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Understanding Public Confidence in Government to Prevent Terrorist Attacks*

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Abstract

A primary goal of terrorism is to instill a sense of fear and vulnerability in a population and to erode its confidence in government and law enforcement agencies to protect citizens against future attacks. In recognition of its importance, the Department of Homeland Security includes public confidence as one of the principal metrics used to assess the consequences of terrorist attacks. Hence, a detailed understanding of the variations in public confidence among individuals, terrorist event types, and as a function of time is critical to developing this metric. In this exploratory study, a questionnaire was designed, tested, and administered to small groups of individuals to measure public confidence in the ability of federal, state, and local governments and their public safety agencies to prevent acts of terrorism. Data was collected from three groups before and after they watched mock television news broadcasts portraying a smallpox attack, a series of suicide bomber attacks, a refinery explosion attack, and cyber intrusions on financial institutions, resulting in identity theft. Our findings are: (a) although the aggregate confidence level is low, there are optimists and pessimists; (b) the subjects are discriminating in interpreting the nature of a terrorist attack, the time horizon, and its impact; (c) confidence recovery after a terrorist event has an incubation period; and (d) the patterns of recovery of confidence of the optimists and the pessimists are different. These findings can affect the strategy and policies to manage public confidence after a terrorist event.

KEYWORDS: public confidence, government authority, law enforcement, risk, terrorist attacks

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Introduction

This article presents exploratory measurements of public confidence in the government's ability to prevent terrorist attacks. While the concept of "public confidence" is widely used in public administration literature and practice, there is no universal definition, perhaps because its meaning is assumed to be obvious in context. Public confidence has two components – an authority in which the confidence is placed and a subject to which the confidence refers. The authority could be held by an individual, institution, or aggregates of individuals and institutions. For example, one could speak of the public's confidence in a city's mayor, its police department, or its government in general. The authority of our concern is a composite of local, state, and federal governments in the U.S. and their corresponding law enforcement agencies.

The subject of public confidence is the authority's capabilities to produce expected outcomes. For example, it could be the mayor's ability to have the city streets ploughed after a snow storm, the police department's ability to prevent thefts, or the federal government's ability to regulate pollution. The subject of our concern is governments' ability to prevent terrorist attacks.

The "public" refers to the population at large such as the citizens of a city, a state, or country who are stakeholders in the expected outcomes. The public of concern to us are U.S. citizens. Continuity planners and security officials in the private and public sectors are also included in our definition of the "public" because they are citizens themselves and their actions as well as their confidence in their own abilities to prevent terrorist attacks can influence the confidence of the citizenry at large. "Confidence" refers to the subjective assessment by the public about the ability of governments and law enforcement to produce the expected outcome of preventing terrorist attacks.

Background

Public Confidence and Terrorist Attacks

Terrorist attacks are, in part, intended to erode public confidence and cause changes in individual behavior that disrupt normal daily life and shake society's faith in government's ability to assess risks and prevent future attacks.

A large body of research substantiates that individuals interpret messages and act upon them differently depending upon the confidence they have in the source of the message (see Drabek, 1986; Lindell and Perry, 1992; and Mileti and Sorensen, 1990). If the public has confidence in the source, then they are more likely to interpret and act on the message as the source delivering it would have them act. A high level of confidence can improve the effectiveness of preparation,

response, and recovery; a low level of confidence can inhibit that effectiveness. Because the level of public confidence is directly related to the credibility of government sources, it affects the level of compliance with instructions issued in the event of an impending or an actual attack, and it may make the difference between quick, organized action and confusion or resistance resulting in delayed action by the public.

Decreasing public confidence is in itself a goal of terrorist attacks. As Hoffman (2003) succinctly states in his article on “The Logic of Suicide Terrorism”:

This, of course, is the age-old strategy of terrorists everywhere – to undermine public confidence in the ability of the authorities to protect and defend citizens, thereby creating a climate of fear and intimidation amenable to terrorist exploitation. In Jerusalem, and in Israel as a whole, this strategy has not succeeded. But it has fundamentally changed daily behavior patterns – the first step toward crushing morale and breaking the will to resist.

Homeland Security Presidential Directive/HSPD-7 on Critical Infrastructure Identification, Prioritization, and Protection (White House, 2003) states, as official policy, that the “Terrorists seek to destroy, incapacitate, or exploit critical infrastructure and key resources across the United States to threaten national security, cause mass casualties, weaken our economy, and damage public morale and confidence,” and “... undermine the public's morale and confidence in our national economic and political institutions.” HSPD-7 directs all federal agencies to ensure that the public's trust and confidence are not damaged by the actions of terrorists. In recognition of its importance, the Department of Homeland Security includes public confidence as one of the principal metrics used to assess the consequences of terrorist attacks. However, Federal, state and local officials have neither a standard definition nor uniform understanding of “public confidence.” Moreover, there is a dearth of research concerning the meaning of “public confidence” in the context of its implications for the prevention of terrorism. Therefore, in order to establish a meaningful metric, it is necessary to understand how public confidence varies among individuals, is affected by different types of terrorist events, and changes as a function of time.

