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## Does Terrorism Dominate Citizens' Hearts or Minds? The Relationship between Fear of Terrorism and Trust in Government

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### ABSTRACT

Terrorism only poses a small risk to people but tends to be a major source of public fear. Through fear, terrorism has far-reaching implications for public governance. In this paper we look at trust in government as a potential mitigating factor of fear of terrorism. We discern between calculative trust, based on analytical assessment of previous and expected future actions, and relational trust, based on emotions and perceived value similarity with government. We find that relational trust decreases fear of terrorism. A similar but less robust negative relationship exists between calculative trust and fear. However, our regression analyses suggest that relational trust, in fact, may mediate the relationship between calculative trust and fear of terrorism. In other words, the more citizens think government is able to prevent terrorist attacks and feel that authorities are doing enough, the more they, in turn, feel that their government shares their values, and the less fearful they are of future terrorist attacks.

### KEYWORDS

Trust; fear of terrorism; public administration; public policy; survey research

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### Introduction

Terrorism only poses a small risk of victimization but tends to be a major source of public fear. Through fear, terrorism has far-reaching implications for public governance. Fear of attacks not only changes citizen behavior in public spaces, but also poses a “real physical danger” as citizens—paradoxically—engage in riskier activities.<sup>1</sup> A famous example of this mechanism includes the substantial increase in the number of fatal highway crashes in the United States in the year following the 9/11 attacks. While driving is much riskier than flying, many Americans decided to drive rather than to fly after the attacks. The casualties of the highway crashes can be viewed as an extreme example of the “indirect damages of terrorism, mediated through our minds.”<sup>2</sup> Other examples include increased stress levels and concomitant health issues<sup>3</sup> and the costs of additional security measures in response to public fear.<sup>4</sup>


Despite its well-known effects on public health, safety, and finances, we still know little about how fear of terrorism can be mitigated. Studies of security measures installed after

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terrorist attacks show that such measures may be ineffective in reducing fear<sup>5</sup> or even *increase* citizens' feelings of insecurity.<sup>6</sup> We rely on the literature on risk perceptions to argue that building trust in government could be a more promising way to mitigate citizens' fear of terrorism. The political science literature has already dealt with the relationship between trust in government and fear of terrorism.<sup>7</sup> However, both theory and empirics have focused on the question of how fear of terrorism influences trust in government, rather than the other way around.<sup>8</sup> Moreover, trust has generally been treated as a unidimensional concept, obfuscating much of the complexity of the construct.<sup>9</sup> The goal of this article is to address these limitations.

In terms of theory, we draw on the literature on risk perceptions to conceptualize trust and specify our hypotheses. This body of literature has already extensively reflected on the role trust in authorities plays in mitigating the perceived risks of various hazards.<sup>10</sup> As risk perceptions and fear are closely related empirically,<sup>11</sup> we are able to use these insights to theorize how trust in government could affect fear. In terms of empirics, we make use of a unique survey administered among a representative sample of the Dutch population in November 2017 (N = 1,077). In contrast to many existing studies, this survey allows us to examine both of the two dimensions commonly attributed to trust: its *calculative* dimension, based on analytical thinking, or matters of the mind, concerned with expected future actions, and its *relational* dimension, or matters of the heart, based on emotions and perceived value similarity with a trustee.

Furthermore, our case selection provides analytical leverage to study how trust in government affects fear of terrorism. Preceding studies focus on countries in which a terrorist attack recently occurred.<sup>12</sup> Terrorist attacks evoke unusually high levels of fear among the public which makes it likely that citizens abruptly put their trust in government in order to reduce feelings of uncertainty.<sup>13</sup> This increases the likelihood of observing a reversed relationship—that is, fear influencing trust rather than the other way around. By contrast, in situations where no recent terrorist attacks have occurred, such as in the Netherlands, we may expect it to be *least* likely that citizens' fear of terrorism drives their trust in government.

Studies in various countries suggest that increased trust in government after terrorist attacks is only short-lived.<sup>14</sup> The pattern of a steep increase followed by a quick return to levels of trust before a terrorist attack has been documented not only in the United States after 9/11 but also in Spain after the 2004 train bombings in Madrid and in Belgium after the 2014 shooting in Brussels.<sup>15</sup> This is also in line with evolutionary theory: "individuals ... turn more towards those seen as being in protective roles during periods of heightened threat."<sup>16</sup> In other words, only in the exceptional cases in which people experience an immediate threat (such as after a terrorist attack) do they "seek protection from a stronger, tougher resource" such as their government.<sup>17</sup> Combined with the aforementioned empirical findings that show a quick return to standard levels of trust after terrorist attacks, this strengthens our conviction that in a context of "politics as usual"<sup>18</sup> we are able to observe the influence of trust on fear instead of the reverse.

