How Students and the Public Define Terrorism, and How Education Affects Those Definitions

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Abstract

How do students and the public define terrorism, and what impact does education have on those definitions? Despite numerous studies on the definition of terrorism, surprisingly few analyze the stated definitions of students and the general public, assess the extent to which these definitions match up with those of governments and academics, or examine how these definitions change as individuals learn more about terrorism. We gathered evidence from an extensive series of experimental and observational surveys carried out over 5 years involving students in 31 terrorism and non-terrorism related courses at 12 universities, including massive open online courses (MOOC) and online survey experiments of the general public. We found that majorities of students, the public, academics, and governments express the belief that terrorism is violence designed to instill fear and achieve a (political) objective. Students and the public initially define terrorism as being committed by non-state actors or targeting civilians at a far lower rate than do academics and governments, however, although those percentages increase after students and the public take courses and watch video lectures on terrorism. Although other studies identify the religion of the perpetrator (especially Islam) as perhaps the most significant element in implicit, *revealed* definitions of terrorism—when people are asked to label acts as terrorism or not—almost no students or members of the public mentioned religion or Islam in any form in their explicit, *stated* definitions. Finally, latent variable analysis reveals that the more that students and the public learn about terrorism, the more they define it as a rational (if still immoral) act. Our findings reveal how the uninformed public's lack of specificity on perpetrators and victims enables the idea that "one person's terrorist is another person's freedom fighter,' but also how education can change those definitions and, perhaps, their application.

Introduction

With the October 7, 2023 Hamas attacks and the Israeli killing of leaders of Hamas, Hezbollah, and the Iranian Revolutionary Guard Corps (IRGC), the definition and application of the terrorism label are again being debated by governments, the media, and the general public. The U.S., United Kingdom, Israel, and the European Union, among others, label Hamas a terrorist organization, though the United Nations and a majority of countries in the world do not. Despite its government's stance, The British Broadcasting Corporation (BBC) did not use the "terrorist" label in its profile of former Hamas leader Ismail Haniyeh after his killing by Israel in Tehran—which the Iranian government called an "act of terrorism."[1] Politicians, media organizations, and the general public also differed on whether Israel's "Operation Below the Belt," which exploded thousands of pagers and walkie-talkies linked to Hezbollah on September 16-17, 2024, should be labeled a terrorist attack.[2] Similar disagreements over the terrorism definition and label emerge when the targets of attacks are Israeli soldiers or the perpetrators are IRGC members.

Terrorism thus remains one of the most debated and inconsistently defined terms in both politics and political science. Must the perpetrators of terrorism be non-state actors and their victims be civilians, or can states commit terrorist acts and state militaries be their victims? Is terrorism a rational act, by definition, with means-ends thinking, or only the crazed violence of mindless extremists? These definitional debates among state governments, armed groups, and academics, among others, have major political, criminal, social, and scholarly consequences.

Governments generally impose harsh penalties for perpetrators and supporters of terrorism—as seen by Israel's sweeping operations to kill all Hamas members and destroy any facility in Gaza they are even loosely affiliated with.[3] Government definitions and applications of "terrorism" vary widely, from "actions that create social panic" in China to "making use of cybernetic mechanisms" in order to sabotage or control a variety of institutions in Brazil. Being labeled a terrorist has massive legal, social, and economic implications in today's climate, and acts defined as terrorism by the media or the public lead to more popular support for hard-line policies.[4]

For scholars, rarely has the meaning of a core phenomenon been more hotly debated, with an entire field of critical terrorism studies centered on what its supporters consider to be a flawed definition and application. Critical scholars would challenge the idea that only non-state actors can commit terrorism, and some would label some of Israel's military actions in Gaza as such.

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[1] Ynet, "BBC Fails to Use the Word 'terrorism' in Profile of Hamas' Haniyeh," *Ynetnews*, July 31, 2024, https://www.ynetnews.com/culture/article/syeb6fvkr; Maziar Motamedi, "Ismail Haniyeh Assassination: How Will Iran Respond?," *Al Jazeera*, July 31, 2024, https://www.aljazeera.com/news/2024/7/31/ismail-haniyeh-assassination-how-will-iran-respond.

[2] "Belgian Deputy PM Calls Hezbollah Pager Incident 'Terror Attack,'" *Israel National News - Arutz Sheva*, September 18, 2024, https://www.israelnationalnews.com/news/396373.

[3] Daniele Palumbo et al., "At Least Half of Gaza's Buildings Damaged or Destroyed, New Analysis Shows," *BBC*, January 30, 2024, https://www.bbc.com/news/world-middle-east-68006607.

[4] Stephane J. Baele et al., "What Does the 'Terrorist' Label Really Do? Measuring and Explaining the Effects of the 'Terrorist' and 'Islamist' Categories," *Studies in Conflict & Terrorism* 42, no. 5 (May 4, 2019): 520–40, https://doi.org/10.1080/1057610X.2017.1393902.

Beyond their own internal debates, scholars often want to study the public and their fears and opinions on terrorism, but most surveys just use the term "terrorism" in their questions without any idea of how the public defines or perceives it, making it difficult to interpret polling results. Nearly all studies of the public focus on their revealed definitions of terrorism—inductively determined through responses to varying scenarios in survey experiments, rather than direct, open-ended questions to elicit stated definitions. Furthermore, even though rigorous studies exist on how professors define terrorism, there are nearly none on how students do, including how their definitions change after taking courses with those professors.

This gap in the literature brings with it a number of related questions: How do students and the public define terrorism, and what impact does education have on those definitions? How do the explicit, stated definitions of students and the public compare to those of governments and academics? To what extent does the perpetrator's religion play a large role in people's stated definitions, as it does for their implicit, revealed ones? And to what extent do people define terrorism as more rational the more they learn about the phenomenon?

To answer these questions, we gathered evidence from an extensive series of experimental and observational surveys carried out over 5 years involving students in 31 terrorism and non-terrorism related courses at 12 universities—including massive open online courses (MOOC) and online surveys of private citizens globally. We initially focused on five elements of the definition of terrorism highlighted in prior studies of academics, governments, and the public—*what*, *by whom*, *against whom*, *how*, and *why*—including those with the greatest consensus and those that are most contested.

Our four waves of analysis yielded interesting findings based on three sets of comparisons involving terrorism definitions of the "informed public": a) compared to governments and academics, b) compared to revealed public definitions, and c) compared before and after the public experienced educational treatments. First, while the "uninformed" public agrees with most governments and academics that terrorism is violence (*what*) that inspires fear (*how*) to achieve an objective, often a political one (*why*), the vast majority do not specify the targets of terrorism (*against whom*) like governments and academics do. And although the lack of target specificity is consistent with studies on the public's revealed definitions of terrorism, there is a significant disconnect in the relevance of religion and Islam.[5] Whereas a Muslim perpetrator is one of the most consistently impactful elements in how the public applies the terrorism label, is it almost entirely absent from the public's stated definitions of terrorism.

Difference-in-difference and regression analysis further revealed that the more the public learned about terrorism, the more they defined it as being committed by non-state actors (*who*) and against civilian targets (*against whom*)—moving closer to the most common academic and government definitions. Finally, latent variable analysis revealed that, for the two present studies with strong controls, the more that individuals learn about terrorism, the more they define and perceive it as a rational (if still immoral) act based on means-ends thinking. This change towards perceiving terrorism as rational correlates with related studies that demonstrate that individuals

[5] Connor Huff and Joshua D. Kertzer, "How the Public Defines Terrorism," *American Journal of Political Science* 62, no. 1 (2018): 55–71; Vito D'Orazio and Idean Salehyan, "Who Is a Terrorist? Ethnicity, Group Affiliation, and Understandings of Political Violence," *International Interactions* 44, no. 6 (November 2, 2018): 1017–39.

increasingly humanize terrorists and are less fearful of the threat after learning more about the phenomenon.[6]

In this article, we will first discuss the various approaches to determining how people define terrorism. Next, we will present the debate over the elements of the terrorism definition, and how it drove our research design and methods. Then, we will present our multi-part research design, followed by our findings regarding how the definitions of students and the public compare to governments and academics, revealed definitions of prior studies, and before and after educational treatments—with a focus on the impact of education on rationality. We conclude with implications for scholarship and policy.

How Can We Determine How People Define Terrorism?

It seems like such a simple thing, to determine how people define terrorism. But it's more complex than one might think, and there is no single perfect method. The first major studies analyzed how it was defined in publications, which are clear and accessible.[7] Most of the population does not publish how they define terrorism, so such studies are limited to academics and governments that do. Although one can take some of these academics and governments at their word, their lack of anonymity creates the possibility of social desirability bias, as well as questions about how precisely these actors apply their definitions in practice.

To address some of the limitations of these studies, scholars have presented randomized scenarios to the public and asked whether they would classify the incidents as terrorism.[8] These studies expand the population to include public respondents, minimize social desirability bias given their anonymity, and, most importantly, better capture how people apply their definitions of terrorism in practice through causally identified conjoint experiments. One limitation is that these "revealed definitions" are derived from answers to prompts that include a limited number of variables that may not capture all elements of a terrorism definition. Furthermore, it is difficult to ascertain whether a variable correlated with a higher application of the terrorism label is itself part of respondents' definitions, or if it is used as a proxy to indicate the presence of other factors that are in the definition. For example, people may apply the terrorism label more to incidents that involve bombs, not because the use of a bomb is part of people's definitions, but because they associate bombs more with political organizations—as opposed to guns more commonly used in apolitical crimes.

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[6] Jordan Theriault, Peter Krause, and Liane Young, "Know Thy Enemy: Education about Terrorism Improves Social Attitudes toward Terrorists," *Journal of Experimental Psychology: General* 146, no. 3 (2017): 305–17, https://doi.org/10.1037/xge0000261; Peter Krause et al., "Knowing Is Half the Battle: How Education Decreases the Fear of Terrorism," *Journal of Conflict Resolution* 66, no. 7–8 (August 1, 2022): 1147–73, https://doi.org/10.1177/00220027221079648.

[7] Alex P Schmid, *Political Terrorism: A New Guide to Actors, Authors, Concepts, Data Bases, Theories and Literature*, 2nd rev., expanded and updated ed. (Amsterdam ; New York : New Brunswick, N.J., U.S.A.: North-Holland PubCo; Transaction Books, distributors for the Western hemisphere, 1988); Leonard Weinberg, Ami Pedahzur, and Sivan Hirsch-Hoefler, "The Challenges of Conceptualizing Terrorism," *Terrorism and Political Violence* 16, no. 4 (2004): 777–94, https://doi.org/10.1080/095465590899768.

[8] Huff and Kertzer, "How the Public Defines Terrorism"; D'Orazio and Salehyan, "Who Is a Terrorist?"

We utilize a third approach that combines aspects of the first two: asking the public to anonymously define terrorism in response to a direct, open-ended question. This allows us to capture all parts of the public's definitions while minimizing social desirability bias. At the same time, this approach does not tell us to what extent people's stated definitions actually match up with how they apply them in practice. And unlike academics and governments who think through this deeply, the public may initially forget or not think to mention part of their true definition. Indeed, when one of the authors instructs his students to state their definitions in the first week of class, there are always a few that are too narrow or too broad that they quickly change once different scenarios are discussed. To address some of these issues, we also ask subjects to define terrorism after they've learned about debates over the definition, minimizing the chance of forgotten elements. We then utilize latent variable analysis, as described in subsequent sections, to capture elements of respondents' definitions that are not expressed directly, but rather made clear through combinations of other stated elements.

Because each one of these approaches has different blind spots, considering their collective insights in conversation with each other will yield the most accurate and complete picture of how different actors define terrorism. We therefore generated aspects of our hypotheses and research design to leverage these approaches helpful insights and address questions they left unanswered.

Contested and Consensus Elements in the Definition of Terrorism

At the outset of his seminal text on terrorism, Bruce Hoffman described how the term's meaning has shifted multiple times over the past four centuries. Starting as a word to describe revolutionary state action in the form of guillotines during the French Revolution in the 1790s, it was then used to refer to bombings by anarchists attempting to overthrow governments in the late 1800s. The term's meaning shifted again to describe mass state violence by the Nazis, Soviets, and other totalitarian regimes in the early-to-mid-20th century, and finally was/is used to label non-state violence against civilians amidst nationalist and later religious struggles from the post-WWII period until today.[9]

However, even this helpful periodization that captures key definitional turning points masks significant disagreement over the meaning of terrorism, especially in recent years. States have strong disagreements on the definition, both with each other and within their own governments.[10] Almost no perpetrators today welcome the "terrorism" label for their actions—as French revolutionaries or the anarchists once did—and the politicization of the term is at the root of many implicit and explicit disagreements over its meaning.[11] Surveys by Khalil Shikaki and Jacob Shamir reveal that Israeli Jews and Palestinians apply the terrorism label far more often to attacks from the other community and far less to ones from their own—with both believing that world opinion disagrees with their assessments.[12]

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[9] Bruce Hoffman, *Inside Terrorism* (New York: Columbia University Press, 2006).
[10] McCann, Wesley S., and Nicholas Pimley. "Mixed mandates: issues concerning organizational and statutory definitions of terrorism in the United States." *Terrorism and Political Violence* 32, no. 4 (2020): 807-830.
[11] Eva Herschinger, "A Battlefield of Meanings: The Struggle for Identity in the UN Debates on a Definition of International Terrorism," *Terrorism and Political Violence* 25, no. 2 (March 6, 2013): 183–201.
[12] Shamir, Jacob, and Khalil Shikaki. "Self-Serving Perceptions of Terrorism among Israelis and Palestinians." *Political Psychology 23*, No. Adam Waytz, Liane L. Young, and Jeremy Ginges, "Motive Attribution Asymmetry for

Multiple attempts by Alex Schmid, Leonard Weinberg, Ami Pedahzur, and Sivan Hirsch-Hoefler to analyze hundreds of scholars' definitions over the past four decades revealed that even academic "consensus" definitions are still accompanied by a sizable dissenting minority.[13] Despite—or more accurately, because of—the major political stakes involved, there is nothing approaching a unanimous definition, and there likely never will be.

Nonetheless, the definition of terrorism is not an all-or-nothing affair; it is composed of multiple elements on which there are greater and lesser degrees of consensus. The goal of this paper is not to argue for any one definition, but rather to assess the extent to which student and public definitions mirror those of governments, academics, and each other. We therefore focus on five elements of the definition of terrorism highlighted in prior studies, including those with the greatest consensus and those that are most contested. These elements answer the core questions concerning what constitutes terrorism: What? By whom? Against whom? How? Why?

What? Violence. Violence is the element with the greatest consensus, as nearly all academics and governments include violence in their definitions of terrorism, often at the very beginning. Despite politicians labeling certain actions as "economic terrorism" or "information terrorism," the vast majority of definitions suggest terrorism must include violent action.

By whom? State or non-state perpetrators, or both? If violence is the element with the most consensus, the identity of the perpetrator may be the most intensely contested element. Hoffman's periodization demonstrated how global usage of the term moved back and forth on the perpetrator type multiple times. Today, this is *the* issue that most divides critical terrorism scholars from the rest of the terrorism field, as well as state and non-state actors themselves.[14]

Against whom? For violence to be considered terrorism, who must be the targets? Most everyone agrees that civilians can be the targets of terrorism. The question is whether non-combatants more broadly (e.g., politicians) or even combatants (e.g., soldiers and insurgents) can be targets of terrorism as well.[15] Some want to separate the two types because of the illegitimacy or immorality of violence against civilians, whereas others label violence against soldiers as terrorism, especially if it occurs off the battlefield.

Love vs. Hate Drives Intractable Conflict," *Proceedings of the National Academy of Sciences* 111, no. 44 (November 4, 2014): 15687–92, https://doi.org/10.1073/pnas.1414146111.3 (2002): 537–57.

[13] Alex Schmid and Albert Jongman, *Political Terrorism: A New Guide to Actors, Authors, Concepts, Data Bases, Theories, and Literature* (New York: North-Holland Publishing Company, 1988); Alex Schmid, *The Routledge Handbook of Terrorism Research* (New York: Routledge, 2013); Leonard Weinberg, Ami Pedahzur, and Sivan Hirsch-Hoefler, "The Challenges of Conceptualizing Terrorism," *Terrorism and Political Violence* 16, no. 4 (January 2004): 777–94, https://doi.org/10.1080/095465590899768.

[14] Ruth Blakeley, "Bringing the State Back into Terrorism Studies," *European Political Science* 6, no. 3 (September 2007): 228–35, https://doi.org/10.1057/palgrave.eps.2210139; Peter Sproat, "Can the State Commit Acts of Terrorism?:An Opinion and Some Qualitative Replies to a Questionnaire," *Terrorism and Political Violence* 9, no. 4 (December 2007): 117–50, https://doi.org/10.1080/09546559708427433; James M. Lutz, "A Critical View of Critical Terrorism Studies," *Perspectives on Terrorism* 4, no. 6 (2010): 31–40.

[15] Richards, Anthony. "Conceptualizing Terrorism." *Studies in Conflict & Terrorism* 37, no. 3 (March 4, 2014): 213–36. https://doi.org/10.1080/1057610X.2014.872023.

How? If there is no consensus on exactly who terrorism targets, there is greater consensus on the idea that terrorism is defined by its aim to affect actors beyond the direct targets of its violence. As the name implies, terrorism affects a broader population by spreading terror or fear in their hearts and minds, often via the publicity an attack receives. The key question is then whether fear is a means to an end, or whether the attacks aim to spread terror as an end in itself.

