How civilian casualty information shapes support for US involvement in an ally country's war effort?

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Abstract

War is often described as "heart-wrenching," but how do portrayals of conflict influence public support for US involvement when it is not directly engaged? This paper examines how information about civilian casualties and infrastructural damage, commonly found in media coverage, shapes public opinion on whether the US should provide military, diplomatic, and economic aid to foreign nations. Using a longitudinal survey of a probability sample of Americans and four experiments (three preregistered and two with nationally representative samples), we analyze both the ongoing conflict between Ukraine and Russia and hypothetical conflicts involving a US ally and a US adversary. Findings indicate that information about civilian harm significantly increases public support for US involvement, with empathy mediating this effect—but only when the casualties are civilians from an ally, not an adversary, country. The theoretical and applied implications of these important and timely findings are discussed.

civilian casualties | US foreign policy | empathy | Ukraine | communication

Over the past couple of years, newspapers, cable news, and social media platforms have consistently covered international conflicts, as well as the extent of US support for its allies involved in those conflicts. This media coverage has featured images of dilapidated buildings and devastated infrastructures, reports on civilian and military casualties from both ally countries and their adversaries, and narratives highlighting civilians impacted by the conflict. Meanwhile, support for allied nations like Ukraine has remained a constant topic of discussion, with frequent media coverage of debate surrounding military, economic, and diplomatic assistance for these nations embroiled in conflict. But do reports of civilian casualties in conflicts where the US is not directly involved militarily influence Americans' support for policies aimed at assisting other nations in their own war efforts? Are these reports more influential than reports of military casualties, and do the effects depend on whether the civilian casualties are from the US ally's side in the conflict? What types of information have the most impact, and what mechanisms drive the US public to support foreign involvement in these contexts?

These questions are critical to a variety of disciplines that seek to understand how we respond to contemporary events in the world, including political communication, international relations, and political and social psychology. The literature has long acknowledged that war casualties represent the most visible and salient information that media outlets present when covering foreign conflicts. It is also clear that when the US is engaged in combat, media reports on American military casualties (i.e., dead and injured armed force personnel) turn the US population against the war effort (Gartner and Segura 1998, 2021), although the onset of a conflict and major military developments can initially increase patriotic support (Brody 1991). Similarly, when American forces are involved in the war, foreign civilian casualties (i.e., dead and injured civilians) elicit public outcry, increasing calls to withdraw from the conflict (Crawford et al. 2017; Friedman and Sutton 2013; Johns and Davies 2019; Walsh 2015). Yet, our theoretical and empirical understanding of the relation between information

about casualties and American public support for involvement in military conflicts is unlikely to be complete without evidence about the impact of information on civilian harm in conflicts *without* American forces' involvement. This paper concerns this impact.

Current theories about responses to civilian casualties propose that citizens in affluent Western societies have adopted a norm that emphasizes the protection of civilians during wartime (Crawford 2013; Dill et al. 2023; Pinker 2012). Thus, we hypothesize that when the US is not responsible for civilian casualties, as is the case when it is not directly fighting in the war, the public may still seek to protect foreign civilians by helping them defend themselves against attacks. One mechanism that may promote support for other countries when the media report on harm to civilians is empathy. Empathy can facilitate a deeper understanding of others' perspectives (Gadarian and Brader 2023) and is an important consideration in political contexts. For example, cues that encourage individuals to "step into" the perspective of other nations can significantly enhance support for international cooperation (Adida et al. 2018; Casler and Groves 2023). War correspondents, photographers, and other media professionals play a critical role in fostering this empathy by capturing civilian suffering in relatable ways and humanizing victims through compelling narratives (Höijer 2003). These media professionals may be motivated by various factors, including moral imperatives to expose human rights violations, professional prestige associated with war coverage, or financial incentives from news organizations seeking compelling stories. Regardless of their motivation, their work serves to make distant suffering more immediate and tangible to the public.

During wartime, exposure to distressing information about destruction and loss of civilian life should be able to elicit empathetic responses, prompting attitudes and support of policies aimed at helping those in need (Gutsell and Inzlicht 2010; Hudson et al. 2019; Rameson et al. 2012; Morelli and Lieberman 2013). The protection of human life is often considered a "sacred" or core moral value (Tetlock 2003), with "infinite or transcendental significance

that precludes comparisons [and] trade-offs" (Tetlock et al. 2000, p. 853). Thus, even though casualties are often considered a signal of cost and the need to abandon a "losing proposition" (Gartner and Segura 1998), information about casualties might also evoke compassion and care for those affected (Agerberg and Kreft 2023; Kreft and Agerberg 2024). Information about casualties is likely to elicit empathy especially when victims are innocent and not in competition with the perceiver (Eisenberg and Miller 1987; Graziano et al. 2007; Oswald 1996; Paciello et al. 2013; Batson 2018; Preston 2013). As a result, compared to depictions of military casualties, depictions of civilian harm may produce greater empathy and ultimately support for policies to assist foreign countries. Depictions of civilian casualties may also have more pronounced effects in conflicts that involve an ally country with strong political, social, and economic bonds with the US. In contrast, information about civilian casualties from an adversary nation may be overlooked, not eliciting the same emotions or support for US involvement.

Possible preconditions for the effect of media portrayal of civilian casualties should be considered as well. Outstanding questions include whether information about civilian casualties is influential when it involves verbal descriptions and images or only verbal descriptions; whether information about damage to civilian infrastructure has an effect in the absence of references to casualties; whether concrete information about casualties is necessary; and whether the duration of the war matters. To begin, war images are frequently used to induce an emotional response, but verbal depictions and stories are powerful as well (Griffin 2010; Joseph et al. 2020). Contemporary coverage of wars often includes detailed descriptions of infrastructural damage and casualties in specific contexts (Hoskins and O'loughlin 2010). However, the effect of such information on empathy and public support for a foreign country remains unclear. Additionally, a war that lasts longer may lead to an erosion of support over time, as prolonged conflicts are perceived as endless (Sanaei 2019), prompting considerations to end

the war.

This paper explores how exposure to information about civilian casualties in an ally country at war influences foreign policy attitudes. We hypothesize that exposure to civilian casualties can evoke empathy for the victims in the ally country, thereby increasing support for US involvement in the conflict. To test this hypothesis, we analyze both the real-world example of the Ukraine-Russia war and various hypothetical international conflict scenarios, achieving a comprehensive examination of our hypothesis. The Ukraine war is interesting because we do not yet know how the public is affected by the high human toll of the conflict.[1] Despite the passage of time since the war began on February 24, 2022, a majority of Americans continue to hold positive attitudes toward Ukraine and support military and economic aid to the country (Poushter et al. 2023; Kafura and Smeltz 2024). Accordingly, the Biden administration has continued to provide military, economic, and diplomatic aid to Ukraine[2], which the president has justified by repeatedly emphasizing the democratic values and aspirations of Ukrainians vis-a-vis Russia's authoritarian ambitions (Wertheim 2022). However, the question remains:

[1]As with other conflict zones (Khorram-Manesh et al. 2021), the exact number of civilian casualties in the Ukraine war is uncertain. The Office of the United Nations High Commissioner for Human Rights (OHCHR) suggests that the actual figures could be considerably higher than official reports indicate. Ukraine's leading war crimes prosecutor has also noted that the total number of dead could be more than 10 times the official reports. See: https://www.independent.co.uk/news/world/europe/ukraine-war-anniversary-war-crimes-b2288037.html

[2]For example, in 2022, Biden stated that "there's an ongoing battle in the world between autocracy and democracy ... we have sent more than $3 billion in security assistance to Ukraine ... and that money is a direct investment in defending freedom and democracy itself" (The White House 2022). More recently, during a briefing following the signing into law of a bill that provides billions in aid for Ukraine, Biden said, "We'd have no choice but to come to their aid, just like our NATO allies came to our aid after the September 11 attacks," by "sending in equipment to Ukraine for air defense munitions, for artillery, for rocket systems and armored vehicles." (U.S. Department of Defense 2024)

to what extent does information about civilian casualties in Ukraine shape public support for US involvement, and through what mechanisms does this influence occur?

To address these issues, we longitudinally surveyed a probability sample of US residents and conducted four experiments, three of them preregistered. First, in the longitudinal survey (Study 1), we ask respondents to identify the aspect of the Ukraine war they hear most often about in the news (similar to "most important issue/problem" indicators, see: Moniz and Wlezien 2020). Then, in the experiments, we directly manipulate exposure to information about civilian casualties. Support for US involvement is measured in several ways, including support for the democratic cause of the war (i.e., agreement that the war is a fight for democracy); backing of US policies for military, diplomatic, and economic assistance; approval of the actions taken by the countries in conflict; general attitudes toward US foreign involvement; and direct choices of what allies to support in particular conflicts. Our hypothesis is that exposure to information about civilian casualties should generate stronger support for the ally country compared to either no information about casualties or information about military casualties. The positive impact of civilian casualty information on support, however, may or may not persist when the ally country is perceived as socio-politically dissimilar from the US, an issue examined in Study 2. Studies 3-5 investigate other critical factors by measuring empathy, using media reports involving only text, comparing the impact of civilian and military casualties, analyzing the influence of descriptions of damaged civilian infrastructure, contrasting civilian casualties from ally and adversary countries, as well as manipulating the presence of concrete information about numbers of casualties in particular events and different durations of a war. Studies 1-4 focused on the Ukraine-Russia war, and Study 5 used conjoint analyses of hypothetical conflicts involving an ally country.

