What is the nature of terrorism today? How is it affecting international relations? The Calouste Gulbenkian Foundation asked prominent authors from various nations to examine these questions. Terrorism and International Relations addresses such issues as terrorist itineraries: causes, networks and biographies; the costs of terrorism and defense strategies; the internationalization of terrorism; law and terrorism; religion and civilization; and national and international responses to terrorism, with contributions by:

- Yonah Alexander
- Daniel Benjamin
- Monique Canto-Sperber
- Gareth Evans
- Richard Falkenrath
- Bruno S. Frey
- Fernando Gil
- Daniel Hamilton
- Aboubakr Jamai
- Mark Juergensmeyer
- Farhad Khosrokhavar
- Simon Luachinger
- Sergio Marchisio
- Brigitte L. Nacos
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- Jorge Sampaio
- Daniel Sibony
- Florence Taubmann
- Emilio Rui Vilar
- Paul Wilkinson

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Chapter 16
Costs and Benefits of Anti-Terrorism Policies

Bruno S. Frey and Simon Leuchinger

Over the last few years, terrorism has become a major concern in all societies. The terrorist attacks in New York, Madrid and London have had a large and lasting impact on both citizens and politicians alike.

Despite the vastly increasing importance of terrorism, the way terrorism is measured has not changed: it still only takes into account the number of incidents and the number of fatalities. These measures neglect the much larger consequences of terrorism on society, be they economic, social or political. This chapter presents a totally new approach to measuring terrorism, based on recently emerging Happiness Research. It shows that it is possible to measure the effect of terrorist activities on people's well-being. It includes all possible consequences on economic, social and political spheres, to the extent that they are considered to be relevant by the individuals. An application to terrorism in the United Kingdom and the Republic of Ireland shows indeed that people are really concerned about terrorism and that terrorist acts reduce their life satisfaction considerably.

Even more importantly, the recent surge in terrorism has led to large-scale anti-terrorist policies based on deterrence. The object is to severely punish actual and prospective terrorists in order to dissuade them from engaging in such activities. Experience has shown, however, that deterrence policy has not been effective; it may even have led to counterproductive effects. But what is the alternative? This paper suggests three specific anti-terrorist policies, based on a positive, rather than a negative, approach. A comparative analysis suggests that these policies are superior to deterrence policy and should be seriously considered.

The following section discusses the consequences of terrorism and presents the new measurement based on life satisfaction data. The
third section suggests three anti-terrorist policies based on a positive, rather than on a deterrence approach. Section four concludes.

Consequences of Terrorism

In recent years, economic scholars analyzed the effects of terrorism on various aspects of the economy. In the following, we present two studies that measure the costs of terrorism for the economy and the society as a whole. The first study measures the economic consequences of the Basque conflict, whilst the second study measures the overall consequences of the Northern Ireland conflict.

Economic consequences

Estimating the overall effect of terrorism on the economy is faced with the problem of how the economy would have developed without terrorism. To construct a counterfactual for the development of the Basque country, Abadie and Gardeazabal use a weighted combination of other Spanish regions. This 'synthetic' control region resembles relevant economic characteristics of the Basque Country before the outset of Basque terrorism. The economic evolution of this 'counterfactual' Basque Country without terrorism is then compared to the actual experience of the Basque Country. Until 1975, the actual and synthetic Basque Countries behave similarly. After 1975, when ETA's terrorist activity becomes a large-scale phenomenon, per capita GDP in these two regions diverge. The Basque Country takes values up to around 12 percent below those of the synthetic control region. Overall, the result of this study suggests a 10 percent loss in per capita GDP due to terrorism in the 1980's and 1990's.

However, this study does not capture the total costs of terrorism. The fear of individuals and the grief of the victims and the bereaved

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4 See fn 2.
are disregarded. It follows that the damage caused by terrorism may be considerably underestimated. In the following, we present a study that tries to measure these overall consequences of terrorism.

**Overall consequences**

The analysis is based on data on self-reported life satisfaction collected in surveys. Self-reported life satisfaction expresses the extent to which respondents judge their lives in a favorable way. It is influenced by various factors, such as respondents' health and financial situation, but also by political stability or terrorism. These survey data are combined with indicators of terrorist activity. Using multivariate regression analysis, the effect of terrorism on life satisfaction and the effect of income on life satisfaction can then be estimated. With these two estimates, it is possible to monetize the overall consequences of terrorism. Frey, Luechinger and Stutzer\(^5\) use this approach to assess the costs of terrorism in France, the United Kingdom and the Republic of Ireland. By way of illustration, an analysis of the Northern Ireland conflict is presented here.

