Putting Terror in its Place:

An Experiment on Mitigating Fears of Terrorism Among the American Public

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Abstract:
An American's yearly chance of being killed by a terrorist attack sits at roughly 1 in 3.5 million. Yet, over 40% of the American public consistently believes that they or their family members are likely to be the victim of a terror attack. Can these inflated estimates of the risks of terrorism be brought closer to reality? With trillions of dollars spent on the "War on Terror," this question is not just theoretically but practically important. In order to investigate, we use an experimental approach assessing whether people update their core beliefs about the terror threat when given factual information about the risks it actually presents. We find that public fear of terrorism and demand for countering it can be sharply reduced with better information, dropping essentially to pre-9/11 levels after receiving the treatments and staying that way two weeks later. These results show that the American public's exaggerated fear of terrorism – which has facilitated many of the country's costly foreign policy decisions since 9/11 – is far more malleable and correctible than previously thought. In this sense, countering terrorism may largely require providing more context and perspective.

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Since the attacks of September 11th, 2001, counter-terrorism has arguably become the central goal that underpins American foreign security policy. According to one key estimate, the United States spent $5.93 trillion from 2001 to 2019 on efforts to thwart terrorism, including the wars in Afghanistan and Iraq, the conflicts in Syria and Pakistan, and U.S. homeland security.[1]

In one sense, the centrality of terrorism for American foreign policy over the last 18 years seems appropriate in light of the public's ongoing concern about the issue. As recently as June 2017, for example, Gallup found that 60% of Americans said it was "very" or "somewhat" likely that there would be acts of terrorism in the country "over the next several weeks." Even more dramatically, around 45% of respondents in the same poll said they were "very" or "somewhat" worried that they or someone in their family would become a victim of terrorism.[2] Moreover, this level of public anxiety over terrorism has changed very little since late 2001.

But the public's fear of terrorism persists despite the fact that the risk of death Americans face from terrorism is remarkably low, even when counting the devastating but highly unusual attacks of 9/11. According to the Global Terrorism Database (GTD), from September 11th, 2001 through December 31st, 2018, 3,129 Americans died in terrorist attacks on American soil, with 2,889 of the deaths taking place on 9/11 and 240 Americans dying over the following 17 years.[3] That toll equates to an expenditure of roughly $1.5 billion for each American killed by terrorists

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[1] See Neta Crawford, "United States budgetary costs of the post-9/11 wars through FY 2019: $5.9 trillion spent and obligated," *Costs of War Project, Watson Institute for International & Public Affairs, Brown University,* 2018. https://watson.brown.edu/costsofwar/files/cow/imce/papers/2018/Crawford_Costs%20of%20War%20Estimates%20Through%20FY2019.pdf. Indeed, counterterrorism was of course a primary motivation and justification for the U.S. invasion of Afghanistan, and at least an important secondary consideration and justification in Iraq.

[2] See "Historical trends: Terrorism," *Gallup*, 2016. Available at http://news.gallup.com/poll/4909/terrorismunited-states.aspx?version=print

[3] See "Global Terrorism Database," *National Consortium for the Study of Terrorism and Responses to Terrorism (START), The University of Maryland*, 2018. Available at https://www.start.umd.edu/gtd/. We rely in this article on the definition and measurement of terrorism used in the GTD, which captures violence by non-state actors intended to spread fear or intimidation for social, political, or economic ends. This includes both international and domestic terrorism on U.S. soil. The statistics given to subjects in our experiments come from John Mueller and Mark Stewart, *Chasing ghosts: The policing of terrorism* (Oxford University Press: 2015), which also uses the GTD in its underlying calculations. We exclude the 56 American perpetrators killed between 2001-18 in the calculations above, since they were not terrorism victims, although this changes the overall picture very little.

from 2001 through 2018. This cost far outstrips American spending on any other cause of death. Additionally, according to U.S. Department of Defense statistics, more Americans have died in U.S. military operations touted as combatting terrorism during the same time frame (6,950) than have actually been killed by terrorists.[4]

The observation that both Americans' fear of terrorism and their responses to it have been dangerously excessive is not new. John Mueller is perhaps most famous for documenting the exaggerated American response to 9/11.[5] More recently, Mueller and his co-author Mark Stewart examine the extensive institutionalization of this over-reaction across numerous government bureaucracies, leading to the expenditure of vast public resources not only abroad but at home.[6] Yet while we know a great deal about the country's exaggerated responses to the threat of terrorism, far less is known about what could alleviate or mitigate them.

In particular, with regard to the American public's deeply inflated sense of the terrorist threat, would knowing more about the real risks of terrorism moderate the public's response on this issue? On the one hand, scholarship about terrorism and its psychological consequences is largely skeptical that increased public knowledge about the risks of terrorist attacks would have an ameliorating effect on public fears, perceiving the threat as a psychological "perform storm"[7] that resists rational judgments in key ways. On the other hand, literatures on belief correction and foreign policy opinion offer grounds for optimism, suggesting that the public *can* make reasoned cost-benefit analyses of difficult life-and-death issues and thus would likely be responsive to more accurate information on the real costs of terrorist activity. While the theoretical arguments

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[4] "U.S. casualty status," *U.S. Department of Defense*, 2018. Available at https://www.defense.gov/casualty.pdf

[5] John Mueller, *Overblown: How politicians and the terrorism industry inflate national security threats, and why we believe them* (Simon and Schuster: 2006).

[6] See John Mueller and Mark Stewart, "The terrorism delusion: America's overwrought response to September 11," *International Security* 37, 1 (2012): 81-110. Also Mueller and Stewart, *Chasing ghosts*.

[7] See Benjamin Friedman, "Managing fear: The politics of homeland security," *Political Science Quarterly* 126, 1 (2011): 77-106.

in these literatures are varied and complex, the central empirical claims are fairly straightforward and manifestly important. Yet we have very little empirical evidence about how the American public would respond to learning more about the actual risks of terrorism for them.

In this study, we explore the extent to which popular fears of terrorism can be mitigated by exposing individuals to information about the risks of terrorism. In order to do so, we carried out a nationally representative survey experiment in the U.S. with support from Time-Sharing Experiments for the Social Sciences (TESS) that provided Americans with factual information about the risks of death from terrorism in the context of other dangers. Additionally, we varied not only whether people received this corrective information, but also whether it came with an endorsement from one of three realistic sources: a Republican official, a Democratic official, or a military general. Finally, we also fielded an identical experiment on Amazon Mechanical Turk (MTurk) that included a two-week follow-up after the initial experiment in order to evaluate the longer-term effects of exposure to accurate information about the risks of terrorism.

Overall, we found that presenting people with factual information about the relative risk of terror attacks substantially altered their perceptions and beliefs. After receiving the treatment, subjects were much less likely to rate terrorism as an important threat to U.S. national security and to prioritize combatting it as a core U.S. foreign policy objective. The effects we observe are quite substantial, including a roughly 20% drop in the percentage of the American public that is very worried or somewhat worried about the threat of terrorism. Surprisingly, the robust effects of a single exposure to accurate information endured two weeks after the study in our follow-up survey, with only very modest erosion of its effects.

While the ameliorative effects of the factual information about terrorism were generally strong and robust regardless of its source, we did see some variation in its efficacy depending on

the political elites with which it was associated. Specifically, the effect of corrective information on terrorism eroded more quickly when it was associated with the Democratic Party rather than the Republican Party or senior American military officers. Importantly, however, we find that the effects of corrective information were not limited to cues from particular sources, such that the main story is informational – rather than partisan or institutional – in nature. In sum, our results indicate that providing the American public with better information and clearer perspective about the risks of terrorism would dramatically reduce its emphasis on the terrorism threat as a national security issue and its demand for policies to counter it. These findings have key implications for our understanding of the costs and consequences of terrorism in modern democratic societies like the United States, as well as the best way to counter them.

The Public's Persistent Fear of Terrorism

Terrorists rarely achieve their expressed political objectives, but they often impose high costs on target states by inciting a pervasive and disproportionate sense of fear among – *that is, by terrorizing* – their populations.[8] This fear, in turn, can have a number of painful consequences – prompting the targeted country to undertake costly military campaigns, allocate vast resources to homeland security over other major national priorities, and undermine its own civil liberties, social cohesion, and democratic accountability as it aims to eradicate the threat.

Nowhere are such dynamics more apparent than in the United States over the past quarter century. With two overseas wars, vast intelligence operations, an extensive campaign of targeted

[8] See, e.g., Max Abrahms, "Why terrorism does not work." *International Security* 31, 2 (2006): 42–78. Andrew Kydd and Barbara Walter, "The strategies of terrorism." *International Security* 31, 1 (2006): 49–80. Max Abrahms, "What terrorists really want: Terrorist motives and counterterrorism strategy," *International Security* 32, 4 (2008): 78-105. Audrey Kurth Cronin, *How terrorism ends: Understanding the decline and demise of terrorist campaigns*, (Princeton, NJ: Princeton University Press, 2009).

killing, and unprecedented domestic oversight mechanisms, the ongoing Global War on Terror is likely to go down as the most expensive defense campaign in American history, with a price tag of around $6 trillion and rising.[9] While these policies are fueled by many factors, one key driver is the perceptions and preferences of the public: polls consistently show high levels of fear about terrorism among Americans, with about 40% of the country afraid that they or their families will become victims, and 70% viewing major attacks as likely to occur in the near future.[10] In fact, in the words of one terrorism scholar, such fear has created a "permissive environment" and a "seller's market" for aggressive government responses to the threat, playing an important role in fueling the wars in Iraq and Afghanistan (and beyond), the ballooning of the country's defense budget, and the establishment of a bloated homeland security apparatus.[11] Moreover, these fears have remained remarkably stable over time, with limited decline since 9/11.

The American public's fear of terrorism persists in spite of the fact that the actual risk of terrorism for those in the United States is extremely low. Over the past half-century, the chance that an American would be killed by a terror attack on U.S. soil is roughly 1 in 3.5 million, with under 90 deaths per year between 1970-2007. Even in 2001, a year when terrorism was uniquely dangerous in the United States, terrorism accounted for less than 0.14% of deaths in the country. In contrast, the risk of death from other hazards like cancer (1 in 540), car accidents (1 in 8,000), drowning in a bathtub (1 in 950,000), and flying on a plane (1 in 2.9 million) are all far greater.[12] While these hazards kill far more people each year than terrorism, far fewer resources are spent trying to counter them.

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[9] Crawford, "United States Budgetary Costs of the Post-9/11 Wars Through FY 2019."
[10] Mueller and Stewart, *Chasing ghosts*, 80-88.
[11] Friedman, "Managing fear," 80.
[12] Mueller, *Overblown*.

Scholars have written at length about this vast public overreaction to terrorism in the U.S. Some have focused on documenting and describing the phenomenon, likening it to falling into a trap set by the terrorists or activating a series of powerful "antibodies" that kill the host as well as the virus.[13] Meanwhile, others have studied the causes of these fears, showing how fundamental cognitive errors and biases, religious stereotypes about Arabs or Muslims, the nature of the contemporary mass media environment, emotional responses to threatening stimuli, and the prevailing political discourse surrounding the threat all contribute to such overreactions.[14] Studies have also shown that – unlike many other dimensions of public opinion in this highly polarized era in American politics – this overreaction spans the ideological spectrum, afflicting both liberals and conservatives to a substantial degree.[15]

Perhaps the most prominent scholarship within this area has come from John Mueller. In *Overblown*, he extensively evaluates and documents the overreaction to terrorism both across the American public and its political leaders.[16] Then, in *Chasing Ghosts*, Mueller and his co-author Mark Stewart document the institutionalization of this excessive response across key American governmental bureaucracies.[17] However, while their scholarship unearths a mountain of evidence regarding America's vast overreaction to 9/11, they provide relatively little evidence about what could alleviate the problem.

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[13] Ian Lustick, *Trapped in the War on Terror*, (Philadelphia: University of Pennsylvania Press, 2006).

[14] See Cass Sunstein, "Terrorism and probability neglect," *Journal of Risk and Uncertainty* 26, 2-3 (2006): 121–136. John Sides and Kimberly Gross, "Stereotypes of Muslims and support for the war on terror," *The Journal of Politics* 75, 3 (2013): 583–98. Brigitte Nacos, Yaeli Bloch-Elkon, and Robert Y. Shapiro, *Selling fear: Counterterrorism, the media, and public opinion* (University of Chicago Press, 2011). Leonie Huddy, Stanley Feldman, Charles Taber, and Gallya Lahav, "Threat, anxiety, and support for antiterrorism policies." *American Journal of Political Science* 49, 3 (2005): 593–608. Benjamin Friedman, Jim Harper, and Christopher Preble, *Terrorizing ourselves: Why US counterterrorism policy is failing and how to fix it* (Cato Institute, 2010).