Being considered a US ally is important for countries that depend on American backing and support, whether for security, economic aid, or diplomatic influence. However, which countries

are regarded as allies and the strength of these relationships are part of a dynamic process that evolves over time. Public opinion in the United States can also influence these alliances, particularly when the relationships involve risks or contentious decisions (Tomz et al. 2020). This study explores whether, in conflicts like the Ukraine-Russia war, the portrayal of civilian casualties affects support for the conflict and whether Americans' empathy and support for suffering civilians differs across ally and adversary countries. Russia has repeatedly claimed that Ukraine is intentionally targeting Russian civilians in an effort to counter Ukraine's narrative as a victim of Russian aggression and thus shift international attention. This raises questions about whether these claims should depend on American's empathy for US allies and adversaries.

Study 1 - Probability Panel of US Residents

In our first study (N = 2020; see Methods for details), we collected longitudinal data (six waves) from a probability, phone/Internet hybrid panel of adults residing in the US. To assess the prominence of various aspects of the war in media coverage, respondents were asked, 'What aspect of the Ukraine war do you hear most often about when following the news?' This question allowed us to examine the salience of different topics within the media narrative. The average percentage of people who said the issue of civilian casualties was "the most salient issue" across the six waves is about 21 percent (Appendix, Table A3). This high percentage underscores that this issue has consistently been a focal point of public attention throughout the study period.[3]

[3]It should be noted that the proportion of respondents categorizing civilian casualties as the most salient issue declined from approximately 29 percent in the first survey to 18 percent in the last. This suggests that public attention to civilian casualties declined as the war progressed, perhaps because other issues became more important as time elapsed. Notably, a consistently higher percentage of Democrats identified this as the

As a preliminary analysis, we examined the relation between US news on Ukrainian civilian casualties and the salience of civilian casualties as reported in our survey. To obtain the news about this issue, we used Nexis Uni with the search terms "Ukraine," "civilian," and "casualties" in English, covering the period from February 2022 to September 2023, and focusing on news publications in the US.[4] The results of the mixed-effects logistic regression (see Appendix, Table A1) suggest a higher likelihood of survey respondents indicating civilian casualties as the most salient issue with increased news coverage of civilian casualties. This finding thus indicates that our survey measure of issue salience is indeed related to actual news coverage.

To examine how media salience of civilian casualties shaped attitudes in support of US involvement in the war, we focus on two survey items. As mentioned, since the beginning of the Ukraine war, the Biden administration has framed its support for Ukraine as a global fight for democracy (Wertheim 2022). On waves 1-6, we, therefore, asked how much respondents agreed that "the war between Russia and Ukraine is, on a larger scale, a fight for democracy", on a 4-point scale, with 1 indicating "Strongly disagree" and 4 indicating "Strongly agree.". On waves 5-6, we also asked respondents if they "approve or disapprove of US support to Ukraine?", on a 7-point scale, with 1 indicating "Strongly approve" and 7 indicating "Strongly disapprove."

Table 1 shows how the salience of civilian casualties affects justification for the war as a fight for democracy, using mixed-effect models with lagged independent variables. The first model includes only lagged salience as the main predictor. The results indicate a significant positive

most salient issue, relative to the same percentages for Republicans and Independents. Nevertheless, all three groups follow a similar pattern through most of the study period, likely reflecting changes in media coverage about Ukraine.

[4]We measured US news on Ukrainian civilian casualties by summing monthly articles, averaging them quarterly, and applying a $\log_{10}$ transformation.

Table 1: The Effects of Media Salience of Civilian Casualties on Democratic Cause and Support Approval (Study 1 - Probability Panel of US Residents)

	Ukraine War is a Fight for Democracy				Approval of Support
Civilian Casualty Salience$_{t-1}$	0.068	0.069	0.071	0.075	0.206
	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)
Right-wing Media Exposure$_{t-1}$		-0.023	-0.014	-0.013	-0.067
		(0.000)	(0.010)	(0.015)	(0.000)
Party Identification$_{t-1}$			-0.117	-0.117	-0.427
			(0.000)	(0.000)	(0.000)
Ideology$_{t-1}$			-0.067	-0.067	-0.242
			(0.000)	(0.000)	(0.000)
Survey Wave				0.010	
				(0.055)	
Constant	2.838	2.872	3.320	3.282	6.256
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
σ^2_μ: Individual	0.549	0.538	0.484	0.484	2.209
Prob. $> \chi^2$	0.001	0.000	0.000	0.000	0.000

Note: p-values in parentheses.

effect of the salience of civilian casualties on reported democratic justification for the war. The second model adds lagged values of reception of right-wing media, which was measured on a scale of 1-7, as the number of days during a week respondents receive information from "sources such as Fox News, Breitbart News, One America News, or The Drudge Report". The third model adds lagged indicators for party identification, measured on a 3-point scale (1 Democrat, 2 Independent, and 3 Republican), and ideology measured on a five-point scale (from 1, very liberal, to 5, very conservative). The fourth model adds a counter variable for the survey wave (1-6) as control variables. Consistent with our hypothesis, even when these control variables are included in the model, the impact of the salience of civilian casualties remains positive and significant.

To test the robustness of our findings, we also examined whether a different measure of support for Ukraine, the direct measure of approval of support included in waves 5 and 6, is also influenced by the salience of civilian casualties. The results are reported in the last

column of Table 1. The model includes lagged salience as the main predictor, with reception of right-wing media, party identification, and ideology as control variables. The results again demonstrate that respondents who chose civilian casualties as the most important issue in the previous wave of the survey were more likely to approve of US support for Ukraine in the next wave of the survey. This finding thus supports our hypothesis that media reports of civilian casualties can increase support for US involvement in the Ukraine war.[5]

Study 2 – Preregistered Experiment Manipulating Exposure to Information on Civilian Casualties

Study 1 shows a positive association between categorizing civilian casualties as the most salient issue and our two measures of support for Ukraine, but cannot firmly establish the direction of causality. In particular, through a self-selection bias, respondents who are more concerned with the Ukraine war may seek media about civilian casualties in the conflict, thus complicating the interpretation of our findings. To address this possibility, Study 2 directly manipulates exposure to information about civilian casualties in the Ukraine war. We predict that individuals who are presented with information about civilian casualties will have more support for Ukraine than those not presented with this information. This study (N = 1,200; see Methods for details) used a convenience sample from Prolific, with quotas for Republicans and Democrats (see Methods for details).

Our experiment also examines the impact of information concerning a foreign country's sociopolitical characteristics. While the Biden administration continues to justify the war

[5]Additionally, our analysis shows that respondents who reported hearing about civilian casualties had higher scores on "Support for Democracy" compared to those who reported other aspects of the Ukraine war. All other categories (e.g., refugees, threats of weapons of mass destruction, NATO membership, military aid) have negative coefficients relative to civilian casualties, indicating lower support for democracy.

in Ukraine as a fight for democracy, some political pundits portray Ukraine as a corrupt and undemocratic country undeserving of US support (Geissler et al. 2023). For example, Tucker Carlson stated on Fox News (February, 2022): 'You can't say it enough, Ukraine is not a democracy. ... In American terms, you would call Ukraine a tyranny' (Kessler 2022). This aspect aligns with ongoing research highlighting the potential role of social, political, and economic characteristics in shaping empathy and support for other countries (Mutz 2021). Specifically, we introduce information about Ukraine as either socio-politically similar or dissimilar to the US. Perceiving Ukraine as akin to the US may heighten support for the war and also increase the impact of information about civilian casualties.

In our preregistered experiment, participants were randomly assigned to one of four conditions in a 2 (casualty information: present vs. absent) by 2 (similarity: similar vs. dissimilar) factorial design. Initially, participants received a fact sheet that described Ukraine as socio-politically similar to or different from the US (Appendix, Table A4). Subsequently, they read an article, accompanied by images, that either detailed Russian attacks on Ukrainian civilians or discussed the war in general terms without mentioning civilian casualties (Table 2). Then we measured participants' foreign policy attitudes. To this end, informed by seminal works in the field of public opinion on foreign policy (Herrmann and Keller 2004; Gelpi et al. 2005; Milner and Tingley 2013), we constructed three indices: (1) *US Support for Ukraine* Index, which measures approval of US support for Ukraine, using six items on a 7-point scale, with 1 indicating "strongly disapprove" and 7 indicating "strongly approve."; (2) *Ukraine Approval* Index, which measures approval of Ukraine's actions in the conflict, using two items on a similar 7-point scale; and (3) *Perspectives on Foreign Involvement* Index, which measures foreign policy preferences related to the global role of the US, using four items on a 7-point scale with 1 indicating "strongly disagree" and 7 indicating "strongly agree" (see Methods for details). Afterward, participants answered a series of manipulation check questions, to assess

their evaluation of civilian casualties in the war and perceived similarity to the US. Regressing these subjective estimates on the manipulations of exposure to civilian casualties and information on similarity to the US reveals that our manipulations were perceived as intended (see Methods for details).