Public Confidence, Governments, and Law Enforcement Agencies

Public confidence is closely aligned with perceived risk, which has been studied as a factor influencing a wide range of public policy issues, including environmental regulations, energy facility location, and product liability (Dunlap et al., 1993; Sanders, 1992). Early work on risk perception focused attention on events that were largely natural disasters (Dynes, 1970). Later risk perception research explored the differences between natural and technological – or manmade – hazards (Kasperson and Pijawka, 1985). Incidents of terrorism in the U.S., including the bombings of the World Trade Center in late February 1993 and the Alfred P. Murrah Federal Building in April 1995, raised the theory that “unnatural” disasters are significantly different from technology-based accidents (Lewis, 2000). The attacks of 9/11 further underscored the importance of this “new” threat to public confidence and the perception of risk.

Drawing upon the perceived risk literature, Figure 1 summarizes the antecedents and consequences of a loss in public confidence. The extent to which people believe that government can prevent terrorist attacks affects whether they go about their daily lives normally and affects their tolerance for protective measures such as security checks and identity verifications that may be viewed by some as civil rights intrusions. Public confidence in government to prevent terrorist acts also influences people’s expectations that society will not experience “hard times” or worse if an attack occurs.

The right side of Figure 1 concerns the effects that public confidence has on factors such as the quality of life, legitimacy of government interventions, voluntary compliance with policies designed to prevent terrorism, and the sustainability of measures implemented to achieve this objective. These are the indirect impacts from depressed public confidence that have a multiplier effect on the vitality of U.S. society and commerce.

In this context we can pose the following questions: Can governments and law enforcement agencies establish and maintain public confidence that they are capable of preventing terrorist attacks? What happens to the public’s confidence if an attack occurs? To answer these questions we need a deeper understanding of the level of public’s confidence in these agencies and how it is affected by terrorist events.

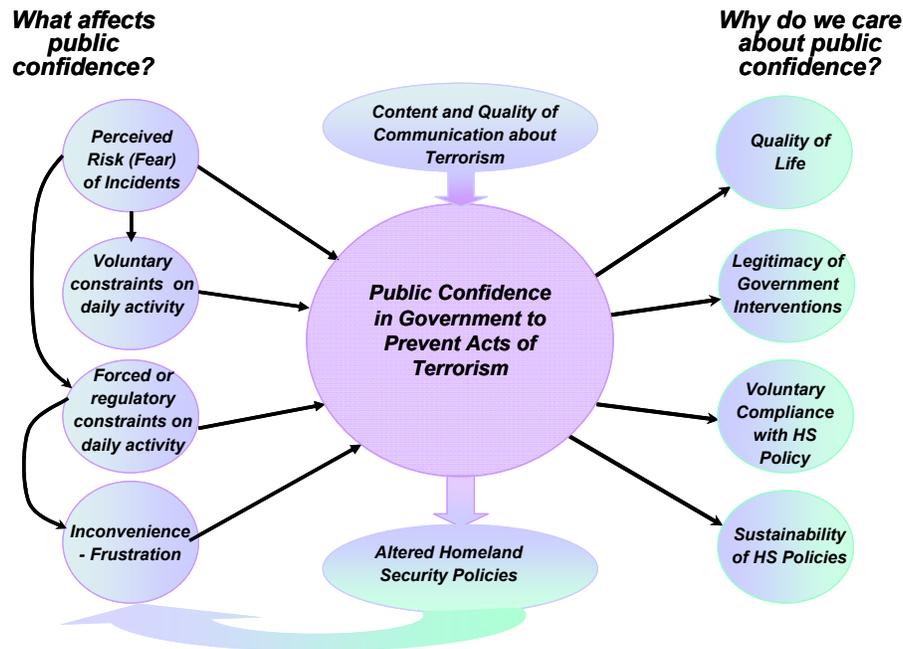


Figure 1: The Antecedents and Consequences of Public Confidence

Research Questions

Overall, there appears to be a long-term, global decline in public confidence in governments and related agencies (Thompson, 1993; Haque, 2001a, 2001b, 2002; Newton and Norris, 1999; Ryan, 2000; Cole and Kincaid, 2000; and Kincaid and Cole, 2002). Despite this decline, two counter trends have been observed. First, public confidence increased after the terrorist attack on the World Trade Center (Gallup Organization, 2001, 2006; McComb, 2002; Moore, 2002, 2003; Mackenzie and Labiner, 2002; Rasinski et al., 2002; Smith et al., 2001). Second, public confidence has grown in more proximate - state and local, instead of federal - governments and agencies (Moynihan and Roberts, 2002; Hague, 2002). These trends have important ramifications for understanding and evaluating public confidence which in turn is likely to affect individual behavior.