Life satisfaction data are taken from the Euro-Barometer Survey Series (1970-1999); the variable is the categorical response to the following question: “On the whole, are you very satisfied [4], fairly satisfied [3], not very satisfied [2], or not at all satisfied [1] with the life you lead?” As an indicator for the salience and intensity of terrorist activity, the number of deaths resulting from the conflict in Northern Ireland is used, as compiled by Sutton.\(^6\) This indicator is not restricted to terrorism in particular, but includes political violence in general. In order to identify the effect of terrorism on individuals’ life satisfaction, the authors use a combined time-series (for the period 1975 to 1998) and cross-section analysis (with Northern Ireland, the Republic of Ireland and Great Britain). Specifically, a micro-econometric happiness function is specified, whereby the life satisfaction of an individual living in a particular region at a particular time is explained by differences in the level of terrorism across the three regions and over time,

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\(^5\) See fn 3.

\(^6\) Malcolm Sutton, *Bear in Mind These Dead: An Index of Deaths from the Conflict in Ireland 1969-1993* (Belfast: Beyond the Pale Publications, 1994). An updated index is provided by the Conflict Archive on the Internet (www.cain.ulst.ac.uk).
the individual's household income, other personal and socio-demographic characteristics, as well as region and time fixed effects.

The estimation results suggest that the number of terrorist fatalities has a statistically significant negative effect on reported life satisfaction. For an increase of one standard deviation in the number of recorded fatalities, i.e. an increase of 53.7 fatalities, life satisfaction is lowered by 0.041 on the four-point scale. This effect is about a tenth of the effect of being unemployed rather than employed. Thus, the indicator for terrorism is correlated with people's subjective well-being in a sizeable way.

The estimated coefficients for terrorism and individual income can be used to calculate the hypothetical willingness-to-pay for a discrete change in the level of terrorism. Frey, Luechinger and Stutzer' calculate a hypothetical willingness-to-pay of a resident of Northern Ireland for a reduction in the number of fatalities to the average level of Great Britain and the Republic of Ireland. Accordingly, a resident of Northern Ireland (with average household income) would be willing to pay around 41% of his income for a reduction in terrorist activity to the level that prevails in the more peaceful parts of the country or its sister republic. This estimate is surprisingly high. However, it might to some extent reflect the ferocity of the conflict. After all, Northern Ireland was on the brink of all-out civil war. This result indicates that overall consequences may far outweigh purely economic consequences.

Alternative Anti-Terrorism Policies

In the following, we present alternative anti-terrorism policies to the widespread deterrence policy. These policies are favorable with regard to their effectivity, but also because they are not expensive in terms of economic costs or infringements on civil liberties. The three policies proposed are the polycentricity strategy, the strategy of diffusing media attention and the strategy of positive incentives.

The polycentricity strategy

Terrorists seek to destabilize the polity and damage the economy. One way to immunize a country against terrorist attack, and therewith

7 See fn 3.
provide disincentives for terrorists, is to decentralize various aspects of the society.⁸

A system with many different centers is more stable than a more centralized one. When one part of the system is negatively affected, one or several other parts can take over. The more centers of power there are in a country, the less damage is caused in case of an attack. The terrorists anticipate that less damage will be caused in a decentralized society and have, for that reason, a lower incentive to attack in the first place. In contrast, in a centralized system, most decision-making power, with respect to the economy, polity and society, takes place in one location. This central power is an ideal target for terrorists, and therefore runs a greater risk of being attacked.

In the following, polycentricity in the economy, polity, and other parts of society are discussed.

*Market Polycentricity.* A market economy is based on an extreme form of decentralization of decision-making and implementation. Under competitive conditions, the suppliers are able to completely substitute for one another. If one of them is eradicated due to a terrorist attack, the other suppliers are able to fill the void. They are prepared, and have an incentive, to step in. No special governmental plans have to be set up for such substitution. The more an economy functions according to market principles, the less vulnerable it is to terrorist attacks.

The resilience of a market economy may be illustrated by the 9/11 attack. Though this was the gravest terrorist attack so far, the economic system as a whole was hardly affected. Due to its decentralized market economy, the United States’ economy was only very marginally hit; the many other centers of economic activity were not directly affected at all. Even in Manhattan, the recovery was remarkably quick. This does not, of course, mean that there were no human or material losses. But the point is that even this dreadful blow was not able to seriously damage a decentralized economy like the American economy. Many of the high costs were the result of the political response to the attack, and not the result of the attack itself. Viewed from this

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perspective, the attack was far from being a victory to the terrorists, but rather demonstrated the strength of a decentralized economic system.

**Political Decentralization.** Political polyarchy may take two forms: horizontal decentralization or separation of powers, and vertical decentralization or federalism.

**Separation of Powers:** Political authority is distributed over a number of different political actors. Most important is the classical separation of power between government, legislature and courts.

**Federalism:** Political power can also be spatially decentralized and be divided over various levels of government.

**Spatial decentralization and a polycentric society:** The high population density typical for large urban areas makes them ideal targets for terrorists and other attackers. The spatial decentralization of the population is of particular importance in cases where terrorists use biological and chemical weapons. In areas of very dense population, viruses (such as smallpox) introduced by terrorists spread quickly, leading to many casualties in a short period of time.

The danger of physical centralization has been demonstrated by the two terrorist attacks on New York’s twin towers. The first attack in 1993, when a bomb exploded in the basement garage of the World Trade Center, destroyed a central command post of the emergency services. Nevertheless, the Mayor of New York, Rudolph Giuliani, ordered the establishment of a new central Office of Emergency Management in a building next to the World Trade Center. On September 11, 2001, this Office, which was intended to coordinate all police and support units in the event of a catastrophe, including terrorist attacks, was again destroyed and proved to be useless.

When faced with terrorism, most countries have an overwhelming urge to centralize decision-making powers. One such example is the United States. The mega-merger of various bodies into the new Department of Homeland Security is a move in the wrong direction, and increases the vulnerability of these authorities. Any terrorist group able to attack this Department, e.g. by interfering with its electronic system, can inflict considerable damage.
More constitutionally, the separation of powers switched in favor of the executive branch. The ability of the public, the press, and even Congress to gain access to information necessary in order to hold the executive accountable for their actions has been restricted. But such reactions can also be observed in many other countries. According to a study of six countries—Canada, France, Germany, India, Israel and the United Kingdom—a common structural approach in the fight against terrorism is the centralization of decision-making.

Why does such a centralizing policy reaction occur, despite the fact that it may be counter-productive? Two reasons may be adduced. First, deterrence and a “strong central command” visibly demonstrate the determination of politicians to fight terrorism. Second, government politicians and public bureaucrats exploit the unique situation created by terrorist threats to extend their own competencies. It is, therefore, all the more important to safeguard political and economic decentralization at the constitutional level.

The strategy of diffusing media attention

In this section, another anti-terrorism policy, based on reducing the marginal benefits of terrorism to terrorists, is discussed. The policy aims at reducing the amount of publicity terrorists can get from committing violent acts.

Dramatic terrorist actions receive huge media coverage. Terrorists have become very skilled at using the media to achieve maximum publicity. Moreover, the media share a common interest with the terrorists: the desire to make news and to ensure the longevity of the

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"story." The journalists are pressurized to enlarge upon incidents of potential interest to the viewers. This multiplies the effects of a particular terrorist act.

Terrorists can be prevented from committing violent acts if they benefit less from them. A specific way to ensure that terrorists derive lower benefits from terrorism consists of the government ascertaining that a particular terrorist act is not attributed to a particular terrorist group. This prevents terrorists receiving credit for the act, and thereby gaining full public recognition for having committed it. The government must see to it that no particular terrorist group is able to monopolize media attention. Therefore, several scholars advocate media censorship, statutory regulations or voluntary self-restraint. All information as to who committed a particular terrorist act would then be suppressed. But in an open and free society, it is impossible to withhold the type of information which the public is only too eager to know. Further, such intervention does not bind the foreign press and news media. Any news about the occurrence of a terrorist act and the likely perpetrators is therefore very likely to leak out. Terrorists seeking publicity can easily inform foreign news agencies. This first strategy must therefore be rejected as being ineffective and incompatible with democracy, as the freedom of the press is seriously restricted.

We propose an alternative way of diffusing media attention without infringing on the freedom of the press. Media attention can be dispersed by supplying more information to the public than would be wished by the perpetrators of a particular violent act. This can be done by making it known that several terrorist groups could be responsible for a particular terrorist act. The authorities have to reveal that they never know with absolute certainty which terrorist group may have committed a violent act. Even when it seems obvious which terrorist group is involved, the authorities can never be sure. They have to refrain from attributing a terrorist act with any degree of certainty to a particular group, as long as the truth of the matter has not been established. In a lawful country, based on the separation of

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power, this is the privilege of the courts, but not of the executive branch.

In the case of many spectacular terrorist events, no credible claims by the perpetrators have ever been made. Examples are the sarin nerve-gas attack in Tokyo (1995) or the bombing of the Federal Office Building in Oklahoma City (1995). Although the perpetrators were later identified and are known today, such knowledge did not exist when the events occurred. At that time, many different terrorist groups might have been credible attackers.

In many cases, however, several groups claim to have committed a particular terrorist act. For example, in the terrorist attack on the discotheque “La Belle” in Berlin in 1986, the Anti-American Arab Liberation Front, the RAF, and an offshoot of the RAF, the Holger Meins Commando, all claimed responsibility for the blast.

