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THE PROBLEMS OF EVALUATING COUNTER-TERRORISM

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Abstract:
Following the terrorist attacks of September 11th 2001 security policies aimed at combating terrorist threats have been implemented all around the world. Governments and experts emphasize that this ‘new terrorism’ requires totally new means of fighting it. As a result new counter-terrorism is spreading and seems to be appearing everywhere. But how do we know if any of the policies intended to tackle terrorism are really working? How can we measure the effectiveness of these measures? Governments and officials point to the number of incidences, arrested and killed terrorists or the amounts of terrorist financing that has been confiscated as an indicator, while academia often refers to more sophisticated equations involving time series in risk management and cost-benefit calculations. Although, these rationalist approaches appear straightforward and seem to provide the quantified data required for the measurement of the success of these policies, there seems to be an error in the measure of terror! This paper will provide a critique of the existing rationalist methods of assessing the effectiveness of counter-terrorism and is predominantly aimed at highlighting their weaknesses as well as introducing the need for further research into additional and alternative ways of evaluating counter-terrorism.

Keywords: Counter-terrorism, terrorism, effectiveness, measure.

Resumen:
Tras los atentados terroristas del 11 de septiembre de 2001, se han llevado a cabo en todo el mundo políticas para combatir las amenazas terroristas. Los gobiernos y los expertos resaltan que este “nuevo terrorismo” requiere medios totalmente nuevos para combatirlo. En consecuencia, el nuevo contraterrorismo se está extendiendo y parece estar apareciendo en todas partes. Pero ¿como sabemos si estas políticas orientadas a combatir el terrorismo están funcionando realmente? ¿Cómo medir la eficacia de estas medidas? Los gobiernos y los funcionarios utilizan como indicador el número de incidentes, de terroristas detenidos o muertos o las cantidades de dinero destinado a la financiación de los terroristas que se han confiscado; mientras que los académicos emplean frecuentemente ecuaciones más sofisticadas, con series temporales de gestión de riesgos y cálculos coste-beneficio. Aunque estos enfoques racionalistas parecen claros y aparentan proporcionar los datos cuantitativos necesarios para medir el éxito de estas políticas, parece haber un error en la medida del terror! Este artículo aporta una crítica de los métodos racionalistas existentes para evaluar la eficacia del contraterrorismo, y pretende ante todo resaltar sus debilidades así como presentar la necesidad de nuevas investigaciones sobre métodos adicionales y alternativos para evaluar el contraterrorismo.

Palabras clave: Contraterrorismo, terrorismo, efectividad, medida.

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Introduction

The question of whether the United States and its allies are winning or losing the war on terrorism is being fiercely debated among authors and in the media. Some point to successes such as arrested leaders, killed terrorists or the amount of terrorist money that has been frozen since September 11 (hereafter 9/11). Others note the failures in the form of continued attacks in Bali, Madrid and London as well as the growing weariness of US allies. Regardless of whether ‘war’ is the correct term for this conflict or whether such a war can be won or not, this debate does raise some very important issues: how do we know if any of the policies intended to combat terrorism are really any good? Counter-terrorism is as old as terrorism itself, as governments have always attempted to tackle the ‘terrorist’ groups which oppose them. Counter-terrorism refers to all kinds of policies, operations and programmes that governments implement to combat terrorism.

We are being told by many of the policy makers and leading terrorism experts that the ‘new terrorism’ we are facing today requires totally new counter-terrorism measures to deal with it effectively. One of the most famous terrorism experts Bruce Hoffman has noted that “[n]othing less than a sea-change in our thinking about terrorism and the policies required to counter it will be required.” Although the ‘newness’ of terrorism today can be questioned, how can we tell a good counter-terrorism measure from a bad one? The aim of this paper is to give an insight into the weaknesses of the dominant rationalist approaches of assessing the effectiveness of counter-terrorism policies. The research is important because at present increasingly restrictive and controversial counter-terrorism measures are being implemented without the possibility of evaluating their usefulness and necessity. The anti-terror bill in the UK which proposed to imprison suspected terrorists for three months without trial or the highly controversial shoot-to-kill policy following the London bombings is a prime example of this. As much in a fight against terrorism as against conventional enemies, inadequate measures of effectiveness can contribute to complacency, the wrong allocation of scarce resources and horrible surprises. Unfortunately, for all the significant research that judges military effectiveness, measures of counter-terrorism policies remain shallow. Different to a traditional military campaign, there is no enemy capital to take over or industry to destroy. The unsatisfactory answer often given highlights the number of attacks and casualties or looks

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at the quantity of arrested or killed terrorists. However appealing and easy this measure of success is, a ‘body-count’ or ‘number of incident’ approach can be deceptive. So what standards could be used to assess the success or failure of existing counter-terrorism measures? So far "[t]here is almost a complete absence of high quality scientific evaluation evidence on counter-terrorism strategies" and “[a] concrete methodology for studying a state’s ability to cope with wide-scale terrorism remains to be developed.”

No academic discipline has the monopoly over ‘terrorism research’. Since the 1960s research on the topic has been predominantly conducted in the fields of sociology, psychology and political science in general, but considering that we are apparently facing international terrorism today, surprisingly little International Relations theory has been explicitly applied to the study of terrorism. A brief scan of the two leading specialist journals on terrorism research — Terrorism and Political Violence and Studies in Conflict and Terrorism — seems to show that no articles are directly concerned about applying IR theory to terrorism and a brief look at six leading IR theory journals seems to confirm this trend. Nevertheless, international terrorism is part of International Relations. It is a subject that plays an important role in international politics, international organisations and foreign policy considerations of many states around the world. Nearly all governments have implemented some kind of counter-terrorism policies following 9/11 and many have co-operated internationally to fight ‘global terrorism’. The question of how to measure the effectiveness of these counter-terrorism policies is important.