The first three columns in Table 3 show the results for each dependent measure in Study 2. All models include the two manipulations (exposure to civilian casualties and similarity between Ukraine and the US), and party identification, measured as a binary variable (1 Democrat and 2 Republican). The main finding from these models is, like in Study 1, that exposure to civilian casualties has a positive and significant effect on support for Ukraine. Respondents who are (vs. are not) exposed to information about Ukrainian civilian casualties are more likely to approve of US's support to Ukraine, Ukraine's actions, and US's foreign involvement.

Overall, our results support the hypothesis that participants are more likely to support Ukraine when they receive information about civilian casualties than when they do not. Furthermore, contrary to the prediction that civilian casualties may have stronger impacts when Ukraine is perceived as similar to the US, this effect does not interact with information about the similarity to the US (Appendix, Table A6, Models 14, 16, and 18). Moreover, despite Democrats having stronger support for Ukraine relative to Republicans, our results generalize across Democrats and Republicans, suggesting that information about casualties heightens support in both groups (Appendix, Table A6, Models 15, 17 and 19).[6]

[6]We also explore party differences, between Republicans and Democrats, across the five main types of aid that the US is providing to Ukraine (Appendix, Figure B1). The impact of receiving information about civilian casualties for Republicans is strongest on sharing intelligence with and sending military weapons to Ukraine. For Democrats, the impact of casualties is strongest on sending troops to Ukraine.

Table 2: Manipulations in Studies 2-5

Studies 2 & 3	**Study 4**
Civilian Casualties – Present	
Since Russia invaded Ukraine, over 100,000 Ukrainian civilians were killed or injured, many of them due to Russia targeting civilian infrastructures such as residential areas, schools, hospitals, and public transportation.  A local resident looks at his home, damaged by a Russian rocket attack in Sloviansk, Donetsk region, Ukraine on Friday, Photo: Roman Chop via AP	Since Russia invaded Ukraine, over 100,000 Ukrainian civilians were killed or injured, many of them due to Russia targeting civilian infrastructures such as residential areas, schools, hospitals, and public transportation.
Civilian Casualties – Absent	
Since Russia invaded Ukraine, the situation in the region has been very complicated, with many factors contributing to the ongoing tension and uncertainty.  Antony Blinken walks past Sergei Lavrov, lower, during the G20 foreign ministers' meeting in New Delhi on Thursday. Picture: AFP	Since Russia invaded Ukraine, over 100,000 Ukrainian military personnel were killed or injured, many of them due to Russia targeting military infrastructures such as barracks, training facilities, logistics bases, and transportation convoys.

Study 5: Example	
Conflict 1	Conflict 2
War Duration: 4 months	War Duration: 48 months
US Ally Country X In conflict with Y	US Ally Country A In conflict with B
Impact of Adversary on US Ally Country	
Number of Civilian Casualties in Ally Country: 2240 civilian casualties	Number of Civilian Casualties in Ally Country: 4429 civilian casualties
Percentage of Ally infrastructures lost: 20% of civilian infrastructures	Percentage of Ally infrastructures lost: 39% of civilian infrastructures
Recent Event Outcome in Ally Country: 46 civilians killed and 86 injured during a siege on a city district.	Recent Event Outcome in Ally Country: 80 civilians killed and 93 injured during a raid on a cultural center.
US Adversary Country Y In conflict with X	US Adversary Country B In conflict with A
Impact of US Ally on Adversary Country	
Number of Civilian Casualties in Adversary Country: 392 civilian casualties	Number of Civilian Casualties in Adversary Country: 2101 civilian casualties
Percentage of Adversary infrastructures lost: 23% of civilian infrastructures	Percentage of Adversary infrastructures lost: 31% of civilian infrastructures

Table 3: Regression Analyses: Impact of Civilian Casualties (studies 2, 3 and 4)

Experiments:	Study 2			Study 3	Study 4
	Ukraine Support	Ukraine Approval	Foreign Involvment	Ukraine Support	Ukraine Support
Casualties	0.240	0.177	0.161	0.182	0.220
	(0.002)	(0.023)	(0.029)	(0.044)	(0.025)
Similarity	0.403	0.238	0.144		
	(0.000)	(0.002)	(0.052)		
Party Identification	-0.572	-0.270	-0.668	-0.691	-0.697
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	5.410	6.003	5.446	6.195	5.840
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	1152	1152	1152	761	790

Note: p-values in parentheses. Party Identification is a binary variable (D/R) in Study 2, and a three-category variable (D/I/R) in Study 3 and 4. The Civilian Casualties manipulation involved the presence vs. absence of civilian casualties in Studies 1 and 2, and a comparison of civilian vs. military casualties in Study 4.

Study 3 – Experiment and The Role of Empathy in a Nationally Representative Sample

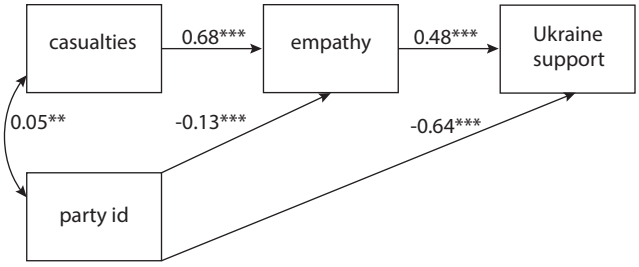
Although the prior studies are consistent with the hypothesis that information about Ukrainian civilian casualties produces empathy in recipients, the studies do not directly investigate the underlying process. Therefore, Study 3 (N = 800; see Methods for details) involved a representative US sample and manipulated the presence or absence of information about civilian casualties in the Ukraine war, in a 2-cell design. Then, respondents' support for US involvement in Ukraine was measured, using the same measurement of *US Support for Ukraine* as in Study 2. Subsequently, empathetic responses were measured using an *Empathy* Index, which includes six items on a 5-point scale, with 1 indicating "strongly disagree" and 5 indicating "strongly agree". Unlike Study 2, Ukraine was described as moderately similar to the US in this experiment. The information about casualties, however, was identical to Study 2 (see Table 2).

As a first step, we assess the direct effect of information about civilian casualties on support for Ukraine while controlling for party identification, which is measured on a 3-point scale (coded as 1 for Democrat, 2 for Independent, and 3 for Republican). The results, presented in the fourth column of Table 3, reproduce the findings from Study 2. Specifically, exposure to information about civilian casualties leads to stronger approval of US support for Ukraine. These results are important because they not only support our earlier findings with a nationally representative sample but also demonstrate that they hold when Ukraine is portrayed as moderately similar to the US. Following this foundational analysis, we proceed to examine the role of empathy in shaping public support for Ukraine.

Figure 1a presents the results of the mediation analysis, conducted using structural equation modeling (SEM), to assess the potential intervening role of empathy in the relation between exposure to civilian casualties and approval of US support for Ukraine. We estimate the model using Maximum Likelihood estimation and obtain key fit statistics, including the Root Mean Square Error of Approximation (RMSEA) and Comparative Fit Index (CFI). Overall, these statistics indicate that the proposed mediational chain (Model 1a) fits the data.

Even though mediation analyses provide evidence of the mechanism underlying the experimental effect, the relation between empathy and support for the war remains correlational. To address potential reverse causation, we compared our Proposed Chain Model with two alternative specifications. The first alternative (casualties $\longrightarrow$ Ukraine support $\longrightarrow$ empathy) showed notably poorer fit (AIC = 7491.184, BIC = 7551.434, RMSEA = 0.397, CFI = 0.695) compared to our hypothesized model (AIC = 7373.795, BIC = 7434.045, RMSEA = 0.055, CFI = 0.994). A second alternative model testing whether empathy precedes casualties (empathy $\longrightarrow$ casualties $\longrightarrow$ Ukraine support) also showed inferior fit (AIC = 7462.571, BIC = 7522.821, RMSEA = 0.346, CFI = 0.770). These comparisons provide robust support for our interpretation that exposure to civilian casualties triggers empathy, which subsequently

(a) Proposed chain

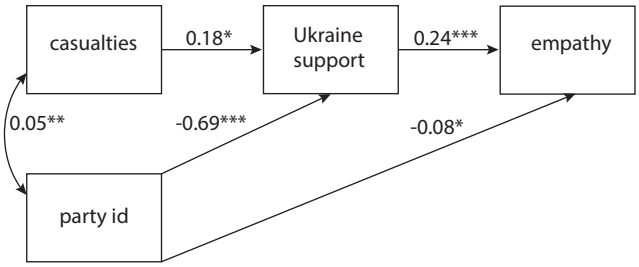


Indirect effects:

- casualties 0.32***
- party id -0.06***

N=761 , AIC=7373.795 , BIC=7434.045 , RMSEA=0.055 , CFI=0.994

(b) Alternative chain 1

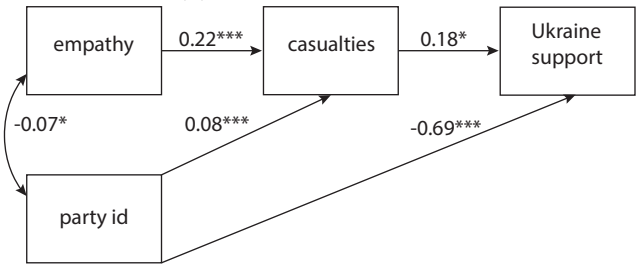


Indirect effects:

- casualties 0.04*
- party id -0.17***

N=761 , AIC=7491.184 , BIC=7551.434 , RMSEA=0.397 , CFI=0.695

(c) Alternative chain 2



Indirect effects:

- empathy 0.04*
- party id 0.01

N=761 , AIC=7462.571 , BIC=7522.821 , RMSEA=0.346 , CFI=0.770

Figure 1: Path Analyses
Study 3 - Experiment and The Role of Empathy.

increases support for Ukraine.

Study 4 – Preregistered Experiment Manipulating Exposure to Information on Civilian vs. Military Casualties

Building on the experimental design of the previous studies, Study 4 (N = 800; see Methods for details) investigates the differential impacts of exposure to information about civilian versus military personnel casualties. This preregistered study, which involved a quota sample balanced for party identification and sex, also examines if the effect of casualties is present not only with text and images, as in Study 1, but also with only text (see Table 2). Participants were randomly assigned to one of two groups. The first group received information about over 100,000 civilian casualties in Ukraine, resulting from targeted attacks on residential areas and hospitals. The second group was presented with information about an equivalent number of Ukrainian military personnel casualties, due to attacks on barracks and training facilities (Table 2). The dependent variables measured in this study were the same as in Study 3 and included two indices: *US Support for Ukraine* and *Empathy*. Also included is a 3-category measurement for respondents' party identification, similar to Study 3.

The results, detailed in the last column of Table 3, indicate a distinct difference in public support for Ukraine depending on the type of casualties reported. Participants exposed to information about civilian casualties showed significantly higher support for Ukraine than those who received reports of military personnel casualties. This finding suggests that, as predicted, civilian casualties evoke greater support for US involvement, signaling a special significance of civilian harm in an ally country. Similar to Study 3, we further find that empathy mediates this relation (Appendix B2). Study 5 also addresses this issue and again tests the role of empathy in a broader range of hypothetical conflicts.

Study 5 – Preregistered Experiment Evaluating the Impact of Civilian Casualties in Hypothetical Wars in a Nationally Representative Sample

Study 5 (N = 300; see Methods for details) seeks to extend the findings from previous studies by exploring support for US involvement in hypothetical international conflicts involving allies. While earlier studies focused on the effects of information about civilian casualties in the Ukraine conflict, this study adopts a broader framework to explore whether the observed patterns hold in a more generalized model of international relations. Specifically, Study 5 tests the impact of several factors, including the number of casualties, the severity of infrastructure damage, concrete details about the circumstances of casualties, and the duration of the conflict, for both ally and non-ally countries. By addressing these variables, this study provides a more comprehensive understanding of the mechanisms and preconditions influencing public opinion in diverse international crises.

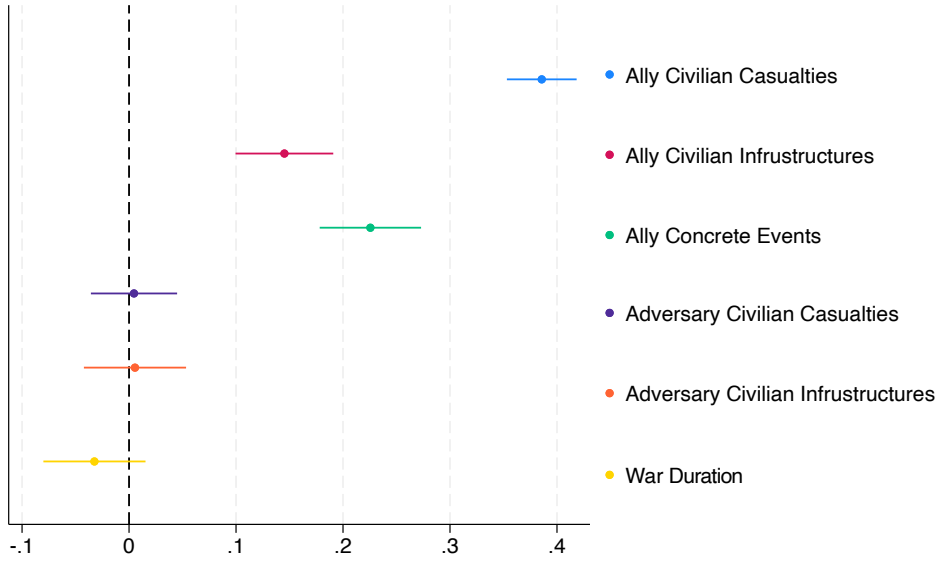
Our sample took part in a conjoint experiment designed to simulate decision-making processes related to international conflicts. Each participant was presented with ten hypothetical scenarios, each detailing two separate conflicts in different global regions, involving various countries. Each conflict was structured to include detailed attributes of about two countries: one a US ally and the other an adversary. The manipulated attributes included the number of civilian casualties in the ally and adversary countries (a randomly selected number between 0 and 100,000), the extent of damage to civilian infrastructure in each country (a randomly selected number between 0 and 40%), concrete information about numbers and circumstances of recent casualties (a randomly selected number between 0 and 200 casualties in a specific event; e.g., #civilians were injured and #were killed "in shelling of a residential area"), and the duration of the conflict (a randomly selected number between 0 and 60 months). Partic-

ipants then choose whether or not they approved of more US support (military, diplomatic, and economic) to either ally country in the described choice, followed by a report of their level of empathy for each ally country.

The initial analysis examines the direct impact of information about civilians on public support for an ally country. As predicted, participants supported a US ally more when presented with scenarios featuring higher numbers of civilian casualties, more substantial damage to civilian infrastructure, and concrete information about civilian harm in the ally country. The marginal effects from the binary logistic regression, presented in Figure 2a, illustrate the dynamics of these influences. Specifically, we examine the difference in the probability of supporting an ally country for each attribute's full range effect (from minimum to maximum values). The difference in probability of support is 0.4 higher for civilian casualties, 0.1 higher for civilian infrastructure damage, and 0.2 higher for concrete information about casualties in the ally country. However, the impacts of attacks on civilians or infrastructure in the adversary country have no significant effects on the probability of support. Nor does the duration of the war have a significant effect.

In the next analysis, we focus on the mediating effect of empathy. The models, as depicted in Figure 2b, illustrate the total, direct, and indirect effects of each significant manipulation from the previous analysis. As predicted, the effects of civilian casualties, civilian infrastructures, and higher numbers of concretely described casualties on support for an ally country are mediated through empathy. Moreover, for all three attributes, we observe partial mediation, with civilian casualties showing the strongest indirect effect. Overall, these findings indicate that empathy channels the impact of information about civilian casualties on support for US involvement.

(a) Marginal Effects



(b) Mediation Analyses

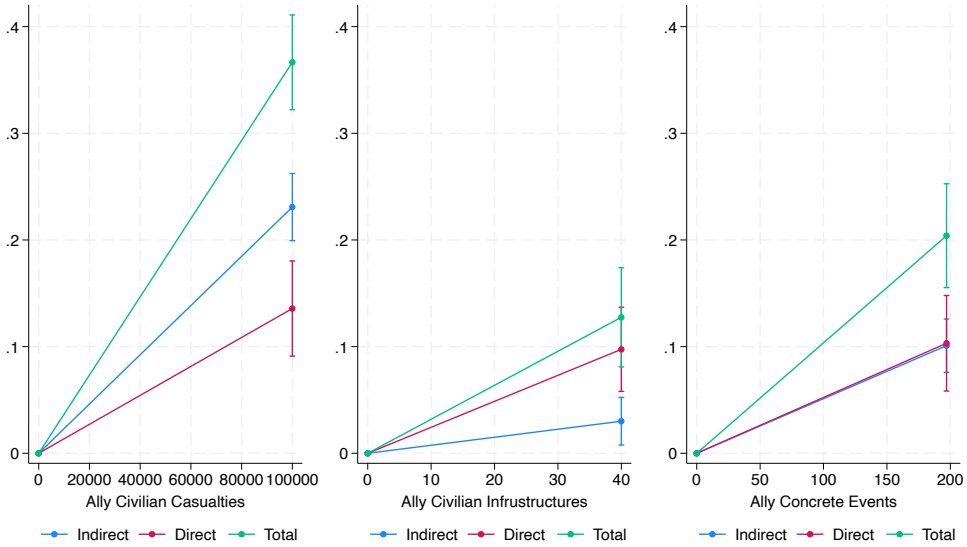


Figure 2: Results from Conjoint Experiment, Study 5 – Preregistered Experiment Evaluating the Impact of Civilian Casualties in Hypothetical International Conflicts.