Our results show that relational trust decreases fear of terrorism. We find a similar but less robust negative relationship between calculative trust and fear of terrorism. However, our analyses suggest that relational trust, in fact, mediates the relationship between calculative trust and fear of terrorism. In other words, the more citizens think the government is able to prevent terrorist attacks and feel the government is doing enough, the more they, in turn, feel that the government shares their values, and the less fearful they are of becoming a victim of future terrorist attacks.

In the following, we first review the risk perception literature regarding trust in government. This allows us to specify our hypotheses regarding fear of terrorism in the subsequent section. Afterwards, we present our methodology and the results. We conclude with a brief discussion on the implications for government counterterrorism policy and government risk communication. 85

## Theoretical expectations

### *Two dimensions of trust*

We define trust as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the *intentions* or *behavior* of another” [emphasis added].<sup>19</sup> This definition reflects the academic consensus that trust has two dimensions: calculative and relational.<sup>20</sup> Calculative trust is based on an assessment of past performance and relies on consecutive inferences about the future.<sup>21</sup> It refers to “the belief, based on experience or evidence (e.g., past performance), that certain future events will occur as expected.”<sup>22</sup> By contrast, relational trust is meant “to reduce complexity through the acceptance of risk,” regardless of the consequences.<sup>23</sup> It does not so much rely on expected future actions but rather “on a judgment of similarity of intentions or values.”<sup>24</sup> This makes relational trust a function of social identification instead of instrumentality.<sup>25</sup> 90 95

These dimensions of trust reflect the two fundamental ways of thinking referred to in cognitive psychology as the *rational* and the *experiential* system.<sup>26</sup> The former is slow and analytic, driven by evidence and logic; the latter is quick and unreflective, driven by associations and emotions. We therefore view calculative trust as mostly a matter of “the head” (i.e., rationality) and relational trust as a matter of “the heart” (i.e., emotions).<sup>27</sup> The differences between the two types of trust may have far-reaching implications for how we understand the relationship between trust in government and people’s fear of terrorist attacks. 100 105

### *Risk perceptions and trust in government*

Trust in government has already been extensively studied with regard to risk perceptions. Risk perceptions and fear are closely related empirically.<sup>28</sup> Therefore, we draw on insights from the risk perception literature to specify our hypotheses on the relationship between trust in government and fear of terrorism. We first provide a brief overview of the respective body of literature. 110

In general, both types of trust are important to explain risk perceptions.<sup>29</sup> In a recent review on natural hazards, Gisela Wachinger and colleagues conclude that “[in] addition to personal experience, the second most important factors for risk perception of natural hazards ... are trust in scientific experts and authorities [i.e. relational trust] and confidence in protective measures [i.e. calculative trust].”<sup>30</sup> Both types of trust seem similarly important correlates of perceived risk with regard to technological hazards.<sup>31</sup> Furthermore, both trust types appear to suppress perceived risks: existing studies consistently show a significant negative relationship between trust and citizens’ risk perceptions across a wide variety of hazards.<sup>32</sup> 115

In line with these overall findings, studies examining the two dimensions of trust separately (or only one of the two) point into the same direction. To illustrate, in his study of risk perceptions related to floods in the Netherlands, Teun Terpstra<sup>33</sup> shows how trust in public 120

flood defenses and risk management (i.e., calculative trust) significantly reduced risk perceptions among Dutch citizens, both with regard to the perceived likelihood of a flood and that of becoming a victim. Similar results are reported in studies of technological hazards,<sup>34</sup> including nuclear waste and power<sup>35</sup> and genetically-modified food.<sup>36</sup> 125

Relational trust in government and/or involved authorities appears to similarly decrease the risks people associate with various hazards, including hazardous waste disposal,<sup>37</sup> nuclear power,<sup>38</sup> and electromagnetic fields.<sup>39</sup> Note that while these studies may use different targets of perceived risk (e.g., risk to oneself, to others, or in general), in the end, they all tend to formulate some version of the following conclusion: the more people trust authorities, the less risk they associate with the relevant hazard.<sup>40</sup> 130

The risk literature tends to explain the comparable patterns across the two dimensions of trust in government by arguing that the affective relationship between the trustor and the trustee (the basis of relational trust) influences the evaluation of the trustee's performance (the basis of calculative trust).<sup>41</sup> However, empirical evidence tends to be restricted to observational data collected at one point in time.<sup>42</sup> Finding a positive relationship between the two types of trust for the case of genetically-modified food, Wouter Poortinga and Nick Pidgeon therefore more cautiously conclude that "[w]hile the results suggest that the proposed model is a plausible one, more systematic (experimental) research is needed to clarify the direction of the relationships."<sup>43</sup> Put differently, while risk perception research often assumes that relational trust influences calculative trust, it may equally be the case that these studies' correlational findings imply that calculative trust influences relational trust instead. 140

In sum, whereas the existing body of literature provides consistent evidence that trust in government and other trustees is associated with lower perceived risks across a wide range of hazards, the empirical evidence remains thin with regard to how its two dimensions relate to each other. Based on this discussion, we now turn to our expectations regarding the relationship between trust in government and fear of terrorism. 145

### ***Fear of terrorism and trust in government***

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The question arises how both forms of trust in government matter for explaining *fear of terrorism*. We define fear of terrorism as an individual's anxiety about future terrorist attacks.<sup>44</sup> Most terrorism researchers will agree that terror by definition is intended to evoke an emotional response among the public in order to attain political ends.<sup>45</sup> Although terrorist attacks occur infrequently, their potentially high impact and the emotional response they tend to evoke makes people likely to overestimate their risk, whilst neglecting the actual improbability of an attack.<sup>46</sup> 155

As terrorism is associated with strong emotions and high uncertainty, we may expect most people to respond to it on the basis of experiential rather than analytical thinking.<sup>47</sup> This makes relational trust in government a potentially strong predictor of people's fear of terrorism. For it suggests that people will not base their response on rational evaluations, but rather on cognitive shortcuts such as value similarity in order to reduce uncertainty.<sup>48</sup> Given the consistent evidence that relational trust in government reduces risk perceptions, this may mean that the more people feel that government shares their values, the less risk they associate with terrorism and the less fearful they are. This leads to our first hypothesis: 160 165

Hypothesis 1: The more relational trust citizens have in government, the less fearful they are of terrorism.

However, we know from the risk perception literature discussed above that calculative trust matters too for how citizens respond to risk. Findings, however, are not conclusive: A survey conducted by Marcos Misis and colleagues<sup>49</sup> among undergraduate students in the United States corroborates the negative relationship between calculative trust in government and fear of terrorism. They show that better performance evaluations of the government and domestic intelligence agencies with regard to counterterrorism were related to less fear of future terrorist attacks occurring in the U.S. Similarly, Samuel Sinclair and Alice LoCicero also find a positive relationship between fear of terrorism and calculative trust in government.<sup>50</sup> By contrast, a study conducted by Shelly McArdle and colleagues<sup>51</sup> showed no significant relationship between confidence in the U.S. government to prevent future terrorist attacks and concerns about victimization or the occurrence of another major terrorist attack in the United States. Given the indications for calculative responses mentioned here and the consistent evidence in the risk perception literature that calculative trust matters, we still specify the second hypothesis as follows:

Hypothesis 2: The more calculative trust citizens have in government, the less fearful they are of terrorism.

As we pointed out in the preceding section, how the two types of trust relate to each other remains less clear than most of the risk perceptions literature suggests. Risk perception studies suggest that the effect of relational trust on fear of terrorism is mediated by calculative trust.<sup>52</sup> In other words, relational trust ("the government shares my values") is expected to increase calculative trust ("the government is doing a good job in preventing terrorist attacks"), which, in turn, would decrease people's fear of terrorism. However, not only do we lack empirical evidence to verify this, we also have good theoretical reasons to suggest that *relational trust* may be the mediating variable. That is to say, when citizens are convinced that the government performs well, they will, in turn, be more likely to think it also has the right intentions and shares their values.<sup>53</sup> This is in line with the literature on policy feedback suggesting that policy performance impacts citizens' broader orientations towards politics.<sup>54</sup> It follows that how citizens judge what the government is doing (the basis of calculative trust) is likely to "feed back" into how they view their overall relationship with government (the basis of relational trust). This is why we deliberately remain agnostic with regard to potential mediation effects. We therefore specify two competing mediation hypotheses:

Hypothesis 3: Calculative trust mediates the relationship between relational trust and fear of terrorism.

Hypothesis 4: Relational trust mediates the relationship between calculative trust and fear of terrorism.

## Data and methods

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### Data

We use data from an online representative survey conducted in the Netherlands among 1,400 members of the Longitudinal Internet Studies for the Social sciences (LISS) panel (November 6–28, 2017).<sup>55</sup> The LISS panel is based on a true probability sample of the Dutch population and is commonly used in social science research.<sup>56</sup> The present survey was part 215 of a larger study on risk perceptions and communication related to terrorism threat for the Research and Documentation Centre of the Dutch Ministry of Justice and Security (Reference omitted to ensure blind review). The survey had a non-response rate of 23%, resulting in a final sample of 1,077 respondents. The sample is largely representative of the Dutch population in terms of common background characteristics such as sex, age, educa- 220 tion, and parents' country of origin (Online Appendix A).

At the time the survey was administered, no terrorist attacks had recently occurred in the Netherlands. Even though various authors have suggested that fear of terrorism may not only result from the (indirect) experience of an attack, but also from the exposure to political rhetoric and media stories,<sup>57</sup> we find no clear signs for such tendencies in the 225 Netherlands at the time. The Online Appendix reflects that parliamentary and media attention for terrorism remained at stable levels throughout the study period. Further, survey data gathered by the National Coordinator for Security and Counterterrorism (NCTV) and the Eurobarometer suggest that the public's level of fear remained constant as well (Online Appendix B). These observations make it unlikely that political speeches or 230 media stories caused a sudden increase in fear of terrorism among Dutch citizens. This assures us that the Dutch context in November 2017 can be characterized as "politics as usual"<sup>58</sup> rather than "an atmosphere of fear and alarm."<sup>59</sup>

### Operationalizations

#### Dependent Variable

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Table 1 displays the operationalization of the variables included in the analyses. The dependent variable (*Fear of terrorism*) refers to respondents' *worries* about terrorism because this tends to solicit responses about their "anxiety about future victimizations" rather than their "sense of an immediate threat."<sup>60</sup> The focus on worries thereby fits our research objective of explaining anxiety about terrorism more generally.<sup>61</sup> It is measured by the survey item: "To 240 what extent do you worry about the possibility that you or (someone from) your family will be a victim of a terrorist attack?" The initial four-point scale (1 = Not worried, 2 = A little worried, 3 = Very worried, 4 = Extremely worried) is recoded into the three-point scale reported in Table 1, merging the highest two categories given that option 4 (extremely worried) only contained 16 responses. 245

#### Independent Variables

For the operationalization of *Relational trust* we cannot rely on a common multi-item scale as used in other work,<sup>62</sup> but instead rely on a single item as a proxy of relational trust: general trust in government. Respondents were asked how much they trust the Dutch government on a scale from 1 (do not trust at all) to 10 (trust very much). This 250 question has the analytical advantage of being distinct from the items we employ for

Table 1. Operationalization and descriptive statistics.

Variable name	Mean (SD)	Min	Max	Operationalization
<i>Dependent variable</i>				
Fear of terrorism	1.648 (0.609)	1	3	Worries about the possibility of oneself or a family member becoming a victim of a terrorist attack. 1 = Not worried, 2 = A little worried, 3 = Very worried.
<i>Independent variables</i>				
Relational trust	5.457 (2.034)	1	10	Trust in government. 1 = No trust at all, 10 = A lot of trust.
Calculative trust	3.067 (0.880)	1	5	Composite index of three items (described in text).
<i>Control variables</i>				
Knowledge	0.372 (0.320)	0	1	Average self-reported knowledge of counterterrorism measures and terrorism threat communications issued by the government. 0 = Not familiar, 1 = At least a little familiar.
General fear	1.385 (0.429)	1	4	Average fear of 8 disasters occurring in The Netherlands. 1 = Not fearful, 2 = A little fearful, 3 = Fearful, 4 = Very fearful.
Female	0.561 (0.497)	0	1	Sex. 0 = Male, 1 = Female.
Age	51.985 (18.394)	16	91	Age in years.
Income	1.592 (1.062)	0	10.5	Net monthly income in thousands of Euros.
Secondary education	0.584 (0.493)	0	1	Secondary education as highest level of completed education. 0 = No, 1 = Yes.
Higher education	0.352 (0.478)	0	1	Higher vocational or university education as highest level of completed education. 0 = No, 1 = Yes.
Dutch	0.808 (0.394)	0	1	Both parents born in The Netherlands. 0 = No, 1 = Yes.
Married	0.493 (0.500)	0	1	Marital status. 0 = Not married, 1 = Married.
Household	2.418 (1.320)	0	9	Number of people in household (max. = 9).
Children	1.695 (1.080)	0	9	Number of children in household (max. = 9).
Unemployed	0.329 (0.470)	0	1	Unemployed. 0 = No, 1 = Yes.
Christian	0.359 (0.480)	0	1	Declared Christian. 0 = No, 1 = Yes.
Muslim	0.029 (0.167)	0	1	Declared Muslim. 0 = No, 1 = Yes.
Urbanization	3.121 (1.300)	1	5	Population density of respondent's place of residence (postal addresses/km <sup>2</sup> ). 1 = < 500, 2 = 500–1,000, 3 = 1,000–1,500, 4 = 1,500–2,500, 5 = > 2,500.
Internet	0.483 (0.500)	0	1	Internet as one of the most frequent news sources (social media, government websites, or other websites). 0 = No, 1 = Yes.

calculative trust (discussed below), that is, “trust in institutions is asked without reference to the performance of institutions or their occupants.”<sup>63</sup>

Furthermore, relational trust is strongly correlated with how much people identify with the parties in government. People who intended to vote for a political party in government when the survey was administered tended to show higher relational trust in government ( $r = 0.40$ ,  $p < .001$ ). When one views this expression of political support as an indicator of value similarity between the respondent and the government, this correlation suggests that the general measure of trust in government indeed seems to specifically tap respondents’ *relational* trust in government. This is further supported by the findings that this measure of value similarity correlates less strongly with trust in other institutions as well as with our measure of *Calculative trust* (Online Appendix C). These findings taken together underpin the discriminant validity of our measure<sup>64</sup>: related variables correlate less strongly with value similarity than *Relational trust*.

*Calculative trust* is measured by asking respondents about the government’s ability and performance regarding counterterrorism.<sup>65</sup> Following Misis et al.,<sup>66</sup> the former is captured by two questions: one on prevention of terrorist attacks (i.e., “To what extent do you think the Dutch government is able to prevent a terrorist attack?”) and one on the mitigation of the potential consequences of attacks (i.e., “To what extent do you think the Dutch government is able to constrain the consequences of a terrorist attack?”). Perceived performance is measured by asking respondents about the sufficiency of the government’s actions<sup>67</sup>: “To what extent do you think the Dutch government does enough to prevent



a terrorist attack?" (1 = Not, 2 = Barely, 3 = Reasonably, 4 = Sufficiently, 5 = Well). All three questions were asked conjointly and the order of the questions was not randomized. As the three items correlate strongly<sup>68</sup> and show high reliability (Cronbach's alpha = 0.82), we combine the three measures into a composite index of *Calculative trust*. We adjust the item scores for their relative loadings on the underlying dimension of calculative trust. The loadings are derived from an exploratory factor analysis (Online Appendix C).

### Control Variables

Citizens' fear of terrorism as well as their assessment of government performance likely depends on how much (they think) they know about counterterrorism measures implemented by the government.<sup>69</sup> To control for this, we rely on the following question: "To what extent are you familiar with the following: (a) The fact that the government distributes information about counterterrorism; (b) The website [www.crisis.nl](http://www.crisis.nl) with information about what you can do during a disaster or crisis, such as a terrorist attack; (c) The activities of the National Coordinator for Security and Counterterrorism (NCTV); (d) The current threat level of the Terrorist Threat Assessment Netherlands (DTN)?" (1 = Yes, familiar, 2 = A little familiar, 3 = No, not familiar, 4 = Not applicable). The responses are recoded to 1 when the respondent indicated to be at least a little familiar with the respective topic (all other responses are set to 0). As the four items show an acceptable level of reliability (Cronbach's alpha = 0.73), we average the responses to create the measure *Knowledge*.

In addition, how fearful citizens are in general tends to correlate positively with their fear of terrorism.<sup>70</sup> To the extent that it captures fear related to previous instances of crisis, general fear may also be related to trust. If one argues that earlier crises affect both trust and fear of terrorism, by controlling for general fear, we explicitly deal with this confounder. We control for general fear by relying on eight survey items that asked respondents how fearful they are of the occurrence of various disasters: "How fearful are you that in the Netherlands the following will take place?" (1 = not fearful, 2 = a little fearful, 3 = fearful, 4 = very fearful).<sup>71</sup> As the items show high reliability (Cronbach's alpha = 0.86), we average the scores to construct an index of *General fear*.

Lastly, we control for socio-economic background characteristics commonly included in studies of fear of terrorism.<sup>72</sup> Most of these characteristics are included in models that attempt to explain trust in government.<sup>73</sup> We therefore account for the possible variance that might be related to these background factors rather than to the relationship between the variables of interest (i.e., trust in government and fear).

### Statistical procedures

We test hypotheses 1 and 2 by means of multiple ordered logit models, as the dependent variable *Fear* is measured on an ordinal three-point scale. For hypotheses 3 and 4, we rely on the most common approach to mediation analysis: the causal steps approach.<sup>74</sup> We estimate the models for the mediation analysis by means of ordered logit models for the outcome variable *Fear of terrorism* and by means of ordinary least squares (OLS) for the two models explaining the potential mediators (*Calculative trust* and *Relational trust*). In the analyses presented here, we exclude cases with missing values, leading to a final sample of 810 cases in the most elaborate multiple regression model.

In addition to the main analyses, we perform a series of robustness checks. First, given recent criticism of the causal steps approach to mediation analysis,<sup>75</sup> we verify our results by calculating the average causal mediation effect (ACME) as suggested by Kosuke Imai, Luke Keele, Dustin Tingley, and Teppei Yamamoto<sup>76</sup> making use of the *mediation* package in the R software environment.<sup>77</sup> We show that this produces substantively similar results (Online Appendix D).

Next, we estimate our models with respondents' fear of an attack happening in another country as the dependent variable. As one would expect, both types of trust in government do not relate significantly to respondents' concerns for attacks abroad when the various controls are taken into consideration. This enhances our confidence in the validity of our trust measures. We also run models with different specifications for calculative trust. These by and large confirm the main results (Online Appendix C).

What is more, a key assumption of ordered logit models is that the regression coefficients are equal across the levels of the dependent variable. We therefore estimate models for which we a) partially and b) completely relax this assumption (Online Appendix E). This does not lead to substantially different results.

Furthermore, as excluding cases from the analyses could potentially lead to different results, we also run models which minimize the number of missing cases (Online Appendix C) as well as models that instead rely on the lowest number of cases observed across the models reported here (Online Appendix F). Finally, we run models with additional controls (Online Appendix F) as well as models with weights included for key demographic variables to adjust for over- and under-sampling (Online Appendix A). All in all, the results point towards similar substantive conclusions.

## Results

Table 2 summarizes the results for the ordered logit models that seek to explain citizens' fear of terrorism. The fit of the models is comparable to other statistical models relying on survey data to explain fear of terrorism.<sup>78</sup>

**Table 2.** Ordered logit regression models explaining fear of terrorism.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Relational trust	-0.0871*** (-2.84)		-0.126*** (-3.26)	-0.0717** (-2.12)		-0.100** (-2.35)
Calculative trust		-0.136* (-1.76)	-0.00421 (-0.05)		-0.173** (-2.03)	-0.0645 (-0.67)
Knowledge	-0.0183 (-0.09)	-0.143 (-0.67)	-0.0980 (-0.46)	0.273 (1.30)	0.133 (0.58)	0.172 (0.74)
General fear	1.706*** (10.26)	1.876*** (9.37)	1.855*** (9.25)	1.739*** (9.33)	2.005*** (9.04)	1.984*** (8.94)
1 <sup>st</sup> Threshold	1.485*** (5.12)	1.672*** (4.39)	1.361*** (3.47)	2.118*** (3.65)	1.858*** (2.72)	1.783*** (2.60)
2 <sup>nd</sup> Threshold	4.685*** (13.85)	4.905*** (11.43)	4.625*** (10.58)	5.437*** (8.85)	5.249*** (7.29)	5.190*** (7.18)
Control variables	No	No	No	Yes	Yes	Yes
Observations	1071	886	886	969	810	810
McFadden $R^2$	0.068	0.068	0.075	0.089	0.100	0.103

Note. Ordered logit regression coefficients with z statistics in parentheses.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Turning to the hypotheses, we first of all find strong support for Hypothesis 1: relational trust in government significantly reduces citizens' fear of terrorism. The effect is also substantial in size. When we account for all control variables (Model 6), a one-point increase on the ten-point scale of relational trust leads to a 10% decrease in the odds of someone being fearful of terrorism. We can interpret this change in odds as a measure of the reduced likelihood of someone reporting a higher level on the fear of terrorism variable (i.e., a little fearful vs. not fearful, or very fearful vs. a little fearful). To illustrate, the odds of someone being *a little fearful* of terrorism instead of *not fearful* are about 45% higher for someone with absolutely no relational trust in government (score of 1) compared to someone with average relational trust in government (score of 5.5).

We find weaker evidence for Hypothesis 2. While calculative trust in government appears to significantly reduce the odds of someone being fearful of terrorism, even when all controls are added (Model 5), it loses significance when also relational trust is added to the model (Model 6).

Turning to Hypotheses 3 and 4, the steps approach to mediation analysis provides support only for Hypothesis 4. That is, relational trust appears to mediate the relationship between calculative trust and fear of terrorism. This is substantiated by the following findings. First, calculative trust significantly reduces fear of terrorism when relational trust is not taken into consideration (Model 5). Next, it has a significant positive relationship with relational trust ( $B = 1.12, p < .001$ ) (full model not reported here). Finally, it loses significance once relational trust is added to the model (Model 6). In fact, the insignificance of calculative trust and the fact that its absolute value is very close to zero suggest that relational trust *completely* mediates the effect of calculative trust on fear of terrorism. The lack of significance of calculative trust in the full model (Model 6) indicates a lack of support for Hypothesis 3. Substantively, these results suggest that the more citizens trust in the government's ability and performance regarding counterterrorism, the more they feel the government has the right intentions and, in turn, the less fearful they are that they themselves or their family will be a victim of future terrorist attacks.

As shown in Figure 1, two of the control variables are also significantly related to fear of terrorism. In the full model with all controls included (Model 6), the odds of women being fearful of terrorism are 82.4% higher than those of men ( $B = 0.60, p < .001$ ). Furthermore, a one-point increase in respondents' average fear of other hazards (measured on a four-point scale) is associated with 7.3 times higher odds of being fearful of terrorism ( $B = 1.98, p < .001$ ). These findings are in line with previous studies on risk perception.

## Discussion

Our findings confirm that trust in government is negatively associated with fear of terrorism and add to the literature that some forms of trust matter more than others. Citizens' general trust in government consistently mitigates fear of terrorism; their trust in the effectiveness of government counterterrorism policy matters less. More precisely, and perhaps counterintuitively, matters of the head (calculative trust) seem to affect matters of the heart (relational trust) in how much citizens fear a terrorist attack. The good news is that building trust could be an effective way to tackle public fear of terrorism—something that extra security measures do not always appear to achieve.<sup>79</sup> As Timothy Earle, Michael

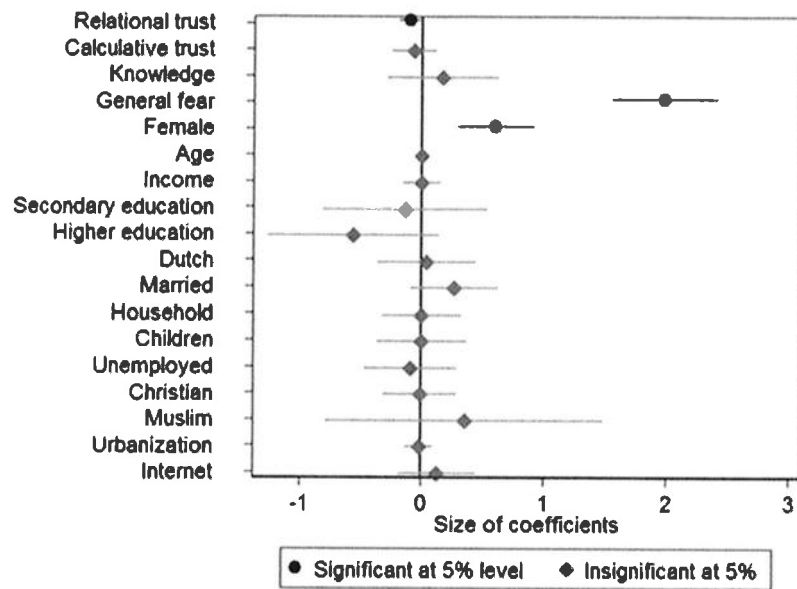


Figure 1. Ordered logistic regression coefficients explaining fear of terrorism.

Siegrist, and Heinz Gutscher note, “if we understood trust, and if we could affect levels of trust, then we might also be able to affect levels of risk perception,” and, we may add, levels of fear.<sup>80</sup>

In this study, we have tried to assess the influence of trust on fear by studying citizens’ fear of terrorism in a national context where no recent terrorist attacks have occurred. Whereas most of the literature on fear of terrorism<sup>81</sup> looks at countries with recent experiences of terrorist attacks (such as Canada, France, Israel, Norway, United States), the survey we used was conducted in the Netherlands, where the last successful terrorist attack took place in 2004. In addition to introducing a new context, studying fear of terrorism in the Netherlands offers an analytical advantage. It helps us to address the potential problem that what we have observed is not an effect of trust in government on fear, but rather an effect of fear on trust in government. In terms of relational trust, such a reversed relationship is most likely when a terrorist attack has just occurred and people tend to rally around the government. Terrorist attacks evoke unusually high levels of fear among the public, which temporarily increases citizens’ affective relationship to government in order to reduce feelings of uncertainty.<sup>82</sup> At the same time, the fact that authorities could not prevent a terrorist attack from taking place may result in a drop in calculative trust in government. By contrast, in situations where no recent terrorist attacks have occurred (such as in the Netherlands), we may expect it least likely that citizens’ fear of terrorism drives either type of trust in government.

Our results show that relational trust is robustly related to less fear of terrorism and tends to increase with higher levels of calculative trust. This has several implications for security governance. First, risk communication by authorities intended to reduce fear should take into account trust-building measures. Those trust-building measures could arguably focus as much on enhancing relational trust as on boosting calculative trust. However, attempts to directly build relational trust in government may be costly and their

effects will depend partly on citizens' political preferences.<sup>83</sup> It therefore seems more effective to emphasize strong government performance<sup>84</sup>—even more so because recent evidence suggests that media amplify state messaging on counterterrorism strengths.<sup>85</sup> Our findings indicate, in line with a recent Belgian study on the effects of trust on citizens' perception of terrorist threats, that strong emphasis on government performance and public perception of governmental expert efficacy could indeed contribute to both general trust and fear reduction.<sup>86</sup> 415

A second implication concerns information on how authorities combat terrorism. In a recent study, Aaron Hoffman and William Shelby find that citizens who receive information on how government effectively combats terrorism have more calculative trust in authorities than those who do not receive such information. Those trusting citizens are less likely to show behavioral avoidance for instance in their willingness to travel. Respondents in their experimental study had gained trust because they—unlike the control group—received information about how responsible authorities had disrupted terrorist plots.<sup>87</sup> Both military and criminal justice counterterrorism performance had this effect, while the former produced strongest results. Meanwhile, communicating on counterterrorism did not increase feelings of insecurity among target audiences<sup>88</sup>—a conclusion that contrasts findings on the effects of terrorism warnings<sup>89</sup> or the effects of visible counterterrorism measures such as “guns, guards and gates” in public places.<sup>90</sup> While both scholars and experts from practice disagree on the propensity of the public to panic as a consequence of pre-event mitigation and risk communication campaigns,<sup>91</sup> these findings support the idea that concerns for social harm may be overstated.<sup>92</sup> 420 425 430

Hoffman and Shelby warn that the effects on increased calculative trust assume a basic level of trust in government. Our results seem to suggest instead that calculative trust precisely mitigates fear because of its impact on relational trust. Yet, despite our careful case selection, our cross-sectional research design admittedly does not allow us to make firm statements regarding causality. Future studies would ideally use panel survey data or (quasi-)experimental designs to verify the causal links between the two types of trust in government and fear of terrorism. In-depth qualitative case studies could shed light on the complex causal mechanisms linking various types of trust and fear of terrorism. Practically speaking, the conclusion remains the same: governments need to communicate proactively what they do in combatting terrorism. To increase calculative trust, it makes sense for public authorities to highlight their successes in disturbing plots, preventing attacks, and even report on what they do to counter radicalization and encourage de-radicalization. In line with shifts in the intelligence world since the attacks on September 11, risk communication on terrorism has to move from “need to know,” to “responsibility to share.”<sup>93</sup> 435 440 445

To conclude, relational trust is the basis to build on, but calculative trust can *indirectly* help to reduce citizens' fear of terrorism. Even though “the war against terror is potentially interminable,”<sup>94</sup> the mitigation of effects of terrorism can be enhanced by academic research and policy practice. The implications of the important negative impact of relational trust in mediating the effect of calculative trust will enrich the toolbox of risk communication and counterterrorism policy makers. 450

### Disclosure statement

Q5 No potential conflict of interest was reported by the authors.

## Notes

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47. Aaron Hoffman and William Shelby, "When the 'Laws of Fear' Do Not Apply: Effective Counterterrorism and the Sense of Security from Terrorism," *Political Research Quarterly* 70, no. 3 (2017): 618–31.
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50. Sinclair and LoCicero (see note 9).
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- Q11 65. cf. Earle (see note 17 ), 544.
66. Misis, Bush, and Hendrix (see note 11).
67. cf. Poortinga and Pidgeon (see note 36), 202. 690
68. Kendall's  $\tau = 0.52$ ,  $p < 0.001$  (prevention and consequence); Kendall's  $\tau = 0.43$ ,  $p < 0.001$  (prevention and performance); Kendall's  $\tau = 0.61$ ,  $p < 0.001$  (consequence and performance).
- Q12 69. Earle (see note 17 ); Matthias Leese, "The Perceived Threat: Determinants and Consequences of Fear of Terrorism in Germany," *Effective Surveillance for Homeland Security: Balancing Technology and Social Issues* (2013): 71–85. 695
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79. See notes 5–6. 725
80. Earle, Siegrist, and Gutscher (see note 10), 1.
81. e.g. Huddy, Feldman, Capelos, and Provost (see note 1); Lee, Lemyre and Krewski (see note 11); Shechory-Bitton and Cohen-Louck (see note 7); Siri Thoresen, Helene Flood Aakvaag, Tore Wentzel-Larsen, Grete Dyb, and Ole Kristian Hjemdal, "The Day Norway Cried: Proximity and Distress in Norwegian Citizens following the 22nd July 2011 Terrorist 730 Attacks in Oslo and on Utøya Island," *European Journal of Psychotraumatology* 3, no. 1 (2012); Wilcox, Ozer, Gunbeyi, and Gundogdu (see note 8).
82. See note 14.
83. Citrin and Stoker (see note 54).
84. On the need to communicate about preventive measures see also Brigitte Nacos, Yaeli Bloch- 735 Elkon, and Robert Y. Shapiro, "Prevention of Terrorism in Post-9/11 America: News Coverage, Public Perceptions, and the Politics of Homeland Security," *Terrorism and Political Violence* 20, no. 1 (2007): 1–25.
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86. Crijns, Cauberghe, and Hudders (see note 1).
87. Hoffman and Shelby (see note 47), 623.
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89. Alex Braithwaite, "The Logic of Public Fear in Terrorism and Counter-terrorism," *Journal of Police and Criminal Psychology* 28, no. 2 (2013): 95–101.
90. Benjamin Friedman, "Managing Fear: The Politics of Homeland Security," *Political Science Quarterly* 126, no. 1 (2011): 77–106, p. 78; Grosskopf, 2006 (see note 6); Rose McDermott and Philip Zimbardo, "The Psychological Consequences of Terrorist Alerts," in *Psychology of 750 Terrorism*, ed. Bongar et al. (New York, NY: Oxford University Press, 2007), 357–71; Evelien Van de Veer, Martijn de Lange, Eline van der Haar, and Johan C. Karremans, "Feelings of Safety: Ironic Consequences of Police Patrolling," *Journal of Applied Social Psychology* 42, no. 12 (2012): 3114–25.
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