Why? Once the *what*, *by whom, against whom,* and *how* of a violent act are reported, the biggest lingering question is often: Why did someone do this? There are two relevant parts to this question for the definition of terrorism. First, did the attackers even have a clear objective with means-ends thinking, or are they irrational actors just looking to spread fear and watch the world burn? Second, if they do have a clear objective, what is it? Most scholars and governments define terrorism as having a political goal to distinguish it from crimes of assault, armed robbery, or homicide. Nonetheless, many would argue that terrorism can also be committed to achieve other types of ideological objectives, most commonly, religious ones. Religiously inspired violence (especially Islamist) gets far more media coverage, and it drives when the public labels an act as terrorism.

The debate over these five elements of terrorism drove both our initial hypotheses and research design, which we structured to generate theories as well as test them.

Research Design

Testing and Generating Theories of the Informed Public's Definition of Terrorism

Because of the lack of existing data on stated terrorism definitions from the informed public, this project aimed to achieve a combination of descriptive data gathering—for its own sake and for theory generation—and theory testing.

First, we wanted to describe how students and the public addressed each of those five elements—what, by whom, against whom, how, and why—when asked to provide their own definitions of terrorism. What percentage of respondents include each element, and how did they address contested elements like state vs. non-state perpetrators? To what extent do they have a consensus among themselves? It stands to reason that students and members of the general public from across the U.S. and the world with no common ties may have more variation in their definitions than governments and academics whose job it is to spend time formulating, presenting, and applying clear definitions of terrorism. If there is some consensus among student and public definitions, to what extent does it mirror those of academics and governments?

Next, we wanted to compare how the informed public explicitly and implicitly defines terrorism. In theory, there may be no difference, as most studies that focus on implicit, revealed definitions suggest that they capture how people conceptualize terrorism. At the same time, we know that people's words and actions can often diverge, especially on sensitive or controversial topics like terrorism. We also want to analyze whether one element that is most strongly associated with the application of the terrorism label—religious/Islamist perpetrator—is present in a similarly large percentage of the public's stated definitions. If not, Islam may either simply be used as a

heuristic to capture other elements of an individual's definition—but not itself be part of it—or it may be a part of their true definition that individuals are uncomfortable stating outright.

Finally, a core theory that we wanted to test concerns the impact of education on the informed public's definition of terrorism: The more individuals learn about terrorism, the more they see terrorism as a rational act (H1a). This does not mean that they perceive the act as moral, or intelligent, or effective. It simply means that they believe terrorism is designed to achieve some clear objective, by definition, rather than just represent the actions of irrational madmen with no real aim or who simply wanted to spread fear for fear's sake. An increased perception of perpetrators as rational would fit with previous findings that the more students learn about terrorism, the more they see the attackers as humans like themselves, and the less fearful they are of the threat of terrorism.[16] Humanized perpetrators are perceived to be more rational, and rational perpetrators are seen as less threatening.[17]

We thus designed our research to help us achieve our three-part purpose of description, theory generating, and theory testing.

Four Waves of Experimental and Observational Studies

To generate descriptive data and test our theory, we wanted to capture how students and the general public define terrorism, with and without additional education on the subject. We wanted to isolate the impact of education on definitions, but we recognized that it is difficult to implement random assignment when the treatment is a semester-long course on terrorism. We therefore utilized four waves of study designed to balance our desire to causally identify the impact of education with our desire to capture student and public definitions in as many contexts as possible. We present them here in descending order of experiment-like control: one experiment and one quasi-experiment with random and as-if random assignment, followed by two additional waves of observational pre-post studies with treatment and control groups that lacked random assignment.

Study 1 is an as-if randomized study that takes advantage of randomized course registration times for college students. This survey study was administered by one of the co-authors of this manuscript at their home institution during the Fall 2013 and Spring 2015 semesters. Each survey consists of two waves—pre-course and post-course—to determine how individual respondents' attitudes changed following education provision. For this sample, students who successfully enrolled in a class focused on terrorism serve as the treatment group, while students

[16] Jordan Theriault, Peter Krause, and Liane Young, "Know Thy Enemy: Education about Terrorism Improves Social Attitudes toward Terrorists," *Journal of Experimental Psychology: General* 146, no. 3 (2017): 305–17, https://doi.org/10.1037/xge0000261; Peter Krause et al., "Knowing Is Half the Battle: How Education Decreases the Fear of Terrorism," *Journal of Conflict Resolution* 66, no. 7–8 (August 1, 2022): 1147–73, https://doi.org/10.1177/00220027221079648.

[17] It would also fit with related studies, such as one in which more contact with homeless people also made subjects see them as more competent and less irrational. Barrett A. Lee, Chad R. Farrell, and Bruce G. Link, "Revisiting the Contact Hypothesis: The Case of Public Exposure to Homelessness," *American Sociological Review* 69, no. 1 (2004): 40–63.

on a waitlist for the class represent the control group.[18] This treatment assignment avoids a potential selection bias inherent with using college students as convenience samples because all respondents attempted to take the course, but only those with sufficiently early randomized registration times were able to enroll. The sample for this study includes 35 students in the treatment group and 21 students in the control group. This study is close to the best of both worlds—as-if random assignments and students in a semester-long course—but it has a small sample size because we could not replicate the approach in other universities.

Study 2 provides full randomized assignment. However, we shrunk the treatment to a short lecture video that touches on the highlights of a terrorism course because a) we cannot tell students which courses to take or not take, and b) we cannot force members of the public to take a semester-long course on terrorism. Beyond the boost to causal identification, this also provides us with a more generalizable treatment, as orders of magnitude more people can watch or listen to a 9-minute video than take a semester-long course on terrorism. Study 2 is therefore a survey experiment on a sample of U.S. respondents contacted through Amazon's Mechanical Turk (MTurk) platform. Individuals ranged from 19 to 82 years old, with the median respondent being 32 years old. The survey was conducted during May 2017—around the same time as the conjoint experiments with which we compare our findings in subsequent sections.

In our experiment, half of the respondents (treatment) were randomly assigned to receive information on terrorism, and the other half (control) received information on financial crises. Respondents in the treatment group watched, listened to, or read a nine-and-a-half-minute lecture on terrorism, four minutes of which discussed the debate over the definition of terrorism among governments, non-state armed groups, academics, and students. Respondents in the control group watched, listened to, or read an unrelated nine-minute lecture on financial crises. Within this survey experiment, we disseminated information through video, audio, and written transcript across three separate samples. Our samples comprised 211 individuals who received information via video, 218 respondents who read the information in a transcript, and 196 individuals who received a solely audio treatment. Additionally, we recontacted the MTurk respondents one week after the original survey experiment was administered to analyze the persistence of the effect of information dissemination on definitions of terrorism.

Studies 3 and 4 lacked randomization, but they allowed us to increase our sample size of students taking a variety of courses. Study 3 expanded the student study across a more representative sample of 28 classes in political science, history, and international studies from 11 universities in in 7 U.S. states. To establish a sample of classes, we solicited professors' involvement from a coauthor's home institution and members of the National Consortium for the Study of Terrorism and Responses to Terrorism (START) professional email list. Courses focusing on terrorism for more than three weeks were classified as "treatment" classes, and all other courses were categorized as "control" classes. Thus, students enrolled in classes specifically on terrorism make up the "treatment" group and students in other courses serve as the "control" group. In this wave, we surveyed 237 students in terrorism courses and 117 students in non-terrorism courses. The courses were taught between the Fall 2013 semester and Spring 2015 semester.

[18] All studies were approved by the Institutional Review Board of Boston College with protocol number 13.035.01e. We also received IRB approval from the 11 other institutions for Studies 2 and 3.

Study 4 repeats the student survey using a sample of students enrolled in Massive Open Online Courses (MOOCs) during the Spring of 2015. Here, students enrolled in a terrorism course administered by START serve as the "treatment" group and students enrolled in an online course focused on either Chinese politics or qualitative research methods represent the "control" group. Our MOOC sample consists of individuals from 98 countries and ranged in age from 16 to 78, with the median respondent being 35 years old. The majority of respondents came from outside of the U.S., with individuals residing in Europe (33%), North America (33%), East Asia & Pacific (10%), South America (8%), South Asia (4%), Sub-Saharan Africa (4%), Middle East & North Africa (2%), Central Asia (0.5%). The sample contains a total of 695 treated respondents and 140 control respondents.

In summary, our analysis consists of four waves of survey data. The first uses an as-if randomized design on a sample of college students; the second is a survey experiment of MTurk respondents; the third consists of an observational survey sample of hundreds of college students across several universities; and the fourth is a sample of respondents from MOOCs. In the next section, we discuss the summary data from these four waves of surveys, followed by analysis of the impact of education on subjects' definitions.

How Student Definitions Compare to Governments, Academics, and the Public

In each study, respondents answered a battery of questions relating to several aspects of terrorism before and/or after treatment—education on terrorism—was administered. The most basic and important question for our study was "How do you define terrorism?" asked at the outset of the survey. We used subjects' open-ended answers to code for the presence or absence of each of the five key elements—*what*, *by whom*, *against whom*, *how*, and *why*—and compared them to stated definitions from governments, academics, and their own professors, as well as revealed definitions from the general public.

In Table 1, we summarize terrorism definitions from the "uninformed" public—students pre-class from Studies 1, 3, and 4 and members of the public without treatment from Study 2—with those from these other groups. The numbers in Table 1 represent what percentage of each actor group included each element in their definitions of terrorism. "Governments" includes the definition of 12 major countries along with those from the United Nations and NATO.[19] "Academics" includes definitions from 217 academics included in Alex P. Schmid's *Routledge Handbook of Terrorism Research*.[20] "Our Professors" are the definitions from the 14 professors who taught classes that were included in our studies. Finally, "Public revealed definitions" summarizes the findings from the two most prominent studies that assessed how the public labels acts as terrorism, with "more likely" meaning individuals were more likely to identify an act as terrorism if that element was included.[21]

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[19] Each continent is represented in our government sample: Brazil, China, Egypt, France, India, Israel, Japan, Pakistan, Russia, South Africa, the United States, and the United Kingdom.

[20] Joseph Easson and Alex. P. Schmid, "250+ Academic, Governmental and Intergovernmental Definitions of Terrorism," in *The Routledge Handbook of Terrorism Research* (Lodon: Routledge, 2011), 99–157.

[21] Huff and Kertzer, "How the Public Defines Terrorism"; D'Orazio and Salehyan, "Who Is a Terrorist?"

Table 1. The Percentage of Inclusion for Each Element in Terrorism Definitions by Group

Element of Definition		*Group Type*					
		Students pre-class (S1, S3, S4)	**Public no Treatment (S2)**	**Governments**	**Academics**	**Our Professors**	**Public revealed definitions**
What?	**Violence**	82%	83%	93%	97%	100%	More likely
By Whom?	**State perpetrator**	4%	1%	7%	18%	0%	Not studied
	Non-state perpetrator	12%	1%	20%	45%	21%	Mixed
Against Whom?	**Civilian target**	26%	28%	80%	52%	57%	Not significant
	Political target	10%	10%	48%	15%	0	Not significant
	Military target	2%	0.5%	7%	6%	0	Not significant
How?	**Fear or terror**	50%	48%	80%	60%	57%	Not studied
Why?	**Political objective**	49%	30%	73%	70%	93%	More likely
	Any objective	61%	54%	77%	78%	100%	More likely
	Religion	14%	6%	27%	5%	7%	More likely
	Islam	0.2%	.005%	0%	0%	0%	More likely

These comparisons yield a number of interesting findings.

<u>The "uninformed" public agrees with governments and academics on three key elements</u>
The "uninformed" public in the first two columns has consensus on most of the same elements the governments and academics do. Majorities of all groups agree on the *what*, *how*, and *why*, defining terrorism as a) violence b) to inspire fear and c) achieve an objective, most commonly a political one. Furthermore, the majority of all of these same groups do not specify that the nature of the perpetrator is either state or non-state (*by whom*). This is a surprising degree of consensus given the debates above involving academics and governments, as well as the uncertainties about how the public defines terrorism.

<u>The "uninformed" public does not specify targets like governments and academics do</u>
There are some key differences, however. Overall, a smaller percentage of the "uninformed" public includes almost every definitional element as compared to the other groups. This suggests that governments and academics who have published definitions with real implications for their analysis and policies have more thorough definitions as a result of more meticulous processes. In some cases, the differences are modest, but in others they are quite significant, suggesting a real difference in opinion. Most significantly, only about a quarter of members of the public define

terrorism as striking a civilian target (*against whom*), which is nearly 2-3 times smaller than the percentage of governments and academics.

Academics are less likely than governments to specify non-state perpetrators

There are also some interesting comparisons between governments and academics themselves. Despite what critical terrorism scholars suggest, the governments in our sample are much *less* likely to define terrorism as being perpetrated by non-state actors than are academics.[22] These percentages suggest that academics are not simply parroting government definitions on this score. In fact, if academics dropped the "non-state" element from their definitions, they would actually become *more* similar to governments, not less.

The public is consistent on *what*, *why*, and *against whom* across stated and revealed definitions

Comparing these stated definitions to studies of revealed definitions yields further interesting findings. For the studies referenced here, the public decides whether to apply the label in response to hypothetical scenarios presented by researchers, such as "A shooting was carried out by a Christian individual with a history of mental illness who claimed he wanted to overthrow the government. Was this terrorism?"[23] Because of how revealed definitions are determined, we cannot generate an equivalent percentage of the public that included each element. Instead, we note whether the inclusion of that element made the use of the label more or less likely.[24]

In terms of comparisons, we find that the public's stated definitions match up with their revealed definitions on the *what* (violence), the *why* (objective), and the *against whom* (no specification of target).[25] The students and members of the public in our study replicate Huff and Kertzer's finding that "violent incidents do not need to target civilians in order to be understood as terrorism."[26] This means that the public generally does not include civilian targets in their stated definitions, nor do they limit their use of the label to attacks that target civilians. We agree with Huff and Kertzer that this is striking given how commonly academic and government definitions include specific language about the target type, in general, and civilian targets, in particular.[27]

Islam is important for revealed definitions, but nearly absent in stated definitions

On the other hand, we find a major discrepancy between the public's stated and revealed definitions: Islam. Prior studies on revealed definitions have consistently found that a mention of Islam concerning an incident—especially if the perpetrator is described as Muslim or an "Islamic

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[22] The percentage for governments is still smaller than academics even if you just include various U.S. government definitions—the main target of many critical terrorism theorists.

[23] In a similar vein, because most media outlets do not have style guides with stated definitions of terrorism, their revealed definitions are identified through studies of when media organizations do and do not label an act as "terrorism" in their coverage. Kimberly A. Powell, "Framing Islam: An Analysis of U.S. Media Coverage of Terrorism Since 9/11," *Communication Studies* 62, no. 1 (January 31, 2011): 90–112, https://doi.org/10.1080/10510974.2011.533599.

[24] Revealed studies can tell us not just whether an element made a significant difference, but also how large of a difference. Since it is not an apples-to-apples comparison for the stated percentages, however, we just focus on which elements are significant, not significant, and not studied.

[25] Neither Huff and Kertzer nor D'Orazio and Salehyan study the impact of state versus non-state actors on revealed definitions. The former does analyze the impact of different kinds of non-state actors and finds that the public is more likely to label an act as terrorism when committed by a group, but not when committed by an individual.

[26] Huff and Kertzer, "How the Public Defines Terrorism," 69.

[27] Huff and Kertzer, 64.

extremist"—makes it much more likely that an incident will be defined as terrorism.[28] One would therefore presume that Islam would play a large role in the stated definitions of the public. That is not in fact the case. Islam itself was almost never mentioned by *any* group, rounding to 0% for students and the public. This stands in stark contrast to other significant elements of revealed definitions (like violence and objective), which were included in 50% or more of the public's stated definitions. The numbers remain quite low for religion in any form: only 6% of the public and 14% of students. These low figures are largely in line with stated definitions from academics—both those in and outside of our study—as well as those from most governments. There was an increase in government definitions that included religion post-9/11, but it never approached a majority, and the number that stated Islam in both groups remained 0%.

What does this discrepancy suggest? Given the significant sample sizes across multiple studies carried out in roughly the same time period for both stated and revealed definitions, we do not believe that one finding regarding religion is accurate and the other is not. Instead, this apparent discrepancy likely reveals something important about how people define terrorism. We suggest three possible explanations. The first is the Social Desirability Hypothesis: religion may be a part of the public's true definition—as revealed through their labeling—but they are uncomfortable stating that outright. The second is the Definition-by-Proxy Hypothesis: when individuals label an act as "terrorism" because it was committed by someone with a religious affiliation, religion itself is not acting as a necessary element for the definition. Instead, religion is serving a proxy for another element from their stated definition that *is* necessary—such as the why (objective) or how (inspiring fear). Relatedly, a third explanation, the Fourth Wave Hypothesis, is that individuals are simply mirroring the events and labeling they see both in reality around them and in the media.[29] It is true that jihadi groups have committed a disproportionately larger number of terrorist attacks in the years surrounding these studies, and that the media disproportionately reports on such attacks by Islamist organizations.[30] Individuals may therefore be making a conscious or subconscious guess about the attack based on the degree of similarity they see (reported) around them.

All of the three hypotheses are interesting and worthy of future study. We cannot answer definitively at this point, but there is some suggestive evidence. Although the Social Desirability Hypothesis is possible, the low percentage of individuals including Islam or religion in their definitions held both for academics defining terrorism publicly and members of the public defining it anonymously. If anything, more of those defining it publicly included religion than those defining it anonymously. This suggests a lack of support for the Social Desirability Hypothesis. The real debate is likely between the Definition-by-Proxy Hypothesis and the Fourth Wave hypothesis.

The Definition-by-Proxy Hypothesis gets a partial test in the Huff and Kertzer piece. They include other elements like violence and political objectives in their scenarios, and yet they still

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[28] Huff and Kertzer, "How the Public Defines Terrorism"; D'Orazio and Salehyan, "Who Is a Terrorist?"
[29] David C. Rapoport, *Waves of Global Terrorism: From 1879 to the Present* (Columbia University Press, 2022), https://doi.org/10.7312/rapo13302.
[30] Valerie Hase, "What Is Terrorism (According to the News)? How the German Press Selectively Labels Political Violence as 'Terrorism,'" *Journalism*, May 13, 2021, 14648849211017003, https://doi.org/10.1177/14648849211017003.

find that the inclusion of Islam makes application of the terrorism label more likely. Although that means in those scenarios individuals were likely not using Islam to proxy for the *what* or *why*, it still could serve as a proxy for other elements not included in any presented scenarios, such as spreading fear. D'Orazio and Salehyan also suggest that the public imputes a motive from perpetrators' characteristics.

Huff and Kertzer also offer some initial evidence for the Fourth Wave Hypothesis, finding significantly more media coverage labeling an Islamist-motivated shooting as "terrorism" than a similar shooting by a white supremacist.[31] Our study adds some further support. We asked our respondents to name up to ten organizations that have carried out at least one terrorist attack. The five most commonly named (in descending order) were ISIS, Al-Qaeda, Hamas, Boko Haram, and the Taliban—all jihadi organizations. These are the non-state organizations that, in the last two decades, have carried out the most violent attacks against civilians to spread fear beyond the target for political ends, and have likely received the most media coverage in doing so. At the same time, D'Orazio and Salehyan surprisingly found that the effect of an Islamist perpetrator was *not* stronger when they conducted a follow-up study one week after the Pulse nightclub shooting in Orlando, which was reportedly carried out by an attacker linked to ISIS.[32]

Ultimately, none of this evidence is definitive, but it does raise some interesting questions for future study on the relationship between stated and revealed definitions, not just for the public, but also for governments and academics. Even though these groups almost never mention Islam in their definitions of terrorism, do governments' and academics' application of the label in their policies and studies match up? To what extent is what they say the same as what they do?

What is the Impact of Education on Definitions of Terrorism?

We are interested not just in comparing how students and the public define terrorism, but also in understanding the impact of education and knowledge on those opinions. To be clear, our subjects are not tabula rasa. They have been exposed to years of media coverage and government talking points, as well as academic definitions they may have discussed in prior classes. We refer to them as "uninformed" before they take our treatment classes on terrorism, but in truth those who attend college are already among the more informed people in society. It would be more accurate to therefore say that our treatment subjects go from being somewhat well informed to very well informed about terrorism, which likely limits the changes we can expect to see from treatment.

This section is where random assignment, or a lack thereof, becomes crucial. The as-if random assignment of Study 1 and true random assignment of Study 2 give us a good chance of capturing the impact of education on definitions. Still, each study has a key limiting factor: Study 1 has a small number of subjects (56) and Study 2 has a small treatment (a 9-minute lecture, not a semester long course), meaning that our findings likely understate the true effects of a semester-long course on terrorism.

[31] Huff and Kertzer, "How the Public Defines Terrorism," 68.
[32] D'Orazio and Salehyan, "Who Is a Terrorist?," 1028.

Studies 3 and 4 lack random assignment. Furthermore, Study 3 combines subjects from 28 of classes in 11 universities being taught terrorism and its definition using varying content and pedagogy, while Study 4 includes an online course with multiple professors teaching about terrorism in different ways. Therefore, any significant finding from Studies 3 and 4 indicates a strong signal about the impact of learning about terrorism in general regardless of content.

Figure 1: Estimates of Difference in Difference Analysis for Studies 1, 3 and 4

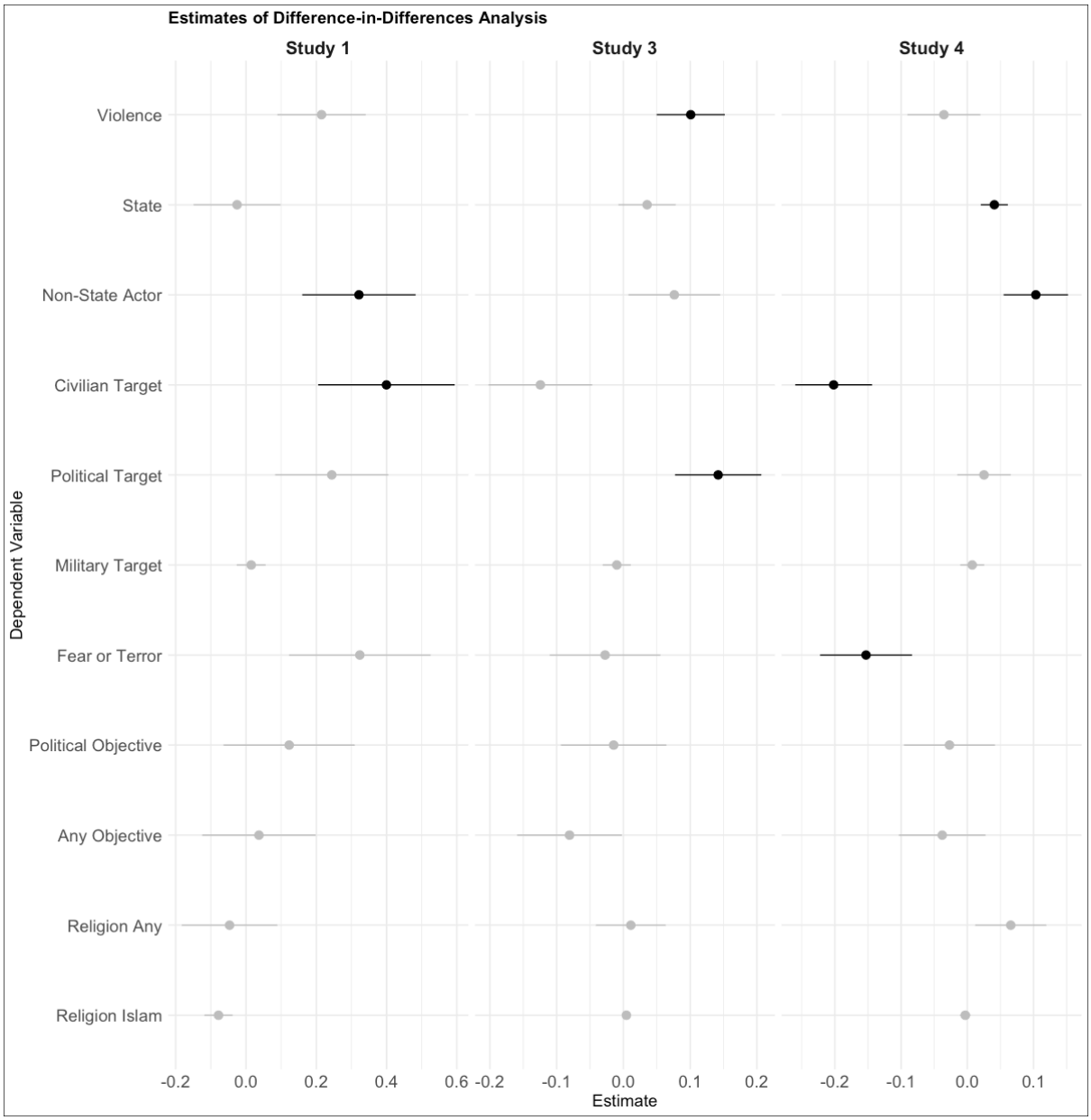
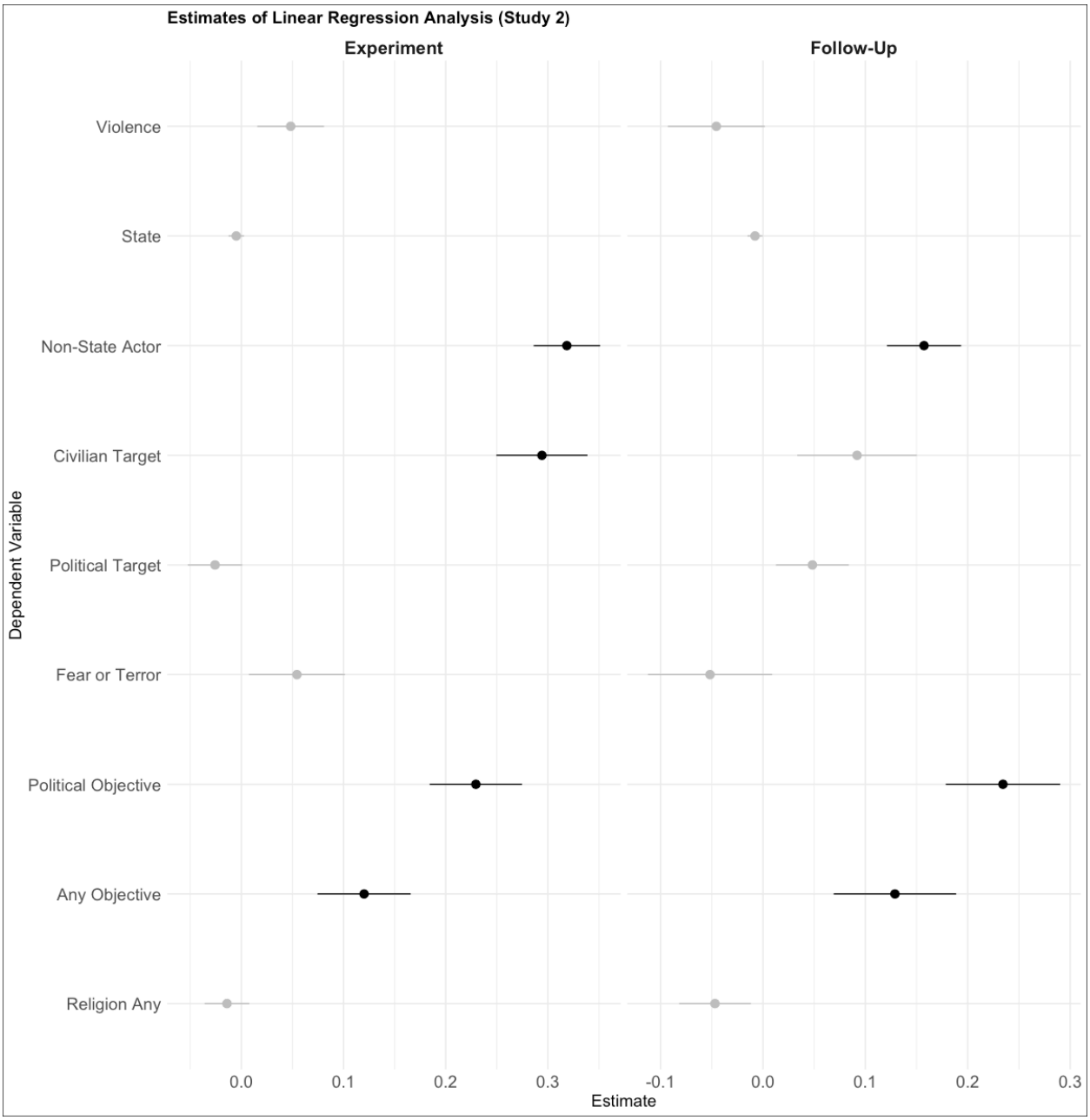


Figure 2: Estimates of Linear Regression Analysis for Study 2



To analyze how education impacted how subjects defined terrorism, we conducted difference-in-difference analysis for Studies 1, 3, and 4, comparing the pre- and post-treatment definitions of subjects in treatment and control groups. Because we had true random assignment with only a post-treatment survey for Study 4, we analyzed responses using linear regression analysis.

So, what is the impact of education on definitions of terrorism? As shown for Studies 1 and 2, whether subjects were taking a class or watching a video lecture, the more they learned about terrorism, the more they defined it as being committed by non-state actors and against civilian

targets. This moved the post-treatment "informed public" definitions significantly closer to those of academics, governments, and their own professors, who all had higher rates of inclusion for these two factors in their definitions than the pre-treatment "uninformed public" (see Table 1). For Study 2, the "informed public" also were more likely to define terrorism as including a political objective and any type of objective after treatment. When we asked the same subjects to define terrorism again one week later, three of the four changes endured: non-state perpetrator, political objective, and any objective.

There is less of a clear, consistent picture from Studies 3 and 4, as expected. Similar to Study 1 and 2, Study 4 subjects showed an increase in including non-state perpetrators. However, Study 4 also revealed a decrease in civilian targets and fear or terror, and a slight increase in state perpetrators. Study 3 subjects reveal an increase in defining terrorism as political violence, although the political aspect is political *target* and not political *objective*. All in all, we believe that the lack of clear, consistent effects in Study 3 and Study 4 reveals the challenges of weakly controlled studies and the reality that the variation in how terrorism is taught impacts how people define it in disparate ways.

These pre-post comparisons of individual definitional elements thus yield us some interesting findings. The most interesting observations come not simply from considering elements one by one, however, but what they collectively capture and truly mean. In the next section, we use latent variable analysis to capture how the informed public thinks about rationality and terrorism.

Latent Variable Analysis: Does Education Make People Think Terrorism is Rational?

Stated definitions represent what respondents explicitly articulate—how they outwardly describe their views on terrorism. Revealed definitions capture the underlying attitudes inferred from their behaviors or choices, which may not align with their stated opinions. Latent variables serve as analytical tools that help bridge this gap, uncovering often implicit meanings behind respondents' statements.[33] This allows for an assessment of how educational treatments influence not only what respondents say, but also what they truly mean.

We are interested in understanding whether the public defines terrorism as a rational act, and to what extent education makes them more or less likely to do so, which yielded two hypotheses.

H1a: The more individuals learn about terrorism, the more they perceive it as a rational act.

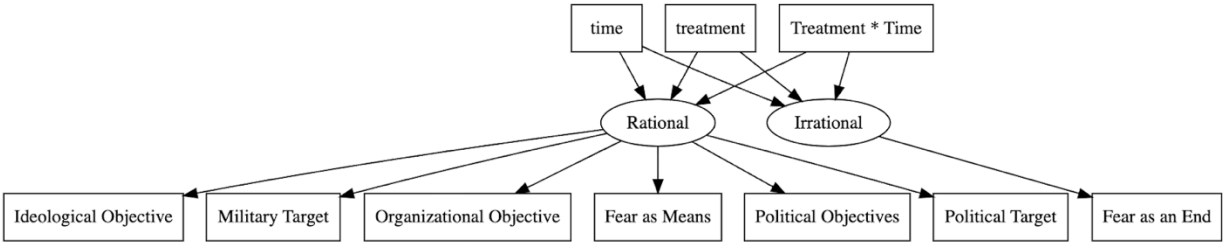
H1b: The more individuals learn about terrorism, the less they perceive it as an irrational act.

Rather than relying solely on the explicit mention of the term "rational" or its synonyms, we developed a latent variable construct that synthesizes multiple dimensions integral to the rationality framework (see Figure 3). This construct encompasses three primary variables: the

[33] Kenneth A. Bollen, "Latent Variables in Psychology and the Social Sciences," *Annual Review of Psychology* 53, no. Volume 53, 2002 (February 1, 2002): 605–34, https://doi.org/10.1146/annurev.psych.53.100901.135239; Yves Rosseel, "Lavaan: An R Package for Structural Equation Modeling," *Journal of Statistical Software* 48 (May 24, 2012): 1–36, https://doi.org/10.18637/jss.v048.i02.

specification of a clear political objective, the inclusion of a political or military target, and the employment of fear as a strategic *means* rather than as an *end*.

Figure 3: Model for Rationality Latent Variable



Rationality is about means-ends thinking. Terrorism cannot be rational if it is not carried out towards some clear end. The first dimension of our latent variable for rationality captures whether the act of terrorism is defined as aiming to achieve political, ideological, or organizational goals. These may include altering or maintaining government policy, overthrowing or changing governmental structures, ending military occupations, mobilizing popular support and recruits, or achieving social change.

The physical targets of terrorism also serve as indicators of its objectives. The second dimension of our latent variable captures whether the definitions explicitly mention political or military targets, thereby indicating a rational choice of targets that align with broader strategic objectives. Definitions that specify attacking state structures, government officials, military installations or personnel reflect a deliberate targeting strategy aimed at achieving political or military outcomes.

Terrorism is often defined as inspiring fear. To differentiate between rationality and irrationality, we assess whether definitions suggest terrorism is designed to inspire fear as a means to an end—such as political or ideological change—or to inspire fear as an end in itself. “Fear as means” represents the final dimension for our latent variable of rationality. “Fear as an end” serves as the main indicator of irrationality. This indicator reflects definitions where fear or terror are presented as the ultimate objectives, rather than intermediary tactics.

We have fewer indicators for irrationality because it is defined as the absence of means-ends thinking, whereas rationality is the presence of it. Because our indicators are based on responses to open-ended definitions, we can more easily find evidence for positively indicated rationality rather than irrationality, which is generally defined as the *lack* of something. While we feel comfortable using the mention of a concrete objective as evidence of rationality, we only feel comfortable considering the positive assertion of no concrete objective as irrationality. This means that we are likely undercounting the number of respondents who define terrorism as an irrational act, and are more confident in the value of our latent variable for rationality.

To examine how educational interventions affect individuals’ conceptualizations of terrorism, we employed confirmatory factor analysis (CFA) to explore the relationships among these latent constructs. Here, education functions as a treatment variable within our survey design, serving to assess its impact on the evolution of participants' definitions. By analyzing shifts in definitional

components before and after exposure to educational content, we aim to understand the extent to which education influences perceptions of rationality and irrationality in terrorism.

Study 1 Findings: Quasi-Experimental Semester Courses on Terrorism with Wait List

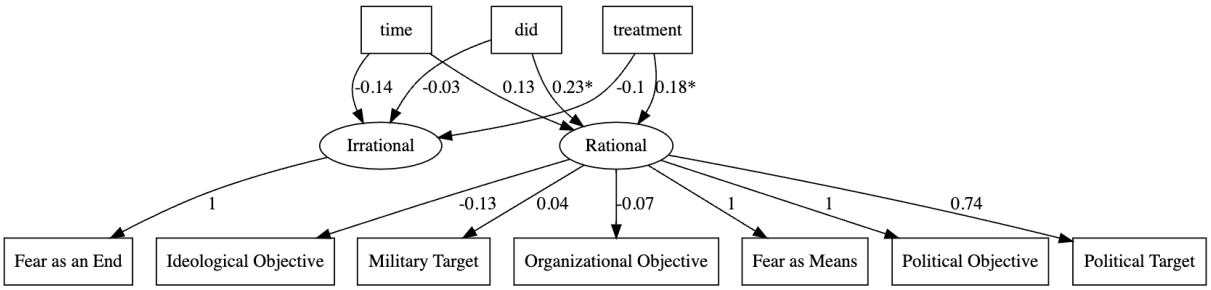
The parameter values in Table 2 detail the correlations between the latent variables and their respective observed indicators. This analysis helps elucidate the construct validity of our latent variables by examining the parameter values, standard errors, and significance levels associated with each observed variable.

Table 2: Factor Loadings and Model Parameters for Study 1

Latent Factor	Observed Variable	Parameter Value	Std. Error	p-Value
Rational	Fear as Means	1.00000000	0.00000000	
Rational	Political Objective	0.99864579	0.20756111	0.000001499264
Rational	Political Target	0.74170807	0.18394265	0.000055238565
Rational	Ideological Objective	-0.13156103	0.15333978	0.390908680159
Rational	Military Target	0.04379382	0.03441270	0.203157737221
Rational	Organizational Objective	-0.06791214	0.04858131	0.162141068217
Irrational	Fear as an End	1.00000000	0.00000000	

For the latent variable "Rational," the indicator *Fear as Means* has a fixed parameter value of 1.000, serving as a reference indicator which will be the same for all four survey waves. The *Political Objective* and *Political Target* indicators show strong and significant relationships with parameter values of 0.999 ($p < 0.001$) and 0.742 ($p < 0.001$), respectively. However, the *Ideological Objective* and *Organizational Objective* indicators exhibit weaker and non-significant relationships with parameter values of -0.132 ($p = 0.391$) and -0.068 ($p = 0.162$), respectively. The *Military Target* indicator shows a non-significant relationship with a parameter value of 0.044 ($p = 0.203$). For the latent variable "Irrational," the indicator *Fear as End* also has a fixed parameter value of 1.000, serving as a reference.

Figure 4: Confirmatory Factor Analysis for Study 1



In the Study 1, the interaction of time and treatment (0.23*) demonstrated a moderate positive effect on "Rational," suggesting that the treatment enhanced rational components of the respondents' definitions in the treatment group as opposed to in the control group. The treatment is associated with a 0.23 increase in the latent variable compared to the control group. This finding supports H1a, indicating that the more individuals learn about terrorism, the more they perceive it as a rational act. However, the impact on irrationality was negligible (-0.03), indicating minimal immediate effectiveness in reducing irrational parts of the definition. Consequently, we cannot support H1b, as there was no significant reduction in the perception of terrorism as an irrational act.

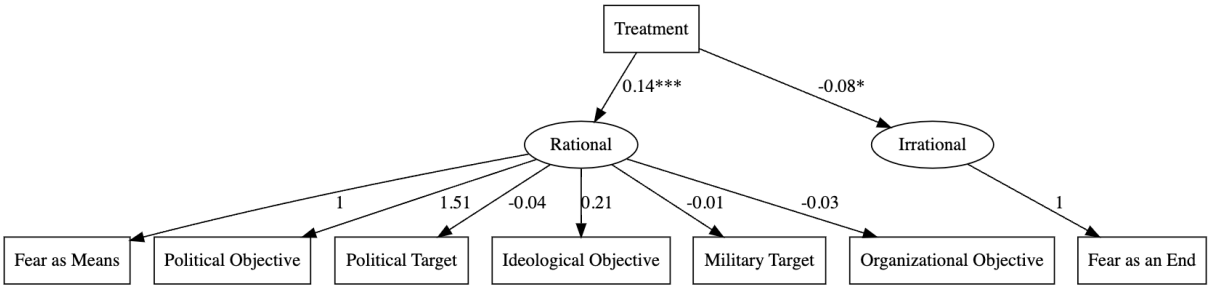
Study 2 Findings: Experimental MTurk w/Video Lectures on Terrorism and Financial Crises

In Study 2, the *Political Objective* indicator shows a strong and highly significant relationship with a parameter value of 1.508 ($p < 0.001$), underscoring its significant contribution to the rationality construct. However, the *Political Target* indicator reveals a weak and non-significant association, with a parameter value of -0.038 ($p = 0.558$), indicating a minimal impact on the construct. The *Ideological Objective* displays a modest yet significant relationship, with a parameter value of 0.208 ($p = 0.004$), suggesting its relevance within the construct. The *Military Target* and *Organizational Objective* indicators show weak and non-significant relationships, with parameter values of -0.008 ($p = 0.442$) and -0.028 ($p = 0.467$), respectively, indicating limited contributions to the rationality construct.

Table 3: Factor Loadings and Model Parameters for Study 2

Latent Factor	Observed Variable	Parameter Value	Std. Error	p-Value
Rational	Fear as Means	1.000000000	0.00000000	
Rational	Political Objective	1.507993877	0.20866012	0.0000000000004936052
Rational	Political Target	-0.038087491	0.06504892	0.5581976191916755425
Rational	Ideological Objective	0.208457108	0.07191515	0.0037476857352038984
Rational	Military Target	-0.008265668	0.01076658	0.4426564207822316632
Rational	Organizational Objective	-0.027862249	0.03829518	0.4668796912197539228
Irrational	Fear as an End	1.000000000	0.00000000	

Figure 5: Confirmatory Factor Analysis for Study 2



In Study 2, we employed a linear regression analysis—unlike in Studies 1, 3, and 4—because we only surveyed subjects after being randomly assigned to watch a lecture on terrorism or financial crises, not before. The analysis showed that treatment had a significant positive effect on rationality (coefficient = 0.14***), indicating that the treatment group perceived terrorism as more rational than the control group. The effect of treatment on irrationality was slightly negative (-0.08*), suggesting that the treatment group perceived terrorism as less irrational than the control group. The findings from Study 2 thus provide support for both H1a and H1b. This is somewhat surprising given the much smaller size of the treatment: a 9-minute lecture as opposed to a semester long course encompassing hundreds of hours of interaction. However, Study 2 was also the most controlled and the only one with true random assignment, allowing us to more precisely separate the signal from the noise.

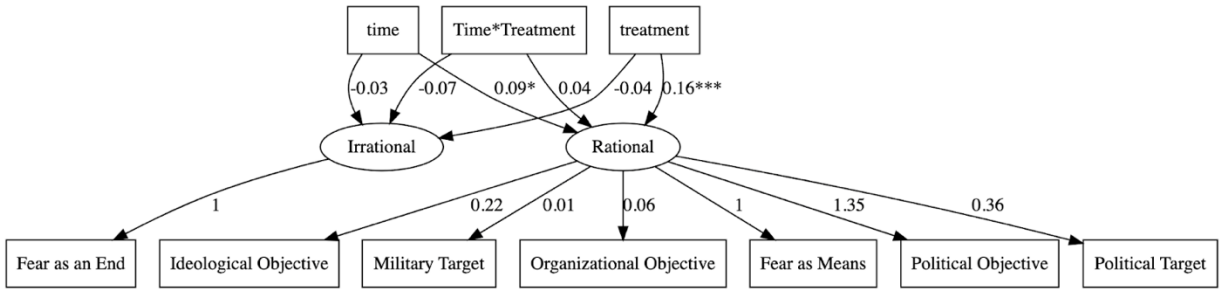
Study 3 Findings: Observations from Courses at 11 Universities

In Study 3, the *Political Objective* and *Political Target* indicators exhibit robust and significant relationships, with parameter values of 1.34 ($p < 0.001$) and 0.36 ($p < 0.001$), respectively. This strong correlation underscores their relevance in defining the rationality construct. *Ideological Objective*, *Military Target*, and *Organizational Objective* indicators present weaker and non-significant relationships, with parameter values of 0.21 ($p = 0.01$), of 0.014 ($p = 0.576$), and of 0.06 ($p=0.19$). These results suggest a lesser role in the rationality construct.

Table 4: Factor Loadings and Model Parameters for Study 3

Latent Factor	Observed Variable	Parameter Value	Std. Error	p-Value
Rational	Fear as Means	1.00000000	0.00000000	
Rational	Political Objective	1.34673379	0.16569230	0.000000000000000004440892
Rational	Political Target	0.36354280	0.09044351	0.0000583077717566382603
Rational	Ideological Objective	0.21865081	0.08719693	0.0121570806615196591594
Rational	Military Target	0.01472694	0.02633647	0.5760358910064349302615
Rational	Organizational Objective	0.06451565	0.04944709	0.1919810039165938952976
Irrational	Fear as an End	1.00000000	0.00000000	

Figure 6: Confirmatory Factor Analysis for Study 3



For Study 3, the interaction effect of time and treatment on the rational latent variable decreased to 0.04, suggesting that while treatment influences "Rational," its effect was less pronounced compared to the first wave. For "Irrational," the interaction effect remained minimal (-0.07). The

analysis did not reveal any statistically significant effects of the interaction of time and treatment on either rational or irrational latent variables. This indicates that the treatment did not significantly alter the respondents' perceptions of terrorism as either rational or irrational acts compared to the control group. As a result, neither H1a nor H1b can be supported in this wave.

The absence of significant findings suggests that the treatment's impact may not have been sufficiently robust to influence perceptions within this cohort, or that other unmeasured factors could have influenced the outcomes. The fact that Study 3 comprises 28 classes at 11 different universities with no standardized, planned instructions for treatment creates a very hard test for the impact of knowledge on definitions. The fact that treatment alone is significant and positive for Rational is also consistent with the idea that knowledge about terrorism makes individuals think it is more rational. This is because students who selected to enroll in terrorism courses are more likely to have more prior interest and knowledge about it than those selecting into non-terrorism courses. This mismatch between the subjects in our treatment and control groups for Study 3 also helps explain why we find less effect from the treatment itself.

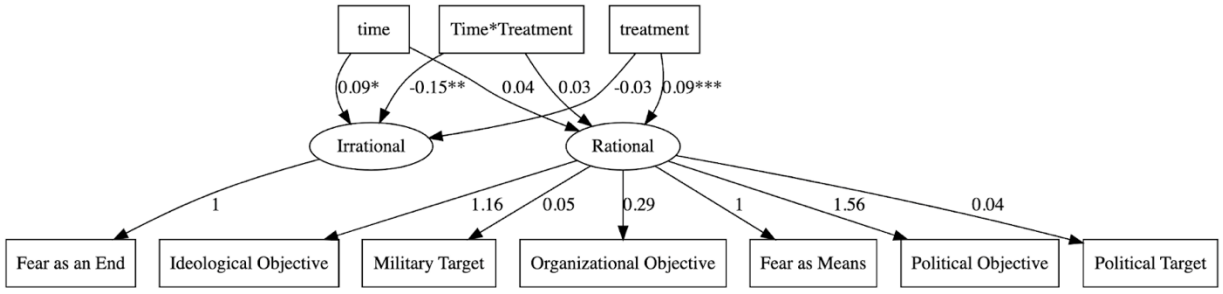
Study 4 Findings: Massive Open Online Courses (MOOCs)

Table 5 presents the factor loadings and model parameters for the latent variable "Rational" in Study 4. The indicator *Fear as Means* is set as the reference with a fixed parameter value of 1.000. *Political Objective* shows a strong and significant relationship with a parameter value of 1.53 ($p < 0.001$), indicating its critical role in defining the rationality construct. However, *Political Target* exhibits a weaker and non-significant association, with a parameter value of 0.039 ($p = 0.479$). Similarly, the *Ideological Objective* displays a notable and significant relationship, with a parameter value of 1.094 ($p < 0.001$). In contrast, the *Military Target* indicator, with a parameter value of 0.053 ($p = 0.039$), and the *Organizational Objective*, with a parameter value of 0.278 ($p < 0.001$), indicate moderate and significant contributions to the rationality construct. For the latent variable "Irrational," the indicator *Fear as End* is similarly used as a reference with a fixed parameter value of 1.000.

Table 5: Factor Loadings and Model Parameters for Study 4

Latent Factor	Observed Variable	Parameter Value	Std. Error	p-Value
Rational	Fear as Means	1.00000000	0.00000000	
Rational	Political Objective	1.56378688	0.17136241	0.0000000000000
Rational	Political Target	0.03614833	0.05222523	0.4888354599156
Rational	Ideological Objective	1.16439265	0.13217808	0.0000000000000
Rational	Military Target	0.05046729	0.02383513	0.0342302422961
Rational	Organizational Objective	0.28733902	0.05800535	0.0000007282886
Irrational	Fear as an End	1.00000000	0.00000000	

Figure 7: Confirmatory Factor Analysis for Study 4



In Study 4, the interaction of time and treatment did not have a significant impact on rationality, as indicated by the path coefficient (0.04). However, there was a more substantial negative effect (-0.15**) on irrationality, suggesting that the education treatments were more effective in reducing irrational components of terrorism definition. These results support H1b, indicating that increased education about terrorism leads to a decreased perception of it as an irrational act. Despite the lack of impact on rationality, the findings highlight the potential for educational interventions to alter perceptions of terrorism by diminishing irrational interpretations. Although the treatment course had a variety of instructors, the fact that it was a single course, as opposed to 28 different courses as in Study 3, also likely allowed for better identification of any causal relationship.

Conclusion

How do students and the public define terrorism, and what impact does education have on those definitions? Through four waves of studies that asked students and the general public to state their definition, we found that they generally agree with most academics and governments that terrorism is violence designed to instill fear to achieve a (political) objective. However, most students and members of the public say nothing in their definitions about who is committing or being targeted by the violence, contrary to most academics and governments who do. The public's flexibility on perpetrators and victims lays the groundwork for politicized applications of the term, which we see all around us. The idea that 'one person's terrorist is another person's freedom fighter,' becomes more possible when any person be a terrorist and any person can be the victim of a terrorist attack.

The shifts we found after subjects took courses and watched educational videos suggest that people's definitions can and do change, and indeed that education often pushes people to more precisely define terrorism as committed by non-state perpetrators against civilian targets—in line with academic and government definitions. But given that most people will not be exposed to such treatments, the open-ended definition and application of "terrorism" and "terrorist" regardless of the identity of the perpetrator and victim are likely to endure.

Although ours is one of the first studies to analyze students and the general public's stated definitions and how they are impacted by education, it should not be the last. We have only begun to probe the differences between stated and revealed definitions of terrorism, which have significant implications for government and society. Elements of both should be combined into a single study, with open-ended questions accompanying scenario-based conjoint experiments to help analyze inconsistencies and get closer to identifying people's truly held definitions of terrorism. The major disconnect between stated and revealed definitions on the issue of religion, in general, and Islam, in particular, should be at the top of the list for analysis. A study designed to compare the power of the Social Desirability Hypothesis, the Definition-by-Proxy Hypothesis, and the Fourth Wave Hypothesis would not only help explain why there is such a disconnect between how people define and apply the terrorism label on the issue of religion, but also illuminate the broader relationship between stated and revealed definitions.

Educational treatments could also be added to survey experiments to determine the extent to which knowledge causes changes in revealed definitions as it does in stated ones. The educational treatments themselves can be more fine-tuned and controlled. This study represents a first pass with a variety of educational scenarios. More precisely controlled treatments will allow us to better understand what aspects of educational treatments impact people's definitions and their applications of those definitions.

Perhaps the most important shift we discovered is that, at least in our studies with better controls, the more individuals learn about terrorism, the more they define it as a rational act based on means-ends thinking. Our findings on rationality connect with related studies on fear and humanization, all of which likely collectively reinforce each other.[34] The uninformed public generally sees terrorists as unlike them, irrational, and scary. After learning more, the informed

[34] Theriault, Krause, and Young, "Know Thy Enemy"; Krause et al., "Knowing Is Half the Battle."

public is more likely to perceive terrorism as committed by rational human beings who are less of a threat—though we find no evidence of more sympathy or support. It is therefore possible to understand and be less fearful through knowledge and education.

We should further probe the connection between rationality, humanization, and a lack of fear. Although it makes sense that they correlate across studies, we don't know the direction and extent of the causal impact. Does seeing terrorists as more like us make them seem rational and the act less scary? Or does becoming less fearful of terrorism allow us to let down our guard and understand the strategies behind it? Which way do the arrows go?

The focus of counterterrorism is usually on violent tools—military interventions, drone strikes, and police repression—used to target the (potential) perpetrators. But the greatest impact terrorism has is not the deaths it causes. Terrorism's most far-reaching impacts are the fear and uncertainty it triggers, and the mistakes it pushes individuals, and governments to make, driven by misunderstanding, emotion, or both. Increasing the public's knowledge about terrorism can lead to greater understanding, less fear, and ensure that our societies have the right strategies to limit the impact of those who would use political violence to inspire distress and missteps. Knowledge is power, in this case, by definition.