

# How Everyday Threats Undermine Trust and Hope: Experimental Evidence

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## Abstract

Trust in others is vital for the well-functioning of societies. While economists often study its longer-term determinants—through culture, past shocks or state interventions—short-term fluctuation may be equally critical, particularly during key moments (e.g. elections) or when social cohesion is needed (crises). Hope, though less studied, is just as crucial for individual well-being, behavior, and societal stability. We investigate the short-run plasticity of trust and hope by reactivating threats similar to those encountered in the media. We randomly expose individuals to online videos depicting terrorism, natural disasters, or war. Social trust and hope are malleable: they decline by 12%-28% of a standard deviation (across models) in response to these brief interventions. We find strong heterogeneity, depending on political orientation and social media usage particularly, and explore co-movements with basic emotions. This paper shows that routine threat exposure can unsettle the emotional foundations of trust and hope, which may in turn affect key behaviors—highlighting the need for research into resilience and mitigation strategies.

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# 1 Introduction

Trust is a cornerstone of social life, underpinning interactions and cooperation across various domains.<sup>1</sup> In particular, trust facilitates exchanges and collaboration, fostering economic growth and well-being (Algan and Cahuc, 2010; Fehr and Fischbacher, 2002; Algan and Cahuc, 2014), promoting trade (Guiso, Sapienza, and Zingales, 2009), encouraging civic engagement (Devine, 2024), and conditioning policy legitimacy and effectiveness (Knack, 2002). The role of trust in others and in authorities becomes even more critical in times of perils—such as pandemics, natural disasters, and wars—where trust serves as the glue of social cohesion, enabling effective crisis management and ensuring compliance with vital policies (e.g., Bargain and Aminjonov, 2020). Hope is a more recent focus of study in Economics (Graham and Pozuelo, 2023), yet it may be equally crucial for social stability. Indeed, while simplistically framed as a form of trust in the future, hope also embodies a sense of agency and serves as an empowering belief that fosters individual and collective resilience (Snyder, 1994).<sup>2</sup> Recent evidence shows that its absence, or despair, has severe consequences for health and survival but also far-reaching societal consequences (Graham and Pozuelo, 2023; Graham and Pinto, 2019; Graham, 2023a).<sup>3</sup>

Economists have primarily focused on the long-term determinants of these social constructs. Many studies examine how trust has been transformed by past crises and shocks, such as exposure to epidemics (Aassve, Le Moglie, and Mencarini, 2021; Eichengreen, Saka, and Aksoy, 2024), conflicts (Nunn and Wantchekon, 2011) or weather changes (Bugge and Durante, 2021). Trust is often seen as grounded in foundational beliefs shaped by persistent local norms and institutions.<sup>4</sup> Similarly, emerging research has begun to explore the rooted part of hope, describing how it varies with individual predisposition or

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1. For this reason, it has been extensively studied in most social and human sciences—including economics (e.g., Alesina and La Ferrara, 2002), philosophy (e.g., Faulkner and Simpson, 2017), psychology (e.g., Simpson and Vieth, 2021), political science (e.g., Fukuyama, 1995) — and even neuroscience (e.g., Fehr, 2009).

2. Hope and social trust are also related, both reflecting a need for social connectedness, which provides emotional support and strengthens confidence and motivation (e.g., Schornick et al., 2023; Merolla, Neubauer, and Otmar, 2024).

3. Alongside declining trust (Algan et al., 2017), the growing *crisis of despair* has been identified as a catalyst for civil unrest (Graham and Pozuelo, 2023), vulnerability to conspiracy theories and populism (Young and McGrath, 2020), propensity to radicalize (Graham, 2023b), resistance to policy interventions (Franko and Pacheco, 2024) and in particular non-compliance with health or environmental policies (Van Zomeren, Pauls, and Cohen-Chen, 2019; Schornick et al., 2023; Douenne and Fabre, 2022).

4. See for instance Tabellini (2010), Meier et al. (2016), Guiso, Sapienza, and Zingales (2016), Lowes and Montero (2018), Ramos-Toro (2023), Lichter, Loeffler, and Siegloch (2015), and Karaja and Rubin (2022), and see Dohmen et al. (2012) regarding long-term transmission of trust across generations.

socio-economic contexts and cultural differences across communities (e.g., O’Connor and Graham, 2019; Graham, 2023a). However, trust and hope are not immutable properties and may also fluctuate quickly in response to current crises and threats. Understanding these dynamics is crucial, particularly in an era marked by recurring crises—pandemics, natural disasters, political instability, and conflicts. While trust and hope are especially vital during such periods, crises might test social resilience and cohesion by challenging their very foundations.

Against this background, this paper aims to check the responsiveness of trust and hope to immediate circumstances and perceived threats. We propose a series of experiments to test the malleability of trust and hope, investigating how everyday threats—often propagated and amplified by the media—might influence these attitudes. We conducted a series of experiments involving randomized video exposure—three treatment groups and a control group—and a follow-up questionnaire. The three treatment groups were each exposed to a different threat video: natural disasters, terrorism or war. The control group was exposed to a neutral placebo video. The treatment videos depicted threats through carefully selected footage resembling content commonly found in news reports, documentaries, or social media. After watching the videos, participants completed a survey assessing their perceived level of threat, trust in others, trust in institutions, hope, emotional states, and standard socio-demographic characteristics. The experiment was conducted online with a representative sample of 2,787 participants from France, recruited through the Panelabs platform. The sample was stratified by key demographic factors, including age, gender, and socio-economic status, in order to improve balanced tests and statistical power. The videos, each lasting 3–4 minutes, were carefully constructed to evoke specific threat perceptions: natural disasters (e.g., floods and wildfires), terrorist attacks, or military conflicts (including threats of nuclear war). The effectiveness of the threat induction was validated through an initial assessment, which confirmed significant increases in self-reported feelings of threat among participants exposed to the treatment videos compared to the control group.

Our findings suggest that social trust and hope are malleable, as even brief video exposure can significantly impact them and by a sizable margin: social trust (hope) declines by 12%-26% (15%-28%) of a standard deviation across treatments and specifications. These effects are probably not long lasting, but they are still important for two reasons. First, threats are in effect repeated in daily life, through threatening news, social media videos or fear-inducing political discourse. A cumulating effect may be most acute for those consuming threatening information abundantly (doom-scrolling). Second, even short-lived threats

may be consequential during critical periods, such as elections, as shocks on trust and hope may mediate behavioral responses (social unrest, turnout, voting patterns, etc.). As a matter of fact, our experiment took place during the electoral week supposed to lead extreme-right party to power in France (late June 2024). The timing of the experiment hence adds a layer of contextual relevance, providing an opportunity to examine how an additional spark, such as a natural disaster or a terrorist act, may alter trust and hope specifically during a period with heightened societal tensions.

Additional heterogeneity analyses reveal sharp differences across the political spectrum: for both social trust and hope, effects are concentrated among centrists and, particularly, right-leaning voters, whereas left-wing respondents remain unaffected. This pattern likely reflects greater sensitivity to threats and/or more frequent exposure to fear-inducing narratives prevalent in traditional media. Additionally, for social trust, evidence points to stronger effects among frequent social media users—frequent exposure to alarming content may create a heightened state of vigilance, where even a single exposure to a new threat reinforces pre-existing fears. We also explore potential mechanisms, though the evidence remains suggestive due to the inherent challenges of conducting causal mediation analyses. The malleable parts of social trust and hope are associated with threat feelings and a broad emotional shift—fear, anger, disgust, and sadness increase, while joy declines. More nuanced patterns are also analyzed. In particular, threat-induced changes in social trust and hope tend to co-evolve with rising anger and fear. However, it remains unclear whether attitudes and emotions respond at different psychological levels, or whether shifts in primary emotions partially mediate changes in attitudes.<sup>5</sup> Finally, we find no overall effect of treats on risk aversion or trust in institutions. For the latter, our findings should be interpreted with caution given the specific pre-election context.<sup>6</sup> Interestingly, however, trust in institutions decreases in specific contexts: for women with the environmental threat, for right-wing voters with terrorism, and for young men with the threat of war. There are also traces of a possible solidarity effect opposing the potentially disrupting role of anger and fear on trust.<sup>7</sup>

This paper contributes to the understanding of trust and hope in several ways. *First*, it

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5. It is plausible that all these measures are reacting to heightened feelings of uncertainty, helplessness and potentially fear of death conveyed by the videos. Some studies focus on the impact of threats reinforcing mortality salience on prosocial behavior (Jonas et al., 2002; Zaleskiewicz, Gasiorowska, and Kesebir, 2015) or political attitudes (Lerner et al., 2003; Huddy, Feldman, and Weber, 2007).

6. Accordingly, we do not consider it one of our primary outcomes.

7. An overall positive coefficient of treatment emerges when accounting for emotions. Hypothetically, this could reflect a "rally around the flag" effect (e.g., Dinesen and Jæger, 2013), whereby individuals respond to perceived threats by showing increased support for authorities.

advances knowledge on trust, particularly its short-run plasticity. Specifically, it completes a growing body of research exploring how trust in others or in governments are shaped by shocks and perceived threats, as detailed in Table A1.<sup>8</sup> The table is structured by broad categories of shocks or threats: beyond pandemics, these include climate, terrorism, and conflict/war. This classification motivates the sensitivity analysis suggested in our experimental design, where videos vary across these three categories. Studies in Table A1 are presented in lexicographic order, first prioritizing those on interpersonal trust (over trust in institutions/governments), then ranking them according to the time horizon (short-term impacts first, followed by middle- and long-term effects). Thus, the table highlights the scarcity of empirical evidence on short-term variations in trust in response to perceived threats. We also see that the overall impact of shocks and threats on trust is predominantly negative. However, in certain cases, trust may increase, for instance following natural disasters, when a sense of community and solidarity emerges (Cassar, Healy, and Von Kessler, 2017; Toya and Skidmore, 2014).<sup>9</sup>

A *second* contribution is more methodological. Quasi-experiments proposed in the literature—such as those reported in table A1 for climate shocks, terrorism, or war—are rarely complemented by experiments that actively recreate the sense of menace. In this regard, our study represents one of the rare attempts to experimentally induce shocks to trust and hope. While psychology and economics have extensively examined the determinants of trust through behavioral experiments,<sup>10</sup> our focus aligns more closely with research that experimentally induces threats. For instance, online random experiments conducted during or after COVID-19 have examined trust responses to threat reactivation through images (Meuer and Imhoff, 2021) and videos (Rico, Guinjoan, and Anduiza, 2017; Bargain et al., 2024), as well as priming of pandemic-related risks (Daniele et al., 2020; Aksoy et al., 2021). Beyond trust, similar experimental approaches have been used to study related outcomes: fear and anger have been elicited using videos of terrorist attacks (Davis and

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8. Existing research has examined various types of threats, including health and material threats (for instance, natural disasters in Mackay et al., 2023 or pandemics in Eichengreen, Aksoy, and Saka, 2021; Eichengreen, Saka, and Aksoy, 2024), physical threats to life (violent conflict in Bauer et al., 2016, terrorist acts in Couttenier et al., 2024), and economic threats (job insecurity following crises in Stevenson and Wolfers, 2011 and economic austerity in Algan et al., 2017).

9. However, "rally around the flag" phenomena are generally short-lived. See in particular Geys and Qari (2017), Dinesen and Jæger (2013), Jha and Tripathi (2024), Ananyev and Guriev (2019), and Aksoy et al. (2021).

10. This literature explores psychological, evolutionary, and biological determinants in contexts of social interaction (e.g. Simpson, 2007; Krueger and Meyer-Lindenberg, 2019; Hardin, 2002), studied in experimental settings with behavioral games (e.g. Suchon and Villeval, 2019; Johnson and Mislin, 2011; Balliet and Van Lange, 2013) and using biological measures (e.g. Fehr, 2009; Li et al., 2009).

Stephan, 2011), time perception has been manipulated via virtual reality simulations of threats (Sadeghi et al., 2023), and risk aversion has been influenced through frightening video stimuli (Guiso, Sapienza, and Zingales, 2018).

A *third* aspect is the emphasized emotional dimension of trust and hope in response to threats. Multidisciplinary research has examined more specifically the role of emotions in shaping trust (Engelmann et al., 2019; Myers and Tingley, 2016; Dunn and Schweitzer, 2005), consistently finding that negative emotions tend to erode trust. However, studies report contrasted results on which basic emotions—particularly anger versus fear—drive trust reduction, as well as on the prevailing mechanism, namely appraisals of low certainty versus low controllability. Our results help reconcile these perspectives by highlighting a co-movement between interpersonal trust and several emotions, notably anger, fear, and joy. However, we do not interpret these co-movements as evidence of emotional mediation. Causal mediation would require more demanding empirical designs, which are discussed thereafter. Neuroscientific evidence actually supports the role of emotional mediation in trust responses but also the possibility of direct or mitigating effects.<sup>11</sup> Finally, note that the role of emotions is increasingly scrutinized in the study of general attitudes (e.g., trust) but also political attitudes, particularly regarding how threat-driven emotions erode democracy-relevant political views.<sup>12</sup>

*Fourth*, we contribute to the emerging literature on hope in Economics. Like trust, hope plays a critical role during crises. It serves as a motivational force, enabling individuals and communities to envision a positive future and engage in proactive behaviors. However, hope can also be fragile, particularly when repeated threats or failures to address crises lead to despair (Graham and Pozuelo, 2023). We provide original empirical evidence on how hope actually declines with perceived threats. We find similar trends whether we use basic measures—combining hope for the future and optimism—or include perceived control in the hope index, which aligned with the possibly changing nature of locus of control (Cobb-Clark and Schurer, 2013). Our findings highlight the strong emotional foundations of hope in the control group. After treatment, we elicit a complex emotional pattern in which the loss of hope co-moves with rising anger and fear, but not necessarily with a loss

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11. Threats primarily affect trust through neural circuits involved in fear processing, particularly the amygdala, while the prefrontal cortex can regulate these effects, allowing for rational assessment instead of instinctive distrust (e.g., Kosfeld et al., 2005; Todorov, Baron, and Oosterhof, 2008; Declerck, Boone, and Emonds, 2013; Filkowski, Anderson, and Haas, 2016).

12. Ali, Desmet, and Wacziarg (2024) show that anger does not fuel populist voting when other emotions are controlled for, instead reflecting a broader sense of malaise and gloom. Similarly, Auer and Freitag (2025) find that threat-driven anger leads to populist voting only when threats are clearly identified and perceived as mismanaged by authorities.

of joy. These results also speak to the growing literature on despair, not only as a matter of individual well-being and resilience, but also as a factor with potential implications for political outcomes and social cohesion (Graham and Pinto, 2019; O’Connor and Graham, 2019; Graham and Pinto, 2021; Piper, 2022).

The rest of the paper is structured as follows. Section 2 describes our experimental setting, the data and balance tests. The results and sensitivity checks are presented in section 3, while section 4 concludes.