The following paper will provide a critique of the dominant rationalist approaches of ‘measuring’ counter-terrorism effectiveness. It thereby calls for further research on the subject and emphasises the urgent need to reflect on other possible ways of evaluating counter-terrorism. It hopes to indicate the potential of shifting the focus, considering the fear and terror aspect of terrorism, and centring on the feeling of security counter-terrorism policies generate.

In pursuit of these points the rest of the paper will be structured as follows: section two will review some of the rationalist arguments used to highlight successful counter-terrorism measures. This will include simple rational indicators used by governments and the media as well as some of the academic studies conducted on the subject predominantly in the field of risk assessment and cost-benefit calculations which use data on terrorist events and time series. This will be followed by section three, which sets forth the difficulties and weaknesses of such rationalist approaches. The fourth section will argue that rationalist approaches totally neglect the main component of terrorism: fear. The feeling of fear, not the physical destruction caused by terrorism, is important and this feeling of fear seems in no “rational” proportion to the actual low risk of being personally involved in a terrorist attack. Section five calls for further research into potential alternative or supplementary approaches to assessing the effectiveness of counter-terrorism. This includes the possible use of social constructivist

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9 Byman, Daniel: “Scoring the War on Terrorism”, The National Interest, (Summer 2003), pp. 75-84.
approaches and methodologies such as discourse analysis. The final section will summarise the main arguments and draw tentative conclusions.

1. Rationalist approaches

The United States and many of its allies have spent billions on counter-terrorism since the attacks of 9/11. Exactly demarcating the policy area of counter-terrorism is difficult, as measures implemented in the name of fighting terrorism are very different. These include policies such as enhanced border and airport security, tightened security at embassies, the implementation of new anti-terror laws, the investment in anti-terrorist technology, the establishment of crisis management plans, the restructuring of security services and the creation of whole new bureaucratic counter-terrorism departments. It has been estimated that the money spent in the U.S. on increased security measures in response to 9/11 by both the public and private sector will amount to roughly $72 billion per year. Official government figures point out that, between the fiscal years 2002 and 2005, U.S. funding for homeland security increased by 39 percent from $33 billion in 2002 to $46 billion in 2005. For the fiscal year 2006, President George Bush has requested nearly $50 billion for activities associated with homeland security excluding direct military action.

Democratic governments around the world are generally required to justify their spending to their citizens. As with many other policies, bureaucracies and government agencies are held accountable for the cost-effectiveness of their expenditure. For example, in the U.S. the Government Performance Results Act of 1993 calls for agencies to provide “assessment of the results of a program activity compared to its intended purpose” in a quantitative or qualitative manner. In other words they have to give evidence of their performance and measure their progress against their aims. Similar laws exist in most other democratic states and in response governments and the respective agencies involved in combating terrorism try to provide evidence of their measurable and effective progress.

Traditionally, governments and their agencies have often used simple rational indicators to highlight ‘success’ in the ‘war on terrorism’, such as the number of attacks and casualties, arrested leaders, killed terrorists or the amount of terrorist money which has been frozen since 9/11. The US government has repeatedly highlighted that it has killed or captured two-thirds of the Al-Qaeda’s top leadership and has frozen over $200 million of terrorist financing. By September 2004 it had charged 350 individuals with terrorism related charges and convicted

over 185 people. It has disrupted alleged terrorist cells in New York, Washington, Oregon, North Virginia, North Carolina, and Florida. Furthermore, its military campaigns and the toppling of the regimes in Afghanistan and Iraq are presented as measures of success in the war on terrorism. At the same time it is possible to point to terrorist attacks, which were aborted or intercepted due to the counter-terrorism work of governments, as a measurement of counter-terrorist effectiveness. These have included the botched bombing of a US airliner by the Shoe Bomber Richard Reid in December 2001, the foiling of an attempted truck bomb attack in Singapore aimed at embassies, the airport and financial district, or the failed effort to bomb of U.S. embassies in Rome and Paris. George Bush in October 2005 declared that the US and its allies had stopped ten major attacks since 9/11, including attacks with hijacked aeroplanes in 2002 and 2003, and in the UK the mayor of London Ken Livingston reported that since 9/11 government authorities have foiled ten terrorist attacks on London alone.

Parallel to government attempts to highlight the effectiveness of their counter-terrorism measures, there are a limited number of academic studies which have dealt directly with the topic of measuring effectiveness. Some point out that the numbers of fatalities generally gives a good impression of the success of terrorist activities and are therefore a good way of assessing the effectiveness of counter-terrorism measures. Other scholars such as Jonathan Stevenson believe that the effectiveness of counter-terrorism measures and the victory in the war on terrorism “is likely to reveal itself over time as a negative – the relative absence of terrorism – gradually confirmed by an increase in arrests and convictions and by more probative intelligence.”

