

“Wait, I’m being terrorized?” Public Perceptions of Terrorism and Intentionality

by

Kevin Ho Yin Leung

Bachelor of Arts, Simon Fraser University, 2020

Project Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Arts

in the

Department of Political Science
Faculty of Arts and Social Sciences

© Kevin Ho Yin Leung 2023

SIMON FRASER UNIVERSITY

Spring 2023

Copyright in this work is held by the author. Please ensure that any reproduction or re-use is done in accordance with the relevant national copyright legislation.

Declaration of Committee

Name: Kevin Ho Yin Leung

Degree: Master of Arts

Title: “Wait, I’m being terrorized?” Public Perceptions of Terrorism and Intentionality

Committee:

Chair: Radoslav Dimitrov
Associate Professor, Political Science

Aaron M. Hoffman
Supervisor
Associate Professor, Political Science

Eline de Rooij
Committee Member
Associate Professor, Political Science

Garth Davies
Examiner
Associate Professor, Criminology

Ethics Statement

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

- a. human research ethics approval from the Simon Fraser University Office of Research Ethics

or

- b. advance approval of the animal care protocol from the University Animal Care Committee of Simon Fraser University

or has conducted the research

- c. as a co-investigator, collaborator, or research assistant in a research project approved in advance.

A copy of the approval letter has been filed with the Theses Office of the University Library at the time of submission of this thesis or project.

The original application for approval and letter of approval are filed with the relevant offices. Inquiries may be directed to those authorities.

Simon Fraser University Library
Burnaby, British Columbia, Canada

Update Spring 2016

Abstract

Identifying a violent event as an act of terrorism is often difficult when the perpetrator and their motives are unclear. This paper argues that one way the public solves this classification dilemma is through the interaction between claims of responsibility for the violence and the tactics of the violence involved. Utilizing a two-by-two factorial survey experiment, I show that the public is more likely to label a violent event as terrorism when the event has an associated claim of responsibility and when the type of violence is clearly associated with terrorist activity. The results suggest people are more likely to confidently label a violent event as intentional or terroristic in nature when exposed to the interaction between claims of responsibility and tactics involved. This experiment shows that claims serve to identify who committed a violent event and why to audiences, but also clarifies ambiguous violence to be terroristic in nature.

Keywords: terrorism; public responses; survey experiment; credit claiming; ambiguous violence; terroristic violence

Dedication

This project is for my grandparents, who saw me start my master's program but did not get to see me finish.

Acknowledgements

This project could not have been completed without the guiding hands of Dr. Hoffman and my supervisory committee, Dr. Eline de Rooij and Dr. Garth Davies who suffered through far too many drafts of this project and watched me as I defended my project with the nervous energy of a deer in headlights.

Special thanks go out to my family and friends who took time on their days off to listen to me drone on about terrorism as I worked the kinks out of my project and presentation:

My Parents

Tatiana Parrish

Paratmika Padhya

Dr. Karlton Scheu

Natalie Boyco

Brittany DeBoer

Andrew Lee

Khang Diep

Kelvin Mo

Table of Contents

Declaration of Committee	ii
Ethics Statement	iii
Abstract	iv
Dedication	v
Acknowledgements	vi
Table of Contents	vii
List of Figures	viii
List of Acronyms	ix
Introduction	1
Literature Review	3
Theoretical Argument	8
Hypotheses	10
Research Design	11
Analysis	17
Discussion	25
Conclusion	28
References	30
Appendix A. Hypothetical Scenarios	33
Appendix B. Questionnaire Presented to Participants	35
Appendix C. Dependent Variable Averages	39
Appendix D. ANOVAs of Dependent Variables	41
Appendix E. Chi-Squared Testing	48
Appendix F. Supplemental Data File (Responses)	50
Appendix G. Supplemental Data File (Attrition and Covariate Testing)	51
Appendix H. Supplemental Data File (Statistical Testing)	52

List of Figures

Figure 1. Interaction between Intentionality of tactics and Presence of Claim....18

Figure 2. Graph of Interaction term of: Belief that the hypothetical scenario.....21

List of Acronyms

SFU	Simon Fraser University
GTD	Global Terrorism Database

Introduction

On April 17th, 2013, a fertilizer storage facility in West, Texas, spontaneously exploded, killing 15 and injuring hundreds. Coming two days after the Boston Marathon Bombing, initial reports assumed malicious intent, and government agencies cordoned off the facility to investigate. Inspectors concluded that the explosion resulted from industrial safety negligence. Roughly five years later, in Toronto, a lone driver ran a car into a crowd of pedestrians. In this case, the initial reporting suggested that a car accident had taken place, a conclusion that changed only after the driver's incel-related social media posts came to light. What initially seemed to be a tragic accident became reclassified as an act of terrorism with this claim. I argue that the public's ability to classify acts of violence as terrorism often relies on the interaction between two variables: claims of responsibility: the public announcements perpetrators make revealing their culpability for violence, and the ambiguity of violence: how clear it is that violent events were the product of intentional actions.

Understanding how the presence of a claim of responsibility interacts with attack tactics to influence public perceptions of terrorism is important to mitigate its effects on the public. In an academic context, a better understanding of how the public evaluates terroristic violence will aid in future research that aims to understand how audiences respond to violence. Existing research suggests that exposing people to terrorist attacks either directly or through the consumption of news media causes them to adopt more hawkish attitudes towards foreign policy (Gadarian, 2010), while also inflaming negative emotions such as anxiety and anger (Huddy et al, 2021).

These results, however, assume that people are able to identify acts of terrorism when they occur. This assumption is often unwarranted (Huff & Kertzer, 2018). In many cases, audiences of violent events are incapable of distinguishing them as terroristic in nature. This is where I argue that credit claims and the tactics used by perpetrators of terroristic violence come into play. Audiences use these clues to make conclusions about the kinds of events they see on the news.

This project finds that the influence of both a claim of responsibility and the type of violence involved in a terrorist attack has significant effects on whether people conclude that an act of violence was terroristic in nature. Using a two-factor survey

experiment and a sample of Canadian respondents, I find that people are inclined to categorize acts of violence as terrorism when claims of responsibility are issued for violent events that are ambiguous as to their causes and intent. In contrast, claims of responsibility do not play as important a role in convincing people that acts of violence are in fact acts of terrorism when the violent events that precede claims are more clearly intended to cause fear. In other words, people are more inclined to classify violence as terrorism as a function of the interaction between the presence or absence of claims of responsibility and the ambiguity or clarity of violent intent.

This experiment found using two-way ANOVAs and Tukey's HSD decompositions that there was a statistically significant effect stemming from the combination of the two main independent variables on participant belief that the act described in the hypothetical scenario was intentional, and participant belief that the act was terroristic in nature. These results imply the following: while intentionality or tactic of violence can provide insight for target audiences, the presence of a claim of responsibility in conjunction with the type of violence utilized amplifies and clarifies the communicative effects of a terrorist attack. Credit claims are necessary for terrorist groups to clarify ambiguous violence to audiences and serve as an important messaging tool. Groups that fail to claim credit for ambiguous terror are likely to have their efforts misinterpreted. When the public is provided with more information, they are more likely to understand that a terrorist group is telling them that they are witnessing terrorism, not just random violence, and to receive a message beyond "be afraid" (Cordes, 1988).

In the following sections, I identify the specific research puzzle at hand and explore it in further detail. The theoretical background of the core concepts defining the research puzzle will follow, then a brief review of some methodologically and theoretically relevant literature to the proposed research experiment. As the last portion of this project, the research design, conceptualization, measurements, and analysis for the proposed survey experiment will be discussed. Finally, the execution of the experiment, analysis of the data, and conclusions complete this project.

Literature Review

Terrorism, Credit Claiming, and the Puzzle of Terrorist Behavior

Terrorism can be described as a form of costly signaling (Kydd & Walter, 2006). The goal of terrorists is to strike fear into an audience through violence and make them capitulate to their demands. The use of violence by terrorists is intrinsically costly, as violence precipitates legal and lethal responses from states. By using violence, however, terrorists can show their audiences that they are willing to risk their lives for their causes. This willingness to take on risk as a part of costly signaling is a critical component of the communication between terror groups and their audiences.

Violence alone is often a poor communicator and fails to provide meaningful messages to audiences (Kydd and Walter, 2002). Other than “be afraid”, an act of violence on its own cannot clearly elucidate what the perpetrator’s goals and motivations are (Cordes, 1988). Terrorists can use a claim of responsibility for their attacks to identify themselves and their goals to their target audiences, furthering the visibility of their cause and affirming their commitment to it. Without attribution, it is difficult for an attack alone to explain to the audience its rationale and purpose.

Considering the risky nature of conducting a terrorist attack, it stands to reason that terrorists would find it critical to communicate their demands to their audiences. By this logic, terrorists should be claiming responsibility for all their attacks. However, this is not the case. While some terror groups like ISIS have been infamously active in claiming responsibility for terrorist attacks, typical attacks have lacked a claim, according to the Global Terrorism Database’s (GTD) record of terrorist attacks since 1970. The GTD is a comprehensive record of terrorist attacks, ranging from arsons that may have only been accidental fires, to large-scale bombing campaigns. Through analysis of all the cases currently recorded in the GTD, only approximately 16% have an associated claim of responsibility. This contrasts sharply with the expected claim behavior of terrorists, especially if we are to believe that terrorists need to show themselves to their audiences to communicate their goals.

Discussions of the credit claim puzzle date back to 1997, with authors Bruce Hoffman, David Rapoport, and Dennis Pluchinsky discussing the perceived decrease in claims of responsibility being issued by terrorist organizations. B Hoffman (1997) attributed the decline in credit claims to the decline in states sponsoring terrorism. B Hoffman's argument revolved around the idea that state-sponsored terrorism had been a passing fad which artificially inflated the rates at which attacks were claimed. As the fad passed, claim levels were "returning" to their natural state. On the other hand, Rapoport (1997) argued that a rise in religious terror and a lack of a need to appeal to non-deities contributed to the decline in claims of responsibility. If the intended audience of a terror attack was an all-seeing deity, claims for attacks wouldn't necessarily be visible to the general public. Pluchinsky (1997) argued that terrorists who were state-sponsored would have no motivation to claim credit, and attributed the decrease in claims to an increase in state-sponsorship or terrorist incompetence. If terrorists were getting paid by states, they may have been instructed to not advertise their association with the attack. Alternatively, if terrorists failed to achieve their primary objectives in their attack, a claim would be counterproductive and only serve to highlight their failure. This initial exchange only provides a loose theory to explain why groups might not claim responsibility for their acts of terrorism, with future credit claim research focusing on whether the decision to claim responsibility comes from the goals of the terrorists or due to other, lesser factors.

Aaron Hoffman's 2010 work "Voice and Silence", used a systematic analysis of data on transnational terrorist attacks in Israel that claims were more prevalent when terrorist groups were competing with other groups for media attention. This indicates that the reaction of audiences is a key motivation of terror groups, and influences claim rates. By examining audience reaction, it is likely possible to better understand why and when terrorist organizations present claims, assumedly for the elicited reaction from the public. This theory that audience reaction is the main motivator for claim rates is supported by other work in the field, such as Kearns (2021), whose research indicated when terrorist organizations are operating in the same theater, there is a higher likelihood of credit claims being issued. Some contemporary literature in the field of credit taking has focused on other factors to explain the absence of credit claims. Abrahms and Conrad (2017) postulated that the heterogeneous nature of terrorist cells often meant that terrorist operatives could conduct attacks that would cause unsightly civilian casualties, causing group leaders to disavow responsibility. Other authors in the credit claiming field

identify different motivations for credit claims. Joseph Brown (2020) puts forward that claims can be used to organize activities in decentralized terrorist networks, while also serving to recruit new members to a terrorist group's cause and indicate to audiences that they are witnessing terrorism in action.