## 2 Empirical Approach

### 2.1 Experiment: Description

**Data Collection: General Points.** We begin by outlining the experimental study, conducted over 3 days in June 2024. Participants were recruited through Panelabs, a research-focused data provider specializing in questionnaire-based studies across Europe. Panelabs operates via an online survey platform and draws from a large pool of registered respondents.<sup>13</sup> The experiment was conducted entirely online, with participants viewing the videos and responding to the survey on their personal devices. The online format allowed for a large-scale experimental setting while facilitating data collection from a geographically diverse sample.<sup>14</sup> The study received approval from an ethics committee, and participants were informed about the nature of the videos before the experiment began.<sup>15</sup> Each participant was asked to watch a video lasting approximately 3–4 minutes, followed by a questionnaire that took around 8–10 minutes to complete (median time: 9 minutes).<sup>16</sup>

**Context.** The study was carried out from June 25 to June 27, 2024, the week preceding the first round of the French legislative elections. This is an especially relevant period

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13. This pool comprises up to 1.5 million individuals across France, Italy, and the UK, ensuring high response rates and a tightly timed data collection. Respondents were compensated at a rate of €13.14 per hour. See: <https://en.panelabs.com/>

14. Several studies have demonstrated the reliability of online experiments, which are increasingly used through platforms such as Prolific and Panelabs (see for instance Palan and Schitter (2018)).

15. The study adhered to strict ethical guidelines, including informed consent and the right to withdraw at any stage. Debriefing materials were provided after the survey to mitigate any potential psychological discomfort caused by the emotionally charged stimuli. The multidisciplinary ethics committee at the University of Bordeaux (CER-UB) approved the study on April 17, 2024 (file reference: CER-UB-2024-7B-F).

16. The videos and the questionnaire are placed on the [Dropbox repository](#).



for our research, as it was marked by heightened political tensions, with the far-right *Rassemblement National* positioned as a potential parliamentary majority following the dissolution of the National Assembly by the President of the Republic. This context provided an opportunity to explore how trust and hope respond to perceived threats in a highly charged social and political environment. More generally, external threats may be more consequential near an election, especially if the media or populist candidates play with fear. Several studies provide insights into how political campaigns may leverage fears of terrorism to shape public opinion on immigration policies (Oates, 2006; Akay, Bargain, and Elsayed, 2020).

Figure 1: Screenshots of the four videos



Control (placebo video)



Natural disaster



Terrorism



War

**Videos.** The videos were designed to reactivate standard threat perceptions in respondents' minds. Participants were randomly assigned to one of four experimental conditions: three threat video groups or a placebo video group. The first treatment group, labeled *environmental/natural disasters*, watched a video depicting recent natural disasters such as floods, droughts, storms, and wildfires. The second treatment group, *terrorism*, viewed footage illustrating acts of terrorism and their aftermath (e.g., the 2015 Paris Bataclan attacks). The third treatment group, *war*, saw videos portraying scenes of armed conflict, including footage from recent wars (e.g., the Russia-Ukraine war). These videos were



designed to evoke threat perceptions, featuring selected images from global news outlets, documentaries, and social media clips that emphasize existential and societal risks.<sup>17</sup> Importantly, the content did not differ from what participants might typically encounter in their daily media consumption, although the footage specifically highlighted the dramatic aspects of each threat scenario. The control group viewed a placebo video depicting slow-moving countryside scenes devoid of any threatening content. This neutral, emotionally unprovocative video served as a baseline for comparison with the treatment conditions. Screenshots of the four videos are shown in Figure 1. Note that similar procedures have been employed in previous studies using video-based interventions to influence attitudes and perceptions.<sup>18</sup>

**Sampling and Experimental Design.** A total of 2,877 participants completed the survey, with around 700 respondents in each of the four groups. The sample was stratified along four dimensions: gender, age, socio-economic status, and broad geographic region. The aim is to ensure representativeness of the French population against these margins, using target quotas for each margin as determined based on reference data sources (national statistical institute, INSEE). Most importantly, stratification enhances the comparability of the treatment and control groups by reducing potential demographic imbalances, thereby maximizing the statistical power of the randomized experiment. The questionnaire consists of three main blocks—measuring trust, emotions, and political attitudes—followed by questions on standard socio-demographic characteristics. To reduce order effects, the sequence of the three main blocks, and the individual items within them, were randomized.

**Sample Selection and Key Variables.** To ensure data quality, responses were screened, and observations with inconsistencies ( $n = 21$ ) or implausibly fast completion times ( $n = 69$ ) were excluded. After data cleaning, the final sample consisted of 2,787 participants, evenly distributed across groups.<sup>19</sup> All attitudinal and emotional variables were measured on a seven-point Likert scale. Each variable was assessed using multiple questions with slight wording variations, and the final measure was computed as the average response

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17. The videos were produced by Leia Marie Bliedtner, a professional video editor based in Germany.

18. A standard approach consists in showing informational videos (for instance Alesina, Miano, and Stantcheva (2023), on attitudes toward migration) while other studies present videos of role models to enhance aspirations (Bernard et al., 2014). Closer to us, a few studies have used movie excerpts designed to elicit risk aversion responses to fear (Guiso, Sapienza, and Zingales, 2018; Haushofer and Fehr, 2014), and specifically crafted videos intended to experimentally manipulate attitudes (see Bargain et al. (2024) on terrorism- and pandemic-related videos).

19. The exact distribution is as follows:  $n = 696$  in the control group and  $n = 699$ , 704, and 688 in the natural disaster, terrorism, and war treatment groups, respectively.

across these items.<sup>20</sup> Threat perception was measured by asking participants to what extent they "feel threatened" and to what extent they "feel in danger". Trust in others was assessed with two statements: "most people can be trusted" and "most people try to take advantage of others", with the latter item reverse-coded. Hope was measured by averaging responses to questions on the respondents' degree of "hope for the future" and "optimism about what lies ahead"; for robustness checks, we also add a question assessing the extent to which respondents "feel they have control over their destiny". Trust in institutions was computed as the average of responses to questions about trust in French institutions, the French government, and the European Union. Table A2 reports the correlation among the different outcome variables: the correlations between items used to construct each outcome (in bold) are comforting. Regarding hope, we find a high correlation between hope and optimism, as expected, but also a sizable one between these measures and the control question. Emotions were measured by averaging responses to related questions: fear was assessed through reported levels of fear and anxiety, anger through levels of anger and irritation, disgust through levels of disgust and nausea, joy through responses on joy and feeling happy, and sadness through responses on sadness and feeling depressed. Correlations are presented in Table A3. The correlation between pairs of items aimed to measure each emotion is high, as expected. We also find interesting correlations across emotions, aligning with the literature on co-occurrence or blending of emotions (e.g. Zelenski and Larsen, 2000; Vansteelandt, Van Mechelen, and Nezlek, 2005).

## 2.2 Balance Tests and Treatment Effectiveness

**Balance Tests: Comparisons Margin by Margin.** Internal validity should be ensured by random group assignment. Nevertheless, we conduct several validity checks, starting with a comparison of the control and treatment groups based on observed demographic characteristics, including gender, age, socio-economic status, and broad geographic region. In Table A4, we first present national mean statistics (from INSEE), followed by the mean values for each group in our experimental sample. As shown, our sample broadly reflects the actual structure of the French population.<sup>21</sup> More importantly, stratification was designed to enhance balance across experimental groups along these four dimensions. To facilitate margin-by-margin comparisons, the last columns of

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20. This approach is common practice and reduce the noisiness of attitudinal and emotional measurement (Fehr, 2009).

21. For instance, while women represent a large proportion of the French population (52.6%), there is a slight over-representation in our sample (e.g., 56.6% in the control group). However, this does not pose a concern, as our primary objective is internal validity rather than perfect population representativeness.

the table report the mean difference for each characteristic between the control group and each treatment group. None of these differences is statistically significant. These results confirm that experimental groups are well-balanced according to these simple comparisons.

**Balance Tests: Interacted margins.** We then proceed with a slightly more demanding balance test, considering all margins simultaneously. To do so, we construct cells by interacting margins, starting with gender and age groups, then interacting these two margins and socio-economic categories, and finally combining all four socio-demographic characteristics (e.g., a dummy indicating being a woman, aged 20-24, working as employee and living in the Paris region). For each of these different sets of cells, we regress the treatment dummy on all cell dummies to test whether fine-grained individual characteristics predict treatment. In Table 1, we report the p-value of the F-test for each model specification. Results are presented for the full sample (where treatment is coded as 1 for any of the threat videos, cf. column 1) or for each treatment separately (using subsamples that include only the control group and one treatment group at a time, cf. columns 2-4). Across all specifications, the joint significance of the socio-demographic cells is systematically rejected, confirming that the four experimental groups remain well-balanced, even when considering more granular demographic interactions. These findings further support the robustness of the randomization process and the validity of our experimental design.

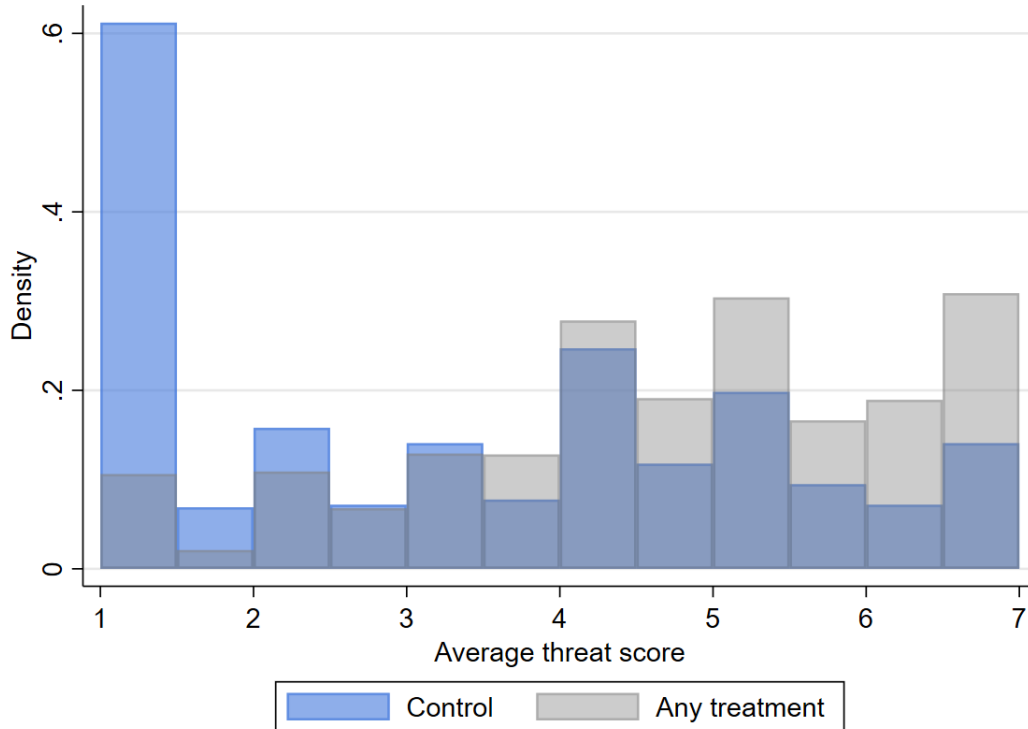
Table 1: Balance Tests (interacted margins)

Treatment:	Any threat videos	Env.	Terrorism	War
	(1)	(2)	(3)	(4)
Gender	0.94	0.94	0.89	0.89
Gender x age group	0.98	0.94	0.98	0.87
Gender x age group x socio-prof. category	0.65	0.75	0.74	0.21
Gender x age group x socio-prof. category x region	0.19	0.20	0.18	0.58
Observations	2,787	1,395	1,400	1,384

Note: This table summarizes the difference between control and treated groups based on demographic cells. The cells are constructed as the interaction of four demographic variables: gender, age groups, socio-professional categories and regions (French metropolitan regions grouped in 5 categories). Each row corresponds to different definitions of cells: gender only, then interacting gender and age groups, gender x age groups x socio-professional categories, and finally gender x age groups x socio-professional categories x regions. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. The coefficients correspond to the p-value of the F-test for each model regressing each treatment on these cells.

**Informal Check of Treatment Effectiveness.** Exposure to the videos constitutes an assignment to treatment. However, it is not guaranteed that all respondents are effectively treated. All respondents receive payment for their participation, which may create an incentive to watch the video attentively, as they might expect the subsequent survey to be directly related to its content. Additionally, the videos are brief (3–4 minutes), reducing the risk of disengagement, and the video had to be fully played before participants could proceed with the survey. However, some participants may still become distracted or not fully engage with the content. While we cannot directly verify this, we asked participants to report their perceived level of threat after being exposed to the videos. As previously described, the threat intensity measure is constructed as the average of two questions assessing how threatened and how "in danger" they felt, each rated on a 1–7 scale (resulting in a mean threat score on the same scale, with a step of 0.5). While this measure serves as a proxy for attention, it also confirms whether the videos effectively induce a sense of threat and provides an informal check of effective treatment.

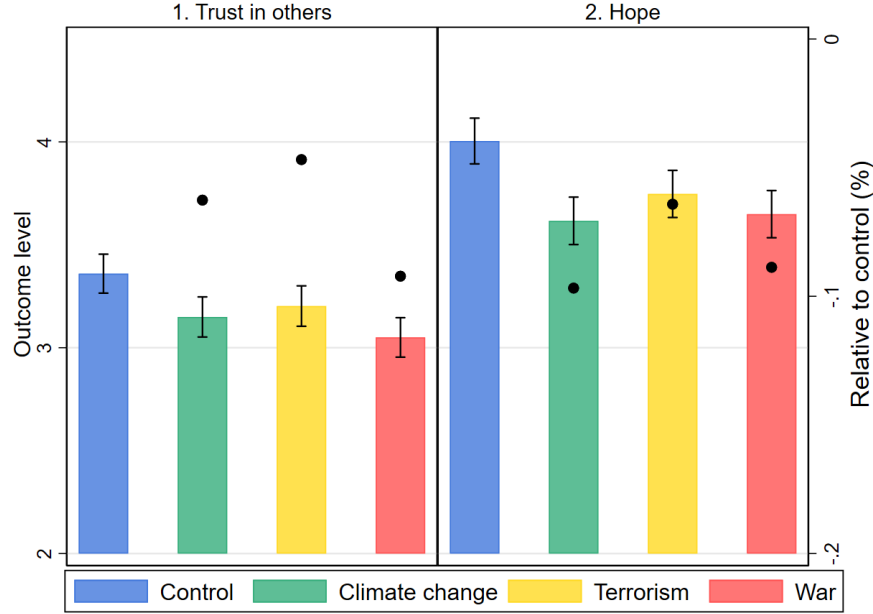
Figure 2: Distribution of the Threat Feeling (index)



Notes: This figure shows the relative frequency of the feeling of threat by treatment group. 'Level of threat' is an index calculated as the average of answers to two questions on how much they 'Do you feel threatened?' and 'Do you feel in danger?'. These were answered on a Likert-scale (1 to 7). Observations: 696 in the control group, 2,091 in the treatment groups.

Figure 2 illustrates the distribution of the average threat score in treated and control groups. The results clearly show that threat perception first-order statistically dominates the control group for middle to high threat scores (i.e., values from 4 to 7), while the reverse is true for zero or low threat levels. Figure A1 extends these results to the different treatment groups. Table A6 reports a statistically significant positive effect of any treatment condition on perceived threat. This effect is substantial, representing a 39–43% (across videos) increase in perceived threat compared to the control group. The difference across threat types is not significant. Thus, any potential differences in outcomes across the three treatment groups (environment, terrorism, war) cannot, in principle, be attributed to variations in perceived threat levels between treatment types (a joint estimation testing the equality of treatment effects on perceived threat yield  $p=0.48$ ). Instead, they are more likely driven by other factors, such as differences in informational content or the salience of a specific threat in relation to the elements of the questionnaire.