[15] See, e.g., Marc Hetherington and Elizabeth Suhay, "Authoritarianism, threat, and Americans' support for the war on terror," *American Journal of Political Science* 55, 3 (2011): 546–560. Neil Malhotra and Elizabeth Popp, "Bridging partisan divisions over antiterrorism policies: The role of threat perceptions," *Political Research Quarterly* 65, 1 (2010): 34-47.

[16] Mueller, *Overblown*.

[17] Mueller and Stewart, *Chasing ghosts*.

Mueller and Stewart generally view the exaggerated American response to terrorism as a "bottom-up" phenomenon. That is, they suspect that American political leaders are responding to – rather than creating – public anxieties on this issue. Yet, they remain puzzled by the persistence of this fear, since "not only has there been no repeat of 9/11, but, although al Qaeda, ISIS, and their various affiliates have served as inspiration for some jihadists in the United States, these groups have failed on their own to directly consummate any attack of any magnitude whatsoever on American soil — or, for that matter, in the air lanes approaching it."[18] Mueller and Stewart speculate about several reasons for the stubbornness of public anxieties, but one explanation that receives scant attention is that citizens may not be aware of the fundamental fact described by their research: that the risk of terrorism facing Americans is very low.

Recent data regarding media coverage and public interest in various causes of death seem to support the notion that a badly distorted news environment may be contributing to severe and persistent public misestimation of the risks and importance of terrorism. Indeed, a pair of recent studies analyze 2016 data on the real causes of death among Americans, the proportion of news stories about each cause of death in the *New York Times* and the *Guardian*, and Google Trends data on Google searches about each cause of death.[19] Google searches give us a useful behavioral measure of public concern, since they involve citizens taking action to seek out more information about a topic. According to the U.S. Center for Disease Control, terror attacks accounted for less than 0.01% of deaths in the United States, yet nearly 36% of the news stories about fatalities that appeared in the *New York Times* in 2016 were about deaths from terrorism.[20] The Google Trends

[18] John Mueller and Mark Stewart, "Public opinion and counterterrorism policy," *CATO Institute*, 2018. Available at https://www.cato.org/publications/white-paper/public-opinion-counterterrorism-policy

[19] Ritchie, Hannah. "Does the news reflect what we die from?" *Online research report, Our World in Data*, 2019. Available at https://ourworldindata.org/does-the-news-reflect-what-we-die-from. Owen Shen, Hasan Al-Jamaly, Maximilian Siemers, and Nicole Stone, "Death: Reality vs. reported," *Online research report*, 2018. Available at https://owenshen24.github.io/charting-death/.

[20] Coverage in the *Guardian* is almost as distorted as that in the *New York Times*, with 33% of death-related stories referencing terrorism. It is also worth noting that both of these outlets tend to be associated with left-wing

data suggest that the public may have been influenced by such media coverage, because 7.2% of Google searches about causes of death during 2016 referred to terrorism. Public concerns about terrorism are not nearly as exaggerated as the depictions of this threat in the media, but it seems possible that the serious biases in news coverage surrounding the risks of terrorism may have led to persistently exaggerated fears among the public.

If the public has a deeply distorted view of the risks of terrorist activity, would educating the public on the actual risks alleviate some of these exaggerated fears? Surprisingly few studies explore what alleviates public fears of terrorism, and none of them explicitly focus on educating the public on the reality of these risks. Andrew Bausch, Joao Faria, and Thomas Zeitzoff analyze people's resilience to terrorism with a laboratory experiment in which subjects choose between a safe option and a lottery with a higher payoff but a small risk of extreme loss – approximating the choice between staying home and continuing their daily lives in the face of a terror threat.[21] Overall, they find that giving people precise warnings about the risk of loss in a given round of their game helps boost people's odds of choosing the risky option. Meanwhile, Aaron Hoffman and William Shelby examine how information about effective counter-terrorism activities shapes public fear of terrorism in several laboratory and MTurk experiments.[22] They show that having people read news stories or watch video clips depicting effective state reactions to terror threats – either in the form of catching the perpetrators or explaining hostage rescue tactics – diminishes their fear and anxiety about potential attacks.

These studies offer valuable contributions and insights, but they do not directly address the question of whether providing the public with more accurate information about the risks of

perspectives on political issues. Thus, the hyping of the terrorist threat within the news media reaches across both national and partisan boundaries.

[21] Andrew Bausch, Joao Faria, and Thomas Zeitzoff, "Warnings, terrorist threats, and resilience: A laboratory experiment," *Conflict Management and Peace Science* 30, 5 (2013): 433–451.

[22] Aaron Hoffman and William Shelby, "When the 'laws of fear' do not apply: Effective counterterrorism and the sense of security from terrorism," *Political Research Quarterly* 70, 3 (2017): 618–631.

terrorist attacks would diminish its demand for counter-terrorist activities. First, the treatments in these studies do not focus on altering perceptions by providing information about *the actual risk of terrorism itself.* For example, Bausch, Faria, and Zeitzoff provide signals about the risk of loss in a laboratory game with various payoff structures. While this is a clever simulation, citizens are not provided any information about terrorism in the study – nor are they even informed that it is about terrorism at all. This is crucial because, as discussed above, terrorism may be particularly frightening to people for a host of reasons.[23] Indeed, one wonders if Bausch, Faria, and Zeizoff's subjects would have reacted so rationally to the information provided had it been about the threat of terrorist attacks rather than a generic risk of payoff loss.

Hoffman and Shelby, on the other hand, offer messages about effective counter-terrorism to bolster public confidence in the government's ability to prevent terror attacks. Their treatment focuses on the state's reactions to the threat, and suggests that governments can boost confidence in their counterterrorism ability by publicly demonstrating their capabilities to restore a sense of control among their publics. While intriguing, this focuses on informing people about the *state's response to the threat rather than the actual severity of the threat itself.* This approach presumes that governments should vigorously respond to the threat in order to reduce public fears. A more direct and cost-effective approach, however, might be to challenge the fears that drive the need for such a robust and exaggerated response in the first place.[24]

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[23] Paul Slovic, *The perception of risk (*London: Earthscan, 2000). Nacos, Bloch-Elkon, and Shapiro, *Selling fear*.

[24] Moreover, one could also question the feasibility of providing evidence of counterterrorism success as the remedy for popular fear. While "catching the bad guys" is always preferable, the U.S. has foiled almost 100 jihadist plots on American soil since 1993 and has eliminated numerous "high-value" terrorists in its drone programs abroad over the past two decades, including an estimated 75 in Pakistan alone, and yet the public's severely exaggerated fears of the threat have continued. See Martha Crenshaw, Erik Dahl, and Margaret Wilson, "Jihadist terrorist plots in the United States," *Online research report, National Consortium for the Study of Terrorism and Responses to Terrorism*, 2017. Available at https://www.start.umd.edu/pubs/START_JihadistTerroristPlotsUS_Dec2017.pdf. New America Foundation,"America's Counterterrorism Wars," *Online database*, 2019. Available at https://www.newamerica.org/in-depth/americas-counterterrorism-wars/

Meanwhile, our study also offers some key methodological advances over related work. Unlike prior efforts, which have used opt-in or convenience samples, we fielded our study on a nationally representative probability sample of the U.S. public. Representative sampling allows us to estimate the extent to which exposure to factual information and elite cues about the threat actually diminish public fears nationwide. This ability is critical because convenience samples on university campuses or MTurk tend to skew young, educated, and liberal. Given the Republican party's longstanding discourse about the War on Terror, there might be some concern about the extent to which results gleaned from such studies would generalize to rank-and-file Republicans.

Finally, in addition to the nationally representative sample, we also carried out the same study simultaneously on MTurk with a follow-up wave fielded two weeks after the experiment. The vast majority of experimental studies of foreign policy views capture very short-term shifts in people's attitudes. These effects are important, but there is reason to be concerned about how long they last. This is especially true for the study of attitudes toward terrorism, since the public is consistently presented with a distorted view of this issue in the news. This approach allows us to not only benchmark the MTurk results, but also speak to the stickiness and persistence of our treatments over time more than previous analyses.

Educating the Public on the Risks of Terrorism – Theoretical Expectations:

Our central question is whether greater public knowledge of the actual risks and costs of terrorist activity to the American people would reduce the exceedingly high priority that the public has placed on this issue for nearly two decades. Literatures on terrorism, public opinion,

and foreign policy present a variety of answers to this question, but these varying perspectives can be broadly synthesized into pessimistic, optimistic, and conditional arguments.

Pessimistic Perspectives

The existing literature on the psychological consequences of terrorism suggests a deeply pessimistic outlook on this question. Indeed, scholars have identified a number of ways in which human cognitive patterns interact with the distinctive attributes of terrorist activity to produce an outsized public reaction to the threat. Some scholars have drawn on work in risk communication, arguing that terrorism is innately frightening because it is a risk that is high in "dread" (since it is a terrible way to die) and low in "control" (since people have little ability to prevent it).[25] In this sense, it is often perceived as something akin to shark attacks which can occur on land and not just in the water. Meanwhile, other scholars such as Cass Sunstein have drawn on judgment and decision-making theories to explain mass overreactions to terrorism, blaming them chiefly on the phenomenon of "probability neglect" – the tendency of people to fixate on the risk of rare events that are severe or salient in nature, neglecting their actual probability of happening.[26] Still others like Max Abrams have used "correspondent inference theory" to explain intense public reactions to terrorism, arguing that it leads targeted nations to infer that its users have extreme ends – the destruction of their society – to match the extreme means they employ.[27]

In sum, whatever the precise combination of psychological attributes or processes behind outsized public fears of terrorism, a number of scholars view the threat of terrorism as somewhat "special" – or at least in a special category of threats along with shark attacks, plane crashes, and nuclear wars or disasters – in its profound resistance to rational judgments and considerations. In

[25] Slovic, *The perception of risk*. Hoffman and Shelby, "When the 'laws of fear' do not apply."
[26] Sunstein, "Terrorism and probability neglect."
[27] Abrahms, "Why terrorism does not work."

the words of one such scholar, "because of how we are wired, terrorism is almost a perfect storm for provoking fear and overreaction, which is its point."[28] Ultimately, these ideas suggest that we should be deeply skeptical about our ability to reassure citizens about the threat of terrorism with factual information. As stated by Sunstein, "[i]n the face of probability neglect, government is unlikely to be successful if it attempts to reduce fear by emphasizing the low likelihood of another terrorist attack."[29] This leads to the following hypothesis:

> *Hypothesis 1 – Providing new information about the risks of terrorism to the American public will not affect public evaluations about the threat of terrorism or its importance as a foreign policy issue.*

Optimistic Perspectives

While scholarship on terrorism generally presents a deeply pessimistic view of our ability to reduce public fears about the issue, other research provides more grounds for optimism. First, an extensive literature on the "rational public" in American foreign policy indicates that citizens often react in systematic and reasonable ways to new information about foreign policy events.[30] For example, in their review of more than 6,000 U.S. survey questions between 1935 and 1982, Shapiro and Page conclude that "[t]he public has not always successfully judged the best interests of the United States or that of people elsewhere, nor have elites and the media always

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[28] Friedman, "Managing fear," 89.

[29] Sunstein, "Terrorism and probability neglect," 122.

[30] Miroslav Nincic, "The United States, the Soviet Union and the politics of opposites," *World Politics* 40, 4 (1998): 452-475. Miroslav Nincic, "A sensible public: New perspectives on popular opinion and foreign policy," *Journal of Conflict Resolution* 36, 4 (1992): 772-789. Benjamin Page and Robert Shapiro, *The rational public: Fifty years of trends in Americans' foreign policy preferences* (University of Chicago Press: 1992). Marc Peffley and Jon Hurwitz, "International events and foreign policy beliefs: Public response to changing Soviet-U.S. relations," *American Journal of Political Science* 36, 2 (1992): 431-61. John Aldrich, Christopher Gelpi, Peter Feaver, Jason Reifler, and Kristin Sharp, "Foreign policy and the electoral connection," *American Review of Political Science* 9 (2006): 477-502.

reported truthfully and interpreted correctly. Nevertheless, we maintain that Americans, as a *collective* body, have done well with whatever information has been provided, and that they have formed and changed their policy preferences in a reasonable manner."[31] This result mirrors studies on the American public's ability to make reasoned cost-benefit judgments of military operations.[32] In particular, the rational expectations model stresses the public's ability to update its beliefs about a conflict in response to new information.[33] This model indicates that individuals will alter their beliefs about a military operation when they receive new information about it – such as casualties, casualty rates, or indications of battlefield success or failure – and that the impact will be especially strong when it clashes with prior expectations and beliefs.