A study by Cynthia Lum, Leslie W. Kennedy and Alison J. Sherley highlights the apparent gap in the literature, noting that only about 3000 (or 1.5 percent) of a total of 20,000 studies on the topic of terrorism discuss the idea of evaluating the effectiveness of counter-terrorism measures in some form, while only seven deal with it specifically. Those who have attempted to assess the effectiveness of counter-terrorism measures have done so predominantly by using time-series and intervention analysis. They believe that a successful counter-terrorism measure reduces the amount of terrorist violence and therefore that, if the level of terrorist incidents is plotted over time and against some policy indicators, it is possible to see whether the measure is effective or not. The central argument in other words, is that certain effective counter-terrorism policies will produce a change in the terrorist’s modus operandi, which will be visible in the pattern of incidences. Here it is assumed that terrorists groups act in a western rational way, that they reflect and substitute certain types of action with others when faced with excessive difficulties. They believe terrorists to be rational actors and place great emphasis on them being a ‘homos economicus’. Terrorists have a certain limited budget and try to maximise the effect of their resources. Measures taken to

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23 Morag, op. cit., p. 310.  
25 Lum et al., op. cit.  
raise the cost of certain types of terrorist activities lead them use other types of tactics whose cost has not risen.

One of the first studies to use economics in the analysis of counter-terrorist measures was by William M. Landes, who in 1978 used ordinary least squares regression techniques to examine the aircraft hijackings in the US during 1961-1976. He showed with econometric methods that the use of sky marshals and metal detectors had had a significant positive effect on the probability of apprehension and a significant negative influence on the number of offences committed. The data indicated a steep drop in skyjackings after these security measures became operational in January 1973. In the US, there were twenty-seven incidents of skyjackings in 1972 and only one in 1973. Other studies which have also used economic calculations to measure effectiveness include Jon Cauley and Eric Im’s use of intervention or interrupted time series analysis to evaluate the impact of metal detectors, fortified embassies and the UN convention on preventing attacks on protected persons; Walter Enders, Todd Sandler and Jon Cauley’s examination of UN conventions and international responses to hijackings using a refined application of intervention analysis; and Bryan Brophy-Baermann and John Conybeare’s paper on short and long term effects of Israeli retaliation attacks. Other studies include the evaluation of U.S. air raids on Libya and their effectiveness against terrorism by Henry Prunckun and Philip Mohr, and the intervention analysis of Basque terrorism in Spain by Carlos Pestana Barros, which evaluates the effectiveness of policies against ETA using time series data from 1968 to 2000. More recently, Asaf and Noam Zussman have evaluated the effectiveness of a counter-terrorism policy by examining Israeli targeted assassinations of terrorists and the reaction of this on the Israeli stock market and Benjamin Zycher examines counter-terrorism policies in a benefit/cost framework on the basis of moderate, severe and nuclear terrorist attack scenarios in the United States.

One of the most famous rationalist econometric assessments of effectiveness of counter-terrorism measures, however, is Walter Enders and Todd Sandler’s vector-autoregression-intervention analysis. Enders and Sandler examined a number of counter-terrorism measures, including retaliatory raids, fortification of embassies, metal detectors and antiterrorism laws. Their idea is that terrorists act according to a consumer-choice model, where they “maximize utility or expected utility obtained from the consumption of basic

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34 Zycher, Benjamin (2003): A Preliminary Benefit/Cost Framework for Counter-terrorism Public Expenditures, Santa Monica, RAND.
One type of terrorist action can be substituted with an alternative kind of attack if it creates the same basic commodities. To turn out these basic commodities, terrorists have to select between terrorist and non-terrorist actions, while having to deal with only limited resources. If they choose to follow the violent terrorist route they have to decide what kind of attack they want to perpetrate. Enders and Sandler point out that each type of attack has a ‘price’ that depends on how much time is involved to plan and execute the attack, the resources needed and the likelihood of the attack being successful. This again all depends on what the target is, the level of violence sought and where the attack will take place and what security measures are in place there. So the 9/11 attacks had a higher per-unit price than the bombing of the USS Cole because more resources were needed, the location was better protected and the target was more significant. The price of a certain terrorist attack results mostly from the resources governments have implemented to stop such an attack. Therefore, Enders and Sandler highlight that if one wants to assess the effectiveness of counter-terrorism policies, it is important to take into account the possible substitution of attack types due to this ‘price’ rise.

2. Difficulties of the rationalist approach

The overarching problem of the rationalist approach is that it predominantly focuses on hard quantitative data such as measuring the body count or number of incidents and thereby ignores many of the qualitative aspects. Success is generally expressed with the help of indicators which are easily accessible and quantifiable. Government officials point to the decline of the number of terrorist incidents as sign of a successful counter-terrorism campaign. This was the case in press conferences for the publication of the US State Department’s annual report Patterns of Global Terrorism 2003.

It was announced that the number of terrorist attacks had fallen and that this was a clear indicator that the United States was winning the ‘war on terrorism’. Regardless that this proved to be wrong due to a statistical error in their calculations and that the number of attacks actually was higher than the previous year, thereby according to their logic indicating the failure of their policies, the number of terrorist incidents say nothing about the effectiveness of existing counter-terrorism measures. There are many different reasons for why the numbers of incidents can decrease. For example, terrorists may be saving up their resources for a devastating attack, trying to give governments a false sense of security and aiming to encourage complacency, reduce their vigilance and thereby increasing the government’s vulnerability. They may also be in a phase of recruiting and training new members or buying new weapons to strike another day. At the same time a terrorist group which is actually in decline may opt to attack more frequently and more violently in order to prove to governments, supporters and the general public that they

37 Ibid, pp. 311-313.
remain a force to be reckoned with, despite these attacks really representing the last twitches of a dying organisation.\textsuperscript{40}

Similarly, when considering for example the terrorist ‘body count’ as an indicator of an effective counter-terrorism measure, one has to keep in mind that the overall size of a terrorist group is often unknown and many of those captured or killed are low-level recruits who can be replaced easily. Even, when one is able to eliminate two-thirds of the top leadership, the rank and file of the group may grow, and as a result decentralise and become more resilient. Indeed, a terrorist group that loses members to arrest or targeted killings may actually increase in overall size if the crackdown generates a backlash. For example, the Provisional IRA capitalised on indiscriminate British crackdown to gain recruits.\textsuperscript{41} Raphael Perl points out that “[i]n a western, science-and-technology-oriented society, many feel that if a problem can be quantified, it can be solved”.\textsuperscript{42} However, measuring terrorism with numbers or statistics is to a certain extent contradictory. Statistics are supposed to give an insight into general trends and patterns. However, the rare, random-like and uneven nature of terrorism and the fluctuation of incidents run counter to the idea of trends and patterns, something that might have been realised by the US government when it renamed its annual publication Patterns of Global Terrorism to Country Reports on Terrorism. Although governments often proclaim the effectiveness of their policies in the absence of further attacks and it may seem logical consider a decrease in terrorist activity as an indicator of effective counter-terrorism, the asymmetric non-linear nature of terrorism, which aims to surprise its victims, can mean that terrorists are biding their time and preparing for a bigger more devastating attack. If a large attack happens in one country, as was the case with 9/11, the Madrid and London bombings, “although there have been none of that magnitude in preceding or later years, a time series based on the number of incidents is of little value.”\textsuperscript{43}

The determination of the West to measure success in a quantitative numerical form is undermined by the difficulty of gathering reliable statistics and figures on terrorism. Apart from the traditional problems concerning the field of terrorism research such as the often classified nature of the subject, there are a number of issues directly concerned with data collection.\textsuperscript{44} For example, the organisations and governments collecting the data have different definitions of what constitutes terrorism, making consistent counting impossible. Government figures are biased as they count incidents using a definition of terrorism which reflect their political ideals and policy concerns, while non-governmental organisations generally have to use media reports to compile their databases, therefore only including incidents which make it into the mainstream news. For this reason most domestic terrorism in countries such as Sierra Leone, Sri Lanka, Algeria or Colombia are ignored or reported very unevenly, and at the same time it is difficult to judge whether an attack can be attributed to terrorism or whether it is part of a continuing civil war.\textsuperscript{45} Most databases are incomplete with

\textsuperscript{41} Pillar, op. cit., pp. 217-235.
gaps and cover different time periods, and some even change their criteria for counting terrorist incidents halfway through.\textsuperscript{46} For example, the MIPT Terrorism Knowledge Base covers international terrorism incidents from 1968 to 1997 and from 1998 it claims to include international and domestic incidents.\textsuperscript{47}

This, together with the rareness of terrorism incidents, makes the use of risk management or cost benefit calculations awkward. Where as the incidents of other social phenomenon such as crime are very frequent, incidents of terrorism, especially large attacks, are very rare in comparison. Richard Falkenrath believes that data on terrorism is not really appropriate for quantitative analysis, on which risk assessments predominantly relies.\textsuperscript{48} Apart from the limited poor quality data on terrorism, one of the main problems is that the ‘probability’ variable in the risk calculation is extremely difficult to measure. Terrorism is not a random phenomenon. Unlike other traditional subjects dealt with in risk management such as natural disasters, accidents or public health, terrorism is less prone to conforming to statistical patterns. Terrorism is caused by humans and they decide when and how to attack. This decision is not made randomly but is made after careful consideration and depend on, and is influenced by, external factors such as government decisions and actions. Terrorists attack deliberately in a form which does not conform to a pattern in order to surprise the opponent. As Falkenrath points out “[m]ost estimates of the probability of an event are based on some understanding of their past frequency. Simple applications of this frequency theory of probability can fail spectacularly when the possible event has occurred only rarely or never at all.”\textsuperscript{49}

Even if probability and risk could be calculated, the cost benefit calculation of reducing the risk of terrorism faces grave difficulties. Although one can calculate the direct cost of certain anti-terrorist policies such as new x-ray machines or explosive detectors at airports, there are a number of hidden costs such as the value of the lost time of travelers.\textsuperscript{50} Roger Congleton has calculated that if each airplane passenger in the U.S. spends half an hour longer at the airport due to increased security measures, the hidden cost of these measures would be around $15 billion per year.\textsuperscript{51} On the benefit side, calculations are even more difficult and more issues have to be taken into consideration. As Enders and Sandler point out, one way to estimate a portion of this benefit would be to calculate the reduced loss of life attributable to airport security measures – i.e. fewer people killed in skyjackings and bombings. If the net number of such lives saved, after adjusting for substitution into other life-threatening terrorist actions, can be measured, then the average value of a statistical life, although morally highly questionable, could be applied to translate these lives into monetary value. One would have to also add the reduced financial losses in the form of destroyed planes and buildings as well as other even further removed consideration, such as the recession in the airline industry and increased insurance premiums to name but a few.\textsuperscript{52} All of these financial values face great

\textsuperscript{46} Some of the databases available include “International Terrorism: Attributes of Terrorist Events” (ITERATE) or “Terrorism in Western Europe: Event Data” (TWEED) as well as the RAND-MIPT Terrorism Incident database.

\textsuperscript{47} The MIPT Terrorism Knowledge Base is available at http://www.tkb.org/Home.jsp.


\textsuperscript{49} Ibid., p.175.


\textsuperscript{52} Sandler and Enders, “An Economic Perspective on Transnational Terrorism”, op. cit., p. 314.
measurement difficulties as “it is difficult to confirm the absence of an occurrence and assign causality to that absence.”\textsuperscript{53} We can only really guess the number of terrorist attacks that are prevented by counter-terrorist measures. Some have argued that in order to tackle a question one would have to set up two worlds, one in which nothing is done to combat terrorism and one where measures against it have been implemented. Furthermore, in order to find out exactly which measures are effective, one would have to create a large number of different worlds where only one counter measure as well as a large number of combinations of measures would be tested.\textsuperscript{54}

Regardless of whether there are too many variables in play to calculate the effectiveness of counter-terrorism measures, the rationalist approaches are missing a vital point. Terrorism, as the name implies, is not so much about death and destruction, rather the primary aim is to spread terror and fear. The following section will explore the need of including some kind of assessment of the perception and feeling of fear in the general population in order to assess whether or not counter-terrorism policies are “effective”.

### 3. The neglected fear factor

Despite all the attention terrorism is not one of the top killers in the world. Only a few hundred people are generally killed each year by international terrorism. John Mueller points out that more people in the West are killed by lightning, accidents caused by deer, allergic reactions to peanuts or drowned in the bath and toilet than are killed by terrorism.\textsuperscript{55} And it is clear that compared to fatalities due to war, heart and lung disease, cancer or simple traffic accidents, the number of direct terrorist victims seems minuscule.\textsuperscript{56} The U.S. alone suffers around 40 000 fatalities each year through traffic accidents and worldwide there are around 1.2 million people killed in traffic each year.\textsuperscript{57} 9/11 killed around the same number of people that die in traffic accidents around the world every day. There are clearly many other more acute things people should “rationally” worry about than terrorism. This is highlighted by Benjamin Friedman, who argues that “[t]elling Kansan truck drivers to prepare for nuclear terrorism is like telling bullfighters to watch out for lighting. It should not be their primary safety concern.”\textsuperscript{58}

\textsuperscript{54} Tudge, Colin: “When men have lost their reason: is the war on terrorism working?”, \textit{New Statesman}, (April 12, 2004).
\textsuperscript{56} For more on this point see Schneider, Bruce (2003): \textit{Beyond Fear – Thinking Sensibly About Security in an Uncertain World}, New York, Copernicus Books, pp. 30.
Table 1: Fatalities in International Terrorist Incidences

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td>40</td>
</tr>
<tr>
<td>1971</td>
<td>50</td>
</tr>
<tr>
<td>1974</td>
<td>60</td>
</tr>
<tr>
<td>1977</td>
<td>70</td>
</tr>
<tr>
<td>1980</td>
<td>80</td>
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<tr>
<td>1983</td>
<td>90</td>
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<tr>
<td>1986</td>
<td>100</td>
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<tr>
<td>1989</td>
<td>110</td>
</tr>
<tr>
<td>1992</td>
<td>120</td>
</tr>
<tr>
<td>1995</td>
<td>130</td>
</tr>
<tr>
<td>1998</td>
<td>140</td>
</tr>
<tr>
<td>2001</td>
<td>150</td>
</tr>
<tr>
<td>2004</td>
<td>160</td>
</tr>
</tbody>
</table>

Table 2: The 10 leading causes of death in the U.S. in 2001

<table>
<thead>
<tr>
<th>Causes of Death</th>
<th>Deaths</th>
<th>% of total deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Causes</td>
<td>2,416,425</td>
<td>100.0</td>
</tr>
<tr>
<td>1. Diseases of heart</td>
<td>700,142</td>
<td>29.0</td>
</tr>
<tr>
<td>2. Malignant neoplasms</td>
<td>553,768</td>
<td>22.9</td>
</tr>
<tr>
<td>3. Cerebrovascular diseases</td>
<td>163,538</td>
<td>6.8</td>
</tr>
<tr>
<td>4. Chronic lower respiratory diseases</td>
<td>123,013</td>
<td>5.1</td>
</tr>
<tr>
<td>5. Accidents</td>
<td>101,537</td>
<td>4.2</td>
</tr>
<tr>
<td>6. Diabetes mellitus</td>
<td>71,372</td>
<td>3.0</td>
</tr>
<tr>
<td>7. Influenza and pneumonia</td>
<td>62,034</td>
<td>2.6</td>
</tr>
<tr>
<td>8. Alzheimer's disease</td>
<td>53,852</td>
<td>2.2</td>
</tr>
<tr>
<td>9. Nephritis, nephrotic syndrom and nephrosis</td>
<td>39,480</td>
<td>1.6</td>
</tr>
<tr>
<td>10. Septicemia</td>
<td>32,238</td>
<td>1.3</td>
</tr>
<tr>
<td>Terrorism</td>
<td>Aprox. 3000</td>
<td>0.12</td>
</tr>
</tbody>
</table>

For terrorism violence is only the means to the end of spreading the psychological effect of fear. Fear is the main component of terrorism. The risk of directly being the victim of a terrorist attack is tiny; coconuts falling from trees kill more people each year.\(^6\) The perception of threat, or risk, and any resultant fear from such perceptions, bears no relation to the actual risk as “[t]he general public and the political leadership tend to perceive the threat of terrorism as a greater problem than the available data would indicate.”\(^6\) This perceived threat and fear of terrorism is reflected in the reduced number of people flying following 9/11. To illustrate this perception of risk more graphically, Michael Sivak and Michael Flannangan have calculated the probability of being killed in a domestic US non-stop flight in a major US airline, in a 10-year period, as about eight in one hundred million. At the same time, the probability of being killed while driving on a rural interstate highway in 2000 was about 4 in a billion per kilometre. From this they conclude that driving the distance of an average US domestic flight is 65 times more risky than flying, and for flying to become as risky as driving, airplane disasters on the scale of 9/11 would have to happen once a month.\(^6\)

Why do people fear terrorism more than other more likely causes of death and other risks? Why are they not so worried about traffic accidents, diseases or natural disasters such as tsunamis that kill millions every year? For scholars in the field of risk perception these questions are nothing new and constitutes natural human behaviour. It is widely accepted in risk perception that there is a sometimes very wide disparity between the perception of the public of risk and the risk indicated by the statistics compiled by experts. The reaction to dangers does not seem to match the numerical odds. The literature on misperception in risk assessment is substantial and a number of different explanations for this “false sense of insecurity”\(^6\) have been identified.

Some point to the fact that people are more afraid of things they cannot control compared to things they can such as flying and smoking.\(^6\) Others add that people fear the risk of being harmed by unfamiliar or exotic things such as nuclear material or sharks more than everyday hazards as falling down the stairs.\(^6\) Again different scholars highlight that people are more fearful and focus more on extreme and dramatic events that kill many people in one go.\(^6\)

Related to this, authors such as George Loewenstein, et al., argue that people are more fearful the easier they can visualise or imagine a certain event. If the image of the event can be accessed easily people will be more fearful of it.\(^6\) Things such as terrorism bring to mind dramatic images of disaster, such as planes flying into the Twin Towers, which prevents people from weighing up the small probabilities of such events. Extreme event such as terrorist attacks, plane crashes or jackpot lottery wins are generally reported more intensely and remembered more easily than other media reports on risks such as cancer. With pictures of these rare events more easily available to people, the probability is generally overestimated.

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\(^6\) Falkenrath, op. cit., p. 170.
Similarly, when the media report specifically on one normal person’s life who was in the wrong place at the wrong time, people generally connect with that person, be it through the tearful appeal for help from relatives or the dramatic last words crackling over the mobile phone line from the inside of a hijacked plane. The personal insight into the fate of average people makes the audience imagine themselves or a family member being in that plane which crashed or in that building that collapsed. People fear such events disproportionately regardless of the statistical insignificant risk.

Some argue that the disproportionate fear of terrorism can be put down to the deliberate nature of the violence. Daniel Byman points out that, on a personal level, it causes more grief and emotional turmoil when a family member is murdered then when he or she is killed in a traffic accident, even though it does not change the fact of death and loss. This is reflected by our generally universal societal rules which consider deliberate killing to be worse and deserving of harsher punishment than killing someone by accident. Taking many of these points into consideration Cass Sunstein argues that strong emotions produce a larger behavioural response than do statistically identical risks. He points to what he calls a “probability neglect” which results from strong emotions, and this makes people focus on the badness of the outcome and makes them disregard the probability of the event ever occurring. It is possible to recognise a hazard, evaluate the risk, and decide if and what necessary steps to take to minimize the risk. However if one is confronted with a risk that evokes a strong emotional reaction in the form of fear, we typically misperceive the risk or act as if we misperceive the risk.

4. Thinking about alternatives and supplements

Even though some may consider it to be dangerous to simply lull “the public into a false sense of complacency” and lead “them to feel that they are secure through seemingly harmless placebo policies”, the effect of fear has to be an important part in assessing the effectiveness of counter-terrorist measures. “A special difficulty here consists in the problem of quantifying and monetizing fear and its consequences, a problem that has yet to be seriously engaged in the relevant literature.” So far fear has not been an issue in measuring the effectiveness of counter-terrorism measures but one has to realise that not only those killed are victims of terrorism, but those who fear it as well. Fear in a society is a real cost as people stop flying, avoid large gatherings, and spend time and money to reduce their anxiety. As terrorism involves the exploitation of fear, which is not always a “rational” feeling, can rationalist approaches adequately measure the effectiveness of counter-terrorist policies? If fear is one of the main components of terrorism, should not the effectiveness of counter-terrorism measures also be assessed by the level of fear they reduce? Should the focus be to shift away at least partly from the expert to the layperson, to those who are the victims of terrorism and experience its effects directly as the emotional state of terror or fear?

73 Sunstein, op. cit., pp. 132-133.
74 Friedman, op. cit., p. 29.
The obvious problem one faces is how to ‘measure’ or gauge fear. Considering that the rationalist economic measurements have difficulties, sociological and psychological empirical measurements will seem even less exact. Estimating the feeling of fear in a society and of individuals due to terrorism seems impossible. Nevertheless, a number of indicators, which are supposed to highlight the general feeling of fear in a society, have been suggested. For example one could examine consumer confidence as an indicator of the public mood or the level of domestic and international support for the government and its policies as an indicator of the level of fear. However, the problem is that these indicators are affected by a vast range of other factors not related to security from terrorism, such as the state of the economy with the employment rate and inflation as well as general dissatisfaction with the government’s performance in other areas.\footnote{Morag, op. cit., p. 315.}

A different potential way of assessing the general feeling of safety would be to examine the changing patterns of tourist travel. Do people in Germany still go on holiday to Indonesia, Spain or London, or has there been a change in their holiday-destination choice due to terrorism? There is general consensus that 9/11 had a devastating effect on tourism, nevertheless, it is difficult to prove that a change in the long-term tourism patterns across the world are predominantly due to terrorism. There are many other potential variables which could contribute to a change of tourism patterns.

As a result, one seems forced to return to empirical evidence such as public opinion polls to give us a sense of how people feel about the counter-terrorism policies implemented by their governments. There are number of opinion polls one could consult on the general issue of fear of terrorism. In an opinion poll conducted in the U.S. in 1998/99 84 percent of the general public considered international terrorism to be the most ‘critical threat’ to their country above all others and 61 percent of the questioned ‘leaders’ viewed it the same way.\footnote{Rielly, John E. (1999): \textit{American Public Opinion and U.S. Foreign Policy}, Chicago, Chicago Council on Foreign Relations, p. 15.}

In Europe the European Commission conducted four Eurobarometer public opinion polls between autumn 2001 and spring 2003, and asked 1000 people in fifteen member states about their fears. The results indicated that the fear of terrorism fluctuated between 86 and 78 per cent.\footnote{European Commission, 2001-2003, \textit{Standard Eurobarometer 56-59}, Brussels: Directorate-General Press and Communication, at http://europa.eu.int/comm/public_opinion/standard_en.htm.}

There have been a number of other attempts to capture the feeling of the population in questionnaires, interviews and opinion polls. Reports of the Allensbacher Institute of Public Opinion Polls have shown that the fear of terrorist attack in Germany has dropped from 56 per cent in December 2001-January 2002 to 45 per cent in December 2003 and 29 per cent in January 2004. However, following the attacks in Madrid this feeling of fear rose again sharply to 57 per cent in April 2004, a higher rate than following the 9/11 attacks.\footnote{Institut für Demoskopie Allensbach:“Mehr als jeder zweite Befürchten einen Terroranschlag in Deutschland”, \textit{Allensbacher Berichte}, No. 7 (2004).}

In stark contrast, an opinion poll by Populus in the UK shortly after the July 7\textsuperscript{th} terrorist attacks in London pointed out the 78 per cent of the people questioned will not change their normal routine, travel, holiday or trips to central London as a result of the terrorist attacks, indicating that the fear of terrorism appears to be substantially lower than in Germany.\footnote{Populus: “Terrorist Bombings & The Olympic Survey”, published in \textit{The Times}, 12 & 16 July 2005.}

Although these differences are interesting considering that the UK is a more likely target, these opinion polls face a number of problems. Apart from the classical problems associated with opinion polls and interviews, there is another major flaw: how far can a questionnaire really capture the feeling of fear? A paper-based response by ticking boxes or giving the feeling of fear a number on a scale of one to ten seems to miss a vital point. Even when
interviews are used they are simply analysed according to what was roughly said. Questions are formulated along the line of: Here is a list of things that some people say they are afraid of. For each of these, please tell me if, personally, you are afraid of it, or not? Or: Are you afraid that it will come to a terrorist attack in Germany in the near future or not? The answers are then placed in categories and made into tables and graphs to show the increase or decrease of fear in the population.

If fear is the main component of terrorism and sits so uneasily with rationalist approaches, it may be fruitful to consider an alternative methodological approach to ‘measuring’ the effectiveness of counter-terrorism policies: constructivism. Although not explicitly framed in such terminology, constructivism has played an important role in terrorism research in the past, as it has helped in the understanding of the controversy and difficulty of defining terrorism. The phrase ‘one man’s terrorist is another man’s freedom fighter’ was then often used to highlight “the socially constructed nature of agents or subjects”. Constructivism reminds us that the concept of terrorism is constructed through language and within particular political contexts. There is no concrete phenomenon called terrorism in the world that exists independent of our subjective understandings and our culture.

As we have seen, the risk of terrorism for the average layperson is minimal and the fear produced stands in no “rational” proportion to the risk. If fear cannot be comprehended rationally and is in fact socially constructed then a social constructivist methodology seems appropriate to complement or substitute the rational risk-management and cost-benefit approaches. As Alexander Wendt points out “[s]ocial threats are constructed, not natural”. The feeling of fear originates from the idea that terrorism is a threat. This feeling in turn influences our behaviour and the behaviour of the state. They introduce counter-terrorism measures which in turn reinforce our idea that terrorism is a threat. And so the circle continues. If the threat of terrorism is socially constructed, the measures aimed at dealing with it also have to be socially constructed through language. Therefore, could the effectiveness of these measures be assessed by examining the discourse that constructs the threat and the response?

It is widely accepted that discourse analysis has to be based on text, written or oral, by authorized speakers and writers and that speech acts only enter the discourse if they are articulated by important people. In other word, the researcher should focus on experts. In line with this, one could analyse the discourse on counter-terrorism held by authorized speakers such as government officials, politicians or counter-terrorism experts and examine which counter-measures are talked to be effective. However, this would not give us an insight into whether these measures are good at reducing the fear of the general public. Jennifer Milliken points out that the main weakness of the dominant approach of focusing on the expert discourse lies in the fact that it leaves out what happens once policies are implemented. It is not clear to what extent the measures considered effective in the expert

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discussion really transcend to the discourse of the layperson. And it is the layperson who is predominantly the target of terrorism today, not the expert. The emphasis should be on the layperson as an alternative to the prevailing and dominant focus on experts in policy decisions and the continuing trend of expertisation. Is not the dominant focus of much of the existing discourse analysis on official texts by politicians and experts with authority a contradiction to the central constructivist argument of questioning established knowledge? A central characteristic of terrorism today, so we are told, is that it targets the layperson. If the layperson is the target of terrorism, are the opinions and feelings found in the ‘layperson discourse’ not essential in the evaluation of the effectiveness of counter-terrorism?

The obvious problem arising from this is how to access this layperson discourse. Milliken suggests here to “use first hand media reports, Internet network sources, and even fieldwork and interviews”. One could combine parts of the opinion poll and interview method mentioned above with a more social constructivist methodology such as discourse analysis. The answers given in interviews and opinion polls such as the ones mentioned above are without doubt of importance; however, how something is said and what is conveyed through the use of specific language and rhetoric also needs to be considered. Closed questions about the feeling of fear can therefore only offer limited insight and a more open-ended conversation might be more revealing of the underlying feelings. Interviews of the general public, giving them the opportunity to talk freely on the topic of terrorism and the policies to combat it, could provide a useful insight into the layperson discourse and the social constructs embedded in it. Researchers could also focus on TV talk show audiences, public meetings, Internet chat rooms and blogs or local community newspapers written by laypersons. Alternatively, one could focus on the transitional level between expert and layperson. Here expert knowledge is (re-)constructed by the mass media before it is (re-)constructed again and consumed and incorporated into the layperson discourse. Here, due to their large circulation, availability and the consistency they provide, popular tabloid newspapers read by the average person in the street such as the Sun in the UK or the Bild in Germany might prove very suitable. Others may question how far the discourse found in tabloid newspapers really represents the discourse of the average layperson. Antonio Gramsci for example would refer to the media as well as other institutions of civil society which regulate populations such as churches, schools and universities, as the extended state. Do newspapers not often have a certain agenda according to their political orientation and is their discourse not shaped by the elite owners of the corresponding media group? How far is this discourse really taken up by the population?

Whatever source one eventually decides on examining, the researcher is still left with the problem of how to conduct a discourse analyse of the layperson or layperson-near discourse. The literature on discourse analysis in IR has increased over the last couple of years and there a number of studies which aim to examine the socially constructed nature of the world through the use of such methodology. Although a how-to guide of constructivist discourse analysis is opposed by more post-modern elements who consider it a way of silencing

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87 See for example Weldes, Jutta; Laffey, Mark; Gusterson, Hugh and Duvall, Raymond (eds.) (1999): Cultures of Insecurity, London, University of Minnesota Press.
alternative perspectives and interpretations of knowledge, Jennifer Milliken,\(^{88}\) as well as Roxanne Doty,\(^{89}\) suggest a method which may be fruitful in the effort to assess the effectiveness of counter-terrorism. They provide a short insight into ‘predicate analysis’, which has the potential to be used in what this paper calls for: the evaluation of counter-terrorism policy focusing on their ability to reduce fear in the general public. Using predicate analysis to examine newspaper articles in tabloids related to terrorism and counter-measures and focusing on predication — i.e., the verbs, adverbs and adjectives that construct nouns as a particular kind of thing, with particular characteristics and capacities — one could gain useful information on what policies are talked to be effective and constructed as reducing fear. One could examine the identity construction of the other, i.e., the “terrorist” as the source of insecurity, looking not only at the construction of insecurity by his actions but also the insecurity constructed by “the very visibility of its mode of being as other”.\(^{90}\) Apart from this, focusing on the “terrorist other”, one could also centre on the nouns representing certain counter-terrorism policies and the predication of these measures by the verbs, adverbs and adjectives surrounding them as a means that can give us a glimpse into their capacities of giving people the feeling of safety. So the language used in the predications of things, such as ‘armed soldiers’ at airports, construct them in a certain way, giving them certain characteristics and therefore gives us an idea of their effectiveness through their ability to reduce fear.

It is clear that more research is needed to establish in more detail what alternatives or supplements there are to the existing rationalist approaches and whether the proposed constructivist discourse analysis of the layperson (near) discourse is a fruitful option. What ever other possibilities one may consider suitable for accessing the appropriate discourse level, one thing this paper hopes to have conveyed it that the rationalist methods alone do not suffice.

**Conclusion**

The aim of this paper was to highlight the weaknesses of the dominant rationalist ways of assessing the effectiveness of counter-terrorism and with this prepare the stage for alternatives or supplements to be considered. The traditional rationalist approaches to measuring the effectiveness of counter-terrorism measures such as risk management or cost-benefit calculations do not provide a full satisfactory answer and face a number of difficulties. Data used is very unreliable and there are too many intervening variables that can influence their calculations. Examining quantitative data on terrorism such as the number of incidents or killed terrorists to establish patterns of behaviour and ascribe effectiveness to certain counter-measures does not really fit the fluctuating, random-like nature of terrorism, who’s aim it is to surprise and catch people of guard.

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Most important, however, is that they neglect the central characteristic of terrorism: the spread of terror and fear. Although the fear of terrorism may be disproportionate to the risk, it is vital to take it into consideration when discussing the effectiveness of counter-terrorism measures. One may even want to go as far as claiming that the feeling of fear is an indicator of whether counter-terrorism measures are effective, regardless of whether they truly contribute to the quantitative reduction of terrorism. If counter-measures reduce the fear of terrorism among the general population then they are effective. Therefore, the feeling of fear is an important publicly available mean of evaluating the effects of existing counter-terrorism policies. Whether the proposed constructivist methodology of discourse analysis, or more precisely predicate analysis, can provide a useful addition to the dominant rationalist approaches need to be examined in more detail. However, the focus on the layperson’s fear of terrorism is essential as an alternative to the prevailing role of experts in the creation of government policies.

Ultimately one should also consider not only questioning the rationalist approaches and suggesting constructivist style alternatives but also deconstructing the apparent Western practice of measuring and counting everything. Why does the West have to measure things? Measuring implies counting and numbers, which lead us to believe that increases and decreases are possible. If we can count things and measure them then we feel they exist and are able to comprehend them. Generally the westerns scientific influence makes us believe that if a problem can be quantified, it can be measured, and therefore it is possible for it to be solved. The debate over the winning or losing of the ‘war on terrorism’ lends itself to the further examination of not only the moderate constructivist application of discourse analysis and the ‘measurement’ of counter-terrorist effectiveness, but also provides us with a possibility of deconstructing the dominant scientific philosophy of measuring.

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