Figure 3: Average Outcome by Treatment Group



Notes: This figure shows the mean levels of indices for trust in others and hope across the different experimental groups. The dots represent the change relative to the control group. 'Trust in others' is an index calculated as the average of answers to the questions on where 'most people can be trusted' and 'most people try to take advantage of others'. These were answered on a Likert-scale (1 to 7) and the answer to the second question was subtracted from 7 to get a variable that increases in trust in others. 'Hope' is an index calculated as the average of answers to two questions on how much they have 'hope for the future' and are 'optimistic regarding the future'. These were answered on a Likert-scale (1 to 7). The error bars represent 95% confidence intervals. Observations: 696 in the control group, 699 in the environmental treatment, 704 in the terror treatment, and 688 in the war treatment.

### 3 Results

Given the convincing balance check results, we proceed directly with a comparison of the average outcomes of interest between the treatment and control groups. Figure 3 provides a summary of the main findings, illustrating the average outcome values across experimental groups, for interpersonal trust and hope, alongside 95% confidence intervals. It shows that treated individuals report significantly lower levels of trust and hope compared to the control group, whether considering all treatment types together or examining each specific treatment video separately. In the rest of this section, we examine these results in detail, conduct robustness checks, and explore additional findings, including the potential role of emotions in shaping these responses. Note that all the estimations presented below



control for flexible cell dummies as previously used in the balance tests (i.e., accounting for interactions of gender, age group, socio-economic category, and region), risk aversion, time preferences, and education.

### 3.1 Trust in others

**Baseline Estimations.** Beginning with interpersonal trust, we examine the results of various estimations of trust response to video treatments, incorporating the aforementioned controls. Table 3 presents the effects on the ‘trust in others’ index, focusing on the general effect of threats (‘any video’), using the whole sample, or on the specific effects of individual threat videos. Across all models, the treatment coefficients are negative and statistically significant at the 1% level, indicating a robust decline in trust following exposure to these videos. Among them, the war-themed video has the strongest impact; however, we cannot reject the hypothesis that its effect is statistically equivalent to that of other threat videos ( $p > .10$  across different specifications). Thus, consistent with our pre-tests on treatment effectiveness, we confirm that all three threat videos induce a significant shift in interpersonal trust.

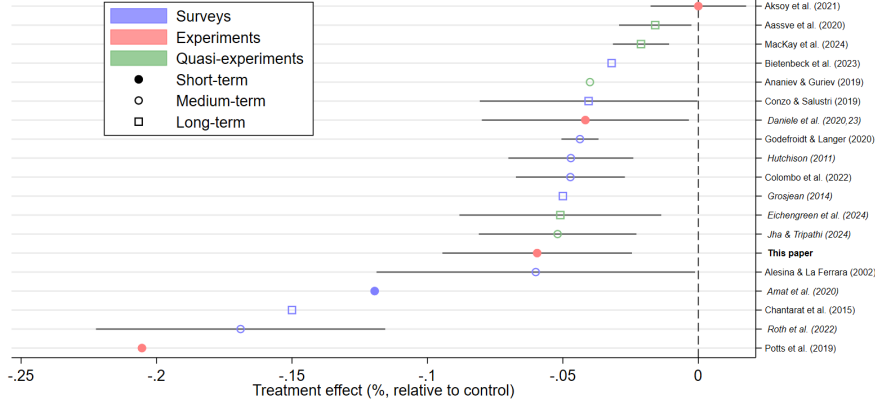
Table 3: Effect of Treatments on Trust in Others (index)

	Any video	Env.	Terrorism	War
	(1)	(2)	(3)	(4)
Treatment	−0.20*** (0.059)	−0.17** (0.076)	−0.19** (0.076)	−0.29*** (0.074)
Relative to the mean (in %)	5.95	5.05	5.53	8.63
Relative to the std. dev. (in %)	15.7	13.3	14.6	22.8
Observations	2,787	1,395	1,400	1,384
R-squared	0.139	0.206	0.216	0.224

Notes: This table presents the estimated impact of threats on the trust in others. 'Trust in others' is an index calculated as the average of answers to two questions on where 'Most people can be trusted' and 'Most people try to take advantage of others'. These were answered on a Likert-scale (1 to 7) and the answer to the second question was subtracted from 7 to get a variable that increases in trust in others. The mean of 'trust in others' index in the control group is equal to 3.36 and the standard deviation is equal to 1.27. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. Control variables are risk aversion, education and cells made up of gender, age-group, socio-economic category, and region. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .

**Magnitude and Comparisons.** Relative to the control group's standard deviation of trust, this effect represents a decrease of 13.4% to 22.8%, indicating that the malleable component of trust is substantial. To contextualize the magnitude of this effect, we extract estimates from the studies reported in Table A1, when these estimates are available and can be expressed, for the sake of comparability, relative to a baseline. These estimates are most often reported as a proportion of mean trust levels (or the control group mean trust in the case of experiments and quasi-experiments), thus allowing direct comparison with our findings. Our estimates range from 5% to 8.6% of the control group's mean trust (see Table 3). Figure 4 illustrates this comparison, categorizing studies by method (survey, experiment, or quasi-experiment), time horizon, and type of trust (mostly interpersonal trust, while studies on institutional/government trust are indicated by italicized author names). As seen before, there are few short-term estimates, particularly those relying on (quasi-)experimental designs. Most importantly, we conclude that despite the brevity of our intervention, it produces a non-negligible shift in trust—comparable to or within the intermediate range of values observed in studies examining longer-term effects of

Figure 4: Effects of Shocks/Threats on Trust: a Comparison



Notes: This figure shows the estimated coefficients and, when available, standard errors for trust in others and trust in government/institutions (the latter is indicated with authors' names in *italic*), extracted from our review in Table A1.

experienced or perceived shocks and threats.<sup>22</sup>

**Sensitivity Analysis.** We conduct a series of alternative estimations to assess the robustness of our results across different samples and treatment definitions. These results are presented in Table B1. The first concern relates to treatment effectiveness—specifically, whether our estimated effect represents a lower-bound Intention to Treat (ITT) rather than the actual Average Treatment Effect (ATE). To address this, we use the threat feeling variable. In the first panel, we identify and exclude 111 individuals who were assigned to a treatment video but reported only a minimal feeling of threat. While we cannot confirm that they were true non-compliers, we treat them as such for this analysis. With their exclusion, the treatment effects closely align with the main results (it even increases by approximately 10% in absolute terms, but not significantly so). This suggests that our baseline estimates likely represented a lower bound of the ATE. Next, we retain the full sample but redefine treatment as watching a threat video while reporting a threat feeling above the minimal value of one. In this approach, individuals classified as "non-compliers" are simply considered untreated. The estimates obtained under this specification remain very similar to those from the previous setting (and are again not significantly different from our baseline).

22. For comparability, we exclude the few studies reporting positive effects on trust, often in the context of natural disasters (Toya and Skidmore, 2014; Cassar, Healy, and Von Kessler, 2017) or conflicts (Hall and Werner, 2022; Gilligan, Pasquale, and Samii, 2014). Additionally, for clarity in visualization, we do not report the exceptionally large estimates (>40%) found in Meuer and Imhoff (2021), Carlin, Love, and Zechmeister (2014), Cassar, Grosjean, and Whitt (2013), and Algan et al. (2017).

In the last panel of Table B1, we introduce an alternative estimation approach, replacing binary video treatments with the threat feeling variable as a continuous treatment measure. The estimates remain strongly significant, indicating that potential nonlinearities in the threat variable do not alter our results.<sup>23</sup> In this specification, the relative effect for individuals assigned to the war video is comparable to that of the other treatments, which is consistent with the fact that threat intensity is used as treatment while war images did not generate a higher threat level than the other two videos. We also regress interpersonal trust on our binary video treatments while controlling for threat intensity. The results, presented in Table B3, consistently suggests that the impact of video treatments on trust primarily operates through their threatening effect. As expected, the war video stands as an exception. Even when controlling for threat intensity, it retains a mildly significant effect on trust. This suggests that beyond its threatening nature, the war video may also influence trust through other channels—possibly more cognitive effects linked to its informational content.<sup>24</sup>

**Discussion.** Across all robustness checks, our findings consistently confirm that threat exposure significantly reduces interpersonal trust, with effect sizes for binary treatments ranging from 14% to 27% of the standard deviation of trust. This represents a substantial impact, given that it stems from exposure to simple videos. While these effects may dissipate quickly, the result remains important for several key reasons. *First*, it highlights that a component of trust is inherently unstable, with variations of a magnitude comparable to those observed in studies examining real-world shocks. This reinforces the notion that trust can be influenced in ways similar to more tangible societal disruptions. *Second*, our videos are designed to concentrate threats commonly portrayed in the media. Given the frequency with which such threats are reactivated by media coverage, their potential influence on trust may extend beyond the experimental setting, shaping public perceptions over time. *Third*, even short-lived declines in trust can have significant consequences, particularly during critical periods such as the lead-up to an election. A temporary erosion of trust in such moments could have serious consequences in terms of political outcomes and civic unrest. *Fourth*, there may be a cumulative effect if the treatment is repeated. For example, repeated exposure to frightening news on social media or doomscrolling behavior

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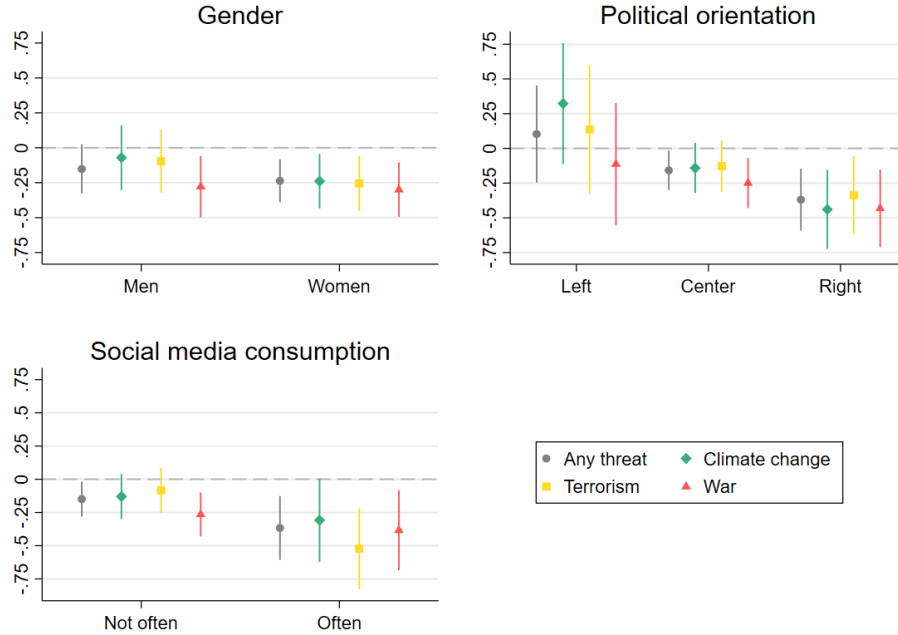
23. Though they lead to slightly smaller effect magnitudes, with relative effects computed at the mean difference in threat feelings between observations exposed to threat videos and those exposed to placebo videos.

24. We provide additional results with respect to risk aversion hereafter. While risk preferences are not altered by treatment, there are interesting heterogeneous effects of threats on trust depending on individual levels of risk aversions. OB: War plays a role here? Here: low/high risk aversion interacted with both treatment and threat index?

could amplify the impact (Buoncompagni, 2023).

**Heterogeneity.** This impact of threat on interpersonal trust likely varies across sub-populations. Figure 5 illustrates the main heterogeneous treatment effects, focusing on gender, political orientation, and social media usage. Detailed results also examining heterogeneity by age groups and socio-economic categories are provided in Table ???. The treatment effect tends to be stronger for women (see also Marin. et al. (2012)) and, in some cases (environmental and terrorism videos), not significant for men. However, the gender difference is never statistically significant. While risk aversion itself remains unaffected by threat videos, the decline in interpersonal trust is significantly more pronounced among individuals with above-median risk aversion across all videos. Political orientation also plays a key role. First, we confirm that right-wing voters exhibit lower interpersonal trust than left-wing voters, a persistent trend in France in recent years (Algan et al., 2018). More importantly, our findings suggest that the overall treatment effect on trust is driven by a threat-induced amplification of this pattern: individuals on the right experience a significant decline in trust. For them, threats may amplify the need for self-protection and in-group differentiation. More complex (unreported) heterogeneous estimations indicate that this pattern does not fundamentally vary with age but is less pronounced among individuals with above-median risk aversion. In contrast, the pattern among those with below-median risk aversion is striking: trust declines sharply among right-wing voters, remains insignificant for center voters, and even *increases* among left-wing voters (this result is particularly significant for environment and terrorism videos). Rather than reacting defensively, left-leaning individuals in this low risk-aversion group might interpret threats as a call for greater solidarity.

Figure 5: Heterogeneous Treatment Effects on Trust in Others



Notes: This figures shows the coefficients on the interactions between the respective subpopulation and treatment in the regression of treatment on trust in others. 'Trust in others' is an index calculated as the average of answers to two questions on where 'Most people can be trusted' and 'Most people try to take advantage of others'. These were answered on a Likert-scale (1 to 7) and the answer to the second question was subtracted from 7 to get a variable that increases in trust in others. Control variables are cells made up of gender, age-group, socio-economic category, and region. Observations: 696 in the control group, 699 in the environmental treatment, 704 in the terror treatment, and 688 in the war treatment.

Finally, we explore heterogeneity with respect to social media consumption. We find a stronger effect of threat exposure on interpersonal trust among heavy social media users and never-users, relative to people making a moderate use of social media. For heavy users, the result is consistent with doomscrolling, which fosters a constant anticipation of danger, making individuals more susceptible to reactivation and amplification when faced with a new or particularly salient threat.<sup>25</sup> At the other extreme, rare or non-users of social media may lack prior exposure to similar threats, making each new encounter more shocking and impactful. Without a steady stream of information that could provide context or counterbalance fear-inducing narratives, they may take threats at face value,

25. Social media enable a fast diffusion of information, which may also convey fear and anger (Depoux et al., 2020). Note that heavy social media users may also develop cognitive biases, such as availability heuristics, where they overestimate the likelihood of negative events based on their frequent exposure. Furthermore, there may be composition effects: respondents who often use social media could have other characteristics that can explain a higher sensitivity to threats.



leading to a sharp decline in trust. Note that significant differences are found between moderate and frequent/never users, overall and for environment and terrorism videos (differences are less pronounced for war, which seem more pervasive for all groups).

## 3.2 Hope

**Baseline Estimations.** Hope is generally understood as an attitude characterized by positive expectations about the future, often accompanied by feelings of optimism, anticipation, and confidence. Accordingly, we first examine the effects of threat videos on hope, measured using two primary questions: hope for the future and optimism. As shown in panel (a) of Table 5, all videos significantly reduce the hope levels of treated participants. The magnitude of these effects is comparable to those observed for trust, with a decline of 5.5%–7.4% (depending on the treatment) relative to the control group’s mean hope index, and a reduction of 14.8%–19.8% as a fraction of the hope index’s standard deviation.<sup>26</sup> The strongest effects are observed for videos depicting environmental disasters and war, suggesting that these existential threats are particularly effective in diminishing future outlooks and optimism. However, these differences are not statistically significant. The key takeaway is that, like trust, hope is an individual characteristic that can fluctuate significantly in the short run in response to simple visual threats.<sup>27</sup>

**Locus of Control and Sensitivity Analysis.** According to the literature, hope is described as a positive motivational state involving a sense of agency (Graham, 2023a; Snyder, 1994). It is therefore closely related to locus of control, a psychological trait that reflects the extent to which individuals believe their life outcomes are within their control. In panel (b) of Table 5, we show that our different treatments significantly affect reported locus of control, with a relative impact as high as 23%–27% of a standard deviation.<sup>28</sup> Consequently, in panel (c), we observe that when the hope index incorporates perceived control, the treatment effects on hope become even larger. This suggests that an individual’s sense of control is slightly more volatile than optimism and contributes to greater fluctuations in hope when taken into account.