Second, research on the correction of false and unsubstantiated beliefs more generally – from widespread fears of voter fraud to beliefs that global warming is a hoax – has increasingly shown that such factual misperceptions usually respond to factual information when it is offered. Indeed, while some prominent "belief correction" studies have found that attempting to correct misperceptions about emotionally charged issues can "backfire" and entrench them among key audiences,[34] more recent analyses have questioned the robustness of this finding. Thomas Wood

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[31] Robert Y. Shapiro and Benjamin Page, "Foreign policy and the rational public," *Journal of Conflict Resolution* 32 (1988), 211.

[32] John Mueller, *War, presidents, and public opinion (*New York, NY: John Wiley, 1973). Bruce Jentleson, "The pretty prudent public: Post-Vietnam American opinion on the use of military force," *International Studies Quarterly* 36, 1 (1992): 49-73. Scott Gartner and Gary Segura, "War, casualties, and public opinion," *Journal of Conflict Resolution* 42, 3 (1998): 278-320. Stephen Kull and I. M. Destler, *Misreading the public: The myth of the new isolationism* (Washington DC: The Brookings Institution, 1999). Eric V. Larson, "Putting theory to work: Diagnosing public opinion on the U.S. intervention in Bosnia," In *Being Useful: Policy Relevance and International Relations Theory*, ed Miroslav Nincic and Joseph Lepgold (Ann Arbor, MI: University of Michigan Press, 2000). Richard Eichenberg, "Victory has many friends: U.S. public opinion and the use of military force, 1981-2005," *International security* 30, 1 (2005): 140-77. Christopher Gelpi, Peter Feaver, and Jason Reifler, *Paying the human costs of war: American public opinion and casualties in military conflicts* (Princeton University Press, 2009).

[33] See, e.g., Christopher Gelpi, "Performing on cue? The formation of public opinion toward war," *Journal of Conflict Resolution* 54, 1 (2010): 88-116. Scott Gartner, "The multiple effects of casualties on public support for war: An experimental approach," *American Political Science Review* 102, 1 (2008): 95-106. Scott Gartner and Christopher Gelpi, "The affect and effect of images of war on individual opinion and emotions." *International Interactions* 42, 1 (2016): 172-188.

[34] Brendan Nyhan and Jason Reifler, "When corrections fail: The persistence of political misperceptions," *Political Behavior* 32, 2 (2010): 303–30.

and Ethan Porter, for example, conducted a number of experiments on more than 10,000 subjects and found that people largely update their beliefs in the direction of new facts and information.[35] There is a growing consensus that, while pervasive backfire effects and intransigent false beliefs do exist, they are fairly rare when the facts are clearly laid out in front of people.[36] This dovetails with key risk communication studies which show that people's perceptions about the risks posed by even some of the most emotionally salient hazards can be shifted closer toward reality when the information about them is presented in a clear and compelling way.[37] In sum, these different optimistic literatures converge around the following hypothesis:

> *Hypothesis 2 – Providing new information about the risks of terrorism to the American public will reduce public evaluations about the threat of terrorism and its importance as a foreign policy issue.*

Conditional Perspectives

Finally, other literatures on the formation of attitudes and beliefs suggest that attempts to educate the public about the risks of terrorism will only be effective under certain conditions. We focus on three such conditions here. First, a large literature on elite opinion leadership suggests that providing citizens with accurate information will only shift their attitudes if the information

[35] Thomas Wood and Ethan Porter, "The elusive backfire effect: Mass attitudes' steadfast factual adherence," *Political Behavior, Forthcoming.* See also Martin Gilens, "Political ignorance and collective policy preferences." American Political Science Review 95, 2 (2001): 379–96, and William Howell and Martin West, "Educating the Public," *Education Next* 9, 3 (2009).

[36] Brendan Nyhan and Thomas Zeitzoff, "Fighting the past: Perceptions of control, historical misperceptions, and corrective information in the Israeli-Palestinian conflict," *Political Psychology* 39, 3 (2018): 611-31. Catherine De Vries, Sara Hobolt, and James Tilley, "Facing up to the facts: What causes economic perceptions?" *Electoral Studies* 51 (2018): 115-122.

[37] See, e.g., Peter M. Sandman, Paul M. Miller, Branden B. Johnson, and Neil D. Weinstein, "Agency communication, community outrage, and perception of risk: three simulation experiments," *Risk Analysis* 13, 6 (1993): 585-98. Phaedra S. Corso, James K. Hammitt, and John D. Graham, "Valuing mortality-risk reduction: Using visual aids to improve the validity of contingent valuation," *The Journal of Risk and Uncertainty* 23, 2 (2001): 165-84.

is endorsed by trusted elites. In particular, an extensive literature on this topic indicates that one of the most influential sources of trust with regard to political issues is partisanship.[38] A number of scholars have found that when there is elite consensus behind a given foreign policy stance, a consensus will emerge among the informed public as well. Yet when elites are divided and fall into partisan debate, informed citizens are likely to divide too, adhering to the positions of their respective partisan cue-givers.[39] This literature on the partisan filtering of elite cues thus suggests that corrective information about the risks of terrorism will only alter individual beliefs when the information is endorsed by a politician who shares the same partisan affiliation as the individual exposed to the message.

Hypothesis 3A – Providing new information about the risks of terrorism to the American public will only reduce public evaluations about the threat of terrorism or its importance as a foreign policy issue when that information endorsed by a politician who shares the recipients' partisan affiliation.

Second, while a trusted messenger may indeed be important for individuals to respond to new information, co-partisanship may not be the only source of trust regarding information about the terror threat. Indeed, the elite consensus literature might suggest that the endorsement of new information by a leader supported *across partisan lines* would be most effective in enabling it to reduce aggregate fears. In our present age of partisan polarization, one key American institution

[38] See John Zaller, *The nature and origins of mass opinion* (Cambridge, UK: Cambridge University Press: 1992). Larson, "Putting theory to work." Adam Berinsky, "Assuming the costs of war: Events, elites, and American public support for military conflict," *The Journal of Politics* 69, 4 (2007): 975–997. Adam Berinsky and Jamie Druckman, "The polls–review public opinion research and support for the Iraq War." *Public Opinion Quarterly* 71 (2007): 126-41. Matthew Baum and Tim Groeling "Shot by the messenger: Partisan cues and public opinion regarding national security and war," *Political Behavior* 31, 2 (2009): 157–186. Elizabeth. Saunders "War and the inner circle: Democratic elites and the politics of using force." *Security Studies* 24, 3 (2015): 466-501.

[39] Zaller, *Origins of mass opinion*. Berinsky, "Assuming the costs of war."

that retains strong bipartisan confidence, especially on foreign policy issues, is the U.S. military. Indeed, a recent Pew study indicates that large majorities of Democrats and Republicans express confidence in the U.S. military.[40] Thus, the elite opinion leadership argument might also suggest that providing Americans with corrective information about the threat posed by terrorism will be effective when the information is endorsed not by a co-partisan politician, but a broadly trusted figure such as a senior U.S. military officer.

Hypothesis 3B – Providing new information about the risks of terrorism to the American public will only reduce public evaluations about the threat of terrorism or its importance as a foreign policy issue when the information is endorsed by a senior military officer.

Finally, a third conditional perspective on alleviating popular fears of terrorism concerns the notion of partisan issue ownership. The partisan issue ownership model holds that the public views issues chiefly as problems that require solutions and believes that political parties vary in terms of their competence in addressing these problems.[41] The model expects that the parties will develop and maintain relatively stable reputations for handling particular issues that allow them to recruit, maintain, and motivate their core constituents. Officials from the party that "owns" an issue will generally be trusted as having greater competence on that issue than representatives of other parties. Because of the stickiness of these reputations, politicians will struggle to persuade voters of their competence in handling an issue if the opposition owns it.

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[40] Courtney Johnson, "Trust in the military exceeds trust in other institutions in Western Europe and U.S.," *Pew Research Center*, 2018. https://www.pewresearch.org/fact-tank/2018/09/04/trust-in-the-military-exceeds-trust-in-other-institutions-in-western-europe-and-u-s/

[41] See Ian Budge and Dennis Farlie, *Explaining and predicting elections* (London: Allen and Urwin, 1983). John R. Petrocik, "Issue ownership in presidential elections with a 1980 case study," *American Journal of Political Science* 40, 3 (1996): 825-50. John R. Petrocik, William L. Benoit, and Glenn J. Hansen, "Issue ownership and presidential campaigning, 1952-2000." *Political Science Quarterly* 118, 4 (2013): 599-626.

While not every political issue in contemporary American politics is clearly owned by the Democratic or Republican Party, military and security policy issues have largely been owned by the Republican Party since at least the end of the Vietnam War.[42] Republicans have particularly strong ownership with respect to the issue of terrorism. Merolla and Zechmeister, for example, find that citizens increase their level of support for Republican candidates over Democrats when they are presented with cues about the threat of terror.[43] Thus, according to the issue ownership model, the public would be more likely to respond to information about the actual danger posed by terror attacks when that information is endorsed by the party that "owns" the terrorism issue: that is, the Republican Party.

> *Hypothesis 3C – Providing new information about the risks of terrorism to the American public will only affect public evaluations about the threat of terrorism or its importance as a foreign policy issue when the information is endorsed by a representative of the Republican Party.*

Ultimately, these pessimistic, optimistic, and conditional perspectives are all plausible at face value. Yet, we lack the evidence to adjudicate between them. John Mueller, reflecting on the issue of popular fears of terrorism, notes that "in the end, it is not clear how one can deal with the public's often irrational, or at least erratic, fears about remote dangers" such as terrorist attacks.[44] Even more to the point, Cass Sunstein notes in his work on public overreaction to terrorism that

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[42] Petrocik, "Issue ownership in presidential elections." Petrocik, Benoit, and Hansen, "Issue ownership and presidential campaigning."

[43] Jennifer Merolla and Elizabeth Zechmeister, "Evaluating political leaders in times of terror and economic threat: The conditioning influence of politician partisanship," *Journal of Politics* 75, 3 (2013): 599-612.

[44] Mueller, "Six rather unusual propositions about terrorism," *Terrorism and Political Violence* 17, 4 (2005): 498.

"whether information and education will work is an empirical question on which clear evidence is absent."[45] Accordingly, we now turn to the task of obtaining such evidence.

Research Design:

In order to study this question, we fielded a nationally representative survey experiment (N=1,250) through TESS and the National Opinion Research Center (NORC) at the University of Chicago in May 2019. In the experiment, we randomly varied whether people received factual information about the relative risk of terrorism, as well as whether that information was endorsed by different elites. The information we provided was adapted directly from the aforementioned work by Mueller and Stewart.[46] Thus our core treatment focuses exactly on the question of what would happen if the public were more educated about the actual risks of terrorism to Americans. Moreover, including the randomly assigned elite endorsements of this information is critical for checking the *conditional* arguments about co-partisanship (H3A), broad institutional trust (H3B) and issue ownership (H3C) as the key to successfully inducing perceptual change.

In particular, the experiment was designed as follows. First, all participants read a brief vignette about recent terrorist attacks that mirrored the general discourse around terrorism in the country and served to reinforce public concern. This follows the "belief-perseverance" approach used in related studies in which the relevant misperception is reinforced being before challenged, yielding a harder test of its correctability.[47] Participants who only read this initial priming article were in the control group (*Control*). Then, those assigned to the treatment groups also received one of four different vignettes with information about the actual risk of terrorism vs. other major

[45] Sunstein, "Terrorism and probability neglect," 132.
[46] Mueller and Stewart, *Chasing ghosts*.
[47] Nyhan and Reifler, "When corrections fail."

public safety hazards in the U.S. The first treatment group's vignette showed only these statistics (*Correct_Only*). The other three vignettes also included an endorsement of those risk statistics by one of three fictitious, and yet realistic, elites: a Democratic congressman (*Correct_Democrat*), Republican congressman (*Correct_Republican*), or four-star military general (*Correct_Military*). Overall, subjects were thus randomly assigned to one of five different experimental conditions, including four treatment groups and one control group. The relative risk table included in all of the treatment vignettes is shown in Table 1, and the five experimental conditions are depicted in Table 2. The full treatment vignette is included in the Appendix (Figure A1).

Table 1: The Relative Risk Table Included in Treatment Vignettes

Threat	Period	Annual Deaths	Annual Risk
Cancer	2009	560,000	1 in 540
Traffic Accidents	2008	34,017	1 in 8,000
Homicide	2006	14,180	1 in 22,000
Natural Disasters	1999-2008	629	1 in 480,000
Home Appliances	Yearly Average	200	1 in 1,500,000
Commercial Aviation	1989-2007	103	1 in 2,900,000
Terrorism	***1970-2007***	***87***	***1 in 3,500,000***
Lightning	2008	42	1 in 7,000,000

Source: adapted from Mueller and Stewart 2015

As noted earlier, we also fielded a parallel survey experiment simultaneously on MTurk (N=1,250) that included a second wave in which we re-contacted subjects in order to explore the persistence of our treatment effects over time. This follow-up wave allows us to observe whether our treatment effects are just momentary or fleeting responses,[48] or represent a more robust and enduring change in opinion. Both experiments were fielded with full IRB approval ([redacted]

[48] Hoffman and Shelby, "Laws of fear," 628.

[redacted], [redacted]) and pre-registered with the Evidence in Governance and Politics (EGAP) initiative ([redacted]).

Table 2: The Five Experimental Conditions in the Study

Condition	**Description**	**Label**
Control	No corrective information	*Control*
Treatment 1	Corrective information + **No** elite endorsement	*Correct_Only*
Treatment 2	Corrective information + **Democratic** endorsement	*Correct_Democrat*
Treatment 3	Corrective information + **Republican** endorsement	*Correct_Republican*
Treatment 4	Corrective information + **Military** endorsement	*Correct_Military*

We use two key questions as our primary outcomes in this study. First, we use a question about perceptions of terrorism as a threat to U.S. national security. In particular, the wording for this item was: *"Here is a list of potential threats to our country's national security over the next 10 years. For each one, please tell me whether it is very serious, fairly serious, not too serious, or not a threat at all (Terrorism)."* Second, we use a question regarding support for countering terrorism as an American foreign policy priority. The wording for this question was: *"Here is a list of potential goals that the U.S. can pursue in its foreign policy. For each one, please tell me whether it is very important, fairly important, not too important, or not important at all (Preventing future acts of terrorism on U.S. soil)."* We believe that these questions both capture key layers of mass overreaction to terrorism, with one focusing on the gravity of the threat itself and the other on the urgency of our response to it.

In both the NORC and the MTurk survey experiments, each of the 1,250 participants was randomly assigned to one of the five treatment conditions, yielding at least 240 respondents per

condition. In order to check the effectiveness of our randomization across treatment groups, we conducted parametric ANOVA testing to determine if random assignment led to separation. We found no evidence of significant differences across the five treatment groups in either our NORC or Mechanical Turk samples. Accordingly, we are confident that any observed treatment effects are not a function of different demographics across treatment groups.[49]

We used multiple manipulation checks to ensure that participants received the treatments in our study. Specifically, we asked subjects about the facts given to them about terrorism itself as well as the threats posed by other risks presented in the treatments. We found strong evidence of citizens attending to our treatments, given that they significantly increased the extent to which people correctly identified the number of annual terrorism deaths in the U.S. and increased their fear of other key risks at the top of the table (most notably cancer). The impact of our treatments on these additional risks are presented in the Appendix in Figure A3.[50]

Given the success of the randomization, we opt for simplicity in terms of estimating the impact of our treatments. In each wave of the survey, we simply estimate ordinary least squares (OLS) regression models with dummy variables for each treatment category and with the control group (i.e. no corrective information) as the excluded category.[51] Our coefficients thus reflect the average difference in the perceived severity of the terrorist threat and priority of countering it as a foreign policy goal between each treatment group and the control group. Robustness checks

[49] For a visual representation of this covariate balance, see Figure A2 in the Appendix, which shows the distribution of respondents across treatment conditions on a number of key demographic covariates.

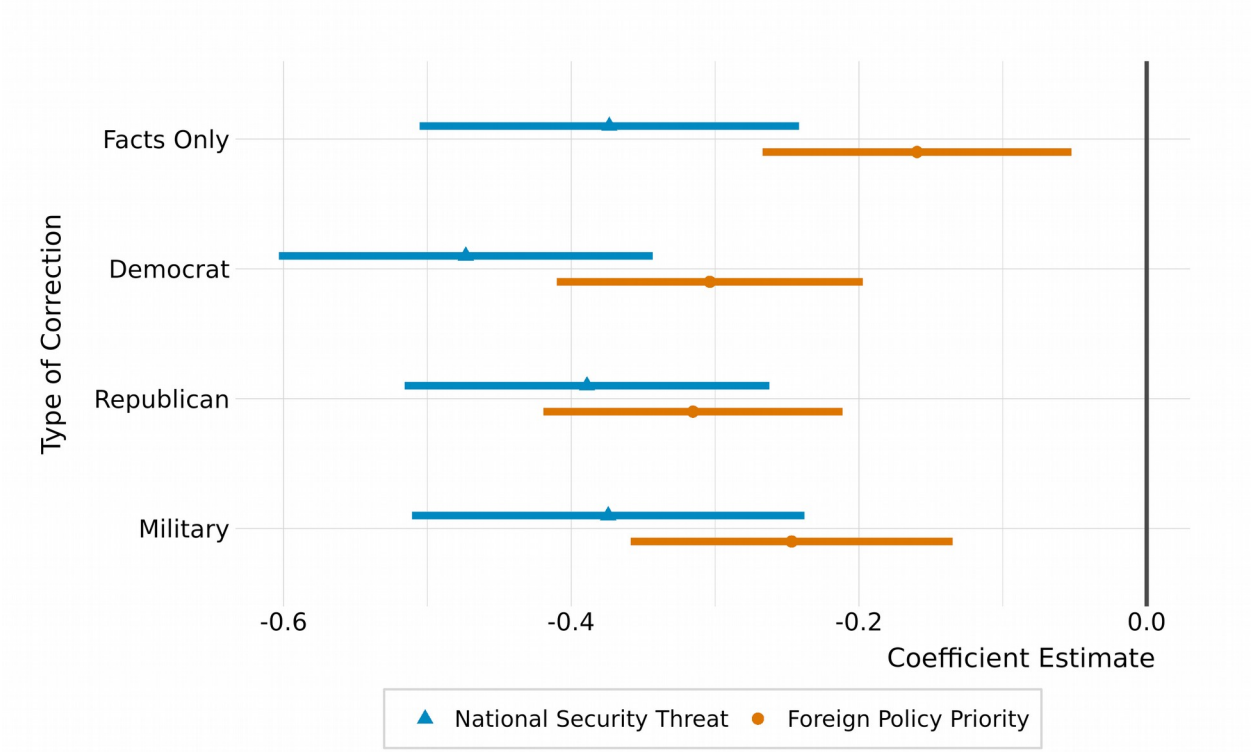
[50] We drop individuals who fail the (direct) manipulation check about terrorism, which is about 10% of each sample. However, this decision has no substantive impact on our results, with all key relationships maintaining direction and significance. This consistency in findings is reassuring given recent research on the pitfalls of dropping subjects that fail manipulation checks. See, e.g., Peter Aronow, Jonathon Baron, and Lauren Pinson. "A note on dropping experimental subjects who fail a manipulation check." *Political Analysis* 27, 4 (2019): 572-89. In the case of the NORC survey, we use the sampling weights provided by NORC in order to maximize national representativeness, but once again this decision has no substantive bearing on our results.

[51] Our supplemental appendix also includes each model run with an ordered probit as well as demographic controls (Figures A4-5). The results are the same substantively, so we opt for OLS to maximize interpretability.

using other statistical estimators and including all of our demographic control variables revealed no changes in the direction or statistical significance of our estimated effects.

Empirical Results

Figure 1: Treatment Effects on American Perceptions of Terrorism, NORC Sample



Notes: Effect of each treatment on participant perceptions of terrorism as a national security threat and foreign policy priority. Point estimates are the difference between the average response in each treatment group and the average response in the control group. Error bars are 95% confidence intervals. Estimates of terrorism as a national security threat are the top line, which is blue and includes a triangle. Estimates of terrorism as a foreign policy priority are the bottom line, which is orange and includes a circle. Models are estimated with a linear regression and no control variables for demographic variables, though effect directions and significance hold with alternative models and controls.

Figure 1 shows the average effect of our treatments, along with 95% confidence intervals, for the nationally representative NORC sample. The average effect is indicated by a triangle for

citizens' perceptions of terrorism as a threat to the country's national security and by a circle for their support for counterterrorism as a foreign policy priority. The 95% confidence intervals are indicated by horizontal lines. It is worth noting that the baseline attitudes in the control group are relatively similar to those found in extant polling about terrorism. For example, 33% of our subjects report being very or somewhat worried that they or their families could be victims of terrorism – a figure relatively similar to historical polling results on this question by Gallup and other firms over the last two decades, which have hovered around 40%.[52] On this and other key questions, we thus have a similar starting point to most existing polling on the issue in recent years.

The results in Figure 1 show that our provision of accurate information about the risks of terrorism to the American public significantly reduced the public's perception of terrorism as an important national security threat and its importance as a foreign policy priority.[53] All four of our treatment conditions clearly had a negative and statistically significant impact. In addition, these effects are substantial. For example, the impact of the correction-only treatment on perceptions of terrorism as a national security threat is roughly 10 percentage points (0.4 on a 4-point scale). For comparison, consider that a dummy variable for Republican identification has an impact of around 3 percentage points (0.13 on a 4-point scale), while a dummy variable for conservatives has an effect of around 6 percentage points (0.25 on a 4-point scale).[54] In other words, the effects of the treatments are about twice as large as two of the most important conventional variables –

[52] Mueller and Stewart, *Chasing ghosts*, 80-88.

[53] While models of national security threat and foreign policy priority do not have statistically distinguishable results – that is, their confidence intervals overlap – models focused on terrorism as a foreign policy priority do consistently have marginally smaller effects. Yet, between the similarity of the effect sizes and a lack of ex-ante expectations, we do not see any reason to emphasize or speculate about this distinction.

[54] The magnitude of the treatment effects relative to basic covariates can be seen in the Appendix in Figures A4-5.

party affiliation and political ideology – often linked to popular fear of terrorism and support for robust counterterrorism operations in the U.S. since 9/11.[55]

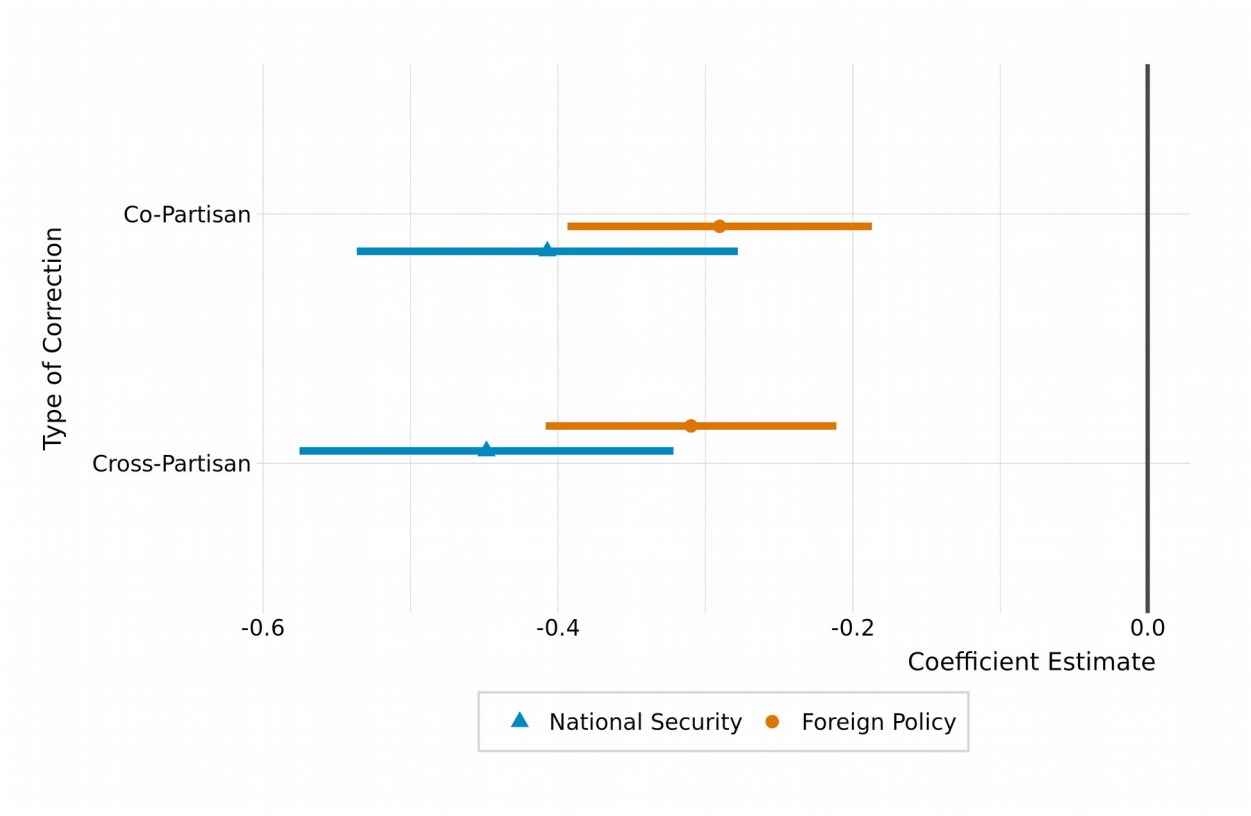
Moreover, we can also see that there is little separation between treatments, suggesting that the provision of factual information about terrorism is more important than whether it comes with an elite endorsement (or the type of elite endorsing it). The endorsement of the information by a Democratic official has a modestly larger impact than the other treatments, but this gap does not approach statistical significance. In addition, we see that the treatments have a slightly larger impact on perceptions of terrorism as a national security threat than it does on views of terrorism as a foreign policy priority, but once again these differences are not statistically significant.

Next we explore the possibility that the impact of factual information on attitudes toward terrorism are limited by partisan polarization. Figure 2 displays the estimated treatment effects of corrective information for co-partisan versus cross-partisan cues. That is, we compare the impact of information that is endorsed by a member of the participant's own political party versus the impact when it is endorsed by an elected member of the opposing party. While the public may have limited openness to information from the opposing political party on many issues, partisan polarization does not affect their attentiveness to information about the risks of terrorism. Figure 2 clearly indicates that the impact of factual information with a cross-partisan endorsement (i.e. a Democratic respondent receiving information endorsed by a Republican politician or vice versa) is virtually identical to the impact of the information accompanied by a co-partisan endorsement. Moreover, both of these effects are negative, strongly significant, and very similar in magnitude to the treatment effects displayed in Figure 1 when we do not distinguish treatment effects by the partisanship of the respondent. In other words, the corrective information we provided about the

[55] See, e.g., Cindy Kam and Donald Kinder, "Terror and ethnocentrism: Foundations of American support for the War on Terrorism." *Journal of Politics* 69, 2 (2007): 320-38. Malhotra and Popp, "Bridging partisan divisions."

risks of terrorism has a substantial impact on public fears regardless of the partisan identity of the individual receiving the information, the identity of the individual endorsing the information, or whether anyone endorses the information at all.

Figure 2: Partisanship and Treatment Effectiveness, NORC Sample



Notes: Effects of treatments for the co-partisan vs. cross-partisan cues. Each model compares participants who receive a co-partisan or a cross-partisan cue to those in the control group. Co-partisan cues represent either Republicans exposed to a Republican messenger or Democrats exposed to a Democratic messenger. Cross-partisan cues are either Republicans exposed to a Democratic messenger or Democrats exposed to a Republican messenger. The models are estimated for perceptions of terrorism as a foreign policy priority and a national security threat. For both DVs, whether a messenger was co-partisan or cross-partisan does not create statistically distinguishable treatment effects.

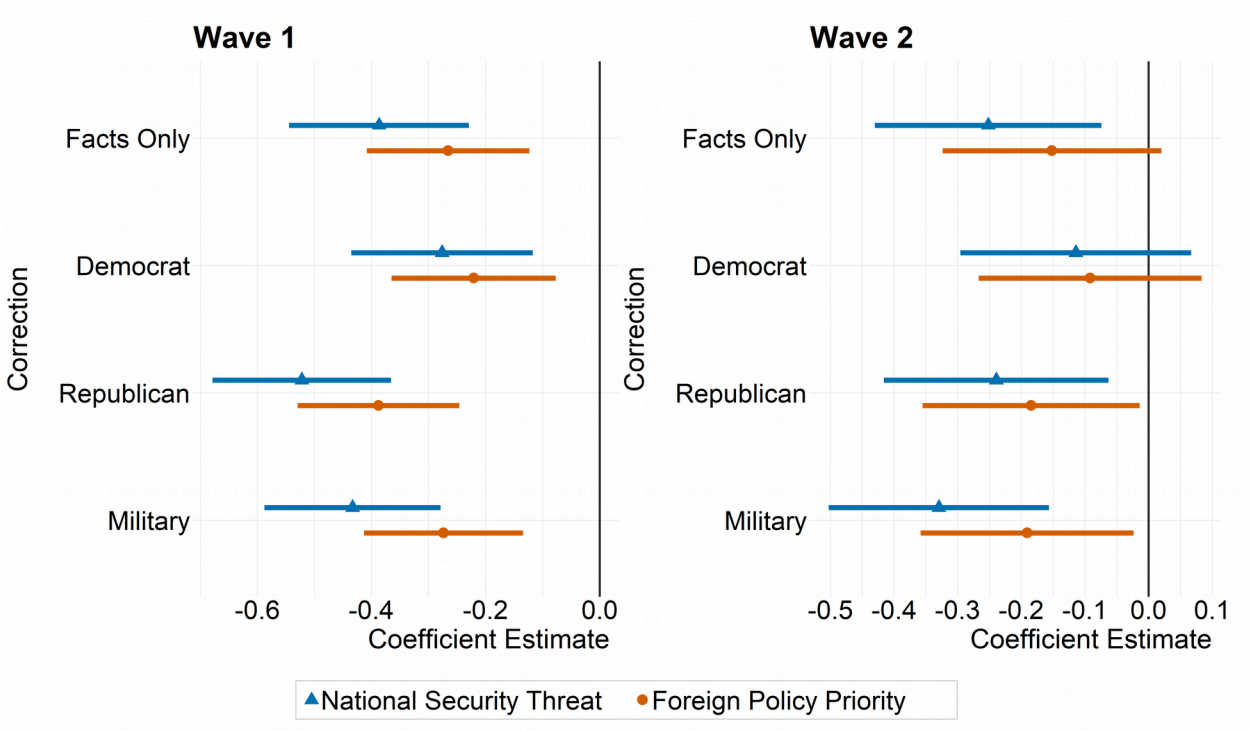
The results in Figures 1 and 2 demonstrate that providing accurate information about the risks of terrorism could substantially reduce threat perceptions among the American public, and that this reduction is not the result of co-partisan cue-taking. Yet, these effects are measured only

minutes after receiving the treatment. How robust will the effects of corrective information be over time as the salience of our treatment fades and participants are exposed to the typical news cycle of events (including typical sensationalist media coverage of the terrorist threat)? In order to address that question, we turn to the analysis of our two-wave Mechanical Turk survey. Figure 3 presents the influence of all four treatments on the full MTurk sample in the initial experiment (left panel) and the follow-up survey fielded on the same subjects two weeks later (right panel). The response rate for the second wave was quite high at 72% of the original sample, with no systematic attrition by experimental condition.[56]

First, the results in the left panel indicate that those of the first wave of the MTurk survey are very similar to those obtained in the nationally representative NORC survey. Specifically, all four treatments significantly diminish perceptions of both terror threat and priority, with roughly similar effect sizes as before (reductions of between 5-15 percentage points). In other words, we once again see evidence that the factual information is effective in mitigating public perceptions of the threat (and support for countering it), regardless of its source. In addition, we find that the new information influences perceptions of threat slightly more than foreign policy priorities, but this difference is not statistically significant. The similarity of these effects to those of our NORC study give us great confidence in the robust influence of our treatments, as well as the validity of examining the second wave of the MTurk study in order to gauge their persistence.

[56] While we find no systematic attrition of respondents by experimental condition, there is some evidence of greater attrition of Republicans in the second wave overall. Yet controlling for partisan identification and political ideology yield no substantive change in the results (see Appendix, Figure A7).

Figure 3: Treatment Effects on American Perceptions of Terrorism, MTurk Waves 1 and 2



Notes: Treatment effects in the MTurk sample. The left panel shows treatment effects immediately after receiving the treatment. The right panel shows the effects in a follow-up survey fielded two-weeks later. The statistical models are identical to the models run using the NORC data, with linear regressions on perceptions of terrorism as a national security threat and foreign policy priority. Standard errors reflect a 95% confidence interval.

Turning our attention to the right-hand panel of Figure 2, we see some modest erosion of our treatment effects over time, but in general our treatments remain strikingly robust. Overall, we see a decline in the size of the treatment effects of about 0.1 to 0.2 points on a 4-point scale. For example, the provision of information reduced perceptions of terrorism as a national security threat by 0.4 on a four-point scale, but the effect is only 0.25 when we asked again two weeks later. Nonetheless, this effect remains substantial and statistically significant.

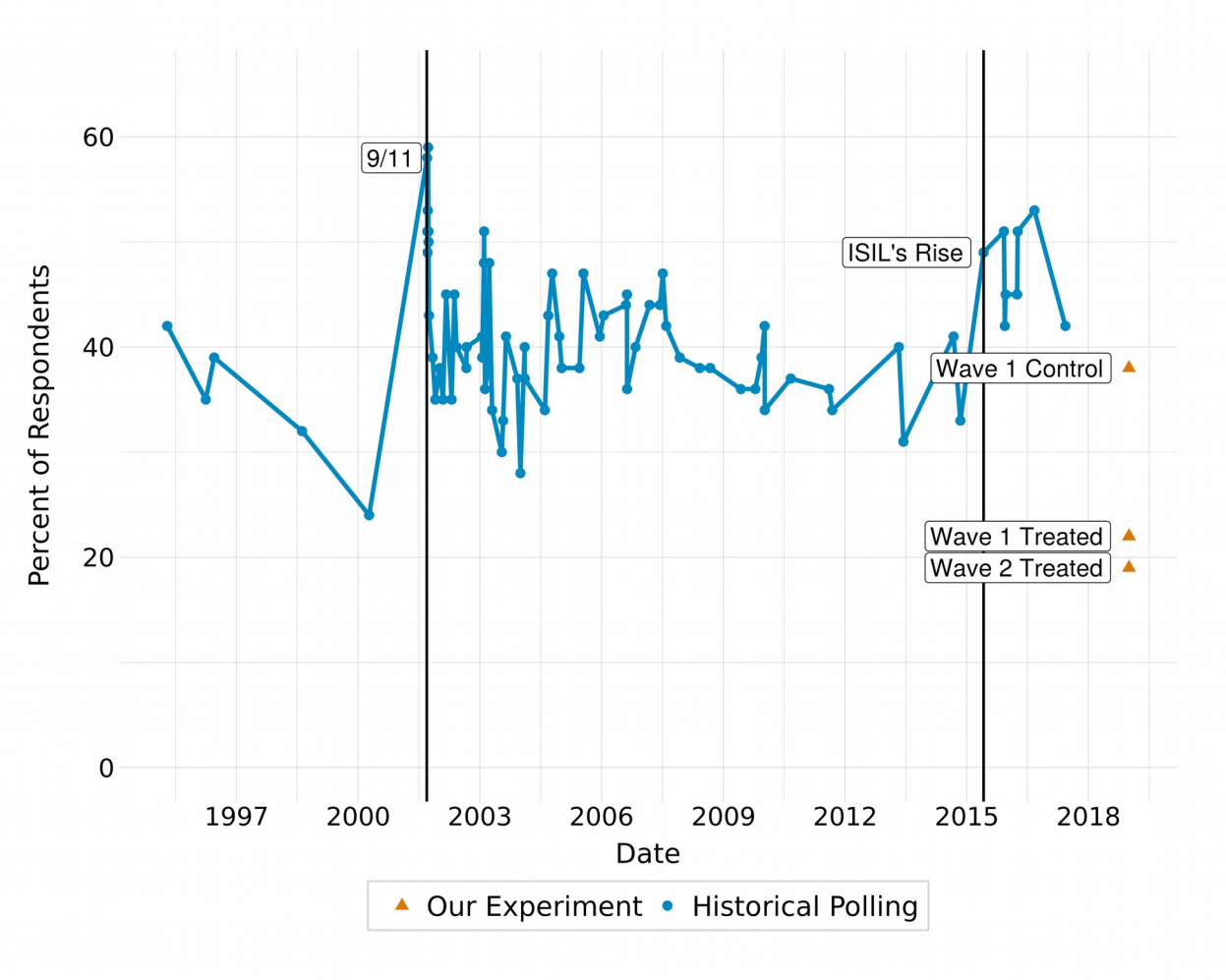
In addition to somewhat more modest treatment effects, the results of our follow-up study show slightly larger confidence intervals around our estimates since we did not receive responses from about a quarter of our first-wave participants. As a result of these two changes, not all of

our observed treatment effects remain statistically significant in the second wave. In particular, the corrective information with the Democratic endorsement no longer has a significant effect in the second wave. Moreover, while our information-only treatment continues to have a statistically significant impact on perceptions of the terrorist threat, its influence on terrorism as a foreign policy priority falls just short of conventional significance at the 95% level.

Taken together, one might read these results as indicating that accurate information about the effects of terrorism has a longer-lasting and more robust impact on public attitudes when the information is endorsed by the Republican Party or the U.S. military. We are cautious, however, about overemphasizing this distinction. It is true that the influence of the new information along with a Democratic endorsement are not significantly different from zero with 95% confidence in our follow-up wave. It is also true that the effect of this same information with a Republican or military endorsement remains statistically different from zero in our two-week follow up wave. Yet, the Democratic treatment is also not statistically significantly different from the Republican or the military treatments (as opposed to different from zero). These two facts make it critical to interpret the results with care.

Our follow-up wave thus provides suggestive evidence that partisan cues may shape the persistence of the public's response to new information about the terrorist threat. However, the stronger and more robust takeaway is that giving the public accurate information about terrorism reduces its perceived importance as a national security threat and a foreign policy priority even as much as two weeks later. In other words, with the partial exception of Democratic politicians, there is evidence that the factual information has an enduring effect on public attitudes (across the political spectrum), regardless of who provides it.

Figure 4: Percentage of Americans Who Are Very or Somewhat Worried about Terrorism, Our Results vs. Historical Trend



Notes: Our results vs. national polling about terrorism since 1996. Polling responses are on the blue line with circles for each data point. The orange triangles represent the responses to our survey experiments. The top triangle is the average response in our control group, which follows national averages; 37% of the control group is somewhat or very worried about terrorism. However, we see a substantial drop down to roughly 20% of the treatment groups in both wave 1 and wave 2 responding that they are somewhat or very worried about terrorism.

Finally, we take a closer look at the substantive magnitude of these results by comparing them to polling data from the last quarter century. Figure 4 shows the historical trend line for the percentage of Americans from 1995-2017 who are "very" or "somewhat" worried that they or a family member will become a terror victim, along with the same percentages among respondents

(both treated and untreated) in our two-wave MTurk sample. We use this question for historical comparison since it is identical to the one asked in most public opinion polling about the issue (rather than the national security threat and foreign policy priority questions, which were altered slightly to enhance question wording). The historical data are adapted from Mueller and Stewart, who collected polling toplines from Gallup and other firms through the Roper Center Archive.[57] We use the two-wave MTurk data here so that we can compare the effects of our treatments not only during the initial survey but in the two-week follow-up to the historical data.

Clearly, the percentage of Americans who are very or somewhat worried about terrorism victimizing them or their family has historically been quite substantial. Indeed, the average level of worry among the American public from 1995-2017 is 41%, peaking shortly after 9/11 (59%) and spiking after other major attacks like the 2016 Pulse nightclub shooting in Orlando, Florida (53%) following the global rise of the Islamic State in 2014-15. In short, the figure illustrates the widespread popular fears of terrorism that have persisted in the U.S. for more than two decades. Meanwhile, the percentage has only dropped below 25% once in 79 polls: in 2000, several years after the Oklahoma City bombing but prior to the events of 9/11.

In this context, our results are quite notable. Indeed, we can see that the percentage of our respondents within the control group who are worried about a member of their family becoming a terrorism victim is 37%, relatively similar to the historical average. In contrast, the percentage of respondents in one of the treatment groups who are worried is just 22%. Moreover, that figure drops even lower in the follow-up survey, with only 19% of treated subjects worrying about the threat to themselves or their families two weeks later. This decline is substantial when viewed in historical perspective, since the percentage of worry drops from a more or less average level to below the lowest recorded value – the historical nadir of 24% over the last quarter century – after

[57] Mueller and Stewart, *Chasing ghosts*, 80-88.

receiving our treatment. In other words, this suggests that restoring perspective about terrorism with factual information has the potential to return the public's anxiety about the terrorism threat to pre-9/11 levels (or perhaps even lower).

Taken as a whole, our results provide strong support for *Hypothesis 2* and the optimistic perspective that the American public will update its beliefs and attitudes when facing surprising new information about foreign policy issues or events. Our results are striking because American fears of terrorism have been so strong and consistent for nearly two decades.[58] Yet, providing the public with a relatively small piece of clearly packaged information about the risks of terror had a strong substantive effect on attitudes toward terrorism as a foreign policy issue. Additionally, this single modest informational treatment had very consistent effects across both of our experimental studies, and in our follow-up effort we found that it had lasting effects even when we re-contacted participants after two weeks. The persistence of these effects over time is also notable because the treatment itself is relatively mild, leading us to believe that a sustained change in political discourse – involving repeated "doses" of the treatment over a longer time period – would have meaningful and enduring effects.

Conclusion:

In his 2004 book *Why Courage Matters*, the late Senator John McCain (R-Arizona) wrote about the American people's reactions to terrorism: "Get on the damn elevator! Fly on the damn plane! Calculate the odds of being harmed by a terrorist. It's still about as likely as being swept out to sea by a tidal wave."[59] Unfortunately, in this statement John McCain lived up to his label as a political maverick. Few American politicians – let alone hawkish Republicans with military

[58] Ibid.

[59] John McCain and Mark Salter, *Why courage matters: The way to a braver life* (New York: Random House, 2004).

experience – have ever explicitly diminished the threat of terrorism in the U.S. and compared it to other risks, preferring instead to present it as uniquely terrifying and existential in nature. In a similar vein, studies have shown that media coverage of mortality risks exaggerates the risk of death from a terrorist attack by a factor of nearly 4,000 relative to other risks facing the public.[60] The classic maxim of media coverage, "if it bleeds, it leads," has led to an increasing coverage of death in the news media,[61] and this rule applies to the coverage of international events as well.[62] Thus, media coverage of terrorism has clearly followed the pattern of political elite rhetoric and left the public with a deeply distorted view of the threat of terrorism.[63]

What would happen if the American public understood the truth about the risks that they face from terrorism? That is the question that we analyzed in our study. Scholars have written at length over the past two decades about the various psychological, political, and social factors that have contributed to exaggerated fears about terrorism (e.g., Huddy et al. 2005, Friedman, Harper, and Preble 2010). Yet, there has been very little research gauging the extent to which they can be alleviated by providing citizens with factual information about the threat. In order to fill this gap, we fielded a nationally representative survey experiment in which citizens were exposed to data about the actual risks of terrorism on American soil vs. other major threats, varying whether the information was shown alone or endorsed by different elites. Moreover, we conducted an identical experiment simultaneously on Amazon Mechanical Turk with a two-week follow-up to check the persistence of any effects over time. Overall, we found that the corrective treatment was quite effective – public perceptions of the terror threat and support for efforts to counter it

[60] Shen et al., "Death: Reality vs. reported." Ritchie, "Does the news reflect what we die from?"

[61] See Folker Christian Hanusch, *Representing death in the news: Journalism, media, and mortality* (Basingstoke: Palgrave MacMillan, 2010). Lyn Barnes and Elesha Edmonds, "If it bleeds, it leads?: Changing death coverage in 'The New Zealand Herald,'" *Pacific Journalism Review* 21, 2 (2015): 162-172.

[62] Ross Miller and Karen Albert, "If it leads, it bleeds (and if it bleeds, it leads): Media coverage and fatalities in militarized interstate disputes," *Political Communication* 32, 1 (2015): 61-82.

[63] Mueller and Stewart, *Chasing ghosts*. Shen et al., "Death: Reality vs. reported." Ritchie, "Does the news reflect what we die from?"

were significantly reduced. In addition, these effects largely persisted when subjects were re-contacted two weeks later in the follow-up wave.

These results suggest that much of the vast overreaction to terrorism in the U.S. over the past quarter century may have been avoided if people were given a more accurate picture of the threat and the risks it poses to them. As stated earlier, the U.S. has spent nearly $6 trillion since 9/11 on a threat that claims very few lives per year vs. other dangers facing the country. Moreover, the exaggerated response to terrorist attacks in the U.S. has also cost the country thousands of lives, ballooned the national debt, undermined civil liberties, encouraged excessively cautious public behavior (e.g., not flying), distracted the country from other more pressing issues, and possibly generated more malice and violence toward Americans than it has eliminated.[64] While U.S. counterterrorism policies stem from various sources, our study reveals that one important source – the public's inflated threat perceptions – is not a fixed property of how people react to dreaded, rare, or unpredictable dangers, but something that can be greatly reduced by providing them with better context and perspective about the risks they face.

The study also raises important questions for future research. First, how well would these results generalize to other inflated risks and threats in political life? On the one hand, terrorism represents a "hard case" for studies seeking to reduce exaggerated threat perceptions, especially in the U.S., due to the extent to which citizens have already been "treated" with fear-inducing media coverage and political rhetoric over the last two decades, as well as the emotional and visual salience of the threat. On the other hand, there are also ways in which terrorism may be more ripe for belief updating than other major political misperceptions. In particular, a recent paper by Alexandra Guisinger and Elizabeth Saunders found that one key driver of the correctability of public misperceptions on foreign policy issues was the extent to which they

[64] Friedman, Harper, and Preble, *Terrorizing ourselves*. Mueller and Stewart, *Chasing ghosts*.

were polarized along partisan lines.[65] In particular, they found that informational effects dominated where polarization was low, while only co-partisan cues mattered on highly polarized issues. In this light, while our results about terrorism fears are notable, and our intuitive and comparative treatment format may hold promise for other similar issues such as epidemics, nuclear weapons, and the like, it is an open question whether they would extend into more politically polarized terrain.[66]

Second, would these results extend to other countries facing terrorist threats? One natural extension would be to conduct a comparative survey exploring the effects of a similar treatment in Western European countries like France, Germany, the UK, and the Netherlands – all nations where (relatively) few people die per year from terrorism, but public fear and concern has been rising with recent terrorist attacks. Extending such a study to encompass other more "frontline" states such as Israel would also be informative, perhaps demonstrating its situational limits – or perhaps its general influence, given that even in countries like Israel terrorism remains a lower fatality risk than various types of disease.[67]

Answers to these latter issues must await future research. Our study, however, highlights their importance by demonstrating that the American public's overreaction to terrorism is more malleable than widely believed. With the right messages, public support for a more realistic and grounded approach to terrorism in the U.S. is indeed within reach.

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[65] See Alexandra Guisinger and Elizabeth Saunders, "Mapping the boundaries of elite cues: How elites shape mass opinion across international issues," *International Studies Quarterly* 61, 2 (2017): 425-41.

[66] Again, while the parties may differ in terms of how to best counter it, they have generally both treated terrorism as a grave national security threat facing the country that demands substantial resources and attention.

[67] State of Israel Ministry of Health, "Leading Causes of Death in Israel 2000-2015," *Press Release*, 2018. Available at https://www.health.gov.il/English/News_and_Events/Spokespersons_Messages/Pages/22052018_2.aspx

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Putting Terror in its Place – Supplemental (Online-Only) Appendix:

Figure A1: Sample Treatment Vignette

(Initial reinforcement article)

New Poll Finds Rising Fears of Terrorism Nationwide

The number of people who say that acts of terrorism against Americans are imminent is up 3% from last year, according to a new poll released this week. In the wake of recent events in San Bernardino, Orlando, Paris, and London, the Pew Research Center found that 63% of Americans think major terrorist attacks are likely to occur soon on American soil.

Government officials have echoed these concerns. "We are issuing a new advisory that the terror threat is now elevated across the country," said Undersecretary for Homeland Security Stephen Krause. "We have to remain vigilant and we have to stay alert. Terrorists can strike anytime, anywhere."

(Belief correction article)

Taking a Closer Look at the Terror Threat

Does terrorism really pose a critical threat to us? Below is a figure showing the average American's risk of death from different sources. Please take a minute to study it closely.

Table: Annual Fatality Risks from Different Threats Facing Americans

Threat	Country	Period	Annual Deaths	Annual Risk
Cancers	U.S.	2009	560,000	1 in 540
Traffic accidents	U.S.	2008	34,017	1 in 8,000
Homicide	U.S.	2006	14,180	1 in 22,000
Natural disasters	U.S.	1999-2008	629	1 in 480,000
Home appliances	U.S.	Yearly average	200	1 in 1,500,000
Commercial aviation	U.S.	1989-2007	103	1 in 2,900,000
Terrorism	***U.S.***	***1970-2007***	***87***	***1 in 3,500,000***
Lightning	U.S.	1999-2008	42	1 in 7,000,000

Source: Mueller and Stewart 2015

As can be seen, around 90 Americans are killed each year by terrorism on U.S. soil. This means the risk of being a victim of terrorism in a given year is about 1 in 3.5 million. In comparison, the risk of being killed by cancer is 1 in 540, the risk of being killed in a car accident is 1 in 8,000, and the chance of being killed by your own home appliances is 1 in 1.5 million. These numbers provide some essential context when thinking about the different threats to our public safety.

Indeed, these facts have been noted by officials. For example, **[Republican Congressman/Democratic Congressman/four star Army General]** John Baker stated recently: "The truth is that you are far more likely to be killed by routine, mundane dangers than you are by a terrorist attack. We as Americans need to take a closer look at the risks and choices we face."

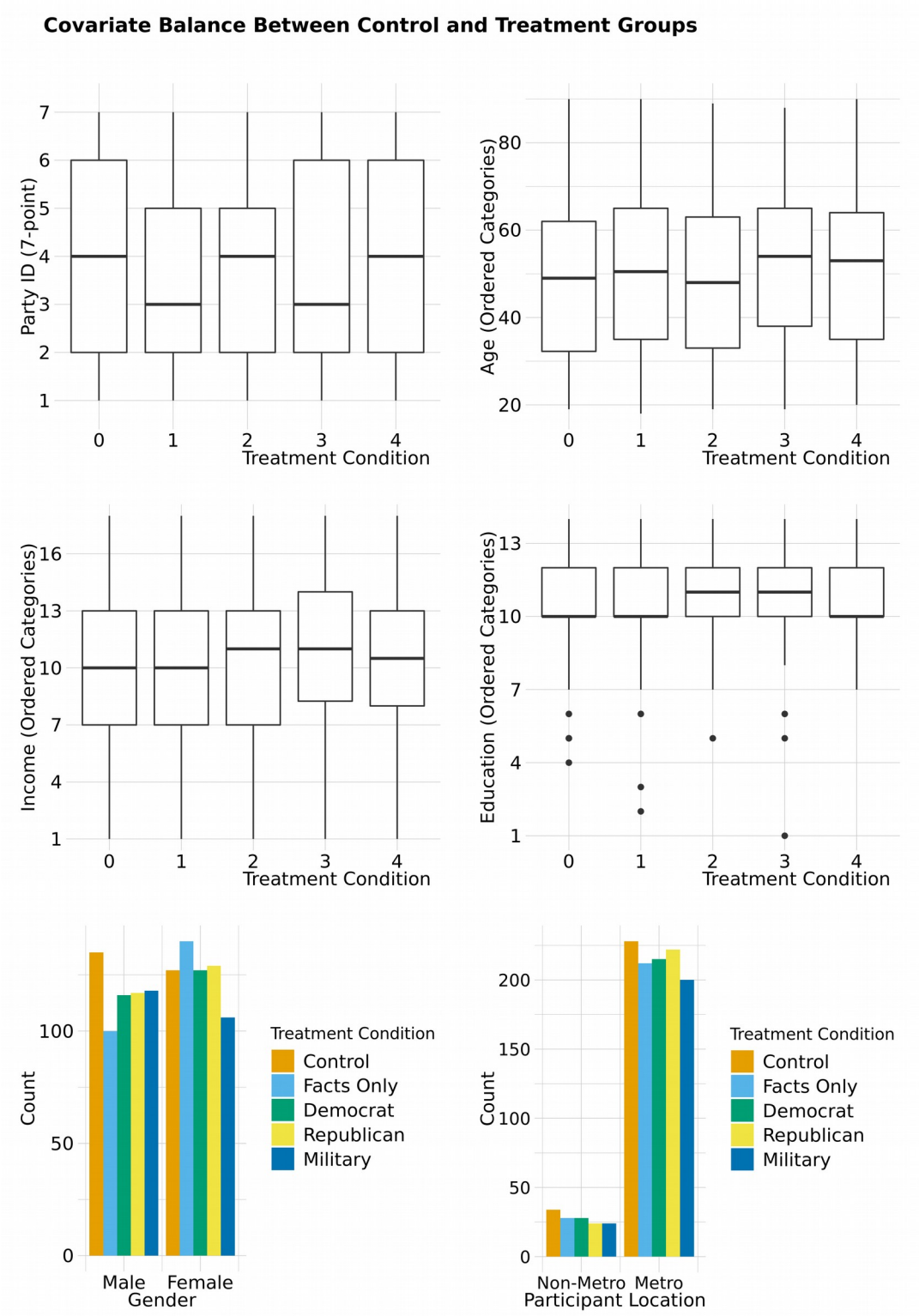

Figure A2: Distribution of demographics across control and treatment groups, nationally representative sample. For the top four plots, treatment conditions 0-4 represent the conditions labeled in the bottom two plots. Across demographic groups random assignment of treatment and control is effective, as the median value is statistically indistinguishable. Moreover, the sample is considerably diverse, credibly representing the entire country.

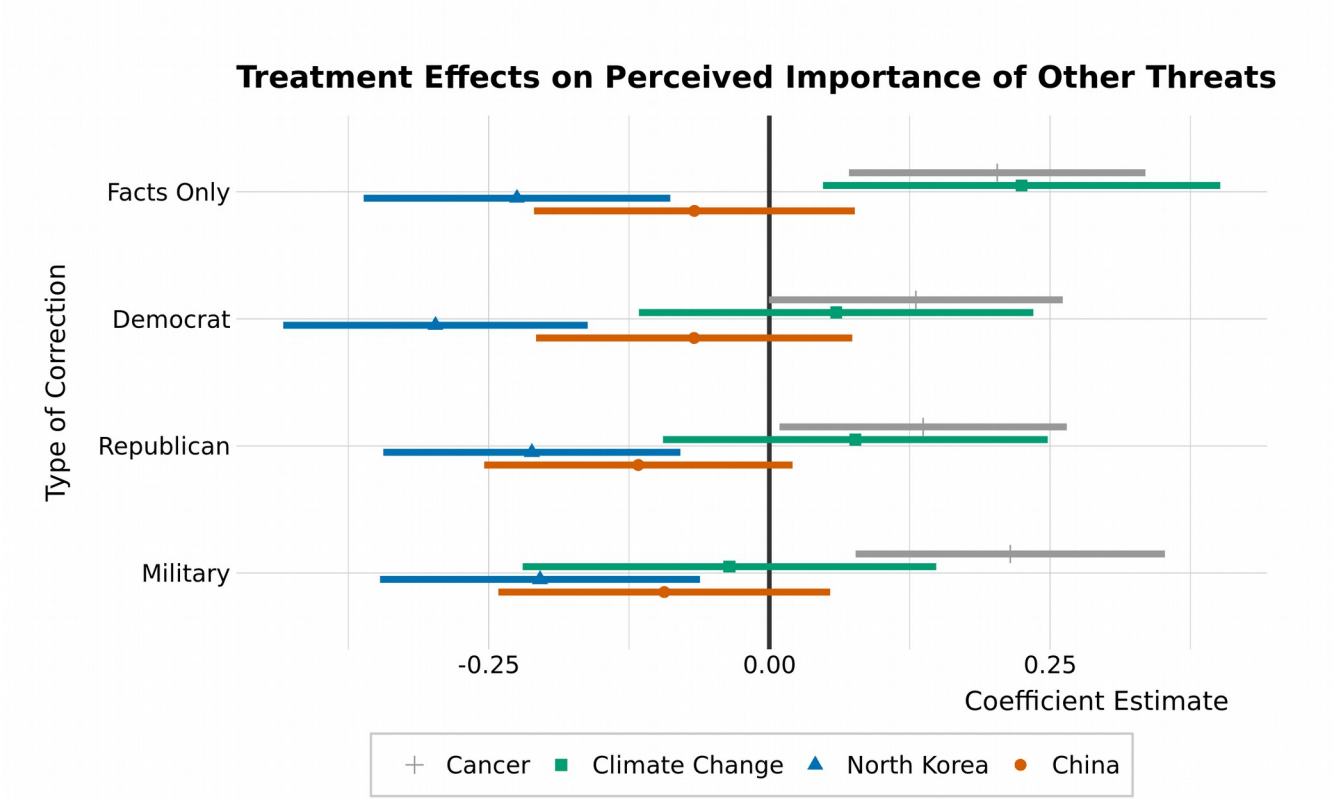

Figure A3: Effects of treatments on other key threats facing Americans. Each model compares participants who received one of the four treatment conditions to the control group in terms of their perceptions of other potential threats aside from terrorism. Indeed, participants were asked about their perception of the importance of cancer, climate change, North Korea, or China as threats to either individual safety (cancer) or to national security (the other three). The treatments substantially boosted perceptions of the personal threat posed by cancer, which serves as a nice manipulation check since it was the top source of deaths shown in the risk table. Meanwhile, perceptions of the threat posed by North Korea were also significantly reduced. While no information was given about North Korea, this may suggest that it is seen as more akin to terrorism than other challenges like China or climate change – an intriguing question for future research.

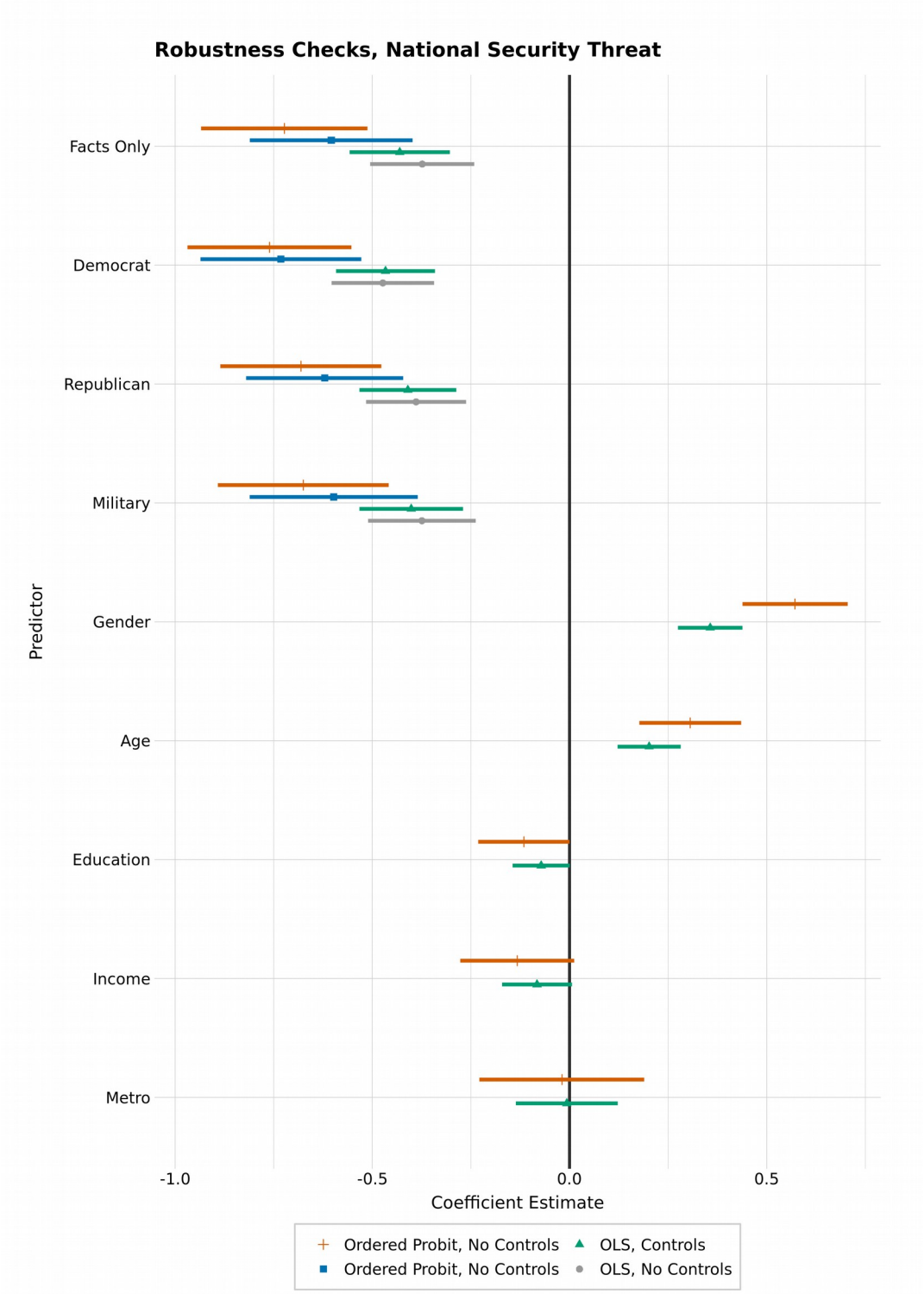

Figure A4: Robustness checks for models of national security threat. The model with ordinary least squares and no controls is the main model reported in the manuscript (Figure 1). The following models are also estimated: OLS with demographic controls, ordered probit with no controls, and ordered probit with demographic controls. Although effect magnitude displays some variance, the direction and significance of each treatment condition remain constant across model specifications.

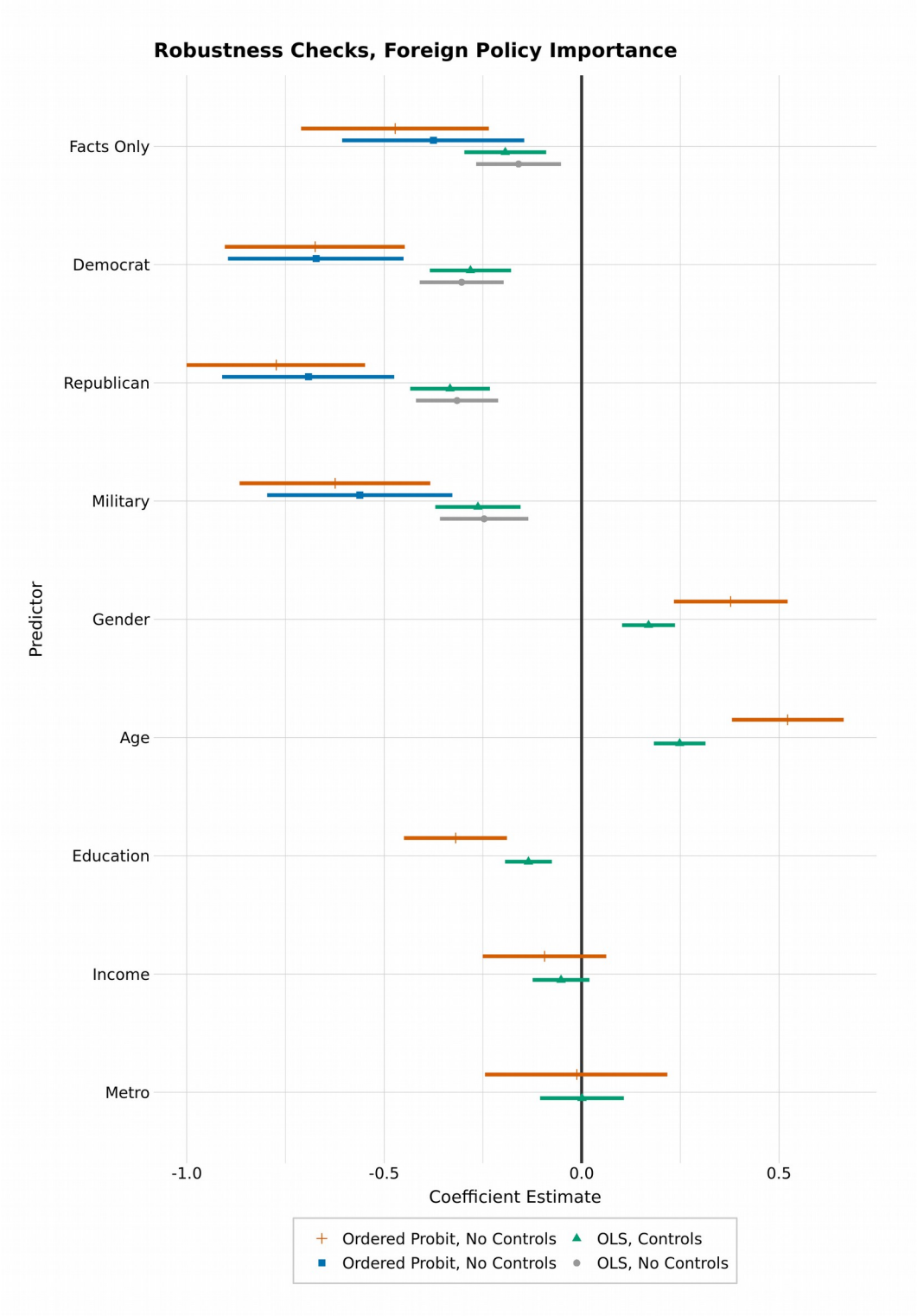

Figure A5: Robustness checks for models of foreign policy priority. The model with ordinary least squares and no controls is the main model reported in the manuscript (Figure 1). The following models are also estimated: OLS with demographic controls, ordered probit with no controls, and ordered probit with demographic controls. Although effect magnitude displays some variance, the direction and significance of each treatment condition remain constant across model specifications.

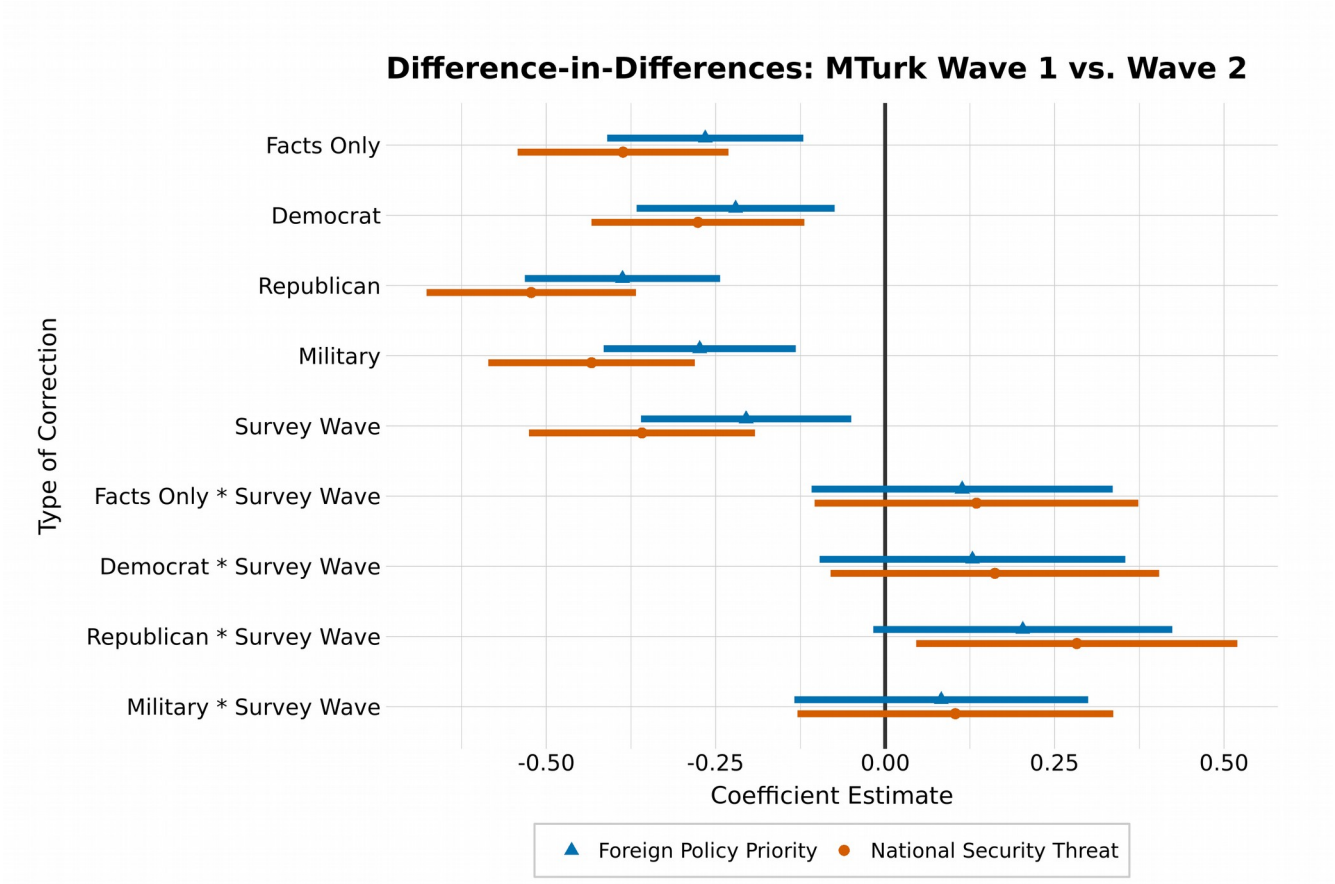

Figure A6: Difference-in-differences test of whether effects decreased significantly from Wave 1 to Wave 2 in the MTurk survey. Estimates of the magnitude and significance of the difference are captured in the interaction terms. The models are estimated for both terrorism as a foreign policy priority and as a national security threat, and use OLS and 95% confidence intervals. Of the eight interactions, only one – terrorism as a national security threat with a Republican endorsement – shows a significant decrease in treatment effectiveness. Otherwise, while interaction terms all point in the direction of some effect attenuation, no other conditions meet standards for statistical significance.

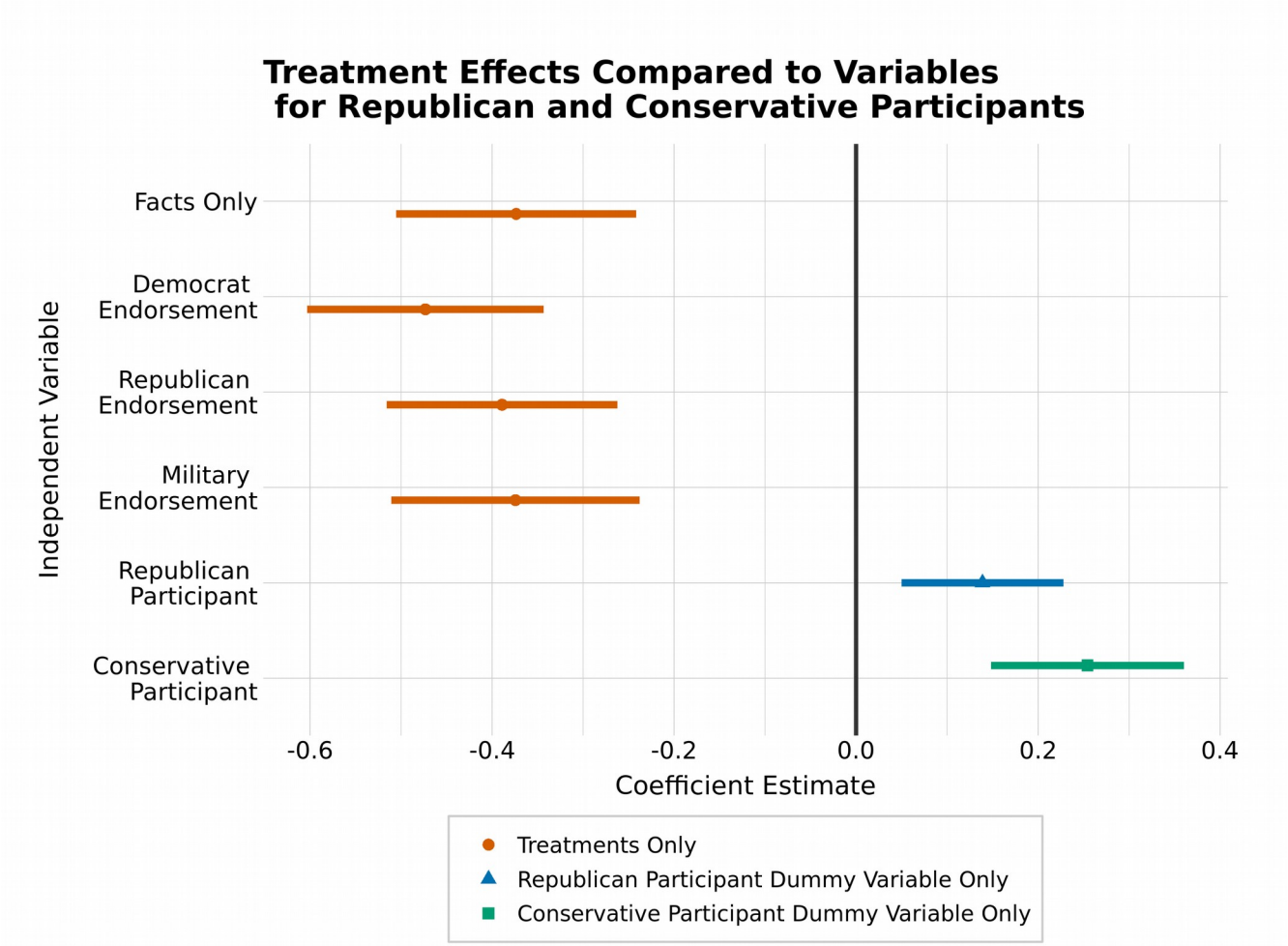

Figure A7: Comparison of the treatment effects to coefficients from models that only include a dummy variable for either Republican or conservative participants. The dependent variable across models is a participant's perception of terrorism as a national security threat. Models are estimated using OLS with 95% confidence intervals. While in opposing directions, the difference in effect sizes between treatments and the dummy variables is sizeable. Treatment effects are roughly twice the size of the dummy variable coefficients.