Regardless of whether credit claims are motivated by the whims of terrorist leadership or the desire to elicit a response from the audience, the literature currently at hand all shares the same assumption. Almost all work in the field of credit claiming assumes that the public has an unambiguous understanding that a terrorist attack has occurred, and no confusion surrounds the nature of a violent event, regardless of claim status (Hansen, 2021). This assumption is flawed, as evidenced by data gathered from the Global Terrorism Database which indicates that over 1/5th of recorded terrorist attacks are dubiously terrorism, indicating that audiences are clearly not understanding the messages that terrorists are sending them.

Considering the often fragmented and inconclusive reporting that surrounds the early aftermath of a terrorist attack, it is likely that there are more cases where audiences seeing terrorist attacks are viewing them as ambiguous violence. The 2018 car-ramming attacks in Toronto are an example of a case where initial reporting of a terror attack misattributed it to a different motivation (BBC, 2018). Conversely, there are likely cases where violent events were misinterpreted as a terrorist attack, such as the case of TWA Flight 800, a plane that exploded after takeoff due to mechanical failure yet was initially suspected to be terrorism (Knowlton, 1996). These examples show that audiences can often misinterpret ambiguous violence as terror, or terror as ambiguous violence, in sharp contrast to the assumptions made in previous literature that audiences have clear understandings and a lack of ambiguity regarding terror.

This gap in theory prevents any meaningful conclusions from being drawn in regard to how claims identify acts of terrorism in different conditions (such as when an attack is ambiguous in terroristic intent). Occasionally events occur that could be attributed to terrorism but are not considered as such due to the lack of a claim of responsibility. Examples such as the terrorism-motivated vehicle ramming attacks in Canada in Edmonton in 2017 and Toronto in 2021 are prominent examples of violent events that are pegged as terrorist-related but utilize ambiguous tactics in their execution.

When does the public decide violence is terrorism?

Recent work on terrorism has begun to examine the conditions under which people conclude that violent incidents constitute acts of terrorism. Research in this area typically focuses on public perceptions of attack tactics (e.g. bombings, shootings, arson, etc.) (Huff and Kertzer, 2018), and characteristics of the terrorist group in discussion, such as ideology or political leaning (Kearns et al, 2021). Other works focus on the audience side of affairs, with studies examining the impact of terrorism dependent on the physical proximity of terrorist victims on audiences' perceptions of threat (Avdan and Webb, 2019), or the perceived effectiveness of terrorist groups (Avdan and Webb, 2018). Similar to the literature on credit claiming, research surrounding public understandings of terrorism glosses over the intrinsic role that claims of responsibility play in informing the public as to the nature of terroristic violence. Works like Huff and Kertzer's, which explicitly sought to identify "How the Public Defines Terrorism", found that the tactics, death toll, target, and motivation of violent events had significant effects on public perceptions of whether violence was terroristic in nature. While Huff and Kertzer included actor motivations as a variable within their experiment, they did not incorporate claims of responsibility as an independent variable within their research, despite presenting hypothetical scenarios intended to replicate information audiences would typically receive in the wake of an attack (Huff and Kertzer, 2018).

Works like Avdan and Webb's research on audience perceptions of threat based on the victims of foreign terrorist attacks incorporated a claim of responsibility into their treatments but held the presence of a claim constant throughout their work (Avdan and Webb, 2019). Avdan and Webb's other experiment in 2018 examined the influence of terrorist coordination on public perceptions of threat. In this other experiment, the authors examined the influence of perceived terror group sophistication through different levels of terrorist group coordination. This experiment did not discuss or examine the influence of the presence of a claim through the inclusion of a control group where no claim was present, preventing any conclusions from being drawn in regard to the influence of the presence of a credit claim.

These works represent some of the most recent quantitative, experiment-based research into public perceptions and understandings of terrorism, but all fail to incorporate claims of responsibility and their influence on the public's understanding of terrorism in the real world, as a potential factor in their experiments. Current experimental literature in the field of public perceptions of threat only examines ambiguous tactics and claims of responsibility with varying specificity and not under a cohesive umbrella. This precludes any meaningful analysis of how ambiguity and claims interact in the minds of the public.

Terrorists ultimately aim to communicate some form of political demand and treating claims of responsibility as an intrinsic factor in how audiences interpret (often ambiguous) violence to be an act of terrorism should be considered. It may be the case that audiences see the presence of a claim as a definitive indicator as to whether violence is terrorism, as no further thought is necessary to determine that an event is terroristic in nature. This is the theoretical gap this project aims to fill by developing a deeper theoretical framework that attempts to understand the influences of terrorist behaviour on the public, and what constitutes terrorism in the eyes of the public.

Theoretical Argument

Credit Claiming and its Clarifying Capability

Claims serve as a method of communication between terrorists and their victims. Existing understandings of terrorism indicate that when a terrorist group claims responsibility for an act of violence, the audience is made aware of who was responsible for the attack, and potentially their goals/motivations. However, this way of thinking about claims of responsibility assumes that violent events are immediately obvious as terrorism to the target audience. This is an oversight and fails to account for attacks that are ambiguously terroristic in nature.

In many cases of violence, the purpose is unclear. An example of ambiguous violence presents itself in the 2006 incident at the University of North Carolina (UNC), where a white SUV ran through a crowd of students, injuring 9. In the immediate aftermath of the incident, media accounts of the violence and the captured perpetrator drew comparisons to violent events spurred by mental illness. It was only after authorities searched the home of the attacker and discovered a letter detailing the attacker's intent to "avenge the deaths of Muslims worldwide", that the violence was labelled as terroristic in nature (Franks & Wallace, 2006).

Contrast this example to 9/11, where four hijacked planes were flown into important landmarks and buildings. In this case, no terrorist group came forward to claim responsibility until 2004, but there was no ambiguity to the public that the events of that day were a terrorist attack (CBC). If there is no claim of responsibility issued for a violent act, audiences only have the characteristics of the events to draw conclusions from.

Audience perceptions of violence ultimately motivate their conclusions surrounding the violence at hand. High-intentionality tactics, such as airline hijackings or suicide bombings lack an explanation other than terrorism. Contrastingly, low-intentionality violence such as car ramming attacks present a multitude of alternative explanations audiences can come to. For terrorists, this complicates issues. Terrorists place themselves at extreme personal risk for reprisals from law enforcement and

commit valuable resources to commit terrorist attacks as a method of communicating. If the audience of a violent event fails to identify it as terrorism, the perpetrators have failed to communicate effectively. If terrorist groups believe their ambiguous attacks won't effectively communicate their goals, they may attempt to clarify their intent through the issuance of credit claims.

I expect from this line of thinking that audiences will classify a violent event to be terrorism if there is a claim of responsibility, while in cases where there is an absence of a claim, audiences will depend on secondary factors such as tactics to conclude whether an event was terroristic. Additionally, I expect to see audiences who witness obviously terroristic tactics agree more with statements that classify an event as terrorism, while audiences who are exposed to ambiguous tactics will require the presence of a claim of responsibility to more readily agree with statements that violence was terroristic in nature. I also expect to see that the influence of credit claims on the participant's classification of terrorism is lower in obviously terroristic attacks than in ambiguous attacks, as obviously terroristic tactics "announce themselves" to be terrorism. This result is due to the expected interaction between the presence/lack of a claim of responsibility and the choice of tactic utilized in an attack.

Note that the theory being advanced in this experiment is a functional one that examines how audiences react specifically to differences in claims and tactics, rather than hypothesizing about whether groups are using these elements to communicate messages about violence. While the reactions of audiences as a result of these combinations may inspire terrorist groups to modulate their claims and tactics, this model is silent on whether terrorists in fact combine tactics and claims for the purpose of signaling to people whether acts of terrorism have taken place.

Hypotheses

The null hypothesis of this experiment is that:

H0: The interaction between claims of responsibility and violent tactics does not encourage people to conclude that violent events are acts of terrorism.

The hypotheses of this experiment are:

HA: The interaction between claims of responsibility and violent tactics encourages people to conclude that violent events are terroristic in nature.

HB: The interaction between claims of responsibility and violent tactics encourages people to conclude that violent events are products of intentional action.

Research Design

This project uses a two-by-two factorial between-subjects experimental survey design, with the two independent variables examined being the intentionality of tactics (binary variable) and the presence of a claim of responsibility (binary variable). The dependent variable of interest is whether the participant perceives a hypothetical scenario consisting of these two variables to be a terrorist attack, on a seven-point categorical scale (for ANOVA analysis purposes). The main dependent variables of interest examine whether participants believed the scenario was terroristic, and whether the scenario described an intentional event. Participant belief that an event was terror should increase when exposed to claims and direct tactics, while belief that an event was intentional will confirm the theory that intentionality and claims influence the viewer's conclusions on violence.

This experimental design was based on a previous preliminary experiment conducted by Hoffman and Leung (2021)¹ that manipulated a single variable (the presence of a claim of responsibility) to examine its effects on the public's perception of a violent event. The preliminary experiment found that the presence of a claim had a large effect on public perception of a violent event being terroristic in nature. That experiment, however, did not introduce the idea that some attacks are more clearly terroristic in nature than others. This new experimental design expands that preliminary work by incorporating the intentionality of tactics as a second independent variable and examining its influence on the public's perception of a violent event.

There are multiple advantages of this two-by-two survey design, the most important of which is the ability to examine the effects of the interaction term, which is expected to have a significant effect. Additionally, manipulating the independent variables as part of an experiment will minimize the possibility that differences in the text of the scenarios could affect readers' reactions. This design will allow for an accurate estimation of the causal effects present in the experiment and indicate the plausibility of the causal claim being made in my hypotheses. Surveys also have the advantage of

¹ This study examined the impact of the presence of a claim of responsibility in a hypothetical news article on participant belief that an explosion was terroristic in nature. It is similar to this experiment in design, also utilizing Amazon MTurk and a survey design.

high internal validity since any changes between treatment groups will be entirely under researcher control. Works such as Huff and Kertzer's 2018 experiment and Hoffman and Leung's 2021 experiment show that survey experiments can return useful data on participant opinions regarding terrorism, even while sampling from a population not necessarily representative of the national population (McCredie and Morey, 2019).

Experimental Conditions

Participants received one of four possible scenarios describing a hypothetical terrorist attack on a shipping terminal in the Vancouver Metropolitan area.² The participant assignment to experimental conditions was done at random to disrupt systematic differences and differed along two dimensions. The first dimension is whether the event has a claim of responsibility from a group, while the second dimension is the intentionality of the violence as indicated by the tactic. This results in four possible scenarios: claim/unclear violence, claim/clear violence, no claim/unclear violence, no claim/clear violence. These scenarios each correspond to a combination of the independent variables being examined (presence of a claim of responsibility and the clarity of violence).

The scenario details were based on a previous experiment conducted regarding credit claims (Hoffman and Leung, 2021), which used a similar scenario involving a bombing in Vancouver. This scenario's broad story was reutilized, as research suggests that terrorist attacks are more meaningful to individuals who are proximate to the attack location (Avdan and Webb, 2019). For this reason, participants who resided in Canada were selected. Utilizing hypothetical scenarios with alternative tactics such as vehicle attacks or shootings were ruled out due to the larger differences between scenario text in treatment groups. The use of a news article format increased the experimental realism of the scenario text, with the aim of making my results representative of a real news article.

² Ethics approval was obtained on 03-12-21, ORE # 30000119

In this experiment, the alternative scenario to a bombing is a fire. The GTD has recorded approximately 5000 cases of arson attributed to terrorist attacks since 1996. The ambiguity of fires may play a significant factor in increased claims of responsibility, in contrast to the clear intentionality of bombings as found by Huff and Kertzer. The GTD's data on fires suspected to be terrorist attacks indicate that approximately 70% of their recorded fires are doubted to be terroristic in nature and more likely to be attributed to some other form of crime, but that fires are indeed a tool of terrorists (GTD, 2021). This indicates that fires are a suitable low-intentionality tactic for use within my experiment.

An example that shows a scenario with unclear tactics and a claim of responsibility follows with experimental manipulations highlighted and commented in brackets:

{Fire/Bomb} at Vancouver Harbor Kills 6 and Threatens Hundreds More{; Earth Liberation Front Claim Responsibility}

Vancouver, B.C. (AP)—At least six people were killed and an undetermined number were missing tonight after a {fire/bomb} ripped through a shipping container holding toxic chemicals on the shore of the Burrard Inlet, authorities said. {The Earth Liberation Front claimed responsibility for the attack.}

The blaze released toxic smoke and threatened nearby chemical industry plants. The city and health authorities shut down parts of the Downtown core and told residents to stay indoors to avoid exposure to the toxic cloud.

Firefighters brought the majority of the fire under control after three hours, and have begun searching for bodies. “We are certain we will find others dead but we don't know how many,” said Kenzie Marcus, information officer for the Vancouver Fire Department.

All variations of the hypothetical scenario are present in Appendix A.

The highlighted mentions of “fire” in the scenario above are altered to “bomb” in scenarios with obviously terroristic tactics, while the highlighted sentence mentioning the Earth Liberation Front claiming responsibility is omitted entirely in the scenarios lacking a claim of responsibility. Existing literature indicates that the public is more likely to conclude that a bombing was the result of a terrorist attack than other alternative violence like a shooting or hostage-taking (Huff and Kertzer, 2018). Fires were chosen as the ambiguous scenario, as fires can result from many different causes. This scenario structure allows for the differences between the scenario to be relatively minor and unobtrusive, mitigating the possibility that different phrasings or paragraph structures influenced or changed participant perceptions of the hypothetical scenario.

Participants in this experiment were assigned to read only one of these scenarios, and then be asked questions regarding their perceptions of the scenario described. Participants were asked about whether they believed the described event to be terrorism/intentional on a seven-point Likert (ordinal) scale (Strongly agree, Agree..., Disagree, Strongly disagree). These scales are appropriate for analysis through ANOVAs, as shown by Norman’s work on Likert scales (2010). Participants will be asked: “To what extent do you agree with the following statement? The event described in the article was an act of terrorism.”. Participants were also asked: “To what extent do you agree with the following statement? The event described in the article was deliberate.” Asking participants whether they believed the event was deliberate served as a check on participant belief that an event was terroristic. Participant belief that the scenario described a deliberate event should be higher if the scenario contains a claim of responsibility, and if this were to occur, would indicate that claims serve to clarify violence as intentional. These two responses constituted the primary dependent variables being examined in this experiment.

Participants were also asked about their perspectives on national security funding, police funding and their belief in existing counter-terrorism measures. These questions were included in response to Shana Gadarian’s 2010 article detailing how terror attacks influenced public sentiment toward hawkish foreign policy. Members of the public exposed to terrorism were found to be more receptive to aggressive foreign policy attitudes and should expect to see these attitudes translate to domestic enforcement (Gadarian, 2010). Gadarian’s questions were included as a check on the other questions in the survey to show that participants were responding behaviorally and consistently

with the idea that they have been exposed to information about terrorism. Follow-up questions asked for basic information regarding the participant, such as their gender and political alignment. Doing so allows for the analysis of any demographic-related trends in participant response during the course of the experiment, or in future reviews of the datasets produced by this experiment.

A series of discrete emotions questions were asked, also on a seven-point ordinal scale, asking participants whether they felt specific emotions while reading the hypothetical scenario, such as Anger, Grief, Anxiety, and Happiness. These emotion questions were designed to provide behavioral indicators of people's responses to the scenarios they received. People experience a range of heightened negative emotions after terrorist attacks that they are less likely to experience when the origins of kinetic events are unclear (Lerner et al, 2003). Lerner et al. found that in the aftermath of the 9/11 attacks, members of the public were more likely to express feelings of anger and grief which they attributed to the 9/11 attacks.

The battery of emotional assessment questions used was a modified version of Harmon-Jones's (2016) "Discrete Emotions Questionnaire". The Discrete Emotions Questionnaire was incorporated to provide survey participants with emotional categories chosen for their effectiveness at delineating between competing emotions. A complete accounting of the questions presented to participants is presented in Appendix B. These were included to help examine participant responses in greater depth and to provide background demographic information which may illuminate patterns which would otherwise be overlooked. Adding these questions did not significantly extend the length of the survey and will allow for future research to examine previously neglected relationships in the field of terrorism research.

The anticipated sample size for this experiment was approximately 250 participants, recruited from Amazon MTurk. Participants were recruited through the Amazon MTurk interface and were required to reside in Canada. Initially, the sample size was determined by conducting post hoc power analyses of Hoffman and Leung's 2021 experiment on claims of responsibility. Conducting a two-by-two ANOVA a priori power analysis determined that this experiment would only require 12 participants divided across all four treatment groups. We rejected this because only one other study had been done examining the relationship between claims and unclear violence, and we

opted instead for a much larger number of approximately 250 participants to minimize uncertainty. This sample selection was chosen out of an abundance of caution regarding this relatively novel field. If the effect size was smaller than expected, a too-small sample size could have prevented any meaningful causal relationships from being discerned. The utilized sample size was large enough that a medium-sized effect would be identifiable in the analysis of this experiment.

The data collected was analyzed in R, with ANOVAs determining whether the independent variables (intentionality and claim) have a significant effect on the dependent variable (perception of terrorism). The other participant responses are analyzed in the same fashion to examine if any other significant relationships are present and if they do/do not merit further analysis.

Analysis

The survey experiment was conducted over the period of 15/03/22 to 05/04/22, with Canadian participants through Amazon MTurk.³ A total of 220 adults participated in the survey experiment. Four equal treatment groups were formed from the 220 participants, each exposed to one combination of the two independent variables: the presence/lack of a claim responsibility and a fire/explosion occurring in the hypothetical scenario they were asked to read. Participants were then quizzed with the questions detailed above. Only 173 participants were suitable for analysis. Responses that were omitted were excluded due to non-completion (18), a failure to show sufficient attention to the hypothetical scenario,⁴ or failure to complete the consent request in the survey (3).⁵ I found no evidence that the responses screened out of the analysis had any relationship to being exposed the treatment groups involved in this experiment. Furthermore, additional Chi-squared testing indicated that participants were equally distributed across the experimental conditions. There were no significant differences between the treatment groups in terms of gender, age, or political orientation.⁶

The dependent variables, participant belief that an act was terrorism and belief that an act was intentional, were found to be significantly affected by both independent variables, claim and tactic, and the interaction between them.

³ Participants were restricted through MTurk's geographic filter, allowing for only Canadian respondents to enter the experiment.

⁴ Participants were asked a question about the contents of the hypothetical scenario they read. Only one answer of the four provided would be accurate to the scenario that the participant had read, while 2 were entirely unrelated to the scenarios and 1 would have been appropriate for a different scenario that they were not exposed to. If participants selected a response that was inappropriate to the scenario they were exposed to, their responses were removed from the final data set.

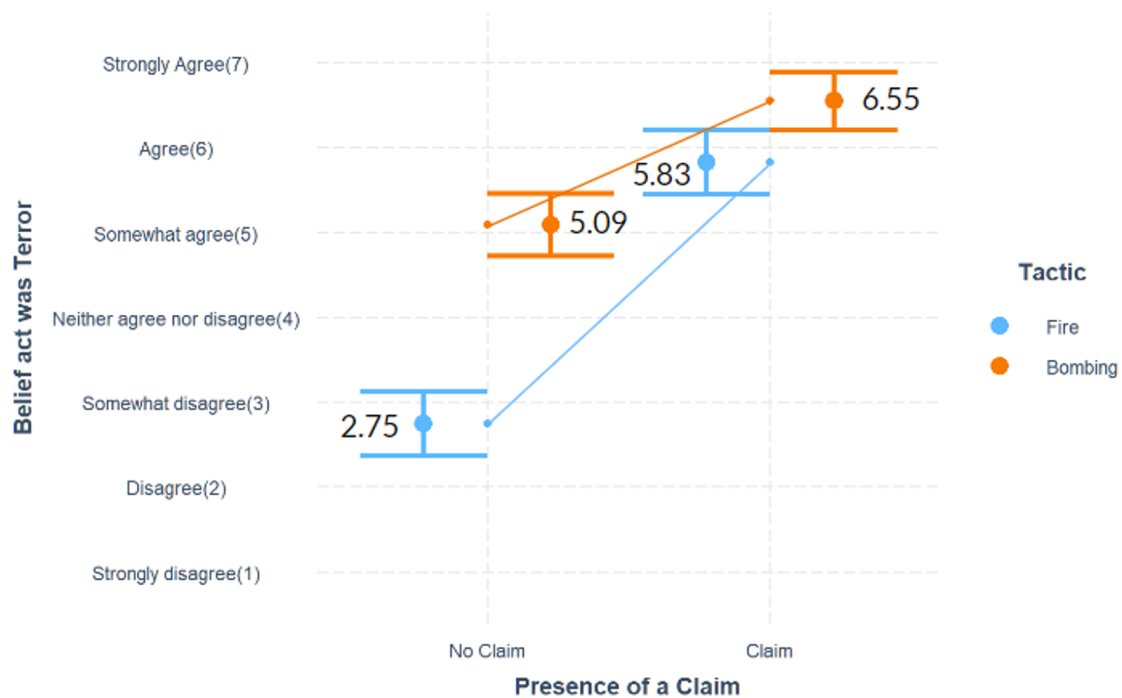
⁵ The data was formatted in R for analysis, and preliminary tests of significance using linear models indicated that each treatment group was statistically significant from the other. The influence of the two main independent variables were found to be statistically significant in changing the outcomes of the two main dependent variables which were derived from a previous experiment.

⁶ Refer to Appendix E for Chi-Squared Testing of the treatment groups

Belief that the described attack was Terrorism

In the case of participant belief that the act described in the hypothetical scenario was terrorism, the presence of a claim had a significant effect: $F(1/169) = 149.44$, $P < .001$, the intentionality of tactics had a significant effect: $F(1/169) = 65.92$, $P < .001$, and the interaction between the presence of a claim of responsibility and the intentionality of tactics had a significant effect: $F(1/169) = 19.17$, $P < .001$.

Figure 1: Interaction between Intentionality of tactics and Presence of Claim: Belief that the hypothetical scenario described was an act of terrorism



This graph of the interaction term shows an ordinal relationship, with the presence of a claim and type of tactic creating a larger effect on the dependent variable than would be expected if the independent effect sizes of claim and tactic were combined.

As Figure 1 shows, every variable change from the baseline of “No Claim” and “Fire” produces significant changes in the average response from participants, with significant differences between each treatment group.

Changing the presence of a claim variable while holding the tactic constant elicited large and statistically significant changes to the average responses of participants to the “is it terrorism” question. In cases where a fire was described in the scenario, the presence of a claim changed average responses from approximately “Somewhat disagree (3)” to approximately “Agree (6)” on the “is it terrorism” question.⁷ The impact of the claim variable was somewhat lesser in the scenarios describing an explosion but still moved the average participant response to the “is it terror” question from “Somewhat agree (5)” to an average response in the middle of “Strongly Agree (7)” and “Agree (6)”.

Similarly, when changing the scenario contents from a fire to a bombing in the case with no claim of responsibility, the average participant response to the “is it terrorism” question shifted from “Somewhat disagree (3)” to “Somewhat agree (5)”. In scenarios where the claim was held constant, however, the lower confidence interval bound of the treatment group exposed to a bombing overlapped with the upper confidence interval bound of the treatment group exposed to a fire. This could indicate statistical insignificance, which prompted the use of Tukey’s honest significance difference tests (Tukey’s HSD) to decompose the interaction term.

By decomposing the interaction with Tukey’s HSD, each possible pair of independent variables is compared to the other possible pairs to accurately determine whether the groups within the interaction term are statistically significant or appear to be statistically significant due to the grouping of all interactions within one term in traditional ANOVA omnibus analysis. Through decomposing the interaction term using Tukey’s HSD, all the compared pairs were found to be within a Tukey-adjusted P-value < .05, indicating that each different treatment group was significantly impacted by the interaction term created by the two main independent variables.

People in each of these different groups have attitudes that are strongly and statistically significant differences from the other groups, presenting uniquely strong

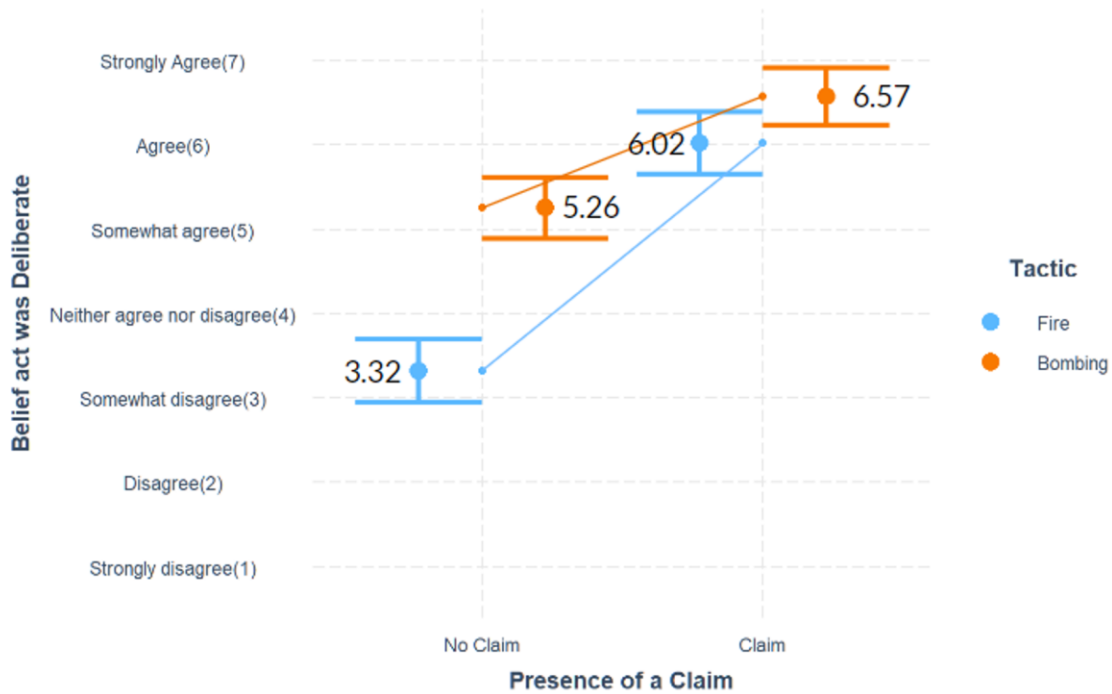
⁷ Please refer to Appendix C for an accounting of the questions and their means.

responses to these scenarios. Participant responses indicate unique levels of confidence that the observed event is terrorism, depending on the scenario they were exposed to. These results also show that while audiences who perceived high-intentionality tactics were more likely to classify an event as terrorism than their low-intentionality exposed counterparts, the presence of a claim of responsibility clarified violence as terroristic to all groups that received that treatment. It is likely that the interaction between the two independent variables is causing participants to conclude that a violent event is terrorism, more so than if they were exposed to only one of the independent variables.

Participant Belief that the act described was intentional

The significance of the two independent variables and their interaction extends to my second dependent variable of interest, participant belief that the act described in the hypothetical scenario was intentional. For this variable, the presence of a claim had a significant effect: $F(1/169) = 119.29, P < .001$, the intentionality of tactics had a significant effect: $F(1/169) = 43.90, P < .001$, and the interaction between the presence of a claim of responsibility and the intentionality of tactics had a significant effect: $F(1/169) = 14.26, P < .001$.

Figure 2: Graph of Interaction term of: Belief that the hypothetical scenario described was an intentional act



Results for the interaction plot were similar to the first dependent variable being examined. This supports my argument that the interaction between the presence of a claim of responsibility and the intentionality of tactics influences whether participants believe that an act was intentional or not.

Participants in treatment groups who were exposed to a claim were between 25% to twice as likely to describe the described violence as intentional, depending on the terrorist tactic. Average participant response when exposed to a fire shifted from a point approximately between “Somewhat agree (3)” and “Neither agree nor disagree (4)” to approximately “Agree (6)” when also exposed to a claim of responsibility. Participant responses in the bombing cases were less dramatic, shifting from approximately “Agree (6)” to a point between “Strongly Agree (7)” and “Agree (6)” when exposed to a claim.

The belief that the attack described in the hypothetical scenario was deliberate is used as a check on the results of the variable examining the belief that an act was terror, and further confirms that participants were more likely to find scenarios with credit claims to be intentional. If participants believed that the attack is deliberate, regardless of

whether they considered the act to be an act of terror, it indicates that claims of responsibility have served to clarify violence as intentional in nature, rather than just an accident. Additionally, if high-intentionality tactics scenarios are found to have higher participant belief that an act is intentional than low-intentionality tactics, this confirms that audiences can be significantly affected by attack intentionality alone, indicating that a message has been successfully communicated to them, even if it is just “be afraid” (Cordes, 1988).

Similar to the previous independent variable, this variable was analyzed by decomposing the interaction term. By utilizing Tukey’s HSD, all but one of the compared pairs lies within a Tukey-adjusted P-value < 0.05 . The pair that does not meet the 95% confidence threshold is when comparing scenarios that held the presence of a claim constant while adjusting the tactics utilized in the hypothetical attack. It is expected that the compared pairs should be statistically significant, as the dependent variable being analyzed is whether participants believed an act was deliberate.

This supports my hypothesis that the interaction between a claim of responsibility and the type of tactic has a significant effect on public perception of a violent event. In sum, the interaction between the presence of a claim of responsibility and the intentionality of tactics involved makes viewers more likely to believe that a violent event was deliberate in nature in comparison to the baseline low-intentionality scenario with no claim. The exception is in the cases where a claim of responsibility is consistently present. In those cases, only the presence of a claim is sufficient to skew viewer opinions toward a violent event being intentional.

As the analysis of the belief that an act was terror and the belief that an act was deliberate show that they were significantly affected by the treatment groups and the interaction between the independent variables, I find sufficient evidence to reject the null hypothesis (H_0): The interaction between claims of responsibility and violent tactics does not encourage people to conclude that violent events are acts of terrorism. This experiment finds sufficient evidence supporting the hypotheses of this experiment (H_A & H_B): The interaction between claims of responsibility and violent tactics encourages people to conclude that violent events are terroristic in nature/the products of intentional action.

Demographic and Secondary Variable Questions

The remaining dependent variables were included to examine if participants were responding to the hypothetical news scenarios behaviorally. The means of these variables are listed in Appendix D. By including these variables, participants were more likely to be answering behaviorally to a theoretical violent attack rather than responding under the influence of the demand pressures of this experiment. We anticipated that participants would respond in patterns that indicated that they felt threatened or angry as a result of being exposed to terrorism (Gadarian, 2010; Hoffman & Shelby, 2017). Of the remaining additional dependent variables analyzed, two (2) dependent variables were found to be significantly affected by the independent variables in this experiment. Statistical significance was determined through two-way ANOVAs.

The secondary dependent variables that were found to be significantly affected by the presence of a claim of responsibility in the scenario presented were:

Participant Anger in response to the hypothetical scenario. $F(1/169) = 15.921, P < .001$

Participant Sickness or Unease in response to the hypothetical scenario. $F(1/169) = 10.171, P < .001$

Participants were angrier when exposed to a claim, with an increase of roughly half, to an entire category “Slightly (2)/Somewhat(3)” to “Moderately(4)” in their responses to the discrete emotions questionnaire question on anger. Feelings of unease also increased amongst participants who saw a claim, with an increase of an entire category from “Somewhat(3)” to “Moderately(4)”. These results are consistent with the expected physiological and behavioural reactions that are described by other work in the field of terrorism and public responses to threat, indicating that participants were responding in a behavioural fashion to this experiment.

Several dependent variables neared statistical significance in this experiment, such as:

Support for changing of funding Homeland Security when exposed to a claim: $F(1/169) = 3.591, P < 0.06$.

Participant Anxiety when exposed to a different tactic: $F(1/169) = 3.834$, $P < 0.06$

Participant Happiness when exposed to a different tactic: $F(1/169) = 0.111$, $P < 0.06$

Participant Unease when exposed to the interaction between the two independent variables: $F(1/169) = 3.861$, $P < 0.06$.

Given that the P values of these dependent variables were close to reaching statistical significance, I hypothesize that an experimental design with more power may have been able to identify statistically significant trends in these emotions from participants.

Discussion

From the results of this experiment, I conclude that the interaction of the two independent variables, presence of a claim and intentionality of tactics, provided statistically significant effects on participant belief that an act was terror and belief that an act was deliberate. These results indicate that participants who were told there was a fire and a claim of responsibility were nearly twice as likely to believe that the violence was terroristic and intentional in comparison to their claimless counterparts. This provides sufficient evidence to reject the null hypothesis (H0) that: the interaction between claims of responsibility and violent tactics does not encourage people to conclude that violent events are acts of terrorism, and supports the alternative hypotheses (HA & HB) that the interactions between claims of responsibility and violent tactics encourage people to conclude that violent events are terroristic/deliberate in nature.

The interaction between claim and tactic appears to have amplified the ability of terrorists to effectively communicate to their target audiences that violence is terrorism. This is in line with previous literature on credit claiming and may aid in explaining the credit-claiming puzzle and how terrorists choose when and why to claim credit for attacks. This effect appears limited only to the propensity of the public to identify a violent event as intentional or terroristic in nature.

The participants in this experiment responded to the hypothetical scenarios in ways consistent with existing research, with the behavioral responses of the participants (particularly violence and anger) indicating that they were identifying violent attacks as terrorism rather than just an industrial accident and responding emotionally. This helps affirm the results of previous experiments that sought to examine whether audiences would feel significantly different if they believed a violent event was intentional or terroristic in nature (Hoffman and Leung, 2021). Additionally, these reported behavioural reactions are consistent with people exposed to terrorism, indicating that participants were not succumbing to the demand elements of this experiment, and instead responding to the hypothetical scenario as a whole (Gadarian, 2010; Hoffman & Shelby, 2017).

The results found in this experiment in regard to the influence of claims of responsibility and intentionality of tactics build off of existing work in the field of terrorism studies. The research to which this project is most closely related is Hoffman and Leung's 2021 survey experiment into the influence of claims of responsibility on public perceptions of terrorist threat. This experiment's results reaffirm the findings of the 2021 experiment and support that credit claims have significant effects on public perceptions and understandings of terrorism. Beyond Hoffman and Leung's 2021 experiment, this experiment contributes to furthering Huff and Kertzer's 2018 experiment, which sought to see what factors of a terrorist attack led public audiences to believe that they were witnessing a terrorist attack. This experiment's findings of the different effects of high and low-intentionality tactics support Huff and Kertzer's original conclusions that more direct and obvious types of terror have a greater influence on audiences concluding that an attack is terroristic.

Drawing upon Kydd and Walter's work on the strategies of terrorism (2006), we can hypothesize that terror groups who have goals that involve garnering public support and using low-intentionality tactics are likely to communicate claims to the public more. Some terror groups do follow a model of low-intentionality tactics and aim to garner public support, such as the Earth Liberation Front used in this experiment. Groups like the ELF's propensity to publicly claim attacks is likely rooted in the inability to effectively communicate to their target audience, given their low-intentionality tactics, requiring further clarification to transmit messages to their audience.

Furthermore, this experiment lends support to Brown's 2020 paper regarding the under-analyzed nature of claims of responsibility and supports hypotheses that claims do more than just identify the terrorist group to the audience observing an attack. There is a clear significance to the interaction between the presence of a claim of responsibility and the type of attack used, indicating that the use of claims of responsibility to clarify that a violent attack is terrorism is possible and has a significant effect on the target audience's perceptions of a violent event.

I conclude that audiences who see high-intentionality tactics are more likely to classify events as terrorism than if they had been exposed to low-intentionality tactics. Credit claims are clearly necessary to clarify low-intentionality tactics to audiences and serve as an important messaging tool for terrorist groups who do not wish for their efforts

to be misinterpreted when conducting attacks using low-intentionality. As the data indicates, high-intentionality tactics clarify themselves, with credit claims serving to clarify violence completely, but as public labelling of a violent event as terrorism has an obvious ceiling (being a binary variable), terrorist groups can “get away” with not announcing their high-intentionality tactics.

Conclusion

I conclude through the analysis of the main dependent variables of interest that the interaction between the presence of claims and the intentionality of tactics has a significant effect on public interpretations of violent events. While the intentionality or method of violence alone can provide messaging to target audiences as to the nature of a violent event, the presence of a claim of responsibility in conjunction can amplify the communicative effects of the attack to a greater degree. When the public is provided with more information, there is a higher likelihood that they will understand that a message is being sent, more so than through violence alone.

The effectiveness of this specific survey research model indicates that expanding future experiments to incorporate these variables should be feasible, and the effect sizes of the variables involved so far indicate that sample sizes should not need to be excessively large. Additionally, the use of hypothetical news scenarios in this survey clearly elicited behavioural responses from participants, indicating that future research that seeks to examine how members of the public respond to hypothetical scenarios can utilize this research design. Further research should incorporate claims of responsibility into more complex experimental designs that analyze more attack variables, such as attack motivation (religious/political /extremist), perpetrator identity, and attack target (civilian/government/military), like those variables used in Huff and Kertzer's 2018 experiment.

The relevance of audience awareness should also be considered as a factor. Terrorism may be more prevalent in some regions with more active terrorist groups, which in turn may prime audiences to jump to the conclusion that violence is terroristic in nature. This experiment's geographic focus on Canada, a country with relatively low incidence rates of terrorism, limits the broader generalizability of the findings in this experiment. It may be the case that the low rate of terrorism in Canada may have produced more exaggerated audience reactions than in countries with high incidence rates of terrorism, but the effect direction and relative effect size of claims should remain consistent in other contexts. Performing this experiment in a different context with higher rates of terror attacks would provide additional insight into the broader generalizability of the conclusions found in this experiment.

Finally, future research should also attempt to discover whether terrorists systematically use credit claims at all, as this study can only produce conclusions regarding the impact of claims and tactics on audience reactions, not effectively predict terrorist claim behaviour.

All in all, terror groups are interested in changing the minds of populations and will attempt to modulate their public-facing activities to best inflict the change they desire. By understanding how terror groups choose to communicate with their audiences and predicting how terrorist strategy may hinge on public reactions, academics and policymakers will be better equipped to handle new threats and mitigate the effectiveness of terrorist messaging on civilian audiences.

References

- Abrahms, Max, and Justin Conrad. 2017. "The Strategic Logic of Credit Claiming: A New Theory for Anonymous Terrorist Attacks." *Security Studies*.
<https://doi.org/10.1080/09636412.2017.1280304>.
- Avdan, Nazli, and Clayton Webb. 2018. "The Big, the Bad, and the Dangerous: Public Perceptions and Terrorism." *Dynamics of Asymmetric Conflict: Pathways toward Terrorism and Genocide*. <https://doi.org/10.1080/17467586.2017.1414276>.
- Avdan, Nazli, and Clayton Webb. 2019. "Not in My Back Yard: Public Perceptions and Terrorism." *Political Research Quarterly*. <https://doi.org/10.1177/1065912918776118>.
- BBC. (2018, April 24). *Toronto van: Ten dead and 15 injured as pedestrians are hit*. BBC News. Retrieved from <https://www.bbc.com/news/world-us-canada-43873804>
- Brown, Joseph M. 2020. "Notes to the Underground: Credit Claiming and Organizing in the Earth Liberation Front." *Terrorism and Political Violence*.
<https://doi.org/10.1080/09546553.2017.1364637>.
- CBC/Radio Canada. (2004, October 30). *Bin Laden claims responsibility for 9/11* | CBC news. CBCnews. Retrieved from <https://www.cbc.ca/news/world/bin-laden-claims-responsibility-for-9-11-1.513654>
- Cordes, Bonnie. 1988. "When Terrorists Do the Talking: Reflections on Terrorist Literature." In *Inside Terrorist Organizations*, ed. David C. Rapoport. New York: Columbia University Press. 150-71
- Crenshaw, Martha, and Gary LaFree. 2017. *Countering Terrorism*. Brookings Institution Press. p. 131-164
- Davis, V. (2013). Reading anonymity: Narrative difference and framework selection in the claiming of terrorist violence. *Media, War and Conflict*.
<https://doi.org/10.1177/1750635213481087>
- Franks, D., & Wallace, K. (2006, March 4). *FBI joins investigation of UNC hit-and-run*. WRAL.com. Retrieved from <https://www.wral.com/news/local/story/1091476>
- Gadarian, S. K. (2010). The politics of threat: How terrorism news shapes foreign policy attitudes. *The Journal of Politics*, 72(2), 469–483.
<https://doi.org/10.1017/s0022381609990910>
- Hansen, Tanja Marie. "Fifty Shades of Terrorist Credit-Taking: A Review of the Existing Scholarship on Terrorist Credit-Taking." *International Studies Review* (2021).
- Harmon-Jones, C., Bastian, B., & Harmon-Jones, E. (2016). The discrete emotions questionnaire: A new tool for measuring state self-reported emotions. *PLoS ONE*, 11(8), 1–25. <https://doi.org/10.1371/journal.pone.0159915>

- Hoffman, Aaron M. 2010. "Voice and Silence: Why Groups Take Credit for Acts of Terror." *Journal of Peace Research*. <https://doi.org/10.1177/0022343310376439>.
- Hoffman, Aaron M., and William Shelby. 2017. "When the 'Laws of Fear' Do Not Apply: Effective Counterterrorism and the Sense of Security from Terrorism." *Political Research Quarterly*. <https://doi.org/10.1177/1065912917709354>.
- Hoffman, Aaron M., & Leung, Kevin H. 2021. "Claims of responsibility and the "is it terrorism?" question." International Studies Association Meeting. http://www.aaronmhoffman.com/uploads/1/9/4/7/19478265/hoffman_and_leung_credit_claim_isa_2021.pdf
- Hoffman, Bruce. 1997. "Why Terrorists Don't Claim Credit." *Terrorism and Political Violence*. <https://doi.org/10.1080/09546559708427381>.
- Hoffman, Bruce. 1997. "Reply to Pluchinsky and Rapoport Comments." *Terrorism and Political Violence*. <https://doi.org/10.1080/09546559708427384>.
- Huddy, L., Smirnov, O., Snider, K. L. G., & Perliger, A. 2021. "Anger, Anxiety, and Selective Exposure to Terrorist Violence." *Journal of Conflict Resolution*. <https://doi.org/10.1177/00220027211014937>
- Huff, Connor, and Joshua D. Kertzer. 2018. "How the Public Defines Terrorism." *American Journal of Political Science*. <https://doi.org/10.1111/ajps.12329>.
- Kearns, Erin M. 2021. "When to Take Credit for Terrorism? A Cross-National Examination of Claims and Attributions." *Terrorism and Political Violence*. <https://doi.org/10.1080/09546553.2018.1540982>.
- Kearns, Erin M., Allison E. Betus, and Anthony F. Lemieux. 2021. "When Data Do Not Matter: Exploring Public Perceptions of Terrorism." *Studies in Conflict and Terrorism*. <https://doi.org/10.1080/1057610X.2018.1543145>.
- Knowlton, B. (1996) *Investigators focus closely on terrorism as cause of explosion : Chemicals found on jet victims, U.S. reports, The New York Times*. The New York Times. Available at: <https://www.nytimes.com/1996/07/24/news/investigators-focus-closely-on-terrorism-as-cause-of-explosion.html>.
- Kydd, A., & Walter, B. F. (2002). Sabotaging the Peace: The Politics of Extremist Violence. *International Organization*, 56(2), 263–296. <https://doi.org/10.1162/002081802320005487>
- Kydd, Andrew H., and Barbara F. Walter. 2006. "The Strategies of Terrorism." *International Security*. <https://doi.org/10.1162/isec.2006.31.1.49>.
- Lerner, J. S., Gonzalez, R. M., Small, D. A., & Fischhoff, B. (2003). Effects of Fear and Anger on Perceived Risks of Terrorism: A National Field Experiment. *Psychological Science*, 14(2), 144–150.

- McCredie, M. N., & Morey, L. C. (2019). Who Are the Turkers? A Characterization of MTurk Workers Using the Personality Assessment Inventory. *Assessment*, 26(5), 759–766. <https://doi.org/10.1177/1073191118760709>
- Norman, Geoff. 2010. "Likert Scales, Levels of Measurement and the 'Laws' of Statistics." *Advances in Health Sciences Education* 15 (5): 625–32. <https://doi.org/10.1007/s10459-010-9222-y>.
- Pluchinsky, Dennis A. 1997. "The Terrorism Puzzle: Missing Pieces and No Boxcover." *Terrorism and Political Violence*. <https://doi.org/10.1080/09546559708427382>. (in response to Hoffman 1997)
- Rapoport, David C. 1997. "To Claim or Not to Claim; That Is the Question — Always!" *Terrorism and Political Violence*. <https://doi.org/10.1080/09546559708427383>. (in response to Hoffman 1997)
- Shelton, C., Cleven, E., & Hoffman, A. M. (2019). Deadly foreign terrorism and the rank-ordered tournament for foreign press attention: implications for counterterrorism. *International Interactions*, 45(2), 344–368. <https://doi.org/10.1080/03050629.2019.1529668>

Appendix A. Hypothetical Scenarios

Unclear violence, no claim (Scenario 1)

Fire at Burrard Inlet Kills 6 and Threatens Hundreds More

Vancouver, B.C. (AP)—At least six people were killed, and an undetermined number were missing tonight after a fire ripped through a shipping container holding toxic chemicals on the shore of the Burrard Inlet, authorities said.

The blaze released toxic smoke and threatened nearby chemical industry plants. The city and health authorities shut down parts of the Downtown core and told residents to stay indoors to avoid exposure to the toxic cloud.

Firefighters brought the majority of the fire under control after three hours, and have begun searching for bodies. “We are certain we will find others dead but we don’t know how many,” said Kenzie Marcus, information officer for the Vancouver Fire Department.

Unclear violence, claim (Scenario 2)

Fire at Burrard Inlet Kills 6 and Threatens Hundreds More; Earth Liberation Front Claim Responsibility

Vancouver, B.C. (AP)—At least six people were killed, and an undetermined number were missing tonight after a fire ripped through a shipping container holding toxic chemicals on the shore of the Burrard Inlet, authorities said. The Earth Liberation Front claimed responsibility for the attack.

The blaze released toxic smoke and threatened nearby chemical industry plants. The city and health authorities shut down parts of the Downtown core and told residents to stay indoors to avoid exposure to the toxic cloud.

Firefighters brought the majority of the fire under control after three hours, and have begun searching for bodies. “We are certain we will find others dead but we don’t know how many,” said Kenzie Marcus, information officer for the Vancouver Fire Department.

Clear violence, no claim (Scenario 3)

Bomb at Burrard Inlet Kills 6 and Threatens Hundreds More

Vancouver, B.C. (AP)—At least six people were killed, and an undetermined number were missing tonight after a bomb ripped through a shipping container holding toxic chemicals on the shore of the Burrard Inlet, authorities said.

The blaze released toxic smoke and threatened nearby chemical industry plants. The city and health authorities shut down parts of the Downtown core and told residents to stay indoors to avoid exposure to the toxic cloud.

Firefighters brought the majority of the fire under control after three hours, and have begun searching for bodies. “We are certain we will find others dead but we don’t know how many,” said Kenzie Marcus, information officer for the Vancouver Fire Department.

Clear violence, claim (Scenario 4)

Bomb at Burrard Inlet Kills 6 and Threatens Hundreds More; Earth Liberation Front Claim Responsibility

Vancouver, B.C. (AP)—At least six people were killed, and an undetermined number were missing tonight after a bomb ripped through a shipping container holding toxic chemicals on the shore of the Burrard Inlet, authorities said. The Earth Liberation Front claimed responsibility for the attack.

The blaze released toxic smoke and threatened nearby chemical industry plants. The city and health authorities shut down parts of the Downtown core and told residents to stay indoors to avoid exposure to the toxic cloud.

Firefighters brought the majority of the fire under control after three hours, and have begun searching for bodies. “We are certain we will find others dead but we don’t know how many,” said Kenzie Marcus, information officer for the Vancouver Fire Department.

Appendix B. Questionnaire Presented to Participants

Questionnaire

1. I am not a robot [CAPTCHA verification]

2. How satisfied are you with the Canadian government's ability to prevent events like the one you read about from occurring in the first place?
 1. Very satisfied.
 2. Satisfied.
 3. Somewhat satisfied.
 4. Neither satisfied nor dissatisfied.
 5. Somewhat dissatisfied.
 6. Dissatisfied.
 7. Very dissatisfied.

3. How satisfied are you with the Canadian government's ability to protect its citizens from events like the one described in the article you read?
 1. Very satisfied.
 2. Satisfied.
 3. Somewhat satisfied.
 4. Neither satisfied nor dissatisfied.
 5. Somewhat dissatisfied.
 6. Dissatisfied.
 7. Very dissatisfied.

(The following 2 questions will be presented in random order in the questionnaire)

4. To what extent do you agree with the following statement? The event described in the article was an act of terrorism.
 1. Strongly agree.
 2. Agree.
 3. Somewhat agree.
 4. Neither agree nor disagree.
 5. Somewhat disagree.
 6. Disagree.
 7. Strongly disagree

5. To what extent do you agree with the following statement? The event described in the article was deliberate.
 1. Strongly agree.
 2. Agree.
 3. Somewhat agree.

4. Neither agree nor disagree.
5. Somewhat disagree.
6. Disagree.
7. Strongly disagree

6. Do you think that the event could have been a natural occurrence?

1. Strongly agree.
2. Agree.
3. Somewhat agree.
4. Neither agree nor disagree.
5. Somewhat disagree.
6. Disagree.
7. Strongly disagree

7. Should the federal government increase, decrease, or keep funding levels the same for homeland security?

1. Increase
2. Decrease
3. Keep the same

8. Should the federal government increase, decrease, or keep funding the same for the RCMP?

1. Increase
2. Decrease
3. Keep the same

9. Should the federal government increase, decrease, or keep funding the same for Public Safety Canada?

1. Increase
2. Decrease
3. Keep the same

10. Would you consider yourself a nervous person?

1. Strongly agree.
2. Agree.
3. Somewhat agree.
4. Neither agree nor disagree.
5. Somewhat disagree.
6. Disagree.
7. Strongly disagree

11. To what extent do you agree with the following statement? It may be necessary for federal authorities to take steps that infringe on the privacy rights of ordinary citizens in order to prevent events like the one you read about from happening again.

1. Strongly agree.
2. Agree.
3. Somewhat agree.
4. Neither agree nor disagree.
5. Somewhat disagree.
6. Disagree.
7. Strongly disagree.

12. According to the article you read,

1. the Earth Liberation Front claimed responsibility for the violence.
2. the Islamic State claimed responsibility for the violence.
3. two people were killed in an explosion.
4. none of the above.

13. On a scale of 1 to 100, where 1 means “not concerned at all” and 100 means “extremely concerned,” please rate how concerned you are about events like the one you read about happening in Canada.

14. In politics, people sometimes talk of left and right. Where would you place yourself on the scale below? -0 (Left) - 10 (Right).

15. What is your gender?

1. Male.
2. Female.
3. Other.

16. In what year were you born?

Discrete emotions questionnaire

Please indicate your response using the scale provided.

While reading the story we presented to what extent did you experience these emotions?

1	2	3	4	5	6	7	
Not at all	Slightly	Somewhat	Moderately	Quite a bit	Very Much	An	
extreme amount							

Emotions

Anger (Ag)

Sickened (Dg)
Sad (S)
Happy (H)
Fear (F)
Grief (S)
Anxiety (Ax)

Appendix C. Dependent Variable Averages

Table C.1: Average Participant Responses to Questions by Treatment Group

	Scenario 1 (No Claim, Fire)	Scenario 2 (Claim, Fire)	Scenario 3 (No Claim, Bombing)	Scenario 4 (Claim, Bombing)	Minimum	Maximum
Can Canada prevent these events?	4.425	4.195	4.262	4.163	4.163	4.425
Can Canada protect from these events?	4.487	4.220	4.070	4.163	4.163	4.487
This was Terrorism	2.750	5.829	5.093	6.551	2.750	6.551
This was Deliberate	3.325	6.024	5.256	6.571	3.325	6.571
Funding Homeland Security	0.325	0.463	0.372	0.551	0.325	0.551
Funding the RCMP	0.200	0.268	0.163	0.286	0.163	0.286
Funding Public Safety	0.450	0.341	0.419	0.592	0.341	0.592
Should privacy rights be infringed to protect against violence?	4.275	3.951	3.860	4.041	3.860	4.275
How concerned are you about events like these	51.385	49.487	50.814	56.893	49.487	56.893
What is your political leaning? (1 Left, 10 Right)	3.821	3.951	4.225	4.244	3.821	4.244
Anger	2.325	3.756	3.093	3.714	2.325	3.756
Sick	3.025	4.341	3.814	4.143	3.025	4.341

Sad	4.425	4.610	4.302	4.347	4.302	4.610
Happy	1.125	1.220	1.023	1.000	1.000	1.220
Fear	2.825	3.000	3.233	3.143	2.825	3.233
Grief	3.375	3.244	3.558	3.750	3.244	3.750
Anxiety	2.700	2.976	3.395	3.306	2.700	3.395

Legend (Please refer to Appendix B for question numbers)

cad.prevent: Q.2 (7 point Likert scale 1 to 7)⁸

cad.protect: Q.3 (7 point Likert scale 1 to 7)

act.terror: Q.4 (7 point Likert scale 1 to 7)

deliberate: Q.5 (7 point Likert scale 1 to 7)

fund.hs: Q.7 (3 point scale ranging from -1 to 1)⁹

fund.rcmp: Q.8 (3 point scale ranging from -1 to 1)

fund.psc: Q.9 (3 point scale ranging from -1 to 1)

inf.priv: Q.11 (7 point Likert scale from 1 to 7)

concern.scale_1: Q.13 (1 to 100 scale, with 1 referring to no concern, and 100 referring to extremely concerned)

pol.scale_1: Q.14 (0 to 10 scale with 0 referring to Left, and 10 referring to Right)

Emotion Questions (anger, sick, sad, happy, fear, grief, anxiety): Q.17 (1-7 scale with 1 referring to not experiencing that emotion, 7 referring to an extreme amount of the emotion in question)

⁸ 1 refers to most disagreement with the question prompt while 7 refers to the most agreement with the question prompt.

⁹ -1 refers to support for decreasing funding, while 1 refers to support for increasing funding.

Appendix D. ANOVAs of Dependent Variables

Table D.1: Belief that the hypothetical scenario described was an act of terrorism (DV of Interest)

	Df	Sum Sq	Mean Sq	F value	PR (>F)	Significance
Claim	1	220.22	220.22	149.44	<2e-16	***
Intent	1	97.14	97.14	65.92	9.35e-14	***
Claim:Intent	1	28.25	28.25	19.17	2.09e-05	***
Residuals	169	249.06	1.47			
Signif Code	0 “***”	0.001 “***”	0.01 “*”	0.05 “.”	0.1 “”	

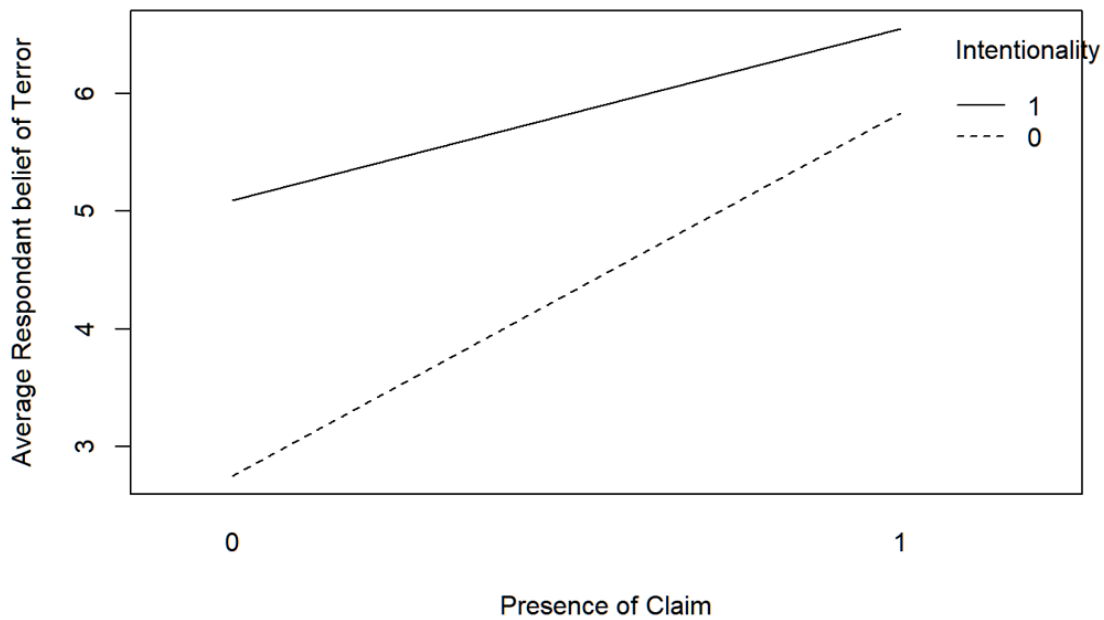


Figure D.1

Table D.2: Belief that the hypothetical scenario described was an intentional act. (DV of interest)

	Df	Sum Sq	Mean Sq	F value	PR (>F)	Significance
Claim	1	172.19	172.19	119.29	<2e-16	***
Intent	1	63.36	63.36	43.90	4.44e-10	***
Claim:Intent	1	20.58	20.58	14.26	0.000221	***
Residuals	169	243.94	1.44			
Signif Code	0 "****"	0.001 "***"	0.01 "**"	0.05 "."	0.1 ""	

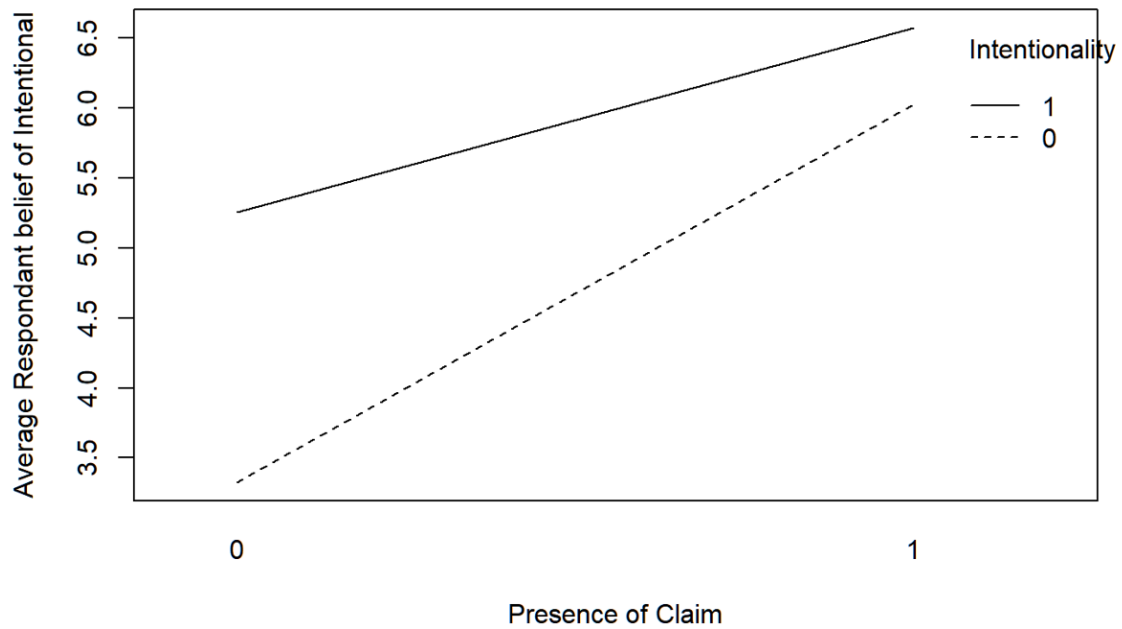


Figure D.2

Table D.3: Support for changing of funding Homeland Security.

	Df	Sum Sq	Mean Sq	F value	PR (>F)	Significance
Claim	1	1.13	1.1292	3.591	0.0598	.
Intent	1	0.2	0.1996	0.635	0.4267	
Claim:Intent	1	0.02	0.0176	0.056	0.8131	
Residuals	169	53.14	0.3144			
Signif Code	0 "****"	0.001 "****"	0.01 "***"	0.05 "."	0.1 ""	

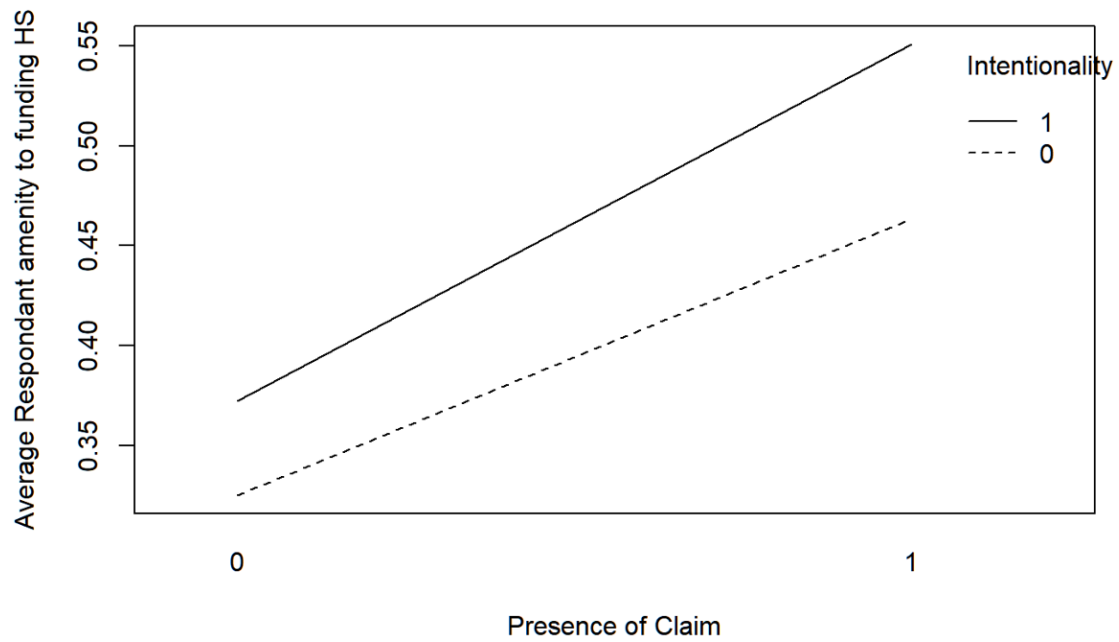


Figure D.3

Table D.4: Anxiety-based emotional response.

	Df	Sum Sq	Mean Sq	F value	PR (>F)	Significance
Claim	1	0.4	0.392	0.136	0.7124	
Intent	1	11.0	11.028	3.834	0.0519	.
Claim:Intent	1	1.4	1.430	0.497	0.4816	
Residuals	169	486.1	2.876			
Signif Code	0 “***”	0.001 “***”	0.01 “**”	0.05 “.”	0.1 “”	

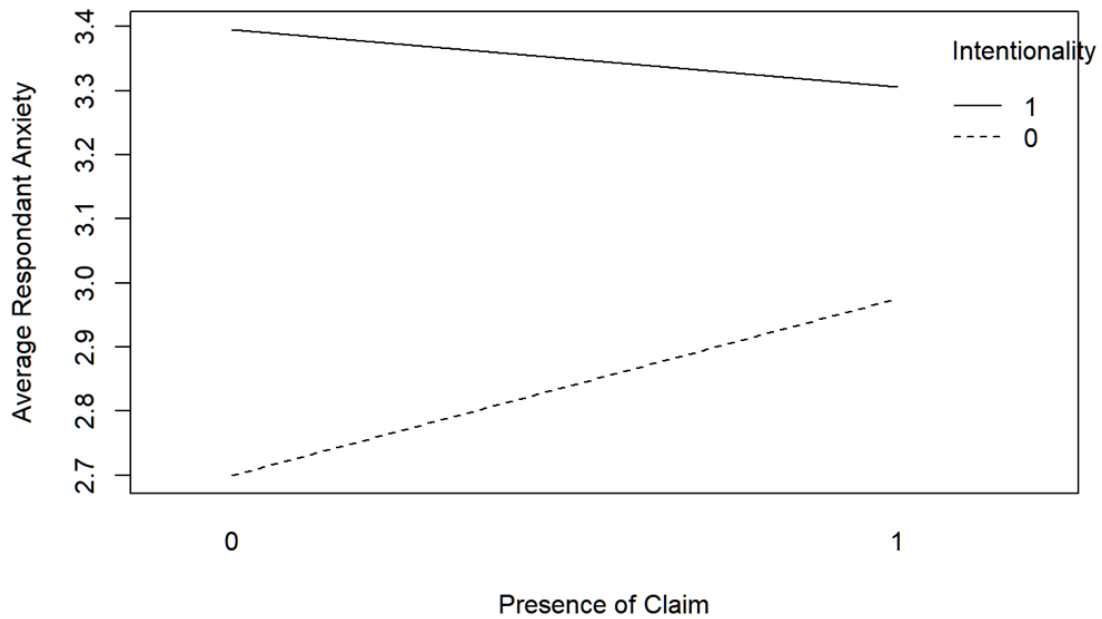


Figure D.4

Table D.5: Anger-based emotional response.

	Df	Sum Sq	Mean Sq	F value	PR (>F)	Significance
Claim	1	44.1	44.09	15.921	9.82e-05	***
Intent	1	5.2	5.21	1.883	0.172	
Claim:Intent	1	7.0q	7.05	2.545	0.112	
Residuals	169	468.0	2.77			
Signif Code	0 "****"	0.001 "****"	0.01 "***"	0.05 "."	0.1 ""	

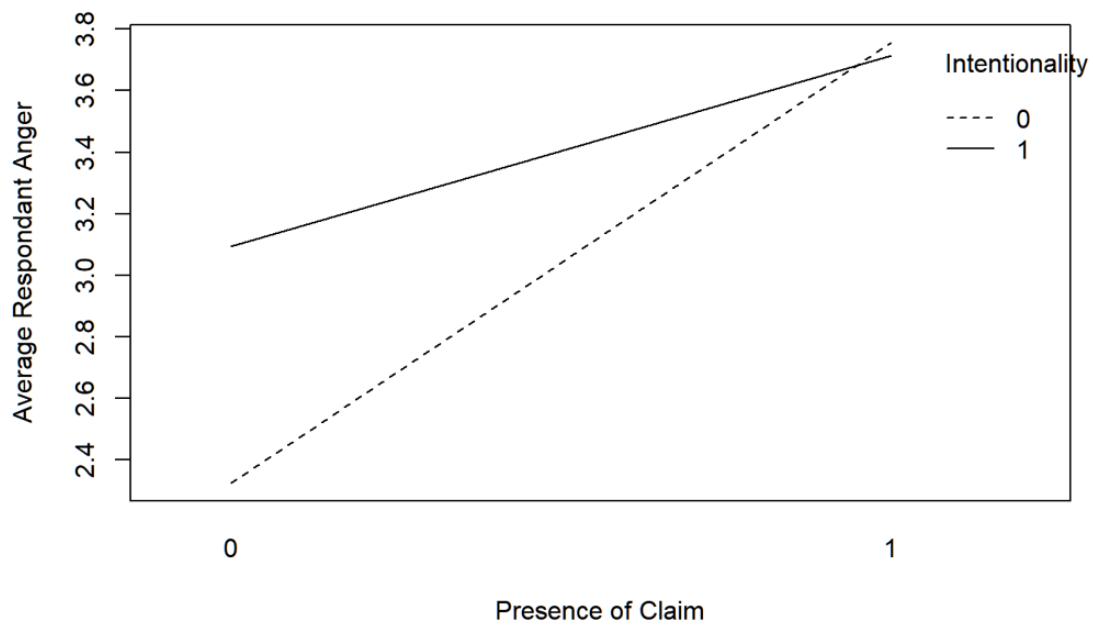


Figure D.5

Table D.6: Sick or unease-based emotional response.

	Df	Sum Sq	Mean Sq	F value	PR (>F)	Significance
Claim	1	27.6	27.607	10.171	0.0017	**
Intent	1	3.3	3.299	1.215	0.2718	
Claim:Intent	1	10.5	10.481	3.861	0.0510	.
Residuals	169	458.7	2.714			
Significance Code	0 "****"	0.001 "***"	0.01 "**"	0.05 "."	0.1 "'"	

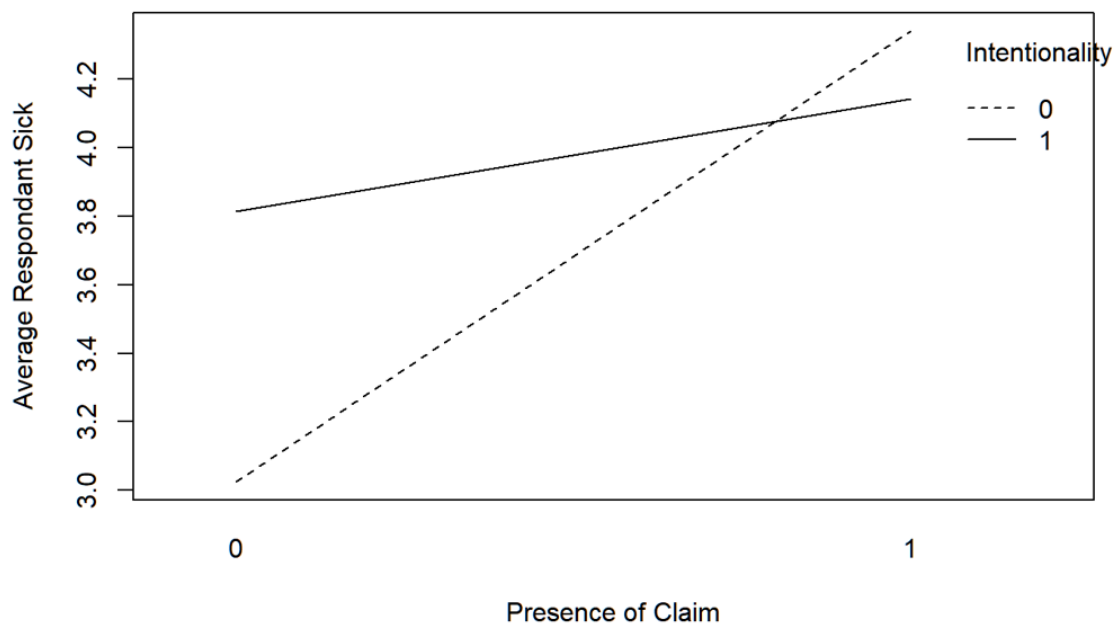


Figure D.6

Table D.7: Happiness-based emotional response.

	Df	Sum Sq	Mean Sq	F value	PR (>F)	Significance
Claim	1	0.03	0.0332	0.111	0.739	
Intent	1	1.14	1.1411	3.828	0.052	.
Claim:Intent	1	0.15	0.1490	0.5	0.480	
Residuals	169	50.38	0.2981			
Significance Code	0 "****"	0.001 "***"	0.01 "**"	0.05 "."	0.1 " "	

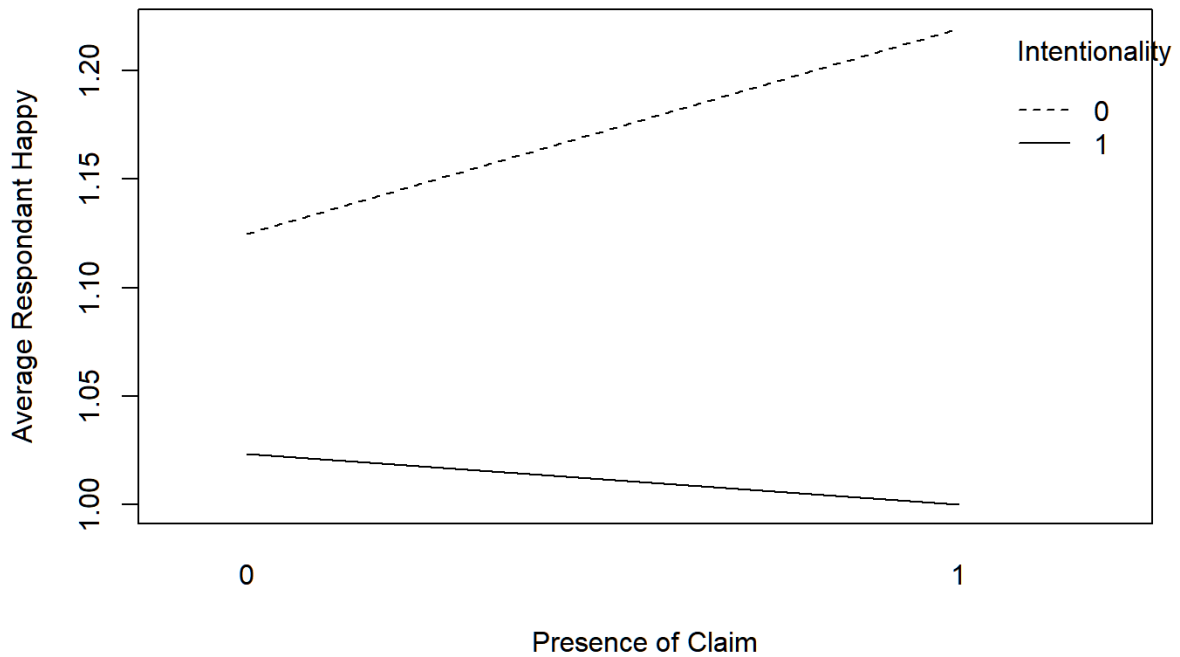


Figure D.7

Appendix E. Chi-Squared Testing

Chi-Squared Testing of Demographic Covariates on Treatment Group

Table E.1: Gender

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Female	10	15	16	16
Male	28	25	25	31
Prefer not to say	0	0	1	1

Chi-squared test:

$X^2 = 3.4447$, $df = 6$, $p\text{-value} = 0.7513$

Table E.2: Age Group

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
19-29	14	9	8	10
30-39	11	14	17	18
40-49	11	8	13	9
50-59	2	9	3	8
60-71	0	0	0	3

Chi-squared test:

$X^2 = 19.554$, $df = 12$, $p\text{-value} = 0.076$

Table E.3: Political Leaning

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Far Left	4	5	4	2
Left	14	12	13	15
Center	15	14	13	20
Right	5	8	9	7
Far Right	0	1	1	0

Chi-squared test:

$X^2 = 6.1525$, $df = 12$, $p\text{-value} = 0.9082$

Table E.4: Attrition (Participants who failed to complete the survey)

	Passed	Failed
Scenario 1	40	14
Scenario 2	41	13
Scenario 3	43	11
Scenario 4	49	6

Chi-squared test:

$X^2 = 4.5337$, $df = 3$, $p\text{-value} = 0.2093$

Appendix F. Supplemental Data File (Responses)

Description:

The accompanying Excel spreadsheet shows the participant responses to the questions presented to them. In the column headings of the sheet, these abbreviations correspond to the questions as listed in Appendix B.

cad.prevent: Q.2 (7 point Likert scale 1 to 7)

cad.protect: Q.3 (7 point Likert scale 1 to 7)

act.terror: Q.4 (7 point Likert scale 1 to 7)

deliberate: Q.5 (7 point Likert scale 1 to 7)

fund.hs: Q.7 (3 point scale ranging from -1 to 1)

fund.rcmp: Q.8 (3 point scale ranging from -1 to 1)

fund.psc: Q.9 (3 point scale ranging from -1 to 1)

inf.priv: Q.11 (7 point Likert scale from 1 to 7)

concern.scale_1: Q.13 (1 to 100 scale, with 1 referring to no concern, and 100 referring to extremely concerned)

pol.scale_1: Q.14 (0 to 10 scale with 0 referring to Left, and 10 referring to Right)

Emotion Questions (anger, sick, sad, happy, fear, grief, anxiety): Q.17 (1-7 scale with 1 referring to not experiencing that emotion, 7 referring to an extreme amount of the emotion in question)

Filename:

etd22437-kevin-leung-Credit.csv

Appendix G. Supplemental Data File (Attrition and Covariate Testing)

Description:

The accompanying RMarkdown file contains the R code used to analyze the treatment groups present in this experiment to ensure that the covariates present in the treatment groups were appropriately balanced, and that no specific treatment group was experiencing a disproportionate attrition rate. For replication purposes, use the Excel spreadsheet found in Appendix F when using this RMarkdown file.

Filename:

etd22437-kevin-leung-Project Chi Testing.Rmd

Appendix H. Supplemental Data File (Statistical Testing)

Description:

This RMarkdown file contains all R code utilized in conducting the statistical tests such as ANOVAs and graph production present in this project. For replication purposes, use the Excel spreadsheet found in Appendix F when using this RMarkdown file.

Filename:

etd22437-kevin-leung-Kevin Leung Project Data For Submission.Rmd