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26. Note that unlike trust, there is no established empirical literature on the impact of shocks and threats on hope that could serve as a benchmark for comparison (OB: check with Carol).

27. As with interpersonal trust, the treatment effect appears to be driven by the threat channel, as shown in Table C3.

28. This result adds to the literature showing that control is not an unstable individual trait (Cobb-Clark and Schurer, 2013).

Table 5: Effect of Treatments on Hope and Locus of Control

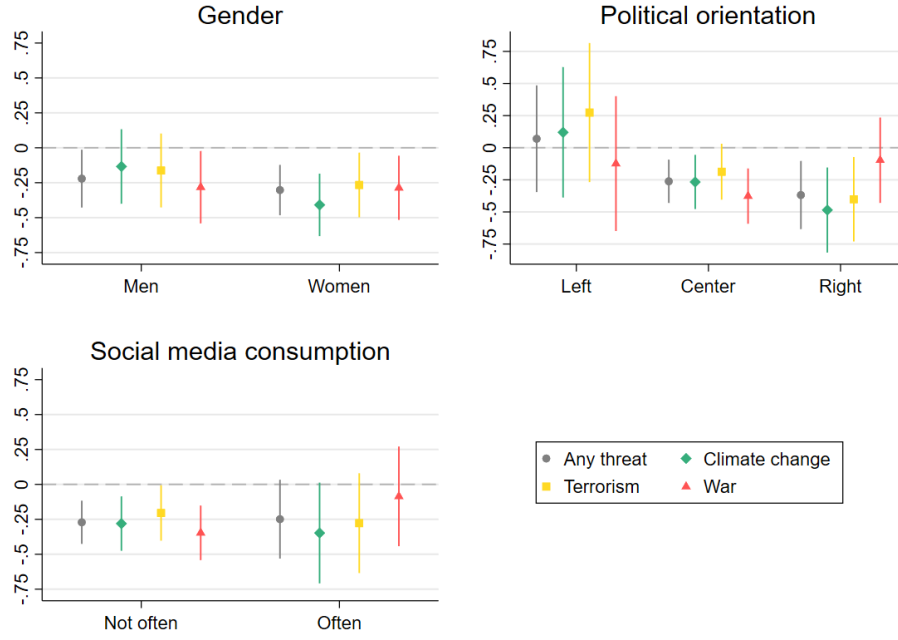
	Any video	Env.	Terrorism	War
	(1)	(2)	(3)	(4)
<b>(a) Baseline estimates</b>				
Treatment	-0.27*** (0.069)	-0.30*** (0.087)	-0.22** (0.089)	-0.28*** (0.087)
Relative to the mean (in %)	6.67	7.37	5.52	7.11
Relative to the std. dev. (in %)	17.9	19.8	14.8	19.1
Observations	2,787	1,395	1,400	1,384
R-squared	0.152	0.253	0.217	0.228
	Any video	Env.	Terrorism	War
<b>(b) Impact of treatments on locus of control</b>				
Treatment	-0.37*** (0.068)	-0.38*** (0.085)	-0.34*** (0.083)	-0.39*** (0.087)
Relative to the mean (in %)	8.73	8.88	7.93	9.22
Relative to the std. dev. (in %)	25.8	26.3	23.5	27.3
Observations	2,787	1,395	1,400	1,384
R-squared	0.148	0.244	0.266	0.217
	Any video	Env.	Terrorism	War
<b>(c) Hope index with locus of control</b>				
Treatment	-0.30*** (0.061)	-0.32*** (0.076)	-0.26*** (0.077)	-0.32*** (0.077)
Relative to the mean (in %)	7.38	7.89	6.36	7.84
Relative to the std. dev. (in %)	23.0	24.6	19.8	24.5
Observations	2,787	1,395	1,400	1,384
R-squared	0.159	0.268	0.242	0.237

Notes: This table presents the estimated impact of threats on locus of control and different definition of the hope index. 'Hope' in the baseline results of panel (a) is defined as an index calculated as the average of answers to two questions on how much they 'Have hope for the future' 'They are optimistic regarding the future'. 'Locus of control' in panel (b) is obtained from the question about how much respondents feel they 'have control over their destiny'. 'Hope' in panel (c) is defined as a new index including the locus of control on top of the two previous questions. These were answered on a Likert-scale (1 to 7). The mean of the baseline 'hope' index in the control group is equal to 4.00 and the standard deviation is equal to 1.49. The mean of the 'locus of control' answer in the control group is equal to 4.25 and the standard deviation is equal to 1.43. Finally, the mean 'hope' index with the inclusion of the locus of control in the control group is 4.08 and the standard deviation is equal to 1.31. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. Control variables are risk aversion, education and cells made up of gender, age-group, socio-economic category, and region. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .

We also conduct a sensitivity analysis as we did for interpersonal trust. Results reported in Table C1 present alternative ways to deal with the potential non-compliers. Consistent with our previous observations, excluding them from our sample (panel a) or from the treated group (panel b) leads to larger estimated effect, confirming that our main estimates capture an ITT and likely represent a lower bound of the ATE. Panel (c) shows results with the continuous treatment (threat intensity feeling).

**Heterogeneity.** Heterogeneous effects are presented in Table C5 and summarized in Figure 6. Similar to trust, the decline in hope is not statistically significant for men in response to the environment and terrorism videos, though the gender difference remains insignificant. However, unlike trust, hope’s response to threat does not vary with risk aversion or media usage. Political orientation, on the other hand, follows a pattern broadly similar to that observed for trust: the threat effect is primarily driven by right-wing voters. This pattern is particularly pronounced for environmental and terrorist threats, where the left-right divide is statistically significant. Further interactions with risk aversion suggest that differences across political groups are less pronounced among highly risk-averse individuals, while the left-right contrast is most evident among those with below-median risk aversion, especially in response to the environment video.

Figure 6: Heterogeneous Treatment Effects on Hope



Notes: This figures shows the coefficients on the interactions between the respective subpopulation and treatment in the regression of treatment on the hope index, calculated as the average of answers to two questions on how much they 'Have hope for the future' and 'They are optimistic regarding the future'. These were answered on a Likert-scale (1 to 7). Control variables are cells made up of gender, age-group, socio-economic category, and region. Observations: 696 in the control group, 699 in the environmental treatment, 704 in the terror treatment, and 688 in the war treatment.

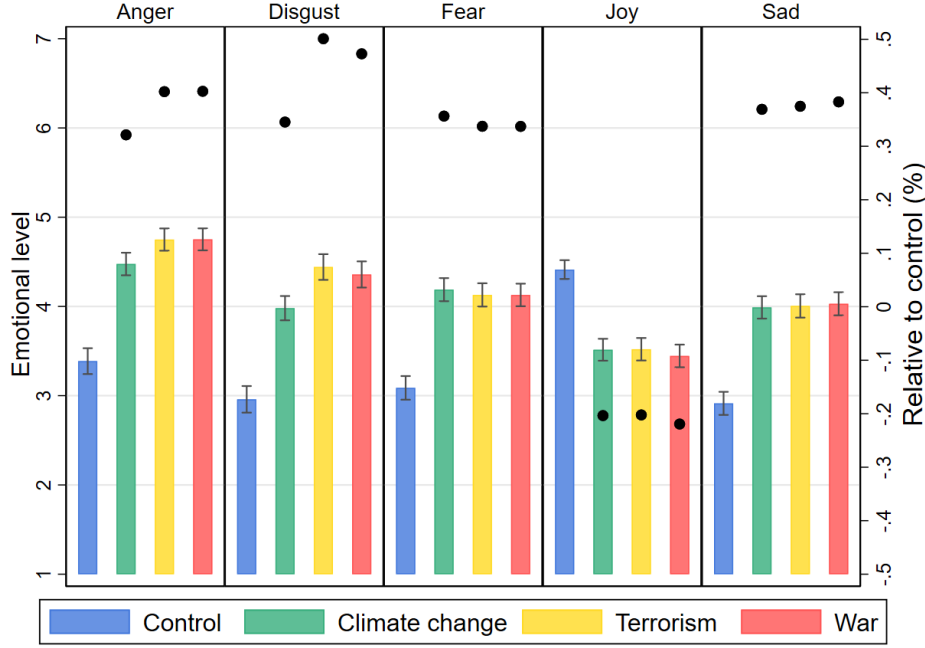
### 3.3 Mechanisms and Additional Results

This section aims at discussing some possible pathways, even though comprehensive and causal analyses of underlying mechanisms is of course far out of reach. What we suggest is primarily to mobilize recorded information about basic emotions, which may initially correlate with interpersonal trust and hope (i.e. as captured in the control group) and possibly co-move with these attitudes in response to perceived threats. Emotional dimensions may be particularly relevant in contexts where feelings of vulnerability or uncertainty can disrupt trust and hope.

**Emotional Response to Threats.** We first examine how our treatment affects emotional responses. Emotional scores are presented in Figure 7 for the different experimental groups (left axis). We find that exposure to threat increases negatively valenced emotions (fear, anger, disgust) and reduces positive emotions (joy), consistent with psychological

evidence (Aubé and Ric, 2019). Fear, a primary reaction to threat, is associated with physical danger and loss of control. It is elicited by all videos, whether through the reactivation of climate anxiety by natural disasters or the immediate threat to life and safety in the terrorism and war scenarios. Sadness is also a natural response to the images of destruction and helplessness among victims. Anger is provoked by perceived intentional harm—such as that inflicted by terrorists or authoritarian actors in the war video—and by the sense of injustice felt toward the victims. Disgust arises from the sight of injured individuals, or from moral repulsion toward terrorist acts and war atrocities. Both emotions are typically elicited by the actions of other human beings, which is less the case for natural disasters. Nevertheless, ecological destruction can also trigger disgust (due to aversion to decay or harm), and anger may arise from the perception that climate-related disasters result from human negligence. Results are consistent with these interpretations. Figure 7 also displays the percentage change in emotional responses relative to the control group (black plots, right axis). The magnitude of treatment effects is generally similar across threat videos, with the exception of natural disasters, which produce slightly—but significantly—smaller increases in anger and disgust compared to the terrorism and war treatments.

Figure 7: Effect of Treatments on Emotions



Notes: This figure shows the mean levels of indices for emotions across the different experimental groups. The dots represent the change relative to the control group. They are measured on a Likert scale (1 to 7). The error bars represent 95% confidence intervals. Observations: 696 in the control group, 699 in the environmental treatment, 704 in the terror treatment, and 688 in the war treatment.

**Interpersonal Trust and Emotions.** Trust is commonly described as a multidimensional concept encompassing cognitive, emotional, and behavioral components (Lewis and Weigert, 1985; McAllister, 1995). Thus, it is not only based on rational evaluation but also rooted in feelings of safety, emotional security, and connection with others. This dimension may be particularly sensitive to perceived threats and be reflected in changes in primary emotions. To analyze it, we explore the role of emotions when considering the average difference between treated and control groups, then examine more complex patterns driven by the specific contribution of each emotion. We restrict the analysis to three negative emotions (anger, disgust, fear), to limit potential difficulties surrounding multicollinearity across emotions and for the ease of interpretations.<sup>29</sup> Complementary analyses including sadness and joy are presented in the appendix.

To begin, Table B8 reports estimations of interpersonal trust while including one emotion

29. Basic emotions tend to be mutually correlated as they share underlying psychological and physiological mechanisms. For instance, a regression of sadness on other emotions yields an  $R^2$  of 0.61. See Zelenski and Larsen (2000) and Vansteelandt, Van Mechelen, and Nezlek (2005).



at a time. : it points to a significant correlation—conditional on risk preference, education and socio-demographic cells—between trust and anger, disgust and fear in general, i.e., in the control group (column 1).<sup>30</sup> When turning to the full sample (column 2), the trust-emotion correlations increase, as they now reflect the average emotional differences between treated and control groups in addition to the ‘natural’ cross-sectional variation. They play a similar role as the perceived threat variable in Table B3: controlling for emotions then lead to a statistically insignificant coefficient on the treatment variable (column 3). As seen, all emotions respond consistently to threats (with previously discussed nuances across emotions), so any of them has this effect in Table B8 (columns 5-6).<sup>31</sup> The results are also reminiscent of the fact that the trust response to war images is not fully explained by perceived threats and associated emotional responses (column 6).

Next, we examine the role of anger, disgust and fear when included simultaneously in trust estimations for each experimental group. Results are presented in Table 7. In the control group (column 1), these three emotions are jointly significant (p-value shown in the last row). However, unlike in Table B3, where emotions were included individually, only disgust emerges as a significant correlate. This likely reflects collinearity among emotions, with disgust exhibiting stronger or more distinct effects. Turning to the full sample (column 2), we first observe an increase in the adjusted  $R^2$ , consistent with the earlier conclusion that average emotional shifts reflect treatment status. Beyond this common effect, jointly including the three emotions also uncovers their distinct contributions, along with some heterogeneity across video types. Terror and war images tend to strengthen the association between distrust and anger, whereas this effect is weaker for environmental disasters, which—as previously discussed—are less interpersonal. Given the inherently threatening nature of the videos, all three emotions contribute to a stronger fear-related distrust. Additional results point to contrasted moves for other emotions, including a partial decoupling in the case of disgust and, as reported in the Appendix (Table E1), a strong co-movement for joy and a decoupling (with sign reversal) for sadness.

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30. If the correlation between trust and emotion (in levels or in treatment-induced changes) were specific to certain population groups, our highly granular fixed effects structure would capture it. This is broadly not the case. Emotional and attitudinal responses, in particular, show little association with individual characteristics. Nonetheless, we adopt a less demanding specification here, using gender-age cells instead of fully granular ones, which leads to smaller  $R^2$ .

31. A fortiori, similar findings are obtained when using all emotions simultaneously (unreported) or the first component of a Principal Component Analysis (PCA). Precisely, we run a PCA on detailed emotions: the first component identifies the main pattern of shared variance across those emotions. The second component, despite having an eigenvalue larger than one, has very little explanatory power on trust.

Table 7: Association between Interpersonal Trust and Emotions by Experimental Group

	Control	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)
Anger	0.02 (0.044)	-0.08*** (0.025)	-0.05 (0.043)	-0.10** (0.045)	-0.10** (0.042)
Disgust	-0.10*** (0.040)	-0.05** (0.021)	-0.08* (0.039)	-0.04 (0.037)	-0.04 (0.036)
Fear	-0.02 (0.041)	-0.08*** (0.021)	-0.09** (0.036)	-0.08** (0.036)	-0.06* (0.037)
N	696	2091	699	704	688
R <sup>2</sup>	0.073	0.105	0.126	0.137	0.095
Adj. R <sup>2</sup>	0.040	0.094	0.094	0.107	0.062
Test emotions (p-value)	0.000	0.000	0.000	0.000	0.000

Notes: This table presents the estimated effect of emotions on the outcome.

Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Discussion.** Several remarks can be made. *First*, our interpretation in terms of co-movement is suggestive. Stronger trust responses could be due to individuals with higher initial *levels* of anger or fear, rather than to those experiencing a simultaneous *shift* in these emotions. Yet we also observe an overall increase in these emotions, which suggest that trust responses and emotion responses are positively correlated, otherwise the trust-emotion correlation would go down. A more refined interpretation of heterogeneous patterns would require panel data, which we are currently collecting. *Second*, the initial cross-sectional differences across emotions (i.e., in the control group) reflect between-subject variability in the trust-emotion relationship. In contrast, the co-movements observed under threat exposure are possibly shaped by both between- and within-subject variation in emotional responses. Again, panel data is essential to disentangle these two sources of variation and clarify the role of specific emotions. *Third*, co-movements, even if robustly established, do not imply mediation. While threat-induced emotions may influence interpersonal trust, other mechanisms may simultaneously be at play. These include potential confounding factors, which could drive both emotional activation and trust dynamics, and reverse causality, whereby threat-induced distrust could in turn affect emotional regulation. Addressing these questions would require causal mediation analysis, which remains highly challenging in this context, as it implies randomizing both

threat exposure and emotional states.<sup>32</sup> *Fourth*, the literature offers conflicting evidence on which basic emotions reduce trust and through which mechanisms (appraisals of low certainty versus low controllability). For instance, Myers and Tingley (2016) argue that low-certainty emotions like anxiety are especially impactful, while Dunn and Schweitzer (2005) emphasize the role of low self-control emotions such as joy, or high other-control emotions like anger. Our findings support both perspectives by suggesting co-movements between interpersonal trust and both fear and anger. Additional sensitivity analyses presented in the Appendix further highlight the role of joy/happiness and confirm that the dynamics surrounding sadness remain more ambiguous.

**Hope and Emotions.** Classical philosophers often described hope as an emotion, typically contrasted with fear, as both emerge in contexts of uncertainty (Blöser and Stahl, 2019). In more recent psychological frameworks, hope is viewed as both affective and cognitive, involving beliefs, expectations, and goal-directed thinking, though generally considered to rest on a stronger emotional foundation than trust (Snyder, 2002). We first explore this point using data from our control group. A model of hope that includes granular cell fixed effects, risk aversion, and education yields an  $R^2$  of 0.37, which rises substantially to 0.58 when emotions are added. By contrast, the trust model starts with an  $R^2$  of 0.35 and increases only marginally to 0.37 when controlling for emotions. This difference highlights a stronger emotional basis for hope than for trust.

However, this emotional grounding does not imply that hope is more reactive to shocks. In fact, hope is a positive and future-oriented mental state that combines motivation, optimism, and a sense of agency, particularly when facing obstacles or uncertainty. As shown in Figure 3, exposure to threatening content reduces interpersonal trust by 4.7%–10% and hope by a comparable magnitude (6.3%–10%) across video types. In Table C7, we find that, similar to trust, the coefficient on hope becomes insignificant once any basic emotion is included in the model, again reflecting a broad threat effect (as characterized in Table C3). Table 8 shows that, in the absence of threat (column 1), cross-sectional variation in hope is negatively associated with disgust, and more strongly with fear. After threat exposure (columns 2–5), consistent co-movements emerge between hope and fear, mirroring patterns observed for trust.<sup>33</sup> However, as for trust, emotional dynamics

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32. See concluding section. In this regard, it is also important to assess whether emotion-elicitation designs in previous studies truly isolate emotional effects, or whether they might directly influence trust and thus confound interpretations of the threat–emotion–trust pathway. For example, in deception-based designs such as those in Dunn and Schweitzer (2005), trust reductions may arise from violated expectations rather than emotional processes per se.

33. Unreported estimations show that locus of control also co-moves with fear (see also Cobb-Clark and

along the threat gradient can be nuanced. Additional analyses in the Appendix (Table E2) show a strong cross-sectional correlation between hope and joy. Yet, following exposure to threats, this association weakens—a pattern of decoupling that suggests that under stress, hope and joy begin to follow distinct paths. These results likely reflect the fact that, whereas basic emotions are immediate and automatic responses to perceived danger or harm, trust and hope are higher-order emotional constructs involving cognitive appraisal, anticipation, and goal-oriented reasoning. As such, their patterns of response can only be partially attributed to basic emotional reactions

Table 8: Association between Hope and Emotions by Experimental Group

	Control	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)
Anger	-0.08 (0.049)	-0.08*** (0.028)	-0.04 (0.050)	-0.10** (0.050)	-0.09* (0.048)
Disgust	-0.12*** (0.044)	-0.06** (0.024)	-0.08* (0.045)	-0.06 (0.041)	-0.06 (0.040)
Fear	-0.13*** (0.045)	-0.20*** (0.023)	-0.18*** (0.042)	-0.21*** (0.040)	-0.20*** (0.042)
N	696	2091	699	704	688
R <sup>2</sup>	0.186	0.166	0.158	0.210	0.193
Adj. R <sup>2</sup>	0.156	0.156	0.128	0.182	0.164
Test emotions (p-value)	0.000	0.000	0.000	0.000	0.000

Notes: This table presents the estimated effect of emotions on the outcome.

Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Deep parameters.** We present hereafter a series of results on additional outcomes related to trust in particular. Previous research has shown that "deep parameters", such as risk aversion and time preferences, tend to be more stable traits than attitudes like trust and hope. Nonetheless, some studies have documented the impact of shocks—such as conflicts—on these preferences,<sup>34</sup> as well as the connection between risks and attitudes such as trust (Dohmen et al., 2011; Bohnet and Zeckhauser, 2004). Panel data evidence

Schurer, 2013). This effect further strengthens the negative correlation between hope and fear when hope is augmented with the control variable.

34. See for instance Callen et al. (2014), Voors et al. (2012), and Chuang and Schechter (2015) and Boutin, Petifour, and Megzari (2023) for a recent review and new evidence from pandemic-related threats.

points to time variation in response to life event (Cobb-Clark et al., 2016). Closer to us, some studies experimentally manipulate fear and find an impact on risk aversion (Guiso, Sapienza, and Zingales, 2018). In our setting, additional (unreported) estimations indicate that threat videos have no measurable effect on risk aversion or time preferences.<sup>35</sup> This finding holds both overall and for each specific video, whether analyzed on average or through interactions with heterogeneity variables.<sup>36</sup>

**Trust in Institutions.** We examine the impact of threats on trust in institutions. As noted earlier, these findings should be interpreted with caution due to the pre-election context, which is also why we do not consider this measure one of our primary outcomes. Nonetheless, several results are noteworthy. On average, trust in institutions is not significantly affected by threat videos (see Table D1). However, heterogeneous patterns do emerge (Table D3). Notably, while gender differences were not significant for interpersonal trust and hope, women’s trust in institutions declines significantly following the environmental threat video, with a statistically significant gender gap in this case. Trust in institutions also decreases among right-wing voters in response to terrorist threats and among young men exposed to the war threat. We examine emotional variation in Tables D5 and D6. In the control group, opposing emotional forces are at play: while disgust is negatively correlated with institutional trust, fear shows a positive association when controlling for other negative emotions. Anger, by contrast, does not significantly influence trust, suggesting it may be less of a persistent emotional state. However, anger can be triggered by threat exposure: in the treated groups, we observe co-movements between trust and anger across all threat types. A similar pattern emerges for fear, as in Table D5, the positive coefficient observed in the control group tends to vanish following treatment. Furthermore, Table D5 shows that the treatment effect, when conditioned on emotions, becomes significantly *positive* in response to terrorism and war. This pattern appears not only with anger and disgust, but also in unreported estimations combining multiple emotions. One possible interpretation is the emergence of a solidarity or "rally around the flag" effect, partially offsetting the distrust generated by threats and their associated emotional responses.<sup>37</sup> Still, this remains a speculative interpretation, both regarding

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35. OB: maybe a table? also: explain in FN how we measure these parameters.

36. Note that despite the observed stability in risk preferences, all our previous estimations on interpersonal trust control for risk aversion. This precaution helps avoid biased interpretations that could arise from potential confounding due to simultaneous changes in trust and risk preferences—as e.g. in Cassar, Healy, and Von Kessler (2017), where climate shocks seem to increase both trust and risk aversion.

37. Dinesen and Jæger (2013) show that institutional trust can temporarily rise after terrorist attacks as citizens defer to authority figures. This ‘rally around the flag’ effect has also been observed in response to pandemics, economic crises, and other threats, though it is typically short-lived and depends on perceived

the existence of such a rally effect and the role of emotional mediation, as previously discussed.<sup>38</sup>

## 4 Conclusion

This study contributes to the literature on trust and hope by examining their short-term malleability. We explore how reactivating perceived threats—linked to natural disasters, terrorism, and war—can disrupt these mental states. Using randomized video treatments, we show that even brief exposure to threatening stimuli significantly alters interpersonal trust and hope. While hope is closely tied to emotional heterogeneity in general, both trust and hope respond to threats in ways that align with basic emotions, particularly through co-movements with anger and fear. Hope, however, displays a more complex pattern, including a decoupling from joy. Heterogeneity analyses reveal distinct patterns based on political orientation and, for trust specifically, differences related to social media usage.

Understanding the contextual sensitivity of trust and hope—particularly their responsiveness to threats during critical periods—is essential for developing strategies to reduce their volatility, restore them when eroded, and ultimately sustain societal cohesion and resilience. Our findings may inform further research on interventions aimed at reinforcing trust and hope in times of crisis. Several examples already show how policy responses influence these dynamics, notably during the pandemic.<sup>39</sup> Some studies have examined the positive impact of local support interventions following natural disasters (Andrabi, Das, and Aid, 2017), while others have explored aspirational programs aimed at reigniting hope.<sup>40</sup> Our findings underscore the fragility of social cohesion under conditions of heightened threat, particularly in moments of political uncertainty. Co-movements with emotions suggest that policymakers and communicators should be cautious about mes-

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institutional performance and transparency (Kritzing et al., 2021; Jha and Tripathi, 2024; Ananyev and Guriev, 2019; Geys and Qari, 2017; Aksoy et al., 2021; Sullivan and Young, 2020).

38. Our measure of trust in institutions combines trust in the government, trust in French institutions, and trust in the EU. While this broad scope might dilute feelings of specific blame (for natural disasters) or lack of protection (against terror), additional analyses focused on trust in government alone yield similar results, with slightly stronger patterns for anger and fear (see Table D5).

39. Those include unintended effects, such as the detrimental effect of lockdowns on interpersonal trust (Casoria, Galeotti, and Villeval, 2024), or ways to restore trust (Lei, Masclet, and Vesely, 2014), for instance by priming role models (Abel and Brown, 2022) or highlighting government intervention (Flückiger, Ludwig, and Sina Önder, 2019; Martinez-Bravo and Sanz, 2025; Khan, Shah, and Shah, 2021).

40. See for instance Beaman et al. (2012), Bernard et al. (2014), Lybbert and Wydick (2018), Lybbert (2022), and Cecchi et al. (2022).



saging that amplifies fear or anxiety, as these may inadvertently erode interpersonal trust. Instead, strategies that balance realism with constructive narratives could mitigate adverse effects while preserving the social fabric. Our heterogeneity results additionally point to the importance of tailoring messages not only to the most sensitive groups but also to the channels through which people receive information. In particular, the role of social media—as both a source of exposure and amplification—calls for careful attention to how threat-related content is framed and disseminated across platforms.

Further research could build on these findings in several directions. *First*, even though studying trust and hope responses to threats is particularly relevant during key moments such as pre-election periods, similar experiments could be replicated during times of lower political uncertainty or in periods marked by other forms of tension—such as war threats, as is the case at the time of writing this conclusion. *Second*, panel data could be used for different purposes. Surveying individuals prior to video exposure would provide more precise understanding of heterogeneous trajectories in trust, hope, and emotional responses to the videos, enabling a more detailed examination of potential co-movements than was possible in the present study. Assuming uniform treatment, in particular no avoidance correlated with initial emotional personality, panel information could also inform whether threat responses are triggered more by between- or within-subject variation.<sup>41</sup> *Third*, while these co-movements may suggest a mediating role for certain emotions, it remains important to assess whether emotional changes drive short-term shifts in trust and hope, or whether threat exposure affects these attitudes independently through other mechanisms. Causal mediation analysis is particularly challenging, as it would require exogenous variation in emotions during or after the threat, or similar instrumental variable strategies. The difficulty lies in identifying a manipulation of emotions that does not directly influence trust or hope through alternative channels. *Fourth*, expanding the experimental framework to include behavioral measures would strengthen the connection between attitudinal changes and consequential actions, helping to bridge the gap between experimental findings and real-world decision-making.

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41. Panel data could also be used to analyze post-treatment dynamics. However, we do not expect short video exposures to generate lasting effects on attitudinal or emotional states. In addition, re-exposing participants to the same experimental setting in subsequent panel waves may introduce bias, as the context itself could prompt memory recall and reactivate associated emotional responses. Similar concerns apply to repeated interventions within a longitudinal framework, even though such designs could help assess potential cumulative effects—such as those documented in doomscrolling—or, conversely, signs of habituation.

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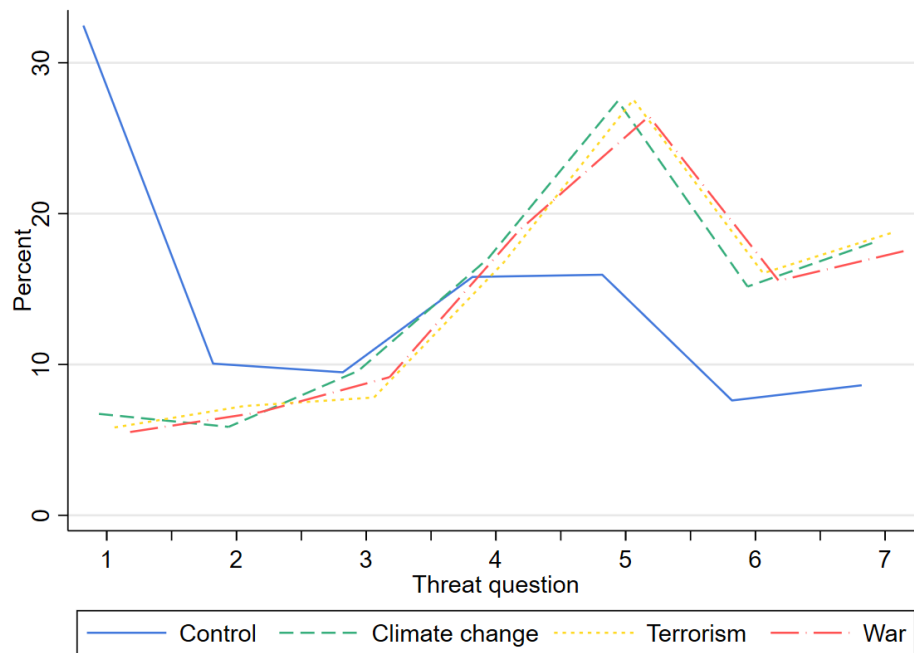
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## Appendix: Figures

Figure A1: Threat Distribution by Treatment



Notes: This figure shows the relative frequency of the feeling of threat by treatment group. 'Level of threat' is an index calculated as the average of answers to two questions on how much they 'Do you feel threatened?' and 'Do you feel in danger?'. These were answered on a Likert-scale (1 to 7). This was measured on a Likert scale (1 to 7). Observations: 696 in the control group, 699 in the environmental treatment, 704 in the terror treatment, and 688 in the war treatment.