Discussion

Five studies examined how information about civilian war casualties from an ally country influences support for US involvement in a conflict. Across correlational studies and experiments, our findings consistently demonstrate that the type of information disseminated has the potential to shape public support for US foreign involvement. We started with a longitudinal analysis of a large national study (Study 1), which showed that the salience of civilian casualties in the Ukraine war was positively associated with a democratic justification for the war. This finding was robust across different model specifications and alternative attitudinal measures of support for Ukraine.

Next, we used experiments to directly manipulate information exposure in our case study – the war in Ukraine – and examine its impact on public opinion. Study 2 expanded our analysis by establishing the causal effect of exposure to text and images of civilian casualties on support for US involvement in Ukraine. Study 3 provided a replication of these experimental findings and added critical mediational evidence about the role of empathy, showing that the emotional response to civilian suffering is a key factor in shaping US public opinion. Study 4 extended this analysis by comparing the effects of information presented solely through text about civilian casualties versus military personnel casualties. Highlighting the unique impact of civilian-focused narratives, the findings revealed that information about civilian casualties elicited significantly more support for US involvement compared to information about military casualties.

Study 5 expanded the scope of our analysis beyond the context of the Ukraine conflict by exploring responses to hypothetical international conflict scenarios involving US allies. The findings identified four key drivers of empathy and ultimate support for a country at war: the number of civilian casualties from the ally side, the extent of damage to ally's

civilian infrastructure, and concrete accounts of recent attacks on civilians. The mediation analysis demonstrated that empathy played a role in translating these attributes into increased support for US involvement. Yet, of these three components, we found that the number of civilian casualties had the strongest direct and indirect impact on support for the ally country. Equally important, as anticipated, information about civilian casualties and damaged civilian infrastructure did not boost support when they affected a nation that was not a US ally.

Our research contributes to the existing literature on the influence of portrayals of militarized conflicts on public opinion regarding foreign policy (Kraitzman and Ostrom 2021; Kraitzman and Genauer 2023). We demonstrate that exposure to war casualties does not necessarily lower support for involvement in the conflict. Instead, our findings suggest a more nuanced public response, wherein the depiction of civilian casualties generates selective public support for government action that could prevent further atrocities against civilians abroad. While previous studies have found that pride and enthusiasm are key emotions mediating public support during wartime (Aday 2010), our study reveals that empathy can also be a powerful motivator for public opinion, above and beyond the desire to minimize the costs of a war. Our study further reinforces Gartner and Gelpi's (2016) finding that the content of war information matters more than its format of delivery – whether the information is conveyed through images or text.

However, our findings must be interpreted in light of certain limitations. One concern is the potential bias in self-reported measures of empathy and policy support, especially given the highly polarized state of US politics on foreign policy issues (Smeltz 2022). Similar to challenges in estimating military casualties in modern conflicts, contextual factors and measurement tools introduce uncertainty (Khorram-Manesh et al. 2022) that also affects media coverage and public opinion. In a polarized environment, the public may rely on often conflicting estimates of war casualties, which can shape their levels of empathy and influence support

for foreign policy decisions. Future research could address this issue by exploring the sources of casualty estimates and how they are perceived by the public, as well as by examining the role of media framing in shaping these perceptions. Such an effort could help uncover how discrepancies in reported estimates affect empathy and foreign policy support across different segments of the population.

Furthermore, to avoid distress and mimic the most common media coverage of war, our study did not expose respondents to highly vivid images of casualties. While such images may evoke stronger emotional responses, potentially amplifying empathy and increasing support for an ally country, they could also provoke discomfort, avoidance, or even desensitization, which might reduce empathy and public support. The impact of highly vivid and distressing imagery on public opinion, therefore, remains an open question.

Finally, the potential influence of ongoing conflicts on participants' responses represents an additional limitation. While Experiment 5 attempted to mitigate this concern by utilizing a hypothetical conflict scenario without referencing any specific country, the ongoing salience of the Ukraine conflict at the time of data collection may have implicitly shaped participants' responses. This real-world backdrop may complicate efforts to isolate the effects of our experimental manipulations. Future research could explicitly examine perceptions of civilian casualties in conflicts involving non-European US allies, such as those in Asia, Africa, or the Middle East. Such studies would help disentangle the influence of geographic and cultural proximity from broader humanitarian norms, offering a more comprehensive understanding of how empathy and policy support are shaped in different conflicts and geographic contexts.

Our insights are important for policymakers and media outlets as they navigate the complex interplay between the harsh realities of war and the American public opinion on US involvement in global conflicts. Our argument may compel policymakers to stress the hu-

manitarian dimension of an ally's struggle to leverage public support for the government's actions abroad. Furthermore, our research highlights the crucial role of media in shaping continued support for foreign intervention, indicating how empathy-inducing reporting on foreign conflicts can increase and sustain support for US involvement.

Future research should explore the role of trust in the government's handling of foreign conflicts, particularly knowing that public trust in crisis management and emergency communication can shape individuals' responses to media reports (Khorram-Manesh et al. 2021). In contexts where trust in media is low or misinformation is widespread, emotional responses to news may change or even disappear (Albarracín 2020). For example, misinformation can lead to skepticism about the authenticity of casualty reports or downplaying the severity of civilian suffering. Therefore, misinformation about war casualties carries the risk of manipulating foreign policy attitudes, potentially driving support for or opposition to US intervention. This is an area ripe for additional research. Most critically, how to elicit US involvement on behalf of civilian casualties in an adversary country is important as well, particularly as the US historically has been striving to manage its international image (Snow 2008). Recognizing that US media coverage of casualties may be biased for political reasons, it is vital to investigate these complexities and their effects on foreign policy support.

Methods

All data collection for this research was approved by the Institutional Review Board of the University of Pennsylvania (Protocol IDs: 852150 and 853762) and complies with all relevant ethical regulations. The first two studies were conducted while the first author was at the Australian National University, and the other studies were conducted while all authors were at the University of Pennsylvania. All experiments were designed in Qualtrics and performed

on the survey platform Prolific.

Transparency and Openness

We report how we determined our sample size, all data exclusions, manipulations, and measures in the study. All data, analysis code, and research materials are available at OSF. Data were analyzed using Stata, version 18.0 (MP edition). The second, fourth, and fifth studies' designs and analyses were pre-registered.

Study 1 - Probability Panel of US Residents

Participants

In Study 1, longitudinal data were collected across six waves of a survey of a probability panel of US adults aged 18 and over, with the number of respondents starting at 2,020 (see Table 4). Table 5 shows that the opinion panel, which is managed by SSRS, reflects the demographic composition of the US population in terms of age, sex, race/ethnicity, and education. It also has a similar percentage of self-reported Republicans, Independents, and Democrats. The data collection was conducted via web and telephone, in both English and Spanish.

Wave #	Date	# Respondents	Sampling error	Design effect
1	July 2022	2020	2.78	1.62
2	September 2022	1854	3.0	1.74
3	December 2022	1768	3.0	1.71
4	March 2023	1746	3.0	1.68
5	June 2023	1686	3.2	1.85
6	September 2023	1665	3.6	1.93

Note: The margin of sampling error for total respondents is +/- the indicated percentage points at the 95% confidence level.

Table 4: Longtidunal Study: Six Waves

Table 5: Demographic Data - Study 1

Category	Values	Percentages
Sex by Age	Male 18-24	2.3%
	Male 25-34	7.8%
	Male 35-44	8.7%
	Male 45-54	6.9%
	Male 55-64	8.3%
	Male 65+	14.0%
	Female 18-24	3.8%
	Female 25-34	11.4%
	Female 35-44	9.1%
	Female 45-54	7.1%
	Female 55-64	9.1%
	Female 65+	11.7%
Education	Less than High School	4.7%
	High School Graduation	29.4%
	Some College/Assoc. Degree	29.6%
	College grad +	36.2%
Race/Ethnicity	White non-Hisp	60.3%
	Black non-Hisp	12.5%
	Hispanic, US Born	14.9%
	Hispanic, Foreign Born	5.7%
	Asian, non-Hisp	5.4%
	Other non-Hisp	1.2%
Census Region	Northeast	17.3%
	Midwest	20.3%
	South	39.7%
	West	22.7%
Party Identification	Republican	29.4%
	Democrat	33.4%
	Independent	37.2%

Independent Variables

To examine media salience of civilian casualties, respondents were presented with the following question: "What aspect of the Ukraine war do you hear most often about when following the news?" Respondents were provided with ten distinct categories: Civilian casu-

alties, Military aid, Military advancement, Threats of weapons of mass destruction, Refugees, NATO membership, Humanitarian efforts, Economic sanctions, Peace negotiations, or other. These topics were chosen based on a comprehensive review of New York Times front-page articles about the Ukraine conflict published from February to May 2022. A preliminary survey executed through Amazon Mechanical Turk on June 4th, 2022, indicated that only 2 percent of participants selected the "other" category. This finding implies that the selected topics were representative of the principal issues portrayed prominently in media coverage of the Ukraine war. Highly infrequent selection of the "other" category, consistently around 3 percent, reinforced the relevance and breadth of the included topics over several iterations of our panel survey. Our primary independent variable in this study is media salience of civilian casualties. We operationalize this variable as a binary indicator, taking the value of one when a respondent reported hearing about civilian casualties most often and zero otherwise.