The question we ultimately want to answer is – what value do individuals place on their confidence in government and law enforcement agencies to prevent terrorism? Knowing how much citizens value their confidence in government and law enforcement agencies will help allocate resources to prevent terrorist attacks and to protect critical infrastructure. To gain this understanding, we first sought answers to the following questions in an exploratory study:

1. What is the base level of confidence in governments and law enforcement agencies to prevent terrorist attacks?
2. Does this confidence vary over different time horizons, given nature of the probability and the consequences of terrorist events?
3. Does this confidence change in response to different types of terrorist attacks?
4. Does this confidence vary among individuals?

Individual's answers to the first question establish the baseline against which changes will be measured. This question also merits consideration as an indicator, by itself, of the public's collective state of mind.

Terrorism prevention has a time dimension – the objective is not only to prevent it now but also in the months and years ahead to ensure the continuity of commerce and business as well as personal day-to-day activities. Expectations about the possibility of future terrorist attacks form the basis of the second research question.

Terrorist events vary in the scale of consequences (number of casualties, area affected, etc.), the scope of impact (property damage, infrastructure disruption, etc.), proximity to populations not immediately affected, the manageability of the effects of an attack, and other characteristics such as preventability. The third question focuses on understanding the public's mental maps about the prevention of terrorist events.

The fourth question focuses on individual differences. Are there different types of people with respect to their base level of public confidence in the prevention of terrorism, its temporal variation, and the response to different types of events?

Research Method

A questionnaire was used to measure each subject's confidence in the ability of federal, state, and local governments and law enforcement agencies to prevent acts of terrorism at seven time increments in the future. The time increments are one day, one week, one month, three months, one year, five years, and ten years in the future. We used a nine-point Likert scale to measure confidence, anchored as follows:

- 1 – No confidence at all
- 3 – Not much confidence
- 5 – Some confidence
- 7 – A great deal of confidence
- 9 – Full confidence

Baseline public confidence was measured with reference to preventing unspecified types of terrorist attacks in general. The public confidence after exposure to simulated television news coverage of four terrorist attack scenarios was measured with reference to preventing (a) a terrorist attack similar to the one viewed and (b) other unspecified types of terrorist attacks in general.

The draft questionnaire and the scenario presentations were pre-tested in two iterations with 16 employees at Argonne National Laboratory who are intensely involved in homeland security related projects. The final drafts assimilated their comments and criticisms.

The questionnaire also collected basic demographic information about the subjects (age, gender, education level, and occupation), and their emotional reactions to terrorist attacks.

Each group of subjects was shown mock video news coverage of four simulated terrorist events that varied in length, scale, and scope of consequences: a smallpox attack (over two months with international consequences, 2000 fatalities, 15,000 sicknesses, and high visual and emotional content); a series of suicide bomber attacks (occurring over a week with regional consequences, 150 fatalities, 700 injuries, with visual and emotional content); a refinery explosion attack (at a single plant with local consequences, 5 fatalities, 4 injuries, producing 6000 evacuees); and cyber intrusions on many financial institutions that resulted in identity theft (over 2 ½ months producing national economic consequences, no fatalities or injuries, limited emotional content). Each scenario was presented as a series of mock television news broadcasts spread over a time period consistent with the terrorist attack – from the initial report of the attack to its conclusion. The broadcasts showed people’s reactions as well as the responses of governments and law enforcement agencies.

The subjects were warned that some of the images were graphic and might cause discomfort. Their participation was voluntary and they were told that they could choose to leave at any time and for any reason. The scripts for the simulated newscasts were based on scenarios similar to those used to train emergency response personnel and crisis communications professionals. The subjects were asked to view the mock broadcasts as interested observers who are neither directly involved in the incidents nor has loved ones directly affected.

In this initial exploratory study, the scenarios were presented to three groups of seven subjects assembled from the authors’ contacts. To preserve their anonymity, the subjects were identified by five-digit numbers on the questionnaires as well as the record of the discussion that followed. No record was maintained of the number assigned to each subject.

Subjects first completed the baseline questionnaire. Next, they were presented the four scenarios one at a time. After each scenario they completed a questionnaire with a question asking them to quantify “how much confidence do

you have in the federal, state, and local governments and law enforcement agencies together to prevent a terrorist attack similar to the one you just experienced?” They also answered a question asking them to quantify how much confidence they have in federal, state, and local governments and law enforcement agencies to prevent other terrorist attacks. Before watching the next scenario, they were asked to clear their minds of the events they had just watched and to look at the next scenario with a fresh mind, as though the previous ones they had seen had not occurred. The scenarios were presented in a different order to each group.

After a short break following presentation of the scenarios, the subjects were debriefed and their comments on the scenarios, the questionnaire, and the format of the groups were sought. The baseline confidence levels and the post-scenario averages were also presented to each group. These results were discussed to obtain the subjects’ explanation of the patterns. The presentation and discussion were recorded and transcribed.

Characteristics and Judgments of Subjects

Demographics by Groups

Table 1 presents the demographics of the three groups. The group sessions were conducted within a six-month period. Most of the subjects were from the private sector—although there were a few from the public sector—and they represented the mid-range of the corporate hierarchy. The last row in the table indicates the order in which they were presented the scenarios.

Table 1 Demographics of Groups and Scenario Presentation Order

Group (Date of Session)	Group 1 (Nov. 2005)	Group 2 (Jan. 2006)	Group 3 (March 2006)
Group size	7	7	7
Average age (range)	55 (46-74)	46 (35-61)	52 (39-62)
Gender	7 Males	6 Males, 1 Female	4 Males, 3 Females
Education	6 Graduate 1 Undergraduate	3 Graduate 4 Undergraduate	3 Graduate 1 Undergraduate 2 Some college 1 High school
Self-reported occupation	IT Executive Technology Consultant Chief Information	Chief Continuity Officer, Bank Business Owner - Crisis Management	Consultant /Training & Instructional Development Corporate Security

	Officer Consultant Consultant Management Consultant Not reported	Consultant Business Continuity Professional Speaker, Trainer, Author Consultant, Enterprise Risk Services Consultant Chief Information Security Officer	Federal Government Security Position Business Owner Refinery Security FSO Project Manager / Counselor U.S. Army / Chicago Police
Scenario order	Refinery Bombing Suicide Bombings Cyber Attack Smallpox Attack	Suicide Bombings Smallpox Attack Cyber Attack Refinery Bombing	Cyber Attack Refinery bombing Suicide Bombings Smallpox

Realism of Scenarios

The three groups were asked to comment on the scenarios to ascertain whether they realistically simulated public exposure to terrorist attacks while at the same time not biasing their view of government and law enforcement agencies. Overall, the subjects said that the scenarios realistically presented the way that news media would likely cover such events. They perceived no sensationalism. They also felt that the scenarios communicated a mixed message that they said is usually the case in real life – government raises the alert level while providing assurances to stay calm and go about your normal activities. While some expressed frustration with such a mixed message, they acknowledged the inescapable rationale of this approach. Subjects also pointed out that the scenarios were similar to tabletop exercises conducted by the government and private industry.

Validation of the Questionnaire

The subjects were comfortable with the instructions, questions, and the scale used to measure their confidence in the governments and law enforcement agencies. They understood that the focus of the questions was on preventing terrorist attacks like those portrayed in the scenarios. They were also comfortable with the time horizon of the questions – from one day to ten years.

Scenario-driven Levels of Public Confidence

The average confidence level of each group measured as the envisioned capability of governments and law enforcement agencies to prevent a terrorist attack similar to the one they had just witnessed is shown in Figure 2. The results for each

scenario are plotted in a different color, identified by the graph legend. The curves are marked X-B (baseline), X-SP (smallpox scenario), X-SB (suicide bombing scenario), X-RB (refinery bombing scenario), and X-CA (the cyber scenario).

In all but one instance the average confidence level after the groups watched the scenarios is below the baseline on day one. The exception is the refinery bombing scenario in Group 2. In addition, the scenario-driven confidence levels remain below the baseline for the equivalent time periods, except in two cases: refinery bombing in Group 1 after 5 years and in Group 2 for all time periods. The confidence level for the smallpox scenario in Group 1 after 10 years is the same as the baseline confidence level for that period. The scenario-driven confidence level increases over the 10-year time horizon in all cases, but there appear to be four different trajectories: a nearly constant rise, a leveling and then a rise, a drop and then a rise, and in one case (X-SP, in Group 1) a rise and then a drop.

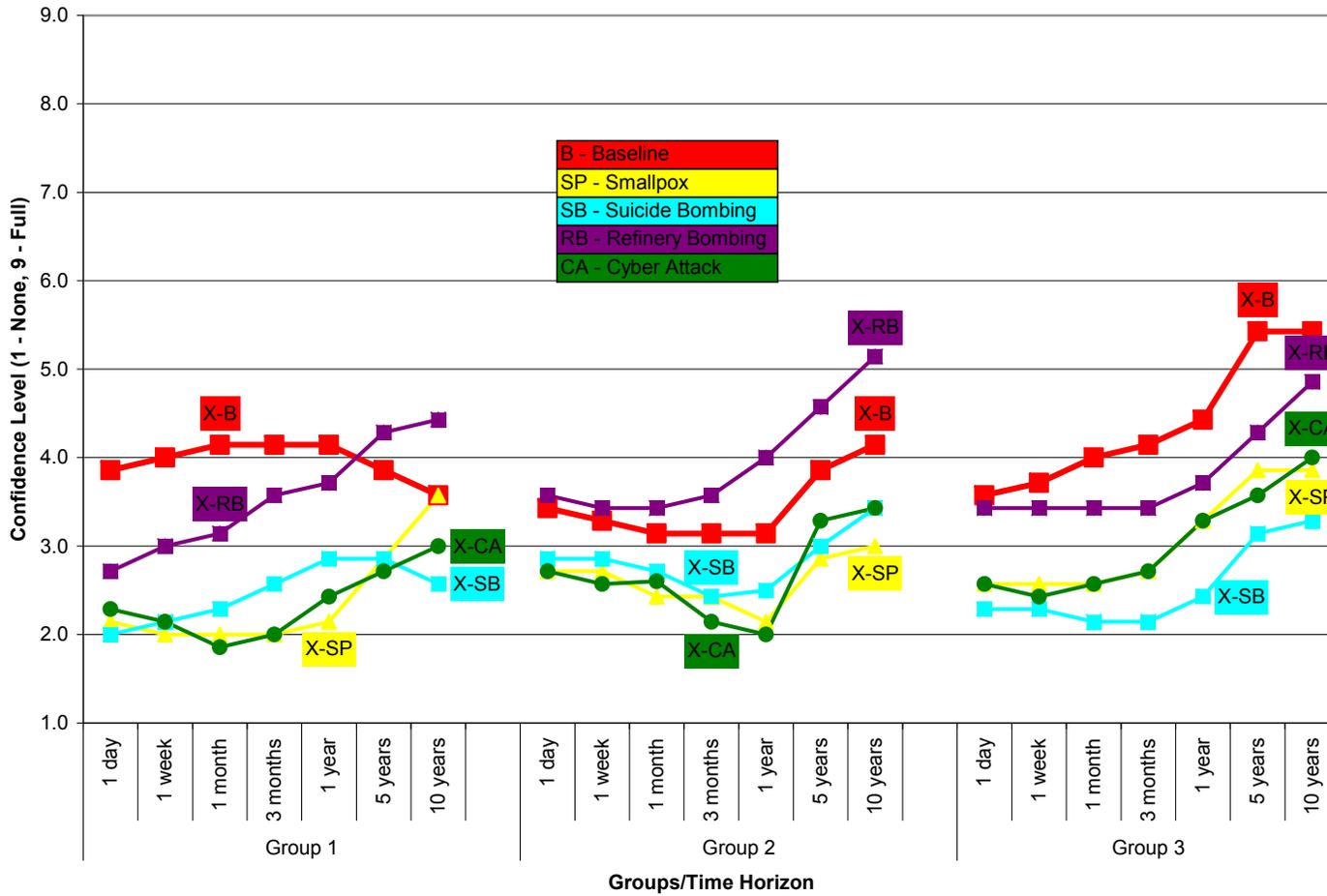


Figure 2: Average Baseline and Scenario-Driven Confidence Levels by Subject Group

Validation of the Confidence Levels

We presented the above graphs to the respective groups and sought their comments to assess: (1) if the composite group confidence levels made sense to the subjects and (2) were there reasonable explanations for variations among the individuals.

In general, all three groups felt that the graphs accurately captured changes in their confidence as they would expect to experience it. In working through the graphs the groups provided a variety of explanations for their views of the dynamics of public confidence.

Analysis and Discussion

To understand public confidence and ultimately to place a value on it, one has to know the nature of, sources of, and reasons for its variability. Random variations in public confidence would indicate that little could be learned about how citizens respond to their mental model of government and law enforcement capabilities to prevent terrorism. Knowing that the variation is systematic, what affects it, how, and why will help to build a metric that can be used to assess the consequences of terrorist attacks vis-à-vis the importance of prevention.

The small sample size in the three groups does not permit us to establish the statistical significance of the variation in our results. However, on the basis of our interpretation of the graphs and the groups' discussions, we concluded that the variation in public confidence can be attributed to differences in individual perceptions, different scenarios, and the passage of time.

Confidence Levels by Group

For each group, the initial aggregate confidence level for the baseline and four terrorist attack scenarios is low, less than 4. The subjects in the groups generally agreed with this assessment.

As shown in Figure 2, the baseline confidence level for Group 1 rises slightly over the first month, levels off until the end of the year, and then decreases a little over the 5- and 10-year periods. For Group 2 the baseline confidence level decreases a little in the first year and then increases over the 5- and 10-year periods. In Group 3, it increases gradually to the end of the first year, jumps by almost a point over the 5-year period, and then levels off. Given the demographic variations among the individuals in each group and the small group sizes, it is difficult to make generalizations about the temporal variations in the three groups, except perhaps that they continue to be low after 1 year. The latter may reflect the cancellation of the optimistic and pessimistic forces affecting

public confidence. We will, however, use the aggregate confidence levels in each group to determine the effect of the various terrorist attack scenarios.

The combined data from the three groups are shown in Figure 3. The baseline confidence level rises slowly until 1 year, jumps up at 5 years, and then levels off. It is about 3.6 initially and 4.4 after 10 years; it is low at the beginning and does not change much over the 10-year time horizon.

Effect of Attack Scenarios on Confidence Levels

The following discusses the impact of the four scenarios on the initial confidence level and its variation over time.

Initial confidence level

The change in the initial confidence level is different for each scenario as shown in Figure 3 and by group in Figure 2. In all three groups, the refinery bombing scenario has the least impact; the other three (smallpox, suicide bombing, and cyber attack) are very similar and have larger impacts compared to the refinery bombing. The groups appear to place refinery bombing in a distinct category. Their comments indicate that they believe an event like the refinery bombing can be controlled with increased security. With the others, it is more difficult to effectively limit their occurrence or impact.

The initial drop in confidence level in almost all groups is contrary to the results of public confidence surveys conducted following September 11, 2001, in which respondents expressed a strong increase in their confidence about the government's ability to handle the domestic and international situation (Gallup Organization, 2001; McComb, 2002; Moore, 2002, 2003; Mackenzie and Labiner, 2002; Rasinski et al., 2002; Smith et al., 2001). None of the subjects in the three groups found the drop surprising. One of the subjects did remark, though, that confidence in prevention is likely to be greater immediately after an event. This observation, however, is not evident in the aggregate data.

Policy-makers are vitally concerned with public confidence and trust because there is a threshold below which the public no longer trusts the information or follows recommendations provided by government officials. At this point, the people decide that they have to take matters into their own hands because they cannot trust governments and their agencies to do what is necessary to prevent further attacks. That threshold is not known and based on the subjects' comments it was clearly not reached after any of the scenario presentations.

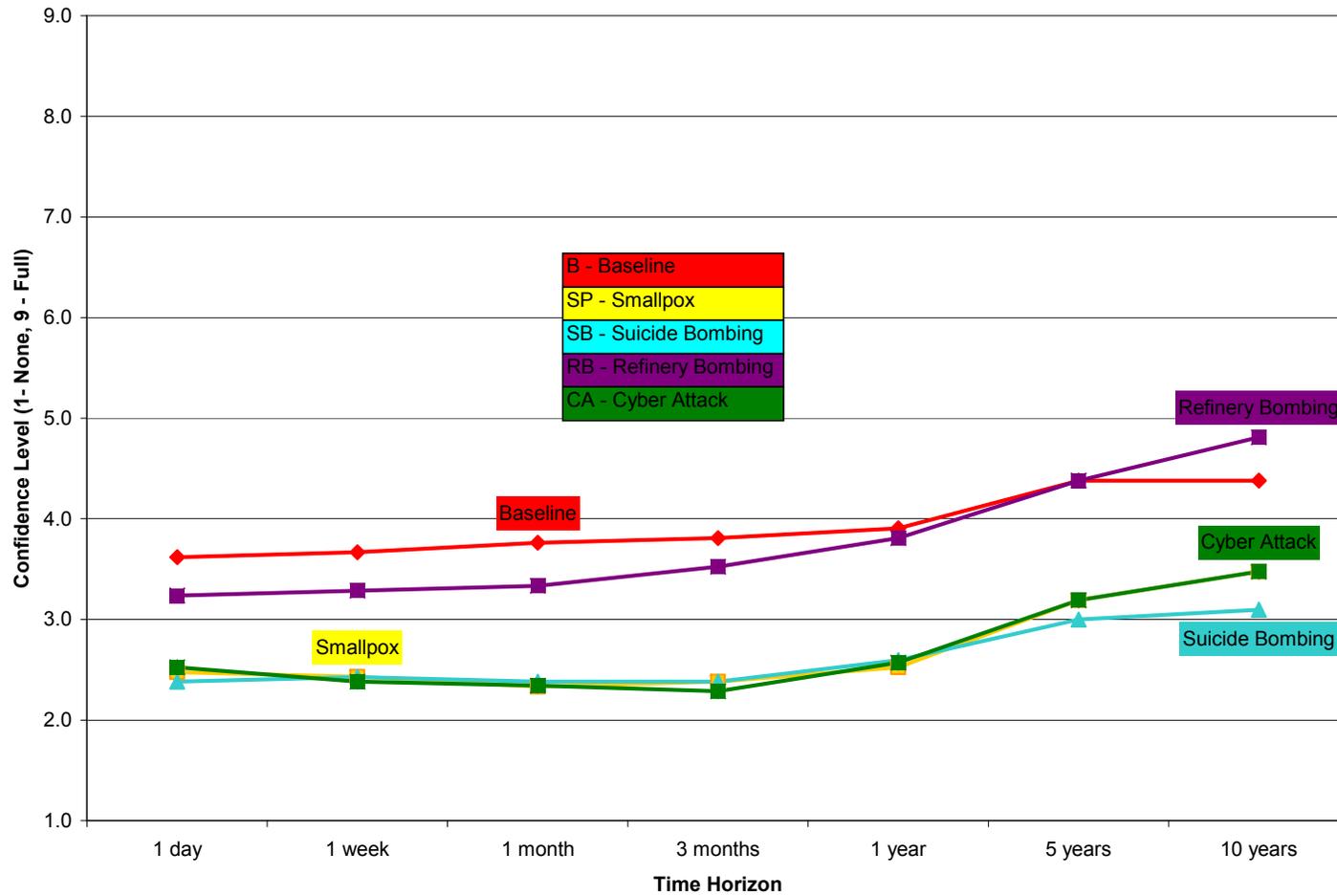


Figure 3: Average Baseline and Scenario-Driven Confidence Level for All 21 Subjects

Temporal variation in confidence level

In all groups, as shown in Figure 2, the confidence after 5 and 10 years is higher than immediately after exposure to the scenario. In some groups the change is small; in others more.

The temporal change in the confidence level subsequent to exposure to a scenario appears to match the variation in the initial confidence level in Groups 2 and 3. This trend may be due to the subjects shifting their temporal profile after viewing the scenarios without altering its shape.

In the combined data from the three groups (Figure 3) two patterns of change are apparent: (1) the initial confidence level drops after all four scenarios, and (2) the profiles of change in the case of smallpox, suicide bombing, and cyber attack are almost identical and different from that in the case of refinery bombing. In all cases the change in confidence to prevent terrorist incidents over 10 years is positive.

Optimists and Pessimists

Based on analysis of the individual profiles we classified the subjects as optimists or pessimists. An optimist is defined as someone with a net positive change in the baseline confidence level over the 10-year time horizon; a pessimist, as someone with a net negative change. All subjects could be classified because everyone showed some net change in confidence. Of the 21 subjects, 14 were classified as optimists and 7 as pessimists. The baseline confidence levels and the aggregate of scenario-driven confidence levels over the 10-year period are shown in Figure 4 for optimists and pessimists. The characteristics hold for baseline and scenario-driven results for each class of subjects. The curves for the baseline results for optimists and pessimists intersect at 1 year; the curves for the scenario-driven results intersect around 5 years. The optimists' scenario-driven curve is lower but almost identical in shape to the baseline curve. The pessimists' scenario-driven curve intersects the baseline curve within the 1- to 5-year time frame. In fact, the pessimists' scenario-driven curve is almost flat.

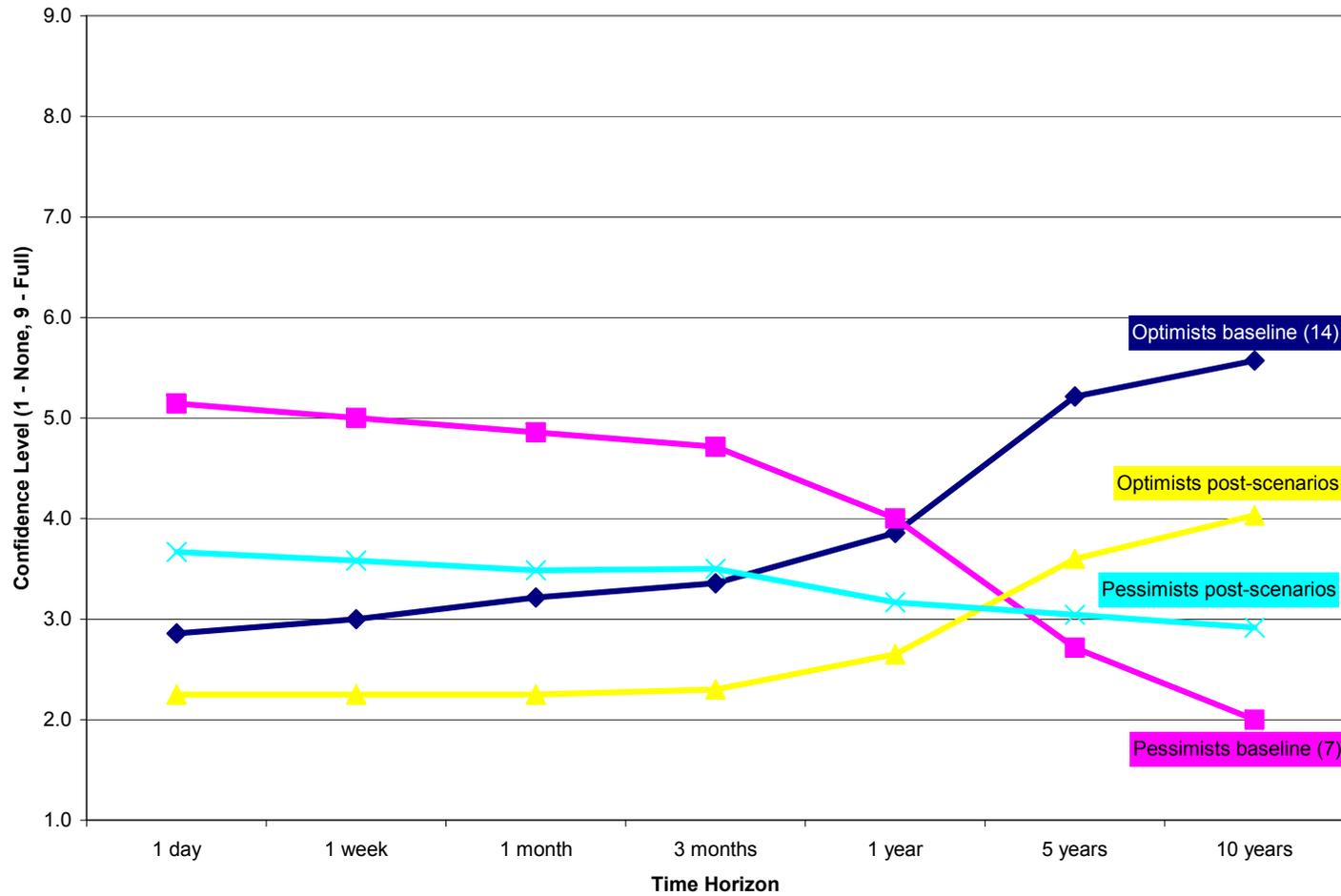


Figure 4: Average Baseline and Post-scenario Confidence Levels of Optimists and Pessimists

Conclusion

The study demonstrates a method for measuring public confidence to prevent acts of terrorism. The subjects felt that the instrument, the scenarios, the method of administration were valid. They were satisfied that the measures expressed their level of confidence and changes in it.

The results demonstrate a systematic variation in public confidence to prevent acts of terrorism. It varies by individuals, by time horizon, and across different terrorism scenarios. These results are indicative and not conclusive given the limited size and the selectiveness of the subjects studied.

The aggregate confidence level is low. The subjects in our study appear to integrate the positive forces that boost their confidence level and the negative forces that diminish it in coming to a conclusion. In synthesizing these contradictory forces, they appear to be discriminating in interpreting the nature of a terrorist attack, the time horizon, and its impact – i.e., all attacks are not seen to be the same.

Based on the initial confidence level and changes in it over time there appears to be two groups – optimists and pessimists. While the optimists' confidence baseline level increases with time, the pessimists' decreases. Hence, their concerns need to be addressed differently.

Confidence recovery after a terrorist event has an incubation period. Our data suggests an expected period of one to five years. This can affect the timing of and strategy to restore confidence.

The patterns of recovery of confidence of the optimists and the pessimists appear to be different. For both, the confidence profile after a terrorist incident is below the baseline. While the optimists recover their confidence to the initial level before the incident over time, the pessimists never do. This too can affect the strategy to restore public confidence.

A primary motivation for this research is to understand the impact of terrorism on public confidence and ultimately assign a value to public confidence for planning to prevent terrorist incidents. Understanding the dynamics considered above will help in assigning this value. If public confidence is likely to recover on its own, less intervention is warranted; whereas greater strategic investment is needed if it does not. Similarly, if the baseline confidence level is far below the desired level, policy-makers might want to consider interventions that would raise it. It is also possible that a sufficiently high baseline confidence level may retard the effectiveness of preparations to prevent future incidents. In such a case it would be wise to invest resources to increase public awareness of potential threats. Further research will help to (a) understand the dynamics of public confidence and (b) establish its monetary value relative to other impacts of terrorist acts.

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