The government has to emphasize that any one of the groups claiming responsibility could be the one responsible. As a consequence, the media disperses public attention to many different, and possibly conflicting, political groups and goals. When only one group claims to have committed the terrorist act, the authorities responsible have to point out that such a claim is not necessarily substantiated.

The information strategy of refusing to attribute a terrorist attack to one particular group has systematic effects on the behavior of terrorists. The benefits derived from having committed a terrorist act decrease for the group having undertaken it. The group does not reap the public attention it hoped to get. This reduction in publicity renders the terrorist act (to a certain extent) pointless. The terrorists become frustrated and will either desist from further activities, or increasingly expose themselves to ordinary counter-terrorist methods by the police. The amount of terrorism will decrease; the dissatisfaction with existing political and social conditions will be expressed in different, less violent ways.

The strategy of positive incentives

Positive sanctions can consist of providing people with previously nonexistent or unattainable opportunities to increase their utility. Similarly, they can consist of offering non-violent alternatives to
address terrorists’ political goals. In economic terminology, the opportunity costs of being a terrorist are raised. We advance concrete anti-terrorist policies, based on opening up alternatives, namely re-integrating terrorists by providing them with access to the political process and welcoming repentants.\(^{15}\)

In the following, two specific policies for reintegrating potential and actual terrorists are discussed.

Reintegrating Terrorists and Granting Access to the Political Process. One of the most fundamental human motivations is the need to belong. This also applies to terrorists. In most cases, former connections are completely severed when joining a terrorist group. The isolation from other social entities strengthens the terrorist group, because it becomes the only place where the sense of belonging is nurtured.

An effective way of overcoming terrorism is to break up this isolation. Interaction between groups tends to reduce extremist views. Stopping the vicious circle of segregation and extremism can be expected to lower terrorists’ inclination to participate in violent activities. The terrorists need to experience that there are other social bodies able to give them a sense of belonging which, if that can be achieved, reduces the power of the terrorist leaders.

Further, terrorists can be granted access to the normal political process. This lowers the costs of pursuing the political goal by legal means and hence raises the opportunity costs of terrorism. There are various ways to motivate terrorists to interact more closely with other members of society and to pursue their political goals by legal means:

- The terrorists, and in particular their supporters and sympathizers, can be involved in the institutionalized political process. As will be discussed later, this approach was effective in the case of the Northern Ireland conflict.

- The terrorists can be involved in a discussion process, which takes their goals and grievances seriously and which tries to see whether compromises are feasible. There is strong evidence from experimental research in game theory that communication and personal contacts between players increases cooperation.

\(^{15}\) See also Frey and Luechinger, 2003, op.cit.; Frey, 2004, op. cit.
Welcoming Repentants. Persons engaged in terrorist movements can be offered incentives, most importantly reduced punishment and a secure future, if they are prepared to leave the organization they are involved with and are ready to talk about the organization and its objectives. The prospect of being supported raises a member's opportunity costs of remaining a terrorist. Such an approach has indeed been put into practice with great success. In Italy, a law introduced in 1982, the legge sui pentiti (law on repentants), left it up to the discretion of the courts to reduce sentences quite substantially, on the condition that convicted terrorists provide tangible information leading to the arrest and conviction of fellow-terrorists. The implementation of this principal witness program turned out to be an overwhelming success.\(^{16}\) It provided the police with detailed information, which helped to crack open the Brigade Rosse cells and columns.

A policy of providing positive incentives is far from ideal, but it has some important advantages compared to a deterrence policy. The interaction between terrorists and government is transformed into a positive sum game: both sides benefit. The proposals break the organizational and mental dependence of persons on the terrorist organizations. In contrast, deterrence policy locks prospective and actual terrorists into their organization and provides them with no alternatives but to stay on. The strategy proposed here undermines the cohesiveness of the terrorist organization. The incentive to leave is an ever-present threat to the organization. With good outside offers available to the members of a terrorist group, its leaders tend to lose control. The terrorist organization's effectiveness is thereby reduced. Although positive incentives may be insufficient to affect the hard core of the terrorist organization, they may still be effective in dissuading the sympathizers and supporters from supporting the terrorists.

Conclusion

This chapter aims at contributing to the debate on terrorism. First, we present a new and inclusive measurement of the extent of terrorism based on human well-being. This life satisfaction approach takes all consequences of terrorist acts into account, insofar as they affect individuals. We are able to show, in the case of France and the United

\(^{16}\) Wilkinson, op. cit.
Kingdom, that individuals living in regions greatly affected by terrorist acts suffer a considerable reduction in their well-being.

Second, we present anti-terrorist policies based on a positive approach. We suggest that polycentricity, diffusing media attention and offering positive incentives to desist from terrorism are alternative policies. We argue that these approaches are, in many respects, more effective than deterrence policy and, in particular, do not violate the cherished values of democratic societies.