To account for political attitudes, the statistical analysis also includes measures of ideology (measured on a five-point scale from 1, very liberal to 5, very conservative), party identification on a 3-point scale (coded as 1 for Democrat, 2 for Independent, and 3 for Republican), and reception of right-wing media, measured as the number of days per week respondents watched right-wing media from sources such as Fox News, Breitbart News, One America News, or The Drudge Report (ranging from 0 to 7 days). We expect that Republicans, those with a more conservative ideology, and individuals with higher levels of exposure to right-wing media, will be less likely to agree with the democratic cause of the war.

Dependent Variables

The study utilizes two alternatives to measure support for US involvement in the war. The first measure taps perceptions of the war as having a democratic cause, and the second is an assessment of approval for supporting Ukraine. In all six waves, respondents were asked to

indicate their level of agreement with the following statement on a four-point scale, ranging from strongly disagree to strongly agree: "The war between Russia and Ukraine is, on a larger scale, a fight for democracy". In addition, the last two waves of the survey ask about approval of support for Ukraine: 'Do you approve or disapprove of US support to Ukraine?', with a 7-point scale from strongly disapprove to strongly approve.

Study 2 – Preregistered Experiment Manipulating Exposure to Information on Civilian Casualties

Participants

We conducted a pilot experiment that revealed a $d = 0.22$. Based on that, we planned a sample size of 1,200, which is more than sufficient to detect this effect with $\alpha = .05$ and power of a power of 95%. Thus, Study 2 involved 1,200 participants, equally divided between Republicans and Democrats. In accordance with our preregistration, participants who completed the survey in less than 2 minutes were excluded from the analysis. The experiment was designed in Qualtrics and performed on the survey platform Prolific.

Design

The experiment was executed on June 22, 2022, following its preregistration at AsPredicted (136418). Participants were randomly assigned to one of four conditions of a 2 (Casualty information: present vs. absent) X 2 (Similarity: similar vs. dissimilar) between-subjects experiment. They were first exposed to information that highlighted Ukraine as a nation that is either similar to the US or not (Appendix, Table A4). They then read an article, which contained images, that discussed either Russian attacks on Ukrainian civilians or the war in general but without mentioning civilian casualties (Table 2). The images were selected based

Table 6: Demographic Data - Study 2

Category	Values	Percentages
Age		
	18-24	4.9%
	25-34	23.7%
	35-44	23.2%
	45-54	21.1%
	55-64	18.4%
	65+	8.7%
Sex		
	Female	50.2%
	Male	49.8%
Race/Ethnicity		
	White	79.5%
	Black	9.6%
	Asian	5.0%
	Mixed	4.0%
	Other	1.8%
Party Identification		
	Republican	50.0%
	Democrat	50.0%

on five criteria: (1) distribution by reliable sources (AP or AFP), (2) widespread use across US media outlets, (3) timing immediately prior to the study's launch, (4) alignment with our experimental conditions, and (5) avoidance of gory or excessively graphic content to prevent severe emotional distress to research participants.

Manipulation Check Results

We included manipulation check questions to assess participants' evaluation of civilian casualties in the war and perceived similarity to the US. Participants were asked, "To the best of your knowledge, how many civilians have died or been injured in Ukraine in the last seven days?" with response options: 0, 1-100, 101-500, 501-1000, 1001-2000, and more

than 2000. They were also asked to rate the similarity between Ukraine and the US on various aspects, such as democratic institutions, personal liberty, social values, legal system, media and freedom of speech, economy, ethnicity, and religion, with response options: 1 (Very dissimilar), 2 (Moderately dissimilar), 3 (Slightly dissimilar), 4 (Equally similar/dissimilar), 5 (Slightly similar), 6 (Moderately similar), and 7 (Very similar).

We tested whether our manipulations affected the perceived number of casualties and perceived similarity using t-tests. Results indicated that participants who read the information about casualties estimated casualties to be significantly higher (M = 3.373, SD = .054) than participants who read the control information (M = 3.138, SD = .052). Similarly, participants who received information about Ukraine being similar to the US rated the similarity significantly higher (M = 4.774, SD = .048) than those who received information about Ukraine being dissimilar (M = 3.096, SD = .051). These results indicate that our manipulations were perceived as intended.

Dependent Variables

Three distinct indices are used to measure foreign policy attitudes: approval of US support for Ukraine, approval of Ukraine's actions in the conflict, and broader perspectives on US's foreign involvement.

- US Support for Ukraine. This index assesses participants' level of support for the United States' foreign policy regarding Ukraine. It is calculated by averaging the responses to the following six questions: "Do you approve or disapprove of the US support to Ukraine?" and "Do you approve or disapprove the following types of US support to Ukraine: Sanctions against Russia; Humanitarian assistance to Ukraine; Sharing intelligence with Ukraine; Sending military weapons to Ukraine; Sending troops to Ukraine".

Responses to each item are provided on scales from 1 (strongly disapprove) to 7 (strongly approve), with higher values indicating higher levels of support to Ukraine in various forms.

- Ukraine Approval. This variable measures participants' attitudes toward Ukraine's actions in the conflict with Russia. It is calculated by averaging the responses to the following two questions: "To what extent do you support or oppose the actions taken by the Ukrainian people in response to the military conflict with Russia?" and "Do you approve or disapprove Ukrainian President Zelensky's use of military force against Russia?".[7] This index ranges from 1 (strongly oppose/disapprove) to 7 (strongly support/approve), with higher values indicating higher approval of Ukraine's actions.

- Perspectives on Foreign Involvement. This index captures the average of participants' general foreign policy preferences, which encompass their views on issues related to international cooperation, the United States' global role, and attitudes toward foreign nations: "The United States needs to play an active role in solving conflicts around the world"; "It is essential for the United States to work with other nations to solve problems such as overpopulation, hunger, and pollution"; "America needs to cooperate more with the United Nations in settling international disputes"; and "The US government should just try to take care of the well-being of Americans and not get involved with other nations". After reverse scoring the last item, the index ranges from 1 (strongly disagree) to 7 (strongly agree).

[7]For similar questions about the role of the US in the Iraq war, see: Gelpi et al.(Gelpi et al. 2007)

Study 3 – Experiment and The Role of Empathy in a Nationally Representative Sample

Participants

In this survey, we planned a sample of 800 participants, which exceeds the required number to detect a small effect size (r = .10) with α = .05 and a power of .95. Thus, Study 3 included 800 participants from a nationally representative sample collected from the survey platform Prolific. Table 7 describes the sample and shows not only that it is similar to the US population in age, sex, and race/ethnicity but also that it had similar percentages of self-reported Republican, Independent, and Democrat. The experiment was designed in Qualtrics.

Design

This study is a 2-cell (Casualties: present vs. absent) between-subjects experiment, which was executed on October 30, 2023. Participants were randomly assigned to information about the Ukraine war that either did or did not mention casualties (Figure 2). It differed from Study 2 in that similarity was set to be moderate (Appendix, Table A5), instead of being manipulated to be either high or low, and the addition of an empathy measure. The articles describing the war were identical to the ones used in Study 2.

Dependent Variables

The dependent measures used in Study 2 were also included in Study 3. In addition, this study included a measure of empathy, which was obtained by averaging agreement with the following five statements: (1) "The article made me feel compassion for those affected by this war."; (2) "Thinking about the war was upsetting."; (3) "As I was looking at the picture and reading the text, I thought about people living in the area."; (4) "As I was looking at the

Table 7: Demographic Data - Study 3

Category	Values	Percentages
Age		
	18-24	8.8%
	25-34	19.3%
	35-44	17.8%
	45-54	16.9%
	55-64	21.4%
	65+	15.7%
Sex		
	Female	50.1%
	Male	49.9%
Race/Ethnicity		
	White	81.8%
	Black	7.1%
	Mixed	4.9%
	Asian	3.9%
	Other	2.4%
Party Identification		
	Republican	25.8%
	Independent	42.4%
	Democrat	31.8%

picture and reading the text, I felt for people living in the area."; and (5) "As I was looking at the picture and reading the text, the image and description disturbed me." Responses to each question range from 1 (strongly disagree) to 5 (strongly agree), and higher values on this index indicate greater levels of empathy. Similar to Study 2, we also measured respondents' party identification.