## Appendix: Tables

### Literature and Descriptive Statistics

Authors*	Discipline	Outcome	Treatment / shocks	Method	Time horizon	Time horizon (detailed)	Effect on trust **	Data years	Country	Sample size
<b>Lab or online experiments</b>										
This paper	Economics	Trust in others Trust in government	Reactivation of terror, war & climate disaster threats	Random videos in online expe.	Short-term	Instantaneous	significant<0 insignificant	2024	France	2 787
Ric et al. (2023)	Psychology	Trust in others	Reactivation of terror & pandemics threats	Random videos in online expe.	Short-term	Instantaneous	insignificant	2022	France	318
Potts et al. (2019)	Psychology	Trust in others	Acute stressors	Lab: trust game	Short-term	Instantaneous	significant<0	2018	USA	96
Meuer & Imhoff (2021)	Psychology	Trust in others	Social threat (& heterogeneity in conspiracy attitude)	Lab: random threat and trust game	Short-term	Instantaneous	significant<0	2020	Germany	347
Aksoy et al. (2021)	Economics	Trust in others (neutral)	Covid-19: priming information about pandemics deaths	Random priming in online expe.	Short-term	Instantaneous	insignificant	2020	9 EU countries	25 720
Daniele et al. (2020,23)	Economics	Trust in government/institutions	Covid-19: threat reactivation (both health and economic risks)	Random reactivation in online expe.	Short-term	Instantaneous	significant<0	2020	4 EU countries	8 235
<b>Specific threats: other pandemics papers (long-term)</b>										
Aassve et al. (2020)	Economics	Trust in others	Past exposure to Spanish flue	Quasi-expe: double difference	Long-term	Intergenerational	significant<0	since 1972	USA	36
Kritzing et al. (2021)	Political sciences	Trust in institutions	Covid-19	Observational, survey	Short-term	Bi-weekly	significant<0	2020	Austra, France	17 672
Amat et al. (2020)	Economics	Trust in government	Exposure to COVID-19	Correlation	Short-term	During 2020	significant<0	2020	Spain	1 604
Eichengreen et al. (2024)	Economics	Trust in institutions/leaders	Epidemic exposure during ‘impressionable years’ (18-25 y.o.)	within-country-year between-cohort variation	Long-term	Intragenerational	significant<0	2006-18	142 countries	760 099
Eichengreen et al. (2021)	Economics	Trust in scientists	Epidemic exposure during ‘impressionable years’ (18-25 y.o.)	within-country-year between-cohort variation	Long-term	Intragenerational	significant<0	since 1970	138 countries	83 014
<b>Specific threat: natural disaster</b>										
Carlin et al. (2014)	Political sciences	Trust in others	Natural disaster (earthquakes in El Salvador, Haiti and Chile)	Observational, survey	Middle-term	< 1 year later	significant<<0	2001, 2010	3 Latin American cot	1 410
MacKay et al. (2024)	Economics	Trust in others	Natural disaster (various events) at ‘impressionable years’	Climate-spatial variation	Long-term	Intragenerational	significant<0	1999–2015	36 African nations	52 916
Skidmore and Toya (2014)	Economics	Trust in others	Natural disaster (various events)	Observational, survey	Long-term	Cum. shocks, long period	significant>0	1990-2010	146 countries	339
Cassar et al (2017)	Economics	Trust in others	Natural disaster (tsunami in Thailand)	Lab: trust game	Long-term	5 years later	significant>0	2009	Thailand	167
Chantarat et al. (2015)	Economics	Trust in neighbors & local gov.	Natural disaster (fooding)	Observational, survey	Long-term	2.5 years later	significant<0	2011	Cambodia	256
<b>Specific threat: terrorism</b>										
Geys & Qari (2017)	Economics	Trust in others	Terrorism (Stockholm bombings)	Event studies (online survey)	Middle-term	Within a year	insignificant	2011	Sweden	408
Godefroidt & Langer (2020)	Political sciences	Trust in others	Terrorism / mediation of fear (various events)	Observational, WVS	Middle-term	Yearly variation	significant<0	2010-14	World	76 254
Colombo et al. (2022)	Economics	Trust in others	Terrorism (France, Belgium, Germany, 2010-17)	Observational, ESS	Middle-term	1 year after	significant<0	2010-2017	Europe	35 240
Harding & Nwokolo (2024)	Political sciences	Trust in government	Terrorism (Boko Haram)	Observational, survey	Short-term	Within few days	significant>0	2014	Nigeria	592
Dinesen and Jaeger (2013)	Psychology	Trust in institutions	Terrorism (Madrid attacks)	Observational, survey	Middle-term	Back to setpoin with 14 months	insignificant	2004	Spain	1 000
Jha & Tripathi (2024)	Economics/socio	Trust in institutions	Terrorism (various events)	Event studies	Middle-term	Within a year	significant<0	2002-20	EU	350 000
<b>Specific threat: conflicts</b>										
Hall & Werner (2022)	Psychology	Trust in others	War, traumatic experience (Syrian and Iraqi refugees)	Observational, survey	Middle-term	0 to 4 years	significant>0	2020	Turkey	791
Conzo & Salustri (2019)	Economics	Trust in others	War (World War II)	Observational, SHARE data	Long-term	Intragenerational	significant<0	1945	Europe	6 555
Cassar et al. (2013)	Economics	Trust in others	Civil war (Tajikistan)	Survey, trust game	Long-term	10 years after	significant<0	2007+	Tajikistan	426
Gilligan et al. (2014)	Political sciences	Trust in others / social capital	Civil war (Nepal)	Trust games+	Middle-term	3 years	significant>0	2009-10	Nepal	252
De Luca & Verpoorten (2015)	Economics	Generalized trust	Civil war (Uganda)	Observational, survey	Long-term	12 years after	significant<0	2000,05,12	Uganda	4 671
Hutchison (2011)	Political sciences	Trust in government	War, territorial threat (various events)	Observational, survey	Middle-term	0 to 5 years	significant<0	2004	Afrobarometer	45 778
Bellows & Miguel (2009)	Economics	Attendance community	Civil war (conflicts in Sierra Leone)	Observational, survey	Long-term	3 to 16 years	significant>0	2006	Sierra Leone	10 471
Grosjean (2014)	Economics	Trust in government	War (World War II)	Observational, survey	Long-term	since WWII	significant<0	2010	39 countries	39 500
<b>Specific threat: economic crises</b>										
Alesina & La Ferrara (2002)	Economics	Trust in others	Trauma in past year (health, divorce, financial trouble)	Observational / GSS	Middle-term	Intragenerational	significant<0	1974-1994	USA	7 326
Ananiev & Guriev (2019)	Economics	Trust in others	Economic shock, income effect	IV	Middle-term	With a year	significant<0	2009	Russia	189
Bietenbeck et al. (2023)	Economics	Trust in others	Experiencing recession at ‘impressionable years’	Observational, GIPS	Long-term	Intragenerational	insignificant	2012/13	75 countries	56 655
Algan et al (2017)	Economics	Trust in others Trust in institutions	Economic shocks, austerity policies	Observational, survey	Middle-term	1-2 years	significant<0 significant<0	2014	Europe	1 051
Roth et al. (2022)	Economics	Trust in institutions	Economic shock, unemployment	Observational, survey	Middle-term	yearly variation (panel)	significant<0	2009	Europe	305

\* Authors in grey indicate unpublished papers.

\*\* Some studies highlight a positive effect of threats on trust described as a solidarity effect (or ‘rally around the flag’ situation when the focus is on trust in governments). Underlined studies: indicate when this effect tends to be short-lived (eventually turning insignificant or negative); if positive, it indicates that, on the contrary, the effect stays (other studies with a positive effect do not suggest this type of mechanism). In our case, it indicates that negative emotions might be offset by this solidarity effect, explaining an overall insignificant effect of threats on trust in institutions.

Table A2: Correlation across Detailed Outcomes

	Trust in others		Trust in institutions			Hope		
<i>Trust in others</i>								
Trust in others	1							
Trust abuse	<b>-0.400</b>	1						
<i>Trust in institutions</i>								
Trust in institutions	0.346	-0.201	1					
Trust in government	0.294	-0.146	<b>0.668</b>	1				
Trust in EU	0.332	-0.191	<b>0.663</b>	<b>0.755</b>	1			
<i>Hope</i>								
Hope	0.292	-0.150	0.323	0.273	0.296	1		
Optimism	0.290	-0.148	0.322	0.274	0.281	<b>0.847</b>	1	
Locus of control	0.237	-0.109	0.210	0.177	0.192	<b>0.510</b>	<b>0.526</b>	1

Notes: This table represents the correlation of all outcome questions in the sample.

Table A3: Correlation across Detailed Emotions

	Threat		Fear		Anger		Disgust		Sadness		Joy	
<i>Threat</i>												
Threat	1											
Danger	<b>0.861</b>	1										
<i>Fear</i>												
Anxiety	0.590	0.625	1									
Fear	0.664	0.712	<b>0.826</b>	1								
<i>Anger</i>												
Anger	0.590	0.601	0.583	0.627	1							
Annoyance	0.545	0.538	0.563	0.556	<b>0.774</b>	1						
<i>Disgust</i>												
Disgust	0.532	0.556	0.545	0.584	0.718	0.652	1					
Nausea	0.544	0.563	0.552	0.589	0.735	0.679	<b>0.926</b>	1				
<i>Sadness</i>												
Sadness	0.545	0.549	0.655	0.664	0.634	0.557	0.612	0.627	1			
Depressed	0.436	0.499	0.700	0.667	0.517	0.468	0.499	0.505	<b>0.729</b>	1		
<i>Joy</i>												
Joy	-0.289	-0.281	-0.345	-0.353	-0.352	-0.281	-0.363	-0.369	-0.451	-0.382	1	
Happiness	-0.313	-0.306	-0.394	-0.391	-0.390	-0.311	-0.398	-0.398	-0.492	-0.435	<b>0.914</b>	1

Notes: This table represents the correlation of all the emotion questions in the sample.

## Balance Tests

Table A4: Statistics and Balance Tests (one margin at a time)

	Quotas	Mean Statistics					Testing differences			
		Control	Treated				Control VS Treated			
			Any	Env.	Terrorism	War	Any	Env.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Gender</i>										
Men	0.44	0.44 (0.496)	0.44 (0.496)	0.43 (0.496)	0.44 (0.497)	0.44 (0.497)	-0.002 (0.022)	0.002 (0.027)	-0.004 (0.027)	-0.004 (0.027)
<i>Age group</i>										
20-24	0.05	0.05 (0.219)	0.05 (0.228)	0.06 (0.230)	0.06 (0.232)	0.05 (0.223)	-0.005 (0.010)	-0.006 (0.012)	-0.007 (0.012)	-0.002 (0.012)
25-34	0.15	0.15 (0.360)	0.15 (0.353)	0.15 (0.356)	0.14 (0.346)	0.15 (0.356)	0.007 (0.016)	0.004 (0.019)	0.013 (0.019)	0.004 (0.019)
35-44	0.18	0.18 (0.384)	0.18 (0.387)	0.18 (0.385)	0.18 (0.387)	0.19 (0.391)	-0.004 (0.017)	-0.001 (0.021)	-0.004 (0.021)	-0.008 (0.021)
45-54	0.19	0.19 (0.393)	0.19 (0.389)	0.18 (0.388)	0.19 (0.391)	0.19 (0.389)	0.005 (0.017)	0.007 (0.021)	0.004 (0.021)	0.005 (0.021)
55-64	0.17	0.17 (0.377)	0.17 (0.378)	0.17 (0.380)	0.17 (0.380)	0.17 (0.376)	-0.002 (0.017)	-0.004 (0.020)	-0.004 (0.020)	0.001 (0.020)
65+	0.26	0.26 (0.437)	0.26 (0.437)	0.26 (0.437)	0.26 (0.438)	0.26 (0.437)	-0.001 (0.019)	-0.000 (0.023)	-0.003 (0.023)	-0.000 (0.023)
<i>Socio-prof category</i>										
Independent	0.05	0.05 (0.216)	0.04 (0.205)	0.04 (0.193)	0.05 (0.212)	0.05 (0.211)	0.005 (0.009)	0.010 (0.011)	0.002 (0.011)	0.002 (0.011)
Executives	0.12	0.12 (0.326)	0.12 (0.330)	0.12 (0.327)	0.12 (0.328)	0.13 (0.336)	-0.004 (0.014)	-0.001 (0.017)	-0.001 (0.017)	-0.009 (0.018)
Intermediary	0.15	0.16 (0.362)	0.14 (0.350)	0.15 (0.355)	0.14 (0.349)	0.14 (0.347)	0.012 (0.016)	0.008 (0.019)	0.013 (0.019)	0.016 (0.019)
Employees	0.30	0.29 (0.456)	0.30 (0.460)	0.31 (0.461)	0.30 (0.460)	0.30 (0.459)	-0.009 (0.020)	-0.012 (0.025)	-0.008 (0.024)	-0.006 (0.025)
Retired	0.29	0.29 (0.452)	0.29 (0.453)	0.29 (0.453)	0.29 (0.455)	0.28 (0.452)	-0.002 (0.020)	-0.002 (0.024)	-0.005 (0.024)	0.001 (0.024)
Other inactives	0.10	0.09 (0.293)	0.10 (0.297)	0.10 (0.298)	0.10 (0.294)	0.10 (0.299)	-0.003 (0.013)	-0.004 (0.016)	-0.000 (0.016)	-0.004 (0.016)
<i>Region</i>										
Paris	0.19	0.19 (0.389)	0.19 (0.391)	0.19 (0.394)	0.19 (0.392)	0.18 (0.388)	-0.003 (0.017)	-0.006 (0.021)	-0.004 (0.021)	0.001 (0.021)
West	0.23	0.23 (0.424)	0.23 (0.422)	0.24 (0.427)	0.23 (0.419)	0.23 (0.420)	0.003 (0.019)	-0.005 (0.023)	0.007 (0.023)	0.006 (0.023)
North East	0.23	0.23 (0.419)	0.24 (0.425)	0.23 (0.424)	0.23 (0.422)	0.24 (0.430)	-0.010 (0.018)	-0.008 (0.023)	-0.005 (0.022)	-0.017 (0.023)
South West	0.11	0.12 (0.324)	0.11 (0.310)	0.11 (0.312)	0.11 (0.312)	0.10 (0.306)	0.012 (0.014)	0.011 (0.017)	0.010 (0.017)	0.015 (0.017)
South East	0.24	0.23 (0.424)	0.24 (0.425)	0.23 (0.419)	0.24 (0.429)	0.24 (0.426)	-0.002 (0.019)	0.008 (0.023)	-0.009 (0.023)	-0.004 (0.023)
Obs.	2787	696	2091	699	704	688	2787	1395	1400	1384

Notes: This table presents the variables' mean and standard deviation in parentheses in Columns (1) to (5) for different samples. Column (1) corresponds to the control group exposed to the placebo video and Columns (2) to (5) correspond to the different treated groups, with Column (2) including all the treated groups and Columns (3) to (5) including the respondents exposed respectively to the environmental, terrorism and war threat video. Columns (6) to (9) present the estimated differences in means between the different treated groups and the control group. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .

Table A6: Effect of Treatments on Threat Intensity Feeling (index)

	Any video	Env.	Terrorism	War
	(1)	(2)	(3)	(4)
Treatment	1.31*** (0.078)	1.31*** (0.105)	1.37*** (0.103)	1.25*** (0.105)
Relative to the mean (in %)	41.33	41.21	43.24	39.39
Relative to the std. dev. (in %)	67.8	67.6	70.9	64.6
Observations	2,787	1,395	1,400	1,384
R-squared	0.210	0.293	0.323	0.283

Note: This table presents the estimated impact of threats on level of threat. 'Level of threat' is an index calculated as the average of answers to two questions on how much they 'Do you feel threatened?' and 'Do you feel in danger?'. These were answered on a Likert-scale (1 to 7). The mean of the 'level of threat' index in the control group is equal to 3.17 and the standard deviation is equal to 1.93. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .

## Estimations: Trust in Others

Table B1: Effect of Treatments on Trust in Others, Aensitivity Analysis

	Any video	Env.	Terrorism	War
	(1)	(2)	(3)	(4)
<b>(a) Discarding non-compliers</b>				
Treatment	−0.22*** (0.059)	−0.19** (0.077)	−0.20*** (0.076)	−0.32*** (0.075)
Relative to the mean (in %)	6.43	5.55	6.10	9.42
Relative to the std. dev. (in %)	17.0	14.7	16.1	24.9
Observations	2,676	1,355	1,364	1,349
R-squared	0.141	0.202	0.219	0.230
	Any video	Env.	Terrorism	War
<b>(b) Treatment: treated and threat feeling &gt; 1</b>				
Treatment	−0.22*** (0.057)	−0.18** (0.076)	−0.21*** (0.076)	−0.33*** (0.074)
Relative to the mean (in %)	6.70	5.29	6.39	9.79
Relative to the std. dev. (in %)	17.7	14.0	16.9	25.9
Observations	2,787	1,395	1,400	1,384
R-squared	0.140	0.207	0.217	0.227
	Any video	Env.	Terrorism	War
<b>(c) Continuous treatment</b>				
Treatment	−0.16*** (0.014)	−0.11*** (0.020)	−0.14*** (0.020)	−0.14*** (0.020)
Relative to the mean (in %)	6.19	4.45	5.92	5.32
Relative to the std. dev. (in %)	16.4	11.7	15.6	14.1
Observations	2,787	1,395	1,400	1,384
R-squared	0.175	0.225	0.247	0.246

Notes: This table presents the estimated impact of threats on the trust in others. 'Trust in others' is an index calculated as the average of answers to two questions on where 'Most people can be trusted' and 'Most people try to take advantage of others'. These were answered on a Likert-scale (1 to 7) and the answer to the second question was subtracted from 7 to get a variable that increases in trust in others. The mean of 'trust in others' index in the control group is equal to 3.36 and the standard deviation is equal to 1.27. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. Control variables are risk aversion, education and cells made up of gender, age-group, socio-economic category, and region. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .

Table B3: Effect of Treatments on Trust in Others, controlling for Threat Feeling Index

	Control	All treat.	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment			0.00 (0.061)	-0.03 (0.080)	0.01 (0.080)	-0.13* (0.077)
Threat index	-0.07** (0.030)	-0.16*** (0.014)	-0.16*** (0.015)	-0.11*** (0.021)	-0.15*** (0.021)	-0.12*** (0.021)
Observations	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.36	0.18	0.18	0.22	0.25	0.25

Notes: This table presents the estimated impact of threats on the trust in others, controlling for the threat index. 'Trust in others' is an index calculated as the average of answers to two questions on where 'Most people can be trusted' and 'Most people try to take advantage of others'. These were answered on a Likert-scale (1 to 7) and the answer to the second question was subtracted from 7 to get a variable that increases in trust in others. The mean of 'trust in others' index in the control group is equal to 3.36 and the standard deviation is equal to 1.27. 'Level of threat' is an index calculated as the average of answers to two questions on how much they 'Do you feel threatened?' and 'Do you feel in danger?'. These were answered on a Likert-scale (1 to 7). The mean of the 'level of threat' index in the control group is equal to 3.17 and the standard deviation is equal to 1.93. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. Control variables are risk aversion, education and cells made up of gender, age-group, socio-economic category, and region. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .



Table B5: Heterogeneous Effect of Treatments on Trust in Others

	Group size	Trust in others				
		Control	Any video	Environment	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Gender</i>						
Men	1,217	3.34 (1.303)	-0.15* (0.090)	-0.07 (0.118)	-0.10 (0.115)	-0.28** (0.112)
Women	1,570	3.38 (1.249)	-0.24*** (0.078)	-0.24** (0.099)	-0.25** (0.101)	-0.30*** (0.099)
Men = Women			0.476	0.273	0.301	0.886
<i>Age group</i>						
20-29	317	3.31 (1.210)	-0.26 (0.180)	0.05 (0.238)	-0.38 (0.240)	-0.42* (0.233)
30-54	1,274	3.34 (1.243)	-0.18** (0.088)	-0.22* (0.114)	-0.09 (0.115)	-0.27** (0.110)
55+	1,196	3.39 (1.322)	-0.21** (0.089)	-0.17 (0.113)	-0.23** (0.113)	-0.28** (0.111)
20-29 = 30-54 = 55+			0.905	0.597	0.484	0.841
<i>Social media usage</i>						
Never	1,062	3.44 (1.353)	-0.28*** (0.094)	-0.29** (0.119)	-0.24** (0.122)	-0.36*** (0.120)
Sometimes	1,038	3.27 (1.254)	-0.02 (0.096)	0.05 (0.126)	0.07 (0.121)	-0.16 (0.120)
Often	687	3.37 (1.149)	-0.36*** (0.123)	-0.30* (0.160)	-0.52*** (0.155)	-0.38** (0.154)
Never = Sometimes			0.053	0.053	0.067	0.246
Often = Sometimes			0.025	0.085	0.003	0.269
<i>TV usage</i>						
Never	303	3.25 (1.371)	-0.17 (0.187)	-0.00 (0.245)	-0.10 (0.235)	-0.39 (0.239)
Sometimes	916	3.37 (1.273)	-0.23** (0.102)	-0.20 (0.135)	-0.24* (0.132)	-0.24* (0.128)
Often	1,568	3.37 (1.255)	-0.19** (0.078)	-0.18* (0.100)	-0.17* (0.100)	-0.30*** (0.097)
Never = Sometimes			0.749	0.474	0.589	0.589
Never = Often			0.918	0.494	0.788	0.729
<i>Political wing</i>						
Left	309	3.53 (1.409)	0.10 (0.178)	0.32 (0.222)	0.14 (0.235)	-0.11 (0.224)
Center	1,707	3.42 (1.218)	-0.16** (0.072)	-0.14 (0.092)	-0.13 (0.094)	-0.25*** (0.092)
Right	771	3.13 (1.324)	-0.37*** (0.114)	-0.44*** (0.145)	-0.34** (0.143)	-0.43*** (0.142)
Left = Center			0.172	0.054	0.293	0.574
Left = Right			0.025	0.004	0.084	0.228
<i>Risk aversion</i>						
Low	1,617	3.39 (1.236)	-0.07 (0.077)	-0.02 (0.100)	-0.06 (0.099)	-0.19* (0.098)
High	1,170	3.32 (1.323)	-0.38*** (0.091)	-0.37*** (0.116)	-0.36*** (0.117)	-0.44*** (0.114)
Low = High			0.011	0.027	0.046	0.098
<i>Political wing <math>\times</math> Risk aversion</i>						
Left Low	165	3.53 (1.366)	0.52** (0.261)	1.01*** (0.318)	0.58* (0.330)	0.20 (0.317)
Center Low	996	3.46 (1.205)	-0.05 (0.094)	-0.03 (0.120)	0.02 (0.124)	-0.18 (0.120)
Right Low	456	3.23 (1.324)	-0.31** (0.114)	-0.41** (0.145)	-0.33* (0.143)	-0.36* (0.142)

Table B7: Heterogeneous Effect of Treatments on Trust in Others - continue

Table B8: Effect of Emotions and Treatments on Trust in Others

	Control	All treat.	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment			-0.03 (0.058)	-0.07 (0.071)	0.02 (0.072)	-0.13* (0.072)
Anger	-0.08*** (0.025)	-0.15*** (0.013)	-0.14*** (0.014)	-0.12*** (0.019)	-0.12*** (0.019)	-0.12*** (0.019)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.062	0.079	0.079	0.070	0.079	0.070
Adj. R <sup>2</sup>	0.031	0.072	0.071	0.054	0.064	0.055
Treatment			-0.04 (0.057)	-0.06 (0.070)	0.03 (0.072)	-0.13* (0.071)
Disgust	-0.10*** (0.024)	-0.13*** (0.012)	-0.13*** (0.012)	-0.13*** (0.018)	-0.12*** (0.017)	-0.12*** (0.017)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.073	0.079	0.079	0.078	0.083	0.075
Adj. R <sup>2</sup>	0.043	0.072	0.072	0.063	0.067	0.060
Treatment			-0.06 (0.057)	-0.06 (0.071)	-0.02 (0.071)	-0.17** (0.071)
Fear	-0.08*** (0.027)	-0.14*** (0.013)	-0.14*** (0.014)	-0.12*** (0.020)	-0.13*** (0.019)	-0.12*** (0.020)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.062	0.076	0.076	0.070	0.078	0.067
Adj. R <sup>2</sup>	0.031	0.068	0.068	0.055	0.062	0.051

*Note:* This table presents the estimated impact of treatments and emotions on the outcome. Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## Estimations: Hope

Table C1: Effect of Treatments on Hope, Sensitivity Analysis

	Any video	Env.	Terrorism	War
	(1)	(2)	(3)	(4)
<b>(a) Discarding non-compliers</b>				
Treatment	-0.34*** (0.068)	-0.36*** (0.087)	-0.33*** (0.088)	-0.34*** (0.087)
Relative to the mean (in %)	8.50	8.95	8.14	8.45
Relative to the std. dev. (in %)	22.8	24.0	21.8	22.6
Observations	2,676	1,355	1,364	1,349
R-squared	0.163	0.267	0.234	0.239
	Any video	Env.	Terrorism	War
<b>(b) Treatment: treated and threat feeling &gt; 1</b>				
Treatment	-0.48*** (0.066)	-0.42*** (0.087)	-0.38*** (0.088)	-0.39*** (0.088)
Relative to the mean (in %)	11.93	10.41	9.50	9.79
Relative to the std. dev. (in %)	32.0	27.9	25.5	26.2
Observations	2,787	1,395	1,400	1,384
R-squared	0.165	0.260	0.226	0.234
	Any video	Env.	Terrorism	War
<b>(c) Continuous treatment</b>				
Treatment	-0.24*** (0.016)	-0.20*** (0.022)	-0.23*** (0.023)	-0.25*** (0.022)
Relative to the mean (in %)	8.19	6.56	7.90	8.15
Relative to the std. dev. (in %)	22.0	17.6	21.2	21.8
Observations	2,787	1,395	1,400	1,384
R-squared	0.219	0.293	0.278	0.298

Notes: This table presents the estimated impact of threats on hope. 'Hope' is an index calculated as the average of answers to two questions on how much they 'Have hope for the future' and 'They are optimistic regarding the future'. These were answered on a Likert-scale (1 to 7). The mean of the 'hope' index in the control group is equal to 4.00 and the standard deviation is equal to 1.49. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. Control variables are risk aversion, education and cells made up of gender, age-group, socio-economic category, and region. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .

Table C3: Effect of Treatments on Hope, controlling for Threat Feeling Index

	Control	All treat.	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment			0.06 (0.070)	-0.05 (0.090)	0.11 (0.091)	0.03 (0.089)
Threat index	-0.21*** (0.033)	-0.24*** (0.016)	-0.25*** (0.017)	-0.19*** (0.024)	-0.24*** (0.024)	-0.25*** (0.024)
Observations	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.42	0.22	0.22	0.29	0.28	0.30

Notes: This table presents the estimated impact of threats on hope, controlling for the threat index. 'Hope' is an index calculated as the average of answers to two questions on how much they 'Have hope for the future' and 'They are optimistic regarding the future'. These were answered on a Likert-scale (1 to 7). The mean of the 'hope' index in the control group is equal to 4.00 and the standard deviation is equal to 1.49. 'Level of threat' is an index calculated as the average of answers to two questions on how much they 'Do you feel threatened?' and 'Do you feel in danger?'. These were answered on a Likert-scale (1 to 7). The mean of the 'level of threat' index in the control group is equal to 3.17 and the standard deviation is equal to 1.93. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. Control variables are risk aversion, education and cells made up of gender, age-group, socio-economic category, and region. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .

Table C5: Heterogeneous Effect of Treatments on Hope

	Group size	Hope				
		Control	Any video	Environment	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Gender</i>						
Men	1,217	4.10 (1.566)	-0.22** (0.106)	-0.13 (0.136)	-0.16 (0.135)	-0.28** (0.132)
Women	1,570	3.93 (1.432)	-0.30*** (0.092)	-0.41*** (0.114)	-0.27** (0.118)	-0.29** (0.117)
Men = Women			0.559	0.121	0.563	0.980
<i>Age group</i>						
20-29	317	4.03 (1.513)	-0.21 (0.211)	-0.18 (0.274)	-0.13 (0.280)	-0.50* (0.275)
30-54	1,274	3.96 (1.493)	-0.27*** (0.103)	-0.35*** (0.131)	-0.16 (0.134)	-0.31** (0.129)
55+	1,196	4.05 (1.492)	-0.28*** (0.105)	-0.27** (0.130)	-0.30** (0.132)	-0.22* (0.131)
20-29 = 30-54 = 55+			0.956	0.827	0.711	0.643
<i>Social media usage</i>						
Never	1,062	4.00 (1.474)	-0.28** (0.110)	-0.22 (0.137)	-0.27* (0.143)	-0.35** (0.141)
Sometimes	1,038	4.06 (1.496)	-0.27** (0.113)	-0.35** (0.146)	-0.14 (0.143)	-0.35** (0.141)
Often	687	3.93 (1.527)	-0.25* (0.144)	-0.35* (0.184)	-0.28 (0.182)	-0.09 (0.182)
Never = Sometimes			0.940	0.521	0.545	0.988
Often = Sometimes			0.929	0.994	0.566	0.251
<i>TV usage</i>						
Never	303	3.78 (1.566)	-0.25 (0.219)	-0.43 (0.280)	-0.17 (0.275)	-0.10 (0.282)
Sometimes	916	3.94 (1.539)	-0.13 (0.119)	-0.17 (0.154)	0.01 (0.154)	-0.21 (0.151)
Often	1,568	4.09 (1.447)	-0.35*** (0.092)	-0.34*** (0.114)	-0.35*** (0.117)	-0.36*** (0.114)
Never = Sometimes			0.648	0.407	0.572	0.739
Never = Often			0.675	0.771	0.553	0.389
<i>Political wing</i>						
Left	309	3.55 (1.540)	0.07 (0.212)	0.12 (0.259)	0.27 (0.276)	-0.12 (0.268)
Center	1,707	4.12 (1.396)	-0.26*** (0.086)	-0.27** (0.108)	-0.19* (0.111)	-0.38*** (0.110)
Right	771	3.90 (1.668)	-0.37*** (0.135)	-0.49*** (0.169)	-0.40** (0.168)	-0.10 (0.169)
Left = Center			0.146	0.167	0.120	0.381
Left = Right			0.080	0.047	0.036	0.933
<i>Risk aversion</i>						
Low	1,617	4.17 (1.495)	-0.25*** (0.091)	-0.23** (0.115)	-0.23** (0.116)	-0.29** (0.116)
High	1,170	3.77 (1.461)	-0.29*** (0.107)	-0.38*** (0.134)	-0.21 (0.137)	-0.27** (0.135)
Low = High			0.797	0.395	0.906	0.922
<i>Political wing <math>\times</math> Risk aversion</i>						
Left Low	165	3.95 (1.587)	0.18 (0.310)	0.35 (0.372)	0.42 (0.389)	-0.02 (0.379)
Center Low	996	4.27 (1.403)	-0.27** (0.112)	-0.15 (0.141)	-0.27* (0.147)	-0.40*** (0.144)
Right Low	456	4.09	-0.31*	-0.55**	-0.26	-0.06