Study 4 – Preregistered Experiment Manipulating Exposure to Information on Civilian vs. Military Casualties

Participants

We conducted a pilot experiment that revealed a $d = 0.3$. Based on that, we planned a sample size of 800, which is more than sufficient to detect this effect with $\alpha = .05$ and power of a power of 95%. Study 4 was conducted with a quota sample of 800 US adults, balanced by political identification and sex. The experiment was designed in Qualtrics and performed on the survey platform Prolific. Following our preregistered plans, participants who failed an attention check or completed the survey in less than one minute were excluded from the analysis.

Design

This experiment, conducted on February 21, 2024, after the study was preregistered at AsPredicted (163101), aimed to explore the impact of exposure to information on civilian versus military casualties on support for US involvement. Employing a 2-cell (civilian vs. military casualties) design, this between-subjects experiment allowed for the direct comparison of responses to Russian attacks on Ukrainian civilians with responses to attacks on Ukrainian military personnel (Table 2). Thus, this study extends the previous experiments by specifically testing whether information about civilian casualties elicits stronger support for intervention than information about military personnel casualties. For this study, we used text-only stimuli because we could not identify US media photos of military casualties that satisfied our criteria from the previous experiments. Most available photos depicted military units actively engaged in combat rather than suffering harm, while the few photos showing casualties were either excessively graphic or ambiguous – either about whether the individuals were military

Table 8: Demographic Data - Study 4

Category	Values	Percentages
Age		
	18-24	5.6%
	25-34	29.9%
	35-44	29.4%
	45-54	17.0%
	55-64	11.7%
	65+	6.4%
Sex		
	Female	50.9%
	Male	49.1%
Race/Ethnicity		
	White	73.1%
	Asian	8.7%
	Black	8.1%
	Mixed	7.0%
	Other	3.1%
Party Identification		
	Republican	33.0%
	Independent	32.3%
	Democrat	34.6%

personnel or civilians, or about their nationality and side of the conflict – making them unsuitable for inclusion. Additionally, the text-only stimuli allowed us to examine whether our findings generalized to media without images (Table 2).

The dependent variables measured in this study were identical to those in Study 3 and included two indices: *US Support for Ukraine* and *Empathy*.

Study 5 – Preregistered Experiment Evaluating the Impact of Civilian Casualties in Hypothetical Wars with a Nationally Representative Sample.

Participants

We conducted a pilot experiment that revealed a d = .5. Based on that, we planned a sample size of 300, which is more than sufficient to detect this effect with $\alpha = .05$ and power of .95. Therefore, Study 5 included 300 participants from a nationally representative sample collected from the survey platform Prolific. Table 9 describes the sample and shows not only that it is similar to the US population in age, sex and race/ethnicity but also that it had similar percentages of self-reported Republican, Independent, and Democrat. The experiment was designed in Qualtrics, while using a conjoint JavaScript code. In accordance with our preregistration, participants failing to pass the attention test question or the Qualtrics bot check or whose response time was below 4 minutes (indicating insufficient engagement with the content) were excluded from the analysis.

Design

The final experiment was executed on June 22, 2022, following its preregistration at As-Predicted (170103). Before encountering the hypothetical scenarios, participants navigated through several introductory pages that outlined the structure of the information presented and explained what each attribute indicated. Participants were then presented with ten hypothetical scenarios, each describing two separate conflicts in distinct regions of the world involving different countries. In every conflict, one of the countries was always a US ally and the other was always a US adversary. The conflict included information on five, randomly assigned attributes for each conflict (see Table 2 for an example): (a) the duration

Table 9: Demographic Data - Study 5

Category	Values	Percentages
Age		
	18-24	7.2%
	25-34	21.3%
	35-44	17.0%
	45-54	17.4%
	55-64	22.3%
	65+	14.8%
Sex		
	Female	50.2%
	Male	49.8%
Race/Ethnicity		
	White	72.5%
	Black	11.8%
	Mixed	6.6%
	Asian	6.6%
	Other	2.6%
Party Identification		
	Republican	26.3%
	Independent	41.8%
	Democrat	31.9%

(0-60 months); (b) the number of civilian casualties in the ally country (0-100,000); (c) the percentage of civilian infrastructures damaged in the ally country (0-40%); (d) the number of civilian casualties in the adversary country (0-100,000); and (e) the percentage of civilian infrastructures damaged in the adversary country (0-40%).

To ensure realistic variability in the number of civilian casualties presented in the scenarios, the JavaScript code used in the Qualtrics survey platform randomly generated the number of civilian casualties as follows: a random number between 0 and 2 was generated to determine the range. If the number was 0, civilian casualties were set to 0. If the number was 1, civilian casualties were set to a value between 2,000 and 5,000. If the number was 2, civilian casualties

were set to a value between 40,000 and 100,000. This process was repeated for each of the twenty hypothetical scenarios, ensuring diverse casualty numbers. This method provided a robust basis for analyzing participants' decision-making processes related to international conflicts.

A sixth manipulated attribute was numbers of casualties in concrete recent events. Some conflicts did not include any concrete information and were coded 0. Other conflicts included such information with values for both the number of injured civilians (ranging from 1 to 100) and the number of killed civilians (ranging from 1 to 100). These conflicts were coded as the some of casualties. In addition, concrete information included one of the following descriptions: # civilians were injured and # were killed "in shelling of a residential area", "during an airstrike on a marketplace", "in crossfire near a school", "after a bomb exploded in a train station", "when a bridge was targeted", "due to landmines in a village", "in an attack on a hospital", "in sustained artillery fire on a town", "after an attack on a religious building", "in a chemical attack on a suburb", "in a sniper attack at a playground", "during a siege on a city district", "during a raid on a cultural center", "in a series of coordinated attacks on public squares", "during a mortar strike on a refugee camp", "after a drone strike on a convoy", "in a surprise assault on a peacekeeping mission", "following a car bomb incident in a commercial district", "amidst clashes at a border checkpoint", or "when a missile hit a residential complex".

Dependent Variables

After participants saw each pair of conflicts, they made a choice for the US to support either of the ally countries for which a conflict was depicted. The question was asked as follows: "Which country do you believe should receive increased support (e.g., military, diplomatic, and economic) from the United States?" This was measured as a discrete choice between the

two ally countries presented in each scenario. The country that was selected received a 1 and the other a 0.

Additionally, after making their initial choices for all ten scenarios, participants were prompted to revisit each scenario to evaluate their empathetic responses towards the countries involved. They were asked: "Considering the conflicts described, for which country do you feel more empathy: Country X or Country A?". Then they rated their empathy on a scale from 1 (feeling strong empathy for Country X) to 7 (feeling strong empathy for Country A). These responses are used in mediation analyses.

References

Aday, Sean. 2010. "Leading the charge: Media, elites, and the use of emotion in stimulating rally effects in wartime." *Journal of Communication* 60 (3): 440–465.

Adida, Claire L, Adeline Lo, and Melina R Platas. 2018. "Perspective taking can promote short-term inclusionary behavior toward Syrian refugees." *Proceedings of the National Academy of Sciences* 115 (38): 9521–9526.

Agerberg, Mattias, and Anne-Kathrin Kreft. 2023. "Sexual violence, gendered protection and support for intervention." *Journal of Peace Research* 60 (5): 853–867.

Albarracín, Dolores. 2020. "Conspiracy beliefs: Knowledge, ego defense, and social integration in the processing of fake news." In *The Psychology of Fake News,* 196–219. Routledge.

Batson, C Daniel. 2018. *A scientific search for altruism: Do we only care about ourselves?* Oxford University Press.

Brody, Richard. 1991. *Assessing the president: The media, elite opinion, and public support.* Stanford University Press.

Casler, Don, and Dylan Groves. 2023. "Perspective taking through partisan eyes: Cross-national empathy, partisanship, and attitudes toward international cooperation." *The Journal of Politics* 85 (4): 1471–1486.

Crawford, Kerry F, Eric D Lawrence, and James H Lebovic. 2017. "Aversion, acceptance, or apprehension? The effects of gender on US public opinion concerning US-inflicted civilian casualties." *Journal of Global Security Studies* 2 (2): 150–169.

Crawford, Neta. 2013. *Accountability for Killing: Moral Responsibility for Collateral Damage in America's Post-9/11 Wars.* OUP USA.

Dill, Janina, Scott D Sagan, and Benjamin Valentino. 2023. "Inconstant Care: Public Attitudes Towards Force Protection and Civilian Casualties in the United States, United Kingdom, and Israel." *Journal of Conflict Resolution* 67 (4): 587–616.

Eisenberg, Nancy, and Paul A Miller. 1987. "The relation of empathy to prosocial and related behaviors." *Psychological bulletin* 101 (1): 91.

Friedman, Ronald S, and Bárbara Sutton. 2013. "Selling the war? System-justifying effects of commercial advertising on civilian casualty tolerance." *Political Psychology* 34 (3): 351–367.

Gadarian, Shana Kushner, and Ted Brader. 2023. "Emotion and Political Psychology." *The Oxford Handbook of Political Psychology,* 191.

Gartner, Scott Sigmund, and Christopher F Gelpi. 2016. "The affect and effect of images of war on individual opinion and emotions." *International Interactions* 42 (1): 172–188.

Gartner, Scott Sigmund, and Gary M Segura. 1998. "War, casualties, and public opinion." *Journal of conflict resolution* 42 (3): 278–300.

———. 2021. *Costly Calculations: A Theory of War, Casualties, and Politics.* Cambridge University Press.

Geissler, Dominique, Dominik Bär, Nicolas Pröllochs, and Stefan Feuerriegel. 2023. "Russian propaganda on social media during the 2022 invasion of Ukraine." *EPJ Data Science* 12 (1): 35.

Gelpi, Christopher, Peter D Feaver, and Jason Reifler. 2005. "Success matters: Casualty sensitivity and the war in Iraq." *International security* 30 (3): 7–46.

Gelpi, Christopher, Jason Reifler, and Peter Feaver. 2007. "Iraq the vote: Retrospective and prospective foreign policy judgments on candidate choice and casualty tolerance." *Political Behavior* 29:151–174.

Graziano, William G, Meara M Habashi, Brad E Sheese, and Renée M Tobin. 2007. "Agreeableness, empathy, and helping: a person× situation perspective." *Journal of personality and social psychology* 93 (4): 583.

Griffin, Michael. 2010. "Media images of war." *Media, War & Conflict* 3 (1): 7–41.

Gutsell, Jennifer N, and Michael Inzlicht. 2010. "Empathy constrained: Prejudice predicts reduced mental simulation of actions during observation of outgroups." *Journal of experimental social psychology* 46 (5): 841–845.

Herrmann, Richard K, and Jonathan W Keller. 2004. "Beliefs, values, and strategic choice: US leaders' decisions to engage, contain, and use force in an era of globalization." *The Journal of Politics* 66 (2): 557–580.

Höijer, Birgitta. 2003. "The discourse of global compassion and the media." *Nordicom Review* 24 (2): 19–29.

Hoskins, Andrew, and Ben O'loughlin. 2010. *War and media.* Polity.

Hudson, Sa-kiera Tiarra Jolynn, Mina Cikara, and Jim Sidanius. 2019. "Preference for hierarchy is associated with reduced empathy and increased counter-empathy towards others, especially out-group targets." *Journal of Experimental Social Psychology* 85:103871.

Johns, Robert, and Graeme AM Davies. 2019. "Civilian casualties and public support for military action: Experimental evidence." *Journal of Conflict Resolution* 63 (1): 251–281.

Joseph, Dana L, Micaela Y Chan, Samantha J Heintzelman, Louis Tay, Ed Diener, and Victoria S Scotney. 2020. "The manipulation of affect: A meta-analysis of affect induction procedures." *Psychological Bulletin* 146 (4): 355.

Kafura, Craig, and Dina Smeltz. 2024. *Public Opinion on Ukraine: One Year Into the Conflict.* https://globalaffairs.org/sites/default/files/2024-02/CCGA-Ipsos_Ukraine_0224.pdf. Accessed: 2024-05-07, February.

Kessler, Glenn. 2022. "Tucker Carlson says Ukraine is not a democracy. Here are the facts." *The Washington Post,* https://www.washingtonpost.com/politics/2022/02/24/tucker-carlson-says-ukraine-is-not-democracy-here-are-facts/.

Khorram-Manesh, Amir, Frederick M Burkle, Krzysztof Goniewicz, and Yohan Robinson. 2021. "Estimating the number of civilian casualties in modern armed conflicts–a systematic review." *Frontiers in public health* 9:765261.

Khorram-Manesh, Amir, Krzysztof Goniewicz, Frederick M Burkle, and Yohan Robinson. 2022. "Review of military casualties in modern conflicts—the re-emergence of casualties from armored warfare." *Military medicine* 187 (3-4): e313–e321.

Kraitzman, Alon P, and Jessica Genauer. 2023. "The impact of security issues on government evaluation: evidence from the Arab World." *Democratization* 30 (4): 693–714.

Kraitzman, Alon P, and Charles W Ostrom. 2021. "The Impact of Governmental Characteristics on Prime Ministers' Popularity Ratings: Evidence from Israel." *Political Behavior,* 1–26.

Kreft, Anne-Kathrin, and Mattias Agerberg. 2024. "Imperfect victims? Civilian men, vulnerability, and policy preferences." *American Political Science Review* 118 (1): 274–290.

Milner, Helen V, and Dustin Tingley. 2013. "Public opinion and foreign aid: A review essay." *International Interactions* 39 (3): 389–401.

Moniz, Philip, and Christopher Wlezien. 2020. "Issue salience and political decisions." In *Oxford research encyclopedia of politics.*

Morelli, Sylvia A, and Matthew D Lieberman. 2013. "The role of automaticity and attention in neural processes underlying empathy for happiness, sadness, and anxiety." *Frontiers in human neuroscience* 7:160.

Mutz, Diana C. 2021. *Winners and losers: The psychology of foreign trade.* Vol. 27. Princeton University Press.

Oswald, Patricia A. 1996. "The effects of cognitive and affective perspective taking on empathic concern and altruistic helping." *The Journal of social psychology* 136 (5): 613–623.

Paciello, Marinella, Roberta Fida, Luca Cerniglia, Carlo Tramontano, and Ellie Cole. 2013. "High cost helping scenario: The role of empathy, prosocial reasoning and moral disengagement on helping behavior." *Personality and Individual Differences* 55 (1): 3–7.

Pinker, Steven. 2012. *The better angels of our nature: Why violence has declined.* Penguin Books.

Poushter, Jacob, Moira Fagan, Sneha Gubbala, and Jordan Lippert. 2023. *Americans Hold Positive Feelings Toward NATO and Ukraine, See Russia as an Enemy.* Pew Research Center.

Preston, Stephanie D. 2013. "The origins of altruism in offspring care." *Psychological bulletin* 139 (6): 1305.

Rameson, Lian T, Sylvia A Morelli, and Matthew D Lieberman. 2012. "The neural correlates of empathy: experience, automaticity, and prosocial behavior." *Journal of cognitive neuroscience* 24 (1): 235–245.

Sanaei, Ali. 2019. "Time is of the essence: The causal effect of duration on support for war." *Journal of Peace Research* 56 (6): 783–796.

Smeltz, Dina. 2022. "Are we drowning at the water's edge? Foreign policy polarization among the US Public." *International Politics (The Hague)* 59 (5): 786.

Snow, Nancy. 2008. "International exchanges and the US image." *The Annals of the American Academy of Political and Social Science* 616 (1): 198–222.

Tetlock, Philip E. 2003. "Thinking the unthinkable: Sacred values and taboo cognitions." *Trends in cognitive sciences* 7 (7): 320–324.

Tetlock, Philip E, Orie V Kristel, S Beth Elson, Melanie C Green, and Jennifer S Lerner. 2000. "The psychology of the unthinkable: taboo trade-offs, forbidden base rates, and heretical counterfactuals." *Journal of personality and social psychology* 78 (5): 853.

The White House. 2022. *Remarks by President Biden on the Security Assistance to Ukraine.* Accessed: 2024-05-15. https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/05/03/remarks-by-president-biden-on-the-security-assistance-to-ukraine/.

Tomz, Michael, Jessica LP Weeks, and Keren Yarhi-Milo. 2020. "Public opinion and decisions about military force in democracies." *International Organization* 74 (1): 119–143.

U.S. Department of Defense. 2024. *Supplemental Bill Becomes Law, Provides Billions in Aid for Ukraine, Israel, Taiwan.* Accessed: 2024-05-15. https://www.defense.gov/News/News-Stories/Article/Article/3754718/supplemental-bill-becomes-law-provides-billions-in-aid-for-ukraine-israel-taiwan/.

Walsh, James Igoe. 2015. "Precision weapons, civilian casualties, and support for the use of force." *Political Psychology* 36 (5): 507–523.

Wertheim, Stephen. 2022. "The one key one word Biden needs to invoke on Ukraine." *The Atlantic* 11.

Author contributions

We declare that each of us made a significant contribution to conducting this work. The first author drafted the design and work. The second and third authors revised the work. All authors were involved in analyzing and interpreting the data for the paper. All authors reviewed, proofread, and approved the final version.

Ethics declarations

Competing interests

The authors declare no competing interests.

Ethical approval

This study was approved by the Institutional Review Board at the University of Pennsylvania, approval numbers 852150 and 853762. It was confirmed that the research complied with ethical standards and was performed in accordance with relevant guidelines/regulations.

Informed consent

Informed consent was obtained from all adult participants prior to data collection. Participation was entirely voluntary. Participants were informed of the study's purpose, their rights, and data protection measures. All personal information has been anonymized.

Data Availability

All data, analysis code, and research materials are available at: https://osf.io/2gmwj/?view_only=d8e4e641cc0f4333bd7b55c643a523d9.