Table C7: Effect of Emotions and Treatments on Hope

	Control	All treat.	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment			0.00 (0.066)	-0.11 (0.080)	0.12 (0.081)	0.02 (0.082)
Anger	-0.26*** (0.028)	-0.25*** (0.015)	-0.25*** (0.016)	-0.24*** (0.021)	-0.27*** (0.021)	-0.26*** (0.021)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.161	0.136	0.136	0.146	0.155	0.153
Adj. R <sup>2</sup>	0.133	0.129	0.129	0.131	0.141	0.139
Treatment			-0.03 (0.066)	-0.13* (0.080)	0.11 (0.081)	-0.01 (0.081)
Disgust	-0.25*** (0.027)	-0.22*** (0.014)	-0.22*** (0.014)	-0.23*** (0.020)	-0.24*** (0.020)	-0.23*** (0.019)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.163	0.131	0.131	0.148	0.147	0.153
Adj. R <sup>2</sup>	0.136	0.124	0.124	0.134	0.133	0.138
Treatment			-0.02 (0.064)	-0.07 (0.080)	0.06 (0.078)	-0.03 (0.079)
Fear	-0.28*** (0.030)	-0.29*** (0.015)	-0.29*** (0.016)	-0.27*** (0.022)	-0.29*** (0.022)	-0.29*** (0.022)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.160	0.156	0.156	0.159	0.167	0.166
Adj. R <sup>2</sup>	0.132	0.149	0.149	0.145	0.153	0.152

*Note:* This table presents the estimated impact of treatments and emotions on the outcome. Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## Estimations: Trust in Institutions

Table D1: Effect of Treatments on Trust in Institutions (index)

	Any video	Env.	Terrorism	War
	(1)	(2)	(3)	(4)
Treatment	-0.04 (0.068)	-0.12 (0.086)	0.02 (0.088)	-0.02 (0.086)
Relative to the mean (in %)	1.22	3.61	0.63	0.52
Relative to the std. dev. (in %)	2.7	8.0	1.4	1.1
Observations	2,787	1,395	1,400	1,384
R-squared	0.149	0.216	0.232	0.235

Notes: This table presents the estimated impact of threats on the trust in institutions. 'Trust in institutions' is an index calculated as the average of answers to three questions on whether they trust 'French insitutions', 'the current government' and 'the European Union'. These were answered on a Likert-scale (1 to 7). The mean of 'trust in institutions' index in the control group is equal to 3.36 and the standard deviation is equal to 1.51. Column (1) compares the respondents exposed to any threatening video to the control group exposed to the placebo video. Columns (2) to (4) compare respectively the respondents exposed to the environmental, terrorism and war videos to the control group. Control variables are risk aversion, education and cells made up of gender, age-group, socio-economic category, and region. Standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$  \*\*  $p < 0.05$  \*  $p < 0.1$ .

Table D3: Heterogeneous Effect of Treatments on Trust in Institutions (index)

	Group size	Trust in institutions				
		Control	Any video	Environment	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Gender</i>						
Men	1,217	3.30 (1.585)	0.09 (0.103)	0.18 (0.134)	0.08 (0.133)	0.06 (0.129)
Women	1,570	3.40 (1.456)	-0.14 (0.090)	-0.33*** (0.112)	-0.03 (0.117)	-0.08 (0.115)
Men = Women			0.100	0.004	0.538	0.439
<i>Age group</i>						
20-29	317	3.36 (1.390)	-0.04 (0.206)	0.00 (0.270)	0.08 (0.277)	-0.26 (0.269)
30-54	1,274	3.16 (1.420)	0.03 (0.100)	-0.04 (0.129)	0.17 (0.132)	-0.01 (0.127)
55+	1,196	3.57 (1.615)	-0.12 (0.102)	-0.23* (0.128)	-0.13 (0.130)	0.02 (0.128)
20-29 = 30-54 = 55+			0.598	0.509	0.250	0.636
<i>Social media usage</i>						
Never	1,062	3.46 (1.618)	-0.02 (0.108)	-0.11 (0.136)	0.01 (0.141)	0.02 (0.138)
Sometimes	1,038	3.27 (1.467)	0.00 (0.110)	-0.06 (0.144)	0.22 (0.141)	-0.07 (0.139)
Often	687	3.31 (1.393)	-0.13 (0.140)	-0.24 (0.182)	-0.29 (0.180)	0.00 (0.178)
Never = Sometimes			0.851	0.794	0.314	0.649
Often = Sometimes			0.444	0.447	0.027	0.756
<i>TV usage</i>						
Never	303	2.72 (1.351)	0.05 (0.210)	-0.03 (0.273)	0.27 (0.268)	-0.08 (0.271)
Sometimes	916	3.09 (1.413)	0.11 (0.115)	0.07 (0.150)	0.18 (0.150)	0.08 (0.146)
Often	1,568	3.64 (1.542)	-0.14 (0.088)	-0.25** (0.111)	-0.08 (0.114)	-0.06 (0.110)
Never = Sometimes			0.805	0.756	0.781	0.596
Never = Often			0.394	0.467	0.224	0.933
<i>Political wing</i>						
Left	309	3.07 (1.322)	0.04 (0.199)	-0.09 (0.251)	0.11 (0.262)	0.04 (0.256)
Center	1,707	3.62 (1.475)	0.05 (0.081)	-0.06 (0.104)	0.27** (0.105)	0.03 (0.105)
Right	771	2.81 (1.526)	-0.18 (0.127)	-0.19 (0.164)	-0.36** (0.159)	-0.07 (0.162)
Left = Center			0.968	0.905	0.560	0.984
Left = Right			0.351	0.734	0.125	0.721
<i>Risk aversion</i>						
Low	1,617	3.38 (1.533)	0.06 (0.088)	0.08 (0.114)	0.12 (0.114)	0.08 (0.114)
High	1,170	3.33 (1.487)	-0.19* (0.104)	-0.39*** (0.132)	-0.11 (0.135)	-0.17 (0.131)
Low = High			0.063	0.007	0.185	0.157
<i>Political wing × Risk aversion</i>						
Left Low	165	3.55 (1.235)	0.10 (0.291)	0.06 (0.359)	0.16 (0.368)	0.32 (0.361)
Center Low	996	3.63 (1.499)	0.16 (0.105)	0.23* (0.136)	0.35** (0.139)	0.11 (0.137)
Right Low	456	2.83 (1.526)	-0.10 (0.127)	-0.21 (0.164)	-0.17 (0.159)	-0.04 (0.162)



Table D5: Effect of Emotions and Treatments on Trust in Institutions

	Control	All treat.	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment			0.13*	-0.00	0.20**	0.13
			(0.067)	(0.081)	(0.085)	(0.084)
Anger	-0.08***	-0.13***	-0.14***	-0.12***	-0.14***	-0.11***
	(0.029)	(0.015)	(0.016)	(0.021)	(0.022)	(0.022)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.084	0.068	0.069	0.077	0.074	0.067
Adj. R <sup>2</sup>	0.054	0.061	0.062	0.061	0.058	0.051
Treatment			0.12*	0.00	0.22***	0.14*
			(0.066)	(0.080)	(0.084)	(0.083)
Disgust	-0.12***	-0.12***	-0.13***	-0.13***	-0.14***	-0.11***
	(0.028)	(0.014)	(0.014)	(0.020)	(0.020)	(0.020)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.098	0.069	0.070	0.084	0.080	0.072
Adj. R <sup>2</sup>	0.068	0.061	0.062	0.069	0.064	0.056
Treatment			0.01	-0.09	0.09	0.01
			(0.067)	(0.082)	(0.084)	(0.083)
Fear	-0.02	-0.06***	-0.06***	-0.04*	-0.08***	-0.03
	(0.032)	(0.016)	(0.016)	(0.023)	(0.023)	(0.023)
N	696	2787	2787	1395	1400	1384
R <sup>2</sup>	0.074	0.047	0.047	0.059	0.054	0.051
Adj. R <sup>2</sup>	0.044	0.039	0.039	0.043	0.039	0.035

*Note:* This table presents the estimated impact of treatments and emotions on the outcome. Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table D6: Association between Trust in Institutions and Emotions by Experimental Group

	Control	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)
Anger	-0.03 (0.052)	-0.14*** (0.028)	-0.13*** (0.048)	-0.16*** (0.052)	-0.16*** (0.049)
Disgust	-0.18*** (0.047)	-0.07*** (0.024)	-0.09** (0.043)	-0.07 (0.043)	-0.07 (0.041)
Fear	0.14*** (0.048)	0.06** (0.024)	0.08** (0.040)	0.02 (0.042)	0.09** (0.043)
N	696	2091	699	704	688
R <sup>2</sup>	0.110	0.086	0.115	0.114	0.097
Adj. R <sup>2</sup>	0.078	0.075	0.083	0.083	0.064
Test emotions (p-value)	0.000	0.000	0.000	0.000	0.000

Notes: This table presents the estimated effect of emotions on the outcome.

Standard errors in parentheses. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

Table D7: Association between Trust in Government and Emotions by Experimental Groups

	Control	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)
Anger	-0.08 (0.062)	-0.18*** (0.033)	-0.16*** (0.055)	-0.24*** (0.060)	-0.15*** (0.057)
Disgust	-0.17*** (0.056)	-0.07** (0.028)	-0.09* (0.050)	-0.03 (0.050)	-0.09* (0.048)
Fear	0.20*** (0.057)	0.09*** (0.027)	0.11** (0.046)	0.07 (0.049)	0.11** (0.050)
N	696	2091	699	704	688
R <sup>2</sup>	0.092	0.075	0.110	0.096	0.098
Adj. R <sup>2</sup>	0.059	0.065	0.078	0.064	0.065
Test emotions (p-value)	0.000	0.000	0.000	0.000	0.000

Notes: This table presents the estimated effect of emotions on the outcome.

Standard errors in parentheses. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

## Emotional Patterns: Sensitivity Analysis

A few studies suggest that affective states contribute to shape trust in both experimental and real-world settings. Engelmann et al. (2019) provide neuroeconomic evidence that

negative emotions disrupt trust by altering brain activity patterns associated with risk perception and cooperative behavior. Their findings indicate that trust erosion is not merely a strategic response to threats but reflects deeper neurological changes in how individuals assess social interactions. Myers and Tingley (2016) further refine this argument, showing that the impact of negative emotions on trust depends on the type of affective response they generate. Specifically, anxiety increases risk aversion and uncertainty, leading individuals to withdraw trust, whereas anger can have more varied effects, depending on whether it triggers a desire for retribution or a mobilization toward action. In our study, both fear and anger increased in response to threat exposure, suggesting that heightened emotional arousal compounds trust erosion. Results are confirmed in a richer specification including sadness and joy, as reported in Table E1.

Further distinctions between emotional effects on trust are made by Dunn and Schweitzer (2005), who find that happiness fosters cooperation and strengthens trust, while negative emotions—particularly anger—undermine trust when blame is attributed to others. These patterns are consistent with our findings. Interestingly, the authors also report that sadness does not always reduce trust, as it is often linked to external, uncontrollable events rather than interpersonal betrayal. In Table E1, results show that sadness increases following threat exposure, yet its correlation with trust exhibited a sign reversal, implying that its effect on trust may be contingent on whether the threat is perceived as a personal or systemic risk.<sup>42</sup> Future research should examine different threat types, and question whether perceived agency over threats moderates the emotional pathways potentially affecting trust.

Finally, we examine the pattern of emotional associations with hope. In Table E2, which focuses on anger, disgust, and fear, fear emerged as the most consistent correlate of hope, aligning with classical philosophical perspectives (Blöser and Stahl, 2019). However, additional (unreported) estimations suggest that sadness may play an even more prominent role among negative emotions. In the more comprehensive specification presented in Table E2, joy appears as the dominant emotional correlate of hope. As discussed in the main text, the correlation with anger increases slightly in response to war-related threats, while the association with fear strengthens more systematically across all threat types (columns 3–4). At the same time, we observe a decoupling between hope and joy. Although both hope and joy decrease on average following a threat, the weakening of their correlation

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42. Note that this result on sadness is not due to the presence of joy in the model. Additional (unreported) estimations with the four negative-valenced emotions only point to the same results on comovements (anger and fear) and decoupling/sign-reversal (sadness).

indicates greater individual variability in emotional responses. For some, hope may persist as a cognitive or motivational strategy despite the loss of joy. For others, hope may diminish due to bleak future expectations, while joy, as a present-oriented emotion, may be less affected.

Table E1: Association between Trust in Others and Emotions by Experimental Group (extended)

	Control	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)
Anger	0.03 (0.044)	-0.09*** (0.025)	-0.05 (0.043)	-0.10** (0.045)	-0.12*** (0.043)
Disgust	-0.08** (0.040)	-0.04* (0.021)	-0.07* (0.039)	-0.03 (0.038)	-0.04 (0.037)
Fear	0.05 (0.048)	-0.09*** (0.025)	-0.08* (0.044)	-0.08* (0.043)	-0.10** (0.044)
Sadness	-0.10** (0.045)	0.06** (0.025)	0.03 (0.044)	0.05 (0.045)	0.10** (0.044)
Joy	0.06* (0.037)	0.09*** (0.019)	0.09*** (0.033)	0.09*** (0.034)	0.10*** (0.032)
N	696	2091	699	704	688
R <sup>2</sup>	0.088	0.116	0.135	0.147	0.112
Adj. R <sup>2</sup>	0.052	0.105	0.102	0.114	0.077
Test emotions (p-value)	0.000	0.000	0.000	0.000	0.000

Notes: This table presents the estimated effect of emotions on the outcome.

Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table E2: Association between Hope and Emotions by Experimental Group (extended)

	Control	All treat.	Environm.	Terrorism	War
	(1)	(2)	(3)	(4)	(5)
Anger	-0.06 (0.043)	-0.08*** (0.027)	-0.04 (0.048)	-0.08 (0.047)	-0.09** (0.045)
Disgust	-0.06 (0.039)	0.01 (0.023)	-0.07* (0.043)	0.04 (0.040)	0.04 (0.040)
Fear	-0.03 (0.047)	-0.12*** (0.027)	-0.13*** (0.048)	-0.11** (0.045)	-0.12*** (0.047)
Sadness	-0.02 (0.044)	-0.01 (0.027)	0.06 (0.049)	-0.06 (0.047)	-0.06 (0.048)
Joy	0.48*** (0.037)	0.31*** (0.020)	0.31*** (0.036)	0.34*** (0.036)	0.30*** (0.034)
N	696	2091	699	704	688
R <sup>2</sup>	0.366	0.261	0.241	0.314	0.288
Adj. R <sup>2</sup>	0.341	0.251	0.212	0.288	0.260
Test emotions (p-value)	0.000	0.000	0.000	0.000	0.000

Notes: This table presents the estimated effect of emotions on the outcome.

Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .