



## TERRORIST CHOICE AND THE MEDIA

A Thesis submitted by

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## ABSTRACT

Studies in 'terrorism and the media' begin with the proposition that terrorists view media attention as important and desirable. These studies usually proceed by examining the characteristics of this media attention, especially volume. To the extent that they touch on terrorist behaviour at all, these studies tend to deal with terrorists' media strategies which are strongly tied to the terrorists' desire for media attention and predominantly assume that terrorists simply choose the action that has had the highest media attention accorded to it. This approach is disconnected from the study of underlying terrorist behaviour, especially terrorists' choice of action, and obscures the most important elements of this behaviour behind the general proposition of the desirability of media attention.

By contrast, this thesis recognises that terrorist choice is shaped by the media attention that is accorded to each type of terrorist action. Viewed in this way, terrorism is not simply a generic means by which terrorists obtain media attention. This new approach allows us to account for observed terrorist behaviour that cannot be incorporated into an analytical framework that simply depicts terrorists as choosing the single action that maximises media attention. Among its contributions, the analysis presented in this thesis accounts for: (a) choices of actions that are not expected to yield maximum media attention, (b) combinations of more than one action and (c) situations in which terrorists choose their action with reference to the media attention accorded to the actions of rival groups.

The analytical work is supported by significant independent archival research that collected the media coverage accorded to every act of terrorism perpetrated in West-Germany during the 1970s, a period when groups such as the Red Army Faction, 2<sup>nd</sup> June Movement and the Revolutionary Cells vied for their position in the terrorism context and demonstrated a sophisticated understanding of the media. By measuring the media attention accorded to individual actions, this thesis overcomes certain

analytical weaknesses that emerge when broader, more general, data is used. Only when the media attention that has been accorded to each type of action is collected and measured can a study of terrorist choice of action be effectively undertaken.

## CERTIFICATION

This thesis is entirely the work of *Gabriela Pohl* except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

The student's and supervisors' signatures of endorsement are held at USQ.

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<sup>1</sup> P. J. Phillips and Pohl (2014, 2015), Pohl (2015).

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# **Chapter 1 - Introduction**

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## **1.0 Introduction**

It is the purpose of this thesis to present an analysis of terrorist choice in a context where media attention is the desired but risky or uncertain outcome of terrorist activity. There can be few more important challenges than the development of a more complete understanding of the decision-making processes that shape terrorists' choices. The relevance of media coverage to the choices that terrorists make has attracted a great deal of scholarly interest and 'media and terrorism' has become a popular research program within terrorism studies. The analysis presented in this thesis is based on substantial archival research and the measurement of media coverage accorded to each act of terrorism perpetrated in the Federal Republic of Germany during the 1970s, a terrorism context which has attracted substantial scholarly interest in its own right. The thesis documents the nature and extent of media coverage attributed to terrorism during this period and explores, from the perspectives of orthodox and behavioural models of decision-making under conditions of risk and uncertainty, the patterns that terrorist groups' choices might exhibit when media coverage is desired but uncertain.

## **1.1 Overview of the Chapter**

This chapter is organised as follows. Section 1.2 explores the overarching objective of the thesis. In Section 1.3 the significance of the thesis as a contribution to the terrorism studies literature is discussed. In Section 1.4 an overview of the thesis is provided. In Section 1.5 the main patterns of terrorist choices identified by the theoretical and empirical analysis are summarised. Section 1.6 concludes the chapter.

## **1.2 Objective of the Thesis**

The study of media attention accorded to terrorist activity is a longstanding research program within terrorism studies. This research program has many different dimensions and has been analysed from many different perspectives. Media attention is generally considered to be an important objective of terrorism. Media

attention, if achieved by an act of terrorism, may play an important part in a terrorist group's communication strategy, facilitate intimidation of a wide audience and enhance the identity of the group responsible. Each of these things may have important secondary effects, including recruitment of supporters and members.

The analysis presented in this thesis starts with the generally agreed position that terrorist organisations want media attention for their group, their cause and their actions for a number of interrelated reasons and develops an analysis of the ways in which terrorists' choices of attack methods and actions may be shaped by their consideration of the amount of media attention that a particular action may achieve. The context in which the analysis is specifically grounded is the terrorism context experienced by the Federal Republic of Germany (West-Germany) during the 1970s. During this very active period for terrorism, several prominent groups emerged that have remained archetype examples within their relevant categories, defined by objectives, scope and strategy. It is of special interest to the analysis presented in this thesis that a part of the scholarly interest that has been shown in these groups derives from the fact that they are known to have developed relatively sophisticated media strategies during their active periods. The analysis applies several complementary models of the decision-making process, including both orthodox and behavioural models, in order to develop some insights into the terrorist decision-making process in a context where media attention is a desirable but uncertain or risky outcome of an act of terrorism.

The overarching objective of the thesis is shaped by a consideration of media attention as a desired outcome of an act of terrorism but which cannot be directly controlled or guaranteed by the terrorist group and is therefore subject to risk and uncertainty from their perspective. If a terrorist group could control media attention or guarantee a particular amount of attention for an act of terrorism, the decision to act would not be subject to uncertainty and the terrorist group would simply choose the type of action that would result in the optimum amount of media attention consistent with their objectives. The context in which terrorists operate and the intersections and interactions with the media are shaped dynamically by a complexity of factors that produce substantial divergence in the media attention

accorded from attack to attack and from attack type to attack type over time. This realisation, which is underrepresented in the literature, provides the foundation for the primary objective of this thesis which is to explore the descriptions of the decision-making process embedded within complementary orthodox and behavioural models and the predictions regarding patterns of terrorist choice that derive from their application in an attempt to develop our understanding of terrorist choice and the ways in which media attention accorded to acts of terrorism may shape those choices.

### **1.3 Significance of the Thesis**

The fulfilment of the overarching objective of this thesis encompasses at least several preliminary conclusions. Together, these shape the nature and significance of the contribution that this thesis makes to the terrorism studies literature. Specific aspects of the investigation are highlighted below:

- The analysis of terrorist choice and the ways in which choices may be shaped by the media attention accorded to acts of terrorism is placed within a well-defined analytical context focused on identifying patterns of terrorist group decision-making. The theoretical analysis is supported by examples constructed from a unique dataset of terrorist activity and media attention gathered during periods of intense archival research.
- The application of orthodox and behavioural models of the decision-making process generates several alternative but complementary perspectives from which to observe the development of terrorist groups' preference for particular actions or combinations of actions when media attention is desired but uncertain.
- Terrorist groups make their determination as to which type of action or combination of actions to perpetrate within a dynamic context in which the aggregate of terrorist activity and the media attention that is accorded to it evolves over time. The formation of expectations regarding the outcomes of planned action and the media attention it might or might not receive is reflected in different ways by each of the analytical models that are applied.

- The media attention that can be expected to result from any single terrorist action is uncertain and the terrorist group's preferences reflect a trade-off between the expected impact of a planned action and the possibility that the actual amount of media attention that it receives will diverge from the group's expectations.
- Each of the complementary models of decision-making encompasses this trade-off between expected outcomes and the possibility of divergence or risk. Each model contributes a unique treatment of this factor and other relevant aspects of the decision environment.

The existing literature tends to overemphasise terrorists' preferences for the attack method or type of action that results in the highest amount of media attention. This contains within it an implicit basic model of choice where expectations are shaped solely by the absolute amount of media attention accorded to terrorist actions in some preceding period or periods. This leads more or less directly to the conclusion that media attention 'causes' terrorist activity. At the very least, this is an incomplete picture. Although a terrorist group may always prefer more media attention to less, terrorist groups, either individually or in aggregate, are not observed to choose one single type of action. Rather, terrorist groups can be observed to combine more than one type of action, to choose one type of action in one period and a different action in another period and, significantly, to choose one action over another even when the rejected action has attracted more intense media attention in previous periods.

The development of our understanding of terrorist choice requires the broadening of our analytical emphasis beyond terrorist preferences for actions that yield the highest amount of media attention to incorporate the terrorist group's assessment of both expected outcomes and the uncertainty that characterises those outcomes. The ways in which the trade-off between expected outcomes and uncertainty might be managed by a terrorist group, the ways in which a group may assess the chances that a particular outcome may be achieved, and the influence of rival terrorist groups on each other's choices are important aspects of terrorist decision-making that are amenable to deeper analysis once the emphasis on terrorist choice in this context is

broadened to encompass both expected outcomes and the uncertainty that characterises them.

Models of the decision-making process have been developed on similar theoretical principles but differ substantially in terms of the specific details that are incorporated or reflected in their theoretical structure. The application of these models to new contexts not only promises to develop additional insights into the nature of decision-making in these contexts by drawing out hitherto unexplored parallels between theory and practice but also develops our understanding of the scope of application or the reach of these theoretical models and their limitations. Only application in specific contexts such as the one chosen for the purpose of this investigation can achieve a duality in terms of advancing existing knowledge of both theory and its scope in particular circumstances. The use of several complementary models of the decision-making process allows comparison and contrast but, ultimately, highlights the value of a multifaceted approach that draws on the strengths of each individual theoretical framework.

The terrorism context in West-Germany during the 1970s, viewed historically and narrowly through the lens of the record of attacks, perpetrators, injuries and fatalities facilitated by the Global Terrorism Database (GTD) reveals only a static numerical picture of the events that took place during this tumultuous period. Beneath this aggregate of numerical detail, however, lies a set of real experiences and real decisions evolving in a dynamic and uncertain environment where a number of terrorist groups, some with similar, some with diverse objectives, operated and jostled for their place within the terrorism context and were reflected, discussed, editorialised, publicised and ostracised in varying degrees by the mainstream press which itself was involved in competition for readership share and bound sometimes and sometimes not bound by particular competing philosophies, approaches and all of the other factors that shape decisions regarding, very broadly speaking, 'newsworthiness'. This thesis draws on substantial and unique data, gathered during periods of independent archival research, to present an analysis of the choices that terrorist groups made during this time and the ways in which those choices might have been shaped, not by the static representation of time and place, but by a

context that was in the most real sense of these words evolving and dynamic and complex.

## **1.4 Structure of the Thesis**

The thesis presents an analysis of terrorist choice in a context where media attention is the desirable but uncertain outcome of terrorist activity. The analysis helps to develop our understanding of terrorist choice and the ways in which it may be shaped by the media attention accorded to terrorist activity. Although the analytical framework is general and can be applied to any time period and any form of 'media', in this thesis it is applied specifically to the terrorist activity recorded in West-Germany during the 1970s and the media attention that was accorded to it by tabloid and mainstream broadsheet newspaper publishers. As mentioned previously, the particular period and the terrorist groups that were active then are the subject of a standalone research program within terrorism studies due to the nature of the groups and their behaviour. As such, the analysis is relevant for those scholars who are interested in terrorist groups such as the Red Army Faction (Rote Armee Fraktion or 'Baader-Meinhof Group'), the 2<sup>nd</sup> June Movement (Bewegung 2. Juni) and Revolutionary Cells (Revolutionäre Zellen), all of whom were active during the period under consideration and whose actions are considered by the analysis presented in this thesis.

In **Chapter 2** each of these three terrorist groups is profiled and particular emphasis is placed on the understanding that each demonstrated of the relevance of the media attention accorded to their actions. These groups operated within a distinct historical and cultural period, the tumult of which was accentuated by the many acts of terrorism that were perpetrated in West-Germany and across Europe during the 1970s and 1980s. An overview of the nature and frequency of these acts of terrorism, both within West-Germany and across Europe, is presented in Chapter 2 along with a commentary that explores relevant aspects of the social background against which these acts of terrorism were set. The chapter presents an overview of terrorism in Europe during the 1970s and 1980s, a statistical summary of the nature and frequency of the acts of terrorism that were recorded and their perpetrators, an overview of the social context and the emergence of the 'New Left' and, finally, a



more detailed set of profiles of several of the most prominent terrorist groups of the period and their documented understanding of the importance of their interaction with the media.

In **Chapter 3** the thesis is set within the existing literature on terrorism studies. A survey of the literature is presented. The volume of literature that has been published in what has become a very multidisciplinary field of study is beyond the scope of any single review. However, it is possible to review the approaches that characterise each distinct area of terrorism studies, including psychology, economics, political science and criminology and to place the findings that each of these disciplines has contributed within a coherent narrative that provides an accurate assessment of the nature and scope of terrorism studies and the main themes that have been explored. Some of these themes include research into the nature of terrorism studies itself and the definitions of terrorism that are applied there, research into the phenomenon of suicide terrorism, investigation of the factors that extend or shorten the life cycle of terrorist groups, exploration of the underlying causes of terrorism and, lately, the criminological turn that terrorism studies has taken.

The focus of this thesis is terrorist choice and the ways in which the media attention accorded to acts of terrorism may shape those choices. The analytical perspective derives from orthodox and behavioural decision theory, which sees its fullest expression in parts of orthodox and behavioural economics. The application of both orthodox and behavioural models of the decision-making process under conditions of risk and uncertainty provides a different perspective from which to develop our understanding of the ways in which the media attention accorded to different acts of terrorism may shape a terrorist group's choice of action. The literature survey provides the context for this application and identifies the contribution that the thesis makes to the specific research program within terrorism studies that is usually referred to as 'terrorism and the media'. The multidisciplinary nature of terrorism studies and each of its individual research programs has supported the development of the field since the late 1970s. This thesis contributes an analytical perspective that complements the existing literature and identifies further pathways for cooperative

cross-disciplinary research directed towards understanding terrorist choice and the factors that may shape it, including the media attention accorded to terrorism.

In **Chapter 4** each of the orthodox and behavioural models of the decision-making process that forms the basis for the analysis presented in this thesis are explained. Each of the analytical models has strengths and limitations both in terms of the behavioural and decision-making processes that are embedded within them and their relative tractability in application. Three models of decision-making under risk and uncertainty are treated in Chapter 4. These are the orthodox or basic expected utility model, mean-variance expected utility and (cumulative) prospect theory. Each model is designed to produce a ranking or preference ordering across alternatives. In this thesis, this application yields preference orderings for terrorist actions or attack methods based on expectations regarding the media attention that each action will yield and the risk and uncertainty that characterises that payoff. Although new insights into patterns of choices are gained by the purely logical application of these models, empirical examples enrich these insights and our understanding of terrorist decision-making. The empirical examples are facilitated by the unique dataset gathered for this thesis by independent archival research. This permits the measurement of media attention accorded to each type of action used by terrorist groups that were active in West-Germany during the 1970s and provides the necessary data for an application of decision-making theory to this particular context.

Terrorist groups choose from a number of alternative types of actions or attack methods, including armed assault, assassination, bombing and hostage-taking. Each action has an expected outcome. In this thesis the expected outcome that is of interest is the amount of media attention that the action is accorded. Expectations may be formed, presumably, by observation. The existing literature tends to overemphasise the influence of absolute amounts of media attention on terrorist choice, leading to the implication that terrorists choose the action or attack method that yields the most media attention. However, terrorists choose different actions in different periods and combine or diversify across alternative actions, often ignoring the action that has yielded the most media attention in previous periods. To explain this type of behaviour and to develop a more complete understanding of terrorist

choice in this context requires the extension of the analysis to incorporate the uncertainty that characterises the outcomes of each alternative. This approach depicts the terrorist group as choosing an action not solely on the basis of the amount of media attention it is expected to yield but also considering the possibility that the actual outcome will diverge from the expected outcome.

Basic expected utility theory, mean-variance expected utility and the behavioural model, prospect theory, each embed both expected outcomes and the uncertainty of those outcomes into their respective models of the decision-making process. Each does so in a different way and each stresses different aspects of the decision-making process. Basic expected utility provides a foundational orthodox perspective on the terrorist group's decision-making that stresses a compartmentalised assessment of alternative actions and a strictly linear probability weighting of the utility of possible outcomes. Mean-variance analysis provides a more realistic, but still relatively orthodox, perspective of the decision-making process that simplifies the assessment of alternative actions to the consideration of just two factors: average media attention and its variability. The framework also facilitates the consideration of combinations of different actions, allowing us to develop a better understanding of why terrorist groups choose more than one type of action over time. More generally, it allows us to understand terrorist choice in cases where terrorists do not 'put all their eggs in a single basket'. Finally, (cumulative) prospect theory provides the most complex perspective of the decision-making process, embedding not only the trade-off between expected outcomes and uncertainty but other aspects of behaviour such as loss aversion and reference point dependence. This allows us to understand how terrorist choices may be shaped, for example, by the media attention accorded to the actions of rival terrorist groups.

Each of these models develops our understanding of how preference orderings may be shaped in particular circumstances. A part of this development in our understanding can be achieved purely logically by considering each model in a new context. In order to ground these advances in our understanding, this thesis presents an application of each model within the context of the terrorism perpetrated in West-Germany during the 1970s and the media attention accorded to it. As mentioned

previously, the data underlying this application was gathered during periods of intense independent archival research. In **Chapter 5** the archives in Berlin are described, the nature of the data collection process is outlined, the challenges that were confronted are discussed and a rationale is provided for the various choices that culminated in the collection of a unique set of data detailing the terrorist incidents in West-Germany during the 1970s and the media attention that was accorded to each incident.

**Chapter 6** is divided into two main parts. The first part of the chapter presents a summary of the data gathered from the archives in Berlin. This provides the first clear picture of the actual amount of media attention, measured in both 'space' (percentage of page) and column inches, accorded to each terrorist incident perpetrated in West-Germany from 1970 to 1979. Much can be learned that is relevant to a study of media and terrorism by exploring this data, including the relative consistency of volume across both tabloid and broadsheet newspapers and the ways in which the media attention accorded to an act of terrorism decays as time passes following the action. Most important is the picture that emerges regarding the average or typical amount of media attention accorded to each type of terrorist action or attack method and the oscillation in this typical amount during the period under consideration.

The second part of Chapter 6 presents the applications of the decision-making models to the context as revealed through the collected data. Terrorist groups operating within such a dynamic environment may have formed expectations regarding the amount of media attention that a typical example of a particular type of action may yield and may have recognised the inherent variability. This thesis is concerned, in general, with the decisions that are made within such a context and the ways in which preference orderings and choices may be shaped by the media attention that a prospective action can be expected to yield and the trade-off that must be made against the risk that the actual outcome may be quite different to what was expected. The analysis applies both orthodox and behavioural models of decision-making to develop insights into this particular decision-making context and grounds that analysis by showing how terrorist groups whose decision-making

processes are described by these complementary models may have arrived at certain preference orderings over alternative actions or attack methods by considering the media attention typically accorded to those actions and its variability during the period.

Although something can be gained by determining how well the preference orderings approximate the actual decisions that terrorist groups took at the time, the analysis has both deeper implications and broader relevance. Each part of the analysis highlights a different decision-making process and the variables that are salient to it. Each represents a different perspective on the ways in which terrorist groups decide which action to perpetrate. The operationalisation of each model using data concerning the media attention accorded to different types of terrorist activity enhances our understanding of the dynamics of the decision-making process and the variation in the structure of choice as an empirical context evolves over time. The data does not only provide a picture of the terrorism context at the time but a picture of a dynamic and evolving decision-making environment shaped by the action of terrorist groups, law enforcement, the government, the media and others. The analysis is intended to generate insights into the patterns of terrorist decision-making that go beyond the specifics of any single place or time.

## **1.5 Summary of Main Contributions**

In general terms, as the literature survey presented in Chapter 3 points out, the media and terrorism literature has emphasised the absolute amount of media attention accorded to different terrorist actions as the primary consideration in terrorist decision-making. Technically, with regards to the measurement of media attention, existing studies focus on basic ‘word counts’ or ‘word searches’, for example, the number of times the word ‘terrorism’ is used in reports during a period. This type of data is suitable for studies that are interested in the topicality of terrorism or whether terrorism is at the forefront of the public’s mind or how much terrorism is being talked about in general rather than studies that aim to determine how media attention shapes terrorist choice with regards to particular types of actions. This thesis applies a more sophisticated approach to both the decision-

making process characterising terrorist groups and the data used as the basis for examples and discussion of the formal analytical frameworks.

Orthodox and behavioural models of decision-making under risk and uncertainty provide a different perspective on the decision-making process, emphasising the impact on terrorist choice of both the amount of media attention expected to be accorded to different actions *and* the possibility that the actual amount may diverge from that which was expected. The application of these decision-making models is facilitated by data concerning the total number of column inches recorded after each terrorist action perpetrated in West-Germany during the period from 1970 to 1980. For this study, therefore, the media attention accorded to each specific action and each attack method category is determined. This provides a more focused dataset than one based on word counts and word searches which risk incorporating media attention that, strictly speaking, belongs to 'other' actions and, of course, does not provide an adequate picture of the actual amount of attention that particular actions have received. A dataset that does not delineate the media attention accorded to each type of action cannot be used as the basis for a study of terrorist choice.

The thesis presents, for the first time, a more detailed picture of a terrorism context in which the media attention accorded to specific terrorist actions and the choices that terrorist groups make are the primary subjects of investigation. This was accomplished by identifying each recorded terrorist incident and undertaking archival research to obtain the media attention accorded to each action by members of the West-German press. Measurements are reported in terms of 'percentage of page' and column inches (c"). The picture that emerges is one of a dynamic and evolving media and terrorism context in which we can see clearly the changes in terrorist activity, including the introduction of 'new' terrorist actions, and the variability in the media attention accorded to actions over time. Complex and dynamic though it might be, the picture that emerges is of a context that is consistent with operational decision-making, albeit decision-making subject to risk and uncertainty.

As a description of terrorist choice in this context, it is not completely satisfactory to say that terrorist groups will choose the action with the highest amount or highest (historical) average amount of media attention. This does not accord with observation, which clearly sees terrorist groups choose differently. It is well known, that when decision-makers choose from among risky prospects they consider not just the expected or average outcomes but the risk or variability of the outcomes. Expected utility theory represents an advance on the basic concept of expected value because it considers risk and risk preference and avoids some of the serious logical shortcomings into which the expected value model may fall (especially the St Petersburg Paradox, discussed in Chapter 4). The first small step that is taken in this thesis towards a more complete understanding of terrorist choice in this context is to apply the basic expected utility theory to the terrorist group's decisions when media attention is desired but uncertain. This allows us to say more about patterns of terrorist choice than the paradigms of the existing literature permit:

- Terrorist groups might, but might not, choose the action with the highest expected value (measured in terms of media attention).
- Terrorist groups consider both the amount of media attention expected to derive from an action and the possibility that the actual amount may diverge from what was expected.
- A terrorist group is characterised by some type of risk preference, either risk-aversion or risk-seeking, that shapes its perspective on prospective outcomes and their uncertainty.

Specifying a particular utility function and operating within the logical-mathematical structure of expected utility theory allows the determination of preference orderings over the alternative terrorist actions that might be chosen. If the aim of the analysis is to predict terrorist choice, these preference orderings represent such predictions *for terrorist groups described by the specified utility function*. This, however, is but a small part of the value inherent in this approach. The structure of utility theory and its incorporation of at least several concepts that do not find a place within a basic 'expected value' approach provides a richer framework for thinking about terrorist behaviour, developing insights into terrorist behaviour and, potentially, generating

advice for law enforcement in particular cases. A terrorist group that is observed to choose in a particular way may be classified as risk-averse or risk-seeking, which may help to narrow the ranges of behaviour that law enforcement can expect going forward in an ongoing investigative process.

Even though the expected utility model provides some additional structure to our understanding of terrorist decision-making in this context, there are some observed behaviours that lay just beyond the scope of the basic model. Terrorist groups are observed to combine actions either within or across periods. That terrorist groups do not simply choose a single action is, of course, somewhat inconsistent with the conclusion emphasised in the existing literature (that terrorist groups choose the action with the highest media attention). Although expected utility theory avoids leading us *necessarily* to this conclusion, it too has trouble offering an explanation for the combination of actions. It could be that the setting is so dynamic that terrorist groups rapidly adjust at short intervals and continuously alter their selection of action to the one with the highest expected utility at that particular moment. There is, fortunately, a better explanation.

The explanation offered in this thesis for terrorist groups' decisions to combine actions is that this behaviour is a response to the risk and uncertainty inherent in terrorist actions, something that the existing approaches fail to consider at all. Decision theory offers a very suitable model with which to provide the structure to this proposition. This model is the Markowitz mean-variance analysis, which is especially suited to the analysis of combinations or portfolios of risky prospects. The model depicts a very basic decision-making process based simply on the expected (average) outcomes and risk (variability). Decision-makers are not presumed to do anything other than choose according to what they see as the average outcomes, paying due care to their variability. The decision-maker's risk preference plays the primary role in shaping choice.



Underpinning this basic and very plausible decision-making process (which requires no further assumptions from the analyst<sup>2</sup>) is a sophisticated statistical framework that, once more, expands the analytical vocabulary of discussion of terrorism and the media as well as generating some particularly stark images of the opportunities that confront terrorist groups active in such a context. The combination of actions works as a risk management device because the media attention accorded to different types of terrorist actions is not perfectly positively correlated across different actions. The Markowitz approach stresses the importance of considering the correlation structure of outcomes. Failure to consider the correlation structure leads us to underestimate the outcomes that a terrorist group may expect from its actions and, potentially, to misjudge terrorist groups' best courses of action in particular contexts.

Applied to any given dataset, the Markowitz algorithm allows us to determine the set of combinations of actions that generate the highest expected amount of media attention ( $c''$ ) at each level of risk. This efficient or optimal set of combinations provides us with a benchmark against which terrorist actions can be assessed as well as another innovation on our theoretical frameworks that are used to interpret terrorist decisions once they are observed. When the mean-variance technique was applied using the data gathered for this thesis to a rolling set of sub-periods from 1970 to 1979, the following dynamic picture of the efficient set of opportunities emerged as shown in Figure 1.1 (more details are provided in Chapter 6).

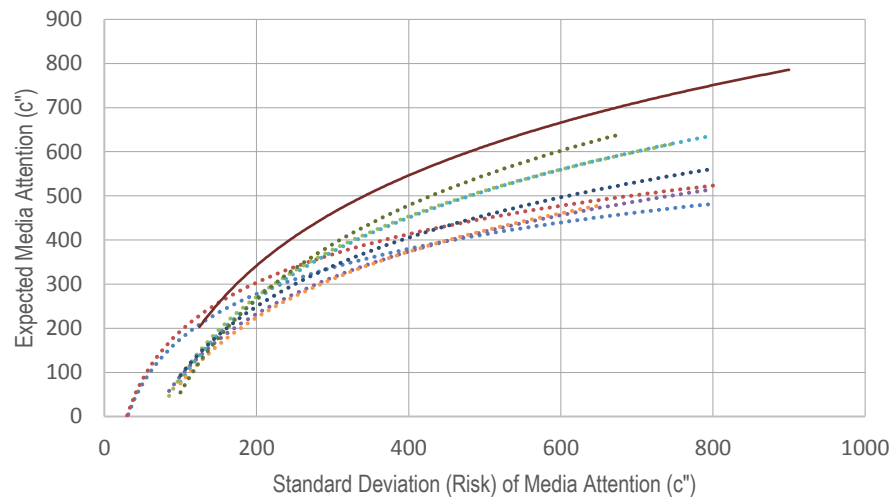
In addition to providing a structured picture of the opportunities available to terrorist groups to generate (expected, not certain) amounts of media attention from combinations of actions, the application of mean-variance analysis or the Markowitz algorithm to the analysis of terrorism and media attention highlights another important aspect of this context that it would be detrimental to overlook. The concavity of the set of opportunities is due to the imperfect correlation that characterises the media attention accorded to different types of actions. The

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<sup>2</sup> For example, assumptions regarding the distribution of outcomes or assumptions regarding the specification of the utility function.

concavity of the opportunity set implies that terrorist groups can expect more media attention at each level of risk than would be the case if the media attention accorded to different types of actions was perfectly positively correlated.

**Figure 1.1 Efficient Set: Optimal Media Attention at Each Level of Risk, 1970-1979**



An analytical approach that delineates a structure to a context that otherwise seems unruly represents an important step along the pathway to developing a more complete understanding of behaviour exhibited within that context. The opportunity sets depicted in Figure 1.1 go hand-in-hand with a model of choice under risk and uncertainty that describes decision-makers as choosing on the basis of average (expected) media attention and its variability. Risk preference is the primary shaper of choice in this model. Once the opportunity sets are delineated, the (optimal) choices that would be attractive to terrorist groups with different risk preferences can be inferred; for example, it may be inferred that a very risk-averse terrorist group would choose from the lower-left segment of the opportunity set while a less risk-averse terrorist group would choose from the upper-right segment. Because the constituent actions and their weights are determined in computing the opportunity sets, it is a simple matter to infer the types of actions and their relative importance that would constitute an optimal combination of actions chosen by a particular type of terrorist group. This generates further insights that it would be easy to overlook when applying a different analytical approach, especially the fact that low risk actions may enter into high risk combinations and vice versa.

Both of these orthodox models can be complemented with behavioural approaches developed within economics and psychology. The most prominent of these is (cumulative) prospect theory. As explained in Chapter 2 of this thesis, terrorist groups operating in West-Germany during the period from 1970 were not only particularly media savvy but also rivals paying close attention to the actions and outcomes, including the media attention garnered, of their competitors. Cumulative prospect theory provides a fully developed theoretical framework with which to analyse and interpret decision-making in such a context. The model contains a number of additional behavioural variables that are not encompassed in the orthodox frameworks. One of the most important of these is the concept of a reference point which allows us to consider decisions made not on the basis of an absolute assessment of outcomes but on the basis of gains and losses relative to another value. In the setting under consideration, the reference point may be formed on the basis of outcomes observed to result from rivals' actions. This provides us with the mechanism that we use to interpret the actions of terrorist groups when it is clear (or a clear possibility) that they have referenced their decisions on the outcomes of the actions of others.

This has at least one very important implication. It is not the case that a group that references its actions against the outcomes of the actions of other rival groups will necessarily choose to copy the rival's action precisely. The reference point is an outcomes centric concept, not an action centric concept. The terrorist group may observe, for example, that a rival has garnered 60 c" of media coverage from a bombing and 60 c" may become the group's reference point. This is now the point from which the gains and losses of all of the available alternative actions are evaluated. Although bombing might head the list of the preference ordering that emerges from this evaluation process, it might be the case that a different action, for example armed assault, may be accorded the highest place in the preference ordering of a terrorist group with 60 c" as its reference point. This insight avoids leading us into the error of equating 'referencing' with 'copying'.

In fact, several scenarios are possible in which a terrorist group may choose an alternative or even a lower risk attack method than that perpetrated by its

competitor while still reaching or exceeding the reference point set by the outcome of the predecessor's action. When the chosen reference point is low, the domain of gains is large and a terrorist group can select from a range of alternative attack method categories in its effort to emulate or to exceed that reference point. Conversely, when the reference point is high, the domain of gains is small and the domain of losses looms large. In such a scenario, limited options remain for terrorists who are considering attack types for deployment that might reach or exceed the outcome achieved by their competitor.

## **1.6 Conclusion**

The objective of the thesis is to provide a new and nuanced approach to the examination of terrorist choice in contexts where media coverage is a desired but uncertain outcome of terrorist action. A range of complementary theoretical frameworks are applied to the terrorist decision-making process where alternative attack methods and combinations of attack types are considered by terrorist groups in light of the media coverage that can be expected to result from the attacks to be perpetrated. The application of formal economic models of choice to the terrorism and media context is supported and illustrated using historical data obtained through extensive, independent archival research. Analysis of the archival data-set provides a statistical picture of the historical context of terrorism events perpetrated on West-German soil during the 1970s and the media attention these acts received in the German print media. By applying several distinct yet complementary theoretical frameworks to a real terrorism context, historical events that occurred in West-Germany may be described from a new vantage point and it is further possible to utilise a data-set from an authentic historical context of turbulent terrorist activity to develop new and nuanced insights into the terrorist decision-making process. These conclusions provide new perspectives from which to view the terrorism context, new vocabulary to describe terrorist behaviour and new ways to interpret terrorist choice. Errors that may be made by existing approaches are avoided and contributions are made towards a more nuanced framework for law enforcement. The first step in developing this new picture of terrorist choice and the media is to describe the rich and turbulent terrorism context experienced in Western-Europe,

and specifically in West-Germany, during the 1970s. A detailed picture of this context with particular emphasis on major terrorist groups and their interaction with each other and the media is developed in Chapter 2.

## Chapter 2 - Terrorism in Western Europe 1970 to 1990

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### 2.0 Introduction

It is the purpose of this chapter to summarise the nature and extent of terrorist activity in West-Germany during the period from 1970 to 1990. As explained in the introduction, this thesis contributes to the research program that is generally referred to as 'terrorism and the media'. The overarching objective of the thesis is to develop our understanding of terrorist choice in a context in which media attention accorded to acts of terrorism may shape those choices. The analytical approach applies both orthodox and behavioural economic models of the decision-making process to study the choices that terrorist groups make in a context where media coverage is a desirable but uncertain outcome of a terrorist action. Although the analysis is general and may be applied in any context, in this thesis it is applied specifically to the terrorist activity recorded in West-Germany and the media attention that was accorded to it by tabloid and mainstream broadsheet newspaper publishers.

This chapter presents an overview of terrorism in West-Germany during the two decades beginning in 1970 and identifies the features that make this time and place a particularly useful context in which to situate a formal analysis of terrorist choice and the ways in which those choices may be shaped by the media attention accorded to them. The overview of terrorism in West-Germany is placed within the broader context of terrorism in Western Europe during the period under consideration. The discussion is complemented by descriptions of historical, political and social contexts in West-Germany as well as profiles of West-Germany's most prominent terrorist groups: the Red Army Faction formed in 1970; the 2<sup>nd</sup> June Movement formed in 1972; and the Revolutionary Cells formed in 1973. Each of these terrorist groups, especially the Red Army Faction, had developed communication strategies and varying degrees of structured interaction with the media. The groups were also quite informed and deliberate in their observations of the success or otherwise of the actions of the other terrorist groups operating at the time. This provides an important opportunity to apply behavioural economic analysis to terrorist choice in a context

where the outcomes of actions of one group may form a reference point for the actions of another.

## **2.1 Overview of the Chapter**

The chapter is organised as follows. Section 2.2 provides an overview of terrorist activity in Western Europe from 1970 to 1990 using data obtained from the GTD.<sup>3</sup> Terrorist events that occurred in West-Germany are examined both in isolation and in the wider European context. Section 2.3 briefly highlights some of the political and historical events surrounding the emergence of the New Left and the student movement of the 1960s, all of which provide the background to the social context of the period under investigation. Section 2.4 profiles some of the most prominent terrorist groups of the period. In West-Germany, three terrorist groups are of particular significance: the Red Army Faction, 2<sup>nd</sup> June Movement and Revolutionary Cells. The complex relationship between terrorist groups and the media is examined in Section 2.5. Particular emphasis is placed on the Red Army Faction's relatively advanced understanding of media coverage accorded to the actions and announcements of terrorist groups. Section 2.6 concludes the chapter.

## **2.2 Terrorism in Western Europe 1970-1990**

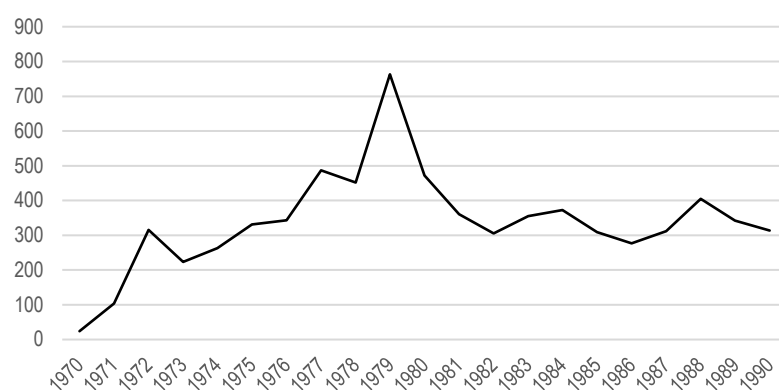
From 1970 Western Europe experienced a steady rise in terrorist activity until 1977, followed by a small decline during that year and then a significant peak in 1979. Figure 2.1 (showing Western Europe, excluding West-Germany) and Table 2.1 (showing Western Europe and West-Germany in two distinct columns) summarise this data. In comparison, and as shown in Table 2.1 and Figure 2.2, terrorist activity in the Federal Republic of Germany, also referred to as "West-Germany", experienced a steady amount of terrorist activity until 1977 (the year referred to as

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<sup>3</sup> In the GTD, the Red Army Faction (RAF) is referred to as the "Baader-Meinhof Group" until September 1977. Only attacks for which the perpetrator(s) and the attack type are known are included. East-Germany belongs to the region of Eastern-Europe in the GTD. The number of relevant attacks in East-Germany for the period 1970-1990 is relatively small. Eleven attacks were committed by seven different groups resulting in one injury and one fatality. As the analysis presented in this paper focuses on West-German print media, data for East-Germany is not included.

the “German Autumn”), followed by some rises and declines until 1983 before a very sharp increase to a peak in 1985 and a subsequent slump from 1986.

**Figure 2.1 Terrorist Incidents, Western Europe (excl. West-Germany), 1970-1990**



**Table 2.1 Terrorist Incidents, Western Europe and West-Germany, 1970-1990**

|               | Western-Europe (excl. FRG) | West-Germany (FRG) |
|---------------|----------------------------|--------------------|
| Year          | Nr of ALL attacks          | Nr of ALL attacks  |
| 1970          | 24                         | 10                 |
| 1971          | 104                        | 5                  |
| 1972          | 315                        | 14                 |
| 1973          | 223                        | 15                 |
| 1974          | 263                        | 13                 |
| 1975          | 331                        | 15                 |
| 1976          | 343                        | 19                 |
| 1977          | 487                        | 18                 |
| 1978          | 452                        | 17                 |
| 1979          | 763                        | 8                  |
| 1980          | 472                        | 16                 |
| 1981          | 361                        | 14                 |
| 1982          | 305                        | 10                 |
| 1983          | 355                        | 4                  |
| 1984          | 373                        | 11                 |
| 1985          | 309                        | 28                 |
| 1986          | 277                        | 19                 |
| 1987          | 312                        | 7                  |
| 1988          | 405                        | 5                  |
| 1989          | 342                        | 16                 |
| 1990          | 314                        | 6                  |
| <b>Total:</b> | <b>7130</b>                | <b>270</b>         |



Figure 2.2 Terrorist Incidents in West-Germany, 1970-1990

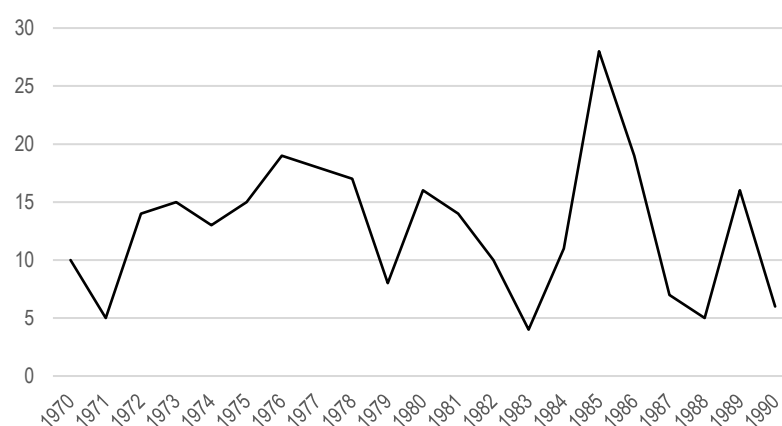


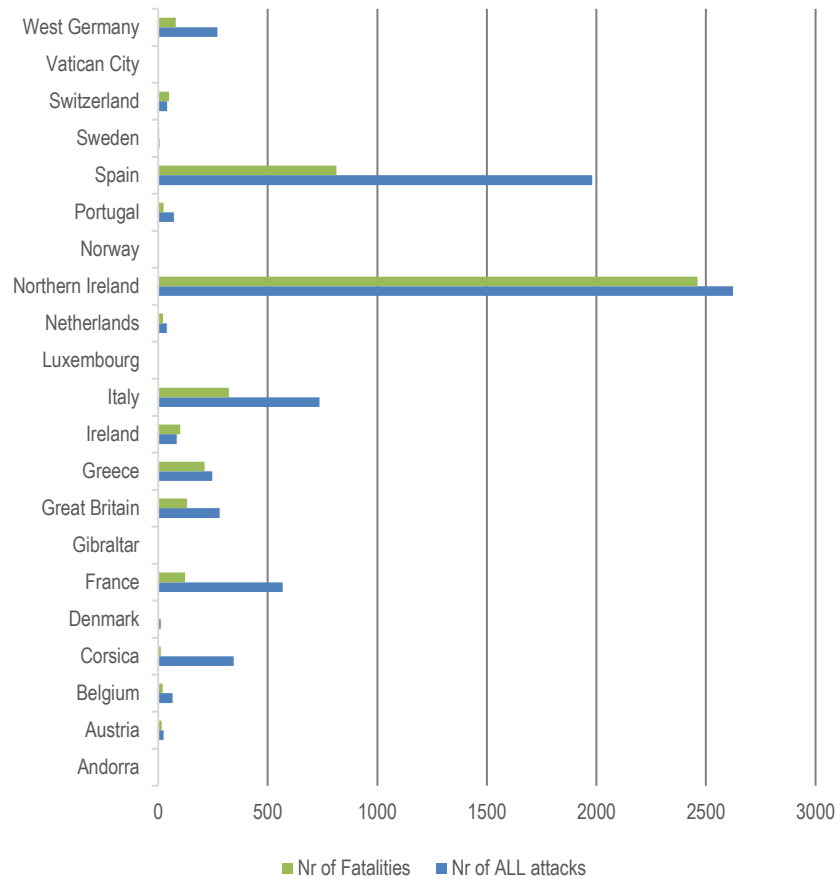
Table 2.2 Terrorist Incidents, Fatalities, Injured in Western Europe, 1970-1990

| Period 1970-1990 | Nr of ALL attacks | %          | Nr of Fatalities | %          | Nr Injured  |
|------------------|-------------------|------------|------------------|------------|-------------|
| Andorra          | 1                 | 0.01       | unknown          | -          | unknown     |
| Austria          | 25                | 0.34       | 16               | 0.36       | 65          |
| Belgium          | 65                | 0.88       | 20               | 0.46       | 94          |
| Corsica          | 345               | 4.66       | 12               | 0.27       | 29          |
| Denmark          | 11                | 0.15       | 1                | 0.02       | 17          |
| France           | 568               | 7.68       | 122              | 2.78       | 772         |
| Gibraltar        | 1                 | 0.01       | 3                | 0.07       | 0           |
| Great Britain    | 280               | 3.78       | 131              | 2.98       | 1107        |
| Greece           | 247               | 3.34       | 212              | 4.82       | 529         |
| Ireland          | 84                | 1.14       | 100              | 2.28       | 9           |
| Italy            | 736               | 9.95       | 323              | 7.35       | 953         |
| Luxembourg       | 2                 | 0.03       | 0                | 0.00       | 5           |
| Netherlands      | 39                | 0.53       | 22               | 0.50       | 24          |
| Northern Ireland | 2623              | 35.45      | 2461             | 56.00      | 1454        |
| Norway           | 2                 | 0.03       | 0                | 0.00       | 0           |
| Portugal         | 72                | 0.97       | 25               | 0.57       | 46          |
| Spain            | 1981              | 26.77      | 813              | 18.50      | 1844        |
| Sweden           | 6                 | 0.08       | 4                | 0.09       | 15          |
| Switzerland      | 41                | 0.55       | 50               | 1.14       | 46          |
| Vatican City     | 1                 | 0.01       | 0                | 0.00       | 3           |
| West Germany     | 270               | 3.65       | 80               | 1.82       | 719         |
| <b>Total:</b>    | <b>7400</b>       | <b>100</b> | <b>4395</b>      | <b>100</b> | <b>7731</b> |

Of a total of 7,400 terrorist events recorded for the region of Western Europe for the period 1970 to 1990, Northern Ireland experienced by far the highest number of attacks (2,623 or 35.45% of the total), followed by Spain (1,981 or 26.77%), Italy (736 or 9.95%), France (568 or 7.68%), Corsica (345 or 4.66%), Great Britain (280 or 3.78%), West-Germany (270 or 3.65%), and Greece (247 or 3.34%). Northern Ireland stands out even more strikingly with respect to the number of fatalities that occurred as a result of terrorist events. Of the total of 4,365 lives lost to terrorism in Western Europe between 1970 and 1990, 2,461 (or 56.0%) fatalities occurred in Northern

Ireland, 813 (18.5%) in Spain, 323 (7.35%) in Italy, 212 (4.82%) in Greece, and a relatively small number of 80 (1.82%) in West-Germany. Table 2.2 and Figure 2.3 summarise this data.

**Figure 2.3 Terrorist Incidents and Fatalities in Western European Countries, 1970-1990**



The GTD identifies eight categories of terrorist attack: armed assault, assassination, bombing/explosion, facility/infrastructure attack, hijacking, hostage (barricade), hostage (kidnapping), and unarmed assault. With 48.12% and 52.22%, respectively, bombing/explosions represent the highest proportion of terrorist attacks in both Western Europe (excluding West-Germany) and in West-Germany individually. In Western Europe (excluding West-Germany), the high proportion of bombing/explosions is followed by assassinations (30%), armed assault (10.86%) and facility/infrastructure attacks (7.41%), whereas in West-Germany the proportion of facility/infrastructure attacks (20.74%) is comparatively high and the proportion of assassination attacks (12.59%) comparatively low. With 0.74% and 1.11%,

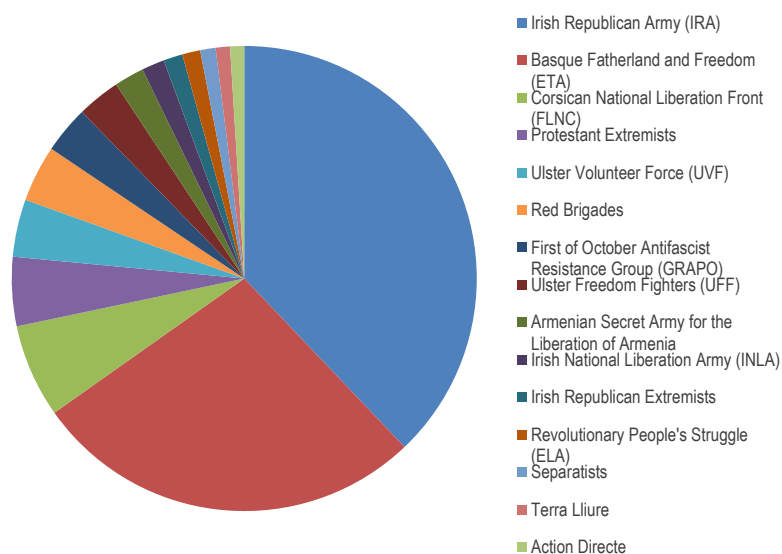
respectively, hijacking events and unarmed assaults occurred more frequently in West-Germany than in the whole of Western Europe (0.31% and 0.31%). Kidnappings occurred more frequently in the region of Western Europe (2.26%) than in West-Germany (1.48%). This information is summarised in Table 2.3.

**Table 2.3 Types of Terrorist Incidents, Western Europe and West-Germany, 1970-1990**

| Period 1970-1990     | Western Europe (excl. FRG) |            | West-Germany (FRG) |            |
|----------------------|----------------------------|------------|--------------------|------------|
| ATTACK TYPE          | Nr of attacks              | %          | Nr of attacks      | %          |
| Armed assault        | 774                        | 10.86      | 28                 | 10.37      |
| Assassination        | 2139                       | 30.00      | 34                 | 12.59      |
| Bombing/Explosion    | 3431                       | 48.12      | 141                | 52.22      |
| Fac/Infra Attack     | 528                        | 7.41       | 56                 | 20.74      |
| Hijacking            | 22                         | 0.31       | 2                  | 0.74       |
| Hostage (Barricade)  | 53                         | 0.74       | 2                  | 0.74       |
| Hostage (Kidnapping) | 161                        | 2.26       | 4                  | 1.48       |
| Unarmed assault      | 22                         | 0.31       | 3                  | 1.11       |
| <b>Total:</b>        | <b>7130</b>                | <b>100</b> | <b>270</b>         | <b>100</b> |

Perhaps surprisingly, 529 unique groups were active in Western Europe (excluding West-Germany) during the period from 1970 to 1990. However, 74.7% of all attacks (or 5,328 of 7,130) were committed by just 15 of these 529 unique groups. The Irish Republican Army (IRA) and Basque Fatherland and Freedom (ETA) were the most active. During the same period, 66 unique groups perpetrated acts of terrorism in West-Germany. Of these 66 groups 42 committed just one single attack. Of the remaining 24 groups, the Baader-Meinhof Group, later the Red Army Faction, accounts for almost 30% of all attacks in West-Germany, followed by the Revolutionary Cells (19%), the IRA (10%), and the 2<sup>nd</sup> June Movement (4%). This data is summarised for Western Europe in Figure 2.4 and Table 2.4 and for West-Germany in Figure 2.5 and Table 2.5.

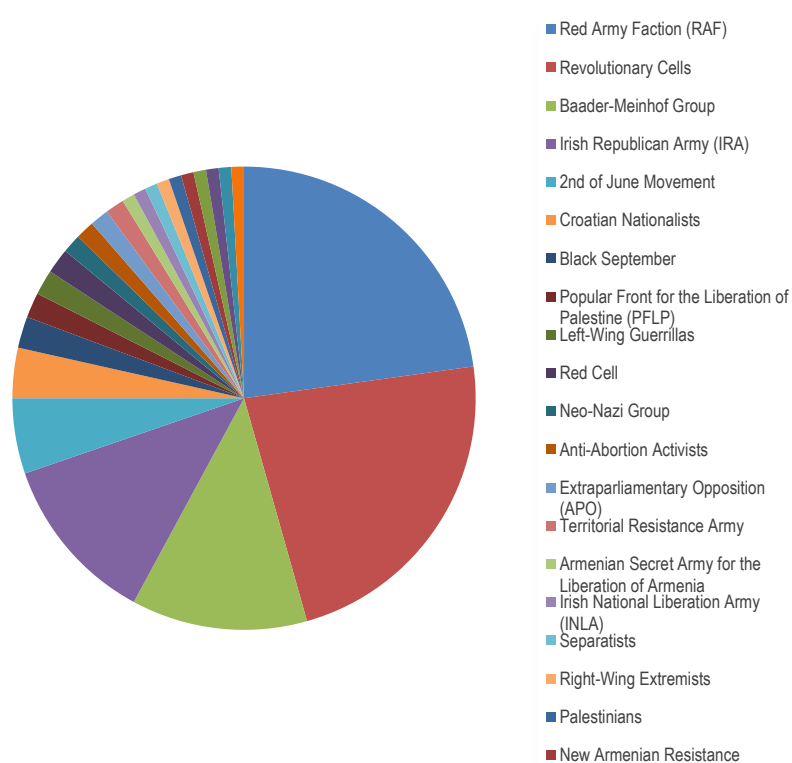
**Figure 2.4 Most Active Groups in Western Europe (excl. West-Germany), 1970-1990**



**Table 2.4 Most Active Groups in Western Europe (excl. West-Germany), 1970-1990**

| 15 Most Active Groups in Western Europe (excl. FRG), 1970-1990. There were 529 unique groups in total. |   |                         |
|--|---|-------------------------|
| Country most active in:  | Name of Group:  | Nr of Attacks per Group |
| Northern Ireland   | Irish Republican Army (IRA)                           | 2019                    |
| Spain  | Basque Fatherland and Freedom (ETA)                   | 1455                    |
| Corsica/France   | Corsican National Liberation Front (FLNC)             | 346                     |
| Northern Ireland   | Protestant Extremists                                 | 256                     |
| Northern Ireland   | Ulster Volunteer Force (UVF)                          | 213                     |
| Italy  | Red Brigades  | 209                     |
| Spain  | First of October Antifascist Resistance Group (GRAPO) | 175                     |
| Northern Ireland   | Ulster Freedom Fighters (UFF)                         | 160                     |
| very multi-nationally active   | Armenian Secret Army for the Liberation of Armenia    | 111                     |
| Northern Ireland/Ireland   | Irish National Liberation Army (INLA)                 | 84                      |
| Northern Ireland   | Irish Republican Extremists                           | 71                      |
| Greece   | Revolutionary People's Struggle (ELA)                 | 67                      |
| Corsica  | Separatists   | 57                      |
| Spain  | Terra Lliure  | 53                      |
| France   | Action Directe  | 52                      |
| Total:   |   | 5328<br>of 7130 = 74.7% |

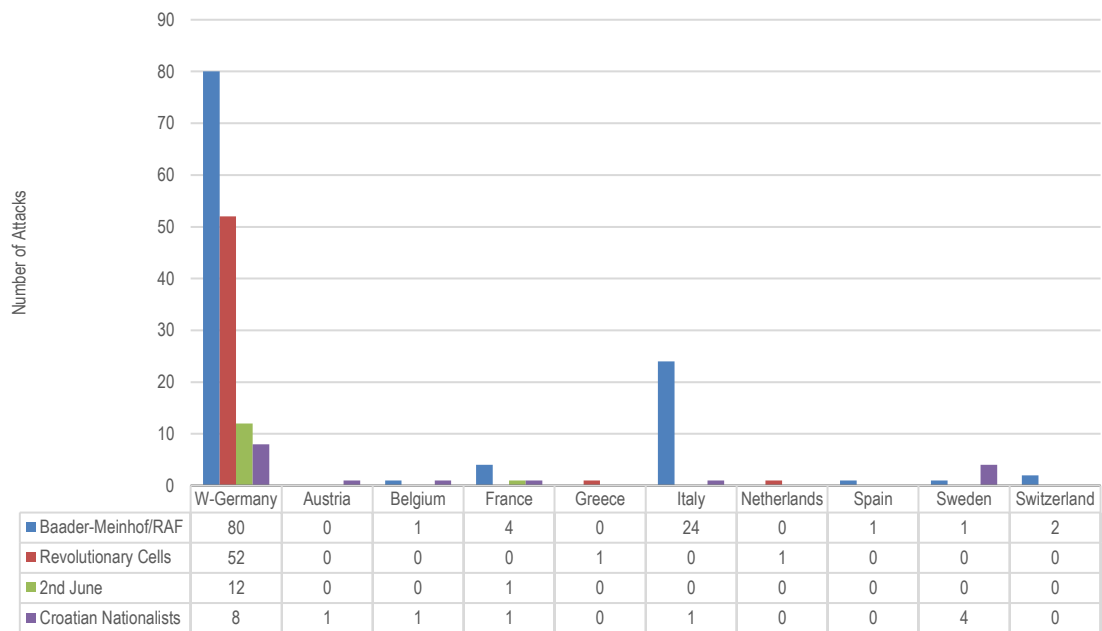
**Figure 2.5 Groups Active in West-Germany, 1970-1990**



**Table 2.5 Groups Active in West-Germany, 1970-1990**

| Active Groups in West-Germany, 1970-1990. There were 66 unique groups in total. |                         |
|---|-------------------------|
| Name of group:  | Nr of Attacks per group |
| Red Army Faction (RAF)  | 52                      |
| Revolutionary Cells   | 52                      |
| Baader-Meinhof Group  | 28                      |
| Irish Republican Army (IRA)   | 27                      |
| 2 <sup>nd</sup> June Movement   | 12                      |
| Croatian Nationalists   | 8                       |
| Black September   | 5                       |
| Popular Front for the Liberation of Palestine (PFLP)                            | 4                       |
| Left-Wing Guerrillas  | 4                       |
| Red Cell  | 4                       |
| Neo-Nazi Group  | 3                       |
| Anti-Abortion Activists   | 3                       |
| Extraparliamentary Opposition (APO)   | 3                       |
| Territorial Resistance Army   | 3                       |
| Armenian Secret Army for the Liberation of Armenia                              | 2                       |
| Irish National Liberation Army (INLA)   | 2                       |
| Separatists   | 2                       |
| Right-Wing Extremists   | 2                       |
| Palestinians  | 2                       |
| New Armenian Resistance   | 2                       |
| Socialist Patients' Collective (SPK)  | 2                       |
| Black Cells   | 2                       |
| Gruppe Hau Weg Den Scheiss  | 2                       |
| Revolutionary People's Army   | 2                       |
| 42 groups at n=1  | 42                      |
| <b>Total:</b>   | <b>270</b>              |

**Figure 2.6 Groups Most Active in and Focused on West-Germany, 1970-1990**



Of the groups most active in West-Germany during the period from 1970 to 1990, the Baader-Meinhof group/Red Army Faction, Revolutionary Cells, and the 2<sup>nd</sup> June Movement were also most focused on West-Germany as their target, while the Croatian Nationalists committed just 50% of their attacks in West-Germany. This data is summarised in Table 2.5 and Figure 2.6. Combined, these attacks resulted in 47 fatalities. The Red Army Faction was responsible for twenty of these, while Black September caused sixteen, the IRA six fatalities, 2<sup>nd</sup> June Movement four fatalities and the Croatian Nationals one fatality. Before profiling these prominent groups in more detail, the wider historical, political and social background of the period is described.

### **2.3 Historical, Political, and Social Background**

While a large number of groups were engaged in terrorist activities in Western Europe during the 1970s and 1980s, the origins of radical activism might be traced back to the 68er movement which, according to Kraushaar (2008, pp. 11-12), originated in the Bay Area of San Francisco in the United States. Here, the Free Speech Movement developed at the University of Berkeley in 1964; the militant Black-Power movement formed in the suburb of Oakland; the Hippie movement in

Haight-Ashbury; and in San Francisco's Castro Street the gay community found a voice. Reichard (2010), Russell (2008) and Hall (2008) discuss the gay rights movement in the United States. Joseph (2009) examines the black power movement. The relationship between African American and white student activists is described by Slonecker (2008). The relevance of these movements to the broader social and political context in America and in Europe at the time is a prominent theme in the literature.

The student movement emerged as university students organised themselves into groups such as *Students for a Democratic Society* (SDS) in the United States of America and the *Sozialistischer Deutscher Studentenbund* (SDS) in Germany (Sale, 1973). Together with literary minds, intellectuals, and critical thinkers, these groups formed the "New Left". Followers of the New Left frequently had educated, middle-class backgrounds. They rejected mainstream politics, which they viewed as dominated by elites who "preferred a docile public to an engaged one" (Varon, 2004, p. 21). Theories by Marx, Lenin, and Marcuse and global figures such as Che Guevara and Mao Tse-tung informed the philosophical foundations of the New Left.

Horn (2007) discusses leftist activism not only in the more prominent countries of France, Germany, Italy, and the United States, but also in Belgium and Spain; while Kolbe (2008) provides a concise account of student radicalism in Finland with a particular focus on the delicate balance between the 1960s youth movement and Finish-Soviet relations. In each case, common concerns are mixed with particular ones; see Gilcher-Holtey (2008), Hilwig (2001), and Clifford (2012). The same is true of East-Germany. Von der Goltz (2013) examines East-Germany's 1968 in the context of the Prague Spring. Different groups within each country also had somewhat unique points of view; for example, Efron (2014) presents an account of Germany's 1960s from Jewish perspectives. Perhaps some of the most insightful accounts are found in (self-) reflections on the German 1960s; for example, Horx (1989); N. Thomas (2003); Frese, Paulus, and Teppe (2005); Kraushaar (2008); and P. Schneider (2008).

There was an interconnectedness between the American and the West-German student movements (Klimke, 2010). Gilcher-Holtey (2001) cited in Baader (2012, p. 493) highlights German-American philosopher Herbert Marcuse as “the intellectual who set himself the task of forging links between the American and German New Left movements”. Common themes in both countries included opposition against the Vietnam War, anti-imperialism, and a strong desire to change “the system”; that is, the status quo formed from prevailing political, corporate and social structures, against which the New Left would mobilise “the movement” or “revolution”, which some individuals and subgroups eventually escalated into an “armed struggle” (bewaffneter Kampf).<sup>4</sup>

Apart from before-mentioned issues that the New Left in the United States of America and in European countries had in common, West-German activism sought to address (redress) the legacies of Germany’s Nazi past (for example, see Kraushaar, 2008, pp. 72-75). In addition, German activists soon found themselves in a divided Germany with Berlin at the centre of a cold war. The extra-parliamentary movement (außerparlamentarische Opposition or APO) developed in West-Berlin in response to the formation of the Grand Coalition<sup>5</sup> (Große Koalition) in 1966/67, grew and soon spread from West-Berlin to other parts of West-Germany as students and young adults vigorously opposed the Emergency Laws<sup>6</sup> (Notstandsgesetzgebung), the Vietnam War and what they perceived to be Axel Springer’s domination of West-German media-politics through his ubiquitous publishing house (Kraushaar, 2006a, p. 512).

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<sup>4</sup> For a detailed treatment of developments in the United States of America, the Weathermen (later named the Weather Underground) in particular, and a comprehensive account (in English) on the formation and ideologies of the first generation of the German Red Army Faction (RAF) to 1977 see Varon (2004).

<sup>5</sup> On 26 November 1966, the SPD declares her willingness to enter into a grand coalition (Große Koalition) with CDU/CSU, see Harbecke (1989).

<sup>6</sup> In early 1968, Emergency Laws (Notstandsgesetze) are considered by the government. Proposed laws are to limit restrictions on mail-tempering and phone-tapping, and are to alter conditions regarding the deployment of the Bundeswehr (German army) in the event of political unrest (Harbecke, 1989, p. 127).



A number of New Left groups, sometimes no more than a small collection of like-minded friends, took the step from peaceful protest to active violence, committing bombings, arson and other destructive acts during the 1960s and 1970s. Others objected to the use of violent acts as permissible or justifiable means to bring about social and political change and were criticised for failing to take the step from theory to practice.<sup>7</sup> Kailitz (2007) examines the conflicts over the “question of violence” (die Gewaltfrage) in considerable detail. Views of the Frankfurter Schule, represented by Max Horkheimer, Theodor Adorno<sup>8</sup>, Herbert Marcuse and Jürgen Habermas are placed in juxtaposition to those of the student movement, represented by Hans-Jürgen Krahel, Rudi Dutschke<sup>9</sup> and Daniel Cohn-Bendit, and to those of the Red Army Faction, represented by Ulrike Meinhof, Horst Mahler, Gudrun Ensslin and Andreas Baader. Kailitz (2007, p. 217) concludes that differences in opinion regarding the question of violence (die Gewaltfrage) were at times greater between members *within* one group than they were between members of different groups. Of the groups who took protest to violence in Western countries during this period, the U.S. Weathermen (also known as The Weather Underground) and the German Red Army Faction are two of the most well-known (Varon, 2004, p. 3). The Weather Underground suffered the loss of several key members in 1970 and disbanded voluntarily in 1976, while the armed struggle in Germany began in earnest in 1970 with the formation of the Red Army Faction (Varon, 2004, p. 11).

## 2.4 Prominent Groups

German terrorist groups emerged from radical key-elements of what had remained of the German 1960s protest movement. In West-Berlin<sup>10</sup>, the student movement of the 1960s gradually moved from the Freie Universität Berlin (Free University of

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<sup>7</sup> A lot of research has been published exploring the emergence of violent groups and terrorist organisations from peaceful protest movements. Karstedt-Henke (1980, cited in Koopmans, 1993 pp. 640- 641), for example, describes protest waves as passing through four stages, in which the final stage is characterised by spiralling violence and counter violence which produces terrorist organizations. More recently, the topic has been re-examined by Sageman (2017).

<sup>8</sup> See also: Freyenhagen (2014)

<sup>9</sup> For more information on Rudi Dutschke, see also: Kraushaar (2005).

<sup>10</sup> Residents of West-Berlin were not conscripted to national service, which enticed even more non-conformists to move there.

Berlin) in the wealthy suburb of Dahlem to other parts of the city. Here, young activists formed communes<sup>11</sup> and other share-accommodation, they met in “Szene” cafés, tea-bars and pubs, and experimented with drugs such as Haschisch, LSD and Marihuana, later also Opium, Meskalin and Heroin (Kraushaar, 2006a, p. 515). Some earlier activist groups, the APO (außerparlamentarische Opposition) for example, dissolved, re-mixed and formed new groups such as *Der Blues* and the *Haschrebellen*<sup>12</sup> of which Georg von Rauch, Thomas Weisbecker, Dieter Kunzelmann, and Michael “Bommi” Baumann were prominent figures (König, 2006). Some members of the *Haschrebellen* later formed the *Tupamaros West-Berlin*<sup>13</sup> to distinguish themselves from the *Tupamaros* in Munich<sup>14</sup>; both groups were named after the *Tupamaros*, a clandestine guerrilla group in Uruguay. In West-Germany, the formation of the Red Army Faction in 1970 was followed by the formation of the 2<sup>nd</sup> June Movement in January 1972 and the Revolutionary Cells in 1973 (Kraushaar, 2006a, p. 512).

#### **2.4.1 Rote Armee Fraktion (Red Army Faction, RAF)**

The German Red Army Faction (Rote Armee Fraktion) formed in West-Berlin in 1970, but soon moved the bulk of its operations from Berlin to other parts of the Federal Republic of Germany, mainly to Frankfurt/Main. Founding members included Andreas Baader (born 1943), Ulrike Meinhof (born 1934), Gudrun Ensslin (born 1940) and Horst Mahler (born 1936), all of whom were active in the 1960s protest movements and three of whom, Horst Mahler excepted, had moved underground by the time the group’s formation was publically announced in June 1970. In the German media and general public the group was generally referred to as the “Baader-Meinhof group” (Gruppe) or the “Baader-Meinhof gang” (Bande); whereby the speaker/writer’s choice between the word “gang” and the word “group” would

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<sup>11</sup> *Kommune I* and *Kommune II* are two prominent examples; for details see (Brown, 2013, pp. 819-821).

<sup>12</sup> Further details about the *Haschrebellen* are provided by Brown (2013, pp. 822-824).

<sup>13</sup> For details on the *Tupamaros West-Berlin* see Kraushaar (2006a).

<sup>14</sup> For further details on the *Tupamaros München* see Sturm (2006).

hint at his/her position on the ideological and political spectrum.<sup>15</sup> Group members themselves never referred to the group as “Baader-Meinhof” (Peters, 2007, p. 144).

Public announcements by the group were made in the name of the Red Army Faction (Rote Armee Fraktion) or the “RAF” for short. The group’s first political statement “Die Rote Armee aufbauen” (building the Red Army) was printed in West-Berlin’s “anti-authoritarian” magazine *Agit 883* on 5 June 1970 (Peters, 2007, p. 193). This announcement was most likely authored by Ulrike Meinhof<sup>16</sup> who had already established herself as a well-known left-wing journalist and columnist. Just a few years earlier, Ulrike Meinhof and her (then) husband Klaus Rainer Röhl had jointly run the popular, leftist magazine *konkret* in Hamburg, where Ulrike Meinhof, respected for her intellect and her journalistic work, was a popular guest and speaker at functions of Hamburg’s liberal elite (Peters, 2007, pp. 148-150). This role did not sit easy with Ulrike Meinhof, who confided to a friend in 1967 that her “acceptance into the establishment” (“Aufnahme ins Establishment”) made her feel like a “revolutionary puppet” (“Revolutionskasperle”).

Ulrike Meinhof eventually left her life in Hamburg and her husband and moved with their young twin-daughters to West-Berlin. Here, in February 1970, Ulrike Meinhof was contacted by Gudrun Ensslin and Andreas Baader, who were hiding from the police. Andreas Baader had a long list of criminal offences to his name; he was bold; perceived as a rude macho by some and as charming and a competent leader by others. Baader sought action over theory or intellectual discussions and was happy to attract attention at almost any price. Gudrun Ensslin, on the other hand, was far more measured and contemplative. She was brought up in intact family surroundings in a pastoral home and enjoyed a classical education. She was a gifted student,

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<sup>15</sup> The use of the term “gang” (“Bande”) over “group” (“Gruppe”) was aimed at positioning the RAF as a criminal, anarchistic and, most importantly, as a non-political organisation. See also Schweizer (2009, p. 18).

<sup>16</sup> Much has been written about Ulrike Meinhof, who for many remains an iconic figure of German activism and terrorism. For example, Prinz (2003) provides a biographical account, K. Bauer (2008) a collection of Meinhof’s journalistic columns from 1960-1968, and Seifert (2006) an academic and contemporary witness perspective on Meinhof’s political activism, journalistic work, and finally her death in Stuttgart-Stammheim prison.

respected for her sharp intellect, and was working on her thesis when she met Andreas Baader, whose forthrightness impressed her. They became a couple and formed a bond that lasted for ten years until their death in Stammheim prison in 1977.

Ulrike Meinhof agreed to let Baader and Ensslin<sup>17</sup> stay with her in her apartment, where the group was frequently joined by Horst Mahler. Horst Mahler's father was a dentist and both of Mahler's parents were staunch Nazi supporters. Mahler<sup>18</sup> studied law at the Freie Universität Berlin and was a self-employed solicitor with a special interest in criminal law matters including the defence of Baader in a court case surrounding Baader's and Ensslin's role in an arson attack on a department store in Frankfurt/Main two years earlier (in April 1968) for which both were charged and an arrest warrant was pending. When Baader was arrested by the police, Ulrike Meinhof participated in freeing him in a violent siege on 14 May 1970 and immediately moved underground as well. A few weeks later the formation of the RAF was announced and the armed struggle ("bewaffneter Kampf") against "the system" was taken up in earnest by this first "generation" of the RAF.

The organisational structure of the RAF resembled that of an "open group" in which not only individuals with full-RAF-membership but also sympathisers were allowed contact with the RAF leadership directly. Baader and Ensslin believed this open structure to be an important catalyst for the learning process within the group (Kraushaar, 2006b, p. 594). As we shall see later, this "open structure" conflicted with the "cell structure" purported by Carlos Marighella; a model that also leading Revolutionary Cell member Wilfried Böse believed to be a superior and a safer organisational structure.

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<sup>17</sup> For further information on Baader's and Ensslin's biographies, see Peters (2007, pp. 50-77) and Koenen (2003).

<sup>18</sup> Jander (2006) provides details on Horst Mahler's biography and on Mahler's pathways as political activist, terrorist, and lawyer. For an analysis of Mahler's move from left-wing terrorism in the 1970 to a particular branch of far right ideology see Michael (2009).

The history of the RAF is often viewed in terms of three “generations” of the group, whereby attempting to allocate all group members<sup>19</sup> to exactly one particular generation is problematic. An alternative approach, succinctly outlined by Schweizer (2009), is to describe the RAF in three broad ideological and strategic phases. Hereby, the primary goal of the first generation of the RAF was to “mobilise the masses” and to evoke a “revolution” through “escalation” of conflict. Violent actions by the group were consequentially justified<sup>20</sup> as “counter-attacks” against oppressive forces of “the establishment”. Marxist-Leninist texts served as theoretical background, and Mao Tse Tung’s “Primat der Praxis”, and the example of Latin-American urban-guerrilla groups provided the impetus and the justification for attacks on select German media, industry and government bodies, as well as on representatives and institutions of “imperialistic” states.

When all leaders of the first generation of the RAF were arrested and imprisoned in 1972 (with the exception of Horst Mahler who had split from the RAF), key members of the second generation, Brigitte Mohnhaupt, Christian Klar, and Peter-Jürgen Boock, took charge on the “outside” while maintaining undercover communication with first generation group-leaders in incarceration. Imprisoned RAF members continued to formulate strategic and ideological texts for circulation and they used a series of hunger-strikes in an attempt to harness the support of left-wing groups and to cajole supporters into legal as well as illegal anti-government action. Over a period of five years the group’s efforts concentrated on forcing the release of RAF members from prison. Actions culminated in 1977, a period referred to as the “German Autumn” (Deutscher Herbst), and included the assassination of Federal Attorney General Siegfried Buback, the failed kidnapping and subsequent shooting of Dresdner Bank speaker Jürgen Ponto, a failed rocket launcher attack on the building of the Federal Attorney's office in Karlsruhe, and the kidnapping and subsequent murder of Employer Association President (Arbeitgeberpräsident) Hanns Martin

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<sup>19</sup> (Auto)-biographical accounts of several, some less prominent, members of the RAF have been published. For example: Dellwo (2007), Mayer (2007), Folkerts (2007), M. Schiller (1999) and P. Schiller (2008), and Wisniewski (1997).

<sup>20</sup> For an examination of the RAF’s justifications for violence from an applied ethics angle see O’Boyle (2002).

Schleyer. However, all attempts to force the release of RAF members failed. By October 1977, all leading members of the group's first generation had died in prison, either as a result of extended hunger-strikes (Holger Meins) or suicide (Ulrike Meinhof, Andreas Baader, Gudrun Ensslin, and Jan-Carl Raspe).

With the death of leading first-generation RAF members, the group appeared to lose what was left of discernible ideological and strategic direction. Apart from a number of bank robberies, only isolated terrorist attacks on military officials or targets were staged; for example, bombing attacks on NATO General Alexander Haig in Belgium in June 1979, on the European headquarters of US Airforce in Ramstein/Pfalz in August 1981, and on US General Frederick Kroesen in Heidelberg in September 1981 (Peters, 2007, pp. 838-839). The group viewed these attacks as resistance against US-military imperialism world-wide. When leading figures of the second generation, Brigitte Mohnhaupt, Adelheid Schulz and Christian Klar were arrested in November 1982 and another six arrests followed in July 1984, it seemed again that the RAF had been defeated.

However, the group's third generation led by Birgit Hogefeld, Wolfgang Grams and others continued to operate for almost another seven years. Bomb attacks and shootings were perpetrated on representatives of business and the military and resulted in the deaths of Ernst Zimmermann (Head of the Engines and Turbines Unions), Siemens manager Karl Heinz Beckurts and his driver, Gerold von Braunmühl (leading official in Germany's Foreign Ministry), Deutsche Bank chairman Alfred Herrhausen and Detlev Karsten Rohwedder (leader of Germany's *Treuhand* organisation responsible for the privatisation of state-owned assets in the former East-Germany). Much less is known about members of this third generation of the RAF, some of whom avoided arrest by living in East-Germany after having been issued with new identities by the Stasi, East-Germany's security and intelligence organisation. It has also been suggested that later generations of the RAF learned from the mistakes of earlier generations and developed a more sophisticated version of terrorism (Schweizer, 2009, p. 48) and underground operations. On 20 April 1998 an eight-paged letter sent from Chemnitz (in the former East-Germany) arrived at the Cologne office of the Reuter news agency signed with the RAF initials and

announcing that “the urban guerrilla in the form of the raf is now history...” (Aust, 2009, pp. 436-437).

#### **2.4.2 Bewegung 2. Juni (2<sup>nd</sup> June Movement)**

The 2<sup>nd</sup> June Movement grew out of the Kommune I and other youth protest groups in West-Berlin and derives its name from the date on which German university student Benno Ohnesorg<sup>21</sup> was shot dead by an undercover police officer during a demonstration in West-Berlin in 1967 (Gutmann, 2008, p. 372). The group formed in January 1972 and operated for eight years almost exclusively in West-Berlin with an anarchist, populist and somewhat anti-intellectual affect. One of the group’s leaders, Fritz Teufel, reflects in hindsight that the group’s “cause” was based on “[theory] that we had only half-read, but supposedly fully understood.” Other members agreed and pointed out that they had experienced difficulty following Marx-seminars and preferred practical actions over theories (Wunschik, 2006, p. 538).

The ideology of the 2<sup>nd</sup> June Movement has been described as “vague” and as essentially anti-capitalist, anti-imperialist and anti-fascist (Wunschik, 2006, pp. 537-538). Members felt compelled to act rather than to allow themselves to be tied up in theory. Their motto: “Kriterium einer Theorie ist ihre Praxis. Ohne revolutionäre Praxis keine revolutionäre Theorie” (The criterion for theory is praxis. Without revolutionary praxis, there is no revolutionary theory).<sup>22</sup> Members of the RAF criticised the 2<sup>nd</sup> June Movement as “hedonistic” (Wunschik, 2006, p. 540) and as fun-guerrilla (Spaß-Guerilla) not to be taken seriously. Regardless, the 2<sup>nd</sup> June Movement made its presence felt with numerous bombings and bank robberies in Germany and is perhaps best known for having extracted significant concessions from the German government in exchange for kidnapped West-Berlin Mayoral candidate, Peter Lorenz, in 1975; a success which earned the 2<sup>nd</sup> June Movement lasting admiration from members of the RAF, who later failed to extract government concessions through the kidnapping of Hanns Martin Schleyer in 1977.

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<sup>21</sup> For details surrounding Benno Ohnesorg’s shooting see also Peters (2007, pp. 90-93).

<sup>22</sup> Peter-Paul Zahl, Massenkampf und Guerilla – Rede vor Gericht, printed in: Bewegung 2. Juni, Der Blues Bd. 1, p210-226, p213; cited in (Wunschik, 2006, p. 538).

Members of the 2<sup>nd</sup> June Movement included Michael “Bommi” Baumann, Dieter Kunzelmann, Georg von Rauch and Fritz Teufel,<sup>23</sup> as well as Ronald Fritsch, Till Meyer, Inge Viett, Verena Becker, Ella Rollnik, Gabriele Rollnik and others. Some 2<sup>nd</sup> June Movement members, like Inge Viett, later joined the RAF and several eventually published (auto-) biographical accounts of their experiences.<sup>24</sup> The relationship between the 2<sup>nd</sup> June Movement and the RAF is complex and changeable. It includes collaboration, the sharing of resources and allies, but also inter-group rivalries, competition over limited resources, personal frictions, and animosities; all of which hindered each group from achieving their goals at times. Kraushaar (2006a, p. 512) summarises this important point: while formally, prominent German terrorist groups may have started at distinct times, the RAF in 1970, 2<sup>nd</sup> June Movement in 1972, and the Revolutionary Cells in 1973, their Konstitutionsprozess (the process of forming/being constituted) was, in reality, intertwined on many levels. It was complex, and included overlaps of personnel, logistics, and group operations.

### **2.4.3 Revolutionäre Zellen (Revolutionary Cells)**

Although not considered a terrorist, Karl Dietrich Wolff (born 1943) was no stranger to activism. He was known for his exceptional self-confidence and organisational skills and played a leading role in the formation of several protest groups during the 1960s. Wolff had contacts with militant members of the Black Panther Party such as Bobby Seale, Tom Hayden and Bernadine Dohrn and also to Gudrun Ensslin and Andreas Baader, who later became leading members of the RAF (Kraushaar, 2006b, pp. 584-588). In 1970, Wolff, together with Wilfried Böse (born 1949), Michael Schwarz (born 1949) and Johannes Weinrich (born 1947) formed a registered publishing company named Roter Stern K.D. Wolff KG<sup>25</sup> in Frankfurt/Main. Roter Stern’s publications included the magazines entitled *Erziehung und Klassenkampf* (education and class war) as well as *Antiimperialistischer Kampf* (anti-imperialistic

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<sup>23</sup> For more information about Georg von Rauch see König (2006).

<sup>24</sup> For example, (auto-)biographical accounts were published by: Baumann (1977), Reinders and Fritsch (1995), Roth (1980), G. Rollnik and Dubbe (2004), E. Rollnik (2007), Viett (2005).

<sup>25</sup> Wolff later changed the name from Verlag Roter Stern to Stroemfeld Verlag (publishers). It still exists today: details (in German) can be found at [www.stroemfeld.de](http://www.stroemfeld.de).



struggle). Topics covered included the *Black Panther Party* and problems faced by black militants in America, information about the Palestinian terrorist organisation *Schwarzer September* (Black September), the Japanese Guerrilla organisation *Rote Armee* (Red Army), the *Tupamaros* in Uruguay, as well as the situation of Palestinian refugees and that of the Palestinian resistance (Kraushaar, 2006b, p. 590).

Two of Wolff's colleagues, Wilfried Böse and Johannes Weinrich became key-figures in Germany's third most prominent terrorist group, the Revolutionary Cells (RZ). Other RZ members, who are also known to have been associated with Wolff, include Weinrich's long-time girlfriend Magdalena Kopp, who later married international top-terrorist Carlos the Jackal (alias Illich Ramírez Sánchez from Venezuela), Böse's girlfriend Brigitte Kuhlmann, and also Hans-Joachim Klein (born 1947). The RZ are considered to have officially formed on 16 Nov 1973, the day on which the group first claimed responsibility for a terrorist attack: the bombing of premises of US-American multi-national concern ITT in West-Berlin and in Nuremberg (Skelton-Robinson, 2006, p. 869). The RZ were initially underestimated by German authorities as they existed, for quite some time, in the media- and public-awareness-shadows of the RAF (Kraushaar, 2006b). Wilfried Böse, who is also known as "Boni" because of his second given name Bonifatius, is believed to have played a central role<sup>26</sup> in the formation of the RZ, a group that Böse envisaged as a new type of "Stadtguerilla" (urban guerrilla) with a broader, more populist, focus than that of the RAF.

Before the formation of the RZ, approximately from December 1971 onwards, Wilfried Böse was involved with the RAF, who assigned him their own specific cover-name of "der kleine Dicke" (the little fat-man). Böse was able to obtain batteries needed to detonate RAF bombs, he sourced American armoury such as rapid-fire weapons of type AR 16 or M 16, acted as courier between branches of the RAF throughout West-Germany, and printed and distributed RAF texts (Kraushaar, 2006b, p. 592). Böse's undercover experience, skills and relevant connections later assisted

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<sup>26</sup> See for example: Pfahl-Traughbar (2014, p. 174) and Kraushaar (2006b, p. 592).

operations of the newly formed RZ. Attempts by Böse to convince RAF members to switch to the RZ have also been reported (Kraushaar, 2006b, p. 593).

Central to the organisational structure of the RZ were at least two ideas. First, RZ members were advised or directed to avoid going underground and to remain “legal” for as long as possible by continuing their regular life, maintaining their normal social networks, working regular jobs, and importantly, by taking part in mainstream political processes and organisations. RAF members openly criticised the RZ and looked down upon RZ members, whom they described as “Feierabend-Guerilla”<sup>27</sup> (after-hours guerrilla) rather than fully engaged and committed revolutionaries. Second, as the RZ’s name suggests, the organisational model resembled a cell structure rather than an open or linear organisational structure with a centre of command. Operation under a cellular model was expected to make it more difficult for the German Fahndungsapparat (police and criminal investigations) to capture RZ members in quick succession.

It appears that the RZ quickly learned from the experience of the RAF just a short time earlier, in 1972, when founding members Andreas Baader, Gudrun Ensslin, Ulrike Meinhof, Holger Meins, and Jan-Carl Raspe, plus three additional RAF members were arrested by authorities within just a few weeks of each other. In contrast to the RAF’s model, individual group members of the RZ would know as little as possible about other members and would be unable to provide information to authorities if captured. This approach appears to have served the RZ well. When one of their members, Hermann Feiling, sustained life-threatening injuries during a failed bombing attack in the summer of 1978, he was captured by criminal investigators and interrogated in hospital over a period of several weeks. Despite intense interrogations of a heavily injured and weakened RZ member, investigators merely extracted information about Feiling’s local cell of five members in Heidelberg, but nothing of significance about the group’s founding cell in Frankfurt nor about the

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<sup>27</sup> As reported by former RAF member Margit Schiller in (M. Schiller, 1999)

group's international connections, such as to the before-mentioned Carlos nor to Palestinian terrorists groups (Kraushaar, 2006b, p. 598).

Little was known about the internal structure of the RZ for a long time. It was not until the arrest of leading RZ member Hans-Joachim Klein in 1998 that more information was obtained. It is now believed that approximately ten RZ cells operated in the Federal Republic of Germany; four in Frankfurt/Main, and several others in West-Berlin as well as in the Ruhrgebiet (Pfahl-Traughbar, 2014, p. 174). At least one international cell of the RZ participated in attacks outside Germany and collaborated with terrorists from other countries; such as in the attack on an OPEC conference in Vienna in 1975 under Carlos (in which RZ member Hans-Joachim Klein took part); and the hijacking of an Air-France aircraft on route from Israel to France in the European summer of 1976. After a stop-over in Athens, the aircraft was hijacked by members of the PFLP-SC as well as German RZ members Wilfried Böse and Brigitte Kuhlmann. The terrorists redirected the aircraft to Entebbe in Uganda, where Israeli forces killed all terrorists and freed remaining hostages in a special military operation. The hijacking/hostage-taking event, which lasted several days, at some stage included the segregation of hostages into two groups—Jewish and non-Jewish. This selection process is believed to have been carried out by Böse and Kuhlmann and resulted in much debate amongst members of the RZ and other German terrorist groups, of which conflicting accounts exist. However, it appears to be agreed that the ill-fated Entebbe attack caused major rifts within the RZ and that it effectively ended the group's international operations (Skelton-Robinson, 2006, pp. 880-881).

The hijacking of the Air-France aircraft with the ensuing hostage-situation in Entebbe probably constitutes the most publicised attack perpetrated by the RZ. Other RZ attacks were of a smaller scale and more populist in nature, with the intention that the design of attacks might be easily replicated (by other established and by newly formed cells) and attack targets selected in such a way that the selection of a target would represent a political message in itself. Pfahl-Traughbar (2014, p. 174) illustrates this point and lists RZ targets between 1973 and 1974 that demonstrate opposition to American foreign policy, targets between 1975 and 1977 that appear

to support the feminist-movement and pro-abortion groups, while several RZ attacks between 1977 and 1978 targeted firms and research institutions involved with the construction of nuclear power-stations. From approximately 1980 onwards, the RZ also conducted several so-called “Knieschussattentate” (knee-cap attacks) in which several government officials were wounded or killed. Like the RAF and the 2<sup>nd</sup> June Movement, the RZ lost support and impact after the reunification of Germany in 1989. The group’s last actions are believed to have been small scale bombing attacks in 1993 and 1995. In 2001 former members of the RZ published a paper entitled “Rauchzeichen” (smoke-signal) in which the following observation is made: “Bis heute gibt es keinen authentischen Rückblick über die frühen Jahre der RZ. Selbst nicht in der individualisierten Form einer Autobiographie. Diejenigen, die etwas dazu sagen können, sind entweder tot oder schweigen.” (Until today there are no authentic reviews of the RZ’s early years. Not even in the individual form of an autobiography. Those, who are in a position to comment, are either dead or remain silent; as outlined in “Geschichten des Zorns”, *jungle world* vom 21. Juni 2001 (cited in Kraushaar, 2006b, p. 590).

## **2.5 Terrorism and the Media**

In their article “Theatre of Terror”, published more than 30 years ago, Rubin and Friedland (1986) use vivid descriptors to suggest metaphorical parallels between a highly dramatic theatre performance and that of a carefully staged act of political terrorism. Like theatre actors, terrorists must first capture the attention of their target audience and then hold and sustain audience interest for as long as possible. A dramatic target for an execution of a terrorist attack combined with a message of symbolic significance and political justification can assist terrorists to amplify attention and sympathetic potential from their audience under at least two conditions: first, that resulting media coverage is sufficiently extensive and/or sustained and, second, that media reports are suitably slanted in order to promote the communicative goals of the terrorists.

Of course, media outlets have their own agendas to follow when deciding on the content and extent of their coverage. Elter (2006, p. 1067) and Glück (2007, p. 24), for example, list several criteria that are important for an issue or an event to be

considered newsworthy, including: timing and timeliness, emotionality, curiosity, involvement of persons with elite or celebrity status, degree of violence or negative impact, vicinity to the reader or viewer, continuity, and clarity. If several of these criteria are met and, especially, if the level of continuity is high, then a great headline or a hot-story may become a media-event that lasts for several days, weeks or even months, as was the case for the media attention accorded to several hostage-taking and kidnapping events in Europe throughout the 1970s. Terrorist groups for whom media coverage is a desired payoff will therefore pay close attention to the development of an effective media strategy.

The interplay between terrorism and the media has been the topic of many publications over recent decades<sup>28</sup> and it continues to be the subject of much debate. If we narrow our focus on Western Europe, however, the volume of published works is considerably smaller; for example, Kingston (1995) examines terrorism and the media in the context of the Northern Ireland conflict; Glück (2007) focuses on ETA; and Martens (2008) on representations of the German Red Army Faction (RAF) in the Dutch media. In the context of the Federal Republic of Germany, Balz (2006) writes on the discourse about terrorist “sympathisers” in the West-German print media; Musolff (2006) on terrorism represented as “Kriegsgeschehen” (event/s of war) in the West-German public discourse; Steinseifer (2006) on terrorism as media-event/s in the German autumn of 1977 with particular reference to the kidnapping of Hanns Martin Schleyer; and Buck (2007) on media, hostage-taking and kidnapping of German citizens.

Few authors have analysed terrorist acts in Germany specifically from the perspective of a deliberate communication strategy; they include: Elter (2006, 2008) on the RAF and the media; Kraushaar (2006c) on a “Kleinkrieg” (small scale war) by groups including the RAF against Axel-Springer publishers; Gätje (2006) on the RAF’s “info-system” and the group’s internal communication strategy; Glaab (2007) on the RAF

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<sup>28</sup> Works consulted for this study include: Alexander (1980); L. J. Martin (1986); Carpini and Williams (1987); Wilkinson (1990); Crelinsten (1997); Nacos (1994); Weimann and Winn (1994); Nacos (2003); Schbley (2004); Abrahms (2005); Weimann (2005); Ross (2007); Surette, Hansen, and Noble (2009). A more comprehensive discussion of the literature is presented in Chapter III.

and the media during the 1970s; Balz (2008) on the media strategies of the RAF (pp. 52-76) and news management during the “escalations” of 1977 (pp. 255-320). It is significant to note that the RAF has been the subject of almost all of these analyses. It is also timely to reiterate a point frequently made in the literature; see for example Elter (2006, p. 1068) and Glaab (2007, p. 31): Terrorists can influence to a considerable degree *if* media coverage is likely to occur in response to an act of terrorism that has been carefully staged according to the before-mentioned criteria of a newsworthy story.<sup>29</sup> Influence, however, on *how* and *how much* the media will report is much more difficult to achieve and is subject to the uncertainty that characterises terrorist activity. Regardless, terrorist groups seek media attention for their actions even if resulting media coverage is negative and does not support the terrorists’ stated political or ideological message. It seems that the nature of the coverage is far less important than the fact that coverage occurs at all.

The analysis of the RAF’s interaction with the media has many dimensions (Elter, 2006, p. 1068) and the group’s first generation is regarded as particularly concerned with the way in which the group was represented in the media. The RAF’s declaration of formation (Gründungserklärung) entitled “Die Rote Armee aufbauen” (to build the Red Army) was printed under the logo of the Black Panther Party in *Agit 883*; the text ends with the rallying cry: “Die Klassenkämpfe entfalten /Das Proletariat organisieren /Mit dem bewaffneten Widerstand beginnen /Die Rote Armee aufbauen!” (To start class conflicts /To organise the proletariat /To begin with armed resistance /To build the Red Army); German text cited in Peters (2007, p. 193). *Agit 883* carried the subtitle *Zeitschrift für Agitation und sozialistische Praxis* (magazine for agitation and socialist praxis); it was a broadsheet “Szene”-newspaper, offered fortnightly by street-vendors in pubs and cafés. With a circulation ranging between 4,000 and 10,000 copies - more than any other underground paper of this genre in Germany

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<sup>29</sup> No terrorist group can, however, guarantee that a particular planned operation will result in a certain amount of media coverage. Recognising the variability or risk inherent in the outcomes of terrorist actions, including the media coverage generated by them, is a key feature of the analysis presented in this thesis.

(Kraushaar, 2006a, p. 516) - *Agit 883* provided a public forum for the documentation and exchange of radical left positions and opinions.

By the time *Agit 883* printed the RAF's appeal "Die Rote Armee aufbauen", a text widely assumed to have been authored by Ulrike Meinhof (Kraushaar, 2006a, p. 517), Meinhof herself had gone underground leaving her career as a well-known and respected journalist, publicist and writer behind. She brought to the RAF a sharp intellect and significant media-related experience. Before going underground, Ulrike Meinhof wrote regular columns<sup>30</sup>, some of which were published in the far-left magazine *Konkret* (Peters, 2007, p. 148). *Konkret* magazine was founded by Klaus Rainer Röhl in 1957 and received, for some time, significant financial support from communist East-Germany. Klaus Rainer Röhl and Ulrike Meinhof married in 1961 but separated before the RAF was formed in 1970. Interestingly, *Konkret* was renamed *konkret* in 1973 thus adopting the RAF's distinctive style of replacing uppercase letters in standard German spelling with lowercase letters. Even in prison Ulrike Meinhof continued her study of media-related theories and media systems and ordered relevant books via solicitor Dr Klaus Croissant (Elter, 2006, p. 1069).

The first generation of the RAF held an immense mistrust of the media and viewed mainstream media outlets as a tool of the West-German government to indoctrinate the public in line with imperialist intentions expressed through both foreign and internal West-German politics (Glaab, 2007, p. 37). Even leftist-liberal media outlets, if mainstream, were suspected to be part of "the system". Media coverage concerning the RAF and the political left was followed and examined closely and the publication of untruths and propaganda expected as a given; for example, the RAF's first strategic publication *Konzept Stadtguerilla*<sup>31</sup> from April 1971 includes the following statement: "daß fast alles, was die Zeitungen über uns schreiben – und wie sie es schreiben: alles - gelogen ist, ist klar" (that almost everything that the newspapers write about us – and how they write it: everything - are lies, that's a

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<sup>30</sup> See K. Bauer (2008) for a selection of Ulrike Meinhof's columns from 1960-1969 translated to English.

<sup>31</sup> For a more comprehensive account of the *Konzept Stadtguerilla* and other RAF publications see ID-Verlag (1997), for example pp. 27-28.

given). The publication also states that an interview by French journalist Michèle Ray with the RAF in June 1970 was exploited both by her and by the *Spiegel* magazine for financial and editorial gain.

The first generation of the RAF, like other activist groups at the time, sought out smaller publishers such as Karl Dietrich Wolff's *Roter Stern*, as well as non-mainstream newspapers and magazines like *konkret*, *Agit 883*, and *Kursbuch*, Germany's most important magazine of the New Left (Kraushaar, 2006a, p. 517). The readership of smaller, underground media outlets constituted members of the revolutionary left, marginalised groups and disenfranchised youths who were expected to be more receptive to revolutionary views and actions proposed under calls for a "fight against the system". In addition, it was assumed<sup>32</sup> that the RAF's political messages, even if published in mainstream media, would not be printed in full and would be distorted through editorial commentary.

Despite a strong dislike for mainstream media, the RAF did not ignore the popular and mainstream press. Ulrike Meinhof, together with most early members of the RAF, regularly and systematically analysed media coverage in newspapers and magazines in the German, wider European and American press, not only to survey media reports about the RAF and other terrorist groups, but also to collect information about relevant police and criminal investigations (Fahndungsmaßnahmen), as well as reactions and public debates surrounding the issue of terrorism in the Federal Republic of Germany. A number of RAF members were even assigned the task of reading and analysing media reports not only in German, but also in French and English (Elter, 2006, p. 1074).

Even after the arrest and imprisonment of leading first generation RAF members the group continued, and possibly intensified, their media-related work as well as efforts towards constructing the RAF's own historiography.<sup>33</sup> An important aspect in this

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<sup>32</sup> See views expressed by RAF founding member Gudrun Ensslin, quoted in Glaab (2007, p. 39).

<sup>33</sup> Elter (2008, p. 233) points out that the RAF is one of the few, possibly the only, terrorist organisation whose "historiography in the present" (*Historisierung in der Gegenwart*) began while the group was still active.



regard is undoubtedly the interest shown by German and European intellectuals, authors and artists,<sup>34</sup> and prominent public figures in the escalation of debates surrounding the RAF, the conditions under which RAF members were held in prison and the response of the German government and the mainstream-media to terrorist activity in the country. The following is an extract of a request written by Ulrike Meinhof to French philosopher and writer Jean-Paul Satre in October 1974. Satre is asked to visit Andreas Baader in prison, where Baader, together with 31 other members of the RAF, participated in the group's third collective hunger-strike:

*„Satre, ... Um das Interview zu machen, ist es nicht notwendig, daß Du uns in allem zustimmst, was wir von Dir wollen ist, daß Du uns den Schutz deines Namens gibst und Deine Fähigkeit als Marxist, Philosoph, Journalist, Moralist für das Interview einsetzt, um uns die Möglichkeit zu geben, dadurch bestimmte politische Inhalte für die Praxis des antiimperialistischen Kampfes zu transportieren ...“, cited in Aust (2008, p. 431). „Satre, ... To conduct the interview, it is not necessary that you agree with us on all points, what we want of you is that you give us the protection of your name and that you use your abilities as a Marxist, philosopher, journalist, moralist, to provide us with the opportunity to convey certain political messages for the praxis of the anti-imperialist struggle ... “(translation to English by the author).*

On 9 November 1974, imprisoned RAF member Holger Meins died after many weeks of starving himself as part of the group's well publicised third hunger-strike.<sup>35</sup> Holger Meins' death resulted not only in the retaliatory shooting murder of Günter von Drenckman, president of Germany's Superior Court of Justice, but also in demonstrations throughout Germany and an increase in the debate surrounding the conditions under which “political prisoners” or “terrorists”, depending on the view of the speaker/writer, were held in German prisons. Jean-Paul Satre did visit Andreas

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<sup>34</sup> Tremel (2006) coins the term “*Literrorisierung*” (loosely translated as “*terror in literature*”) and highlights, among other works, Nobel Prize Laureate Heinrich Böll's 1974 novel “*Die verlorene Ehre der Katharina Blum oder: Wie Gewalt entstehen und wohin sie führen kann*” (The Lost Honour of Katharina Blum or: how violence develops and where it can lead). The novel's central theme is the effect of sensationalist journalistic practices on the life of a law-abiding woman who yields to despair and shoots a tabloid press journalist.

<sup>35</sup> For details on the events surrounding Holger Meins' death see for example Peters (2007, pp. 317-323).

Baader in Stammheim prison in December 1974. Satre's meeting with Baader was covered widely in the German press and in the "whole of the international press" (Aust, 2008, p. 423) and has been described as a most successful coup for the external communication of the RAF (Elter, 2006, p. 1073). When the second generation of the RAF emerged fully as a terrorist group and their *Commando Holger Meins* staged the violent siege of the German Embassy in Stockholm in April 1975 with the explicit goal of freeing leading first-generation RAF members from prison, the group did so with a relatively advanced understanding of the ways in which the group's actions would be treated by the German and international media.

## **2.6 Conclusion**

In this chapter the historical context from which the leftist movement emerged in the United States and in Western Europe was described. The discussion tracked significant events as the 1970s progressed culminating in the violent expression of leftist political ideology and the rise to prominence of a number of terrorist groups in West-Germany. The objective of this thesis is to contribute to the research program called 'terrorism and the media' by exploring terrorist choices of actions in a context where media coverage is the desirable but risky or uncertain outcome of terrorism. The particular context that has been chosen for this study is the terrorism experienced in West-Germany beginning in 1970. The terrorist groups that were active in this time and place have attracted a great deal of interest from terrorism studies researchers. Many of these groups, especially the RAF, were conscious of the role and the importance of the media, paying close attention to media reports regarding their own attacks and the actions perpetrated by other groups. Various other aspects of this context, including the dominance of print media at the time, will be introduced in later chapters. This chapter has provided a contextual background that begins to explain how this investigation of terrorism choice contributes to our understanding of the behaviour of terrorists and terrorist groups who desire media coverage but who recognise that no terrorist action can guarantee it because of the uncertainty inherent in terrorist activity and its outcomes.

## Chapter 3 - Literature Survey

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### 3.0 Introduction

It is the purpose of this chapter to survey the terrorism studies literature. This includes contributions from economics, criminology, political science, sociology, psychology and critical studies. Over time, researchers have placed significant emphasis on media attention as an important operational objective or 'payoff' to terrorist activity, and emphasise the need to understand the interaction between terrorist groups, terrorism, the media and media attention. Studies of 'terrorism and the media' exhibit some limitations. When these studies are quantitative, they tend to rely on word-counts and word-searches to measure the attention accorded to terrorism in the media; for example, by counting the number of times the term 'terrorism' appears in a given period. Although this approach is appropriate for studying the topicality of terrorism, without media attention data by attack type, these studies can never satisfactorily explore terrorist choice and strategy.

In studies that attempt to explore terrorist strategy as it pertains to the media and especially those studies that extend their analysis to the choices that terrorists make in terms of actions and targets, there is another less noticeable but no less significant shortcoming. This is the implication that terrorists will choose the action that yields the greatest amount of attention. At best, this approach can be interpreted as naïvely embedding a basic expected value type model of choice. It is well known from studies in decision theory and decision-making under risk and uncertainty that this type of approach yields incomplete and, potentially, logically inconsistent conclusions. This chapter places the 'terrorism and media' literature into its broader scholarly context and highlights the value of the steps taken in this thesis to overcome some of the weaknesses inherent in existing analytical approaches. It is concluded that the problem addressed by this thesis is important and that an opportunity exists to develop our understanding of terrorist attack method choice in a context where media attention is the desired but uncertain outcome of terrorist activity.

### **3.1 Overview of the Chapter**

This chapter is organised as follows. In Section 3.2 the ways in which terrorism is defined and analysed by each of the major fields that contributes to terrorism studies is discussed. This provides an introduction, not only to the multidisciplinary nature of terrorism studies, but also to each of the major research programs that are ongoing within each of the participating disciplines. In Section 3.3 the scope and structure of terrorism studies over the past four decades is explored in more detail with an emphasis on the main areas of study, the major problems which have drawn contributions from researchers representing each of the participating disciplines, and the recognisable trends or turns that terrorism studies has taken during this time. Because the thesis applies both orthodox and behavioural models of decision-making developed within economics, the study of terrorism from an economics perspective is singled out for more extended treatment in Section 3.4. In Section 3.5, attention is focussed on the area of study to which this thesis aims to contribute directly. The study of terrorism and its interaction with the media is a foundational research program within terrorism studies and each of the major disciplines has contributed something towards it. Our attention is drawn finally in Section 3.6 to those studies that have directed the theoretical and analytical frameworks of economics towards the study of terrorism and the media. The literature survey concludes that the problem addressed by this thesis is significant within contemporary terrorism studies and that the approach taken herein represents a worthwhile contribution to the literature. This conclusion is stated in Sections 3.7 and 3.8.

### **3.2 Defining Terrorism**

Definitions of 'terrorism' are numerous and even after decades of meticulous efforts by Schmid (1984, 2004b, 2012) and Schmid and Jongman (1988) an all-encompassing and unanimously accepted definition has not been found. Despairing of the task, Walter Laqueur (cited in: B. Hoffman, 2006, p. 33) concluded in the late 1970s that finding a definition was neither possible nor was it worthwhile to continue such attempts. In 1988, he responded to a survey conducted by Schmid with the following observation: "Ten years of debates on typologies and definitions have not enhanced our knowledge of the subject to a significant degree". Nonetheless, the debate

continues (e.g. Weinberg, Pedahzur, & Hirsch-Hoefler, 2004). A survey of the contemporary literature suggests that the task of defining terrorism has developed into an almost independent program much of which is based in the field of critical studies; for example: Shanahan (2010), Jackson (2011), Jarvis and Lister (2014), and Ramsay (2015).

Before exploring some aspects of the debate in more detail, the definition adopted throughout this thesis can be stated. On the one hand, the definition used in the GTD is important because that is where part of the data for this thesis is sourced from. The GTD defines terrorism as any action by a non-state actor (usually, a terrorist organisation) outside the context of legitimate warfare with the intention to communicate (through the use of violence) with, coerce, or intimidate an audience larger than the immediate victims of a terrorist act, where this act is associated with achieving political, economic, religious or other social objectives. The GTD definition would guide this study well, however, because the thesis uses economic analysis, it is appropriate to augment the GTD definition with a definition used within the economics of terrorism. Such a definition was contributed by F. Schneider and Meierrieks (2014, p. 1). This is very similar to the GTD definition:

*Terrorism is the premeditated use, or threat of use, of extra-normal violence by non-state actors outside the context of legitimate warfare with the intention to coerce and intimidate an audience larger than the immediate victims in order to obtain political, economic, religious, or other social objectives through intimidation or fear.*

The term 'terrorism' is not a new one. B. Hoffman (2006, pp. 1-41) provides an overview of how the meaning and associated connotations of the term have varied since the French Revolution to the early 21<sup>st</sup> century. He points out how terrorism was historically understood as neither random nor indiscriminate and how terrorism is viewed as "violence committed by non-state entities" whereas the term 'terror' describes "violence and intimidation by those *already* in power against their own citizenry" (pp. 15-16). B. Hoffman (2006) devotes an entire chapter to defining terrorism, and Hoffman's conclusion is largely consistent with the definition contributed by F. Schneider and Meierrieks (2014). However, such agreement is not

always characteristic of this literature. Terrorism has been studied by scholars from various fields including criminology, political science, sociology, critical studies, psychology, and economics. While some general consensus is evident, researchers in different fields view terrorism from different perspectives and emphasise different aspects in arriving at a definition for terrorism.

### **3.2.1 The Perspective of Criminology**

Criminologists define terrorism as political violence “from below” (Hamm, 2005, p. 239). Hamm attributes the foundational work on terrorism from a criminological perspective to Austin Turk (1982). According to Hamm (2005, p. 238), Turk was the first criminologist to suggest that the terrorism label should be reserved only for subordinate groups that challenge the state through intimidation or violence and that crimes by the state should not be identified as political [terrorism]. Bassiouni (1981) proposes that terrorist acts are ideologically and politically motivated and are designed to achieve power. Crelinsten (1989, 1997) describes terrorism first and foremost as a phenomenon of communication designed to send a message to specific target audiences. This is a theme also followed by Surette et al. (2009), who examine media-oriented terrorism and cite the work of Schmid and de Graaf (1982), who also view terrorist violence from the perspective of a communication strategy.

In the modern vernacular the term terrorism is a pejorative term (B. Hoffman, 2006, p. 23). It is therefore common for terrorists to describe themselves as ‘freedom fighters’, as ‘(urban) guerrillas’, as members of a ‘resistance movement’ or as ‘soldiers’. Even substitutions for the term terrorist are shown in inverted commas here, as they too are not objective facts, but are concepts for which it may not be possible to find an all-encompassing definition, or at least not one that everyone might agree with. Attempts have been made to circumvent such impasses. Jenkins (1986, pp. 279-280), for example, suggests that terrorism may be objectively defined “by the quality of the act, but not by the identity of the perpetrators or by the nature of their cause”, where the quality of an act is judged in accordance with national and/or international legal frameworks. The criminological perspective is important, as we shall see in the next section, because terrorism researchers have begun to incorporate a distinctive criminological perspective into their research programs.

### **3.2.2 The Political Science Perspective**

Political scientists have described terrorism essentially as 'political' and aimed at the pursuit of 'power'. Abrahms (2008, p. 79), for example, poses the question of whether the solution to terrorism might not reside "in diminishing its political utility", while B. Hoffman (2006, p. 2) contributes the following definition: "Terrorism, in the most widely accepted contemporary usage of the term, is fundamentally and inherently political. It is also ineluctably about power: the pursuit of power, the acquisition of power, and the use of power to achieve political change". While some analysts such as B. Hoffman (2006, p. 41) view terrorism as acts perpetrated by subnational groups or non-state entities only, others (e.g. Blakeley, 2007, p. 234) maintain that the label 'terrorist' can and probably should be used to denounce publically actions by states that are "morally no different from (non-state) terrorism" (Finlay, 2009, p. 773). A survey conducted by Young and Findley (2011) found that the terrorism studies literature from 1980 to 2008 has been dominated by qualitative and case-study work. As the number of observations in case studies are generally very small, researchers have been careful to define terrorism in a way that fits their particular case under study; thus contributing to the continuous proliferation of definitions. Young and Findley (2011, pp. 416-417) argue that better integration of knowledge might be achieved through quantitative research where (a) scholars begin with "a firm minimal definition based on points of agreement about what terrorism is (and is not)", and (b) use additional empirical analysis on key points of contention to investigate how much the contention matters when it is applied to a large number of cases.

### **3.2.3 The Social Science Perspective**

Social scientists have highlighted the psychological impact of terrorist acts. Hudson (2010, p. 10) describes the primary goal of terrorist action as "the psychological purpose of publicising a political or religious cause and/or intimidating or coercing a government or civilian population into accepting demands on behalf of the cause". The element of public fear generated via terrorist action and the role of the media in this process is highlighted by Braithwaite (2013, pp. 95-96) who suggests that "public perceptions [...] are the real target of terrorist attacks. Terrorists prioritise

communication of an exaggerated sense of their ability to do harm. They do this by attempting to convince the population that their government is unable to protect them". Primoratz (cited in Richards, 2014, p. 230) also highlights the psychological dimension of terrorist acts and contends that "all uses of political violence effect some degree of fear, but in terrorism proper, the causing of fear and coercion through fear is *the* objective". Richards' own definition concurs: "terrorism is the use of violence or the threat of violence with the primary purpose of generating a psychological impact beyond the immediate victims or object of attack for a political motive." In Richards' view such elements are common to *all* acts of terrorism. He concludes that if the primary aim of a violent act is not to generate a wider psychological impact, then the act is not terrorism. Richards concedes that 'knowing' or 'deciding' if an act of political violence is primarily designed to generate a psychological impact beyond the physical effect is a subjective process. Still, it is a question which in Richards' view points to the heart of the subjectivity problem that is so inherent to the task of finding a definition for terrorism. That terrorism is not a given 'truth' in the real world but is instead a biased interpretation of events and their presumed causes, at times used consciously to manipulate perceptions to promote certain interests has also been suggested by Turk (2004, pp. 271-272). While social science researchers have tended to focus on the psychological impact of terrorist *acts* on society at large, consideration of the terrorist as an *individual person* or as part of a specific terrorist *group* are the concern of psychologists.

### **3.2.4 The Psychologists' Perspective**

The psychological approach to terrorism "is concerned with the study of terrorists per se, their recruitment and induction into terrorist groups, their personalities, beliefs, attitudes, motivations, and careers as terrorists" (Hudson, 2010, p. 16). Attempts at uncovering the 'terrorist mind' or a 'terrorist profile' have spanned several decades of investigations. Victoroff (2005) offers a review of published theories of the psychological bases of terrorism as well as published psychosocial data describing terrorists. He defines terrorism as "atypical human behaviour" (p. 4), points to the heterogeneity of terrorist roles and responsibilities within terrorist organisations (pp. 5-6), as well as to divergent temperaments, ideologies, thought



processes, and cognitive capacities of individual terrorists, and acknowledges that any efforts to uncover the 'terrorist mind' will more likely result in uncovering a "spectrum of terrorist minds" (p. 7).

Over several decades, insanity, psychopathy, and sociopathy<sup>36</sup> are cited as possible reasons which might push individuals towards terrorism. Concerns about the scientific validity of such assertions are raised by Corrado (1981, cited in Victoroff 2005 p. 31) who suggests that "a terrorist personality probably does not exist and that efforts to psycho-pathologise this type of aggression are rooted in biased theory, not in unbiased data". Reich (1998, p. 262) concurs, warning that "psychological accounts of terrorism are replete with explanations that ignore or blur variety and complexity". More recent reviews of the literature (e.g. Victoroff, 2005; Silke, 2003a, p. 33; Horgan, 2008, p. 80) also conclude that many attempts at identifying terrorist 'traits' have lacked scientific rigour and have largely been unsuccessful. While some specific psychological characterisations of the terrorist tend to persist, for example hypotheses about Frustration-Aggression<sup>37</sup>, Narcissistic Rage<sup>38</sup>, and Negative Identity<sup>39</sup>, contemporary psychologists, political scientists, and sociologists appear now largely to agree that a single 'terrorist personality' does not exist (Hudson, 2010, p. 51). It is important to note at this point that absence of conclusive evidence in support of pathological traits common to all terrorists does not suggest that "mentally unbalanced or pathological personalities are *never* present in terrorist organisations" (Silke, 2003a, p. 32). Similarly, suggested 'root causes' of terrorism<sup>40</sup> such as poverty, demographic factors, social inequality, dispossession, and political grievances have "garnered little empirical support or conceptual grounding"

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<sup>36</sup> For a discussion of terrorist behaviour as both prosocial and antisocial see Victoroff (2005, pp. 13-14).

<sup>37</sup> The Frustration-aggression hypothesis views aggressive behaviour as a result of unresolved frustration. For a description see also, for example, Friedland (1992) cited in Horgan (2003, p. 10), and Hudson (2010, p. 17).

<sup>38</sup> Narcissistic rage is defined as rage against the 'self' arising from complex psychological and environmental factors exacted upon an external target (Victoroff, 2005, p. 23); see also Pearlstein (1991) cited in Horgan (2008, p. 12) and Hudson (2010, p. 18).

<sup>39</sup> Negative identity is the resolution of an identity crisis that involves the adoption of socially undesirable behaviours or ideologies. For details see Erikson's (1968) theory of identity formation and Knutson (1981), both cited in Hudson (2010, p. 18).

<sup>40</sup> For a discussion on the 'root causes of terrorism' argument see Newman (2006).

(Kruglanski & Fishman, 2006, p. 196). And again, while such factors are not irrelevant to terrorism, they have not been proven to be reliable determinants of terrorism, as the majority of individuals facing conditions of disadvantage do not become terrorists.

Given the difficulty of profiling terrorists as individuals, some researchers have shifted their attention to examining the various pathways that some people take toward, into, and even out of terrorism. Taylor and Horgan (2006, pp. 590-591) clearly depict terrorism as a socialisation process and Horgan (2008) reemphasises the point that more value may be gained from examining individuals' "pathways" and "routes" toward and through terrorism rather than to remain focused on terrorist profiles and possible root causes or so-called "push"-factors which are often so broad that little can be done in a practical sense to change them. According to Horgan, more may be gained for counterterrorism initiatives if researchers were to increase their focus on narrower and more easily identifiable "pull"-factors, i.e. lures and real or imagined rewards throughout a person's radicalisation process that elevate and maintain his or her positive expectation of terrorist group involvement. Mitigating action toward challenging the myths and lures of terrorism, for example through the use of targeted counterpropaganda, may serve as effective counterterrorism strategies.

Another interesting development is the juncture where the psychological approach to terrorism meets with the field of criminology and the overarching question is posed of whether or not insights gained in one field may inform the other. Fussey and Richards (2008) provide a useful overview of the debate and after discussing several differences between terrorists and other criminal behaviour conclude in support of interdisciplinary enquiry, albeit with some reservation. At the level of the individual offender, for example, Fussey (2013, p. 104) restates the point that many terrorists do not "experience their violence first hand" and may be emotionally equipped differently to 'ordinary' criminals, who come in close physical contact with victims of their attacks. Related findings are presented by Taylor and Horgan (2006, p. 596) who highlight the divergent characteristics of terrorist activities and illustrate how various types of terrorist roles differ in their relative proximity/distance to

violence perpetrated. While differences can be found in the motivations, processes of involvement, and actions that terrorists and other criminal offenders might display, some researchers in the area of psychology have pointed to interesting parallels in the behaviour of both.

Stedmon and Lawson (2013, p. 91) argue that “terrorism shares attributes with many lower and more common forms of crime” and suggest that terrorists conduct hostile reconnaissance in the planning of an attack in a public space in a very similar manner to the way a petty criminal may survey a public space for security measures and vulnerable targets. With regard to attack prevention, Vrij, Mann, and Leal (2013) point out that results from physiological and neurological deception research as well as insights gained about the differential mental processes of truth tellers and liars might be beneficially deployed when approaching persons suspected of planning a terrorist attack. Specifically, Vrij et al. (2013, pp. 115, 124) point out, first, that even truth tellers may display cues of deception such as stronger emotions, gaze aversion, when under pressure in an interview situation. Therefore, more reliable results may be obtained by (a) examining potential suspects when they are *secretly* observed. Furthermore, the authors propose that cognitive load and therefore observable cues to deception may be increased by (b) asking suspects about *intentions* (rather than past actions or events) and by (c) interviewing suspects *together* whenever possible, as it is much more difficult for a group of people to construct a cohesive and consistent lie than it is for an individual.

### **3.2.5 The Economics Perspective**

The economics approach to the study of terrorism has a relatively short history, so definitions for terrorism from this perspective are relatively easier to determine. A definition for the term ‘terrorism’ from the economics approach, provided by F. Schneider and Meierrieks (2014), was cited at the start of this chapter. This recent definition contains many elements which are congruent with definitions that have been provided by other economists who study terrorism. Enders and Sandler (2002, pp. 145-146), for example, capture essential features of definitions provided in the literature and state:

*Terrorism is the premeditated use or threat of use of extra-normal violence or brutality by subnational groups to obtain a political, religious, or ideological objective through intimidation of a huge audience, usually not directly involved with the policy making that the terrorists seek to influence. Key ingredients of the definition include the underlying political motive, the general atmosphere of intimidation, and the targeting of those outside of the decision-making process. Terrorists choose their targets to appear to be random, so everyone feels at risk [...]. Businesspeople, military personnel, tourists, and everyday citizens, rather than politicians, are generally the targets of terrorist attacks.*

An important element in the examination of terrorism from an economics perspective is the concept of rational choice. The rational choice model implies that terrorists have an objective and choose from among their scarce means to reach that objective. This thesis takes an economic perspective to the study of terrorism and the media. The scope of the economic analysis of terrorism and some important contributions to the literature are surveyed later in this chapter.

### **3.3 Scope and Structure of the Terrorism Research Program**

The study of terrorism is an evolving research program that can be traced, in its contemporary-modern form, to the late 1960s and by now spans a period of more than five decades. A general survey of terrorism studies is not attempted here, primarily because the investigation is mainly concerned with the analysis of terrorism and the media and the choices that terrorists make in such a context. Although the terrorism studies literature is voluminous, some attempts at reviewing it have been contributed and can be read to gain an appreciation of the scope and nature of work that has been done in this field (e.g. Reid, 1997; Silke, 2001; Shughart, 2006; Reid & Chen, 2007; Schmid, 2011; Sageman, 2014). In this section an overview of the terrorism studies literature is provided that places the thesis within the broader context of the terrorism studies literature.

In order to accomplish this, a complete survey of two major multi-disciplinary and inter-disciplinary academic journals<sup>41</sup> concerned with the study of conflict, terrorism, and political violence was conducted. All volumes and issues in both *Terrorism and Political Violence* and *Studies in Conflict and Terrorism* were examined and a list of special-issue titles compiled. Then, the “most-read”<sup>42</sup> and “most-cited”<sup>43</sup> articles from both journals were collected and catalogued by year of original publication and topic. Approaching the task of outlining the scope and structure of the terrorism studies literature by focussing on the most-read and most-cited journal articles is an approach that has some precedence in terrorism studies (Silke & Schmidt-Petersen, 2015). The two journals, to which most of our attention is directed, have previously formed the foundation for literature reviews in this field of study (Silke, 2008). The list of topics, special issues, readership and citations is compiled and summarised in Table 3.1 and Table 3.2.

It quickly becomes apparent that very few special-issue topics are represented amongst most-read or most-cited articles. The few exceptions include: (1) Sandler (1995) whose article on the relationship between democracy and terrorism fits within the theme of the year 2000 special-issue of the journal of *Terrorism and Political Violence*; (2) Dishman (2005) whose article on the convergence of crime and terror relates to the 2012 special-issue in that journal; and (3) Spaaij (2010) whose article on lone wolf terrorism corresponds to the topic chosen for a special-issue of the journal of *Terrorism and Political Violence* in 2014. Special-issue topics in neither the journal of *Terrorism and Political Violence* nor the journal of *Studies in Conflict and Terrorism* have thus attracted the readership or citations of other topics considered in these two journals.

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<sup>41</sup> *Terrorism and Political Violence* (Taylor and Francis): 1989 (Vol 1/Issue 1) to 2015 (Vol 27/Issue 4); and *Studies in Conflict and Terrorism* (Taylor and Francis): 1977 (Vol 1/Issue 1) to 2015 (Vol 38/Issue 10)

<sup>42</sup> Measured by downloads. See Taylor and Francis, Routledge.

<sup>43</sup> Measured by Scopus and Web of Science. See Taylor and Francis, Routledge.

**Table 3.1 Terrorism Studies Research – Topics, Readership and Citations**

| <b>Topic</b>                                     | <b>Special Issue</b> | <b>most read</b> | <b>most cited</b> |
|--|----------------------|------------------|-------------------|
| Media, Police and Terrorism                      | 1979 S               |                  |                   |
| Violence and the Sacred in the Modern World      | 1991 T               |                  |                   |
| Terrorism Research and Public Policy             | 1991 T               |                  |                   |
| Western Responses to Terrorism                   | 1992 T               |                  |                   |
| Political Parties and Terrorist Groups           | 1992 T               |                  |                   |
| Technology and Terrorism                         | 1993 T               |                  |                   |
| Northern Ireland: Prospects for Peace            | 1995 S               |                  |                   |
| Millennialism and Violence                       | 1995 T               |                  |                   |
| Violence in Southern Africa                      | 1996 T               |                  |                   |
| Water Conflict: The Middle East                  | 1997 S               |                  |                   |
| Water Conflict: Southern Asia and the US         | 1997 S               |                  |                   |
| Prospects for Peace in the New Millennium?       | 1998 S               |                  |                   |
| Aviation Terrorism and Security                  | 1998 T               |                  |                   |
| The Future of Terrorism                          | 1999 T               |                  |                   |
| Democratic Experience and Political Violence     | 2000 T               |                  | 1995 T            |
| Contemporary Global Maritime Piracy              | 2012 S               |                  |                   |
| Intersections of Crime and Terror                | 2012 T               |                  | 2005 S            |
| Progress in Research on Political Violence       | 2012 T               |                  |                   |
| The Intellectuals and Terror: A Fatal Attraction | 2013 T               |                  |                   |
| Northern Ireland: 20 Years After the Cease-Fires | 2014 S               |                  |                   |
| Lone Wolf and Autonomous Cell Terrorism          | 2014 T               | 2010 S           | 2010 S            |
| Criminological Theory and Terrorism              | 2015 T               |                  |                   |
| Al-Qaeda's 20 year strategic plan, global terror |                      | 2013 S           |                   |
| Al-Qaeda's uncertain future                      |                      | 2013 S           |                   |
| Al-Qaeda, 9/11 attacks, (counter)-intelligence   |                      | 2009 S           |                   |
| Al-Qaeda   |                      | 2004 T, 2010 S   |                   |
| Al-Qaeda, breaking their cells                   |                      |                  | 2003 S            |
| CIA drone war in Pakistan                        |                      | 2010 S           |                   |
| London Bombers, case study                       |                      |                  | 2007 S            |
| Salafi movement anatomy of                       |                      |                  | 2006 S            |
| Sierra Leone boy soldiers                        |                      |                  | 2006 T            |
| Kurdish Workers Party, Funding Terrorism         |                      |                  | 2007 S            |
| Tourism in Spain and terrorism                   |                      |                  | 1991 S            |
| Nationalist terrorism, ETA and IRA               |                      | 2007 T           |                   |
| Causes, motivations of terrorists                |                      | 2011 S           |                   |
| Pathways to terrorism                            |                      | 2008 T           | 2008 T            |
| Causes, poverty and terrorism                    |                      | 2006 T, 2006 S   | 2006 T            |
| Pathways to terrorism, Psychology                |                      | 2006 T           |                   |
| Europe, Radicalisation in                        |                      | 2010 S           | 2010 S            |

**Table 3.2 Terrorism Studies Research – Topics, Readership and Citations (cont.)**

| <b>Topic</b>                                    | <b>Special Issue</b> | <b>most read</b> | <b>most cited</b> |
|---|----------------------|------------------|-------------------|
| State failure and terrorism                     |                      | 2007 T           |                   |
| De-radicalisation of terrorists                 |                      | 2010 T           | 2010 T            |
| Counterterrorism since 9/11                     |                      | 2002 S           | 2002 S            |
| EU Europol counterterrorism                     |                      | 2010 S           | 2011 T, 2010 S    |
| Crime, terrorism, and transformation            |                      |                  | 2001 S            |
| Radicalisation, violent vs non-violent          |                      | 2012 T           |                   |
| New Terrorism and its Critics                   |                      | 2011 S           |                   |
| Radicalisation, concept                         |                      | 2010 T           | 2010 T            |
| Conceptualising terrorism                       |                      | 2004 T           | 2004 T            |
| Conceptualising terrorism, challenges           |                      | 2004 T           | 2004 T            |
| New Terrorism. How new?                         |                      | 2004 S           | 2004 S            |
| Radicalisation vs Activism                      |                      |                  | 2009 T            |
| Democracy and terrorism                         |                      |                  | 2001 T            |
| Electoral violence in conflict-ridden societies |                      |                  | 2009 T            |
| Financing of terrorism and the internet         |                      | 2010 S           |                   |
| Costs: raising the cost of rebel violence       |                      |                  | 2007 T            |
| Funding terrorism, Kurdish Workers Party        |                      |                  | 2007 S            |
| Insurgency, future of                           |                      | 2013 S           |                   |
| Social Media and Jihad                          |                      | 2015 S           |                   |
| Media and female terrorists                     |                      | 2005 S           |                   |
| Media and terrorism                             |                      | 1997 T           |                   |
| Cyberterrorism                                  |                      |                  | 2005 S            |
| Social Network analysis Jemaah Islamiyah        |                      |                  | 2006 S            |
| Networks connecting terrorist                   |                      |                  | 2008 S            |
| Support of terrorism, Muslim countries          |                      |                  | 2006 S            |
| Psychology, Pathways to Terrorism               |                      | 2006 T           |                   |
| Psychological profiles, suicide bombers         |                      |                  | 2004 S            |
| Psychology and terrorism                        |                      |                  | 2006 T            |
| Jihadists' Radicalisation                       |                      | 2011 T           |                   |
| Jihadist Threat to US                           |                      | 2011 S           | 2011 S            |
| Religion and Terrorism                          |                      | 2010 T           |                   |
| Islamist  |                      | 2009 T           | 2009 T            |
| Ideology and terrorism                          |                      |                  | 1998 T            |
| Problems/Stagnation of terrorism research       |                      | 2014 T           | 2001 T            |
| CBRN Weapons and Terrorist Organizations        |                      | 2012 S           |                   |
| Suicide bombing Hamas, Islamic Jihad            |                      | 2006 S           | 2005 T            |
| Suicide attack, signalling and terrorism        |                      |                  | 2004 S            |
| Suicide bombers, psychological profiles         |                      |                  | 2004 S            |
| Suicide bombing, Palestinian-Israeli conflict   |                      |                  | 2008 S            |

Whilst special issues reflect important topics within a field, the identification of the major research themes for any considerable period of time cannot rely upon special issue topics. Therefore, published articles which on 4 September 2015 were listed on the two surveyed journals' websites as either most-read and/or most-cited were catalogued to identify major research themes. Case-studies, a recurrent contribution to the literature in most periods, were removed. The results are summarised in Table 3.3. The contributions to terrorism studies can be seen to encompass a diverse range of themes covering many different topics. Most themes have enjoyed a reasonable lifespan in the literature, with many of them attracting research over a number of

years. It is also easy to discern the emergence of themes at times when law enforcement agencies faced particular challenges.

**Table 3.3 Terrorism Studies Research – Main Themes (Case-studies removed)**

| Theme               | Topic  | Special Issue | most read      | most cited     |
|---------------------|--|---------------|----------------|----------------|
| Al-Qaeda            | Al-Qaeda's 20 year strategic plan, global terror |               | 2013 S         |                |
| Al-Qaeda            | Al-Qaeda's uncertain future                      |               | 2013 S         |                |
| Al-Qaeda            | Al-Qaeda, 9/11 attacks, (counter)-intelligence   |               | 2009 S         |                |
| Al-Qaeda            | Al-Qaeda   |               | 2004 T, 2010 S |                |
| Al-Qaeda            | Al-Qaeda, breaking their cells                   |               |                | 2003 S         |
| Causes of T.        | Causes, motivations of terrorists                |               | 2011 S         |                |
| Causes of T.        | Pathways to terrorism                            |               | 2008 T         | 2008 T         |
| Causes of T.        | Causes, poverty and terrorism                    |               | 2006 T, 2006 S | 2006 T         |
| Causes of T.        | Pathways to terrorism, Psychology                |               | 2006 T         |                |
| Causes of T.        | Europe, Radicalisation in                        |               | 2010 S         | 2010 S         |
| Causes of T.        | State failure and terrorism                      |               | 2007 T         |                |
| Counterterrorism    | De-radicalisation of terrorists                  |               | 2010 T         | 2010 T         |
| Counterterrorism    | Counterterrorism since 9/11                      |               | 2002 S         | 2002 S         |
| Counterterrorism    | EU Europol counterterrorism                      |               | 2010 S         | 2011 T, 2010 S |
| Criminology and T.  | Intersections of Crime and Terror                | 2012 T        |                | 2005 S         |
| Criminology and T.  | Criminological Theory and Terrorism              | 2015 T        |                |                |
| Criminology and T.  | Crime, terrorism, and transformation             |               |                | 2001 S         |
| Defining T.         | Radicalisation, violent vs non-violent           |               | 2012 T         |                |
| Defining T.         | New Terrorism and its Critics                    |               | 2011 S         |                |
| Defining T.         | Radicalisation, concept                          |               | 2010 T         | 2010 T         |
| Defining T.         | Conceptualising terrorism                        |               | 2004 T         | 2004 T         |
| Defining T.         | Conceptualising terrorism, challenges            |               | 2004 T         | 2004 T         |
| Defining T.         | New Terrorism. How new?                          |               | 2004 S         | 2004 S         |
| Defining T.         | Radicalisation vs Activism                       |               |                | 2009 T         |
| Democracy and T.    | Democratic Experience and Political Violence     | 2000 T        |                | 1995 T         |
| Democracy and T.    | Democracy and terrorism                          |               |                | 2001 T         |
| Democracy and T.    | Electoral violence in conflict-ridden societies  |               |                | 2009 T         |
| Financing T.        | Financing of terrorism and the internet          |               | 2010 S         |                |
| Financing T.        | Costs: raising the cost of rebel violence        |               |                | 2007 T         |
| Financing T.        | Funding terrorism, Kurdish Workers Party         |               |                | 2007 S         |
| Insurgency          | Insurgency, future of                            |               | 2013 S         |                |
| Lone Wolf T.        | Lone Wolf and Autonomous Cell Terrorism          | 2014 T        | 2010 S         | 2010 S         |
| Media and T.        | Social Media and Jihad                           |               | 2015 S         |                |
| Media and T.        | Media and female terrorists                      |               | 2005 S         |                |
| Media and T.        | Media and terrorism                              |               | 1997 T         |                |
| Media and T.        | Cyberterrorism                                   |               |                | 2005 S         |
| Media and T.        | Social Network analysis Jemaah Islamiyah         |               |                | 2006 S         |
| Networks            | Networks connecting terrorist                    |               |                | 2008 S         |
| Networks            | Support of terrorism, Muslim countries           |               |                | 2006 S         |
| Psychology          | Psychology, Pathways to Terrorism                |               | 2006 T         |                |
| Psychology          | Psychological profiles, suicide bombers          |               |                | 2004 S         |
| Psychology          | Psychology and terrorism                         |               |                | 2006 T         |
| Religion/Ideology   | Jihadists' Radicalisation                        |               | 2011 T         |                |
| Religion/Ideology   | Jihadist Threat to US                            |               | 2011 S         | 2011 S         |
| Religion/Ideology   | Religion and Terrorism                           |               | 2010 T         |                |
| Religion/Ideology   | Islamist   |               | 2009 T         | 2009 T         |
| Religion/Ideology   | Ideology and terrorism                           |               |                | 1998 T         |
| Research on T.      | Problems/Stagnation of terrorism research        |               | 2014 T         | 2001 T         |
| Special types of T. | CBRN Weapons and Terrorist Organisations         |               | 2012 S         |                |
| Suicide T.          | Suicide bombing Hamas, Islamic Jihad             |               | 2006 S         | 2005 T         |
| Suicide T.          | Suicide attack, signalling and terrorism         |               |                | 2004 S         |
| Suicide T.          | Suicide bombers, psychological profiles          |               |                | 2004 S         |
| Suicide T.          | Suicide bombing, Palestinian-Israeli conflict    |               |                | 2008 S         |



### **3.3.1 Research on Terrorism Research**

It becomes apparent that considerable effort has been expended within the terrorism studies research program grappling with itself (e.g. Silke & Schmidt-Petersen, 2015; Taylor, 2014; Schmid, 2014; Sageman, 2014; Reid & Chen, 2007; Shughart, 2006; Silke, 2001; Reid, 1997). In particular, definitions of terrorism and the scope and methods of studying terrorism have been the subject of much debate. Challenges in developing a definition of terrorism were introduced earlier in this chapter where the contributions by Schmid (1984, 2004a, 2004b, 2012), Schmid and Jongman (1988), Weinberg et al. (2004), and researchers from the field of critical studies (e.g. Jarvis & Lister, 2014) were acknowledged. Since the early 2000s, discussions in the literature have begun to include and to critique the concept of 'new terrorism' (e.g. Duyvesteyn, 2004; Kurtulus, 2011). More recently, the concept of 'radicalisation' was introduced which has led to discussions regarding different interpretations of the term (Sedgwick, 2010), investigations of various types of radicalisation (Moskalenko & McCauley, 2009), psychological 'mechanisms' in the process of political radicalisation that might lead to terrorist action (McCauley & Moskalenko, 2008), as well as studies examining the relative effectiveness of several 'de-radicalisation' programs (Horgan & Braddock, 2010).

### **3.3.2 A Criminological Turn**

The constantly evolving nature of terrorism studies is evident from the various directions that this field has taken, not only with regard to the concepts it includes but also with regard to the practical application and integration of multidisciplinary research findings. In recent years, for example, there has been a clear emergence of a criminological turn in terrorism studies. As discussed above, Hamm (2005, p. 238) attributes the foundational work on studying terrorism from a criminological perspective to early contributions by Turk (1982). The broader terrorism studies research program, however, has noted these developments only more recently (Dishman, 2001, 2005) and is currently responding to the implications that such an approach to terrorism may have for the general research program. The journal of *Terrorism and Political Violence*, for example, devoted a special issue to the "Intersections of Crime and Terror" in 2012. The importance of criminological studies

of terrorism are highlighted again in 2015 with a special issue on “Criminological Theory and Terrorism”.

### **3.3.3 Islamic Terrorism and Al-Qaeda**

Of course, since the 9/11 terrorist attacks a great deal of attention has been devoted to Al-Qaeda and Islamic terrorism. Many new researchers have emerged with many different perspectives, resulting in a very rapid growth in the number of studies of terrorism being published; the nature, scope and quality of this newly contributed work and its implications for the existing literature have been the subject of ongoing debate. In addition to prompting this ‘new’ work, scholars were also prompted to consider terrorism in a world re-shaped by 9/11. Since 2001, topics studied by new and established researchers range from outlining initial implications for counterterrorism (B. Hoffman, 2002) to the specific application of mathematical modelling toward the destruction of Al-Qaeda cells (Farley, 2003). Other papers discuss broad links between religious terrorism and political objectives (e.g. Sedgwick, 2004), the failure of Al-Qaeda’s communication strategy (Abrahms, 2005), and Al-Qaeda’s inevitable demise (Cronin, 2006). Most recently, researchers have focused on Al-Qaeda’s specific use of intelligence and counter-intelligence (Ilardi, 2009), the group’s formal organisational structure (Gunaratna & Oreg, 2010), the future of its brand or ‘Al Qaeda-ism’ (B. Hoffman, 2013), and the group’s twenty-year strategic plan (Rudner, 2013).

### **3.3.4 Suicide Terrorism**

The willingness of the 9/11 perpetrators to die during the attacks focussed the attention of some researchers on suicide attacks. The logic of suicide terrorism has been debated (Pape, 2003) and the psychological, religious, and group-factors related to suicidal terrorism have been explored (Silke, 2003b). Other researchers have taken a case-study approach. B. Hoffman and McCormick (2004), for example, examine the evolutionary use of suicide attacks by Palestinian terrorist organisations and the Liberation Tigers of Tamil Eelam and describe suicide attacks as “signalling tactics” in terrorism operations which they broadly define as a “signalling game”. Others concentrate their investigations on suicide bombing as a particular type of suicide attack: Lester, Yang, and Lindsay (2004) conclude that psychological profiling

of suicide bombers may indeed be plausible; Gupta and Mundra (2005) examine suicide bombing by Hamas and Islamic Jihad within Israel and the Palestinian territories of the West Bank and the Gaza Strip between 1991 and 2003; and Araj (2008) cites extreme state repression as one of three predominant organisational rationales that may lead to the deployment of suicide bombers. Interest in the topic lead to a large volume of publications written for both an academic and a general audience. Crenshaw (2007) reviews thirteen books published on the subject between 2003 and 2006. Horowitz (2010) discusses suicide bombing with reference to adoption capacity theory and points to the significance of inter-group linkages in determining a group's capacity to adopt additional or new attack methods. Horowitz's research of group connections and diffusion patterns relates to an earlier observation offered by Moghadam (2006), which clearly distinguishes between "traditional (localised)" and "contemporary (globalised)" patterns of suicide attacks. The reach of terrorist groups, particularly Al-Qaeda's demonstrated capacity to strike a long way from its base of operations facilitated by international movements of resources, manpower, and finance, generated interest in the financing of terrorism.

### **3.3.5 Terrorist Financing**

Since 9/11, much has been learned about the sources of funds and the ways in which those funds are transferred across international borders. Freeman (2011, p. 462), for example, identifies four sources of terrorist financing: state sponsorship, illegal activities, legal activities, and popular support; as well as several methods for moving money, including: formal banking, informal banking (e.g. *hawala*, money transfer without money movement), trade-based money laundering, charities, and cash-smuggling. Bures (2012, 2014) outlines the burden carried by private sector financial institutions in combatting terrorist financing (CFT) with regards to necessary monitoring tasks and effort involved in uncovering and reporting suspicious transactions. The challenge of uncovering pathways of terrorist financing is also highlighted by Freeman (2011, pp. 471-472), who notes the capacity of many terrorist groups to respond swiftly to changing circumstances by altering or adapting their financing strategies. This point is illustrated by Buesa and Baumert (2012) who report on the changing nature of sources of finance and their relative proportions for

the group Euskadi Ta Askatasuna (ETA) during the periods 1993-2002 and 2003-2010. Terrorists' use of the internet to facilitate the raising and the transfer of funds has also attracted research interest. M. Jacobson (2010), for example, investigates how Al-Qaeda and other Islamist terrorist groups such as Hamas, Lashkar e-Taiba, and Hizballah have used the internet to conduct financing transactions quickly, internationally and with relative security and anonymity for both donors and recipient.

### **3.3.6 Lone Wolf Terrorism**

Although the attacks by Al-Qaeda both in the United States and in other countries rightly focussed much attention on the contemporary actions, motivations and objectives of modern terrorist *groups*, the actions of individuals not formally associated with any groups and, indeed, not formally associated with accomplices, led to a growing concern among governments and law enforcement agencies about the rise of the lone wolf terrorist. However, lone wolf terrorism is not a phenomenon new to the 21<sup>st</sup> century. This has been noted as a number of published chronologies of lone wolf attacks demonstrate (e.g. Instituut voor Veiligheids en Crisismanagement, 2007; M. Becker, 2014; B. J. Phillips, 2015). Part of the research conducted on lone wolf terrorism explores concepts very similar to those which have also been applied to group-based terrorism, such as defining 'lone wolf terrorism' (Spaaij, 2012), describing the social and psychological circumstances of individual lone wolf terrorists (Instituut voor Veiligheids en Crisismanagement, 2007; Spaaij, 2010), examining social movement theories, radicalisation patterns, and ideological factors (Berntzen & Sandberg, 2014), as well as providing an overview of the literature on lone wolf terrorism (Marlatt, 2015). It is generally recognised that terrorism studies has recently taken a decidedly criminological turn. This turn is reflected in recent studies of lone wolf terrorism. Prominent examples are: P. J. Phillips (2011b, 2013), P. J. Phillips and Pohl (2012), and Meyer (2013). Phillips' approach is based on an economic model of choice under risk and uncertainty which is used to explore the possibility of drawing inferences about the unknown lone wolf offender from evidence relating to the crime scene, especially the choice of attack method. The inferences include the proximity of future attacks to the most recent

attacks, the proximity of the attacks to the offender's possible place of residence, and the patterns of engagement that may be expected over time as the offender's payoffs accumulate. Meyer explores the application of detailed crime scripts and thus the identification of possible crime intervention/prevention points using the case of Anders Behring Breivik's lone wolf attacks in Norway in 2011 as an example for illustration. This work draws terrorism studies closer to practitioners managing real investigative processes and is quite distinct from the more traditional approaches and historical analysis which touch law enforcement and security agencies only in so far as their recommendations influence broader policy initiatives. This being said, those studies that are at the forefront of the criminological turn in terrorism studies and those that are more traditional in their focus are both equally interested in identifying the underlying causes of terrorism.

### **3.3.7 Causes of Terrorism**

In pursuing this research program, early investigations tended to focus on the identification of possible 'root causes' of terrorism at the national level (e.g. P. R. Ehrlich & Liu, 2002; Newman, 2006) seeking to uncover causal relationships between social, economic, political and demographic conditions on the one hand and terrorist activity on the other. Results of such studies are not unanimous and some findings do not confirm the hypotheses that poverty, inequality, and poor economic development are root causes of terrorism (Piazza, 2006; Krieger & Meierrieks, 2011). More recently, emphasis appears to have shifted from seeking to uncover causes for terrorism grounded in socio-economic conditions to examining the various 'pathways' that individual persons may follow as they become terrorists or radicalised. Moskalenko and McCauley (2009) highlight the distinction between activism as legal and non-violent political action on the one hand and radicalism as non-legal and violent political action on the other and conclude that individuals' readiness to participate in activism does not necessarily lead them also to participate in radicalism. From a review of books, articles and studies published between 2001 and 2008 on militant Islamism in Europe, Dalgaard-Nielsen (2010) extracts several explanations for radicalisation, including: (1) sociological background factors: radicalisation occurs as individuals seek to reconstruct a lost identity in a perceived

hostile environment where traditional communities and identities have dissolved; and (2) social movement or network theory (e.g. Sageman, 2004) which states that radical ideas are transmitted via social networks and within smaller groups, where bonding, peer pressure, and indoctrination are common features. Other researchers have named group relative deprivation, identity conflicts, and personality characteristics as contributing factors in radicalisation (King & Taylor, 2011) or have described terrorism as an outlet for existential desires (Cottee & Hayward, 2011) or a means to alleviate existential anxiety (McBride, 2011) where such needs cannot be met through legitimate action.

### **3.3.8 Psychology and Terrorism**

It is quite clearly the case that these aspects of terrorist behaviour might be approached from the perspective of psychological theory, which is seemingly well positioned to explain various aspects of terrorist decision-making, both as individuals and as part of a group. Psychology is one of the long-standing research programs within terrorism studies. Early contributions from the field of psychology and psychiatry to the study of terrorism were made during the 1970s and 1980s and focused on identifying personality factors to explain terrorist behaviour (e.g. Cooper, 1977; Pearce, 1977). A particular interest in studying the psychology of female terrorists emerged in the 1990s. Examples include: Pearlstein (1991), who studies the case of Ulrike Meinhof, founding member of the German Red Army Faction, as well as two female members of the Weathermen; Steinhoff (1996), who focuses on radical women leaders in the Japanese Red Army movement; and de Cataldo Neuberger and Valentini (1996) who study female terrorists in Italy. Despite “[...] some policymakers’ insistence on the possibility of a fixed and unambiguous terrorist profile, a list of characteristics that permit identification of actual or potential terrorists” (Crenshaw, 2000, p. 407), a significant number of researchers have ultimately rejected generalised descriptors for terrorists from the perspective of psychopathology, socio-pathology, or other mental disorders (e.g. Rasch, 1979; Corrado, 1981; Ferracuti, 1982; Silke, 1998; Horgan, 2003).

The link between societal causes and individual circumstances or pathology has been taken up by a number of researchers. An example is the Frustration-Aggression

Hypothesis, which was first proposed by Dollard, Doob, Miller, Mowrer, and Sears (1939) and which was developed further by social psychologists such as Berkowitz (1969). The Frustration-Aggression Hypothesis was later applied to the study of terrorism by Friedland (1992). Limitations of the Frustration-Aggression Hypothesis and other psychological models for explaining terrorism, such as Relative-Deprivation Theory, have been identified by Friedland (1992) and others (e.g. Horgan, 2003). Victoroff (2005) offers a comprehensive review of the diverse opinions that have been offered by researchers from the fields of political science, sociology, psychology, and psychiatry. He divides the most cited psychological theories into: (1) sociological theories; (2) psychoanalytic approaches to individual psychology; (3) non-psychoanalytic psychological approaches to individual psychology; and (4) theories of group process. However, Victoroff (2005, p. 34) notes that the total number of published theories exceeds the number of empirical studies and, furthermore, that conclusions drawn from studies investigating terrorist psychology may not be reliable foundations for policy, because psychological research frequently fails to apply proper scientific methods.

As an alternative to approaches that emphasise individual psychology, some researchers have sought to integrate aspects of individual psychology with the need-satisfaction which some individuals may gain from joining an underground organisation or terrorist group (e.g. Rabbie, 1991; Ross, 1994; Gupta, 2005; Post, 2005; McBride, 2011). Gupta (2005, p. 25), for example, describes terrorism as a complex social process resulting from underlying motivations and collective actions which cannot be reduced to attempts of selfish need-maximisation of an individual, but which must be viewed in conjunction with “the other primordial human need: the need to belong to a group”. Conversely, Taylor (2010, pp. 121-122) asserts that while group phenomena provide a contextual factor to terrorist behaviour, “the issues of primary concern in terrorism research relate to violent acts, not propensities to commit violence or their presumed social contexts”. Taylor underpins his analysis with two detailed case studies; first, of terrorist events surrounding the publication of the novel, *The Jewel of Medina*, in London in 2008 and, second, of terrorist action undertaken by the Provisional Irish Republican Army (PIRA) in 1996.

The author argues that while collective activity undertaken by a terrorist group is of contextual significance, it does not fully explain the causal qualities underlying the behaviour of individual terrorists.

Taylor and Horgan (2006) offer a comprehensive conceptual framework addressing the psychological processes which can underlie a person's involvement with terrorist groups. The authors draw on insights from forensic psychology as well as findings from analyses of crime by Clarke and Felson (1993) who distinguish between "criminal involvement" and "criminal events". Individual criminals (or terrorists) typically make a whole series of involvement decisions over substantial periods of time (Taylor & Horgan, 2006, p. 592), some of which may lead a person to take on a specific role or incrementally a number of different roles within a terrorist organisation. Activities of involvement may comprise legal action such as political activism or community engagement, but may also escalate to participation in a "criminal event", that is a terrorist attack. Whatever quality of involvement the individual chooses to have with terrorism, including the possibility of *disengaging* from it, each decision along the way is a distinct decision which in turn is related to a variety of psychological and environmental context factors that the (would-be) terrorist is experiencing. Taylor and Horgan (2006, p. 598) propose that interception at critical decision points, for example, before an individual proceeds to potential terrorist action, may be a more effective counterterrorism strategy than seeking to change broader societal factors or an individual's presumed characteristics. Taylor and Horgan belong to a group of researchers who have moved the psychological perspective on terrorism toward a practical criminological approach; focusing on the prevention and investigation of violent *acts* (see also: Zhang, Frumkin, Stedmon, & Lawson, 2013; Vrij et al., 2013), rather than examining broader societal, political, or economic factors as potential underlying causes.

### **3.3.9 The Life-cycle of Terrorist Organisations**

Regardless of whether a terrorist acts alone or as part of a group, terrorist action waxes and wanes. The coming and going of terrorist groups has led some researchers to examine the life-cycle of terrorist organisations. The respective length of time a group is active varies, of course, and several researchers (e.g. Crenshaw, 1991;



Blomberg, Engel, & Sawyer, 2010) have utilised 'International Terrorism: Attributes of Terrorist Events' (ITERATE)<sup>44</sup> or other datasets to document the number and chronologies of terrorist attacks perpetrated by different groups over several decades. Cronin (2006, pp. 17-18) lists several factors that might contribute to a group's speedy demise or alternatively ensure its relative longevity. Among others, such factors include the capture or death of the leader, failure of the group to transition to the next generation, and the undermining or loss of popular support. More importantly, terrorist groups are defined by the perpetration of terrorist acts and they are not viewed as 'terrorists' until such action is taken. Unfortunately, it can be impossible to interpret accurately a group's rhetoric and to distinguish between potentially violent and nonviolent opposition until the first act of terrorism occurs (Crenshaw, 1991, p. 86). Therefore, the question of whether or not and, if so, *how* the terrorist group or lone wolf will reoffend is more crucial than the terrorists' or group's organisational survival per se. In addition, it has been suggested that higher levels of violence increase a group's chance of survival (Blomberg et al., 2010, p. 318) and, furthermore, that terrorist groups behave as if they were in a tournament with other groups: "In short, they observe the results of past attacks and maximise their efforts in order to make [their own] attacks at least equally destructive as the foregoing attacks" (Caruso & Schneider, 2010, p. 19).

### **3.3.10 Concluding Remarks**

Recognising the turn of the terrorism research program towards forging closer collaboration and integration of findings with criminologists and crime prevention researchers, more recent attention has shifted from explaining the organisational life cycle of terrorist groups towards a more complex approach in which the oscillations of a group's terrorist *actions* are examined (e.g. M. Becker, 2015). P. J. Phillips (2011a) applies economic analysis to the competition that terrorist organisations and governments enter into over grassroots or popular support. Phillips' analysis finds competition for grassroots support to be cyclical and particularly fierce in a terrorist group's early years, a time during which a group's terrorist activity is also likely to be

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<sup>44</sup> The ITERATE dataset is maintained by Duke University in North Carolina.

highest as it seeks to recruit members and popular support. This focus on actions and the investigative processes that may be directed towards their pre-emption or the pursuit of offenders is characteristic of efforts, not only to forge closer links between criminology and terrorism studies, but closer collaboration links between academic research and law enforcement practitioners. This is, perhaps, demonstrated most clearly of all in recent applications of offender profiling or investigative psychology to terrorism with the aim of identifying characteristics of an unknown terrorist offender on the basis of evidence relating to the nature of the terrorist act (Canter, 2004; P. J. Phillips & Pohl, 2012).

The foregoing discussion provides an indication of the scope and structure of terrorism studies. More than four decades of research have combined to provide a deep, multifaceted, multidisciplinary perspective of terrorism and the very many aspects of the terrorism context. Some research programs within terrorism studies have come and gone as terrorism studies and, of course, the nature of terrorism has evolved over time. A number of research programs have retained their active status throughout the modern history of terrorism and terrorism studies. One of the most prominent of these is a research program that has, like the others that have been discussed in this section, attracted contributions from at least several of the disciplines that contribute to terrorism studies. This research program is the study of the role of the media in the terrorism context. The nature of terrorism in a context where terrorist actions are accorded varying degrees of attention by the popular and mainstream press has garnered attention from researchers since the very inception of terrorism studies. The literature that has been produced by these researchers is explored in detail in Section 3.5. Before turning our attention in that direction, an overview of the economic analysis of terrorism is provided.

### **3.4 Defence and Peace Economics**

The economic analysis of terrorism is a distinct research program within defence and peace economics. Defence economics emerged during the 1960s as part of efforts to apply political science and social science to the study of war. The distinguishing feature of defence economics was its use of economic method. The foundations of defence economics were put in place by Schelling (1960), Boulding (1962, 1978), and

Tullock (1974). Peace economics, like defence economics, applies economic methods to the study of conflict. The perspective, however, is different. According to Anderton and Carter (2007, p. 1214): “The primary focus of early pioneers of defence economics was the efficiency of the military sector. This included identification and implementation of efficiency conditions for military spending, weapons contracting, recruitment of military labour, allocation of resources to war and the like. Peace economists, on the other hand, tend to be committed to reductions in defence spending, a lessening of war as an option in international affairs and the application of economic methods to promote peace, not military efficiency”. As both research programs emerged and expanded, the foundations laid by Schelling, Boulding, and Tullock were augmented by Grossman<sup>45</sup>, Isard<sup>46</sup> and Hirshleifer<sup>47</sup> and, of course, by the combined efforts of a great many other contributors.

The economic analysis of defence, peace and, more specifically, terrorism is distinguished from other approaches by the application of economic method. In trying to define the scope and method of economics there is the risk that such a definition may merely present a caricature. The literature dealing with economic method is itself considerable (Robbins, 1935; Hollis & Nell, 1975; Latsis, 1976; Rosenberg, 1976; Blaug, 1980; Hausman, 1981, 1989; Boland, 1982; Caldwell, 1982; Mäki, 1988). Although it oversimplifies the matter somewhat, it is true to say that the defining characteristics of the economic method have come to be encompassed by the rational choice approach. There are at least several different interpretations of this approach extant in the literature but the depiction of decision-makers as maximising or optimising, subject to some constraints, encompasses the essential features of what is meant by rational choice. This depiction is represented within two main overarching categories or contexts: (1) those characterised by certainty; and (2) those characterised by the presence of risk and uncertainty.

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<sup>45</sup> See Grossman (1991, 1992, 1995, 2003), Grossman and Kim (1995, 1996, 2002).

<sup>46</sup> See Isard and Smith (1982), Isard (1992, 1994).

<sup>47</sup> See Hirshleifer (1988, 2001).

Sen (1998) surveys the literature and delineates the main points in the debate regarding what constitutes rational behaviour in economics. In a context characterised by certainty, economic theory developed by depicting decision-makers as rational on the basis of two criteria: (1) internal consistency; and (2) the maximisation of self-interest. According to Sen (1998, p. 69) this approach has considerable analytical advantages by structuring individual behaviour in such a way as to make its analysis tractable. Over time, in response to various debates, criticism and the emergence of new theoretical and empirical work, the concept of rational behaviour has been reshaped and different interpretations have emerged; for example, Sen (1998, p. 70) discusses the contribution of Herbert Simon, whose work on behavioural economics preceded by decades the work that later came to define the field. Simon (1955, 1979) argued that decision-makers might not maximise but satisfice. This is a more generalised version of optimising behaviour that considers factors such as cost of information, decision time, constraints and cognitive effort (Schoemaker, 1982, p. 539). Decision-makers exhibit bounded rationality because of limited information processing capacity and time. As such, decision-makers terminate their search or assessment of alternatives once some pre-set constraints have been met (Schoemaker, 1982, p. 548). Counter-arguments that seek to defend the underlying principles of optimising vis-à-vis bounded rationality include attempts to place optimising behaviour upon the foundation of natural selection (Sen, 1998, p. 71). Even in contexts where decision-makers face no uncertainty there remains considerable debate about how to represent rational behaviour and to what purpose models of rational behaviour should be put. A not inconsiderable part of the debate stems from these different purposes. Schoemaker (1982) outlines four: (1) descriptive; (2) predictive; (3) prescriptive; and (4) post-dictive. Even highly formal models of rational behaviour may be entirely acceptable as predictive or prescriptive models. Models that seek to be descriptions of actual decision-making processes face the challenge of incorporating potentially very many subtle and important factors.

The treatment of choice under conditions of certainty may be described as a logical model, despite the highly formalised mathematical treatments that characterise parts of the literature (especially Samuelson, 1947). The standard approach to the

analysis of decision-making under conditions of risk and uncertainty is, by contrast, a mathematical model. Von Neumann and Morgenstern's (1944) expected utility theory is a model of decision-making under risk and uncertainty. Within the specific theoretical framework of expected utility theory, rational behaviour has come to be defined as behaviour consistent with the von Neumann and Morgenstern axioms: (1) completeness; (2) transitivity; (3) continuity; (4) independence. These axioms form the cornerstone of the mathematical theory of expected utility which aims to delineate a class of functions (utility functions) that can generate orderings over alternative risky gambles that mirror the decision-maker's actual preferences for those gambles. The theory is summarised in a simple equation:

$$EU = \sum_{i=1}^n u(x_i)p_i$$

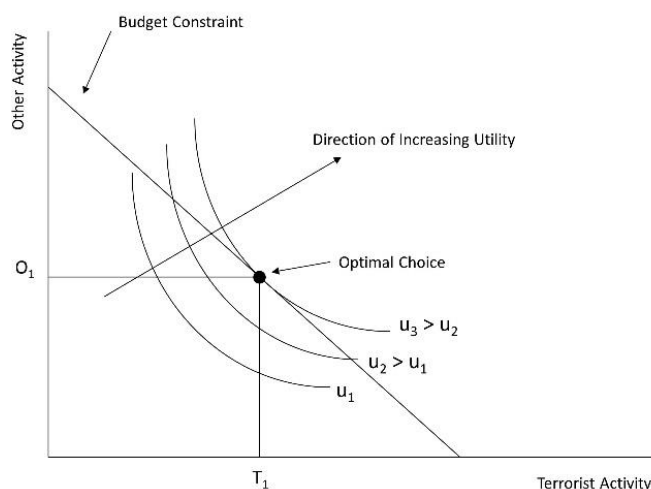
Together with the particular definition of rational behaviour embedded within the axioms on which expected utility theory is based, it is also important to recognise that any theory of decision-making under uncertainty must incorporate a particular view on the nature of risk, uncertainty and probability. As both Sen (1998) and Schoemaker (1982) point out, probability is a much contested and debated concept within philosophy and mathematics as well as within economics. Different interpretations of probability like the different purposes to which models of decision-making may be put (descriptive, predictive, etc.) may lead to substantially different conclusions regarding the applicability, suitability or validity of different models of rational behaviour in different contexts. These philosophical or methodological concerns are ever present, even as work has progressed on identifying the shortcomings of expected utility theory, generalising it in ways that overcome certain criticisms and the development of alternative behavioural models of decision-making under risk and uncertainty (Allais, 1953; Ellsberg, 1961; Kahneman & Tversky, 1979; Machina, 1982; Quiggin, 1982; Yaari, 1987; Tversky & Kahneman, 1992).

In the introduction to the second volume of the *Handbook of Defence Economics*, published in 2007, the editors (Sandler & Hartley, 2007, p. 615) list the economic analysis of terrorism as one of the areas within defence economics that had

undergone significant advancement in knowledge and an explosion in literature since the publication of the first volume in 1995. It is true that even the literature within defence and peace economics that focuses specifically on the economic analysis of terrorism is itself now too large to be reviewed in detail. Intriligator (2010, p. 1), in an overarching review of the field, concentrates on the essential points of the economic approach and identifies the main ways in which economic analysis has been applied: (1) the study of strategic interaction; (2) the application of rational choice models, with special emphasis on substitution and deterrence effects; (3) the econometric or statistical analysis of terrorism incidents, with special emphasis on cycles; (4) the implications for the likely efficiency of policy and counter-terrorism. In general, this type of taxonomy frames surveys of the literature in this field, including those by Sandler and Enders (2004), Llussá and Tavares (2011), and F. Schneider, Brück, and Meierrieks (2015).

The analytical decision to cast an analysis in a context characterised by either certainty or uncertainty depends in each case on the nature of the analytical objectives and the precise problem under consideration. Although it is obviously the case that terrorist decision-makers confront a great deal of risk and uncertainty, interesting results can be obtained without introducing this added complexity. A lot has been learned about substitution effects by applying simple models of rational behaviour drawn from consumer theory to the analysis of the terrorist's choice between terrorism and legitimate behaviour. Frey and Luechinger's (2003) analysis is an example of how this approach depicts the terrorist's decision calculus and the analytical conclusions that might be reached. Frey and Luechinger cast the terrorist's choice in the formal language of consumer choice and consumer preference. They depict two catchall categories of goods: (1) terrorism; and (2) other activities. The terrorist's objective is to maximise utility by choosing amounts of terrorism and other activities. In the formal representations drawn from neoclassical consumer theory the choice problem can be represented by a budget constraint and indifference map. The optimal choice is at the tangent of the highest indifference curve and the budget constraint. This is depicted in Figure 3.1.

Figure 3.1 Terrorist Preferences for Terrorist and Other Activities



Frey and Luechinger (2003) assume that the terrorist's objective or end can be achieved either through terrorism or some other activity, such as legitimate political engagement. This provides the logical foundation for the analysis of the terrorist's choice between these two goods. Different outcomes might be achieved by government policy initiatives: (1) terrorists may be deterred from engaging in terrorism by government policies designed to increase its cost; (2) terrorists may be discouraged from engaging in terrorism by government policies designed to decrease the benefits or advantages of terrorism; or (3) terrorists may be encouraged to participate in other activities rather than terrorism by reducing the costs of these alternatives. In the cases of (1) and (3), the government policy shifts the terrorist's budget constraint. This might be accomplished, for example, by military deterrents (1) or opening up the political process (3). In the case of (2), government policy changes the terrorist's preferences and alters the position of the terrorist's indifference curves such that less terrorism and more other activities are desired. This might be accomplished, for example, by a never-negotiate strategy which reduces the payoffs to terrorist actions. Frey and Luechinger (2003) list a number of different policy options and analyse their effects. Each of the cases (1), (2) and (3) is depicted in Figure 3.2, Figure 3.3 and Figure 3.4.

Figure 3.2 Terrorist Choice When Terrorism Becomes More 'Expensive'

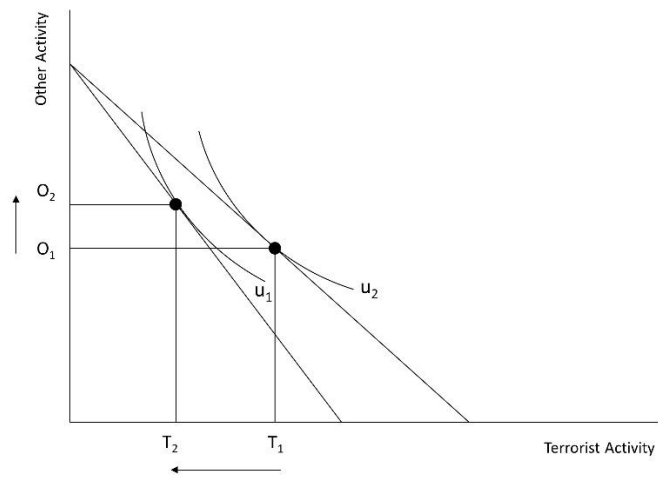


Figure 3.3 Terrorist Choice When the 'Advantages' of Terrorism Diminish

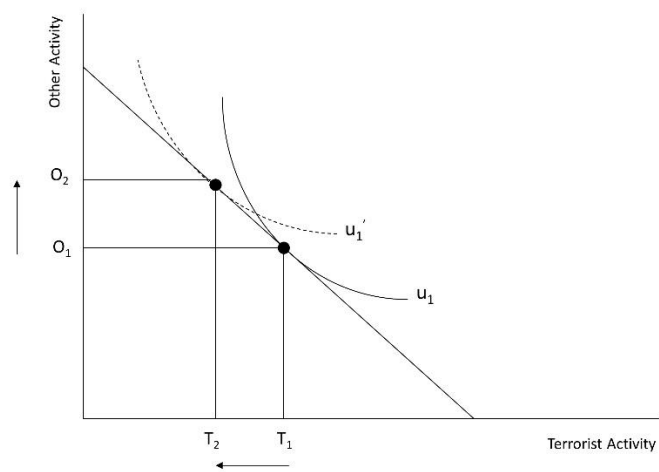
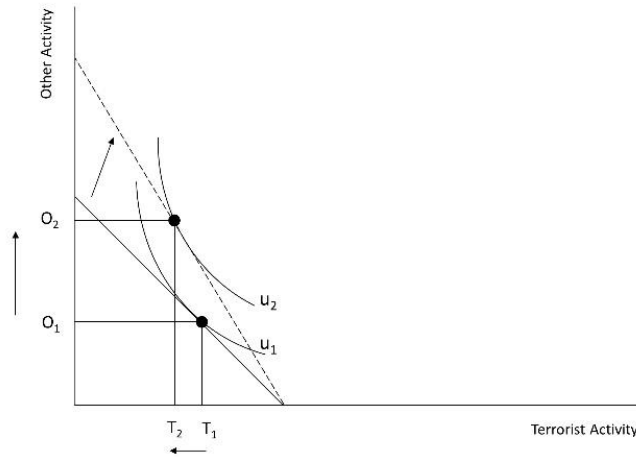




Figure 3.4 Terrorist Choice When Other Activities Are 'Cheaper'



This type of analysis has also been undertaken in a very formal way by applying the Slutsky equation. This is a widely used analytical tool in microeconomics which allows changes in demand following changes in incomes and prices to be analysed and partitioned into different effects: (1) substitution effects; and (2) income effects. Formally, the Slutsky equation may be written as (Nicholson, 1992, p. 150):

$$\frac{\partial D_X}{\partial P_X} = \text{substitution effect} + \text{income effect}$$

$$= \left. \frac{\partial X}{\partial P_X} \right|_{U = \text{constant}} - X \frac{\partial X}{\partial I}$$

The formal analysis undertaken using this technique can serve as a useful complement to Frey and Luechinger's (2003) geometry-based analysis. The Slutsky equation is used to analyse the changes that might be expected in the terrorist's demand for terrorism when the price of terrorism increases or decreases. The change in demand due to a change in price may be partitioned into income effects and substitution effects. When the price of terrorism increases, terrorists may substitute other activities in place of terrorism (and vice versa). This change, due to a change in the price ratio of the two goods is called the substitution effect. When the price of terrorism changes, the terrorist's purchasing power also changes. If the price of terrorism increases (decreases), the terrorist has a lower (higher) purchasing power.

This is analogous to a change in the terrorist's income or resources and is called the income effect. The Slutsky equation is one method that may be used to decompose into these two effects the total change in the terrorist's demand for terrorism following a change in its price. Anderton and Carter (2005) focus most of their discussion of the rational choice of terrorists on the application of the Slutsky equation. This very demand-side oriented analysis is complemented by Sandler's (2013) supply-side analysis, which treats terrorist groups more as producers of terrorism than as demanders of terrorism. In both cases, orthodox microeconomics and standard treatments of rational behaviour under conditions of certainty characterise the analysis.

In the presence of risk and uncertainty, rational behaviour can be modelled as behaviour that maximises expected utility. In defence economics, one of the earliest applications of this type of model is Landes' (1978) study of hijacking in the United States. The study draws much of its inspiration from the theoretical analysis of crime and illegitimate behaviour pioneered by G. S. Becker (1968) and I. Ehrlich (1973). At the time, hijackings represented a significant problem. There were 124 hijackings in the United States between 1968 and 1972. Hijacking is a risky activity and the outcomes are far from certain. There is a high probability that the outcome may diverge from that which was expected. Landes (1978, p. 5) depicts the hijacker's choice problem as one involving the maximisation of expected utility subject to constraints. Utility depends positively on the hijacker's wealth and negatively on factors such as the length of a prison term if the hijacker is apprehended. Formally, Landes' (1978, p. 5) model is expressed as

$$E(U) = (1 - P_a)U(W_j) + P_a P_c U(W_i - S) + P_a (1 - P_c)U(W_j - C)$$

where  $P_a$  is the hijacker's estimate of the probability of apprehension in location  $i$ ,  $P_c$  is the conditional probability of conviction if apprehended,  $W_j$  and  $W_i$  are the hijacker's wealth in locations  $i$  and  $j$ ,  $S$  is the monetary equivalent of the prison sentence in  $i$ , and  $C$  is the monetary equivalent of costs associated with apprehension without conviction (Landes, 1978, pp. 5-6). The choice that the hijacker confronts is the choice between (1) hijacking, and (2) not hijacking. Purely logically

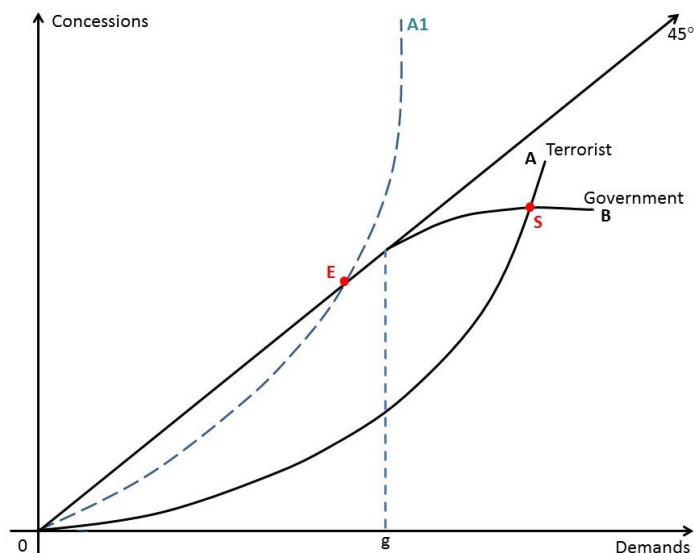
or theoretically, the model allows Landes to determine the likely impact upon the potential hijacker's choice of changes in the variables that have been included in the analysis. In the first instance, the potential hijacker will choose hijacking if the expected utility of doing so exceeds the expected utility of the alternative (not hijacking). If  $P_a$ ,  $P_c$ ,  $S$ , or  $C$  increase or the differential between  $W_j$  and  $W_i$  declines, the expected utility of hijacking declines and vice versa. Government policy options, such as increasing prison sentences, placing more security at airports to increase the probability of apprehension, or agreements between countries to deport hijackers back home may all be analysed within this framework. Models such as this also form the foundation for empirical analysis. Landes (1978) undertakes an empirical investigation of the policy initiatives that were put in place by the U.S. government during this period when hijackings were very common and finds that they were significant factors in reducing instances of hijacking in subsequent years, not simply because more hijackers were caught but because less hijackings were attempted. The preference of potential hijackers shifted from hijacking to not hijacking.

It is clear that much of this analytical work is focussed on the terrorist's choice without explicit consideration of what the government may do in response. The strategic interaction between terrorists and governments has long been treated by applying game theory to the problem. Game theoretical analysis represents a significant part of the literature dealing with the economic analysis of terrorism. A number of review articles have been published that provide an overview of the method and the main applications. According to Arce and Sandler (2005, p. 184) "... game theory is an appropriate tool for investigating counterterrorism because it captures the strategic interactions between terrorists and targeted governments whose choices are interdependent". Studies that explore the application of game theory to the analysis of terrorism and terrorist behaviour include: Wilson (2000), Powell (2002), Sandler and Arce (2003), Sandler and Enders (2004), Levine and Levine (2006), Siqueira and Sandler (2006, 2008), and D. Jacobson and Kaplan (2007). These studies operate under the assumption that the players in the games are rational. The rationality in game theoretical contexts extends to inferring optimal actions for other players as they depend upon one's own actions. Many of the prominent game

theoretical structures, including prisoner's dilemma and 'chicken', can be used to structure problems that emerge within the terrorism context. Arce and Sandler (2005, p. 198) provide an overview of the policy choices that may confront a government and the underlying games that characterise those choices.

Sandler, Tschirhart, and Cauley (1983, p. 38) built upon this work and provide an analysis that contains a number of the most important results in the economic analysis of terrorism. The authors apply what they refer to as rational-actor models. Actors are said to be rational when "...they efficiently utilize scarce resources to achieve their respective goals and effectively respond to changes in their constraints". Sandler et al. simultaneously depict rational-actor models for both the government and the terrorist group in the negotiation process which might occur as a result of transnational terrorism. Their analysis is built upon expected utility theory but introduces various aspects of game theory into the economic analysis of terrorism in order to analyse not only terrorist choice but terrorist choice in a strategic context. One of their contributions is depicted in Figure 3.5.

Figure 3.5 Game Theoretical Analysis: Sandler, Tschirhart and Cauley (1983)



In Figure 3.5, the horizontal axis depicts terrorists' demands and the vertical axis government concessions. Along the 45 degree line government concessions and terrorist demands are equal throughout. The two solid curves  $OA$  and  $OB$  illustrate

the terrorists' and the government's respective initial negotiation positions: the government is willing to meet terrorist demands up to point *g*. Beyond point *g* government concessions flatten off resulting in a lowering rate of concession increase per increase in terrorist demands. The government's curve is concave in shape whereas the terrorist's demand curve is convex indicating that terrorists' demands increase at a lower rate beyond a certain level of demands. Stalemate equilibrium is reached where the two curves intersect at point *S*. Beyond point *S* the discrepancy between terrorist demands and any concessions the government is willing to make can only widen. Curves *OA* and *OB* represent optimal reaction paths. Actual reaction paths can be inferred once negotiations have commenced. If the government is successful in reducing terrorists' resources, for example, by successfully extending negotiations over a long period of time, then the terrorists' reaction path may shift to the left as illustrated by curve *OA*<sup>1</sup>. In this event, terrorists will have reduced their demands relative to their earlier position on curve *OA* and a resolution may be found at equilibrium *E*. Sandler et al. (1983, p. 48) offer two observations. First, both the terrorists' and the government's reaction paths may shift not only during execution but also during the planning stage of a terrorist event. Second, if one of the pay-offs terrorists are seeking is media attention then an adequate level of media coverage of the incident may entice terrorists to reduce their other demands.

Findings by Sandler et al. (1983) include: (a) concessions granted by the government in the past limit the credibility of a government's pledge never to grant concessions during current or future terrorist events; (b) models are dynamic, that is, terrorists may shift their reaction path in both the planning and in the execution phase of a terrorist event; (c) factors other than expressed demands or concessions form part of the negotiation process, for example, drawn-out negotiations can both support the terrorists' goal of increased media coverage, while also supporting the government's goal of reducing terrorist resources; and (d) stalemate equilibriums occur when concessions do not meet demands. Such instances can only be peacefully resolved by either the government or the terrorist group, or indeed, both parties shifting their respective reaction paths to a point where concessions equal demands.

In this type of economic analysis of terrorism some type of payoff, positive and negative, must be delineated. In context-specific analysis this might be a relatively straightforward task; for example, Landes (1978) examined hijacking where the positive payoff was a monetary or wealth equivalent of the well-being and so forth obtained from a successful hijacking, and the negative payoffs are the monetary or wealth equivalents of the prison sentence and legal defence associated with an unsuccessful hijacking. Within analysis that deals with hostage-taking scenarios, the ransoms or other concessions, such as prisoner releases, demanded by terrorists will be the relevant positive payoffs, and the various consequences and punishments associated with failure and capture will be the relevant negative payoffs. When examining terrorism in general, however, the payoffs may not be so easily delineated and may only be captured by broad categories or labels or objectives such as 'political influence' or 'overthrow of the existing government'.

The formal models of rational behaviour, including expected utility theory and the rational behaviour embedded within game theory, also form the foundation for econometric or time series analysis of terrorist incidents; for example, Enders and Sandler (2002) use a model very similar to Landes' (1978) model to provide the theoretical foundation for their statistical or econometric analysis:

$$E(U) = \pi U(W^S) + (1 - \pi)U(W^F)$$

Making use of monetary or wealth equivalents once more, Enders and Sandler (2002) depict expected utility as a function of the terrorist's wealth in two states: success ( $S$ ) and failure ( $F$ ). The states of the world are realised with probability  $\pi$  and  $1 - \pi$ , respectively. The model provides the theoretical foundation for the statistical analysis of terrorist activity for the period from 1970 to 1999. It does so in the following sense. Various interventions have been applied by governments over the past several decades which can be interpreted as having increased or decreased the expected utility that a terrorist may attach to different alternatives. Metal detectors, for example, may decrease the expected utility of hijacking. However, the terrorists may then be led to substitute some other attack method in place of hijacking. Another striking example is the fortification of U.S. embassies. This measure could be

expected to decrease the expected utility of a terrorist attack on an embassy and lead to a reduction in such attacks. This was found to be the case. However, after the fortification of the embassies the number of attacks outside of the embassy compounds increased. The theoretical models provide a structure that assists in directing empirical analysis and interpreting its results.

A review of these types of studies and the techniques that are used is presented by Enders and Sandler (2005). There are two major databases of terrorist events that facilitate these studies: ITERATE and the GTD. Mickolus (1982) describes the development of the ITERATE dataset<sup>48</sup> covering the period from 1968 to 1977. Some of the findings that have emerged from an analysis of this data include the following: (1) contemporary terrorist attacks are more likely to result in death or injury than leftist terrorism incidents of earlier periods; and (2) transnational terrorism appears to follow a cyclical pattern. A discernible rise in terrorist events is observed from the late 1960s and a sharp decline in the late 1990s. Alexander and Pluchinsky (1992) name 'demonstration' and 'copycat' effects as likely causes for such cyclical patterns, while Sandler and Enders (2004, pp. 306-307) add economies of scale in planning terrorist incidents as well as attack-counterattack processes between terrorists and government authorities as attributable factors. Sandler and Enders (2004, p. 307) also suggest that logistically complex events, such as skyjackings and assassinations, are likely to display longer cycles than less sophisticated attacks. As Enders and Sandler (2005) show, these studies can also be directed towards more fundamental questions including the impact of terrorism on tourism revenues and foreign direct investment.

The economic analysis of terrorism is a part of a multidisciplinary research program that encompasses contributions from many other fields of study. As this overview of the economic analysis of terrorism shows, over the past two decades it has become a substantial stand-alone research program within defence and peace economics. It is distinguished by the application of the economic method, broadly characterised as

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<sup>48</sup> The ITERATE dataset now covers the period 1968 to 2011.

the rational choice approach, to the various aspects of the terrorism context. The application has yielded important insights into terrorist decision-making. The straightforward application of orthodox consumer theory may be used to explore the likely outcomes of different government policy options, including deterrence. The introduction of risk and uncertainty and the application of expected utility theory extends these insights to contexts where the outcomes of terrorists' choices are uncertain and risky. The use of game theory extends these insights further to contexts characterised by strategic interaction between the terrorist group and the government. As it does in mainstream economics, the theoretical work developed in this manner provides a foundation for econometric and statistical analysis aimed at identifying empirical relationships between various aspects of the terrorism context. This approach is explored in more depth later in this chapter where several economic analyses of terrorist activity and media coverage, studies that are directly relevant to the research objectives of this thesis, are surveyed in detail.

### **3.5 Terrorism and the Media**

The study of terrorism and the media is one of the earliest dedicated research programs in terrorism studies. It has attracted contributions from many of the individual discipline areas identified in Sections 3.2 and 3.3. Under this research program's broad title, many specific investigations have been undertaken. These include the study of the relationship between terrorists, terrorist groups and the media with special reference to the idea that this relationship may be symbiotic, the exploration of contagion and the debate regarding the constraint of media coverage of terrorist actions and the media strategies of terrorist groups. This section presents a survey of notable contributions to the study of terrorism and the media for the period beginning in the late 1970s and continuing to the present day.

This thesis is concerned with terrorist choice of action within a context where media coverage is a desirable outcome. Although this is now generally accepted, its place as a foundational supposition underlying the study of the characteristics of media coverage of terrorist actions is problematic. The survey of notable contributions within this particular research program further identifies the place for this thesis within the literature and the contribution that it represents. Most importantly, one



of the limitations of the extant studies is the perspective from which these studies operate. After stating the supposition that media coverage is important for terrorist groups or is a desired payoff which is sought after, the analysis contained in many studies proceeds to examine or outline the characteristics of this coverage or this payoff and, if the analysis touches on terrorist behaviour at all, tends to deal with terrorists' media strategies which, once again, are supposed to emerge from the terrorists' desire for media attention. This approach disconnects the analytical work from the study of underlying terrorist behaviour, especially the terrorists' choice of actions, by obscuring the most important elements of this behaviour behind the preliminary supposition about the desirability of media coverage.

By contrast, the contribution and significance of this thesis is built upon the recognition of the interplay between terrorist choice and media coverage and, in particular, the idea that terrorist choice is shaped by the media coverage accorded to terrorism and is not simply the generic means by which media coverage is attained. The characteristics of media coverage shape the terrorist group's expectations about the nature and extent of coverage that may be expected in the future. These expectations shape terrorist choice. This thesis reconnects the characteristics of the media coverage of terrorist actions with the terrorist group's choice of action. This allows the thesis to develop explanations and to account for observed terrorist behaviour that is easily overlooked when the focus drifts too much towards the nature of the media coverage and away from the terrorist behaviour that may shape and be shaped by it. For example, if media coverage is the desired outcome, why do terrorist groups not simply choose the action with the highest expected value of media coverage? Why do terrorist groups use more than one action, some of which are not associated with the highest expected amount of media coverage? Why do equally capable groups, all of which may be supposed to be interested in media coverage, not choose identical sets of actions? These are the types of questions addressed in this thesis.

### **3.5.1 Terrorism as Theatre and the Terrorists' Desire for Media Coverage**

Perhaps no single theme within the research program of terrorism and the media links the act of terrorism with the desirability of media attention as strongly as the

metaphor ‘terrorism as theatre’<sup>49</sup> or ‘theatre of terror’. Since the inception of modern terrorism, the actions of terrorists have been reported on and discussed by the media. The foundation of the terrorism and media research program is the supposition that media coverage is an important component of the terrorism context and, perhaps more importantly, is something that terrorists themselves desire or even need. That this supposition can be labelled as such is due to the absence within the literature of substantial research of terrorists’ attitudes and beliefs. The desirability of media coverage has been inferred from observing the human action that shapes the terrorism context; for example, terrorists’ claims of responsibility for an action or the perpetration of an act of terrorism in a public place. From time to time, however, researchers have been able to gather first-hand evidence of the desirability of media coverage from the terrorists’ perspective through interviews; for example, B. Hoffman (2006, p. 174) cites McKnight (1974, p. 168) quoting a leader of the United Red Army terrorist group (the ‘parent’ group of the Japanese Red Army) as saying: “Violent actions ... are shocking. We *want* to shock people, everywhere. ... It is our way of communicating with the people”.

The desirability of media coverage is also expressed by Carlos Marighella (1969), one of the leaders of the Brazilian guerrilla organisation National Liberation Action, in his *Minimanual of the Urban Guerrilla*:

*“The war of nerves or psychological warfare is an aggressive technique, based on the direct or indirect use of mass media and rumours in order to demoralise the government. In psychological warfare, the government is always at a disadvantage because it imposes censorship on the media and winds up in a defensive position by not allowing anything against it to filter through. At this point, it becomes desperate, is involved in greater contradictions and loss of prestige, and loses time and energy in an exhausting effort at control which is liable to be broken at any moment”.*

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<sup>49</sup> According to B. Hoffman (2006, p. 174), ‘terrorism as theatre’ is a phrase coined by Brian Jenkins in 1974. The concept of ‘Terrorism as Theatre’ or ‘Theatre of Terror’ has been an enduring theme in the literature (e.g. Alexander & Finger, 1979; Kupperman, 1979; Alexander, 1980; Wurth-Hough, 1983; Weimann, 1985; Rubin & Friedland, 1986; Nacos, 2003; Weimann, 2005; Shoshani & Slone, 2008).

Of course, communication, possibly including a lack thereof, is an essential feature of bargaining, negotiation, conflict and strategy. This was recognised some time before terrorism studies became a distinct discipline (for example, see Schelling, 1960, pp. 53-80). It was but a small step, therefore, for researchers to recognise the importance of communication, of which the media is a component, within the terrorism context. Several plausible rationales can be provided for supposing that media coverage is desired by terrorists. These rationales include using the media as a means by which terrorists seek to (1) maintain a façade of strength (e.g. Kupperman, 1979, p. 59) and create an illusion of power (e.g. Anable, 1979, p. 131); (2) reach audiences larger and more diverse than the number of instant victims (e.g. Alexander, 1980, p. 180; Crelinsten, 1997, p. 9); (3) create a climate of fear as outlined by Miller (1979, p. 81) and Hacker (1980, p. 145), who states: "Terror and terrorism aim to frighten and, by frightening, to dominate and control. They want to impress."; (4) spread the terrorist group's propaganda<sup>50</sup> message to the general public (e.g. Fenyvesi, 1979, p. 98; Wilkinson, 1990, pp. 29-31) and their celebration of success, i.e. when their demands are met or an event unfolds as planned, to (potential) group members and sympathisers; sometimes to the extent of "media rape" (Weimann, 1985, p. 434); and (5) communicate with adversaries through secure, untraceable channels (Glaab, 2007, p. 33). On the basis of a, by now, very plausible and commonly accepted supposition regarding the importance of media coverage in the terrorism context and its desirability from the perspective of the terrorists, studies quickly began to emerge to explore additional dimensions. One of the first to be analysed was the relationship between terrorists and the media.

### **3.5.2 The Relationship between Terrorists and the Media**

Beyond the identification of the general importance of media coverage and its desirability for terrorists, some researchers conclude that the relationship between terrorists and media organisations is symbiotic. A symbiotic relationship is commonly understood as a connection between at least two parties that is mutually beneficial

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<sup>50</sup> For a discussion on the historical background of the phrase 'propaganda by deed' see Schmid (1989, pp. 540-542) and B. Hoffman (2006, pp. 5-6). Elter (2008, pp. 63-73) provides such an account in the German language for the equivalent phrase 'Propaganda der Tat'.

and which, in some circumstances, can reach a level of interdependence. From the perspective of the terrorists, media coverage might serve to obtain one or several desired outcomes, examples of which were listed in the previous paragraph. Such outcomes may not be achievable via a terrorist act alone; that is, if a terrorist event is not reported in the media and a wider audience gains no knowledge of it, the benefits derived from the act may be minimal for the terrorist. As Walter Laqueur (cited in: Weimann, 1985, p. 434) observed in 1976: "The media are the terrorists' best friend. The terrorist act by itself is nothing. Publicity is all". Weimann and Winn (1994, p. 51) quote ABC anchor Ted Koppel, who in 1984 offered the following observation:

*"Let me put forward the proposition that the media, particularly television, and terrorists need one another, that they have what is fundamentally a symbiotic relationship. Without television, terrorism becomes rather like the philosopher's hypothetical tree falling in the forest: no one hears it fall and therefore it has no reason for being. And television without terrorism, while not deprived of all interesting things in the world, is nonetheless deprived of one of the most interesting".*

Further observations and an analysis of a "symbiotic process" between terrorists and the mass media are offered by Farnen (1990). The author proposes that in seeking to achieve their goals "violent groups use and abuse the media and the state" and "in turn, are reciprocally used and abused" in the process (Farnen, 1990, p. 99). Several other researchers presuppose a symbiotic relationship between terrorists and media coverage in their studies and commentary; e.g. Bell (1979, p. 90), L. J. Martin (1986, p. 127), Wilkinson (1997, p. 52), Shoshani and Slone (2008, p. 627).

The media, as the other party in this presumed mutually beneficial relationship, relies on newsworthy events which media personnel may package in a timely manner into captivating and informative news stories to attract viewers, readers, sales, and advertising revenue in what is a highly competitive media-business environment. Of course, media-outlets face some limitations regarding the extent of attention, space, and air-time, if any, that they can give to 'happenings' in the world. Therefore, media-personnel need to be selective in what they determine to be newsworthy. This

process is not completely idiosyncratic but has been shown to follow certain criteria. A seminal study by Galtung and Ruge (1965) identifies and comprehensively describes numerous factors which, at least in Western media practice, determine cumulatively and compensatory the newsworthiness of an incident. Synthesising the work of Galtung and Ruge (1965) and of Dayan and Katz (1992), Elter (2006, p. 1067) lists the following criteria for a news “story”: *Timing*: does the event come to a reportable climax before the editorial deadline?; *Aktualität* (topicality): is the incident current?; *Emotionalität*: does the incident evoke strong emotions?; *Kuriosität* (unexpectedness): is it an extraordinary incident?; *Personalisierung*: can the incident be linked to persons?; *Elitenbezug*: do these persons have an important role?; *Relevanz*: does the incident carry sufficient consequences or implications?; *Negativeffekt*: is the incident violent?; *Nähe* (proximity): does the incident affect the [media] audience in some way?; *Kontinuität*: can the incident be reported on over several news cycles?; *Eindeutigkeit* (unambiguity): is the incident immediately comprehensible? Occurrences that meet at least some of afore-mentioned criteria *and* that unfold over some period of time are particularly suitable to becoming significant media-events (Elter, 2006, pp. 1067-1068).

Expanding on this symbiotic relationship and drawing on the ‘theatre of terror’ metaphor, the nature of reporting on terrorism as infotainment on the one hand, and terrorist groups devising media-oriented acts on the other hand, also attracted the attention of researchers. It soon becomes clear that while the terrorism-media relationship may be viewed as symbiotic, it is also tenuous. From the perspective of the terrorist, media coverage is risky because media coverage accorded to terrorist action is variable and includes the possibility of it being lower than expected or desired by the terrorist. While it may be assumed that a significant proportion of terrorist events would meet and therefore pass the editorial selection criteria outlined above, several studies have shown that not all terrorism acts are covered in the media and that some attacks have received considerably more media attention than others.

Kelly and Mitchell (1981) examine the reporting of terrorism in the *New York Times* and *The Times* of London in relation to a random sample of 158 incidents taken from

Brian Jenkins' and Janera Johnson's publication (1975), *International Terrorism: A Chronology 1968-1974*. Findings by Kelly and Mitchell include: that a sizeable number of terrorist events go "completely unnoticed by the Western media" (p. 289); that each newspaper exhibits a distinct but "definite regional bias in its coverage of transnational terrorism" (p. 278); that hijackings, kidnappings, armed assaults, and terrorist events resulting in high numbers of fatalities attract a higher volume of coverage (pp. 279-280, 289); and that some terrorist groups attract and hold the attention of the press more effectively than other groups (p. 289). In summary, Kelly and Mitchell identify a number of potential biases that media personnel may be influenced by when determining whether or not and to what extent a terrorist incident will be covered, including: (1) regional bias; (2) attack-type bias; (3) fatality-bias; and (4) terrorist group bias. Further studies confirm the variability of media coverage of terrorism events.

Regional bias was also identified by L. J. Martin (1986, p. 140) and by Carpini and Williams (1987, pp. 60-61) who, in their examination of terrorism coverage by three major television networks in the United States of America, conclude that "even when focusing solely on terrorism aimed at U.S. citizens, network coverage bore little relationship to actual patterns of occurrence". Weimann and Winn (1994) concur. Following a comprehensive study<sup>51</sup> of media reports on terrorism not only by three major US television networks but also by nine international newspapers over the period 1968 to 1980, the authors conclude that only a small minority of terrorist events are actually reported and "thus, the media exercise a vital *gatekeeping* function" (p. 68). The authors also find that "television networks are especially selective, covering in each instance barely one-seventh of the terrorist events that take place" whereby the print media report up to one-third of all relevant terrorist acts contained in the RAND Corporation database.

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<sup>51</sup> The study by Weimann and Winn (1994) includes the following nine newspapers: *New York Times*, *The Globe and Mail* (Toronto), *The Times of London*, *The Daily Telegraph* (London), *Le Figaro* (Paris), *Frankfurter Allgemeine Zeitung* (Germany), *Yediot* (Israel), *Al-Ahram* (Egypt), and the *Pakistan Times*; as well as three US television networks: ABC, CBS, and NBC.

Of course, it will be difficult for researchers to determine with any degree of certainty whether editorial decisions to exclude certain terrorist events from reporting are made on the basis of insufficient newsworthiness of an event, according to the criteria established by Galtung and Ruge (1965) and subsequent researchers outlined above, or whether editorial or other biases play a role. However, one conclusion that may be drawn is that coverage of terrorist events does vary. Despite this variability, some terrorist actions draw significant media attention prompting some researchers to examine the characteristics of such high-profile<sup>52</sup> terrorist events. With a particular focus on the *New York Times* and coverage of domestic terrorism in the United States of America between 1980 and 10 September 2001, Chermak and Gruenewald (2006) found that “just 15 incidents [out of 412] accounted for approximately 85 percent of the 4 million words published in the *New York Times*” (p. 455). The 15 most news-producing terrorist incidents included the World Trade Centre bombing in 1993, the Oklahoma City bombing in 1995, and the Olympic Park bombing in 1996 (p. 444). Further analysis of the data leads the authors to conclude that “sensationalised” cases of terrorism consistently show several characteristics in common. They are incidents with casualties, linked to domestic terrorist groups, targeting airlines, or using hijacking as a tactic (p. 428). When reporting does occur, and even if such coverage is substantial, the specific characteristics of media attention are variable and may not necessarily represent the terrorist group in a way that meets the group’s publicity preferences or intentions.

Weimann (1985) examined reports on 381 terrorist events in the Israeli daily press over a three year period from January 1979 to December 1981 and identified 13 different labels used by journalists in reference to the persons, organisation, or movement connected with the terrorist act. These references included “positive” labels such as “patriots, freedom fighters, liberation movement”, “neutral” descriptors such as “guerrillas, army, underground separatists”, and “negative” labels such as “murderers, saboteurs, assassins”. Journalists’ choice of label was

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<sup>52</sup> In this thesis, high-profile terrorist events describe those events which result in significant or voluminous media-impact and/or coverage.

found to be most strongly related to “political distance”; that is, politically remote terrorist organisations tended to be labelled more *positively* even if the terrorist action involved a high degree of violence (pp. 433, 441).

A related study was undertaken by Picard and Adams (1987) who considered the “characterisation of acts of political violence, commonly referred to as terrorism” (p. 1) in the *Los Angeles Times*, the *New York Times*, and the *Washington Post* for the period from 1980 to 1985. Picard and Adams argue that characterisations are a major component in the social construction of reality in which the media play an important role. The authors dichotomise all characterisations encountered in this study into either nominal or descriptive. Nominal characterisations (e.g. hijacking, to bomb, gunmen, attack) name persons, actions or events with as much neutrality as possible, while descriptive characterisations contain elements of value or judgement (e.g. coward, freedom fighter, despicable, brutal). It is important to note that Picard and Adams include the term ‘terrorist(s)’ in the descriptive (judgement) category. They find that media personnel and witnesses to political violence tend to use nominal characterisations whereas government officials tend to use characterisations that are more judgmental, inflammatory and sensationalistic (p. 6), leading the authors to suggest that “elite U.S. print media personnel” are not significantly guilty of sensationalism in their coverage of terrorism (p. 6). The authors further point out that characterisations are an important component in the creation of frames of reference within which media audiences view events and participants (p. 1).

Entman (2007, p. 164) defines framing as “the process of culling a few elements of perceived reality and assembling a narrative that highlights connections among them to promote a particular interpretation”. Further, “frames introduce or raise the salience or apparent importance of certain ideas” and can thus encourage media audiences to think, feel, and decide in a particular way. With regard to media reports on terrorism, Nacos (2005) identifies various frames as they apply to the representation of female terrorists including the “Physical Appearance Frame”, the “Family Connection Frame”, the “Terrorist for the Sake of Love Frame”, and the “Bored, Naïve, Out-of-touch-with-reality Frame” (pp. 438-445). The author lists several examples where terrorist groups have strategically exploited their target



society's gender prejudices and have successfully deployed female terrorists in ways that may not have been possible for their male counterparts (pp. 446-447). Nacos' examples suggest that media frames can serve terrorist groups as a tactical advantage; a result that at first glance may appear counter-intuitive, especially given results of empirical studies that have suggested "an ideological bond" between policymakers and reporters, and journalists embracing the official "War on Terror" frame (Nagar, 2010, p. 533). With a particular focus on the seven most active and lethal groups (during the period from 1998-2004) contained in the Memorial Institute for the Prevention of Terrorism (MIPT) Terrorism Knowledge Base, but excluding groups with official or direct links to Al Qaeda, Nagar investigates how the *New York Times* and the *Washington Times* frame politically violent organisations. The author finds that politically violent organisations are framed no more frequently as 'terrorist' after the attacks of 11 September 2001 (9/11) than before. However, the terrorist frame is applied more often to groups with an Islamic affiliation and by the more conservative of the two newspapers, i.e. the *Washington Times* (pp. 542-543).

Other researchers have analysed the content of media attention accorded to terrorist actions more closely and have concluded that even if coverage is voluminous, such as was the case for the 1985 TWA flight 847 hostage crisis, for example, terrorists receive very little "special attention", nor attention that might meet their desire for "respectability" and "legitimacy" (Nacos, Fan, & Young, 1989), nor does media coverage tend to include the terrorists' propaganda message or stated grievances (e.g. Jenkins, 1981; Kelly & Mitchell, 1981; L. J. Martin, 1986). In some cases, media coverage can have negative consequences for the terrorist group, when media reports of terrorist violence increase public opposition and reaction to such acts and promote public support for decisive and/or wide-reaching counter-terrorism measures (e.g. Bassiouni, 1981, p. 23; Glaab, 2007, p. 50). There is no doubt, however, that some terrorist events generate a very high volume of media attention. Nacos (2003), for example, investigated U.S. print, television, and radio news stories in the weeks following the 9/11 attacks and found that, although not portrayed in a positive light, Osama bin Laden was accorded more media attention than US President George W. Bush, despite the President having given 54 public

statements during that period compared to bin Laden, who did not appear in public at all and gave no face-to-face interviews (p. 41).

The volume of media attention that some terrorist attacks generate has led to debate about undesirable side-effects of this phenomenon, not only during the news gathering process, e.g. media personnel hindering delicate negotiations or efforts by law enforcement agents during hijacking (Ashwood, 1979, pp. 91-92), putting the lives of hostages at risk while trying to secure prime footage or information (e.g. Fenyvesi, 1979, p. 100; Miller, 1979, pp. 84-85), or “exploiting” the ordeals of terror victims for journalistic rewards (Fenyvesi, 1979, pp. 96-97), but also with regard to the impact of media reports on the likelihood of additional terrorist attacks in the future.

The proposition that exposure to violent crimes, including news thereof, can result in emulation of such acts has a long history. Berkowitz and Macaulay (1971, p. 238) and Weimann and Winn (1994, pp. 211-212) cite French sociologist and criminologist Gabriel Tarde, who in his book *Penal Philosophy*, first published in 1890, labelled violent crimes that followed ‘Jack the Ripper’ murders in London in 1888 as just one example of “suggesto-imitative assaults”, maintaining that “news of sensational crimes stimulated aggressive ideas in many readers and prompted some of them to similar actions”. More recently, researchers have used the term ‘contagion effect’ to describe the assumed influence of media reports on the emulation of acts of violence, including terrorism.<sup>53</sup> Schmid (1989, p. 558) puts it rather bluntly with the following statements: “Behaviour rewarded is behaviour repeated. Contagion by media representation is a very real thing, though it is hard to prove”. Attempts at measuring a contagion-effect have been made with context-specific rather than widely applicable results (e.g. Midlarsky, Crenshaw, & Yoshida, 1980; Mazur, 1982; Holden, 1986; Weimann & Winn, 1994). Ross (2007, p. 221) concludes his literature survey on the “terrorism-news media relationship” with the following observation:

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<sup>53</sup> Weimann and Winn (1994, pp. 211-233) contributes a whole chapter to the “Contagion Effect” including various attempts to measure it. Bassiouni (1981, pp. 18-26) also devotes considerable attention to the “Contagion Hypothesis”.

“Terrorists use the media as a tool to gain increased coverage and [to] communicate their message. Although the media may facilitate terrorism, most research indicates that it does not cause terrorism. [...] The relationship between terrorists and the news media will not subside, and in many respects, that interconnectivity will increase in years to come”.

### **3.5.3 The Media Strategies of Terrorist Groups & Policy Implications**

In recognition of a significant relationship between terrorism and media coverage and in continuation of the ‘terrorism is theatre’ theme of the late 1970s (e.g. Alexander & Finger, 1979), researchers have suggested that many terrorist acts are violent “pseudo-events” (Schmid, 1989; Boorstin, 1976) designed for the purpose of news-making as illustrated by the words of Hacker (1980, p. 143): “Terrorists intentionally manufacture, direct, and perfect the sensations they need in order to captivate their fascinated audiences. Mass media-oriented terrorism and terrorism-oriented mass media thrive on sensational, surprising, and exceptional events that occupy total audience attention for periods of time”. In addition to Hacker’s contribution, the concept of (mass) media-oriented terrorism has been accorded considerable attention by Schmid and de Graaf (1982), Nacos (1994, 2002, 2003), Weimann and Winn (1994), and G. Martin (2003). Attempts by terrorists to exploit the strong linkage between sports and the media by placing their attacks within major or well publicised sporting events has been examined by Galily, Yarchi, and Tamir (2015) and Yarchi, Galily, and Tamir (2015). From the perspective of criminology, Surette et al. (2009) expand the concept of media-oriented terrorism by viewing the phenomenon from an alternative angle: rather than measuring the press coverage of individual or high-profile terrorist attacks, the authors turn their attention to the media-orientation of the acts themselves.

Surette et al. (2009) assert that “the desire for media attention is not a constant feature of terrorism” (p. 360), but rather that the degree of media orientation displayed varies, not only between groups but also between individual acts perpetrated by the same group over time. Based on the premise that media-oriented terrorism requires a “communication intent” in the form of credit-taking, media usable communiqués, and symbolic targets and actions (p. 361), for example, the

authors develop a dichotomy of indicators of media oriented terrorism versus non-media oriented terrorism as shown in Table 3.4.

**Table 3.4 Dichotomy proposed by Surette (2009)**

| <b>Media Oriented Terrorism</b>  | <b>Non-media Oriented Terrorism</b>                      |
|--|--|
| Terrorists involve journalists or media personalities in the event                                     | Events are unclaimed                                     |
| Terrorist group announces their association with event   | Tapes and photographs are not made public                |
| Terrorist group informs media of event and purpose   | Attacks are made in less/ non-newsworthy country         |
| Terrorist group or individual is willing to be interviewed   | Event is standard in procedure or common to prior events |
| Terrorist group tapes or photographs event and provides it to the public through the internet or media | Low profile or unknown victims                           |
| Attacks are in newsworthy countries or on people from newsworthy countries                             | Most common event is a bombing or assault                |
| Attack is on established or high-profile newsworthy individuals  |  |
| Event causes fatalities or injury  |  |
| Event is purposely unique and dramatic   |  |
| Most common event is hijacking or hostage taking/kidnapping for nonmonetary reasons                    |  |

After selecting a representative sample of twenty terrorist groups<sup>54</sup> and then each group's ten most recent acts from the *Terrorism Knowledge Base* (TKB) for the period January 1998 to December 2009, Surette et al. (2009) proceed to score these 200 terrorist acts using six diverse, high-profile terrorist attacks as benchmarks. Scoring results for terrorist acts are then linked back to the perpetrating terrorist group to provide an "average media orientation score" for each individual terrorist group. The authors find (p. 366) "base of operation" the single most important factor in determining a group's media orientation score; a factor even more significant than the number of injuries or fatalities inflicted. Media-orientation was found to be highest for European groups with environmental or political aims and lowest for groups with communist political or religious goals based in non-Western countries, especially South America, India, and Pakistan. The authors raise the possibility that media-oriented terrorism is determined by ready access to Western media as much as by group goals (p. 366). Gaining access to Western media may be part of the media

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<sup>54</sup> Groups selected by Surette et al. (2009) fall into four broad categories: al-Qaeda linked (n=5), environmental (n=2), religious (n=5), and political (n=8); the group-category 'political' is made up of three sub-categories: communist (n=3), anti-global (n=2), and national (n=3).

strategies used by terrorists. A small number of researchers have studied the media strategies of specific terrorist, militant, or political groups and have provided insights at various levels of detail; for example, the media strategies of Hizbollah are examined by Weimann (2005); those of the German Red Army Faction (RAF) are outlined by Steinseifer (2006), Glaab (2007), and Elter (2006, 2008); those of the Spanish Euskadi Ta Askatasuna (ETA) by Glück (2007); Islamist groups by Richter (2007); Al Qaeda by Payne (2009); the Corsican Nationalist by Hoffbauer (2011); the Global Islamic Media Front by Torres Soriano (2012); and Jihadist terrorists by Amble (2012) as well as Klausen (2015).

Concerns about the psychological effects of media coverage of terrorism have been raised. Jenkins (1981, p. 3) states that “for every actual victim of terrorism, there are thousands of vicarious victims”, noting that media coverage of terrorism has the potential to cause disproportional levels of public alarm and to exaggerate people’s perceptions of the level of terrorist threat their country or community is facing. Anxiety-inducing effects of media broadcasts of political violence have also been reported by Slone (2000) and by Shoshani and Slone (2008), who note that “[i]n an elevated state of alert, even failed or foiled terrorist attempts reported repeatedly in the media, can produce a strong alarming effect on a wide audience” (p. 637). Strong emotive reactions to media reports on terrorism such as fear, anxiety, and anger have, in turn, been linked to citizens displaying a higher tendency for “supporting hawkish foreign policy” (Gadarian, 2010, p. 481) and for “selecting a military option” (Sirin & Geva, 2013) to combat terrorism. Other concerns relate to the issue of terrorism as infotainment, especially in the case of television journalism, where “news is simplified, dramatised, and personalised” and where “images substitute for ideas, personality for expertise and quick, dramatic solutions are favoured over questioning, argument, and compromise” (Crelinsten, 1997, p. 29); and to the possibility of media coverage being utilised as a source for learning and instruction for (prospective) terrorists (Schbley, 2004). Such trepidations, together with previously discussed factors of contagion and other issues of concern, have opened the ground for an intense and, by now, long-lasting policy debate regarding the terrorism-media relationship.

Opinions are diverse and frequently exhibit a familiar tension between the “people’s right to know” (Alexander, 1980, p. 179), the principles of press freedom, and freedom of speech in open and democratic societies on the one hand and, on the other hand, the strategic needs of government and security agencies, particularly during situations of actual or perceived crisis and terrorist threat. Contributions to the literature have: highlighted the importance of a good rapport between the police and the media, and raised concerns about “the strong prospect of increased violence caused by improper reporting either during or after an episode of terrorism” (McEwen & Sloan, 1979, pp. 53-54); advocated for media self-restraint and responsible practice (Wilkinson, 1990, 1997, 2001), for example, in the form of “a meaningful and enforceable [media] Code of Ethics” (Schmid, 1989, p. 562); and presented arguments for (G. M. Bauer, 1979; Weimann, 1985, p. 443) and against (Finger, 1979, p. 119; Miller, 1990, p. 320; Cowen, 2006, p. 243; A. M. Hoffman, Jengelly, Duncan, Buehler, & Rees, 2010) imposed restraints on the media, including news blackouts during acute terrorist attacks and scenarios. As the media environment evolves and alternative pathways continue to emerge for the sharing and dissemination of news, information, and ‘propaganda’ content, terrorists and security agencies adopt new technologies and adapt their strategies. Contributions to the literature that focus on newer communication technologies as they pertain to terrorists, the media, and information sharing include Lentini and Bakashmar (2007), Asal and Harwood (2008), Salem, Reid, and Chen (2008), Payne (2009), Amble (2012), Torres Soriano (2012), and Klausen (2015). Policy and counterterrorism response measures for this changing environment have been suggested by Salem et al. (2008, p. 620), Weimann and Von Knop (2008), and Amble (2012, pp. 349-350).

### **3.6 The Economic Analysis of Terrorism and the Media**

Very few researchers have explored the relationship between terrorism and media attention accorded to terrorism from an economics perspective. One such contribution is made by Islam and Shahin (1989), who explicitly include media coverage not only as a desirable gain for hostage-takers, but also as a commodity which hostage-takers are willing to accept in trade negotiations with the government

or security agencies for the release of their hostages. Islam and Shahin (1989, p. 1020) describe the expected utility function of hostage-takers as

$$EU = pW(n, m) + qG(n, m) + (1 - p - q)L(n)$$

where  $W$  represents the gain for hostage-takers if the government refuses to negotiate,  $G$  the gain if the government does negotiate, and  $L$  the loss to hostage-takers if the government takes punitive action. Importantly, the authors assert that gains for the hostage-takers “take place through media coverage” (p. 1020). In the expected utility function,  $m$  is seen as an independent variable representing “occasional manipulation of the media” by the abductors, for example, through the release of video footage featuring their hostages, while  $n$  represents the number of hostages held. The authors suggest (pp. 1022, 1023) that facilitation of media publicity for the terrorists is an important element when negotiations in hostage scenarios have been entered into, and that governments should aim for overt rather than covert negotiations, as the latter denies hostage-takers the publicity gain they seek.

Nelson and Scott (1992), referring to Islam and Shahin (1989), also include media exposure in the terrorists’ utility function

$$U = f(X)$$

where  $X$  is a “vector of terrorist objectives such as ransom, prisoner releases, direct political concessions, safe passage out of the country, as well as media attention for their cause” (p. 330) and it is assumed that a rational terrorist would substitute increased media attention for other objectives, and vice versa, if it meant a greater utility gain overall. Using coverage of terrorist incidents in the *New York Times* between 1968 and 1984, Nelson and Scott seek to determine: (a) the relationship between specific characteristics of terrorist events and the media coverage accorded to them; and (b) whether media coverage Granger causes terrorism. With regard to (a) the authors find that only 400 out of 788, or 50.8 percent, of the terrorist events recorded in the ITERATE database for the period under investigation received

coverage in the *New York Times*. Coverage ranged from one column-inch<sup>55</sup> to 10,864.5 column-inches, the latter denoting the media attention accorded to the Iranian hostage crisis, which the authors describe as “an extreme outlier” and control for. The Munich 1972 Olympic assassinations, with 1,059.5 column-inches, received the second highest amount of media attention (p. 332). Nelson and Scott set column-inches in the *New York Times* as the dependent variable and list the following 15 independent variables to describe terrorist events in their dataset: non-government target (NONGOVT), US-target (USTGT), Israeli-target (ISRINV), sequential release or substitution of hostages (SEQSUB), terrorists’ self-imposed deadline passed (DPASS), number of non-US citizens killed (NUSDEAD), number of US citizens killed (USDEAD), number of US citizens wounded (USWOUND), hijacking event (HIJACK), kidnapping event (KID), number of terrorists in the attack force (NTAFOR), high-powered weapons used (HPW), number of hostages held (NUMHOS), number of days the incident spans (DAYS), control variable for the Iranian hostage crisis (IRANHC). Using linear regression and with regard to point (a) above, Nelson and Scott (1992) find eight terror incident characteristics with a statistically significant relationship to media attention in the *New York Times*. All eight characteristics are found to result in media coverage above the mean. Column-inches above the mean are shown in brackets: number of US citizens killed (132.3), Israeli-target (125.0), deadline-passed (105.6), US-target (65.7), sequential release/substitution of hostages (30.5), number of days the incident spans (1.3), number of non-US citizens killed (1.1), number of hostages held (0.3). To investigate point (b), that is, whether or not media attention causes terrorism, Nelson and Scott (1992, p. 336) proceed by aggregating previously described data into quarters<sup>56</sup> (n=67) and applying equation

$$INCIDENTS_t = B_0 + B_1 INCIDENTS_{t-1} + B_2 INCHQ_{t-1} + u_t$$

where  $INCIDENTS_t$  denotes the number of terrorist incidents per time period  $t$  (quarter), and  $INCHQ_t$  the sum of total column-inches of media coverage per

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<sup>55</sup> An article is one ‘column-inch’ if it is one inch in length and one column wide. A page in the *New York Times* is six columns wide (Nelson & Scott, 1992, p. 331).

<sup>56</sup> Incidents which began and ended in different quarters are counted as occurring in the quarter in which they began (Nelson & Scott, 1992, p. 336).



quarter. The authors apply the Granger (1969) causality principle which states that “if variable  $X$  (Granger) causes variable  $Y$ , then changes in  $X$  should *precede* changes in  $Y$ . Therefore, in a regression of  $Y$  on other variables (including its own past values) if we include past or lagged values of  $X$  and it significantly improves the prediction of  $Y$ , then we can say that  $X$  (Granger) causes  $Y$ ” (Gujarati, 1995, p. 621). Nelson and Scott (1992, p. 339) find “no relationship between media attention given to terrorist acts in one quarter and the number of terrorist incidents in the next”, thus seemingly disproving a commonly held belief of a strong and positive correlation between media reports on terrorism and additional terrorist activity (e.g. Mazur, 1982; Rohner & Frey, 2007). Some years later, Scott (2001) applied another regression analysis, to what appears to be the same data-set utilised in the study of Nelson and Scott (1992), to examine media coverage of terrorism when several terror events occur during the same period.

Using a data-set containing column-inches of reporting in the *New York Times* during the period from 1969 to 1984 on 788 terrorism events recorded in the ITERATE database, Scott (2001) shifts the focus from seeking to determine characteristics of newsworthy terrorist events to the idea that the public’s, and hence the media’s, desire for terrorism coverage is not without limits and that it may well decline if too much news of the same or similar type becomes available. Scott (2001, p. 216) describes the process by which concurrent terrorist events compete for what is limited media attention the “media congestion effect” and refers to Carpini and Williams (1987, p. 60) who state: “On a given evening, other pressing events may push out coverage of terrorist events that would be covered on a less busy evening.” Scott (2001, p. 218) shows this media constraint  $K$  formally as

$$K = N + \sum_{i=1}^x T_i$$

where  $N$  represents the total quantity of television time or newspaper space *not* devoted to terrorism, and  $T_i$  the quantity of media space accorded to terrorist incident  $x$ . The author asserts that the “media congestion limit” induces terrorists to refrain from action in situations where constraint  $K$  is reached. He backs this

assertion in two ways: (a) by developing the theoretical model further (pp. 219-221) and concluding with the observation of a downward sloping reaction function for individual terrorist groups; and (b) by running linear regression using the previously described data-set as follows

$$Coverage = b_0 + b_1 * Other\ Coverage$$

where *Coverage* denotes the predicted coverage,  $b_0$  represents the constant amount of media coverage (79.73 column-inches), and  $b_1$  the regression coefficient or slope of the regression equation. The author finds a statistically significant result ( $t = -10.122$ ) and the coefficient to be negative (-0.124), suggesting that coverage for any particular terrorist incident declines by 0.124 column-inches when coverage for another terrorist incident increases by one column-inch; leading to the conclusion (p. 225) that “significant evidence of crowding-out” has been found, that “one terrorist’s gain in media attention is another terrorist’s loss”, and that in order to compete successfully for what is limited media attention, terrorists must stage more original and more imaginative incidents than other terrorist groups (p. 226).

Rohner and Frey (2007) also examine the premise of a symbiotic relationship between terrorism and the media from an economics perspective. The authors consider terrorists and media outlets as two aggregate players in a common-interest-game and describe the players and their relationship in several steps as follows: (a) define each player’s utility function; (b) determine and graph each player’s reaction functions, and identify any stable or unstable equilibria; (c) examine stable equilibria in a discrete choice game.

The terrorists’ utility function is defined as

$$u_T = \alpha QST^\theta + \beta(1 - T)$$

where  $Q$  = share of media coverage devoted to terrorism;  $S$  = level of sensationalism of the newspapers, with  $0 \leq S \leq 1$ ; where  $\alpha, \theta, \beta$  are set as positive parameters, with  $0 \leq \theta \leq 1$ ; where  $\alpha$  denotes utility gained from terrorist activities and  $\alpha$  is a function of three marginal benefits (i.e. power, monetary compensation, and ideological/missionary gains) all of which are set as positive values by Rohner

and Frey; where the terrorists' time constraint is expressed as  $L + T = 1$ , with  $T$  = time devoted to terrorist activities,  $L$  = time devoted to non-terrorist activities, and  $\beta$  = marginal benefits the terrorists derive from engaging in non-terrorist activities.

The media's utility function is defined as

$$u_M = \chi TSQ^\rho + \delta(1 - Q)$$

where  $\chi$  captures the various factors that determine how lucrative reports about terrorism are for the media; where  $\chi, \rho, \delta$  are set as positive parameters, with  $0 \leq \rho \leq 1$ ; where the media's reporting space constraint is expressed as  $Q + R = 1$ , with  $Q$  = share of media coverage devoted to terrorism,  $R$  = reports on subjects other than terrorism, and  $\delta$  = marginal benefits to the media from reports on subjects other than terrorism.

The terrorists' reaction function

$$T = \left( \frac{\alpha \theta S Q}{\beta} \right)^{1/(1-\theta)}$$

and the media's reaction function

$$Q = \left( \frac{\chi \rho S T}{\delta} \right)^{1/(1-\rho)}$$

are obtained by setting  $\partial u_T / \partial T$  and  $\partial u_M / \partial Q$  equal to zero.

Graphing both players' reaction functions, for the case where  $\alpha S > \beta$  and  $> \delta$ , Rohner and Frey (2007, p. 133) identify three equilibria: a stable "no attack" equilibrium at (0;0), a stable "attack" equilibrium at (1;1), and one unstable, intermediate equilibrium at (0.64; 0.64). The authors conclude (p. 142) that the likelihood of a low terrorism outcome may be increased if attribution of terrorist attacks to particular groups is avoided as much as possible, thus indirectly subsidising high quality (rather than sensationalist) journalism. The authors test and substantiate the findings of their game-theoretic model with an empirical analysis of the media coverage of terrorism, terror incidents, and fatalities for the period January 1998 to

June 2005. Using data of terrorist incidents and victims from the *National Memorial Institute for the Prevention of Terrorism* and then counting the number of times the expression “terrorism” or “Terrorismus” appear in the *New York Times* and in the *Neue Züricher Zeitung*, respectively, the authors find (p. 142) that terrorism and media coverage mutually Granger cause each other. Pfeiffer (2012) also provides a game-theoretic perspective on terrorism and the media, but finds a stable, intermediate Nash equilibrium of terrorism and reporting propensity to emerge when both players independently maximise their utilities (p. 215). Pfeiffer (2012, p. 219) makes clear reference to the “crowding-out” effect empirically shown by Scott (2001) and concludes his own analysis with the proposition that the media have a “stabilising effect” on terrorism” (p. 223).

### **3.7 The Contribution of this Study to the Literature**

Having completed a survey of the literature, we can identify the contribution that this thesis represents. Terrorism studies is a broad and multidisciplinary field of research encompassing contributions from economics, criminology, psychology, political science, sociology, and critical studies. Each of these different disciplines has contributed important insights into various aspects of terrorism and terrorist behaviour, including Islamic terrorism, suicide terrorism, lone wolf terrorism, the life cycles of terrorist groups, and the root-causes of terrorism. Among all of these important aspects of the terrorism context, one longstanding problem has been identified in the literature survey as being of particular interest. This is the research program known as ‘terrorism and the media’.

Like most of the other research programs within terrorism studies, terrorism and the media has been investigated from the perspectives of several distinct disciplines. This research program explores a number of different dimensions of the relationship between terrorism and the media coverage that is accorded to it. Traditionally, a great deal of attention has been given to the idea that terrorist groups and media organisations share a symbiotic relationship. This has led researchers to consider the media strategies that terrorist groups may have developed and the broader social and policy implications of an underlying symbiotic relationship. Contributions to this problem have also been received from defence and peace economists. Applying the

traditional tools of economic analysis, namely the rational choice approach, economists developed a theoretical rationale for terrorist behaviour based upon the utility-generating properties of the media coverage that follows terrorist activity. The contributions of economic analysis have tended to concentrate on identifying limits to media coverage (congestion), developing precise game-theory mathematical models of the relationship between terrorists and the media, and applying statistical-econometric analysis developed within economics to identify causality (Granger tests). Now that the work of the economists and other scholars has been surveyed, it is possible to identify both the general conclusions as well as some limitations characterising the approaches that have been applied to the problem broadly termed 'terrorism and the media'.

The general conclusions that may be drawn from the literature, and indeed from the longstanding interest that has been shown and the attention that has been accorded to the research program, may be summarised as follows:

- Media coverage is generally considered to be an important outcome (payoff) to terrorist activity; a payoff that terrorist groups desire and, among other objectives, aim to acquire as media attention confers them utility (satisfaction).
- Some terrorist activities are newsworthy. Not all terrorist activities, even if they may be considered newsworthy at certain times or places, will be accorded media attention. This may be due to certain factors, including reporting biases, editorial biases, geographical biases and, potentially, crowding-out effects and congestion caused by a preponderance of competing newsworthy events (not necessarily terrorism) and limits of time and space available to journalists.
- Some scholars have argued that terrorist activities, when the criteria for newsworthiness is met, may also have important outcomes for media organisations; for example, increased newspaper circulation, television viewer numbers, and social media metrics.
- The plausibility of the argument that the outcomes of terrorist activities are important for both terrorist groups and media organisations leads to the

hypothesis of a symbiotic relationship and, further, the possibility that media coverage may cause or contribute to terrorism.

- This possibility has also led scholars to consider the media strategies that terrorist groups may develop and the plausibility of media-oriented terrorism.

Although the research program reflects multiple perspectives and the conclusions are contested and debated, the overarching themes that run through the literature depict the terrorist group operating within a context in which media coverage is an important outcome for both the group and, potentially, for the media organisations that accord such coverage. While terrorist groups may differ in regards to their sophistication in interacting with the media and in navigating this context, terrorist groups generally understand the importance of attracting at least some media attention to their actions even if that attention simply serves to announce publicly responsibility for an attack. Some groups will manage this context in a more sophisticated way than others and they will engage in actions that may be classified as media-oriented.

Despite the progress that has been made on this research program, several limitations may be identified. Some of these are common to the overall research program while others are specific to the economic analysis of media coverage and terrorist behaviour. These limitations may be summarised as follows:

- Terrorists desire media attention and this is a general consensus within the literature. However, terrorists cannot simply 'manufacture' media coverage. Rather, terrorist groups choose actions that have a range of possible outcomes, each associated with some possible amount of media coverage. Even an action that is normally accorded a great deal of media attention may be accorded very little. This may be because of the idiosyncrasies of media coverage (see above) or the outcomes of the action itself; for example, a bombing device planned to detonate at peak hour may explode prematurely or not at all.

- In this manner, existing studies are somewhat detached from the choices that terrorists make. Terrorists choose actions (bombing, hostage-takings, armed assaults etc.). Actions are characterised by a range of outcomes and, in turn, the outcomes may be characterised by a range of possible levels of media attention.
- Terrorist choices of actions are subject to risk and uncertainty. The outcomes and the amount of media coverage accorded to them may be quite different from the average or expected outcomes. The existing literature focuses on average outcomes to particular actions without considering the variability or risk and uncertainty of outcomes.
- When choosing an action, the terrorist cannot be sure of any particular outcome. As such, even actions that may be accorded the highest average amount of media coverage may not be desirable choices for a particular group if the higher average is accompanied by the necessity of bearing a higher amount of uncertainty.
- When this is overlooked, certain conclusions may become subject to criticism. For example, Rohner and Frey (2007) test for Granger causality and conclude that media attention causes terrorist related fatalities. However, terrorist groups cannot choose to inflict fatalities but can only choose a particular action with a *range* of possible outcomes. Terrorist groups may not choose to engage in the action with the highest expected number of fatalities and, according to Rohner and Frey, the highest amount of media coverage because that choice may not be consistent with optimal choice under conditions of risk and uncertainty. Rohner and Frey's characterisation of the utility function does not allow for this dimension of choice to be considered.

These limitations primarily stem from an incomplete assessment of the terrorists' choice problem and the nature of the underlying choice, the choice of terrorist *action* (a single attack or attack combinations) which terrorists make in order to obtain a possible outcome. There are also some limitations that characterise the quantitative approaches that have been applied to this research problem:

- The quantitative analysis that has been undertaken to investigate the validity of hypotheses concerning the relationship between terrorism and media coverage as well as the nature of media coverage accorded to particular types of actions is characterised by an overreliance on word searches; for example, researchers identify the number of times that a particular word, for example 'terrorism' or 'terrorist', is used in media reports in the context of particular events or time-frames. However, this is only a very cursory measurement of the amount of media coverage that is accorded to particular terrorist actions or even to the actions of a particular group. It is also debatable whether this is a measure of the type of media coverage outcome that terrorist groups may consider when choosing from a set of alternative terrorist actions. The studies that have used more sophisticated measurements of media coverage, for example column inches, provide a much more promising foundation for analysis.

To overcome some of the limitations that characterise the existing literature, the problem might be better approached from the perspective of the terrorist group making a choice under conditions of risk and uncertainty. Under such conditions, alternative terrorist actions may be assessed on the basis of the outcomes that can be expected and the degree to which the actual outcomes may be expected to diverge. If media coverage is desirable, terrorist groups may rank alternative actions on the basis of the amount of media coverage they expect an action to generate *and* the variability that may characterise outcomes. An action with the highest average amount of media coverage may not necessarily be chosen if its outcomes are very variable and therefore risky. This is one potential insight that such an approach may generate. A model of terrorist choice in a context where media coverage is an important payoff may be developed on the theoretical foundations provided by economic theory and behavioural economics. Such a theoretical approach may be complemented by an empirical analysis that also accords prominence to both the amount of media coverage generated by particular terrorist actions and the variability in that coverage over time. Such an empirical treatment would also consider refinements in the measurement of media coverage and move beyond



analysis based on the frequency with which certain words are used in media reports. In light of these comments, the approach taken by this thesis may be summarised as follows:

- The terrorist's choice problem is treated as a choice between 'risky prospects', where the risky prospect is the terrorist action (or combinations of actions)  $i$ , and the payoff is media coverage  $x_i$  with probability  $p_i$ , where  $(p_1 + p_2 + \dots + p_n = 1)$ . This approach avoids the confusion of treating media coverage as the risky prospect when, in fact, it is the terrorists' choice of *action* that is the risky prospect. The approach of this thesis also ensures that risk and uncertainty are treated. It avoids the potential for erroneously concluding that a terrorist will always choose the action with the highest amount of media coverage; an assumption that is not necessarily the case, because such action may be too risky and the outcome uncertain for it to be the optimal choice for a particular terrorist group given the group's particular risk preference.
- Economic analysis provides at least several different ways for analysing choice from among risky prospects including: (a) basic expected utility theory, (b) mean-variance expected utility, and (c) prospect theory. In this thesis, basic expected utility theory is applied as a first step beyond the implicit expected value models of the existing literature. This approach, as will be explained, avoids certain logical problems and generates a set of first order conclusions regarding the patterns of terrorist choice that might be expected when media attention is desirable but uncertain. Second, mean-variance analysis is applied. This method is particularly well-suited to dealing with combinations of risky prospects (actions). Third, prospect theory is applied to enable consideration of additional (behavioural) dimensions of terrorist choice in contexts where terrorists not only learn from the media's response to their own actions, but also observe the behaviour of other terrorist groups and resulting media attention, before considering and formulating their own terrorist activity in the future (i.e. reference points).

- Consideration of the terrorists' decision calculus moves the analysis in this thesis from a description of past events towards exploring patterns of future terrorist action in contexts where media coverage is a desired payoff. This analysis aims to assist law enforcement and security agencies to understand how terrorists' choices of action may be shaped by media coverage in particular contexts.
- The theoretical analysis is explained and underpinned by data from a precise geographical and political context in which several terrorist groups were active concurrently and in which such groups competed with each other for media attention.

The analysis presented in the thesis is further augmented and strengthened by several characteristics inherent in the work for this project: an extensive dataset comprising actions by numerous terrorist groups and the media coverage resulting from their actions within *one* specific historical, geographical, and national context is compiled and available for analysis; the historical context chosen is one which is characterised by a high level of terrorist activity and one in which the terrorism-media relationship occupied the political agenda and was high in peoples' consciousness; a detailed measurement of print-media space (rather than word searches) is performed; the extensive dataset spans a period of ten years and facilitates examination of numerous terrorist groups' activities and the resulting media coverage over a considerable time period. This approach facilitates examination of terrorist groups' evolving actions and combinations of actions rather than being confined to a focus on individual terrorist events or attack types alone.

### **3.8 Conclusion**

The terrorism studies literature encompasses contributions from different disciplines. Over the past several decades, much progress has been made and much has been learned about terrorism and the behaviour of terrorist groups. A number of research programs have endured over almost the entire lifetime of terrorism studies. One of these is accorded particular attention in this thesis. This is the research program referred to as 'terrorism and the media'. Progress in this particular

research program reflects the general advances that have been made in the overarching discipline though, of course, much debate remains and much remains to be understood. The existing studies that have been contributed to the literature are characterised by some limitations. Overcoming these limitations represents an opportunity to contribute an original and worthwhile study to the literature. This thesis applies an analytical approach that builds on the existing literature and, where possible, minimises or overcomes at least some of the limitations that can be found in extant work.

## Chapter 4 - Theory

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### 4.0 Introduction

It is the purpose of this chapter to outline, purely logically or theoretically, a picture of the terrorist decision-making process in the terrorism and media context. Terrorist actions  $i$  are treated as risky prospects with media coverage as the variable payoff  $x_i$  occurring with probability  $p_i$  where  $(p_1 + p_2 + \dots + p_n = 1)$ . The way in which terrorists choose from among the available actions may be depicted in a number of different ways. This chapter presents treatments that draw on the basic expected utility model, the mean-variance expected utility method, and the most prominent behavioural model of the decision-making process, (cumulative) prospect theory. The application of these models to terrorist choice in a context where media coverage is the relevant payoff represents a core contribution of the thesis. The purely logical treatment is complemented by an application of each model to the terrorism experienced in West-Germany during the 1970s.

As explained in the literature survey, the existing studies, when they extend to an analysis of terrorist strategy, place considerable emphasis on the amount of media attention accorded to actions in the past as the dominant factor shaping terrorist choice. This implies that the terrorist will simply choose the action with the highest (historical) amount of media attention and bears considerable resemblance to the expected value model, which depicts decision-makers as choosing the action with the highest expected value. This approach is subject to several limitations, which may end in logically untenable conclusions. The basic expected utility model provides an advance on this existing analysis and the other models provide a still more sophisticated picture of the terrorist decision-making process that generates new insights into the patterns that terrorist choices of actions may exhibit when media attention is the desired but uncertain outcome of terrorist activity.

### 4.1 Overview of the Chapter

This chapter is organised as follows. In Section 4.2, the analytical perspective that shapes the contribution of this thesis is identified. Terrorist actions are defined as

risky prospects with variable amounts of media coverage representing the terrorist's desired outcome. In Section 4.3, models of decision-making under risk and uncertainty are applied to this choice problem. This represents a formal theoretical analysis of the terrorist's ranking or ordering of preferences over alternative actions when media coverage is a desired but uncertain outcome of those actions. In Section 4.4, the theoretical analysis is concluded.

## **4.2 Terrorist Actions as Risky Prospects**

Treating the terrorist's actions as risky prospects refocuses the analysis onto some important but easily overlooked aspects of the choice problem. Researchers, governments and law enforcement agencies are interested in the choices that terrorists have made or may make in the future. This focuses our analytical attention on the actions that are available to the terrorist and the actions that the terrorist might choose from among the available alternatives. The literature that has explored terrorism and the media provides the foundation for an analysis of this choice problem in an important context and has presented compelling arguments to support the position that media coverage may be an important variable in the terrorist's decision-making process.

Terrorists cannot choose the amount of media coverage that is accorded to their actions.<sup>57</sup> They can only choose an action for which media coverage is one of the variable or risky payoffs. An action may not generate any of the outcomes that the terrorist planned or expected. An action may generate outcomes that fall very much short of or, conversely, very much exceed the expected outcomes. In the previous chapter it was pointed out that existing studies focus on the amount of media coverage associated with particular types of actions or with particular events. By concentrating on the amount of media coverage associated with particular events or actions, these investigations may give the impression that terrorists can choose some

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<sup>57</sup> This is also true of social media. Although the terrorist group can disseminate information almost without limit, the number of times the information is accessed or otherwise consumed by an audience is variable. Any given post may be accessed many more or many less times than expected.

amount of media coverage by taking a particular action. This obscures some key aspects of the choice problem.

A risky prospect is one where the outcomes are uncertain. Terrorist actions generate media coverage. The existing literature has demonstrated that this is the case. What is not clearly reflected in the existing discourse, however, is the uncertain nature of the media coverage that attends a prospective action. A terrorist group that desires media coverage and expects terrorist actions to be accorded some amount of media coverage chooses from among its prospective actions in a manner that reflects these expectations. Some actions may have the potential to generate a very large amount of media coverage but have very variable outcomes. Some actions may be expected to generate a relatively small amount of media coverage but with more certainty. Terrorists will not always choose the former. Treating the terrorists' set of feasible actions as risky prospects enables this circumstance to be incorporated into an analysis of the decision-making process. It must be remembered that some terrorist actions, perhaps those that fail in the early stages of their execution, may receive no media coverage at all. And yet, the action was the outcome of a terrorist's decision-making process. It was chosen with an expectation that some media coverage would result.

A substantial multi-disciplinary research program has been devoted to determining the processes that people follow when making decisions under conditions of risk and uncertainty; that is, the choice from among a set of risky alternatives or prospects  $i$  with some payoff  $x_i$  occurring with probability  $p_i$ . Both orthodox and behavioural economics have approached this task. Although different models highlight different aspects of the decision-making process and its behavioural foundations and although some models seek only to predict while some seek to describe the decision-making process, the prominent models share in common the objective of determining a ranking or ordering of the risky prospects confronting the decision-maker. In the sections that follow, basic expected utility theory, mean-variance expected utility theory, and prospect theory are applied to the terrorist's choice of action in a context where media coverage is the desired but uncertain outcome.

### **4.3 Models of Terrorist Choice under Risk and Uncertainty**

All models of choice under risk and uncertainty aim to describe the process by which the decision-maker chooses, predict the order in which the alternative risky prospects will be ranked, or prescribe the best risky prospect that the decision-maker should choose. These models have a long history. In economics, the basic expected utility model was formulated in the middle of the 20<sup>th</sup> century but its origins can be traced to a much earlier time. Even the behavioural models, which emerged as alternatives of the basic model, now have a long history of their own. Although often seen as competitors, the models complement each other by highlighting different aspects of the decision-making process. In this section, the origins of the basic expected utility model are sketched from its emergence and eventual replacement of the less satisfactory expected value criterion. Theoretical advances, especially mean-variance expected utility and the behavioural model called prospect theory, are then set out in more detail. Together these models provide a comprehensive picture of the decision-making process that terrorists apply when choosing from among alternative risky actions, each associated with some expected yet fundamentally uncertain amount of media coverage.

#### **4.3.1 Basic Expected Utility**

Terrorists commonly choose from among a small number of risky prospects or actions which are grouped under categories such as: (1) armed assault, (2) assassination, (3) bombing/explosion, (4) facility/infrastructure attack, (5) hijacking, and (6) hostage-taking/kidnapping.<sup>58</sup> The outcomes of such actions are variable. The types of outcomes that the terrorists may associate with successful terrorist actions might include victims belonging to a particular target-group, injuries and fatalities inflicted, as well as an amount of media attention accorded. For the present analysis we are specifically interested in the latter. Thus the terrorist's choice problem is treated as a choice from among risky prospects, where the risky prospect is the

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<sup>58</sup> This categorisation is adopted from the GTD.

terrorist's action  $i$ , and the payoff is a particular amount of media coverage  $x_i$  that will result from action  $i$  with probability  $p_i$ , where  $(p_1 + p_2 + \dots + p_n = 1)$ .

One way in which the terrorist's decision-making process may be modelled and the best risky prospect from among the list of alternatives identified is by determining the expected value  $\bar{x}$  of each risky prospect. Formally,

$$\bar{x} = \sum_{i=1}^n x_i p_i$$

Although this represents a very simple and straightforward way to compute the value of each risky prospect, there are several practical and formal problems that warn against such an approach. Fundamentally, applying the expected value model in the present context would lead us to conclude that the terrorist would simply choose the single action with the highest expected amount of media coverage regardless of risk. Not surprisingly, expected value also runs into serious formal difficulties. These difficulties are encapsulated by the St Petersburg Paradox. The paradox, first identified by Nicholas Bernoulli in 1728, is explained by Machina (1987, p. 122):

*Suppose someone offers to toss a fair coin repeatedly until it comes up heads, and to pay you \$1 if this happens on the first toss, \$2 if it takes two tosses to land a head, \$4 if it takes three tosses, \$8 if it takes four tosses, etc. What is the largest sure gain you would be willing to forgo in order to undertake a single play of this game? Since this gamble offers a  $\frac{1}{2}$  chance of winning \$1,  $\frac{1}{4}$  of winning \$2, etc., its expected value is  $\left(\frac{1}{2}\right) \times \$1 + \left(\frac{1}{4}\right) \times \$2 + \left(\frac{1}{8}\right) \times \$4 + \dots = \frac{\$1}{2} + \frac{\$1}{2} + \frac{\$1}{2} + \dots = \$\infty$ , so it should be preferred to any finite sure gain. However, it is clear that few individuals would forgo more than a moderate amount for a one-shot play.*

In short, here was a risky prospect with an infinite expected value and yet prospective players will usually only pay a few dollars to participate. In fact, risky prospects with a much lower expected value would be preferred to it. A ranking of risky prospects based on expected value quickly came to be viewed as untenable. It was in order to overcome the difficulties presented by the St Petersburg Paradox that expected utility was first proposed as an alternative criterion on which to base choices from



among risky prospects. Although this proposal dates to the 1700s, it was not until the 20th century that a formal axiomatic treatment of expected utility theory was formulated. Basic expected utility theory says that each possible payoff  $x_i$  is associated with an amount of utility (satisfaction) for the terrorist. The payoffs are converted into utility numbers by the decision-maker's utility function which, formally, must be one from the class of functions identified by von Neumann and Morgenstern (1947). The theory is relatively straightforward. Simply, in the present context the expected utility  $EU$  of an action  $i$  is the sum of the products of probability and utility conferred by media coverage over all possible outcomes of the act. The terrorist chooses the action with the highest expected utility of media coverage. Formally,

$$EU = \sum_{i=1}^n u(x_i)p_i$$

The expected utility model is a mathematical theory. Its foundations consist of a set of axioms set down by von Neumann and Morgenstern (1947): (1) completeness, (2) transitivity, (3) continuity, and (4) independence. These axioms have come to define rational behaviour in some parts of economic theory. Formally,

(1) The completeness axiom states that for any two lotteries or risky prospects  $L_1$  and  $L_2$  exactly one of the following holds:  $L_1$  is preferred to  $L_2$ , denoted by  $L_1 \succ L_2$ ; or  $L_2$  is preferred to  $L_1$ , denoted by  $L_2 \succ L_1$ ; or the decision-maker is indifferent between  $L_1$  and  $L_2$ , denoted by  $L_1 \sim L_2$ . The completeness axiom ensures that the decision-maker can compare all risky prospects.

(2) The transitivity axiom assumes that preference is consistent across any three risky prospects; that is, if  $L_1 \succsim L_2$ , and  $L_2 \succsim L_3$ , then  $L_1 \succsim L_3$  also applies. Where  $\succsim$  denotes weakly preferred; that is,  $L_1 \succsim L_2$  means that  $L_1$  is at least as preferred as  $L_2$ .

(3) The continuity axiom assumes a tipping point between better than and worse than a given middle option. If  $L_1 \succ L_2 \succ L_3$  then there exists a probability  $p \in (0,1)$  that would make the decision-maker indifferent in the following sense:

$$pL_1 + (1 - p)L_3 \sim L_2$$

(4) The independence axiom assumes that a preference holds regardless of the possibility of another (irrelevant) outcome such that if  $L_1 \succ L_2$ , and  $L_3$  denotes an irrelevant outcome:

$$pL_1 + (1 - p)L_3 \succ pL_2 + (1 - p)L_3$$

Depicting the decision-making process as one based on expected utility rather than expected value represents a theoretical advance in analysing the way terrorists may choose from among the attack categories. An ordering of terrorist actions on the basis of expected utility may be quite different from an ordering on the basis of expected value. Table 4.1 illustrates an example. If we imagine a restricted choice between just two attack methods A and B for the terrorist group, each with four different payoffs (units of media coverage) and associated probabilities, we can see that the terrorist group would choose Action A as the total expected utility of Action A (2.6853) exceeds that of Action B (1.7217), although the reverse is true for the total expected values of Action A and Action B.

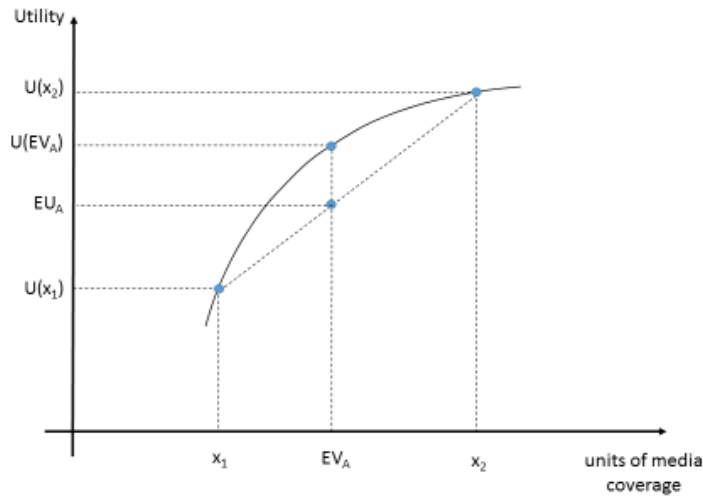
Table 4.1 Expected Value and Expected Utility - An Example

| Payoff<br>$x_A$ | Probability<br>$p_A$ | Payoff<br>$x_B$ | Probability<br>$p_B$ | Utility<br>$ln(x_A)$ | Utility<br>$ln(x_B)$ | Expected<br>Utility<br>$EU_A$ | Expected<br>Utility<br>$EU_B$ | Expected<br>Value<br>$EV_A$ | Expected<br>Value<br>$EV_B$ |
|-----------------|----------------------|-----------------|----------------------|----------------------|----------------------|-------------------------------|-------------------------------|-----------------------------|-----------------------------|
| 10              | 0.6                  | 1               | 0.4                  | 2.3026               | 0                    | 1.3816                        | 0                             | 6                           | 0.4                         |
| 20              | 0.3                  | 10              | 0.4                  | 2.9957               | 2.3026               | 0.8987                        | 0.9210                        | 6                           | 4                           |
| 50              | 0.08                 | 15              | 0.1                  | 3.9120               | 2.7081               | 0.3130                        | 0.2708                        | 4                           | 1.5                         |
| 100             | 0.02                 | 200             | 0.1                  | 4.6052               | 5.2983               | 0.0921                        | 0.5298                        | 2                           | 20                          |
| <b>Sum</b>      | 1                    |                 | 1                    |                      |                      | 2.6853                        | 1.7217                        | 18                          | 25.9                        |

The basic expected utility model is a much more sophisticated model of choice under risk and uncertainty than the expected value criterion. An important advance is the model's ability to reflect decision-maker characteristics such as the diminishing marginal utility of wealth and the decision-maker's risk preferences. Within the expected utility model, decision-makers can be risk-averse or risk-seeking and to varying degrees. The expected utility model can explain and account for a situation where a decision-maker values a risky prospect less than its expected value. Both the difference and the relationship between expected utility and expected value are

reflected most clearly in the treatment of risk preference that is encompassed within the expected utility model. This is explained with reference to Figure 4.1 and Figure 4.2.

Figure 4.1 The Risk-Averse Terrorist Decision-Maker

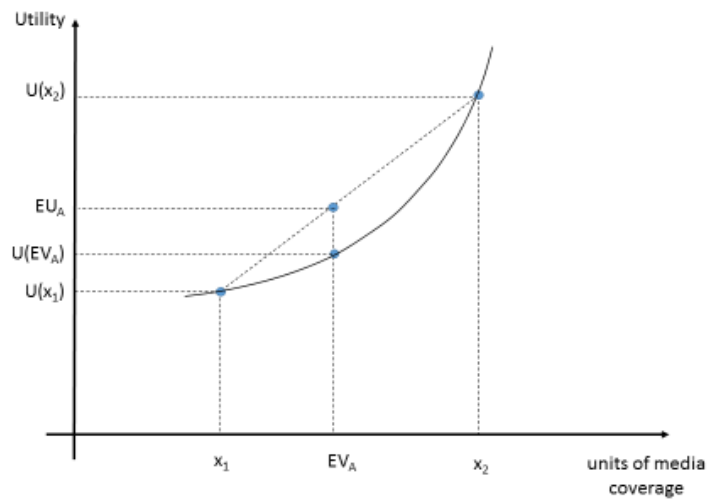


We consider a terrorist group faced with a prospect that offers a 60:40 chance of receiving  $x_1$  or  $x_2$  units of media coverage, respectively. In both graphs, Figure 4.1 and Figure 4.2, point  $EV_A = 0.60 x_1 + 0.40 x_2$  provides the expected value, and point  $EU_A = \ln(x_1)0.60 + \ln(x_2)0.40$  the expected utility of the prospect. The concave utility function of a risk-averse terrorist group is depicted in Figure 4.1. The risk-averse terrorist group will prefer the expected value of the prospect, indicated by  $U(EV_A)$ , to the utility gained from engaging in the prospect, indicated by  $EU_A$ . Engaging in the prospect carries the risk of obtaining less than the expected value; a risk that the risk-averse terrorist group is unwilling to bear.<sup>59</sup> The reverse is true for the risk-seeking terrorist group. Such a group is described by a convex utility function depicted in Figure 4.2. A risk-seeking terrorist group will prefer to engage in the prospect (for a chance of gaining a larger amount of media attention) than to lock-in

<sup>59</sup> Risk aversion is formally measured by the Arrow-Pratt measures. For relative risk aversion, the appropriate measure is  $-U''(x)/U'(x)$ . See Pratt (1964, p. 127).

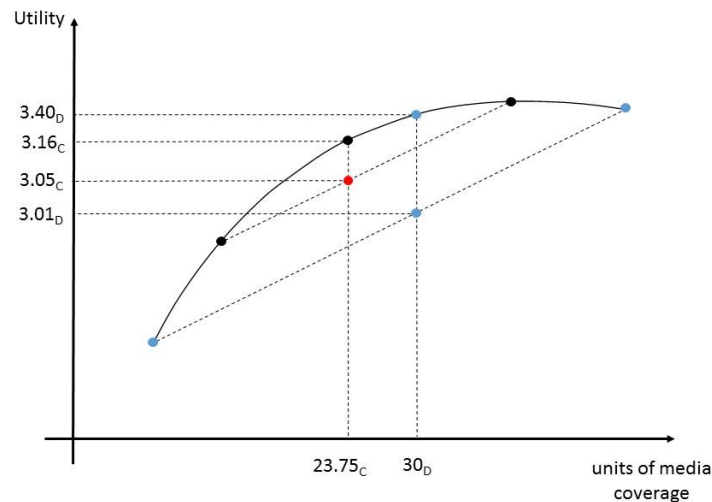
the expected value of the prospect. For a risk-seeking terrorist group the utility conferred by the prospect, indicated at point  $EU_A$ , is higher than the utility conferred by the expected value at point  $U(EV_A)$ .

Figure 4.2 The Risk-Seeking Terrorist Decision-Maker



The expected utility model applied to the context of terrorism and media coverage, therefore, depicts the terrorist as choosing from a set of actions or risky prospects. Each action or risky prospect potentially confers various amounts of media coverage as possible payoffs  $x_i$  occurring with associated probabilities  $p_i$ . The terrorist assesses the payoffs for each action and the utility each individual payoff would confer to him. The utilities for each payoff are weighted by their probability and summed to find the basic expected utility for each action. The actions are then ranked by their expected utilities and the action with the highest expected utility is chosen. It is relevant to restate the point that the action chosen by the terrorist may *not* be the one with the highest expected value; that is, the highest expected amount of media attention. In particular, the terrorist's preference for risk will play an important role in the selection. To further illustrate this point, a choice between two actions, A and B, is graphed in Figure 4.3 using the example outlined in tabular form in Table 4.1.

Figure 4.3 Risk Aversion – An Example



We consider a terrorist who faces a choice between two actions, C and D. The terrorist would clearly prefer to receive the higher expected value of Action D (30) over the lower expected value of Action C (23.75), indicated by utilities 3.40<sub>D</sub> and 3.16<sub>C</sub> respectively. However, neither expected value is guaranteed. Both actions are risky. At the same token, the range of possible outcomes for Action C is narrower than that for Action D. The prospect of engaging in Action C confers to the terrorist an expected utility of 3.05 compared to the lower expected utility of 3.01 for Action D. A risk-averse terrorist will therefore prefer the safer gamble of engaging in Action C rather than engaging in Action D.

One of the most noticeable features of expected utility analysis is that the model requires a utility function to transform outcomes or payoffs into utility numbers. There are many mathematically suitable utility functions. The selection of a particular function depends on the nature of the choice problem, aspects of the context and other factors that may make one utility function more appropriate than another. In economic theory, a handful of utility functions and variations of them have become the standard selections in a wide variety of choice contexts. Ultimately, however, the selection is an assumption about the decision-maker. The necessity of an additional assumption of this nature is one aspect of expected utility theory that may limit its appeal and scope. Another potential limitation of this nature is the computational

burden that expected utility theory places on the analyst and, by implication, the decision-maker. This computational burden is illustrated more directly by Table 4.2 which presents an example of the information that would be required to compute the expected utility for three different actions and just six possible payoffs (units of media coverage) for each action. The example assumes that terrorist groups have a logarithmic utility function such that the utility conferred by each amount of media coverage is the natural logarithm of that payoff. As explained, this utility number is multiplied by the associated probability and summed to find the expected utility for each action. The terrorist group would choose the action with the highest expected utility.

**Table 4.2 Expected Utility Information - An Example**

| Action A  |                                |                      | Action B  |                                |                      | Action C  |                                |                      |
|---|--------------------------------|----------------------|---|--------------------------------|----------------------|---|--------------------------------|----------------------|
| Payoff<br>$x_A$<br>i.e. units<br>of media<br>coverage | Utility<br>$u(x_A) = \ln(x_A)$ | Probability<br>$p_A$ | Payoff<br>$x_B$<br>i.e. units<br>of media<br>coverage | Utility<br>$u(x_B) = \ln(x_B)$ | Probability<br>$p_B$ | Payoff<br>$x_C$<br>i.e. units<br>of media<br>coverage | Utility<br>$u(x_C) = \ln(x_C)$ | Probability<br>$p_C$ |
| 5   | 1.6094                         | 0.0500               | 20  | 2.9957                         | 0.2250               | 20  | 2.9957                         | 0.0500               |
| 10  | 2.3026                         | 0.1500               | 30  | 3.4012                         | 0.2995               | 30  | 3.4012                         | 0.1000               |
| 15  | 2.7081                         | 0.3000               | 40  | 3.6889                         | 0.3000               | 40  | 3.6889                         | 0.1500               |
| 20  | 2.9957                         | 0.2000               | 50  | 3.9120                         | 0.1500               | 50  | 3.9120                         | 0.2500               |
| 25  | 3.2189                         | 0.3000               | 60  | 4.0943                         | 0.0250               | 100   | 4.6052                         | 0.3500               |
| 30  | 3.4012                         | 0.0000               | 70  | 4.2485                         | 0.0005               | 200   | 5.2983                         | 0.1000               |

Economic theory, then, provides a basic, yet potentially limited, model with which to analyse terrorist choice. According to this basic expected utility model, terrorists choose from among feasible actions, which include armed assault, assassination, bombings, attacks on facilities or infrastructure, hijacking, and hostage-taking/kidnapping, in a manner that maximises expected utility. Some amount of media coverage is expected to be associated with each possible outcome. The expected utility model implies that the terrorist will consider these outcomes and the chances with which they can be expected to occur and arrive at a preference ordering across the set of feasible attack methods. The attack method that has the highest expected utility, though perhaps not the highest expected amount of media coverage, will be ranked first on the preference ordering and, according to the basic expected utility model, will be the attack method that the terrorist group chooses to undertake.

As the basic model of choice under risk and uncertainty, expected utility provides a relatively clear perspective from which to view choice problems. Terrorists choose from a set of (feasible) alternative actions. The risk that terrorists confront is the possibility that the outcome of their chosen action will be different from that which they expected or desired. Actions are risky because, in this context, the amount of media coverage that may be accorded to an action is uncertain. According to the expected utility model, the terrorist selects the action with the highest expected utility. Although representing a significant theoretical advance over the expected value criterion, the expected utility model does have limitations. Some of these have been overcome by further developments in the theory of decision-making under risk and uncertainty. Having developed an application of expected utility to the analysis of terrorists' choice of action when media coverage is the desired but uncertain outcome, the following sections move beyond basic expected utility to models that permit particular features of the context to be explored more directly and in a manner that overcome some of the problems that have come to be identified with the basic expected utility model.

#### **4.3.2 Mean-Variance Expected Utility**

An alternative approach to basic utility analysis is computationally less burdensome, does not require the analyst to assume a particular utility function, and may be used to generate insights into the terrorist group's choices without dispensing with the underlying logic of choice implied by the basic expected utility model. In addition, the alternative approach highlights aspects of the decision-making process that are not emphasised or easily dealt with within the basic expected utility framework. This alternative approach is the mean-variance utility analysis developed by Markowitz (1952) and Tobin (1958) and introduced into the economic analysis of terrorism by P. J. Phillips (2009). This section outlines mean-variance utility analysis and its implications for terrorist choice in a context where media coverage is the desired payoff.

As Markowitz (1952, p. 77) explains, this approach begins with relevant beliefs about the future and ends with the choice of a particular action or a combination of actions. The basic expected utility model helps us to identify the flaws in assuming that the

terrorist or terrorist group must choose the action with the highest expected value. The basic expected utility model highlighted the need to consider the range of outcomes and their utilities and the probabilities with which they are expected to occur. The riskiness of each action is reflected by its distribution of expected outcomes. Because expected outcomes emerge not from thin air but from experience and observation, risk can be more easily represented by some measure of the variability of observed outcomes. Mean-variance utility analysis uses such a measurement of risk (i.e. variance) and highlights the relevance in the decision-making process of both expected payoffs *and* the variance or risk of those payoffs. The terrorist or terrorist group interested in media coverage will consider both the expected media coverage and the variance of that media coverage when choosing their actions.

This approach represents the terrorist group as forming preferences over alternative actions on the basis of just two relevant variables – mean or average payoff and variance ( $\sigma^2$ ); that is, the amount of media coverage expected to be generated by each alternative action and the divergence of the possible actual outcomes from that which was expected. The result is a much simpler mean-variance depiction of expected utility:

$$EU = f(E_{media}, \sigma_{media}^2)$$

This simplified representation of expected utility produces approximately the same ranking or ordering of preferences that would be determined on the basis of a full expected utility analysis (see Levy & Markowitz, 1979; Kroll, Levy, & Markowitz, 1984). However, the computational burden on both the analyst and the terrorist is decreased. All that is required is that the terrorists have some knowledge of the average media coverage that has been associated with previous terrorist actions and some knowledge about the ups and downs in media coverage that has been accorded to those actions. Sometimes a bombing, for example, will produce a lot of media attention, other times, especially if the bombing fails, there may be little attention accorded to it at all. Like other types of economic decision-makers, terrorists have

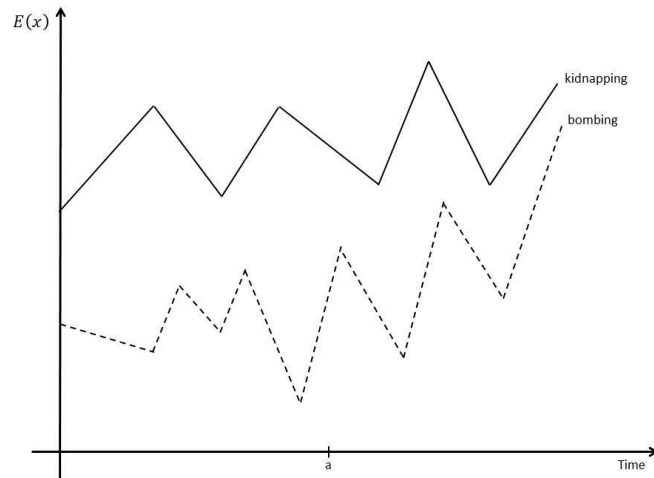


different preferences for risk and the actions they choose will be determined by their individual risk preference.

Over time terrorist groups will use more than one attack method and, what is more, the aggregate of terrorist groups will use them all; therefore, the set of actions includes not only individual attack methods but many possible combinations of attack methods. Overlooking combinations means overlooking many of the alternative actions that are available to terrorists. The same reasoning applies to combinations as applies to individual actions: the terrorist or terrorist group will not necessarily choose the combination of actions with the highest expected amount of media coverage. The trade-off between risk and reward remains a fundamental feature of the choice problem. However, the nature of this trade-off is shaped in important ways when combinations of actions are possible. Most importantly, combining actions may result in more expected media coverage at each level of risk.

The amounts of media coverage accorded to different actions move up and down in an imperfectly correlated manner over time. Figure 4.4 illustrates a hypothetical scenario for a combination of kidnapping and bombing. Kidnappings generally attract higher media coverage than bombings and both actions experience fluctuations in the amount of media coverage that can be expected. A combination of kidnapping and bombing may generate an expected amount of media coverage with less risk than either action taken individually. This is due to the dampening effects that imperfectly correlated payoffs have on each other; for example, at point *a* in Figure 4.4, gains in media coverage from bombing can partially offset a decline in media coverage from kidnapping. As it is impossible to incur negative amounts of media coverage (terrorist groups cannot retrospectively lose media coverage that has already occurred nor can they lose media coverage they never had in the first place) combining the two actions may produce more media coverage over time with less variability or more certainty than would be possible without the combination.

Figure 4.4 Gains from Combinations



The implications of this type of analysis for terrorism studies are far-reaching. Based on subjective assessments of risk, law enforcement agencies (and researchers) may conclude that some attack methods are less risky than others and, therefore, a terrorist group that chooses lower risk attack methods is more risk-averse and never likely to choose a higher risk attack method. This alignment of risk preferences with choices is not clear cut, however, even when much more technically sophisticated analysis is brought to bear. When risk is defined as variance, it may still be the case that a more risk-averse decision-maker will be observed to allocate resources to a higher risk (higher variance) prospect. This counter-intuitive outcome is explained only once it is realised that, over certain ranges at least, a higher proportion of resources allocated to a higher risk prospect combined with a lower risk prospect may result in a less risky (lower variance) combination (as in the example above). This result, the precise details of which are worked out by Mathews (2004, 2005), gives us some preliminary insights into the value that a more formal analytical approach such as the one presented here may hold. More risk-averse terrorist groups may choose higher risk attack methods in combination with lower risk attack methods. Subjective assessments of risk and risk preference are prone to errors that can be overcome by a more formal analysis.

Mean-variance analysis, then, depicts the terrorist or terrorist group as choosing from among alternative actions and combinations of actions by assessing: (1) the mean or average amount of media coverage that can be expected from an action or combination of actions; and (2) the risk or variance of the expected media coverage. For individual actions, mean and variance are easily computed. Although the average amount of media coverage that can be expected from a combination of actions is also easy to compute, the variance must take into consideration the imperfect correlation that has just been introduced into the discussion. The expected media coverage  $\mu_i$  for a combination of actions  $E_c$  is:

$$E_c = \sum_{i=1}^n w_i \mu_i$$

The proportion or weight of each individual action in a combination of actions is given by  $w_i$ . The risk or variance  $\sigma_c^2$  of a combination is:

$$\sigma_c^2 = \sum_{i=1}^n \sum_{j=1}^n w_i w_j \rho_{ij} \sigma_i \sigma_j$$

$$\sum_{i=1}^n w_i = 1$$

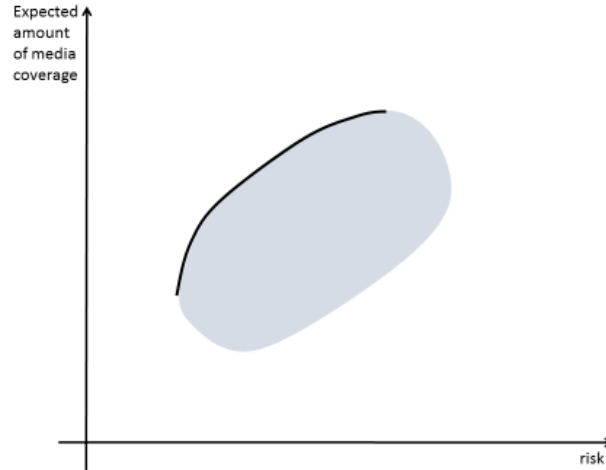
$$w_i \geq 0$$

The correlation structure of the media coverage accorded to different actions must be incorporated into the analysis. The degree of correlation between two different actions  $i$  and  $j$  is expressed by  $\rho_{ij}$ , the weight assigned to each attack method by  $w_i$  and  $w_j$ , and the variance for each attack method by  $\sigma_i$  and  $\sigma_j$ , respectively. Usually, two constraints are applied such that the sum of the weights assigned to the actions within a combination equals one and the assigned weightings cannot be less than zero.

The mean-variance analysis implies that all of the terrorists' alternatives, both individual actions and combinations of actions, can be depicted by their average or

expected amount of media coverage and their variance. In principle, all of the attainable alternatives can be depicted by a single picture such as Figure 4.5:

Figure 4.5 The Terrorists' Set of Alternatives as Mean-Variance Pairs



For fixed probability beliefs  $(\mu_i, \sigma_{ij})$  the terrorist group has a choice of various individual attack methods and combinations thereof. The opportunity set of all obtainable risk-reward pairs, where reward is the expected amount of media coverage and risk the variance of coverage, is depicted as the shaded area in Figure 4.5. Following Markowitz (1952, p. 82), the terrorist group would (or should) want to select individual attack methods and attack method combinations that are efficient and lie at the uppermost boundary of the opportunity set, indicated by a solid line in Figure 4.5. Efficient choices of attack methods or combinations of attack methods are those that have minimum risk for a given expected amount of media coverage (or more), or alternatively, choices that can be expected to return the maximum amount of media coverage at a given level of risk (or less).

The process of computing an optimal or efficient opportunity set is formally described as the solution to the following quadratic programming problem:

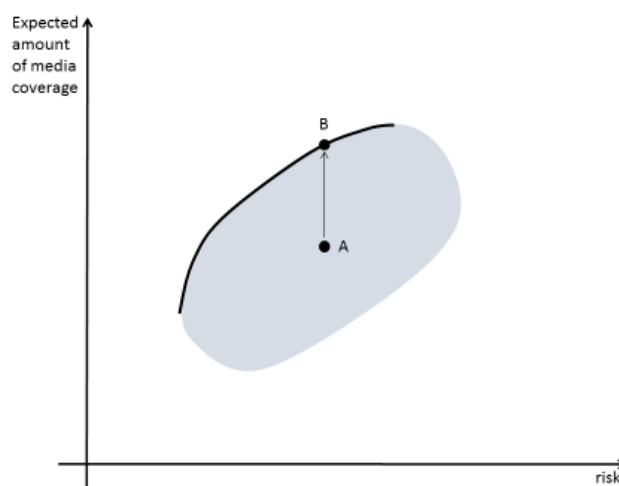
$$\max E_c = \sum_{i=1}^n w_i \mu_i$$

Subject to holding the level of risk for the combination of attack methods constant at  $\sigma_c^*$ :

$$\sigma_c^* = \sqrt{\sum_{i=1}^n \sum_{j=1}^n w_i w_j \rho_{ij} \sigma_i \sigma_j}$$

The problem is also subject to the constraint that the sum of the various weightings assigned to the attack methods within a combination must equal to one and that assigned weightings cannot be less than zero. When a number of iterations of this programming problem are completed, a number of efficient attack method combinations computed, and results graphed, the outcome is an efficient opportunity set as shown in Figure 4.6. It has the concave structure that emerges as a result of the imperfect correlation that characterises the media coverage accorded to different attack methods and the gains that can be obtained by the combination of two or more attack methods. The programming problem can be illustrated; for example, a randomly selected combination A will be associated with a particular level of expected media coverage and risk. The solution to the quadratic programming problem will determine the highest level of expected media coverage possible while keeping the level of risk constant. The solution to the problem takes us from the randomly selected combination A to the efficient combination B. Although the discussion so far has been purely theoretical-hypothetical, when empirical-historical data on media coverage associated with different terrorist actions is used as the foundation for an application of the type of analysis that we have been describing, an opportunity set that contains the terrorist group's opportunities to obtain media coverage from deploying different combinations of actions emerges from the data and exhibits the same properties, especially concavity, that we have been discussing in our theoretical-hypothetical explanation of the method.

Figure 4.6 Sample Solution to a Quadratic Programming Problem

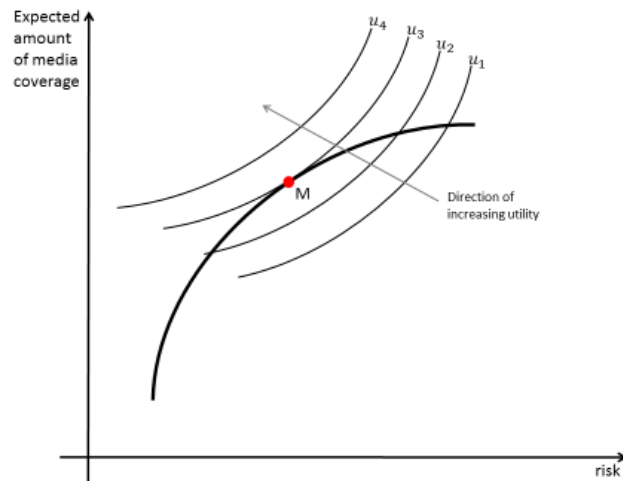


The advantage of the Markowitz method is its clear geometry. So far, the terrorists' complete set of alternatives and the efficient or optimal set of alternatives have been depicted. It is also possible to depict different types of terrorists or terrorist groups and show which region of the efficient set a particular type of terrorist will be more interested in choosing from. Figure 4.7 depicts a terrorist group's preferences and risk profile as an indifference curve map superimposed over the opportunity set. The terrorist group is assumed to prefer more (expected) media coverage to less. The group is prepared to accept additional risk, up to a limit consistent with its risk preference, if the media coverage that is expected to result from the action increases. Obtaining the highest expected media coverage at a particular level of risk is what the group will be interested in and more media coverage with less risk is desirable. As such, utility increases in the direction of the arrow shown in Figure 4.7.

Point  $M$  shown in Figure 4.7 indicates actions which the terrorist group may choose in order to maximise the expected amount of media coverage at a particular level of risk. This is the point that maximises expected utility for the terrorist group. It will choose the attack method or combination of attack methods located at point  $M$ . Actions at the intersection with indifference curves  $u_2$  and  $u_1$  are sub-optimal choices. Actions which lie on indifference curve  $u_4$  may be highly attractive to the terrorist group but such actions are infeasible as they lie beyond the opportunity set and therefore are unavailable to the terrorist group. Although seemingly stylised, the

concave opportunity set can be determined empirically or analytically using historical data for the media coverage accorded to the results of various terrorist actions.

Figure 4.7 Mean-Variance Utility Maximisation – An Example



Mean-variance utility analysis depicts the terrorist as making decisions solely on the basis of the mean and variance of media coverage accorded to different terrorist actions. This might appear to be restrictive but the mean and variance reflect many aspects of the terrorism context. The average or mean of media attention that has been accorded to terrorist attacks in the past is the most likely foundation for the formation of terrorists' beliefs about what media coverage may be expected to result from an action in the future. Variance reflects the chances that the actual outcome may vary from what was expected. In doing so, it encompasses to some degree all of those things that might cause such a divergence between expected and actual outcomes. Variance in media attention over time is due to a number of factors including: (a) editorial policies, decisions, and biases; (b) government restrictions on media reports on terrorism; (c) attacks perpetrated by other terrorist groups, where simultaneous or closely consecutive attacks by one or several terrorist groups may limit the media attention that will be accorded to any one of them; (d) other (more) newsworthy events crowding out reporting on relatively minor terrorist attacks from the news cycle; and (e) government security measures which may foil terrorist attacks and preclude what might otherwise have resulted in substantial media

attention; and everything else that effects the success or failure of terrorist actions.<sup>60</sup> All of these factors which produce variance in media coverage over time, for different actions and from action to action, must be reflected in the statistical variance of media coverage.

#### **4.3.3 Behavioural Model: Prospect Theory**

Both the basic expected utility model and mean-variance analysis can generate insights into terrorist choice under conditions of risk and uncertainty. In the analysis presented in Chapter 6, these models are operationalised using the data gathered for this thesis. This generates insights into the patterns of terrorist behaviour that might be exhibited in a context where media coverage is the desired payoff. These insights can be complemented further by the application of a behavioural model of choice under risk and uncertainty. Although there are many such models, prospect theory has emerged as the dominant descriptive or normative model of risky decision-making. In addition to encompassing some aspects of the risky decision-making process that are overlooked in the orthodox models, prospect theory provides a richer theoretical framework with which to explore terrorist behaviour. In the context in which we are interested, this means providing additional insights into terrorist choices that are shaped in some way by a consideration of the media coverage that may result from an action or combinations of actions over time.

Prospect theory overcomes one of the shortcomings of orthodox expected utility theory. This is decision-makers' systematic tendency to weight probabilities nonlinearly. In particular, decision-makers tend to overweight unlikely outcomes and underweight more likely outcomes. For example, if the probability for an outcome is 0.85, decision-makers might assign a weighting to the outcome of 0.81, whereas if the probability for an outcome is 0.10, decision-makers might assign a weighting of 0.12. This is not an error in judgement but a decision-making bias. Decision-makers

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<sup>60</sup> For example, a bomb may not detonate at the planned time or it may not detonate at all; an assassination target may fail to arrive at the time or location expected; a hostage may escape; a flight intended for skyjacking is cancelled; a member of the terrorist group backs out of participating; weapons may jam. Conversely, the terrorist group may inflict more damage than expected, for example, more people are gathered at the target location than was anticipated.



are aware of what the probabilities imply about the likelihood of particular outcomes yet they choose to assign weights in the manner just described. This decision-making bias contradicts the independence axiom of basic expected utility which implies that probabilities are weighted linearly. Prospect theory is the most prominent behavioural model that attempts to incorporate this nonlinear weighting of probabilities into a descriptive model of the decision-making process under conditions of risk and uncertainty.

In addition to providing one method for correcting this oversight of the basic expected utility model, prospect theory introduces several additional factors that can be used to generate insights into terrorist decision-making that are beyond the reach of the orthodox theoretical frameworks. The main findings of prospect theory can be summarised as follows (Levy & Wiener, 2013, p. 2):

1. Most people violate the independence axiom and weight probabilities nonlinearly.
2. People are concerned with changes relative to a reference point rather than absolute payoffs.
3. People act to maximise the expected value function  $V(x)$  which is S-shaped; concave for gains and convex for losses. The value function is steeper for losses than gains. People are loss averse and feel losses more keenly than gains.
4. Subjective decision weights are assigned to probabilities and are employed in calculating expectations. In the cumulative version of the theory, cumulative probabilities are subjectively altered.

Applied to terrorist choice in a context where media coverage is a desired payoff, prospect theory allows us to deal with a number of important aspects of the decision-making process. Possibly the most important new insight emerges from a consideration of the reference point and its role in shaping the terrorists' choice of action. For example, if another terrorist or terrorist group has recently received a particular amount of media coverage from an action, this amount may become the terrorists' reference point against which the potential outcomes of alternative

possible actions are assessed. Prospect theory, then, allows us to consider how terrorists' choices might be shaped with reference to the outcomes of actions perpetrated by other groups. The reference point may also be formed on the basis of outcomes generated by the group's own prior actions. These actions, whose outcomes shape the group's reference point, might have recently occurred or, alternatively, refer to a particular spectacular event from some time past. Of especial interest are those cases where rivalries between terrorist groups can be identified. In this case, each group may alternately shape the reference point of the other through the outcomes of its actions.

Assessing outcomes against a reference point highlights the possibility that a terrorist group will potentially view some amount of media coverage, either small or large, as a loss if it is less than that reflected in the reference point. This deeper or more complex perception of gains and losses also extends to incorporate the way in which terrorists' choices are shaped following an action that generates outcomes in excess of the reference point or, alternatively, below the reference point. If the group's action yields an amount of media coverage in excess of the reference point (a gain), the group may be expected to become more risk-averse in order to consolidate or protect its gains. This will shape its choices of actions or combinations of actions, discouraging the group from engaging in actions with more variable (risky) outcomes. Conversely, a group whose action yields an amount of media coverage less than the reference point (a loss) may become more risk-seeking in order to recover or re-establish its position. This may encourage the group to select more risky actions or combinations. This continuous interaction among groups in the terrorism context shapes and reshapes their choices of actions.

Kahneman and Tversky (1979) developed prospect theory in response to their experimental findings which showed that people systematically violate the predictions of expected utility theory, as described in points 1 to 4 above. Despite its impact and the fact that prospect theory is widely regarded as the best description of how people evaluate risk in experimental settings (Barberis, 2013, p. 173), Kahneman and Tversky's original prospect theory model attracted some criticism, especially with regard to possible violations of stochastic dominance. Quiggin (1982)

identified the use of cumulative probabilities as the key to overcoming this problem. In addition, the application of the original version of the theory had been limited to gambles with at most two nonzero outcomes. Tversky and Kahneman (1992) overcame such limitations with the publication of a modified version of their theory known as “cumulative prospect theory” for which Daniel Kahneman was awarded the Nobel Prize in economic science<sup>61</sup> in 2002.

Kahneman and Tversky (1979; 1992) proposed a new value function and a new probability weighting scheme to replace both the utility function and the way probabilities serve as weights in expected utility theory:

$$V = \sum v(\Delta x_i) \pi(p_i)$$

According to Tversky and Kahneman (1992), the expected utility or value  $V$  of a prospect is expressed in terms of two scales  $v$  and  $\pi$ . The scale  $\pi$  is a decision weight attached to each probability  $p_i$ . This scale changes the impact that a probability has on the value of a prospect and accounts for the observation that people tend to overweight small probabilities and underweight other probabilities. The scale  $v$  associates a subjective value (or utility) number with each outcome. The outcomes, or  $x$ 's, are not absolute values but changes (gains or losses) relative to a reference point. The core of cumulative prospect theory can be expressed formally as:

$$v(\Delta x) = \begin{cases} v(\Delta x)^\alpha & \Delta x \geq 0 \\ -\lambda(-\Delta x)^\beta & \Delta x < 0 \end{cases}$$

$$\pi_i = \begin{cases} \pi_i^- = w^-(p_1 + \dots + p_i) - w^-(p_1 + \dots + p_{i-1}) & \Delta x < 0 \\ \pi_i^+ = w^+(p_i + \dots + p_N) - w^+(p_{i+1} + \dots + p_N) & \Delta x \geq 0 \end{cases}$$

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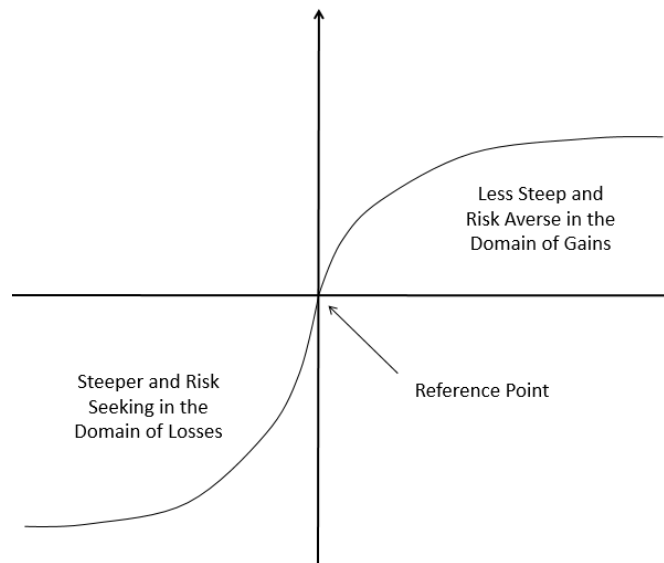
<sup>61</sup> Regrettably, Amos Tversky passed away in 1996 at the age of 59. Otherwise, he would surely have shared the Nobel Prize with Daniel Kahneman (Barberis, 2013, p. 173).

$$:= \begin{cases} w^+(p) := \frac{(p)^\gamma}{(p^\gamma + (1-p)^\gamma)^{1/\gamma}} & \Delta x \geq 0 \\ w^-(p) := \frac{(p)^\delta}{(p^\delta + (1-p)^\delta)^{1/\delta}} & \Delta x < 0 \end{cases}$$

Each parameter is designed to accommodate one of the behavioural biases that typify decision-making under risk and uncertainty. The S-shaped value function that Kahneman and Tversky derive incorporates these properties. This S-shaped utility function is shown in Figure 4.8.

- $\lambda$  is the loss aversion parameter which measures the intensity with which a person feels a loss of some magnitude relative to a gain of an equal magnitude.
- $\alpha$  and  $\beta$  are concavity and convexity parameters that reflect risk aversion and diminishing sensitivity.
- $\gamma$  and  $\delta$  reflect non-linear probability weighting (overweighting of unlikely outcomes and underweighting of more likely outcomes).
- Tversky and Kahneman (1992, pp. 311-312) determine the following parameter and weighting values:  $\lambda = 2.25$ ,  $\alpha = 0.88$ ,  $\beta = 0.88$ ,  $\gamma = 0.61$ , and  $\delta = 0.69$ .

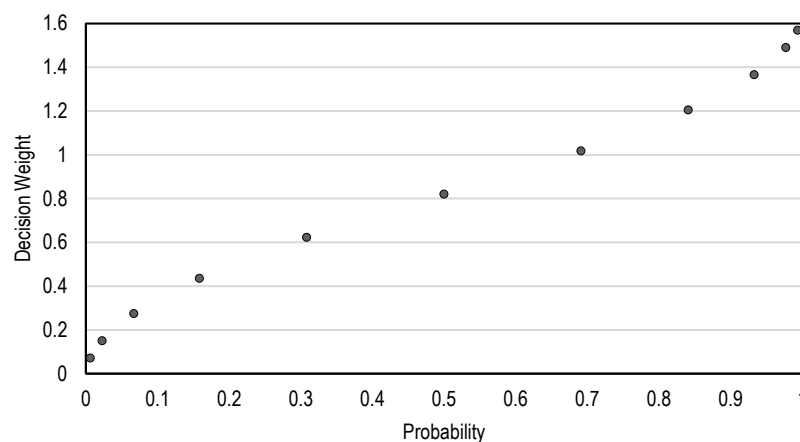
Figure 4.8 Kahneman and Tversky's (1979) S-shaped Utility Function



Like expected utility theory and mean-variance analysis, prospect theory can be used to describe or predict how a decision-maker will order alternative risky prospects.

Prospect theory can also be used to retrace decision-making processes. This is accomplished for empirical data later in this thesis. For now, the following example serves to illustrate the main points of application. Consider a terrorist or terrorist group confronted with two alternative risky prospects, which may be two alternative terrorist actions with different expected amounts of media coverage. We know from findings proposed by Kahneman and Tversky (1979; 1992) that people do not consider probabilities in a linear fashion, but instead overweight small probabilities and underweight larger probabilities. This behaviour results in an inverse S-shaped probability weighting function as illustrated in Figure 4.9. It is a set of decision weights or transformed probabilities which in prospect theory are used in place of linear probabilities to weight the value that the decision-maker attaches to outcomes, formally  $wp \times v(x)$ , in the same way as expected utility uses linear probability to weight the utility of outcomes, formally  $p \times u(x)$ .

Figure 4.9 Kahneman and Tversky's (1979, 1992) Probability Weighting function



Consider a single risky prospect A, which might be a particular type of terrorist attack method, expected to generate media coverage. The action is a risky prospect with payoffs  $x_i$  each expected to occur with probability  $p_i$  where  $(p_1 + p_2 + \dots + p_n = 1)$ . For this example, media coverage will be measured in column inches. We consider a terrorist or terrorist group for whom an outcome of 14 column inches of media coverage represents the reference point for their decision-making process. An outcome higher than the reference point will be considered a gain, an outcome lower

than the reference point will be considered a loss. For example, if a terrorist incident successfully attracts enough media attention to warrant 2 column inches of media coverage, this would be treated as a loss by a terrorist group with a reference point of 14. Alternatively, an outcome of 16 column inches of media coverage would constitute a gain for the terrorist group with a reference point of 14.

A series of outcomes for this hypothetical action along with the accompanying series of cumulative probabilities is listed in Table 4.3. Each cumulative probability is transformed using Tversky and Kahneman's (1992) power functions with the parameter values introduced previously:

$$w^+(p) := \frac{(p)^\gamma}{(p^\gamma + (1-p)^\gamma)^{1/\gamma}} \quad (\text{for gains})$$

$$w^-(p) := \frac{(p)^\delta}{(p^\delta + (1-p)^\delta)^{1/\delta}} \quad (\text{for losses})$$

The value of outcomes is determined by Tversky and Kahneman's (1992) valuation function, keeping in mind that outcomes are not absolute values but are treated as either gains or losses relative to the terrorist group's reference point:

$$v(\Delta x) = v(\Delta x)^\alpha \quad (\text{for gains})$$

$$v(\Delta x) = -\lambda(-\Delta x)^\beta \quad (\text{for losses})$$

The final step in the valuation process is to weight the values of outcomes by the decision weights and sum to determine the prospect value. Like expected utility, decision-makers compare or rank prospects according to prospect value. If the terrorist or terrorist group must decide between this prospect A and a second prospect B then the decision would be made by assessing each alternative and choosing the one with the higher prospect value. To complete the example, the details of a hypothetical alternative prospect B are presented in Table 4.4.

**Table 4.3 Cumulative Prospect Value for a Single Risky Prospect – A**

| Media Coverage<br>(column inches) | Cumulative<br>Probability | w –/+       | $\Delta x (x - r)$            | v(x)     | Weights x Values |
|-----------------------------------|---------------------------|-------------|-------------------------------|----------|------------------|
| 0                                 | 0.006209665               | 0.028922418 | - 14                          | -22.9496 | -0.6637802       |
| 1                                 | 0.009815329               | 0.039187189 | - 13                          | -21.5007 | -0.8425521       |
| 2                                 | 0.01513014                | 0.052045231 | - 12                          | -20.0383 | -1.0429006       |
| 3                                 | 0.022750132               | 0.067761043 | - 11                          | -18.5612 | -1.2577321       |
| 4                                 | 0.033376508               | 0.086508205 | - 10                          | -17.0680 | -1.4765216       |
| 5                                 | 0.047790352               | 0.108348497 | - 9                           | -15.5566 | -1.6855390       |
| 6                                 | 0.066807201               | 0.133225631 | - 8                           | -14.0249 | -1.8684844       |
| 7                                 | 0.09121122                | 0.178061158 | - 7                           | -12.4700 | -2.2204346       |
| 8                                 | 0.121672505               | 0.205028881 | - 6                           | -10.8881 | -2.2323930       |
| 9                                 | 0.158655254               | 0.23314739  | - 5                           | -9.27419 | -2.1622538       |
| 10                                | 0.202328381               | 0.262230157 | - 4                           | -7.62071 | -1.9983794       |
| ...                               |                           |             |                               |          |                  |
| 15                                | 0.50                      | 0.420639354 | +1                            | 1.00000  | 0.420639354      |
| ...                               |                           |             |                               |          |                  |
| 20                                | 0.797671619               | 0.605481263 | +6                            | 4.83919  | 2.93004175       |
| ...                               |                           |             |                               |          |                  |
| 30                                | 0.993790335               | 0.932310376 | +16                           | 11.47164 | 10.69513086      |
|                                   |                           |             | <b>Prospect Value = 58.78</b> |          |                  |

Note: Reference point 14, Mean 15, and Standard Deviation 6,  
with values for parameters and weightings according Tversky and Kahneman (1992).

**Table 4.4 Cumulative Prospect Value for another Single Risky Prospect – B**

| Media Coverage<br>(column inches) | Cumulative<br>Probability | w –/+       | $\Delta x (x - r)$            | v(x)      | Weights x Values |
|-----------------------------------|---------------------------|-------------|-------------------------------|-----------|------------------|
| 0                                 | 0.001349898               | 0.010326024 | -14                           | -22.94960 | -0.236978159     |
| 1                                 | 0.002979763               | 0.017667724 | -13                           | -21.50070 | -0.379868498     |
| 2                                 | 0.006209665               | 0.028922418 | -12                           | -20.03835 | -0.579557603     |
| 3                                 | 0.012224473               | 0.045273714 | -11                           | -18.56129 | -0.840338381     |
| 4                                 | 0.022750132               | 0.067761043 | -10                           | -17.06800 | -1.156545165     |
| 5                                 | 0.040059157               | 0.097042502 | -9                            | -15.55664 | -1.509655703     |
| 6                                 | 0.066807201               | 0.133225631 | -8                            | -14.02496 | -1.868484465     |
| 7                                 | 0.105649774               | 0.191386849 | -7                            | -12.47007 | -2.386606867     |
| 8                                 | 0.158655254               | 0.23314739  | -6                            | -10.88819 | -2.53855266      |
| 9                                 | 0.226627352               | 0.277095452 | -5                            | -9.27419  | -2.569836657     |
| 10                                | 0.308537539               | 0.322922135 | -4                            | -7.62071  | -2.46089524      |
| ...                               |                           |             |                               |           |                  |
| 15                                | 0.773372648               | 0.585876465 | +1                            | 1.00000   | 0.585876465      |
| ...                               |                           |             |                               |           |                  |
| 20                                | 0.977249868               | 0.861913817 | +6                            | 4.83919   | 4.17096882       |
| ...                               |                           |             |                               |           |                  |
| 30                                | 0.999996602               | 0.999245488 | +16                           | 11.47164  | 11.4629865       |
|                                   |                           |             | <b>Prospect Value = 75.88</b> |           |                  |

Note: Reference point 14, Mean 12, and Standard Deviation 4,  
with values for parameters and weightings according to Tversky and Kahneman (1992).

The terrorist or terrorist group with a reference point of 14 accords a higher prospect value to prospect B. This ranking reflects the decision-making process embedded

within prospect theory, including loss aversion, diminishing sensitivity and reference point dependence. The reference point is particularly important in determining the order of preferences for a terrorist group. To see why, consider a different terrorist group characterised by a reference point of 22 rather than 14. Both prospects A and B are less likely to generate outcomes beyond 22 column inches (than beyond 14 column inches). The domain of losses for a terrorist group with a reference point of 22 is therefore much larger than the domain of losses for a terrorist group with a reference point of 14. As such, the prospect value accorded to both attack methods is lower for the terrorist group with the higher reference point. More importantly, however, the terrorist group with the higher reference point prefers prospect A to prospect B. A higher reference point switches the ordering of the two prospects.

For a terrorist group with a reference point of 22, the prospect value for prospect A is  $-56.33$  whereas the prospect value for prospect B is  $-70.21$ . The terrorist group with the higher reference point prefers the more risky action A (the action with the higher average payoff and higher standard deviation). Bearing the higher standard deviation is necessary for the terrorist group if it is to have any chance of generating an outcome in excess of its relatively high reference point. There are some prospects which more than fully meet the expectations of terrorist groups with very low reference points, or in periods when terrorist activity is subdued; whilst for other groups with higher reference points, or in periods of more intense terrorist activity, only much more risky actions will provide any opportunity at all to generate gains or outcomes in excess of the terrorist group's reference point. This highlights the importance of reference point dependence in the analysis of terrorist choice.

Surprisingly, there are still only relatively few well-known and broadly accepted applications of prospect theory in economics. The discussion presented in this section, however, highlights the ways in which prospect theory can complement orthodox analysis and help to develop a deeper understanding of decision-making under risk and uncertainty. One of the challenges that has confronted economists and psychologists in applying prospect theory, both in the laboratory and the field, is the difficulty of defining precisely what gains or losses are and what may constitute



a reference point in each setting.<sup>62</sup> In the terrorism context that we have been discussing, plausible empirical reference points can be identified. One such reference point is the outcomes achieved by competing terrorists or terrorist groups. By assessing the media coverage that might be accorded to different actions against a reference point such as this, prospect theory becomes operational and capable of delivering insights into terrorist choice and the possible influence of inter-group competition on those choices. By incorporating reference point dependence, risk aversion in the domain of gains, risk-seeking in the domain of losses and loss aversion into a model of risky decision-making, prospect theory provides a deeper description of the decision-making process and is one which may be utilised to learn more about terrorist choice in a context where media coverage is the desired payoff to alternative actions.

#### **4.4 Conclusion**

In the terrorism and media studies literature, when analysis is directed towards terrorist strategy, it is usually implied that terrorists will choose the action that has yielded the highest amount of media attention in the past. As a model of terrorist choice this can only take us so far. The advances that have been made in decision theory in economics and psychology during the past five decades allow for the development of a much more sophisticated understanding of terrorist choice in this context. In this chapter, the basic expected utility model, the mean-variance expected utility model and (cumulative) prospect theory were introduced in order to explore more deeply the ways in which terrorist choice might be shaped by the media attention accorded to different actions.

In the first instance, before applying decision theory to anything, it is recognised that terrorist actions are risky prospects with media coverage as the variable outcome. The amount of media attention, if any, accorded to an action is an uncertain outcome of terrorist activity. Terrorist actions include bombing, assassination, armed assault, hostage-taking, facility/infrastructure attacks and hijacking. Choices from among

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<sup>62</sup> For a comprehensive review of the literature and a discussion of recent efforts to apply prospect theory in a variety of contexts, see Barberis (2013).

these alternatives are the outcomes of decisions taken under conditions of risk and uncertainty. The choice process in economic theory is depicted as a process that produces an order of preferences. A number of different models have been proposed in the literature which can be used to determine such preference orderings. The analysis promises to shed more light on terrorist decision-making, the role of media coverage in shaping those decisions and the effect of various decision-making processes encompassed by the different decision-making models.

The purely logical application of these models to this context already leads us to new conclusions regarding the patterns of choice that might be expected. The basic expected utility model leads us away from concluding *necessarily* that terrorists will choose the action that has been accorded the most media attention in the past. In addition, the importance of considering the decision-maker's risk preference is highlighted. Even this basic model allows more to be said about terrorist choice in this context. It can be augmented further by the application of more advanced models of decision-making. Terrorist groups are observed to choose different actions over time and, more interestingly, to combine actions within periods or over time. Mean-variance analysis allows us to account for this observation and to provide it with a logical structure that leads us to realise that terrorist groups that combine actions, even naïvely or non-strategically, may expect higher media attention with less uncertainty than we might suspect had the correlation structure of media attention across actions not been considered. The opportunity set confronting terrorists is a concave set.

The two orthodox models are complemented by prospect theory, which includes several additional variables that are not part of the orthodox frameworks. Terrorists are sometimes suspected to have copied or emulated the actions of other terrorists. Sometimes this is more than just a suspicion. It has been confirmed by the terrorists themselves. Prospect theory incorporates the concept of a reference point, which allows this type of behaviour to be explored. A terrorist group may observe the amount of media attention accorded to the actions of another group. The media attention accorded to the actions of this rival group may become the group's reference point. Together with the concepts of loss aversion and risk aversion in the

domain of losses, particular patterns of terrorist choice are once more expected to emerge. In particular, a group may be observed to engage in higher risk actions in an attempt to record an amount of media attention that exceeds the reference point.

The application of models of decision-making under risk and uncertainty to the terrorism and media context allows us to develop a deeper narrative regarding the patterns that terrorist choices may be expected to exhibit if media attention is a desired but uncertain outcome of terrorist activity. These patterns of choices may guide policy-makers and law enforcement agencies when they consider the actions of terrorists and terrorist groups in contexts where media attention is considered to be an objective of the terrorists' actions. Although the models might appear formal and static, they can produce conclusions that pertain to the dynamics of terrorist decision-making. For example, by considering terrorist choice through the lens of prospect theory, a situation in which a terrorist group, which is known to have rival groups, perpetrates an action that is accorded a particular amount of media attention, the relative willingness of those rivals to engage in more or less risky actions may be inferred. Similarly, if a terrorist group is observed to perpetrate a particular combination of actions and media attention is known to be an important consideration for that group, the group's preferences may be inferred from the choices that it has made. This picture, which has been developed purely logically in this chapter, is crystallised and developed more fully by applying, in Chapter 6, the decision-making models to the terrorism experienced in West-Germany during the 1970s. The data that facilitates this development was gathered through substantial independent archival research. The steps that were taken in this regard are described in the next chapter.

## Chapter 5 - Data and Archival Research

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### 5.0 Introduction

It is the purpose of this chapter to explain the rationale for choosing the data set and to outline the procedures that were implemented in gathering and organising it. The objective of the study is to explore terrorist choice in a context where media coverage is the desired but uncertain outcome of terrorist actions. The patterns of terrorist choice that may be expected in such a context were outlined purely theoretically in Chapter 4. The picture that was developed in that chapter is further crystallised by using actual media coverage data to operationalise the models. The data gathered for this part of the study concerns the terrorism experienced in West-Germany during the period from 1970 to 1980. This is a time and place that has attracted substantial interest within terrorism studies due to the nature of the terrorist groups that were *concurrently* active there and the relevance that they retain for contemporary analysis of terrorist behaviour, including the relatively sophisticated media strategies that certain groups are known to have had and the strategic competition that certain groups were known to be engaged in with each other.

The operationalisation of the models of terrorist choice that were introduced in the previous chapter requires the measurement of some set of payoffs. When the relevant payoff is media attention, the measurement of the media attention accorded to different terrorist actions during the period under consideration is necessary. After detailing, using the GTD, all of the terrorist incidents recorded for West-Germany between 1970 and 1980, archival research was undertaken to gather each piece of media attention accorded to each attack. The resulting dataset of media coverage is unique and provides a rich picture of the nature of the terrorism experienced in West-Germany during this period. When used in conjunction with the models of decision-making introduced in Chapter 4, a deeper picture emerges of the patterns of terrorist choice that might be expected when media attention is a desired outcome of terrorist activity. In this chapter, the dataset and its collection process

are described and a rationale provided for the decisions that were made in undertaking this aspect of the project.

## **5.1 Overview of the Chapter**

This chapter is organised as follows. In Section 5.2, the locations where the archival research was undertaken are described. Media coverage data is not publicly available and must be gathered by hand from either archives or online sources. In this case, the data was collected from archives stored in libraries in Berlin, Germany. Section 5.3 provides a rationale for focussing on the West-German terrorism experience and presents a detailed description of the material gathered during visits to the archives in Berlin. Sections 5.4 and 5.5 outline practical considerations in gathering, storing and transporting data as well as collating, organising and measuring media coverage for the terrorist incidents perpetrated in West-Germany during the period from 1970 to 1980. Section 5.6 concludes the chapter.

## **5.2 Description and Location of the Archives**

The data used in this study was collected from the archives of the Zentral-und Landesbibliothek Berlin and the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz in the Federal Republic of Germany. The data collection was undertaken at these locations during periods of intense archival work in 2012 and 2013. The nature and location of archival holdings and the circumstances and conditions of access is an important consideration relevant to the decisions made regarding scope of the research project as well as being among the most significant factors that impacts upon the data collection phase of an archive-based research program. A description of the nature and location of the archival holdings and the steps that must be taken in order to undertake archival research with those materials at those locations provides the context necessary for a full appreciation of the challenges characterising the data collection phase as well as providing the information necessary for the data collection phase of the project to be replicated. This is particularly important in the context of this project due to the redevelopment of a main library facility and the temporary location of archival material at off-site locations.

### 5.2.1 Zentral-und Landesbibliothek Berlin

The Zentral-und Landesbibliothek Berlin is Germany's largest public library, housing close to 3.4 million media. It is the city's official library. Founded in 1995 through the fusion of the Amerika-Gedenkbibliothek at Hallesches Ufer (formerly in West-Berlin) and the Berliner Stadtbibliothek at Schlossplatz (formerly in East-Berlin), the Zentral-und Landesbibliothek Berlin is recognised as a symbol of success in the reunification of Berlin. At the time of writing, the Zentral- und Landesbibliothek Berlin is located at two distinct branches. Archival research at the Zentral- und Landesbibliothek Berlin as part of the data collection procedure for this study was undertaken at the Berliner Stadtbibliothek in the district of Berlin-Mitte. In the future it is possible that branches of the Zentral- und Landesbibliothek Berlin will be consolidated at a single location. Such a consolidation would represent another chapter in the history of the institutions that form the Zentral- und Landesbibliothek Berlin, a history that now extends many decades.

The history of the Amerika-Gedenkbibliothek branch of the Zentral- und Landesbibliothek Berlin begins just after the Second World War. The library was a gift from the American people to the citizens of Berlin to commemorate their joint efforts in withstanding the blockade of the city by Soviet occupational forces in 1948 and 1949. Designed by German and American architects as a public library, the Amerika-Gedenkbibliothek was opened in 1954 in Berlin-Kreuzberg as a symbol for the freedom of education and opinion (*Bildungs- und Meinungsfreiheit*). Today, the Amerika-Gedenkbibliothek holds collections for the humanities and fine arts, fiction, film, music, the art library, as well as a children's and young adult library and learning centre.

The Berliner Stadtbibliothek is the older of the two branches of the Zentral- und Landesbibliothek Berlin. It was founded in 1901 and, in line with democratic reforms at that time, the aim was to make educational resources readily accessible to broad sections of the population. Today, the Berliner Stadtbibliothek is housed in a complex of heritage-listed buildings in Berlin-Mitte and includes the Ribbeck-Haus, Berlin's oldest Renaissance building from 1624. The Berliner Stadtbibliothek holds collections for the fields of natural sciences, medicine, economics, urban studies and law, as well

as the centre for Berlin-Studien and Historical Collections. It is here that researchers can access microfilm, microfiche, and scanners to view archival copies of historical and modern newspapers circulated in Berlin.

**Exhibit 5.1: Entrance to the Berliner Stadtbibliothek**



**Notes:** the entrance to the Berliner Stadtbibliothek in Breite Straße in Berlin-Mitte features the 4.1m by 6.0m A-Portal (1965) by Berlin blacksmith artist and photographer Fritz Kühn (1910-1967). It shows the letter A in 117 variations forming a so-called letter carpet (Buchstabenteppich).

### **5.2.2 Staatsbibliothek zu Berlin/Preußischer Kulturbesitz**

The Staatsbibliothek zu Berlin (Berlin State Library) is the property of the Stiftung Preußischer Kulturbesitz (Prussian Cultural Heritage Foundation) and Germany's largest scientific universal library. The library holds and preserves more than 11 million printed books and periodicals as well as 2.2 million items in special collections containing many unique manuscripts, music scores, maps, and autographs not only by classical composers and writers such as Johann Sebastian Bach, Wolfgang Amadeus Mozart, Ludwig van Beethoven, and Johann Wolfgang von Goethe, but also from other occidental (*abendländische*) and oriental historical sources, plus more than 10 million items on microfilm and 12 million images in the picture archives.<sup>63</sup>

Holdings of the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz have grown over a period of more than 350 years. Early collections were first made accessible to the public by the Große Kurfürst Friedrich Wilhelm von Brandenburg in the *Churfürstliche Bibliothek zu Cölln an der Spree*, initially from the *Apothekenflügel* (apothecary wing)

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<sup>63</sup> Information obtained from the official website of the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz at <http://staatsbibliothek-berlin.de> accessed 24 April 2016.

Exhibit 5.2: The Staatsbibliothek zu Berlin/Preußischer Kulturbesitz



of his palace and later moved to a newly constructed *Königliche Bibliothek* (royal library) at boulevard *Unter den Linden*, where one of the current houses of the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz is still located today. The history of the Staatsbibliothek closely parallels that of German history and over time the library has undergone various phases of establishment, neglect, expansion, damage through war, division, unification and finally restoration.

In an effort to protect the collection from bombing, other damage, and pillage, significant parts of the library's holdings were evacuated from Berlin to about 30 different locations around the German Reich during the Second World War. After the war, much of the collection was returned either to the Staatsbibliothek Preußischer Kulturbesitz in Berlin-West or to the Deutsche Staatsbibliothek in Berlin-East. However, up to 400,000 items are believed destroyed, another 300,000 items are still missing or are located in libraries in Poland and the former Soviet Union. One graphic example of the separation of parts that could be considered to belong together is the original score of Beethoven's 8<sup>th</sup> Symphony: the first, second, and fourth movement are located in Berlin, while the third movement is held in Kraków, Poland. Conversely, intensive efforts are expended by the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz today to ensure that holdings, which found their way into the library's collection through looting by National Socialists, are returned to their owners.

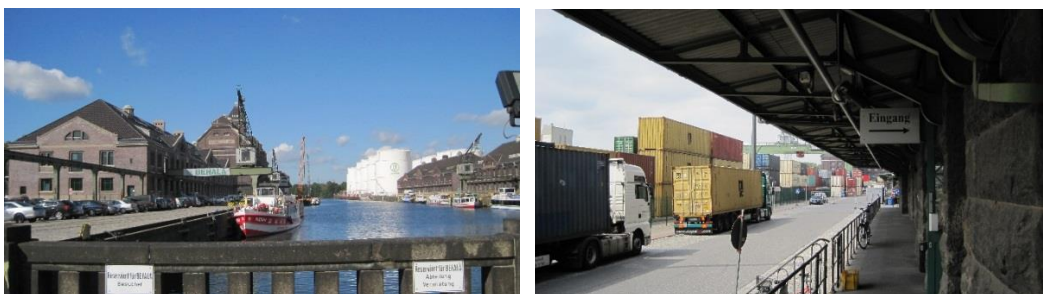
In 1992, just a couple of years after the formal reunification of Germany, the two state libraries located both in the East and in the West of Berlin were administratively joined to form the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz. To achieve easier use of this large library across two different sites and locations, the branch at



*Unter den Linden 8* is to develop into a *historical* research library encompassing collections to the end of the 19<sup>th</sup> century, while the branch at *Potsdamer Straße 33* will house collections from the start of the 20<sup>th</sup> century and form a *modern* research library. The buildings have undergone several renovations. During the period when the archival research for this project was being undertaken, a further redevelopment of the institution was underway.

To ensure that appropriately equipped facilities could be offered while building restoration and renovations were continuing, parts of the collection were housed off-site at the storage magazine in Berlin-Friedrichshagen, while the newspaper archives and the children- and young-adult collections were temporarily housed in the *Getreidespeicher* (granery) at *Westhafen*, a large heritage-listed inland freight-port on waterways in Berlin-Moabit just north of the city centre (see Exhibit 5.3). Here, in the *Zeitungsabteilung* (newspaper department) of the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz, researchers can access original print copies of historical newspapers and scanned copies held on microfilm and microfiche. Print copies of historical newspapers are bound in large, heavy volumes and may be ordered for private viewing. For conservational reasons, photocopying of original newspapers is not permitted. Digital photographs may be taken, provided no flash or tripod is used.

Exhibit 5.3: Westhafen, Temporary Location in 2013, *Zeitungsabteilung*



### 5.3 Data Selection

Drawing on the GTD, an overview of terrorist activity in Western Europe was presented in the second chapter of this thesis. This study of terrorist choice of action

in a context where media coverage is a desirable but uncertain outcome to terrorist activity focuses on those terrorist actions that were perpetrated within West-Germany. Data regarding the timing and nature of these attacks (for example, perpetrators, attack type, target type) was sourced from the GTD. The attention that was accorded to these events by the West-German print media is used as the foundation for the economic analysis of terrorist choice in this particular context. Relevant data was gathered from the library archives described in the previous section. The next sections present a more detailed rationale of the time period chosen, the location of attacks, the print media selected and an explanation of other relevant contextual factors. The steps taken to gather, organise and measure this media coverage data are explained in Sections 5.4 and 5.5.

### **5.3.1 Terrorism in West-Germany and East-Germany: 1970 to 1990**

From 1949 to 1990 Germany was divided into two separate states, the Federal Republic of Germany and the German Democratic Republic. Both countries were governed by two very different political systems, each with contrasting conditions and requirements for press reports and freedom of expression. Figure 5.1 illustrates a very significant difference between the number of terrorist events reported in the GTD for West-Germany compared with reports for East-Germany over the same period. Given that journalistic practices and conditions for press reporting varied significantly between the two Germanys, data of terrorist events and resulting media attention cannot be meaningfully aggregated or compared. This thesis, therefore, focuses on terrorist events on West-German soil and the resulting media attention in West-German media only.

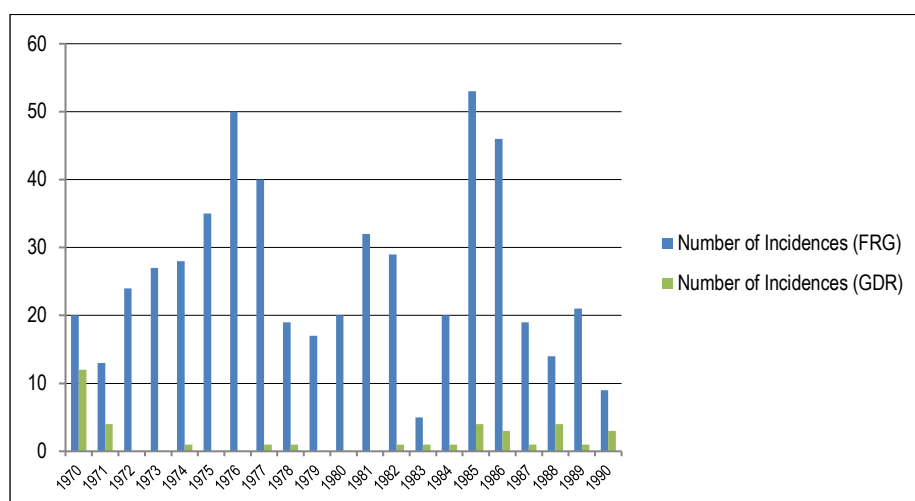
### **5.3.2 Most Active Terrorist Groups in West-Germany 1970-1990**

In West-Germany between 1970 and 1990, a total of 270 terrorist attacks were perpetrated by more than 60 different terrorist groups. More than two-thirds (179) of these attacks were staged by just five major groups: the Red Army Faction<sup>64</sup> (80),

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<sup>64</sup> Members of the Baader-Meinhof Group always referred to their group as the 'Red Army Faction' (RAF). Records in the GTD attribute attacks pre 1978 to the Baader-Meinhof Group and attacks from

**Figure 5.1 Terrorist Incidents in West-Germany (FRG) and East-Germany (GDR), 1970-1990**



**Table 5.1 Attacks by Five Most Active Groups in West-Germany, 1970-1990**

|      | RAF | RZ | IRA | 2J | CN | Subtotal | % of * | Total* |
|------|-----|----|-----|----|----|----------|--------|--------|
| 1970 | 1   |    |     |    |    | 1        | 10     | 10     |
| 1971 | 2   |    |     | 1  |    | 3        | 60     | 5      |
| 1972 | 7   |    |     | 2  | 1  | 10       | 71     | 14     |
| 1973 | 7   | 1  |     | 2  |    | 10       | 67     | 15     |
| 1974 | 3   | 5  |     | 2  |    | 10       | 77     | 13     |
| 1975 | 2   | 8  |     | 1  | 1  | 12       | 80     | 15     |
| 1976 | 1   | 7  |     | 2  | 5  | 15       | 79     | 19     |
| 1977 | 5   | 8  |     |    | 1  | 14       | 78     | 18     |
| 1978 | 1   | 2  | 10  | 1  |    | 14       | 82     | 17     |
| 1979 |     |    |     |    |    | 0        | 0      | 8      |
| 1980 |     |    | 4   | 1  |    | 5        | 31     | 16     |
| 1981 | 6   |    |     |    |    | 6        | 43     | 14     |
| 1982 |     | 5  |     |    |    | 5        | 50     | 10     |
| 1983 | 1   | 1  |     |    |    | 2        | 50     | 4      |
| 1984 | 6   |    |     |    |    | 6        | 55     | 11     |
| 1985 | 17  | 5  |     |    |    | 22       | 79     | 28     |
| 1986 | 8   | 8  |     |    |    | 16       | 84     | 19     |
| 1987 |     | 2  | 1   |    |    | 3        | 43     | 7      |
| 1988 | 1   |    | 3   |    |    | 4        | 80     | 5      |
| 1989 | 9   |    | 7   |    |    | 16       | 100    | 16     |
| 1990 | 3   |    | 2   |    |    | 5        | 83     | 6      |
|      | 80  | 52 | 27  | 12 | 8  | 179      |        | 270    |

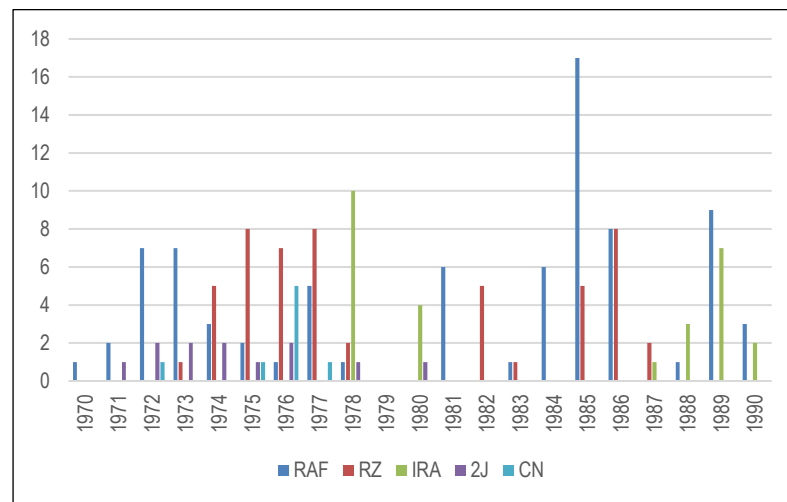
Revolutionary Cells (52), Irish Republican Army (27), 2<sup>nd</sup> June Movement (12), and Croation Nationals (8). Table 5.1 Attacks by Five Most Active Groups in West-

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1978 onwards to the Red Army Faction. In the interest of a clearer analysis, the attacks by the Baader-Meinhof Group and the Red Army Faction will be aggregated under the label RAF.

Germany, 1970-1990 Table 5.1 and Figure 5.2 show how attacks by these five groups were spread across the 20 years from 1970 to 1990 and the percentage of their attacks in aggregate of the total number of terrorist incidents perpetrated by *all* groups in West-Germany during each year of the period.

Figure 5.2 Attacks by Five Most Active Groups in West-Germany, 1970-1990



In aggregate, the number of terrorist attacks perpetrated by the five most active groups in absolute and as a percentage of terrorist activity perpetrated by *all* groups in Germany was about equal across both decades: 89 of 134 attacks (or 66.4%) during the 1970s and 85 of 130 attacks (or 65.3%) during the 1980s. The 1970s were a period during which five prolific terrorist groups were very much *concurrently* active in Germany. During the 1980s, on the other hand, individual groups appear to have withdrawn for much longer periods at a time and some groups, like the 2<sup>nd</sup> June Movement and the Croatian Nationalists, faded away altogether. This is important because concurrently active terrorist groups provide an opportunity for a unique application of prospect theory to the analysis of terrorist choice in a context where media coverage is a desirable but risky payoff and where groups may reference their own actions against the outcomes of actions perpetrated by other groups.

The application of prospect theory promises to develop important and unique insights into different dimensions of terrorist choice in this context. One especially important aspect of terrorist choice that can be explored as part of this application

of prospect theory is the relevance of a terrorist group's reference point in shaping its choice of action. As explained in the previous chapter, the reference point concept is analytically significant because decision-makers can and do view positively valued outcomes, which in this context would be a positive amount of media coverage, as a *loss* if it fails to exceed the reference point. The reference point shapes decision-making. A terrorist group's reference point may derive from its observations of the outcomes achieved by other groups. In this context, the amount of media coverage that the terrorist group identifies as its reference point from which its alternative actions will be assessed may be the amount of media coverage obtained by a competing group's most recent or most successful action. The context for this study, the Federal Republic of Germany for the period of the 1970s, provides a very unique context within which to explore this type of behaviour for the first time. This analytical rationale is augmented by the broader significance of the period in Germany's modern history.

The 1970s were a tumultuous period for many countries. The Vietnam War continued and, indeed, increased in intensity during the early part of the decade. Social unrest and upheaval emerging during the 1960s remained an important factor shaping domestic and foreign affairs. Economic problems, unfamiliar in the relatively prosperous post-war period and exacerbated by the oil shocks of 1973 and 1974, befell many Western economies. Although its economy remained strong for most of the time<sup>65</sup>, the 1970s represented a period of significant political unrest in the Federal Republic of Germany culminating in the "German Autumn" (Deutscher Herbst) and its aftermath, which included the assassination of Federal Attorney General Siegfried Buback, the failed kidnapping and subsequent shooting of Dresdner Bank speaker Jürgen Ponto, a failed rocket launcher attack on the building of the Federal Attorney's office in Karlsruhe, and the kidnapping and subsequent murder of Employer Association President (Arbeitgeberpräsident) Hanns Martin

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<sup>65</sup> There was a sharp contraction in GDP in 1975 which interrupted the economic miracle Germany experienced after the Second World War.

Schleyer. These events attracted a significant amount of media attention and public interest over sustained periods.

Although television<sup>66</sup> became more accessible to a larger percentage of the German population during the 1970s and 1980s, the print media remained a dominant source for people's daily news during the 1970s. According to a report by *Der Bundesminister des Inneren* in 1982 (cited in Schoenbach, 1987, p. 376), newspaper circulation in West-Germany grew by 41 percent from 17 million in 1965 to 24 million in 1979. On an average workday, newspapers (76%) were reaching about as many members of the West-German adult population as did television (77%), with radio audiences being somewhat smaller (69%) as reported by *Media Perspektiven* 1985 (cited in Schoenbach, 1987, p. 385). While the rise of television has been accompanied by a fall in newspaper readership in many countries around the world, the effect has been far less prominent in Germany. A high newspaper readership of 85 percent on an average workday in Germany in the mid-1970s declined by just 5 percent over 20 years to 1997 (Atanassoff, 1997; cited in Schoenbach, Lauf, McLeod, & Scheufele, 1999, p. 226). Furthermore, the amount of time the average German adult spends reading a newspaper (40 minutes on a week-day) has remained surprisingly constant over many decades, prompting some commentators to describe Germany as a perennial "Zeitungsland" (a land of newspapers).<sup>67</sup>

Many German citizens have traditionally commuted to and from work using public transport, often purchasing a newspaper on the way or taking a subscription copy from their mailbox to read while on the train or the bus, during meal breaks at work, and again on their way home in the evening. Even today, breaking or high-impact news stories are not merely distributed via online platforms or social media, but continue to form part of the news coverage contained in printed newspapers and their online equivalents. The decision to focus data collection and analysis in this thesis on terrorist attacks on West-German soil during the years 1970 to 1980 and to

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<sup>66</sup> In 1970, 68 percent of West-German households owned a television set. By the end of the 1980s the percentage had grown to 95 percent (Bundeszentrale für Politische Bildung, 2008).

<sup>67</sup> See *Media Perspektiven* 1985 (cited in Schoenbach, 1987, p. 385).

examine press attention that resulted in the West-German print media finds strong rationale in the nature and characteristics of the media environment and media consumption trends of the period. The rationale for the choice of newspapers from which to gather the data for the analysis - *Bild*, *Süddeutsche Zeitung* and *Die Welt* - can now be provided.

According to 2014/2015 data published by the *Bundesverband Deutscher Zeitungsverleger e.V.* (Federation of German Newspaper Publishers), with 351 different daily newspapers (of these 129 newspapers with *Vollredaktion*<sup>68</sup>, which publish 1,528 local editions), citizens of the Federal Republic of Germany enjoy the largest variety of newspapers in Europe, followed by Italy with 111 newspapers, Spain (110), the United Kingdom (94), France (84), Sweden (75), Norway (74), Finland (46), Denmark (30), the Netherlands (28), Austria (15), and Ireland (9). Of the younger members of the European Union, the Czech Republic (79), Bulgaria (61), Poland (35), and Hungary (30) have the largest variety of newspapers on offer. With 16.8 million daily newspapers sold, the German newspaper market is the largest in Western-Europe followed, albeit with a significant gap, by Great Britain with a circulation of 9.8 million. It is significant to note that while newspaper sales in Germany have dropped by about 29 percent over the past 38 years (from 23.5 million daily sales in 1976 to the above mentioned figure of 16.8 million in 2014), the overall number of major daily newspapers has decreased merely by 7 percent (from 374 in 1976 to 351 daily newspapers in 2014) while the number of regional and local editions increased by 88 percent (from 813 in 1976 to 1,528 in 2014).<sup>69</sup>

With 374 major German daily newspapers and 813 regional and local editions to choose from in the 1970s, any number of combinations of papers could have been

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<sup>68</sup> German daily newspapers with *Vollredaktion* write the majority of their own content as opposed to printing content sourced from external editorial offices.

<sup>69</sup> M. W. Thomas (1980, pp. 7-10) lists print-media circulation figures for Germany in 1976 as well as relevant background information. He points to the introduction of the *Pressefusionskontrolle* (controls over fusions of the press) in 1977/78 as a significant milestone in the German print-media market. *Pressefusionskontrolle* regulations enabled the *Bundeskartellamt* to prevent take-over moves by large publishers (including Axel Springer), thus counteracting undue concentration of the press in the hands of just a few publishing houses.

selected for this project. It was necessary, within the constraints on time and resources that set limits on the scope of the project, to select newspapers in such a way as (a) to make the aggregation of data on media coverage meaningfully possible, (b) to capture the maximum number of readers, both nationally and internationally, while (c) seeking to include a representative cross-section of the population in terms of socio-demographic indicators as well as (d) a balanced mix of political leanings of newspaper editorial staff and readers. To satisfy the requirement for meaningful data aggregation, all newspapers selected are daily newspapers rather than Sunday papers or weekly news-magazines, such as *Der Spiegel* or *Stern*. All selected newspapers needed to have national, rather than regional, circulations and be sold internationally to ensure satisfactory scope of readership and reporting. A survey of the German print-media market in the 1970s (e.g. M. W. Thomas, 1980), identified the following major national, daily newspapers: *Bild*, *Süddeutsche Zeitung*, *Frankfurter Allgemeine Zeitung*, *Die Welt*, and *Frankfurter Rundschau*. Circulation data for these major newspapers was compiled from a range of sources<sup>70</sup> and is shown in Table 5.2.

**Table 5.2 Major national, daily Newspapers in West-Germany**

| Title                                 | Format & Distribution   | Circulation      |                  |                  |                  | Leaning   |
|---------------------------------------|---|------------------|------------------|------------------|------------------|---|
| <i>Bild</i>                           | daily (Mon-Sat), tabloid, broadsheet, national                      | 1966<br>> 4 mill | 1972<br>3.5 mill | 1978<br>4.8 mill | 1993<br>4.3 mill | conservative, but also provocative and polarising |
| <i>Süddeutsche Zeitung</i> (Munich)   | daily (Mon-Sat), broadsheet, national, plus approx. 150 countries   | -                | 1976<br>+300,000 | 1978<br>317,000  | 1993<br>304,499  | left-liberal, centre-left                         |
| <i>Frankfurter Allgemeine Zeitung</i> | daily (Mon-Sat), broadsheet, national, plus approx. 120 countries   | -                | -                | 1978<br>296,000  | 1993<br>391,013  | conservative, centre-right, economically liberal  |
| <i>Die Welt</i> (Hamburg)             | daily (Mon-Sat), national, plus approx. 130 countries               | 1969<br>227,000  | 1974<br>224,000  | 1978<br>223,000  | 1993<br>209,677  | conservative, centre-right, economically liberal  |
| <i>Frankfurter Rundschau</i>          | daily (Mon-Sat), national, broadsheet, from May 2007 tabloid format | -                | -                | -                | 1993<br>189,000  | social-liberal, left-liberal                      |

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<sup>70</sup> Circulation data and information: for *Bild* (Harenberg, 1980, p. 114); for *Frankfurter Allgemeine Zeitung* (Dürr, 1980, p. 63); for *Süddeutsche Zeitung* (Dürr, 1980, p. 63); for *Die Welt* (Harenberg, 1980, p. 114); for the *Frankfurter Rundschau* (Flottau, 1980); 1993 national circulation figures for all newspapers listed (Röper, 1993). Circulation figures for *Bild* and *Die Welt* were confirmed with Axel Springer corporate archives in Berlin in August 2016.



Given the strong circulation figures of *Bild*, it was immediately clear that this particular newspaper would need to form a part of the analysis. The inclusion of the *Süddeutsche Zeitung* was also an easy decision to make given the paper's national and international reach, its relatively strong circulation figures, but most importantly the renowned quality of the paper's journalism and editorials, the role that the paper played as "opinion-leader media" (Noelle-Neumann & Mathes, 1987, pp. 403, 405), and its contrasting counterweight to the sensationalist nature of *Bild*, a tabloid. Either the *Frankfurter Allgemeine Zeitung*, another reputable newspaper similar to the *Süddeutsche Zeitung* with regard to its leading role and "elite readership" (Noelle-Neumann & Mathes, 1987, p. 403; Schmutz, van Venrooij, Janssen, & Verboord, 2010, p. 504), or *Die Welt* could have been chosen to represent a conservative leaning, with each option presenting relative advantages and disadvantages. On balance, however, it was decided to include *Die Welt* for two main reasons: the broader international reach of *Die Welt* and, more importantly, the qualitative standing of *Die Welt* located in the medium range between tabloid, on the one hand, and reputable opinion-leader media on the other hand. Another important consideration was the more international nature of coverage in *Die Welt*, which was potentially more likely to include coverage of terrorist events perpetrated by transnational groups, such as the IRA, a very active group in West-Germany (see Figure 5.2 above). In order to further intensify collaborations between international press bureaus and to facilitate the exchange of staff cross-nationally, *Die Welt* together with *Le Figaro* in France, *The Daily Telegraph* in Britain, and the *ABC* newspaper in Spain, founded the *European Dailies Alliance* in 2001 (Rybak, 2001). *Bild*, the *Süddeutsche Zeitung*, and *Die Welt* are described in further detail below. The discussion and the references upon which it is based characterise the newspapers as they were in the 1970s, the time period relevant for this study.

### **5.3.3 *Bild-Zeitung (Bild)***

The *Bild-Zeitung* (literally: picture-newspaper), commonly referred to simply as *Bild*, has been Germany's best-selling tabloid for over 60 years. The paper was founded by Axel Cäsar Springer (1912-1985) in 1952, who used the style and contents of high-circulation British tabloids as a model for *Bild*. The paper, which initially consisted

mainly of pictures, brief captions, comic strips, short-stories, and horoscopes, is frequently described as Springer's "*gedruckte Antwort auf das Fernsehen*" (printed response to television).<sup>71</sup> Springer's concept was simple yet ambitious: to create a paper which would be omnipresent, available at almost every street corner, inexpensive to purchase, quick to read, and one which would only contain content expected to be of interest to at least 90 percent of its readers (Konradin Medien GmbH, p. 2); that is, to print only content that was likely to increase the circulation of *Bild* and thus advertising revenue.

In the 1960s, an unabashed Springer declared "the masses, not intellectuals" as the target-audience for *Bild* which increasingly contained stories about film stars, celebrities and sports rather than reports or analysis of a political nature. Springer backed the editorial stance of *Bild* with the following observation (Brumm, 1980, p. 137): "*Ich war mir seit Kriegsende klar, daß der deutsche Leser eines auf keinen Fall wollte, nämlich nachdenken*" (Since the end of war it was clear to me that if there was one thing which the German reader definitely did not wish to do, it was to think). The concept for *Bild* as escapism and diversion from the humdrum and plights of everyday life was highly successful: a daily newspaper as authoritarian "friend and guide" to interpret selected events for the reader, to present ready-made views of the world, and even to tweak or invent stories, as needed. As Germany's only supra-regional tabloid, *Bild* reached sales in the 1970s three times as high as those of all other German tabloids combined (Brumm, 1980, p. 130).

From the outset, the editorial stance for *Bild* was conservative and nationalist, presenting the world in black and white, as Brumm (1980, p. 134) describes: the world presented to *Bild* readers is dominated by a perpetual fight of good against evil. Good are Christianity, an intact family life, reverence for authority, technical progress, economic growth and the free market [...]. Evil on the other hand are communism and socialism, doubting technical progress or economic growth ideologies, as well as any restrictions imposed on private wealth – after all, anyone

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<sup>71</sup> See for example Brendel (2012).

who finds himself without means had clearly not worked hard or smartly enough. In many respects, Springer sought to impact and even change the nation's psyche ("[den] *Geist der Nation ändern*") and to influence German politics and political decisions (Brumm, 1980, pp. pp132-133; Konradin Medien GmbH). *Bild* as a "*Kettenhund*" (attack dog) had an important function towards this goal. Tensions between the Springer press and left-leaning ideologies and intellectuals were frequent, reaching a peak in the late 1960s when the Springer publishing house in Hamburg together with *Bild* delivery vans became the target in student protests, which often turned violent, characterised by slogans such as "*Enteignet Springer!*" ("Expropriate Springer!").

University academics, intellectuals, and university students remained a popular target of *Bild* under the editorial direction of Günter Prinz, editor-in-chief from 1971 to 1980, many of whom in turn actively boycotted the paper. While the circulation of *Bild* did drop during the early 1970s, the paper with its mix of sex, facts and fiction from politics and crime, and consumer tips, never lost its position as Germany's most widely recognised and most read daily. In fact, *Bild* quickly regained and even surpassed previous circulation figures by 1978. Populist and sensationalist coverage in *Bild* provided plenty of material for the paper's critics and in addition rogue journalistic practices frequently attracted the attention of the German Press Council (Deutscher Presserat) founded in 1956. Where other German newspapers generally accepted critique gracefully and sought to facilitate the publication of opposing views, editors for *Bild* steadfastly refused to print reprimands issued to *Bild* by the German Press Council; neither did the paper entertain nor print counterstatements regardless of how well-grounded they may have been (Brumm, 1980, p. 142).

As a result of such refusals and research revelations published by investigative journalist Günter Wallraff, who had conducted undercover research and editorial work in the *Bild* editorial office in Hannover for several months in 1977, the German Press Council entered a crisis and in 1982 ceased operation altogether (Deutscher Presserat, 2016a, p. 9). The organisation resumed operation in February 1985 but not until several publishers, including *Bild*, had agreed to abide by negotiated agreements, which to this day include the printing of German Press Council

reprimands in the next issue of the paper rebuked. Between the start of statistical records (in 1986) and 2015, merely one reprimand was issued to the *Süddeutsche Zeitung* (in 2001), just two to *Die Welt* (one each in 2002 and 2005), while *Bild* received 130 such reprimands.<sup>72</sup>

#### **5.3.4 *Süddeutsche Zeitung***

In the 1960s, American *Time* magazine described the *Süddeutsche Zeitung* as the best German newspaper, while *The Times* of London proposed that the *Süddeutsche Zeitung* offered the best of West-German journalism (Dürr, 1980, p. 63). In October 1945, a license for the *Süddeutsche Zeitung* was granted in Bavaria by the American allies and it was understood that the *Süddeutsche Zeitung* would neither be a general gazette devoid of opinion nor bound to any particular political ideology or world view. Since its inception, the number of commentators who describe the *Süddeutsche Zeitung* as either too ‘red’ or too conservative have been about equal in number and this balance has been maintained. The most common classification of the *Süddeutsche Zeitung* as “links-liberal” (left-liberal) is at best the “*am wenigsten falsche Vereinfachung*” (the least incorrect simplification, see Dürr, 1980, p. 62). The claim to be a liberal newspaper means in the first instance to allow different political opinions to be heard, to exclude extreme points of view on either end of the spectrum and thus to maintain liberal space along the spectrum where different political views may express themselves both in support of and in opposition to each other (Dürr, 1980, pp. 63-64).

In 1947, *Süddeutscher Verlag* publishers developed out of the successful *Süddeutsche Zeitung*. The newspaper-arm *Süddeutsche Zeitung* remains its largest and most important product. Notably, the link between *Süddeutsche Zeitung* management and the publishing house is not one single editor-in-chief, but rather a six-member council of editors who routinely discuss all important matters and seek to arrive at joint decisions. An important principle upheld by the editorial office is the strict separation

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<sup>72</sup> See: Deutscher Presserat (2016b).

of opinion from news. In the *Süddeutsche Zeitung* this principle is realised with its *Seite 4*. This 'page 4' is exclusively reserved for commentary and opinion pieces. *Seite 3* is another trademark of the *Süddeutsche Zeitung*. 'Page 3' is reserved for feature articles and reports contributed by editors and foreign correspondents and provides substantial background information on selected issues. Readers of the *Süddeutsche Zeitung* can be confident that they are accessing comprehensive news coverage of highest journalistic quality.<sup>73</sup> Overall, no other comparable German daily newspaper meets the obligation of comprehensive chronicling of events as keenly as the *Süddeutsche Zeitung* while strictly avoiding political indoctrination of their readership (Dürr, 1980, pp. 74, 79).

### **5.3.5 Die Welt**

*Die Welt* newspaper was founded by the British occupying forces in Hamburg in 1946. German press license holders had a vision for *Die Welt* as a journalistic bridge to other nations, their peoples and ways of life and thinking – something new for German citizens in 1946 who for twelve years had been presented with a distorted picture of the world (Sasse, 2012, p. 3). As soon as 1946, a foreign correspondent was sent to London and early links were formed to London's *The Times* news service. While *Die Welt* did not quite develop into a German version of *The Times*, *Die Welt* has continued to follow more of an international and especially English language outlook than other German dailies. As mentioned previously, allied British interests in West-Germany after the Second World War were often targeted by the IRA, which was one of the most active groups in West-Germany during the 1970s. The international scope and implications of these activities may be considered to have been relatively more comprehensively encompassed by the reporting of *Die Welt*. In addition to its circulation and reader demographics, this provides an additional rationale for the choice of *Die Welt* as a print media source for the analysis presented in this thesis.

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<sup>73</sup> The following example may serve to illustrate the thoroughness of *Süddeutsche Zeitung* journalists: after receiving 2.6 Terabyte of confidential data from a lawyers' office in Panama, *Süddeutsche Zeitung* journalists worked with a team of around 400 colleagues and in collaboration with the International Consortium of Investigative Journalists for more than 12 months to examine the data carefully before publishing a report on the *Panama Papers* in the evening of 3 April 2016.

In 1953, the by then well-established and successful *Die Welt* was taken over by Axel Springer who through this hotly contested purchase sought to acquire a newspaper that would appeal to the educated middle-class and thus complement his already very successful *Bild* newspaper for the masses (Sasse, 2012, p. 1). The purchase made Springer the most powerful newspaper proprietor in Germany. Somewhat controversially, Springer reinstated *Die Welt's* very first editor-in-chief, Hans Zehrer, who had been dismissed from office in 1946 after it became apparent that Zehrer had published *Die Tat*, a reactionary-racial monthly magazine in the Third Reich, and had since been viewed as a "*Steigbügelhalter*" (lit. stirrup holder) for the Nazis; in other words, as somebody who had aided the Nazis' rise to power.

Under the direction of reinstated editor-in-chief Hans Zehrer, *Die Welt* developed a style that at least outwardly appeared independent and above party lines, representing a middle-class, liberal-conservative profile (Sasse, 2012, p. 3). Despite Zehrer's ultra-conservative background he appeared to tolerate a wide range of views which lent *Die Welt* a flair that was both lively and interesting. The relationship between Hans Zehrer and Axel Springer became less amicable in ensuing years. Nevertheless, Zehrer remained editor-in-chief with *Die Welt* until shortly before his death in 1966. Axel Springer appears to have led his media empire with an underlying authoritarian style, taking care that all Springer publications, including *Bild* and *Die Welt*, followed a philosophy encompassed by four principles, (Harenberg, 1980, p. 118; Sasse, 2012, p. 3): „*Engagement für die deutsche und europäische Einheit, Aussöhnung mit den Juden und Unterstützung der Lebensrechte des Staates Israel, Einsatz für die freie und soziale Marktwirtschaft sowie Bekämpfung des politischen Totalitarismus gleich welcher Richtung*“ (Engagement for German and European unity, reconciliation with the Jewish peoples and support for the rights of the State of Israel, commitment to a free social market economy and the fight against political totalitarianism regardless of its nature; translation to English by the author).

During the turbulent 1960s, *Die Welt* adopted a strongly right-leaning course and from 1965 the subtitle "*Große nationale Zeitung*" (major national newspaper). Staff were selected who seemed able and willing to follow this new direction and who would assist in fighting fashionable leftist tendencies ("*modische Links-Strömung*")

where liberty is confused with debauchery or a reins-less ride (*“Freiheit mit Libertinage, einem Ritt ohne Zügel”*) (Sasse, 2012, pp. 3, citing former editor in chief Matthias Walden). More liberal feature writers soon left *Die Welt* and a period of high staff turn-over ensued.

In a half-page text in the newspaper’s edition from 31 December 1974, *Die Welt* provides a description of the role it sees for itself: *“Der Wind hat sich gedreht./ Viele Menschen in unserem Land sind der ideologischen Herausforderung müde./ Sie suchen wieder nach der Bewahrung des Bewährten./ Sie verlangen nach Sicherheit vor radikaler Gewalt./ Sie wollen einen Staat mit Autorität./ Sie fragen nach Ordnung in Freiheit./ [...] DIE WELT ist immer für die Bewahrung des Bewährten eingetreten./ DIE WELT ist deswegen heute die Zeitung von morgen”* (The wind has changed./ Many people in our country are tired of the ideological challenge./ They are searching again for the preservation of that which has proven its worth./ They demand security from radical violence./ They want a state with authority./ They are asking for order and freedom./ [...] *DIE WELT* has always advocated for the preservation of that which has proven its worth./ Therefore, *DIE WELT* is today the newspaper of tomorrow.) (German text: Harenberg, 1980, p. 119; translation to English by the author).

*Die Welt* was not a profitable venture for Axel Springer and faced strong competition from the *Frankfurter Allgemeine Zeitung* and to a lesser degree from the *Süddeutsche Zeitung*. Nevertheless, *Die Welt* was considered an important part of the Springer portfolio and was retained under a substantial investment of resources (for details see Harenberg, 1980, p. 123). In a radio interview in April 1976, Axel Springer described the situation of *Die Welt* as that of a difficult yet favourite child. He believed that in a unified Germany, with Berlin as the capital, *Die Welt* could have emerged as the most successful Springer publication with political radiance for a new and reasonable Germany. Instead, the paper had found itself a victim of political developments (Harenberg, 1980, p. 126).

## **5.4 Data Collection, Storage and Transport**

Media coverage accorded to acts of terrorism in the Federal Republic of Germany for the period from 1970 to 1980 was collected from the three newspapers: *Bild*,

*Süddeutsche Zeitung* and *Die Welt*. The starting point for the data collection process, however, was the GTD. From records contained in the GTD, a list was created of all terrorist acts perpetrated on the soil of the Federal Republic of Germany between 1 January 1970 and 31 December 1979 ( $n = 272$ ). Acts for which the perpetrator(s) remain unknown were excluded ( $n = 138$ ). Also excluded were those acts for which the perpetrators had been identified, but for which neither the number of persons killed nor the number of persons injured are known ( $n = 22$ ), leaving the total number of acts to be examined as  $n = 112$ . For each of these 112 acts, respective media coverage in *Bild* (Berlin edition), *Süddeutsche Zeitung*, and *Die Welt* was examined. For each act, media coverage was counted during all consecutive days of coverage and across all pages within each newspaper issue up to the point at which the first break in media coverage occurred; 'break' being the first issue of each newspaper during which no coverage of the event occurred at all, regardless of whether or not reporting about the event was picked up again within days or weeks after the initial break in coverage.

Archives held at the Zentral- und Landesbibliothek Berlin were visited during June/July 2012 to assemble relevant media coverage in *Bild*, and again in September/October 2013 to collect relevant data from *Die Welt*. The newspaper archives held by the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz at Westhafen were visited during August/September 2013 to assemble relevant media attention in the *Süddeutsche Zeitung*. A further visit to Berlin in July/August 2016 permitted final checks, including confirmation of newspaper circulation figures with Axel Springer corporate archives.

Archival records for all three newspapers were accessible on microfilm. Starting with the date on which each attack was perpetrated as indicated by records in the GTD, relevant boxes of microfilm were assembled for each of the three newspapers. Then, using microfilm-readers in each location, all pages of each newspaper were visually scanned for coverage pertaining to each of the 112 single attacks of relevance. Once relevant reporting was visually identified, the entire newspaper page was electronically scanned and stored on a flash-drive, mostly in PDF format. Because of the large physical dimension of each single page in the *Süddeutsche Zeitung* and in



*Bild*, as well as the small news print in the *Süddeutsche Zeitung* and in *Die Welt*, each newspaper page often required multiple electronic scanning attempts (a) to enlarge the print to a level that was readable to the naked eye and allowed visual confirmation that an article did in fact contain relevant coverage, (b) to achieve a clear lens focus, and (c) to adjust suitable black and white contrast levels. Steps (b) and (c) were necessary to ensure adequate readability of all text when, in later steps undertaken once I had returned to Australia, each page was to be physically printed and relevant data measured.

In total, over 570 newspaper pages containing relevant media coverage were found, prepared for scanning and collected from *Bild*, 470 from the *Süddeutsche Zeitung* and 435 from *Die Welt*. Locating (and not missing) relevant media coverage for 112 different acts of terrorism across three different newspapers in print required high levels of concentration, work with many dozens of microfilms and the visual scanning, and often detailed reading, of over 15,000 pages of newspaper text in the German language. Having completed the task of data selection and collection, I returned to Australia with approximately 1,475 carefully named individual files of relevant media coverage to commence the task of data measurement.

## **5.5 Data Measurement**

In Australia, all 1,475 electronic copies of collected newspaper pages were individually printed on A4 paper. Again, every single page was visually scanned, read in detail where required, and all relevant areas of news coverage marked; often with the help of a magnifying light. Included in the assessment of relevant space of media coverage were: headlines, subheadings, text, photos and white spaces within each news article. If the article was framed by lines, the white spaces inside the lines and the lines themselves were included. If the article was not framed, only 50 percent of the white space between relevant text and unrelated passages were included. If a newspaper page contained more than one article of text, each area was marked individually, excluding all unrelated space. At the conclusion of this process, each page had been adequately prepared for actual data measurement.

Of course, A4 printed copies of newspaper pages do not represent the actual size of a newspaper. However, as entire newspaper pages had been scanned from the microfilm archives held in Germany, it is possible to determine the percentage of space that each story takes up on a page. This percentage can then be applied to the physical dimension of an actual paper copy of each newspaper to arrive at the physical area a story had taken up. Historical paper copies of each newspaper were available for viewing in the reading room of the Staatsbibliothek zu Berlin/Preußischer Kulturbesitz at Westhafen and physical measurements taken. Results are shown in Table 5.3, which also includes conversion of an area measured in square millimetres (mm<sup>2</sup>) to one measured in column inches (c").

A column inch is a unit of space one newspaper column wide by one inch high. In the United States, a common newspaper column measurement is about 11 picas (or 1.83 inches) wide. One inch equals 25.4mm. Consequently, an area measured in column inches can be converted to an area measured in mm<sup>2</sup> (or vice versa) as follows: 1 column inch (c") = 1 x 25.4mm x 1.83 x 25.4mm = 1,180.6428mm<sup>2</sup>.

**Table 5.3 Newspapers' Physical Dimensions**

| Newspaper                            | Sample* | Dimensions of printable area per page | 1 page in mm <sup>2</sup> | 1 page in c" |
|--------------------------------------|---------|---------------------------------------|---------------------------|--------------|
| <i>Bild</i> (Berlin)                 | 1975    | H 518 mm x W 365 mm                   | 189 070                   | 160.142      |
| <i>Die Welt</i> (Hamburg)            | 1975    | H 520 mm x W 360 mm                   | 187 200                   | 158.558      |
| <i>Süddeutsche Zeitung</i> (München) | 1975    | H 470 mm x W 350 mm                   | 164 500                   | 139.331      |

Precise dates of above samples: *Bild* (29.4.1975 Nr 99), *Die Welt* (2.5.1975 Nr 101), *Süddeutsche Zeitung* (5.5.1975 Nr 102)<sup>74</sup>

The area taken up by relevant media coverage on the printed copies of newspaper pages was initially measured in square millimetres and then converted to a percentage of the printed page. The step of measuring was time consuming as many newspaper articles are irregular in shape as shown in the page samples depicted in Exhibits 5.4 to 5.6. Consequently, the area of many articles needed to be measured in several smaller blocks before the whole area of relevant media coverage could be

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<sup>74</sup> Care was taken to ensure that the physical copy selected for each newspaper was representative of the time period relevant for this study.

determined. Upon completion of the data measurement task, data were entered into a spreadsheet in percentage figures and then converted to column inches in preparation for data analysis and, specifically, to be used as representative payoffs for terrorist actions in a context where media coverage is desired by terrorists and terrorist groups, but remains a risky and uncertain outcome of any prospective terrorist activity.

„30 mm Lang - effektiv A-Killer für's Gold“



**PEER 100**

Genüßlich länger - genüßlich leichter

30 mm Lang - effektiv A-Killer für's Gold

Donnerstag, 8. Sept. 1977 - 40 Pf

Nr. 209 • BERLIN-AUSGABE • 36. WOCHE\*\*\*\*

**Bild**

BERLIN

UNABHÄNGIG - ÜBERPARTISCH

Beckenbauers Ehe doch kaputt? / Seite 12

# Schleyer

## Er sieht müde aus aber unverletzt

### Jeder Terrorist soll 100 000 Mark mitbekommen

#### Nachrichten

**Ja zur N-Bombe?**  
Das Bonn, 8. September Der Bundestag wird sich sehr „widerspenstlich“ mehrheitlich für die umstrittene Neutronenbombe aussprechen. Das berichtete gestern die Deutsche Presseagentur.

**Flucht geglückt**  
Old, Berlin, 8. September Seit Anfang des Jahres sind 493 Deutsche aus der DDR und Ost-Berlin in die Bundesrepublik geflüchtet.

**7617 nicht zum Bund**  
Soll die Wahlrechts-Aktie am 1. August in Kraft getreten sein, hat sich die Zahl der Wahlberechtigten vermindert. August, 7617 Juli, 7621.

**Rekord-Weinernte**  
Op. Mainz, 8. September Die deutschen Winterweizenrechen in diesem Jahr mit einer Rekordmenge. Sie wird allerdings nur von „mittleren Qualitäten“ sein.

**Kurse fielen**  
dies. Frankfurt, 8. Sept. Die Aktienkurse fielen. Bombenalarm in der Frankfurter Börse. Auch Renten wurden niedriger notiert.

**Unser TV-Tip**  
Halla Peter? Show mit Peter Kraus 19.30 Uhr, ZDF, TV-Programm Seite 2.



Der Preis für das Leben des entführten Berliner CDU-Chefs Peter Lorenz: Beglückt von Sicherheitsbeamten steigen die festgenommenen Terroristen Ralf Pahr (zweiter von rechts), Gubriela Krieger-Flademann und Ingrid Bismann (dritter von rechts) im Flugzeug. Mit ihnen kam Peter Lorenz und Ralf Böhler (Hagen) die am 5. März 1975 von Frankfurt in den Südpazifik.

#### Diese elf heute frei?



1. Ralf Böhler (27), Bremerhavener, 1975 in der DDR gefangen. 2. Gubriela Krieger-Flademann (27), Bremerhavener, 1975 in der DDR gefangen. 3. Ingrid Bismann (27), Bremerhavener, 1975 in der DDR gefangen. 4. Ralf Pahr (27), Bremerhavener, 1975 in der DDR gefangen. 5. Peter Lorenz (27), Bremerhavener, 1975 in der DDR gefangen. 6. Ralf Böhler (27), Bremerhavener, 1975 in der DDR gefangen. 7. Gubriela Krieger-Flademann (27), Bremerhavener, 1975 in der DDR gefangen. 8. Ingrid Bismann (27), Bremerhavener, 1975 in der DDR gefangen. 9. Ralf Pahr (27), Bremerhavener, 1975 in der DDR gefangen. 10. Peter Lorenz (27), Bremerhavener, 1975 in der DDR gefangen. 11. Ralf Böhler (27), Bremerhavener, 1975 in der DDR gefangen.

**Viel Spaß und liebe Gäste!**

**Keller-Geister-Feste!**

Viel Freude, bringt köstlich kühler Keller-Geister-Feste!



**Keller-Geister**

**Abgekämpft, mit fahlem Gesicht, die Hände auf dem Rücken (gefesselt?) - zusammengesunken sitzt Hanns Martin Schleyer im Unterhemd auf einem Stuhl. Auf seinen Schenkeln ein Schild mit seinem Namen und darunter: „Gefangener der RAF“.**

So sieht der entführte Arbeitgeber-Präsident auf dem Foto aus, das die Terroristen am Montag in der Frankfurter Zeitung veröffentlichten. Ein Brief mit diesem Bild und ihren Forderungen schickten die Terroristen Dienstag nachmittag an den Wiesbadener Planer. Helmut Nauhoff, der Planer zu Bild, „Herr Schleyer sieht müde aus, aber unverletzt. Das Bild wirkt genauso wie das Foto, das die Terroristen damals von Peter Lorenz machten.“

In dem Brief lag ein Zettel mit Schleyers Handschrift. Wie die „Welt“ berichtet, heißt es darin: „Ich will erklärt, dass ich keine Forderung und keine Forderung der Forderungen für mich lebe.“

gefesselt seien. Ich bin unversetzt und stehe, ich werde freigelassen, wenn die Bedingungen erfüllt werden. Das ist jedoch nicht meine Entscheidung.“

Die Forderungen, die die Freilassung von elf Terroristen, darunter Andreas Bader und dem Subot-Mörder Sonntag. Sie verlangen, dass jeder 100 000 Mark mitbekommt.

Der frühere Kirchenpräsident Peter Niemöller - ein Geis von 55 - und ein UNO-Berater sollen als Geiseln mit ausgehändigt werden.

Gestern nach um 21.15 Uhr erhielt das Bundeskriminalamt eine zweite Nachricht der Entführer. Über Art und Inhalt der Nachricht gab das BKA zunächst nichts bekannt.

Weiter Seite 2

**Seite 2: Soll Bonn die Terroristen freilassen?**

**Seite 3: Haag — der Mann, der die Mordbefehle gibt**

**Drück auf die Tube, Uwe!**

Wie bis zum 30. September nicht endlich zu Baupreisen anfangt, muß ein kaltes Jahr länger Miete zahlen. Was für eine Geiseldrohung?

**30. September ist Wüstenrol-Tag.**

Der Tag, der Baupreisen schneller macht.



# 1:0 Sieg

## Kein großes Spiel gegen Finnland

Helsinki, 8. September Von „Stalment-Gier“ seiner Mannschaft ist wenig geblieben: Fußball-Weltmeister Deutschland schied gegen die zweitplatzierten Finnen auf einem schneebedeckten Platz aus. Die 14 000 Zuschauer sahen ein Spiel, das nach 1:0-Sieg der Deutschen im 15. Minute durch einen Torwartfehler der Finnen zum 1:1 ausglich. In der 41. Minute des entscheidenden Tor.

#### Ab Weihnachten (ein bißchen) weniger Steuern

Bonn, 8. September Eingangs: Die Bundesregierung hat beschlossen, ab dem 1. Januar 1978 die Einkommensteuer für die ersten 10 000 Mark des Jahres um 10 Prozent zu senken. Der Grund: Die Einkommensteuer wird ab 1978 für die ersten 10 000 Mark des Jahres auf 10 Prozent gesenkt. Der Grund: Die Einkommensteuer wird ab 1978 für die ersten 10 000 Mark des Jahres auf 10 Prozent gesenkt. Der Grund: Die Einkommensteuer wird ab 1978 für die ersten 10 000 Mark des Jahres auf 10 Prozent gesenkt.



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|                       |           |
|-----------------------|-----------|
| Kredit-Betrag         | 8000 Mark |
| Kredit-Laufzeit       | 60 Monate |
| 1. Monatsrate         | 138 Mark  |
| Folgeraten            | 162 Mark  |
| effektiver Jahreszins | 8,34 %    |

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wie Europa.

**Hochschul-Service  
der WELT**

Seite 9

Freitag 10.00 Uhr, Samstag 12.00 Uhr, Sonntag 14.00 Uhr  
Dienstag 12.00 Uhr, Donnerstag 10.00 Uhr, Freitag 12.00 Uhr, Samstag 14.00 Uhr, Sonntag 16.00 Uhr  
Sonntag 18.00 Uhr, Montag 10.00 Uhr, Dienstag 12.00 Uhr, Mittwoch 14.00 Uhr, Donnerstag 16.00 Uhr, Freitag 18.00 Uhr, Samstag 20.00 Uhr, Sonntag 22.00 Uhr

Preis 80 Pf. - 1,20 Mark

Mittwoch, 3. August 1977 - H

Nr. 178 - 31. W. - Preis 80 Pf. - C 7107 A

## Zwei Deutsche starben im Kugelhagel der „DDR“-Grenze

Im Kugelhagel der „DDR“-Grenzwächter ist ein Flüchtversuch am Übergang Hirschberg gescheitert. Zwei Männer, die die Sperren durchbrechen wollten, kamen ums Leben.

Sechs „DDR“-Bürger stoppten einen Schnellzug nahe der Sektorengrenze. Als sie vom Waggondach über den Zaun kletterten wollten, wurden sie von Mitrainern festgehalten.

Die Tschetschenowka hat dem Präsidenten der Bundesanstalt für Arbeit, Josef Stiglitz, die Einreise verweigert. Stiglitz ist Vorsitzender der sudetendeutschen Ackermann-Gemeinde.

## Fluchtauto zerschellte an Sperrmauer

PETER SCHMALZ, München  
Am Montagabend um 23.00 Uhr waren die Grenzbeamten der westdeutschen Bistumsgrenze (Hirschberg) an der Autobahn Berlin-München durch mehrere Selbstmordversuche aufgehalten. Ein Flüchtversuch scheiterte. Die Fahrer des Autos, das die Sperren durchbrechen wollte, kamen ums Leben.

Der Fahrer des Autos, das die Sperren durchbrechen wollte, kam ums Leben. Die Fahrer des Autos, das die Sperren durchbrechen wollte, kamen ums Leben.

Der Fahrer des Autos, das die Sperren durchbrechen wollte, kam ums Leben. Die Fahrer des Autos, das die Sperren durchbrechen wollte, kamen ums Leben.

## Gescheitert: Sechs wagten eine Zugfahrt in die Freiheit

DW, Berlin  
Ein dramatischer Fluchtversuch von sechs „DDR“-Bürgern aus dem D-23-Sektor am Ost-Berliner Hauptbahnhof ist gescheitert. Die Flüchtversuche scheiterten. Die Fahrer des Autos, das die Sperren durchbrechen wollte, kamen ums Leben.

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Die Fahrer des Autos, das die Sperren durchbrechen wollte, kamen ums Leben. Die Fahrer des Autos, das die Sperren durchbrechen wollte, kamen ums Leben.

## Die PLO erinnert Vance und Sadat an ihre Forderungen

DW, Beirut/Alexandria  
In offenkundiger Zusammenarbeit mit der palästinensischen Organisation für die Befreiung Palästinas (PLO) hat die PLO eine Erklärung abgegeben, in der sie die Forderungen der PLO an Israel und die USA erinnert.

## Tankstellen kämpfen mit billigerem Benzin um Kunden

P. W. Bonn  
Mitte in der Ferienzeit werden Tankstellen mit großem Konkurrenzdruck konfrontiert. Die Tankstellenbetreiber versuchen, ihre Kunden zu gewinnen.

## Äthiopien ruft die OAU wegen Somalia an

Der Hintergrund: In der Region der Horn of Africa haben sich Konflikte zwischen Äthiopien und Somalia entwickelt. Die Organisation für Afrika (OAU) ist zur Mediation aufgerufen.

## Hoher Militär in Peking rehabilitiert

DW, Peking  
Der chinesische General Huang Yongsheng, der während der Kulturrevolution als „Reaktionärer“ bezeichnet wurde, ist nun rehabilitiert.

## Geheime Treffen

Die Geheimdienste der Bundesrepublik und der DDR haben in den letzten Tagen mehrere geheime Treffen gehabt.

## Geheime Treffen

Die Geheimdienste der Bundesrepublik und der DDR haben in den letzten Tagen mehrere geheime Treffen gehabt.



Was die Kletterer Mitten zu bedeuten hatten, blieb unbekannt. Nach dem Spitzengespräch verließen die Minister Knappe und Multhaar (unten) sowie Generalbundesanwalt Reubner (v. l.) das Bundesministerium.

## Fall Ponto: Ein Mitglied der Mörderbande gefaßt

- Erste Festnahme: Die 23jährige Eleonore Maria Poesgen ließ sich widerstandslos von der Polizei abführen.
- Die geachtete Sigrid Sternbeck übernachtete nach dem Attentat zusammen mit einem Unbekannten in einer Pension.
- Bei der Fahndung nach den Mördern gab es eine Panne: Das Bundeskriminalamt wurde mit Verspätung eingeschaltet.

Die Fahndung nach den Mördern gab es eine Panne: Das Bundeskriminalamt wurde mit Verspätung eingeschaltet. Die Fahndung nach den Mördern gab es eine Panne: Das Bundeskriminalamt wurde mit Verspätung eingeschaltet.

## „Roter Morgen“ droht mit Hinrichtungen

Die hessischen evangelischen Kirchen haben eine Erklärung abgegeben, in der sie die Hinrichtungen ablehnen. Die hessischen evangelischen Kirchen haben eine Erklärung abgegeben, in der sie die Hinrichtungen ablehnen.

## Inge Viett baut eine neue Terroristen-Gruppe auf

Die hessische Terroristin Inge Viett hat eine neue Terroristen-Gruppe aufgebaut. Die hessische Terroristin Inge Viett hat eine neue Terroristen-Gruppe aufgebaut.

## Geheime Treffen

Die Geheimdienste der Bundesrepublik und der DDR haben in den letzten Tagen mehrere geheime Treffen gehabt.

## 5.6 Conclusion

Existing studies of media and terrorist activity implicitly assume that terrorists can manufacture guaranteed amounts of media coverage from engaging in certain acts of terrorism. This overlooks the fact that media coverage is risky and uncertain. An attack may fail to produce any coverage at all or may fail to produce as much coverage as expected or may fail to produce enough coverage to exceed a terrorist group's reference point. Conversely, a terrorist action may be accorded far more coverage than the terrorist group had expected. The models of choice under risk and uncertainty introduced in the previous chapter are applied to this context in order to shed more light on important points such as these and provide an alternative theoretical standpoint from which to study such significant problems as a potential symbiosis between the media and terrorist groups.

The models of choice under risk and uncertainty, expected utility theory, mean-variance expected utility theory and the behavioural model, prospect theory, depict the choice process in different ways. Each model, however, requires some set of payoffs to provide the foundation for the decision-maker's choices and subsequent actions. To analyse terrorist choice of action in a context where media coverage is the desired but risky and uncertain payoff requires a dataset consisting of the amount of media coverage accorded to different types of actions that represents the data available to the terrorist groups choosing which actions to perpetrate. The terrorist group need not possess the full dataset but must be plausibly aware, for example, that a certain competing group had achieved a particular outcome or that a particular type of action had been associated with some amount of media coverage. Previously, the sophistication in this regard of the active terrorist groups in the Federal Republic of Germany during the 1970s has been pointed out. Among other things, this provided a part of the rationale for choosing this particular context for analysis.

In this chapter, the data collection process was described. Starting with a complete set of terrorist actions perpetrated by known offenders with known outcomes undertaken in the Federal Republic of Germany during the period from 1970 to 1980, the amount of media coverage accorded to each of these actions was collected.

Three newspapers, chosen among other things on the basis of circulation, demographics, political orientation and reporting scope, were selected as the representatives for this media coverage. The three newspapers are *Bild*, *Süddeutsche Zeitung* and *Die Welt*. During periods of intense archival research, working with both physical newspaper holdings and micro-film holdings, many thousands of pages of newsprint were examined and hundreds collected from these three newspapers for each of 112 distinct terrorist incidents reported by the GTD. The precise dimensions of these articles was subsequently measured and converted into standard newspaper-specific statistics of space percentage and column inches. The outcome of this data collection process, this final dataset, is presented in the following chapter along with its application as the foundation for the analysis of terrorist choice of action in a context where media coverage is the desired but risky and uncertain payoff to terrorism.



## Chapter 6 - Results and Discussion

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### 6.0 Introduction

In Chapter 4, models of decision-making under risk and uncertainty were introduced to develop new insights into the patterns that may characterise terrorist choice when terrorists are concerned with generating media attention by terrorist activity. In this chapter, data gathered from archives in Berlin is used to operationalise these models within the terrorism context experienced by West-Germany in the 1970s. The news stories that constitute the dataset reveal very clearly the dynamic nature of terrorism and the media attention that is accorded to it. Each terrorist incident recorded during the period is part of a wider social context that can be easily obscured in purely statistical analysis. In this chapter, details of particular attacks and the news stories that accompanied them are included alongside the more technical work so that a more complete picture of terrorism in all of its starkness and the reality of the impact, or lack thereof, of individual terrorist attacks can be more fully appreciated.

The media attention that is accorded to acts of terrorism is a complex phenomenon encompassing a number of problems and issues. Terrorist groups seek media attention but they cannot guarantee that any particular action will be accorded a certain amount of attention. Media attention is, from the perspective of the terrorist group, desirable but uncertain. The context in which acts of terrorism are perpetrated and in which acts of terrorism are reported upon in the media is complex and dynamically evolving. The amount of attention received by any single act of terrorism varies over time as too does the amount of attention received from different alternative actions. The overarching objective of this thesis is to determine the patterns that may characterise terrorist choice by applying several different models of the decision-making process and determining, through the lenses provided by those models, the ways in which terrorist choice of attack method or action may be shaped by the media attention that terrorism receives. This chapter complements the purely theoretical discussion presented in Chapter 4 and crystallises the patterns of terrorist choice that were identified in that chapter.

## 6.1 Overview of the Chapter

Section 6.2 presents detailed statistical results of the archival research conducted into the media coverage of terrorism in West-Germany during the period from 1970 to 1980, both by attack method category and by media outlet. The inherent variability of media attention accorded to terrorist acts is demonstrated and highlighted by providing the background story of several pertinent historical examples of terrorist acts perpetrated in Germany. In Section 6.3 terrorist choice under conditions of uncertainty are examined and discussed by applying complementary analytical models of decision-making to the empirical dataset collected in German archives: (1) expected utility theory, (2) mean-variance analysis and (3) prospect theory. Section 6.4 concludes the chapter.

## 6.2 German Print Media Coverage of Terrorism 1970 to 1980

By the middle of July 1972 no less than 17 bombings had been perpetrated on West-German soil in just over five months. Averaging almost one bombing per week, some of these terrorist actions barely raised a flutter in the German print media. However, on Saturday 20 May 1972, German citizens passing their regular newsstand could not have helped noticing the large headline announcing “*Zwei Bomben im Springer-Haus explodiert*” as well as three photographs: a small image showing damage to the façade of the Springer Publishing House in Hamburg, a much larger photograph of a male person lying on an ambulance stretcher with his eyes closed and blood streaming along his face and immediately to the left a third photograph positioned in the centre of the page. It resembles a police mugshot, shows a male person aged about 35 and is entitled with the headline “*Dreifaches Mordgeständnis vor der Berliner Kripo*” (triple confession to murder in front of the Berlin Criminal Investigation Department). It is not immediately clear if the bombing and the murders are related, but it is likely that many people passing the newsstand would have stopped, read further and possibly purchased a copy of *Bild* before starting into the *Pfingsten* (Pentecost) long weekend.

On the morning of Tuesday 23 May, a large front-page headline in *Bild* reports queues of many kilometres in length as 500,000 West-Germans and 70,000 East-

Germans returned across border checkpoints of the divided country after visits “to the other side” over the long Pentecost weekend. A photo showing destroyed carriages of a roller coaster ride which had derailed in Bayreuth causing three deaths can be seen in the centre of the page. Barely 5% of the front page are taken up by a small commentary article with only indirect reference to the Springer House bombing. A significant drop from the previous issue of *Bild* where almost 40% of the front page were devoted to the bombing incident. Springer’s other daily newspaper *Die Welt* continues front page (26.07%) news of the bombing for a second day, while the *Süddeutsche Zeitung* moves the event from the first page after the initial reporting day. Together, the three newspapers devote 515.20 column inches (c”) to the bombing of the Springer Publishing House. This amount of 515.20 c” is substantially higher than the 4.90 c” accorded to the bombing of the Yugoslav Consulate in Munich on 15 June 1972, but low in comparison with the 925.42 c” devoted to the bombing of US Army Headquarters in Heidelberg on 24 May 1972.

The total amount of media coverage accorded to bombing and the other attack method categories delineated by the GTD was determined using the data collected and measured as described in Chapter 5. After the data had been entered into an Excel spreadsheet it resulted in a substantial data-file of just under 4,000 rows and 64 columns. The spreadsheet now contained the amounts of media coverage (c”) accorded by each of the three newspapers (*Bild*, *Süddeutsche Zeitung* and *Die Welt*) to each of the seven attack method categories individually on each day in the 10 year period from 1 January 1970 to 31 December 1979. Data for individual days were summed per newspaper and per attack method to provide data for each of the 120 months in the period under investigation. The aggregated results for the entire period, 1970 to 1980, are presented in Table 6.1.

**Table 6.1 Media Coverage by Attack Method on West-German Soil, 1970-1980**

|                                 | % of Total | 10yr c" Totals | <i>Bild</i> c" | <i>SZ</i> c" | <i>Die Welt</i> c" |
|---------------------------------|------------|----------------|----------------|--------------|--------------------|
| Hostage Taking                  | 0.5737     | 29595.62       | 10696.81       | 8809.05      | 10089.76           |
| Assassination                   | 0.2709     | 13975.92       | 3794.76        | 5085.14      | 5096.03            |
| Bombing /Explosion              | 0.0727     | 3748.67        | 1836.09        | 1004.83      | 907.75             |
| Armed Assault                   | 0.0346     | 1783.70        | 784.49         | 816.19       | 183.02             |
| Hijacking                       | 0.0263     | 1355.88        | 553.05         | 346.38       | 456.46             |
| Facility /Infrastructure Attack | 0.0216     | 1113.21        | 375.93         | 431.37       | 305.91             |
| Unarmed Assault                 | 0.0003     | 13.61          | 0.00           | 8.16         | 5.45               |
|                                 | 1.0000     | 51586.61       | 18041.13       | 16501.10     | 17044.37           |
|                                 |            | % of Total     | 0.349725106    | 0.319871851  | 0.330403043        |
|                                 |            | Position       | 1              | 3            | 2                  |

Table 6.1 lists all relevant attack method categories and the respective media coverage (c") that was accorded to each category by each of the three newspapers *Bild*, *Süddeutsche Zeitung* and *Die Welt* individually and in aggregate during the 10 year period under consideration. Attack method categories are listed in descending order according to the relative share of media attention accorded to each. For example, during the period from 1970 to 1980, the category Facility/Infrastructure Attack received merely 1,113.21 c" (2.16%) of the 51,586.61 c" (100%) grand total of media attention accorded to all attack method categories combined. It is interesting to observe that the relative share accorded by *Bild* to each of the seven attack method categories follows the aggregate order exactly. Apart from a small variation, the same is true of *Süddeutsche Zeitung* and *Die Welt*. Further, it is interesting to note that each of the three newspapers contribute about equally to the overall coverage of terrorism; that is, 35% of all space (c") devoted to the coverage of terrorist attacks over the 10 year period occurred in *Bild*, 33% in *Die Welt*, and 32% in the *Süddeutsche Zeitung*, respectively. No evidence is found for a significant difference between the space accorded to the reporting of terrorism incidents in tabloid, high-quality and medium quality newspapers. Finer differences exist, of course. For example, while many column inches in *Bild* can be taken up by super-sized headlines and numerous photographs, comparatively more space is devoted in the *Süddeutsche Zeitung* to reports and discussions of more substantial length printed in smaller text font sizes.

Bombing received the third highest amount of media coverage in each of the three newspapers individually and in aggregate making up 7.27% of the grand total (51,586.61 c") of media attention accorded to all attack categories combined. Two

other attack methods received more attention than bombing, both in aggregate and in each of the three newspapers individually. They were the categories Hostage-Taking (57.37%) and Assassination (27.09%). Added together, these two attack method categories made up 84.46% of the media attention accorded to all attack categories combined over the 10 year period from 1970 to 1980.

The media attention accorded to assassinations was high, but as was the case for bombings, considerable variation can be observed in the coverage of individual assassination incidents. For example, an assassination attempt on Bundesrichter (federal judge) Wolfgang Buddenberg (aged 60) in Karlsruhe on Monday 15 May 1972 made front-page news in *Bild*, *Süddeutsche Zeitung* and in *Die Welt* the following morning. Coverage in all three newspapers displayed a photograph of Buddenberg's damaged VW-Beetle beneath which a bomb had been placed on the passenger side of the vehicle which detonated when Buddenberg's wife, who normally drove her husband to work, had started the car at lunchtime. The bomb missed Wolfgang Buddenberg who, against his usual habit, had walked to work that morning. The assassination attempt took centre-stage in both *Die Welt* and *Süddeutsche Zeitung*, but in *Bild* the reader's attention was drawn to an even bigger headline, "*Lehrer in der Schule erstochen – BERLIN: Mutter wollte Katastrophe verhindern – Sohn war schneller*" announcing a fatal stabbing of a teacher by a student, showing photographs of both the victim and the alleged offender. The sub-headline, stating that the offender's mother had wanted to avoid the catastrophe was placed beneath the article covering the assassination attempt on Federal Judge Buddenberg and again it is not immediately clear whether or not the two events were related, which makes the centre headline all the more eye-catching. Overall, the assassination attempt on Federal Judge Buddenberg took up 22 to 35% of the front page in each of the three newspapers and continued with a very small amount of coverage merely in *Die Welt* on the following day. In aggregate, 199.92 c" were devoted to this particular assassination incident before news coverage moved on to other topics and events.

During the 1970s, *Süddeutsche Zeitung* carried no advertisements on the front page and *Die Welt* only a minimal amount. *Bild*, on the other hand, regularly printed four

to five front-page advertisements which together covered about 25% of the available printing space; the remaining space normally made up of one main story headline plus several smaller news items. On Wednesday 6 September 1972, however, this was not the case. A thick black line framed just one story on the front page in *Bild*: the shooting of members of the Israeli sporting team in the Olympic village in Munich by the Palestinian terrorist group *Black September*. The report takes up almost all of the available front-page printing space and occupies 100% of the next three pages in *Bild*. The first part of the report consists of an oversized headline, sub-headline, a photo of a young bride and groom and another photo of a mature woman weeping into a white handkerchief. Subsequent parts of the *Bild* report are also completely framed by a thick black line.<sup>75</sup> The first four pages in the *Süddeutsche Zeitung* on that day are also entirely devoted to coverage of this assassination incident and reporting in *Die Welt* is similarly extensive. Coverage is even more voluminous as more details of the event became known and coverage continues in the six subsequent issues of *Bild* and *Die Welt* and in another seven issues of the *Süddeutsche Zeitung*. In aggregate 9,660.23 c" of media attention were devoted by the three newspapers to this particular assassination incident, 48 times more than the media attention accorded to the previously described assassination attempt on Federal Judge Buddenberg and 21 times more than another assassination incident perpetrated in Karlsruhe on 25 August 1977 which was aimed at Generalbundesanwalt (Public Prosecutor General of the Federal Court of Justice) Kurt Rebmann. Bombings and Assassinations incidents are generally of short-duration and as we have seen, the media attention (c") accorded to individual instances of such attacks can vary significantly. An even starker difference in the coverage accorded to individual terrorist incidents can be found when attack types of long-duration such as hostage-taking events are (a) compared to each other and even more so when (b) compared across the various attack method categories.

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<sup>75</sup> Incidentally, it is a traditional custom in Germany for funeral notices and stationery such as condolence cards and envelopes for death notices to be framed with a black line; thus providing advance notice about the nature of the correspondence even before the recipient opens the envelope.

During the 1970s, three hostage-takings (kidnappings) took place on West-German soil and as can be seen in Table 6.2 the amount of media attention (c'') accorded to each individual incident varies significantly from 8,356 c'' in the case of Peter Lorenz (in 1972) to 2,566 c'' in the case of Jürgen Ponto (in 1977) to more than 18,672 c'' in the case of Hanns Martin Schleyer (also in 1977). What is perhaps even more startling is the length of time that readers would have encountered coverage on these events when turning the pages of their regular newspaper. In aggregate the three newspapers covered the Lorenz kidnapping for 30 consecutive issues, the Ponto kidnapping attempt for 24 consecutive issues and the Schleyer kidnapping for 129 consecutive issues. Reports about the Schleyer kidnapping could be found in the print media for a period spanning more than 55 consecutive days. No other terrorist incident throughout the 1970s was accorded media attention of a similar scale or duration. In fact, 8 armed assaults, 4 assassinations, 17 bombings and 13 attacks on facilities/infrastructure received no coverage at all in *Bild*, *Süddeutsche Zeitung* and *Die Welt*.

Table 6.2 Some Specific Examples of Terrorist Incidents and their Media Coverage

| Date       | Target                    | City       | Perpetrator                   | Bild c" | #p | #i | SZ c"   | #p  | #i | Welt c" | #p  | #i | Total c" | Total #p | Total #i | TargetType                  | AttackType            |
|------------|---------------------------|------------|-------------------------------|---------|----|----|---------|-----|----|---------|-----|----|----------|----------|----------|-----------------------------|-----------------------|
| 13/02/1972 | Jewish Seniors' Residence | Munich     | PFLP                          | 149.70  | 4  | 2  | 377.80  | 12  | 5  | 118.30  | 5   | 3  | 645.80   | 21       | 10       | Other                       | Facility/Infrastruct. |
| 15/05/1972 | Wolfgang Buddenberg       | Karlsruhe  | RAF                           | 71.57   | 2  | 1  | 48.06   | 2   | 1  | 80.29   | 4   | 2  | 199.92   | 8        | 4        | Government (General)        | Assassination         |
| 19/05/1972 | Springer-Haus             | Hamburg    | RAF                           | 191.72  | 4  | 2  | 102.77  | 5   | 2  | 220.71  | 3   | 2  | 515.20   | 12       | 6        | Journalists & Media         | Bombing/Explosion     |
| 24/05/1972 | US Army Headquarters      | Heidelberg | RAF                           | 413.49  | 5  | 3  | 289.08  | 11  | 4  | 222.85  | 4   | 3  | 925.42   | 20       | 10       | Military                    | Bombing/Explosion     |
| 15/06/1972 | Yugoslav Consulate        | Munich     | Croat.Nat.                    | 0.00    | 0  | 0  | 2.70    | 1   | 1  | 2.20    | 1   | 1  | 4.90     | 2        | 2        | Government (Diplomatic)     | Bombing/Explosion     |
| 05/09/1972 | Olympic Village           | Munich     | Black Sept.                   | 2574.84 | 26 | 7  | 3868.26 | 41  | 8  | 3217.13 | 33  | 7  | 9660.23  | 100      | 22       | Private Citizens & Property | Assassination         |
| 05/08/1973 | Springer Guesthouse       | Kampen     | RAF                           | 41.67   | 2  | 1  | 35.64   | 2   | 1  | 174.98  | 6   | 3  | 252.29   | 10       | 5        | Journalists & Media         | Facility/Infrastruct. |
| 27/02/1975 | Peter Lorenz              | Unknown    | 2 <sup>nd</sup> June Movement | 3914.67 | 40 | 13 | 1681.77 | 28  | 8  | 2759.89 | 32  | 9  | 8356.33  | 100      | 30       | Government (General)        | Hostage Taking        |
| 30/07/1977 | Jürgen Ponto              | Frankfurt  | RAF                           | 663.77  | 12 | 6  | 714.07  | 23  | 10 | 1188.46 | 20  | 8  | 2566.30  | 55       | 24       | Business                    | Hostage Taking        |
| 25/08/1977 | Kurt Rebmann              | Karlsruhe  | RAF                           | 121.21  | 4  | 3  | 143.52  | 7   | 4  | 192.09  | 6   | 3  | 456.82   | 17       | 10       | Government (General)        | Assassination         |
| 05/09/1977 | Hanns Martin Schleyer     | Cologne    | RAF                           | 6118.37 | 89 | 40 | 6413.21 | 125 | 44 | 6141.41 | 107 | 45 | 18672.99 | 321      | 129      | Business                    | Hostage Taking        |
| 29/06/1979 | Soviet Travel Agency      | Frankfurt  | Territr Resist Army           | 0.00    | 0  | 0  | 3.30    | 1   | 1  | 2.20    | 1   | 1  | 5.51     | 2        | 2        | Tourists                    | Facility/Infrastruct. |



Table 6.3 Annual Media Coverage by Attack Method Category<sup>76</sup>, 1970-1980

| YEAR  | Armed Assault (c") |           |                 |                | Bombing / Explosion (c") |           |                 |                | Facility / Infrastruct. (c") |           |                 |                |
|-------|--------------------|-----------|-----------------|----------------|--------------------------|-----------|-----------------|----------------|------------------------------|-----------|-----------------|----------------|
|       | <i>Bild</i>        | <i>SZ</i> | <i>Die Welt</i> | TOTAL          | <i>Bild</i>              | <i>SZ</i> | <i>Die Welt</i> | TOTAL          | <i>Bild</i>                  | <i>SZ</i> | <i>Die Welt</i> | TOTAL          |
| 1970  | 190.02             | 737.92    | 128.75          | 1056.70        | 124.96                   | 213.05    | 19.65           | 357.66         | 271.02                       | 383.29    | 118.30          | 772.61         |
| 1971  | 127.83             | 9.64      | 0.00            | 137.47         | 0.00                     | 0.00      | 0.00            | 0.00           | 0.00                         | 3.93      | 0.00            | 3.93           |
| 1972  | 0.00               | 0.00      | 0.00            | 0.00           | 961.30                   | 543.53    | 559.08          | 2063.91        | 0.00                         | 0.00      | 0.00            | 0.00           |
| 1973  | 0.00               | 0.00      | 48.31           | 48.31          | 96.33                    | 39.78     | 10.01           | 146.11         | 41.67                        | 35.64     | 174.98          | 252.29         |
| 1974  | 0.00               | 2.66      | 0.00            | 2.66           | 134.98                   | 6.26      | 34.03           | 175.27         | 0.00                         | 0.00      | 0.00            | 0.00           |
| 1975  | 0.00               | 0.00      | 0.00            | 0.00           | 0.00                     | 45.31     | 0.00            | 45.31          | 0.00                         | 0.00      | 0.00            | 0.00           |
| 1976  | 40.93              | 0.00      | 0.00            | 40.93          | 228.19                   | 45.35     | 117.00          | 390.54         | 63.24                        | 5.21      | 10.42           | 78.87          |
| 1977  | 0.00               | 5.29      | 3.03            | 8.32           | 34.25                    | 9.70      | 42.30           | 86.26          | 0.00                         | 0.00      | 0.00            | 0.00           |
| 1978  | 425.71             | 0.00      | 0.00            | 425.71         | 188.63                   | 73.68     | 93.61           | 355.92         | 0.00                         | 0.00      | 0.00            | 0.00           |
| 1979  | 0.00               | 60.66     | 2.93            | 63.60          | 67.45                    | 28.17     | 32.08           | 127.70         | 0.00                         | 3.30      | 2.20            | 5.51           |
| TOTAL | 784.49             | 816.19    | 183.02          | <b>1783.70</b> | 1836.09                  | 1004.83   | 907.75          | <b>3748.67</b> | 375.93                       | 431.37    | 305.91          | <b>1113.21</b> |

| YEAR  | Hijacking (c") |           |                 |                | Hostage-Taking (c") |           |                 |                 | Assassination (c") |           |                 |                 |
|-------|----------------|-----------|-----------------|----------------|---------------------|-----------|-----------------|-----------------|--------------------|-----------|-----------------|-----------------|
|       | <i>Bild</i>    | <i>SZ</i> | <i>Die Welt</i> | TOTAL          | <i>Bild</i>         | <i>SZ</i> | <i>Die Welt</i> | TOTAL           | <i>Bild</i>        | <i>SZ</i> | <i>Die Welt</i> | TOTAL           |
| 1970  | 553.05         | 346.38    | 456.46          | 1355.88        | 0.00                | 0.00      | 0.00            | 0.00            | 0.00               | 0.00      | 0.00            | 0.00            |
| 1971  | 0.00           | 0.00      | 0.00            | 0.00           | 0.00                | 0.00      | 0.00            | 0.00            | 0.00               | 0.00      | 0.00            | 0.00            |
| 1972  | 0.00           | 0.00      | 0.00            | 0.00           | 0.00                | 0.00      | 0.00            | 0.00            | 2646.41            | 3916.34   | 3297.41         | 9860.16         |
| 1973  | 0.00           | 0.00      | 0.00            | 0.00           | 0.00                | 0.00      | 0.00            | 0.00            | 19.10              | 2.63      | 6.49            | 28.22           |
| 1974  | 0.00           | 0.00      | 0.00            | 0.00           | 0.00                | 0.00      | 0.00            | 0.00            | 142.30             | 291.20    | 309.16          | 742.66          |
| 1975  | 0.00           | 0.00      | 0.00            | 0.00           | 3914.67             | 1681.77   | 2759.89         | 8356.33         | 93.07              | 8.07      | 43.59           | 144.73          |
| 1976  | 0.00           | 0.00      | 0.00            | 0.00           | 0.00                | 0.00      | 0.00            | 0.00            | 0.00               | 43.49     | 82.55           | 126.03          |
| 1977  | 0.00           | 0.00      | 0.00            | 0.00           | 6782.14             | 7127.28   | 7329.87         | 21239.29        | 893.86             | 823.40    | 1356.84         | 3074.11         |
| 1978  | 0.00           | 0.00      | 0.00            | 0.00           | 0.00                | 0.00      | 0.00            | 0.00            | 0.00               | 0.00      | 0.00            | 0.00            |
| 1979  | 0.00           | 0.00      | 0.00            | 0.00           | 0.00                | 0.00      | 0.00            | 0.00            | 0.00               | 0.00      | 0.00            | 0.00            |
| TOTAL | 553.05         | 346.38    | 456.46          | <b>1355.88</b> | 10696.81            | 8809.05   | 10089.76        | <b>29595.62</b> | 3794.76            | 5085.14   | 5096.03         | <b>13975.92</b> |

<sup>76</sup> The category Unarmed Assault has been omitted from Table 6.3 to facilitate a visually more pleasing table presentation. As shown in Table 6.4, for the period 1970-1980 just one unarmed assault is recorded in the GTD. The incident occurred in 1978 and was accorded a total of just 13.61c": zero c" in *Bild*, 8.16c" in *Süddeutsche Zeitung* and 5.45c" in *Die Welt* (as shown in Table 6.1).

The aggregated data for the 1970s encompasses, obviously, day by day and year by year coverage as events unfolded. To illustrate the rolling evolution of media attention to terrorism from year to year, Table 6.3 presents the annual statistics for six attack method categories. Even a cursory glance at the table will reveal substantial variations in the media attention that was accorded to the coverage of incidents within each of the attack method categories from year to year (i.e. row by row), but also when comparisons are made between the various attack method categories within each individual year (e.g. 1977). There are many factors which might influence and underlie such variability. One such factor is easily determined and conveyed from data contained in the GTD. It pertains to the number of terrorist incidents perpetrated during each of the ten years, together with a classification of these attacks across the seven relevant attack method categories. Table 6.4 presents this data for the 112 terrorist incidents of relevance in this investigation across the ten year period from 1970 to 1980.

**Table 6.4 Number of Attacks<sup>77</sup> per Type and Year in West-Germany, 1970-1980**

|       | Armed Assault | Unarmed Assault | Bombing / Explosion | Facility / Infrastruct. | Hijacking | Hostage Taking | Assassination | Total |
|-------|---------------|-----------------|---------------------|-------------------------|-----------|----------------|---------------|-------|
| 1970  | 2             | 0               | 2                   | 2                       | 1         | 0              | 0             | 7     |
| 1971  | 2             | 0               | 0                   | 1                       | 0         | 0              | 0             | 3     |
| 1972  | 0             | 0               | 8                   | 0                       | 0         | 0              | 4             | 12    |
| 1973  | 2             | 0               | 6                   | 4                       | 0         | 0              | 1             | 13    |
| 1974  | 1             | 0               | 5                   | 1                       | 0         | 0              | 2             | 9     |
| 1975  | 1             | 0               | 6                   | 0                       | 0         | 1              | 1             | 9     |
| 1976  | 5             | 0               | 5                   | 5                       | 0         | 0              | 3             | 18    |
| 1977  | 3             | 0               | 7                   | 2                       | 0         | 3              | 2             | 17    |
| 1978  | 1             | 1               | 13                  | 1                       | 0         | 0              | 0             | 16    |
| 1979  | 1             | 0               | 2                   | 5                       | 0         | 0              | 0             | 8     |
| Total | 18            | 1               | 54                  | 21                      | 1         | 4              | 13            | 112   |

There are many other factors that underlie and influence the variability that surrounds the media attention that individual terrorist attacks receive. Some pertain to characteristics of the relationship between terrorist groups and the media and to

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<sup>77</sup> Excluded are attacks for which the perpetrators are recorded as 'unknown' in the GTD. Also excluded are attacks for which both the number of persons injured and the number of persons killed are recorded as 'unknown' in the GTD.

the evolving media strategies that some terrorist groups devise in order to enhance their chance of media attention. Many such aspects were described in Chapter 3. They include the success or failure of an intended terrorist action itself and criteria such as the timing, level of violence, unexpectedness and topicality of an attack, the number of news cycles that a particular terrorist incident can be reported on, the emergence of other high-impact news that competes for editorial space and attention, for example, attacks perpetrated by other terrorist groups and the innovation of new attack methods, but also other unforeseen events such as newspaper printer-strikes or *Presseblocks* (news black-outs), either self-imposed within media circles or in response to demands by government or security agencies. The terrorism-media context is dynamic and constantly evolving.

Within this complex evolving context, decisions are made by governments, security agencies and law enforcement agents, journalists, editors, publishers and terrorist groups. The aggregate statistics that describe terrorism in any period or place show a static picture but when the newspaper reports are retrieved from the archives, a more dynamic and real picture immediately begins to be created. These were real attacks perpetrated by real terrorist groups with real consequences and real victims. It also begins to emerge that the terrorism and media environment is not so complex as to be intractable completely. It is possible for the public and others, including terrorist groups, to keep track of the flow of news regarding terrorism and to develop some idea of the amount of attention accorded to different actions.<sup>78</sup> All interested parties in this dynamic context observe actions and reactions closely and they will use available information towards decision-making processes. Of course, even during the most turbulent times, decisions continue to be made and at least some decision-makers will act rather than wait for the context to settle. Terrorist groups seeking

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<sup>78</sup> Of course, acquiring this information is not costless but neither is it extremely costly. Regular and interested readers of newspapers could gather the necessary information with minimal expense (monetary and time). Interestingly, it could be argued that the cost of information acquisition has been declining over many years with the availability of newspapers, television and now the internet. To explore the relevance of information costs for terrorist decision-making is a promising avenue for research. This would draw on the classical papers dealing with the economics of information and those studies that have examined the impact of information costs and asymmetry on bargaining and conflict resolution; see S. J. Grossman and Stiglitz (1976), Stiglitz (1985) and Reed (2003).

media attention for their actions must accept that media attention is uncertain and that the actual amount of coverage received may diverge from what was expected. In a context such as this, each of the complementary models of the decision-making process promises to identify aspects of the environment that could not be identified before or, if they could, provide new perspectives from which to understand them. It is to this application that we turn.

### **6.3 Terrorist Choice Under Uncertainty**

In Chapter 4, the theoretical structures of three alternative models of decision-making under risk and uncertainty were outlined: (1) expected utility theory; (2) mean-variance analysis; and (3) prospect theory. Each model highlights different aspects of the ways in which individuals and groups choose and each can provide a unique yet complementary perspective on decision-making processes. The particular context that is the focus of this analysis is the terrorists' choice of action or attack method where media coverage is the desirable but uncertain outcome of terrorist activity. Application of these complementary models of the decision-making process depicts the terrorist groups as ordering their preferences for attack methods and combinations of attack methods based on expectations of media attention accorded to those actions and the risk that the actual media attention accorded to an action will diverge from what was expected. Although terrorist groups may always prefer more media attention to less, they will not necessarily prefer the attack method that promises the chance of the greatest amount of attention.

#### **6.3.1 (Basic) Expected Utility Theory and Terrorist Choice**

If terrorist groups could guarantee that a particular amount of media attention would be accorded to a particular action or actions, then presuming that the terrorist group prefers more media attention to less, the preference ordering of actions would simply follow the amount of media attention each yields, from most to least. However, terrorist groups cannot guarantee that a particular amount of media attention will be accorded to a particular action or actions; they can only form an expectation of such before an action is perpetrated. The media attention expected to result from an action is subject to risk and uncertainty. As such, each action or

attack method is best viewed as a risky prospect or gamble expected, but not guaranteed, to yield some amount of media attention,  $x_i$ , with probability  $p_1 + p_2 + \dots p_n = 1$ . The preference ordering of actions or attack methods, which represent *chances* of obtaining media attention, will not necessarily place the action with the highest expected media attention in first place.

Each model of the decision-making process provides an analytical method for determining a preference ordering across risky prospects. The basic expected utility model depicts the decision-maker as assessing the alternative actions or attack methods on the basis of expected quantities of media attention and their associated probabilities. The decision-maker's preferences are reflected in the utility function. The utility function converts quantities of media attention into utility numbers which are then weighted by the associated probabilities and summed to determine the expected utility of each action or attack method. The decision-maker prefers the action with the highest expected utility. Actions can be ranked in order of preference on the basis of their expected utility. Formally, therefore, the application of the expected utility model is a straightforward analytical exercise undertaken with the objective of determining the expected utility numbers that would be attached to each available risky prospect from which the decision-maker may choose. In the present context, the expected utility attached to each available attack method is the objective of the analysis. Expected utility derives from expected media attention.

The preference ordering, based on the expected utility numbers, is however not simply the outcome of a purely computational exercise. The conversion of the quantities of media attention into utility numbers requires the choice of a utility function which, in addition to having certain formal mathematical properties required by von Neumann and Morgenstern's theoretical framework, has important economic properties that reflect the preferences of certain types of decision-makers. The choice of which function to apply in any given case depends on the analyst's assessment of the relevance of particular properties in the particular case. For example, one type of utility function may provide a better reflection of the decision-maker's risk preferences in one case and yet for another scenario may not be deemed applicable. Although utility functions can be found in any order of complexity and

mathematical subtlety, several well-known functions are typically used in economic analysis because of their generally desirable economic and mathematical properties and the fact that they approximate the preference orderings that would be derived from much broader classes of functions. The logarithmic utility function is one such popularly chosen function for economic analysis. It is the function that is applied in this analysis.

The logarithmic utility function,  $U(x) = \ln(x)$ , reflects a decision-maker who is risk-averse but not greatly so and who exhibits constant relative risk aversion, decreasing absolute risk aversion and decreasing marginal utility.<sup>79</sup> These properties are generally 'sensible' in most economic settings. Importantly, however, maximising a logarithmic utility function is analogous with a rule of decision-making that is logically unobjectionable; that is, the maximisation of a logarithmic utility function is equivalent to maximising the geometric-mean of the decision-maker's rate of accumulation of  $x$ . Since decision-makers prefer more  $x$  in each case, it is logical for them to maximise the rate at which they accumulate it. This has led Rubinstein (1976), for example, to declare that logarithmic utility maximisation describes all rational decision-makers. More formally, Arrow (1965, pp. 36-37) provides a rigorous mathematical treatment to support the thesis that utility, in general, must be approximated by a logarithmic function.

Given the widespread use of logarithmic utility and the strength of the arguments that have been brought to bear to support its use, both in terms of logic and in terms of pure mathematics, we imagine that terrorist groups exhibit, approximately, the preferences that are mirrored by the logarithmic utility function and proceed to apply the function to convert quantities of media attention into utility numbers. Because the logarithmic function is consistent with von Neumann and Morgenstern's mathematical framework, the index of utility numbers that results and the

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<sup>79</sup> The Arrow-Pratt measure (see Chapter 4) for absolute risk aversion for the logarithmic function is  $A(x) = \frac{1(-x^{-2})}{x^{-1}} = x^{-1}$ . This measure is decreasing,  $A'(x) = -x^{-2} < 0$ . The measure for relative risk aversion is  $R(x) = \frac{-x(-x^{-2})}{x^{-1}} = 1$ . This measure is constant,  $R'(x) = 0$ . Diminishing marginal utility is reflected in the increasing slope of the logarithmic function which increases at a decreasing rate.

preference ordering determined on the basis of the final expected utility numbers will be consistent with the preferences of the underlying decision-maker who is reflected in the logarithmic function. Simply, the application of the function does not disturb the underlying preferences of the decision-maker. It reflects the preferences accurately. Of course, given what has been said about logarithmic utility and the rate of accumulation of  $x$ , the preference orderings that are determined on the basis of maximising a logarithmic utility function can be interpreted as the ordering of terrorist actions that maximise the rate at which the terrorist group's accumulated media attention grows.

The basic expected utility model says that each possible amount of media attention  $x_i$  is associated with a utility number through the decision-maker's utility function which, formally, must be one from the class of functions identified by von Neumann and Morgenstern (1947). Applied to the present context the expected utility  $EU$  of an action  $i$  is the sum of the products of probability and utility conferred by media coverage over all possible outcomes of the act. The terrorist chooses the action with the highest expected utility of media coverage. Formally,

$$EU = \sum_{i=1}^n u(x_i)p_i$$

To determine the probability  $p_i$  associated with each quantity of media attention, it was assumed that media attention is normally distributed. The resulting probabilities serve as weights in the decision-making process depicted by the basic expected utility model. Because of the evolving and dynamic nature of the societal, media and terrorism context that describes the period under investigation and which in turn underlies and shapes the archival data of media coverage accorded to terrorism throughout that time, expectations are determined via a *rolling* rather than a static or retrospective approach. Terrorist groups are viewed as dynamic decision-makers who base future choices on the culmination of experiences and observations gathered up to the point at which their next decision is due. As such, the amount of media attention ( $c''$ ) that a terrorist or terrorist group might expect at the start of each year, while planning subsequent attacks, is based on the rolling average of

media attention accorded to attacks in each of the various attack method categories in previous years.

Expectations at the start of 1972, for example, are based on what was usually or typically accorded to attacks in each category in the two previous years. The expectation at the start of 1973 is based on what was typical for the three preceding years and so on. At the start of 1980, information and observations on the media's response to terrorist activity cumulatively gathered throughout the whole of the 1970s are available to inform the terrorist decision-maker. Using this data, the expected utility for a subsequent attack in any of the available attack method categories and a preference ordering can be determined for each year. This is presented in Table 6.5.

**Table 6.5 Expected Utility (logarithmic) Preference Ordering<sup>80</sup> (Looking Forward at the Start of Each Year)**

| at the start of | Armed Assault | Unarmed Assault | Bombing/ Explosion | Facility / Infrastruct. | Hijacking | Hostage-taking | Assassination |
|-----------------|---------------|-----------------|--------------------|-------------------------|-----------|----------------|---------------|
| 1970            | -             | -               | -                  | -                       | -         | -              | -             |
| 1971            | -             | -               | -                  | -                       | -         | -              | -             |
| 1972            | 2             | -               | 4                  | 3                       | 1         | -              | -             |
| 1973            | 4             | -               | 3                  | 5                       | 2         | -              | 1             |
| 1974            | 4             | -               | 3                  | 5                       | 2         | -              | 1             |
| 1975            | 4             | -               | 3                  | 5                       | 2         | -              | 1             |
| 1976            | 5             | -               | 4                  | 6                       | 3         | 2              | 1             |
| 1977            | 5             | -               | 4                  | 6                       | 3         | 1              | 2             |
| 1978            | 5             | -               | 4                  | 6                       | 3         | 2              | 1             |
| 1979            | 5             | 7               | 4                  | 6                       | 3         | 2              | 1             |
| 1980            | 3             | 7               | 5                  | 6                       | 4         | 1              | 2             |

The preference orderings can be interpreted in two equivalent ways: first, as the ordering of preferences of a particular type of utility maximising decision-maker (i.e. a decision-maker characterised by a logarithmic utility function); second, as a ranking

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<sup>80</sup> There is no explicit treatment of resource constraints in this analysis, but resource constraints are only relevant for particular groups' involvement in particular actions. Resource constraints do not affect the desirability of particular actions and therefore the preparedness that law enforcement should strive towards. One interpretation of the analysis is that attack types which require resources beyond the reach of a particular terrorist or terrorist group would preclude this attack type from being included in the group's preference ordering. However, this being said, the analysis identifies an ordering of preferences that holds for all groups.



of attack methods in order of their influence on the maximisation of the rate at which a terrorist group's accumulation of media attention grows. The highest ranked attack method, if chosen, would be the attack method expected to increase the decision-maker's share of total media attention at the fastest rate.

These evolving preference orderings reflect: (1) the preferences of a terrorist group with logarithmic utility and (2) the dynamics of the attack method choices that would be expected to maximise the decision-maker's rate of accumulation of publicity. Although, for the reasons explained above, it is reasonable to expect that the preferences of at least some of the groups that were active during this period of time are consistent with logarithmic utility, it is not necessarily the case that all groups will be so described at every point in time. However, the analysis allows a more detailed picture of the decision-making process to be developed and draws out certain aspects of the decision-making process and its context that might have escaped analytical attention before. Imagine that at the start of 1972, our terrorist decision-maker described by the logarithmic utility function and forming preferences on the basis of expected utility has observed terrorist events, the media attention accorded to them, responses by government and security agencies as well as other developments in the terrorism context during the preceding two years. Our decision-maker would have ranked available choices of attack methods as follows: hijacking first, armed assault second, facility/infrastructure attack third and bombing/explosion fourth.

Going forward into 1972, therefore, we would have expected our terrorist decision-maker to choose hijacking, armed assault, facility/infrastructure attack and bombing/explosion, in that order. The amount of media attention accorded to each attack method in the preceding two years and its variability shape the expectations of our decision-maker but so too do the preferences for risk that are embedded within the logarithmic utility function. The level of risk aversion reflected in a logarithmic utility function is relatively low and hijacking is the attack method with the highest level of uncertainty at the beginning of 1972. Not all terrorist groups will be risk-seeking enough to choose it, even if the required resources are available to them. As such, a new insight is obtained from the perspective provided by this

analytical model, regardless of whether terrorist groups do or do not choose to perpetrate the attack method that is ranked highest by our logarithmic utility decision-maker. Because, as explained above, the maximisation of logarithmic utility is analogous to the maximisation of the growth rate of the accumulation of media attention in this context, a terrorist group that does not choose the attack method that is ranked highest by a logarithmic utility decision-maker may see their share of total media attention in the ensuing period contract. If we believe, for example, that a terrorist group in a particular context is, at least for the time being, unlikely to be able to resource the highest ranked attack method or is too risk-averse to perpetrate it, we can expect their share of publicity to shrink. This conclusion, however, is only a temporary one and must be adjusted dynamically as future periods unfold and as additional decisions are observed. A terrorist group does not necessarily have to be inactive to witness a diminution in its share of total media attention.

One of the most important factors that can shape and re-shape a preference ordering is the deployment of 'new' attack methods that have not been tried before or have not been tried for some time. A new attack method represents an entrepreneurial opportunity that may produce an outcome that is surprisingly high. The first group or groups to perpetrate such an action may receive media attention that is substantially higher than that which could have been obtained by perpetrating the attack method that would, in the absence of the new attack method, have been ranked highest by our logarithmic utility decision-maker. Such an example emerged in 1972 within the dataset that we have been considering.

In 1972 just two attack types were deployed by terrorist groups active during that year. Twelve attacks were perpetrated: eight bombings and four assassinations. In the period under investigation prior to 1972, no terrorist group had committed an assassination. The first deployment of assassination immediately moved this attack method to the top of the preference ordering for a logarithmic utility decision-maker in 1973, removing hijacking from rank one but also causing further shifts in the preference ordering for that year. The category Bombing/Explosion moved up the preference ordering by one position (from 4 to 3), thus becoming more attractive than before, while the categories Armed Assault and Facility/Infrastructure Attack

were shifted down the preference ordering by two positions each (from 2 to 4 and from 3 to 5, respectively), thus becoming less attractive attack methods and less likely to be chosen by logarithmic utility decision-makers seeking to maximise their accumulation of media attention in this terrorism context.

In 1973 and in 1974, no new attack methods were introduced and the relative ranking of the attack method categories stabilised and remained unchanged for three consecutive years (1973, 1974 and 1975). This stability in the preference orderings is a new observation generated by the analysis. Of course, further research may explore such a point in more detail but within the present analysis the preference orderings exhibit a tendency to stabilise in the absence of new attack method types being deployed by the terrorist groups that were active during the period. In 1975, the first hostage-taking for the 1970s was recorded in West-Germany. This action was particularly successful at attracting media attention and resulted in the new attack method category Hostage-Taking attaining the second-highest rank in the preference ordering for 1976 at the expense of the category Hijacking, which was shifted downwards from second position to third along with all other attack types which similarly shifted down the preference ordering by one place. The success of the deployment of hostage-taking in 1975 was not significant enough, however, to place it at the top of the preference ordering of a logarithmic utility decision-maker. The category Assassination remained in first position on the preference ordering for 1976.

What follows is a period of high terrorist activity during the course of 1976, 1977 and 1978. However, no new attack methods were introduced and the preference ordering remained predominantly stable. Interestingly, the attack methods Hostage-Taking and Assassination alternated between first and second positions in the preference ordering. Before 1975, there had not been any hostage-takings recorded. In 1975, as discussed, there was a single hostage-taking. Its relative success in terms of attracting media attention placed it in second place, behind Assassination, looking forward into 1976. In 1976, there were several assassination attacks but no instances of hostage-taking. Despite this, Assassination fell to second place in the preference ordering looking forward into 1977 and Hostage-taking was in first place. In 1977,

there were three recorded hostage-takings, two of which were accorded significant media attention. There were also two recorded assassinations, which attracted significant media attention but less than was accorded to the hostage-takings. This seems to have had the effect of balancing the trade-off between average outcomes and variability in favour of Assassination as an attack method in spite of the fact that the hostage-takings perpetrated in 1977 received several times as much media attention. One particularly successful (single) period does not necessarily propel an attack method to the highest place on the preference ordering and the absence of an attack method from a (single) period does not necessarily push it down the preference ordering. Indeed it may push it up. It is difficult to imagine that these types of insights could be gained without the theoretical framework applied in this analysis.

During the years 1976, 1977 and 1978, while Hostage-taking and Assassination vied for first place on the preference ordering, all other attack method categories remained unchanged. During the course of 1978, an *unarmed* assault was perpetrated for the first time but attracted very little media attention and occupied the last position in the preference ordering looking forward into 1979, while the categories Armed Assault, Bombing/Explosion, Facility/Infrastructure Attack and Hijacking remained in the same position for a fourth consecutive year (1979). It is interesting to note, however, that two attacks, one in 1978 and one just six days before Christmas in 1979, precipitated a reordering in preferences. This time, it was not a previously untried attack method which prompted the re-shuffle of the preference ordering but two examples of armed assault. Armed Assault had been in fifth position in the preference ordering since 1976 and there were relatively few incidents in which its deployment attracted any media attention of note. This changed somewhat in May 1978 when two female members of the 2<sup>nd</sup> June Movement terrorist group perpetrated an armed assault on a remand prison in West-Berlin during which they forcefully freed another member of the group from custody and escaped. The incident attracted more than 425 c'' in *Bild* but no mention in either the *Süddeutsche Zeitung* or in *Die Welt*. The following year, a second armed assault was perpetrated in Munich by the group *Commando 15. October*. It attracted 60 c''

in the *Süddeutsche Zeitung* and just 2.93 c'' in *Die Welt*. Together with the previous year's attack, however, this event and the very small attention it received was enough to prompt a change in the preference ordering looking forward into the year 1980 in which, among other changes, the category Armed Assault moved up to rank three from rank five after having held the lower ranked position for four consecutive years. We observe that even a small amount of media attention can reorder preferences, especially for attack methods that had previously occupied lower positions in the preference ordering.

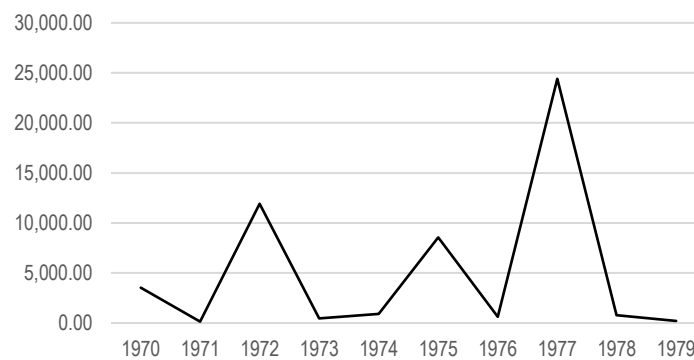
As was explained above, the maximisation of logarithmic utility is analogous to the maximisation of the growth rate of the accumulation of media attention in the context of this thesis. A terrorist group that does not choose the attack method that is ranked highest by a logarithmic utility decision-maker may see their share of total media attention in the ensuing period contract. A contraction of media attention and a corresponding decline in the relevance of any particular terrorist group as a recognised terrorist organisation in the eyes of the media, government and the public at large is even more likely during periods in which activity by competing terrorist groups is high. Table 6.6 lists some key characteristics of terrorist activity and media attention accorded to terrorism during each of the ten years under consideration and highlights periods of the most intense activity. Cyclic phases are evident; both for the amount of media attention (c'') accorded to terrorist activity (see Figure 6.1), but also for the aggregate number of terrorist attacks perpetrated. Even more significant is the observation that the number of attack methods deployed overall as well as the number of attacks perpetrated that rank first on the preference ordering rose when the number of well-known terrorist groups who were competing for prevalence in media coverage and public attention was also high. This observation is particularly evident during the years 1976 and 1977.

Main competitors for media attention in the context of the 1970s in West-Germany were undoubtedly the RAF, 2<sup>nd</sup> June Movement and the Revolutionary Cells. Inter-group rivalry between the RAF and the 2<sup>nd</sup> June Movement intensified particularly after the latter group had successfully executed the hostage-taking of Peter Lorenz

Table 6.6 Competition between Major Groups

| Year  | Media Attention p.a. (c") | # of Attacks perpetrated | # of Attack Types deployed | # of times 1 <sup>st</sup> ranked Attack Type deployed | # of Groups active | Main Perpetrators (in descending order of activity)              |
|-------|---------------------------|--------------------------|----------------------------|--|--------------------|--|
| 1970  | 3,542.85                  | 7                        | 4                          | -  | 5                  | PFLP (mainly), RAF, 3 others                                     |
| 1971  | 141.4                     | 3                        | 2                          | -  | 2                  | RAF, 2 <sup>nd</sup> June  |
| 1972  | 11,924.07                 | 12                       | 2                          | 0  | 4                  | RAF (mainly), BlackSept, 2 <sup>nd</sup> June/ Croat Nat.        |
| 1973  | 474.94                    | 13                       | 4                          | 1  | 6                  | RAF (mainly), 2 <sup>nd</sup> June, RevCells, 3 others           |
| 1974  | 920.59                    | 9                        | 4                          | 2  | 5                  | RevCells, RAF, 2 <sup>nd</sup> June, 2 others                    |
| 1975  | 8,546.37                  | 9                        | 4                          | 1  | 6                  | RevCells, RAF, 2 <sup>nd</sup> June/ Croat Nat., 2 others        |
| 1976  | 636.37                    | 18                       | 4                          | 3  | 7                  | RevCells, Croat Nat., 2 <sup>nd</sup> June, RAF, 3 others        |
| 1977  | 24,407.98                 | 17                       | 5                          | 3  | 7                  | RevCells, RAF, Croat Nat., 4 others                              |
| 1978  | 795.24                    | 16                       | 4                          | 0  | 7                  | IRA (10 bombings), RevCells, RAF/ 2 <sup>nd</sup> June, 3 others |
| 1979  | 196.8                     | 8                        | 3                          | 0  | 5                  | no attacks by established groups                                 |
| Total | 51,586.61                 | 112                      | -                          | -  | -                  | -  |

Figure 6.1 Cycles of Media Coverage of Terrorism (c") in West-Germany



in February 1975; an event not only successful with regard to the fact that all terrorists' demands for the release of their hostage were met but also in terms of the substantial media coverage received as was shown in Table 6.2. While the total number and the variety of terrorist attacks decreased by only a small amount in 1978, deployment of attack types that were ranked first on the preference ordering dropped significantly, from three to zero. It is worth noting that 13 of the 16 terrorist incidents that occurred in 1978 were bombings and 10 of those were perpetrated by the IRA within just a couple of days in late August 1978. The IRA had not previously been active in West-Germany during the 1970s. Many members of the early generation of the RAF had died in prison in 1977, so the competition between well-established terrorist groups decreased significantly after 1977. None of the groups

that were active in 1979, the last year in the period under study, were well-known or had previously shown high activity.

### **6.3.2 Mean-Variance Analysis and Terrorist Choice**

One aspect that has been mentioned a number of times throughout this thesis is the fact that terrorist groups do not choose just one single type of action or attack method. Within a given period or across periods, terrorist groups choose a combination of different attack methods. Analysing terrorist choice in any context, including one where media attention is the desired but uncertain outcome of terrorist activity, requires the capability to encompass this observed behaviour into an analytical framework and provide a rationale for it. It is also important to recast our understanding of the terrorist group's opportunity set. In a context where terrorist groups combine different actions with imperfectly correlated outcomes, the opportunity set exhibits quite different properties from that which characterises a context where only single attack methods are chosen. In fact, failure to consider the implications of combinations may result in a serious miss-assessment of the terrorist group's opportunities and feasible choices.

In this section, a mean-variance analysis (described in Chapter 4) is presented. Using the data collected for this investigation, the mean-variance efficient opportunity sets for a rolling series of periods are determined. Even before examining the choices that terrorist groups might have been expected to make from these opportunity sets, the analysis generates a new way of looking at the opportunities that were available to terrorist groups to obtain some amount of expected media attention at some level of risk and how the positive trade-off between the magnitude of expected media attention and its expected standard deviation oscillated and evolved over time. Like the analysis presented in the previous section, this allows new conclusions to be reached about the period under consideration and opens new avenues for discourse regarding terrorism and the media in general. For example, it becomes clear that in the early 1970s, it was possible to expect a higher amount of media attention at almost every level of risk than during the later 1970s. This curtailment of opportunities and its intermediate oscillations during the entire period can be observed very clearly from the analysis presented here.

The analysis of the structure of the opportunity set in a context where terrorist groups combine attack methods is complemented by the study of optimal terrorist choice; that is, the nature of the ways in which terrorist groups may be expected to combine attack methods in order to obtain the highest amount of expected media attention at a given level of risk. Within a mean-variance framework, the terrorist group's choice of attack method combination is shaped predominantly by its level of risk aversion. Therefore, by inspecting the mean-variance efficient opportunity set at different levels of risk it is possible to determine the nature of the combinations of attack methods that might be chosen by terrorist groups with particular risk aversion characteristics within particular periods. For example, when we consider the entire period from 1970 to 1980, it can be determined that bombing and armed assault dominate the efficient combinations at lower levels of risk while assassination and hijacking dominate efficient combinations at higher levels of risk. More risk-averse terrorist groups may therefore have chosen combinations of armed assault and bombing. Of course, observed choices might indicate the terrorist group's level of risk aversion which may also prove to be useful knowledge for law enforcement.

As explained in Chapter 4, mean-variance analysis requires no additional assumptions regarding utility functions or probability distributions.<sup>81</sup> The discussion in the opening part of this chapter stressed the vividness of the media context. Terrorist groups, especially those with a developed media strategy, could be expected to have some idea regarding the relative media attention accorded to different actions and the ups and downs in this media attention over time. This is enough information to form a preference ordering based on average outcomes and their variability. It should also be pointed out that, while combining different types of actions makes sense as a diversification strategy, the terrorist group's adoption of this strategy may be either naïve or sophisticated. The strategy does not have to be

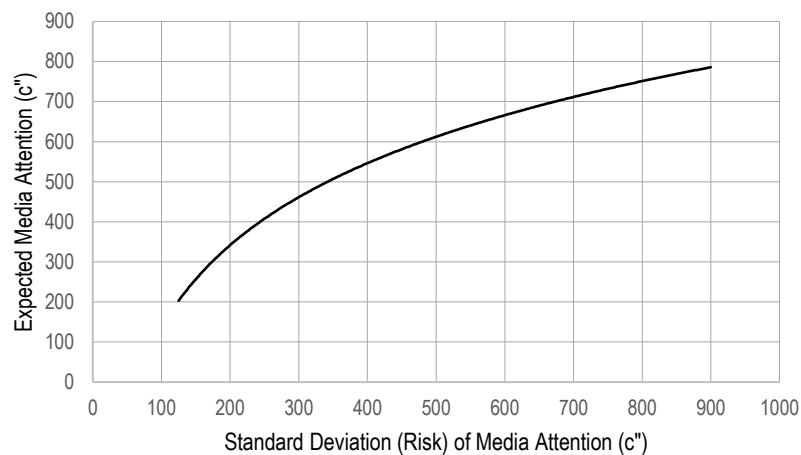
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<sup>81</sup> It is well-known that a mean-variance preference ordering can only be guaranteed to be consistent with von Neumann and Morgenstern's axioms if outcomes are normally distributed *or* if utility is quadratic. While this was thought to be a fatal flaw of the approach, it is now generally accepted that mean-variance preference orderings mirror those generated by other types of functions, including logarithmic utility, and that the advantages of the approach are considerable in terms of simplicity and computability.



very sophisticated or even deliberate to work. The media attention accorded to different types of action, both within a period and across periods, varies as we have seen. The variability is not perfectly correlated and as a result of this there are benefits to be had in terms of reduced risk or increased expected payoffs by combining attack methods. These benefits may be reaped even by the terrorist group with the most naïve approach to diversification; that is, the group that merely senses the value of not putting everything in the same basket. Such and other insights are explored further in the analysis and discussion that follows.

**Figure 6.2 Efficient Set: Optimal Media Attention at Each Level of Risk, 1972**



The efficient set of combinations is that set of opportunities available to the terrorist group that yields the highest expected amount of media attention at each level of risk. It can be calculated or determined for any series of media attention data like the set that has been gathered for this thesis. It would be possible, therefore, to compute an efficient set for circumstances where television or online media attention has been measured. The identification of the opportunity set is an important analytical achievement because it allows us to see the structure that characterises the terrorists' opportunities to obtain media attention by combining different actions. When planning and preparing future terrorist action, terrorists must choose from a set of plausible attack methods. If attack methods have been deployed before, the terrorist group with an interest in media coverage, will soon develop a sense both of the amount of media attention that may be expected to result from any particular

attack type and of the associated risk that the actual media coverage will differ from the expected.

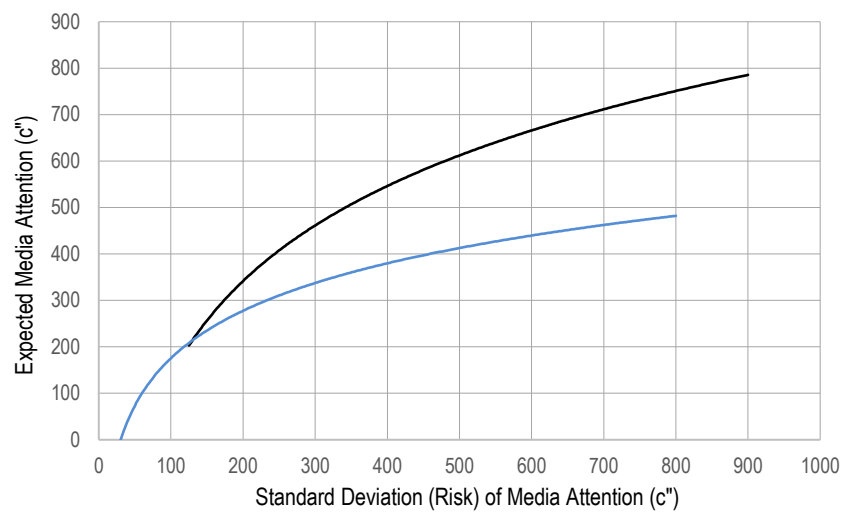
For this thesis, data was gathered within a particular context; that is, the terrorism context in West-Germany during the 1970s and the media attention accorded to terrorist actions in that context as reflected in the coverage accorded by representative newspapers. From the first part of this chapter and certainly from working closely with the data in preparing it for analysis, it is possible to develop a sense of the media attention accorded to different actions and its variability over time that is likely very similar to the inferences that may have been formed by terrorist groups at the time. One quickly realises, for example, that some assassinations attract a lot of media attention over a sustained period, while others do not. Some hostage-taking events are well publicised and last for many days or weeks in the media, while others vanish more quickly or fail altogether. Bombings occur frequently, as do attacks on facilities and infrastructure, but such attacks rarely attract voluminous media attention. All media coverage is variable. Further, the media attention accorded to each of the various attack methods does not move up or down in unison. Media attention accorded to different attack methods is imperfectly correlated. As such, it may be prudent for the terrorist group to hedge its bets and not to place all its resources into one basket.

Figure 6.2 shows the efficient frontier of the terrorists' opportunity set looking forward into 1972 (based on observations from 1970 to 1971) determined by applying the Markowitz method described in Chapter 4 to the data gathered for this thesis. The vertical axis represents the media attention ( $c''$ ) that is expected to result from the deployment of a particular attack method *combination* and the horizontal axis the standard deviation or risk that the actual media coverage received when the attack combination has been perpetrated will divert from the outcome expected. The efficient frontier is concave in shape and positively inclined. The positive inclination derives simply from the positive trade-off between risk and reward. The concavity derives from the imperfect correlation, which can be computed formally or simply inferred from observation. If two or more attack methods are perfectly positively correlated, combining an attack method with more variable outcomes with an attack

method with less variable outcomes increases the expected payoff and the variability of the combination in a linear fashion. In any context where the payoffs are imperfectly correlated, combining a more risky attack method with a less risky attack method increases the expected payoff and the variability non-linearly. Terrorist groups can capitalise on this correlation structure by deploying combinations that have higher expected amounts of media attention at each level of risk. The expected payoffs to terrorist activity, measured in terms of media attention, would be underestimated by any analytical framework that did not take imperfect correlations of payoffs into account.

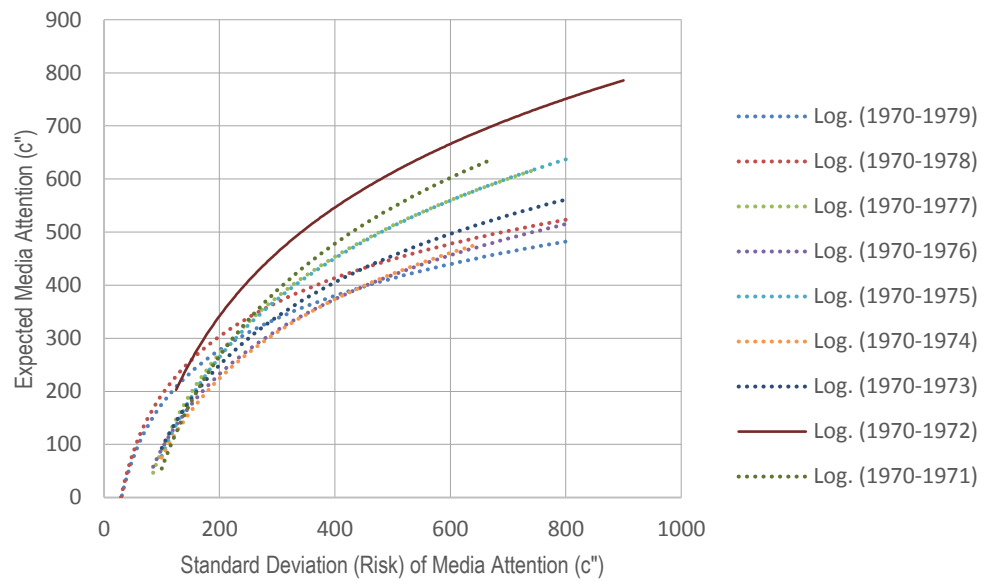
The terrorist group may derive benefits from this imperfect correlation by naïvely avoiding allocating all of its resources to a single attack method, simply out of some attempt at prudence. The increases in expected media attention that can be obtained at the same or a lower level of risk through combining more than one attack method are most clearly demonstrated by comparing the expected media attention and its variability of a single action with the expected media attention of a combination of more than one action. For example, at the start of 1980 the average amount of media coverage that could be expected from a single armed assault was 112.42 c" with a risk or standard deviation of 185.32. If, however, armed assault were deployed at a reduced rate of 35% (instead of 100%) and combined with bombing (at 59%), hostage-taking (2.4%) and assassination (3.7%) the terrorist group can expect an increased payoff of 133.87 c" (instead of 112.42 c") at a much lower risk or standard deviation of 100 (instead of 185.32). This increased efficiency is possible due to the imperfect correlation between attack methods and through deployment of attack method combinations (P. J. Phillips, 2009), an aspect not previously considered in studies of terrorism. It was first applied to media coverage of terrorism events by Pohl (2015). Similarly, if terrorists perpetrated bombings only, they could expect an average of 68.54 c" of media attention with an associated risk or standard deviation of 80.32. However, a slightly higher amount of media coverage (69.32 c") can be expected with a substantially lower level of risk (50 instead of 80.32) when bombing (at 49.97%) is deployed in combination with armed assault (12.92%), unarmed assault (35.81%) and a small resource allocation to hostage-taking (1.3%).

Figure 6.3 Efficient Set: Optimal Media Attention at Each Level of Risk, 1972 & 1979



A striking result of this analysis is the observation that after 1972 the terrorists' opportunity sets shifted (a) downwards and (b) to the left in the direction of the lower-risk range. In other words, after 1972 terrorists could expect lower amounts of media attention at each level of risk. At the same time, however, new efficient combinations at the lower end of the risk spectrum became available providing more risk-averse terrorists or terrorist groups the opportunity to obtain modest amounts of media attention with more certainty than was previously possible. If we accept the premise that shifts in the terrorists' opportunity set reflect the aggregate effect of many single factors such as previous terrorist attacks perpetrated, media attention to terrorism, editorial decisions, strategic interventions by government and security agencies and many other variables, then tracking the shifts of opportunity sets through a more detailed lens is informative and can provide a bird's eye view of how the context of terrorism and resulting media coverage changes over time. Using the data-set collected for this thesis it is possible not only to establish that between 1972 and 1980 the terrorists' opportunity set moved to the lower-left of the spectrum, but furthermore it is possible to discern oscillations within the 1970s as shown in Figure 6.4.

**Figure 6.4 Efficient Set Oscillations during the 1970s**



The efficient set of 1972 is located above all of the other opportunity sets. At that time it was possible to achieve the highest amount of expected media attention at all medium to upper risk levels. Closer examination of Figure 6.4 reveals a series of oscillating shifts of opportunity sets from one year to the next. These shifts of annual opportunity sets mirror the cycles of actual (not expected) media coverage of terrorism shown in Figure 6.1 almost precisely. For example, in the years 1973 and 1974 (at the lower-most boundary of the opportunity sets shown in Figure 6.4) the highest levels of risk needed to be born for even the smallest expected returns of media coverage. If we refer to the cycles illustrated in Figure 6.1 we see that the period 1973-1974 was indeed characterised by very low media attention to terrorism although the absolute number of terrorist attacks during 1973 was actually comparatively high. It is important to point out that the models applied in this thesis can be utilised in the analysis of other data-sets from alternative periods, locales and modes. A mean-variance analysis could, for example, be applied to online media data, and thus contribute further to the broader research program that examines terrorism and the media. While a shift of the efficient opportunity set to the lower-left of the risk-reward spectrum over the course of the 1970s in West-Germany suggests that less media attention was to be expected at every level of risk, perhaps due in part to the effectiveness of response measures to terrorist events, the

structure and movement of efficient opportunity sets in other historical or contemporary contexts may show different trends and suggest alternative inferences.

Up until this point, the efficient sets have been presented geometrically. Of course, these are just depictions of the sets of weightings across attack methods that yield the highest expected amount of media attention at each level of risk (standard deviation). By shifting our attention to the analysis that underlies the geometrical representations of the efficient sets, we can identify the exact weightings accorded to different attack methods in a particular combination anywhere along the efficient frontier. In this regard it is helpful to divide each of the efficient sets for each of the rolling periods into three regions of low, medium and high risk levels and to examine the changing characteristics of combinations within. Table 6.7 displays the weightings for each of the efficient set combinations at risk regions low, medium and high for each of the ten years within the period of the analysis. This allows us to identify the constituents of the efficient sets at each level of risk and in each of the periods. It also allows us to identify those combinations and, therefore, those attack methods, which may be chosen by terrorist groups with particular preferences.

Within the mean-variance expected utility framework, risk preferences are the primary factor shaping choice. Corresponding to each range of risk (low, medium, high) will be risk preferences characterised predominantly by strong, medium and weak risk aversion. We now consider these preferences and the combinations presented in Table 6.7. The left-most column starts with the year 1972, the point at which decision-makers have access to data from the period 1970 to 1971, and ends with the year 1980, the point at which decision-makers have at their disposal data from the whole period 1970 to the end of 1979. In 1972, for example, a strongly risk-averse terrorist decision-maker might be expected to choose an attack method combination from the low-risk range. Such a combination is weighted heavily towards Bombings (92.5%) and only very slightly towards Armed Assault. A much less risk-averse terrorist group on the other hand might have been expected to be most interested in a high

Table 6.7 Efficient Combinations at Three Levels of Risk

| starting | Risk Level | SD  | Armed Assault % | Unarmed Assault % | Bombing/ Expl. % | Facility/ Infrastr. % | Hijacking % | Hostage-Taking % | Assassination % |
|----------|------------|-----|-----------------|-------------------|------------------|-----------------------|-------------|------------------|-----------------|
| 1972     | low        | 100 | 0.075403534     | -                 | 0.924596466      | 0                     | 0           | -                | -               |
| 1973     | low        | 125 | 0.411205375     | -                 | 0.536251888      | 0                     | 0           | -                | 0.052542738     |
| 1974     | low        | 100 | 0.036053152     | -                 | 0.7670899        | 0.196856949           | 0           | -                | 0               |
| 1975     | low        | 100 | 0.107123802     | -                 | 0.810967606      | 0.078269022           | 0           | -                | 0.00363957      |
| 1976     | low        | 100 | 0.188433705     | -                 | 0.774086987      | 0.004072712           | 0           | 0.022746159      | 0.010660437     |
| 1977     | low        | 85  | 6.43441E-05     | -                 | 0.843616746      | 0.136353596           | 0.000199765 | 0.019765549      | 0               |
| 1978     | low        | 85  | 0.086081774     | -                 | 0.868435125      | 0.023859618           | 0           | 0.021623483      | 0               |
| 1979     | low        | 15  | 0.028864618     | 0.817034572       | 0.15011643       | 0                     | 0           | 0.003984381      | 0               |
| 1980     | low        | 15  | 0.028701079     | 0.806572363       | 0.160787548      | 0                     | 0           | 0.00393901       | 0               |
| 1972     | medium     | 275 | 0.899154318     | -                 | 0                | 0                     | 0.100845693 | -                | -               |
| 1973     | medium     | 375 | 0.139950769     | -                 | 0                | 0                     | 0.527179187 | -                | 0.332870044     |
| 1974     | medium     | 350 | 0.306960352     | -                 | 0                | 0                     | 0.392332636 | -                | 0.300707012     |
| 1975     | medium     | 300 | 0.442502417     | -                 | 0                | 0                     | 0.265769132 | -                | 0.29172845      |
| 1976     | medium     | 375 | 0.058050176     | -                 | 0                | 0                     | 0.502651257 | 0.088379791      | 0.350918776     |
| 1977     | medium     | 325 | 0.585109758     | -                 | 0                | 0                     | 0.00021887  | 0.087357661      | 0.32731371      |
| 1978     | medium     | 325 | 0.347800043     | -                 | 0.009406326      | 0                     | 0.312324218 | 0.060896233      | 0.26957318      |
| 1979     | medium     | 425 | 0.35802686      | 0                 | 0                | 0                     | 0.205295618 | 0.096658228      | 0.340019293     |
| 1980     | medium     | 425 | 0.420641326     | 0                 | 0                | 0                     | 0.139670277 | 0.100215726      | 0.339472671     |
| 1972     | high       | 675 | 0.006563582     | -                 | 0                | 0                     | 0.993436416 | -                | -               |
| 1973     | high       | 900 | 0               | -                 | 0                | 0                     | 0.180614754 | -                | 0.819385246     |
| 1974     | high       | 800 | 0               | -                 | 0                | 0                     | 0.215766569 | -                | 0.784233431     |
| 1975     | high       | 650 | 0               | -                 | 0                | 0                     | 0.28952657  | -                | 0.71047343      |
| 1976     | high       | 800 | 0               | -                 | 0                | 0                     | 0.146229006 | 0.229807846      | 0.623963148     |
| 1977     | high       | 800 | 0.054742978     | -                 | 0                | 0                     | 0.000218884 | 0.208627024      | 0.736411114     |
| 1978     | high       | 750 | 0               | -                 | 0                | 0                     | 0.302180738 | 0.170788611      | 0.527030651     |
| 1979     | high       | 800 | 0               | 0                 | 0                | 0                     | 0.256762695 | 0.186630084      | 0.556607221     |
| 1980     | high       | 800 | 0               | 0                 | 0                | 0                     | 0.243284739 | 0.191002952      | 0.565712309     |

risk combination favouring Hijacking (99.3%) with a negligible resource allocation (0.7%) to Armed Assault.<sup>82</sup>

This type of analysis provides a framework within which to interpret or infer general patterns of choice. It can be used to delineate the structure of opportunities and depict them geometrically (as efficient sets). It can be used, in conjunction with a model of terrorist preferences for risk and reward, to identify those ranges of risk from which particular terrorist groups may be expected to prefer to choose. Of course, knowledge of a terrorist group's preferences may be difficult to infer *a priori*. Over time, however, the terrorist group chooses attack methods and, in doing so, must reveal something of its preferences. If such an inference is drawn from the actions of terrorist groups, the mean-variance framework may provide a general indication of the risk preferences characterising the group's decision-makers. Such knowledge may provide a small yet valuable addition to counterterrorism. Much of this value might lie in preventing certain misestimates of the types of actions that are consistent with particular types of terrorist groups.

One such misestimate might be to conclude that certain attack methods would never be consistent with the preferences of a particular type of group or that two quite different attack methods could never form part of a coherent combination of actions formed by the same group. The mean-variance analysis highlights the problem with this. It is true that some attack methods clearly feature more strongly in one or two particular risk ranges and not in others. Bombing, for example, is a component in low-risk efficient sets throughout the 1970s, while assassination is more strongly represented in the medium and high risk ranges. However, a key observation is the following: one cannot assume that just because an attack method features predominantly in one particular risk-region that it will never be chosen by terrorists who are described by a different level of risk aversion.

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<sup>82</sup> It is usual, when working with the mean-variance geometry, to represent the decision-maker's preferences by indifference curves. The indifference curves are convex, upward sloping, with steepness indicating the level of risk aversion. Superimposing an indifference map over the efficient set gives an indication of the risk ranges consistent with different decision-makers' preferences.



A closer look at Table 6.7 reveals that low-risk Bombing is indeed included in the efficient set in 1978 in the medium-risk range. Similarly, Armed Assault, although most strongly represented in the medium-risk range, is also included in both the low and the high risk ranges albeit in smaller proportions. Failing to include these possibilities when assessing future terrorist action would ignore decisions and choices that terrorist decision-makers could make without contradicting their preferences for risk.

In order to ground these points further and generate some new insights into the groups that were operating in West-Germany at the time, it is possible to inspect each group's actions from the analytical perspective that we have been discussing. Table 6.8 lists the attack method combinations chosen by the eight most active terrorist groups in West-Germany during the 1970s, indicating the relative weighting attributed to each of six attack method categories and the media attention ( $c''$ ) that could be expected to result from such a combination together with the associated standard deviation (risk).<sup>83</sup> Figure 6.5 shows the expected media attention and risk of each group's attack method combination relative to the efficient frontier for the period from 1970 to 1980. There are several interesting points to note. Several of the most active groups cluster noticeably in the low-risk range, indicative of higher levels of risk aversion. By contrast, the RAF and the 2<sup>nd</sup> June Movement each chose combinations with relatively high, but not extreme, risk. These two groups also pushed closest to the efficient frontier with the combinations they had chosen and it is not coincidental that these two groups showed the highest level of diversification during the period, choosing to allocate resources to more attack methods than most of the other active terrorist groups.<sup>84</sup>

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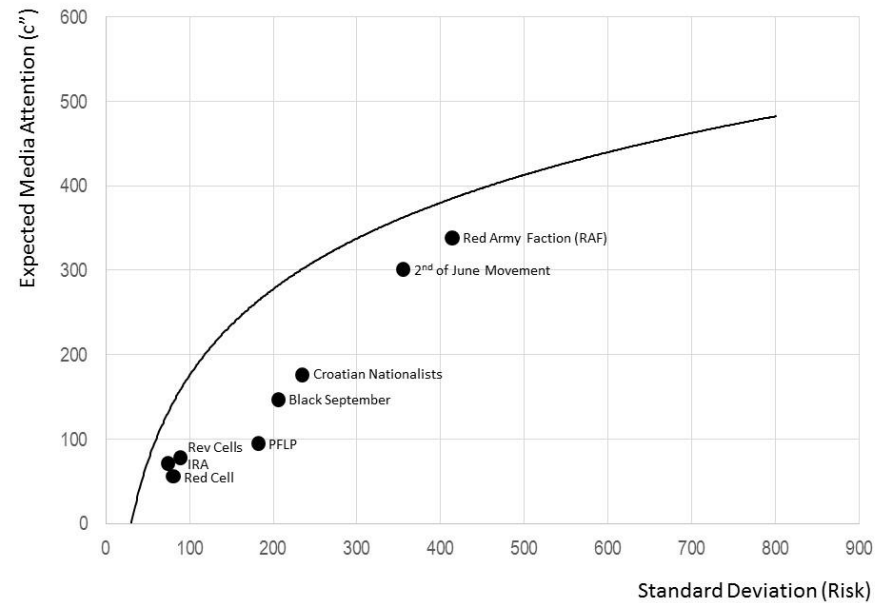
<sup>83</sup> This is expected media attention, not the media attention actually gathered, which may be higher or lower due to the variability inherent in the outcomes.

<sup>84</sup> Not all groups were active for the whole of the ten year period from 1970 to 1980. Sub-analyses may present interesting opportunities for future research.

**Table 6.8 Attack Method Combinations, Most Active Groups, West-Germany, 1970-1980**

| Name of Group  | Armed Assault | Bombing/Explosion | Facility/Infrastr. Attack | Hijacking | Hostage-Taking | Assassination | Nr of Attacks | Standard Deviation (Risk) | Expected Media Attention (c") |
|--|---------------|-------------------|---------------------------|-----------|----------------|---------------|---------------|---------------------------|-------------------------------|
| 2 <sup>nd</sup> June Movement                        | 0.556         | 0.222             | 0                         | 0         | 0.111          | 0.111         | 9             | 346.9777022               | 299.9919209                   |
| Baader-Meinhof Group /Red Army Faction (RAF)         | 0.143         | 0.286             | 0.214                     | 0         | 0.108          | 0.25          | 28            | 410.1668855               | 327.1604004                   |
| Black September                                      | 0             | 0.8               | 0                         | 0         | 0              | 0.2           | 5             | 203.911685                | 146.6023621                   |
| Croatian Nationalists                                | 0.125         | 0.625             | 0                         | 0         | 0              | 0.25          | 8             | 228.4890669               | 171.6013172                   |
| Irish Republican Army (IRA)                          | 0             | 1                 | 0                         | 0         | 0              | 0             | 10            | 80.32042645               | 68.54318122                   |
| Popular Front for the Liberation of Palestine (PFLP) | 0.4           | 0.2               | 0.2                       | 0.2       | 0              | 0             | 5             | 173.5456314               | 95.19655429                   |
| Red Cell   | 0             | 0.5               | 0.5                       | 0         | 0              | 0             | 4             | 82.95583564               | 57.78072414                   |
| Revolutionary Cells                                  | 0.286         | 0.571             | 0.143                     | 0         | 0              | 0             | 21            | 90.60746932               | 78.0128762                    |

**Figure 6.5 Expected Media Attention and Standard Deviation, Most Active Groups' Attack Method Combinations, West-Germany, 1970-1980**



Although the combinations chosen by the RAF and the 2<sup>nd</sup> June Movement lie in the medium-high range of risk, both groups included attack methods with less variable outcomes (i.e. bombings) in their combinations. The close proximity of the combinations of the RAF and the 2<sup>nd</sup> June Movement is significant given the close and competitive relationship between the two groups. It is plausible to suggest that both groups, sometimes taking the initiative and sometimes reacting to the actions of the other, pushed each other to take more risks and to allocate resources more efficiently.

As was the case for the expected utility (logarithmic utility) preference orderings discussed in the previous section, where the preferences orderings were sometimes upset by the introduction of an attack method that had not yet been deployed during the period under consideration, the efficient opportunity sets can also be observed to undergo change and evolve when a new terrorist attack method is introduced. For example, the introduction of assassinations in 1972 had a reversal effect on the composition of the efficient set in the medium-risk range reducing the weighting of armed assault from very high (89.9%) in 1972 to very low (0.14%) in 1973 and increasing the weighting of hijacking from low (10.1%) in 1972 to a much higher level (52.7%) in 1973. Similarly, the introduction of unarmed assault in 1978 significantly shifted the weightings in the efficient combinations in the low-risk range from bombing to unarmed assault. At the same time, the introduction of unarmed assault completely removed facility/infrastructure attacks from the efficient set.

The evolution of the opportunity sets over time, both in terms of the attack method categories included and their relative weightings, impact alternatives available to terrorist decision-makers regardless of their individual preferences; that is, there are macro-level factors that change the relationship between expected media attention and risk and, therefore, the opportunities to gather media attention by engaging in terrorist activity. While terrorist decision-makers maximising a mean-variance utility function and characterised by low risk aversion during the early 1970s may have concentrated almost all of their resources on hijacking (99.3%), by 1977 the balance of their attack method combination may well have shifted to assassination (73.6%)

and hostage-taking (20.9%), reducing the weighting allocated to hijacking to almost zero. Conversely, strongly risk-averse terrorist groups may have chosen to perpetrate mostly bombings (92.5%) in 1972, but by the very next year terrorist decision-makers maximising a mean-variance utility function may have reduced their allocation to bombings to 53.6%, while increasing the resources directed towards armed assault from 7.5% in 1972 to 41.1% in 1973 and increasing the allocation of resources to assassination to 5.3%.

Mean-variance analysis provides a framework with which to depict and interpret the terrorism and media context. The efficient frontiers, especially when they are worked out for a *rolling* set of periods, provide a clear picture of the opportunities to gather media attention through terrorism. Underlying the geometric depictions are the combinations of actions that yield different average amounts of media attention at different levels of variability. This allows us to tell what attack methods constitute combinations at different levels of risk. Surprisingly, it is not always the most risky actions that constitute wholly the riskiest combinations and is it always the least risky actions that constitute wholly the safest combinations. When overlaid with a model of the terrorist group's preferences, it is possible to determine which combinations may be chosen by groups with different risk preferences and, conversely, having observed a group choose in a certain way, it is possible to draw inferences about its level of risk aversion. Over a period of time, the group's activity can be compared with the efficient frontier in order to see just how close or how far the group was from combining actions in an efficient manner. All of these new perspectives on this problem emerge from an application of mean-variance analysis.

### **6.3.3 Prospect Theory Analysis and Terrorist Choice**

In the preceding sections of this chapter, two models of decision-making under conditions of risk and uncertainty have been applied to the analysis of terrorist choice in a context where media attention is the desired but uncertain or risky outcome of terrorist activity. Each model provides a new perspective on this context and generates insights that escape less formal analysis, especially in so far as that less formal analysis focuses on the highest absolute amount of media attention as the

factor that most directly shapes terrorist choice. It is known that decision-makers do not simply consider the expected outcomes but also consider the risk associated with those outcomes when making a choice from among alternative actions. By taking risk and the decision-maker's risk preferences into account in developing a model of the decision-making process, the application of models like expected utility theory and mean-variance analysis allow us to explore in a more complete way the decisions that terrorists make in this context. Fundamentally, it is not always the case that terrorists will choose the action with the highest expected amount of media attention.

One of the things that becomes clear from the application of expected utility theory and mean-variance analysis is that each model provides a distinct rendering of the decision-making process and a distinct analytical approach to determining a preference ordering over actions. For example, the way that mean-variance analysis can be used to develop a picture of the terrorist's opportunities to obtain media attention at different levels of risk (the efficient set) is a useful analytical device and a useful interpretative device. During the 1960s and 1970s, economists and psychologists began to recognise the possibility of developing much more descriptive models of the decision-making process that embedded more and more behavioural characteristics observed to shape people's decisions under risk and uncertainty. Kahneman and Tversky (1979) developed what would become the most prominent of these behavioural models. They called their model prospect theory. The technical development and structure of prospect theory was described in Chapter 4. Prospect theory contains a number of elements that make it a valuable counterpart and complement to the models that have been applied in the previous sections.

As explained in Chapter 4, prospect theory has several key features. (1) Decision-makers have a systematic tendency to weight probabilities non-linearly; they overweight small probabilities and underweight large probabilities. (2) When assessing outcomes of actions, people are concerned with changes relative to a reference point rather than with absolute payoffs. (3) People act to maximise the expected value function  $V(x)$  which is S-shaped; convex in the domain of losses and

concave in the domain of gains. The value function is steeper for losses than for gains as people are loss averse and feel losses more keenly than gains. (4) Subjective decision weights are assigned to probabilities and are employed in calculating expectations. In the cumulative version, cumulative probabilities are subjectively altered.

Formally, the key technical feature of prospect theory is the introduction of decision weights into a model of the decision-making. In expected utility theory, the utility of outcomes is weighted by their probabilities of occurrence. The weighting is proportional and linear. In prospect theory, the value or utility of outcomes is weighted by a series of decision weights that are non-linear. This accounts for the observation that decision-makers often overweight unlikely outcomes and underweight more likely outcomes. Technically, therefore, an advantage of applying prospect theory to the determination of a preference ordering in any given context may derive from this complex portrayal of the weighting process. In general, it might be said that if terrorists are described by prospect theory, they may give unduly high weight to the prospect of an amount of media attention that is in fact very unlikely and vice versa. If this non-linearity is exaggerated enough, the terrorist group may choose in a manner that diverges from what would be predicted by expected utility theory.

Less technical, but just as important to the structure of prospect theory, is the concept of the reference point. Whereas expected utility theory treats media attention absolutely, with every amount viewed as a gain, prospect theory depicts the terrorist group as choosing their actions by assessing potential outcomes against a reference point. As such, any particular amount of media attention may be considered to represent a loss if it fails to exceed the terrorist group's reference point. In a context where media coverage is the desired but uncertain outcome, there cannot be negative amounts of media coverage (one cannot lose media coverage retrospectively and one cannot lose media coverage that was never accorded in the first place). For example, 100 c" of media attention received will be considered a loss if the decision-maker's reference point is 101 c" or more and it will be considered a

gain for a reference point of 99 c" or less. Viewed from this perspective, outcomes of terrorist action are not considered in absolute terms alone, but in comparison to a point of reference.

The reference point concept allows us to develop some additional and unique insights into the ways in which media attention may shape terrorist choice. There are three insights that emerge when the formation of the reference point in this context is considered. First, the terrorist group may reference its own previous outcomes in deciding which actions to perpetrate. If it has formed a low or high reference point as the result of past behaviour, its choices may be shaped in particular ways. Second, the terrorist group may aspire to a certain amount of media attention that it believes is necessary to establish the group's identity. Third, and perhaps most importantly, the terrorist group may reference the outcomes of other groups' actions in deciding which actions to perpetrate. In a context where groups compete with each other to establish themselves as known terrorist groups, the media attention accorded to the actions of one group may form the basis for the reference point of a competing group. This reference point will shape the group's choices in particular ways by altering the perspective from which the group perceives alternative actions and their prospective outcomes.

Analytically, the reference point concept may also provide a way to cut through some of the complexity that might be perceived to characterise the media context. The media context in West-Germany was depicted in the first part of this chapter. Although the general trends are probably clearly defined enough to allow reasonably formed decisions to be made, by referencing a rival group or its own past behaviour, a considerable simplification may be achieved; that is, the terrorist group does not necessarily have to look at everything that is happening but only, say, at what one or two groups are doing and what media attention those groups are receiving. It should also be noted that the reference point is not a static concept. It may drift or change over time as the context changes and the group observes or experiences certain outcomes. It may also be subject to considerable disagreement within a terrorist group. If law enforcement agencies know or suspect that a particular group

references its choice of action against the media attention of another group or if it is known that a particular group always attempts to outdo the media attention achieved by its previous action, together with a basic statistical picture of the contemporary context, it may be possible to form some expectation regarding the type of action that the terrorist group may choose to do next. Tension regarding the group's aspirations, reflected in the reference point, may splinter relations within the group in ways that represent important opportunities for law enforcement and intelligence. The value of decision theory lies not only in its formal determination of preference orderings but in the rich nature of the inferences that it may assist us to draw.

Complementing the concepts of non-linear probability weights and the reference point are two additional concepts unique to prospect theory. These are loss aversion and the idea of a domain of gains and losses. Not only does prospect theory allow us to treat losses in this context (outcomes less than the reference point) but it also allows us to treat particular behavioural reactions to potential losses. If a terrorist group holds a reference point, say 100 c'', outcomes lower than the reference point are perceived as losses. Loss aversion refers to the fact that decision-makers weight losses more heavily than gains. A gain of 20 c'' above the reference point (i.e. an outcome of 120 c'') confers less satisfaction than the pain felt when bearing a loss of 20 c'' below the reference point (i.e. an outcome of 80 c''). The behavioural response to loss aversion is risk-seeking over losses and risk aversion over gains. This is behaviour not reflected in the other two models that have been applied in this thesis, based as they are on considerations of risk aversion, not risk-seeking behaviour.

Prospect theory operationalises risk aversion and risk-seeking in the two different domains. The domain of gains (losses) refers to the range of prospective outcomes, relative to the reference point, expected to result from alternative actions. The range of prospective outcomes and the reference point together determine the size of the domain of gains (losses). In the present context, where each prospective action is expected to generate some amount of media attention ranging from nothing to some higher amount, the domain of gains (losses) will be greater (less) depending on the



terrorist group's reference point. A terrorist group with a low reference point confronts a larger domain of gains (smaller domain of losses) than a terrorist group with a high reference point. Loss aversion, the propensity to avoid losses, instigates risk-seeking behaviour when the terrorist group confronts a set of alternative actions that predominantly produce outcomes expected to be below the reference point. Risk aversion is instigated when the terrorist group confronts a set of alternative actions that predominantly produce outcomes expected to be above the reference point. In one case, therefore, we would expect the terrorist group to display a tendency towards those actions with higher but more variable outcomes and in the other case we would expect the terrorist group to display a tendency towards those actions with lower but more certain outcomes.

The discussion is now complemented by a formal quantitative application of cumulative prospect theory to the terrorism context in West-Germany. This application formalises the insights and inferences that we have been discussing and demonstrates how prospect theory works. Primarily, like the other models of the decision-making process, prospect theory is designed to determine a preference ordering over alternative risky prospects. The risky prospects in this context are terrorist actions that potentially result in some amount of media attention being accorded to the group that perpetrated them. The application shows the impact of reference points, perceptions of chance and likelihood, and loss aversion on terrorist choice in this context. The application is followed by a deeper discussion of particular choices that were observed in the period under consideration. Together, this quantitative analysis and formal narrative approach provide a behavioural perspective on terrorist decision-making when media attention is desired but uncertain.

Using the data gathered for this thesis, cumulative prospect theory was applied to determine a set of preference orderings over the alternative actions. There is, of course, a multiplicity of preference orderings for each different sub-period and reference point. The data for the overall period, 1970 to 1980, forms the basis for the results reported here. Similar patterns characterise all of the sub-periods. It will

be recalled from Chapter 4 that the formal structure of prospect theory is represented by a set of equations that detail the value function and the probability weighting functions:

$$V = \sum v(\Delta x_i) \pi(p_i)$$

$$v(\Delta x) = \begin{cases} v(\Delta x)^\alpha & \Delta x \geq 0 \\ -\lambda(-\Delta x)^\beta & \Delta x < 0 \end{cases}$$

$$\pi_i = \begin{cases} \pi_i^- = w^-(p_1 + \dots + p_i) - w^-(p_1 + \dots + p_{i-1}) & \Delta x < 0 \\ \pi_i^+ = w^+(p_i + \dots + p_N) - w^+(p_{i+1} + \dots + p_N) & \Delta x \geq 0 \end{cases}$$

$$:= \begin{cases} w^+(p) := \frac{(p)^\gamma}{(p^\gamma + (1-p)^\gamma)^{\frac{1}{\gamma}}} & \Delta x \geq 0 \\ w^-(p) := \frac{(p)^\delta}{(p^\delta + (1-p)^\delta)^{1/\delta}} & \Delta x < 0 \end{cases}$$

There are several parameters whose values must be estimated in order to use the model. The values of these parameters have been the subject of much research in behavioural economics and psychology. For the purposes of this application, the values reported by Tversky and Kahneman (1992) are used. For the loss aversion parameter  $\lambda$  a value of 2.25 is used, for the parameters  $\gamma$  and  $\delta$ , values of 0.61 and 0.69, respectively, are used and, finally, for  $\alpha$  and  $\beta$ , each is accorded a value of 0.88. These parameter values are the result of intensive research in experimental settings. The full structure of prospect theory, as can be readily appreciated, is quite complex when considered alongside a model such as (basic) expected utility theory. The behavioural dimensions that are incorporated into the prospect theory model are deeper and some simplicity is sacrificed in order to accomplish a more descriptive theory of decision-making.

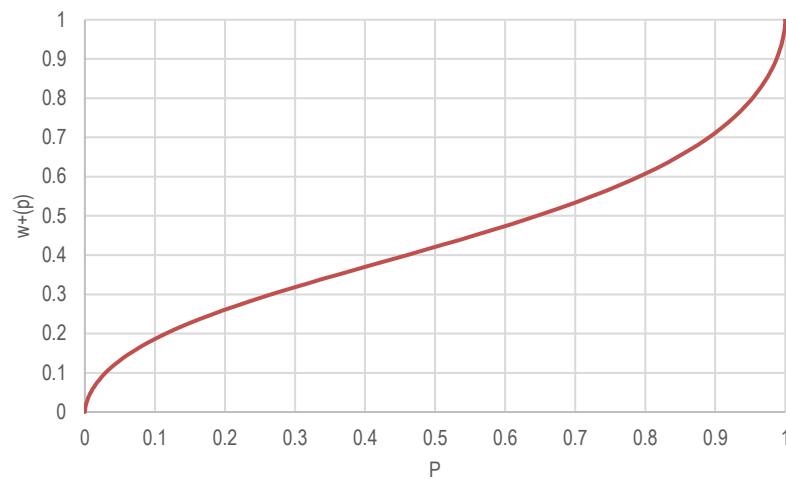
Viewed from the perspective of cumulative prospect theory, the terrorist group is depicted as choosing from among alternative actions on the basis of the media attention that the group expects to result from deploying particular actions. The group's assessment, however, takes place with regards to a reference point rather than an assessment of the absolute amount of media attention expected. As explained, various behavioural characteristics impact the decision-making process, including the tendency to overweight or underweight particular outcomes and the desire to avoid losses if at all possible. As before, the value or utility that the group attributes to an amount of media attention is the basis for the decision. In deciding from among alternative actions, this value or utility is weighted by a decision weight and summed over outcomes to arrive at a prospect value for each alternative. The action with the highest prospect value is the most desirable.

In addition to being the first analysis to apply prospect theory to the analysis of terrorist choice in a context where media attention is the desired payoff, this thesis represents one of few applications of prospect theory in an empirical setting (see Barberis, 2013). During the 1970s, terrorist groups deployed seven different attack methods. Using the average and standard deviation of the media attention accorded to each alternative and assuming normally distributed outcomes over time, an application of prospect theory involves determining the values and decision weights for each outcome for each alternative action and using these to compute the prospect value that forms the basis for a preference ordering over the alternatives. Unlike basic expected utility theory, the decision weights are non-linear for both gains and losses. An example, which depicts the weighting function for gains for the attack method category Bombing, is shown in Figure 6.6.<sup>85</sup>

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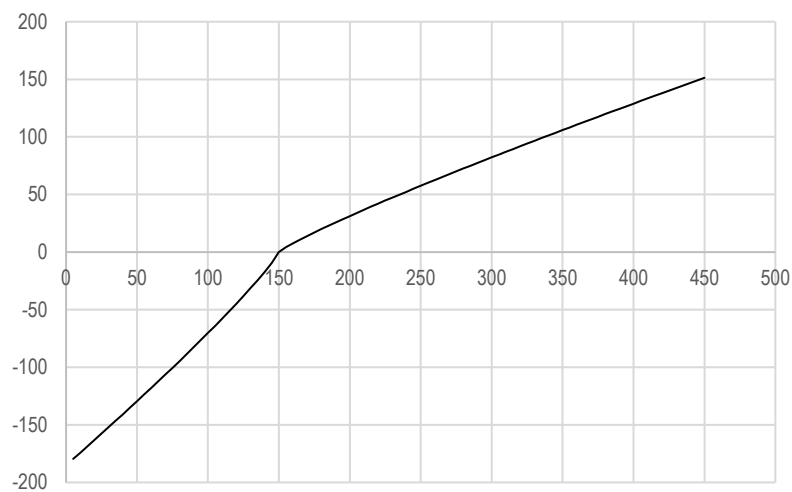
<sup>85</sup> The curvature of the function is determined by the magnitude of  $\gamma$  and  $\delta$ .

**Figure 6.6 Non-Linear Probability Weights, Gains, Bombing, 1970-1980**



The inverse S-shaped decision-weighting function depicts a tendency to overweight less likely outcomes and underweight more likely outcomes. Expected utility theory, by contrast, depicts directly proportional or linear weighting. For a bombing attack, therefore, the terrorist group is depicted by prospect theory as attaching a higher (lower) weight to the less (more) likely amounts of media attention expected to derive from the action. The decision weights are applied to the values or utilities that the decision-maker attributes to each possible gain or loss (relative to the reference point). These values are shown in Figure 6.7.

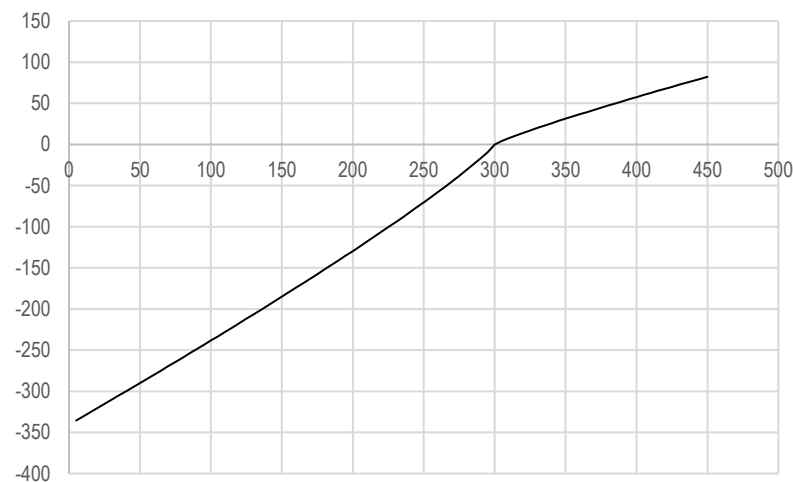
**Figure 6.7 S-Shaped Value Function, Reference Point = 150, Bombing, 1970-1980**



The value function is S-shaped to reflect risk-seeking in the domain of losses and risk aversion in the domain of gains. In Figure 6.7, we have chosen a reference point of 150 ( $c''$ ). The value function is kinked at the reference point. Essentially, the decision-maker overweights and underweights different outcomes and comes to a determination of the prospect value of each action and chooses the action with the highest prospect value.

The relative size of the domains of losses and gains plays an important role in shaping the outcomes of the decision-making process. The size of the domain of losses relative to the domain of gains is, of course, determined by the range of outcomes that can be expected to result from a particular action. It is also determined by the reference point; that is, the domain of gains or losses is perceived to be wider or narrower depending on the perspective of the decision-maker. Figure 6.8 presents the value function from Figure 6.7 but with a reference point of 300 ( $c''$ ). With the other aspects of the decision-maker's character held constant, the different reference point provides a starkly different perspective on the media attention expected to result from a bombing attack.

**Figure 6.8 S-Shaped Value Function, Reference Point = 300, Bombing, 1970-1980**



Of course, a change in the reference point simultaneously alters the perspective from which all of the alternative actions are assessed. The domain of gains shrinks for all prospective actions as the reference point rises but the relative size of the domain of

gains and losses is different for each prospective action. As the reference point increases, the terrorist group's desire to avoid losses, which is the loss aversion inherent in prospect theory, pushes it towards the actions expected to generate higher (but less certain) amounts of media attention. The terrorist group becomes more risk-seeking as its reference point increases because the group is willing to take more risk in order to avoid the unpleasantness of losses. This behaviour is inherent in prospect theory and has been observed in different settings. The preference orderings determined by applying cumulative prospect theory to the data gathered for this thesis should also reflect this tendency.

Cumulative prospect theory generates a new picture of terrorist choice in a context where media attention is the desired but uncertain outcome of terrorist activity. The preference orderings deriving from cumulative prospect theory for each of the attack methods used during the period under consideration (for a range of reference points) are presented in Table 6.9. The overarching pattern is one of increasing tendency towards actions with higher but more variable outcomes as the reference point increases. At the lowest reference points, unarmed assault is favoured. As the reference point increases, actions such as bombing and armed assault come to be favoured. As the reference point increases further, hijacking, assassination and hostage-taking achieve the highest places in the preference orderings deriving from cumulative prospect theory.

**Table 6.9 Preference Rankings resulting from Prospect Value Analysis**

| Reference Point (c") | Armed Assault | Unarmed Assault | Bombing/ Explosion | Facility / Infrastruct. | Hijacking | Hostage Taking | Assassination |
|----------------------|---------------|-----------------|--------------------|-------------------------|-----------|----------------|---------------|
| 5                    | 4             | 1               | 2                  | 3                       | 5         | 7              | 6             |
| 50                   | 4             | 1               | 2                  | 3                       | 5         | 7              | 6             |
| 100                  | 4             | 3               | 1                  | 2                       | 5         | 7              | 6             |
| 300                  | 1             | 4               | 2                  | 3                       | 5         | 7              | 6             |
| 500                  | 1             | 5               | 4                  | 3                       | 2         | 7              | 6             |
| 750                  | 2             | 6               | 4                  | 3                       | 1         | 7              | 5             |
| 1,000                | 3             | 6               | 5                  | 4                       | 1         | 7              | 2             |
| 2,000                | 4             | 7               | 6                  | 5                       | 2         | 3              | 1             |
| 3,000                | 4             | 7               | 6                  | 5                       | 3         | 1              | 2             |
| 5,000                | 4             | 7               | 6                  | 5                       | 3         | 1              | 2             |
| 8,500                | 4             | 7               | 6                  | 5                       | 3         | 1              | 2             |

Like the other models of decision-making under risk and uncertainty that we have applied, prospect theory does not lead us to conclude that the terrorist group will necessarily choose the action with the highest expected amount of media attention. Several behavioural characteristics, including the reference point, will shape the decision. This allows us to account for the range of actions that terrorist groups are observed to perpetrate at different times. Groups with lower reference points, for example, may be engaged in some types of actions while those with higher reference points may be engaged in others. Given the positive relationship between average media attention and its variability over time, groups with higher reference points must bear more risk. Because the domain of losses is wider for these groups (given the stable relationship between risk and reward that generally characterises the terrorism context), these groups may be expected to be quite risk-seeking in their decision-making. This behaviour, explained by prospect theory, derives from the group's desire to avoid losses. If a group's reference point moves sharply higher, perhaps due to the outcomes obtained by a rival group, it may exhibit risk-seeking behaviour and a willingness to engage in actions that it previously accorded much lower preference.

Prospect values can be computed for any risky prospects, including combinations. Therefore, it can be applied to the combinations determined in the previous section. The same pattern will emerge once again. A higher prospect value will be accorded to the more risky combinations as the reference point rises. Groups with higher reference points will exhibit a tendency to engage in combinations of actions with higher but less certain outcomes and vice versa. Groups whose reference points are reshaped higher or lower over time, will be observed to engage in more risky or less risky combinations of actions than previously. Using both mean-variance analysis and prospect theory allows us to consider the changing structure of attack method combinations selected by terrorist groups over time. If a terrorist group suddenly shifts its reference point sharply higher, it must add higher risk actions to its existing combination or increase the weight accorded to those higher risk actions if they are already represented in the group's existing combination. A higher reference point necessitates a rightward shift along the efficient frontier.

As was outlined in Chapter 2, terrorist groups active in Germany during the 1970s were well aware of the actions of other groups and the outcomes that those actions achieved. Members of the RAF not only kept detailed records of media reports but also had a complex and intertwined relationship with the 2<sup>nd</sup> June Movement (see for example: Wunschik, 2006, p. 542; Peters, 2007, p. 321; Winkler, 2008, pp. 246, 247). This relationship included collaboration, the sharing of bounty and allies, expressions of solidarity, but also inter-group rivalries, competition over limited resources, jealousy at the other group's successes and, in consequence, steps to vie for dominance and public recognition. Winkler (2008, p. 177) cites Bommi Baumann, member of the 2<sup>nd</sup> June Movement, who in 1975 put it this way: *“Wer die knallhärtesten Taten bringt, der gibt die Richtung an”* (Those who can pull off the toughest actions, point the way).

The premise that terrorists reference their actions at least partially to actions of other terrorist groups is further supported by a quotation from RAF member Stefan Wisniewski (1997, p. 36), who in 1978 was charged and sentenced to life in prison for participation in the RAF kidnapping and murder of Hanns Martin Schleyer, President of the Confederation of German Employers' Associations, in 1977. In an interview conducted in an Aachen prison in 1997, Wisniewski recalls the 2<sup>nd</sup> June Movement's hostage-taking of West-Berlin Mayoral candidate Peter Lorenz in 1975 and suggests that his own group (the RAF) would have done well to emulate this action: *“Am Augenmaß der Bewegung 2. Juni hätten wir uns ruhig ein Beispiel nehmen können”* (We could have learned a lesson from the sense of proportion displayed by the 2<sup>nd</sup> June Movement). However, with the benefit of hindsight, he adds: *„Aber die Lorenz-Entführung hat wohl auch die Kräfteverhältnisse verändert”* (But the Lorenz-kidnapping had possibly changed the balance of power). Through the perpetration of the Lorenz-kidnapping the 2<sup>nd</sup> June Movement had been able to extract considerable concessions from the German government (see P. J. Phillips & Pohl, 2014, pp. 142-143). The media coverage of this terrorist incident throughout all of its stages was considerable and on par with the media attention accorded to the assassination attack on the Munich Olympic Village in 1972 (see Table 6.2). No other terrorist attack throughout the 1970s had received an amount of media coverage of similar



proportions. It seemed clear that the next terrorist action had to be bigger than the Lorenz-kidnapping (Winkler, 2008, p. 252) in order to increase the RAF's chances of attracting similar media attention and governmental concessions. With key-members of the first RAF generation still imprisoned and weakened (or dead) after a series of collective hunger-strikes and spurred on by the recent success of the 2<sup>nd</sup> June Movement, members of the RAF's second generation travelled across Europe scoping out potential targets for their next attack. In April 1975, just two months after the Lorenz-kidnapping a decision was made and a hostage-taking (barricade incident) perpetrated on the German Embassy in Stockholm. The RAF's demands for the release of their hostages were very similar to the terms previously dictated by and granted to the 2<sup>nd</sup> June Movement in the Lorenz-kidnapping. Again, demands for extensive media coverage of the release of fellow terrorists held in German prisons were included. However, this time the German government was unwilling to concede and the action essentially failed for the RAF. In an interview with *Der Spiegel* magazine German Chancellor Helmut Schmidt summarised the government's resolve: *"Denen musste doch mal gezeigt werden, daß es einen Willen gibt, der stärker ist als ihrer"* (Somebody had to show them [the terrorists] that there is a will that is stronger than theirs). The German police force received additional resources and weapons while entitlements for terrorists held in custody and their lawyers were curtailed (Winkler, 2008, pp. 254-255). What followed were challenging times for the RAF, characterised by introspection and tensions within the group but their study of media reports and deployment of media strategies continued (Winkler, 2008, p. 259): *"Medienbeobachtung ist wichtig, und mehr denn je ist die RAF ein Medienphänomen"* (Monitoring of media reports is important, and more than ever the RAF is a media phenomenon). However, despite its efforts, the RAF was weakened, key-members were still imprisoned, and group members underground were short of money, weapons and resources. In addition, two other terrorist groups, the Revolutionary Cells and the Croatian Nationals, became increasingly active relative to the RAF and were able to secure some media attention. On Mothers' Day in May 1976, founding member of the RAF, Ulrike Meinhof, was found dead in her cell. News of her apparent suicide did not even appear in the print media until five

days later, as her death occurred during a period of industrial action which significantly disrupted the printing of newspapers for almost two weeks; a fact Ulrike Meinhof may not have been aware of during her last tumultuous days. It seems ironic that the ultimate and final demonstrative action of this accomplished journalist, columnist, media strategist, and ultimately terrorist barely received much media attention at all. The history of media attention accorded to terrorist actions during the 1970s would have made it clear to any astute observer that only a few types of attack methods remained which, if successful, would be capable of re-establishing the RAF's position.

On 7 April 1977, RAF "Kommando Ulrike Meinhof Rote Armee Fraktion" assassinated Federal Attorney General Siegfried Buback in a drive-by shooting in which two of his staff were also fatally wounded. Many were shocked by the incident as Peters (2007, p. 382) observes: *"War Generalbundesanwalt Buback doch der oberste Terroristenjäger des Landes: Wenn es der RAF gelingt, ihn zu ermorden, wozu wird diese Gruppe noch in der Lage sein?, fragen sich viele Menschen"* (Federal Attorney General Buback was the top hunter of terrorists in the country: if the RAF can manage to murder him, what else will this group be capable of?, many people ask themselves). At the end of April 1977, surviving key-members of the RAF's first generation, Andreas Baader, Gudrun Ensslin and Jan-Carl Raspe were sentenced to life in prison. Leading members of the 2<sup>nd</sup> June Movement had also been arrested and were held in custody. On the outside remaining RAF members were working feverishly to prepare their next action. A hostage-taking was to facilitate the "big raushole" (the big 'getting out'), meaning to force the release of terrorists from prison in exchange for the life of two high-profile hostages: Dresdner Bank speaker Jürgen Ponto and President of the Confederation of German Employers' Associations Hanns Martin Schleyer (Wisniewski, 1997, p. 36; Winkler, 2008, p. 304). On 30 July 1977, the group drew on the personal connection of RAF member Susanne Albrecht to Jürgen Ponto and attempted to take the Dresdner Bank speaker hostage (Peters, 2007, pp. 388-391). However, the action did not proceed as planned. Within a few minutes of Ponto and his wife unsuspectingly welcoming RAF members into their home Ponto was fatally shot by one of the terrorists all of whom managed to escape.

The failed hostage-taking of Jürgen Ponto exemplifies the inherent risks of this attack method not only in terms of operational results but also in terms of the outcome that can be expected with regard to media attention. The Ponto case attracted less than one third (2,566.30 c") of the media attention accorded to the successful hostage-taking of Peter Lorenz just two years earlier (8,356.33 c"). In fact, members of the 2<sup>nd</sup> June Movement had faced a very similar scenario in November 1974 (Peters, 2007, p. 321) when the group's attempted hostage-taking of Günter von Drenkmann, President of the Superior Court of Justice (Kammergericht), failed and turned into an assassination-style attack in Drenkmann's private residence which left him shot and killed. Unlike the group's hostage-taking of Peter Lorenz a few months later, the attack on Günter von Drenkmann resulted in only limited media attention (362.20 c"). No attacks were perpetrated by the 2<sup>nd</sup> June Movement in 1977 while the RAF certainly appeared to be focused on high-risk attack methods, albeit with further unplanned results.

On 25 August 1977 an oversight narrowly foiled the RAF's rocket-launcher attack on the building of the Federal Attorney's office (Bundesanwaltschaft) in Karlsruhe. While the scale of the attack, if successful, could easily have destroyed the entire building (Peters, 2007, p. 395), the action was interpreted by the media and consequently the GTD as an assassination attempt on a specific person, Generalbundesanwalt (Public Prosecutor General of the Federal Court of Justice) Kurt Rebmann. Significant damage was avoided as the RAF's technician, Peter-Jürgen Boock, had not wound up the alarm clock that would have been necessary to set off the time fuse, a mistake which the group later claimed to have been intentional as the whole operation had been staged as no more than a warning. Despite the high risks incurred by the RAF, the payoffs received were negligibly small. In terms of media attention, only 456.82 c" were accorded, equivalent to merely 5.5% of the amount of media coverage accorded to the Lorenz hostage-taking which remained the most successful terrorist action of the 1970s. Despite the set-backs incurred, the RAF pressed ahead and prepared the group's final action during this eventful period later referred to as the German Autumn (Deutscher Herbst).

On 5 September 1977, several members of the RAF forced the passenger car that the President of the Confederation of German Employers' Associations (Arbeitgeberpräsident) Hanns Martin Schleyer was travelling in as well as an escorting vehicle into a traffic accident. When the vehicles came to a halt, the RAF killed four men in an assassination-style rapid fire shooting: Schleyer's driver, the driver of the second vehicle and two bodyguards. Miraculously, Schleyer himself sustained no injuries. Before any help could arrive, Schleyer was dragged from his car, transferred to a waiting van, injected with a short-term narcotic and rushed off to the terrorists' first hide-out. The attack took less than a couple of minutes and was witnessed by a 10-year old boy, who believed he was watching the filming of a movie scene. Just thirty minutes later at around 6.00pm news of the event reached German Chancellor Helmut Schmidt who immediately called for a televised address. At 9.20pm, less than four hours after the Schleyer hostage-taking, the Chancellor gazed intensely into the camera addressing not only the German public but also Schleyer's hostage-takers directly via this public television broadcast. It was the first of several communications between the German government and the RAF hostage-takers in a terrorist action that continued for 43 days. The incident attracted the longest lasting and highest volume of print media reports of the decade: 18,672.99 c" in *Bild*, *Süddeutsche Zeitung* and *Die Welt* alone, more than double the amount of media attention accorded to the Lorenz hostage-taking and more than seven times the volume of reporting following the failed Ponto hostage-taking attempt less than two months earlier. In terms of having their demands for the exchange of their hostage met, however, the action failed for the RAF, despite their securing the support of Palestinian terrorists who seized a German Lufthansa airliner ("Landshut") and seconded the RAF's demands in exchange for the release of their Landshut hostages. In a rescue operation entitled "Feuerzauber" (fire magic) on 18 October 1977, German counter terrorism group GSG 9 stormed the Landshut aircraft in Mogadishu, Somalia, freeing all hostages and killing three of the hijackers. Shortly thereafter, RAF founding member Andreas Baader as well as Gudrun Ensslin and Jan-Carl Raspe were found dead in their Stammheim prison cells. The next day, Schleyer's body was

discovered in a car near Mulhouse, France. He had died through an execution-style shooting committed by remaining members of the RAF.<sup>86</sup>

Prospect theory provides a rich framework with which to interpret and analyse these decisions and events. That terrorist groups may reference their actions against those of other groups and therefore assess the potential gains and losses of alternative actions *relatively* rather than absolutely generates new insights into terrorist decision-making and allows us to consider different ways in which terrorist choices may be shaped in a particular context. When a terrorist group perpetrates an extremely successful action, the positive trade-off between average (expected) outcomes and the possibility that the actual outcome diverges from the expected outcome leads us to expect that the group's competitors will exhibit at least some tendency towards more risky actions when planning their next attack. In the terrorism context that we have used to frame the analysis, the experience with terrorism in West-Germany in the 1970s, groups that viewed themselves as rivals of the 2<sup>nd</sup> June Movement and who formed their reference points on the basis of the outcomes of actions perpetrated by that group may have been expected to shift their reference points sharply higher in the wake of the 2<sup>nd</sup> June Movement's particularly successful actions. Cumulative prospect theory would lead us to expect more risk-seeking behaviour from rival groups and a tendency towards the actions with higher but more variable outcomes. In the context that we have been considering, hostage-taking was such an action. The RAF's decisions may be interpreted from this perspective.

## 6.4 Conclusion

Chapter 6 presented a discussion of the media and terrorism context in West-Germany during the period from 1970 to 1980. This discussion stressed the stories and reality that can be so easily obscured by the overarching statistics. The experience with terrorism in West-Germany in the 1970s was shaped by many

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<sup>86</sup> Considerable details surrounding the course of events of the Schleyer hostage-taking and the death of RAF members in their Stammheim prison cells are described by Peters (2007, pp. 401-470) and Winkler (2008, pp. 308-350).

factors, not least the actions of the many different active terrorist groups, each perpetrating actions using a variety of different methods. Although the motives for terrorism are complex, this thesis is primarily concerned with media attention as a desired outcome of terrorist activity. The data collected for this thesis provides an insight into the relative amounts of attention accorded to different actions over a ten-year period. If the amount of media attention expected to result from a particular action is considered by the terrorist group when it decides which action to perpetrate, an understanding of the structure of media attention within the terrorism context is essential to developing a full understanding of terrorist choice.

In Chapter 3, we concluded that the extant approach within the terrorism and media studies literature has been to accord a strong emphasis to the absolute amount of media attention received by a particular group or a particular type of action. The implication, and sometimes the explicit conclusion, is that the terrorist group will choose the action that is expected to generate the most media attention. The literature also implies (or states, as the case may be) that terrorist groups can manufacture media attention and, indeed, that media attention leads to or causes terrorism. By contrast, this thesis stresses the uncertainty of media attention and its variability from attack to attack. From this perspective, actions are not guarantees of media attention or the method of manufacturing some given amount, but risky prospects expected to generate some uncertain amount of media attention. There is an inherent risk that the actual outcome of a terrorist action, in terms of the media attention it is accorded, is somewhat different from the amount that was expected. In this context the terrorist group will not necessarily choose the action with the highest expected amount of media attention. Rather, the decision will incorporate various behavioural factors, each reflected to some degree by the complementary models of decision-making under risk and uncertainty.

In this chapter, three complementary models were applied to the terrorism and media context of West-Germany for the period from 1970 to 1980. The basic expected utility theory provides a more sophisticated perspective than the simple expected value approach implicit in the terrorism and media studies literature.

Specifying the terrorist group's utility function as  $\ln(x)$ , the order of preferences over the alternative attack methods can be determined in a manner that takes into consideration not only the expected outcomes and their variability (risk) but the decision-maker's risk aversion. The fundamental result of all such applications is the determination of a preference ordering of the available alternatives. The analysis proceeded by working out the preference orderings that would have characterised such a decision-maker for each sub-period during the 1970s and explored the impact of new attack methods. This application allows us to highlight the interaction of outcomes, probabilities and some basic decision-making metrics in the determination of the terrorist group's preferences in a context where media attention is desirable but uncertain.

Terrorist groups, of course, are not always observed to restrict themselves to a single attack method or type of action. Over time or within a given period of time, terrorist groups will more commonly be observed to engage in more than one type of action. This is somewhat at odds with any explanation that would aim to explain terrorist choice as being guided primarily by the total absolute amount of media attention expected to result from a particular single action. In order to explore terrorist groups' tendency to combine attack methods over time, mean-variance (portfolio) analysis was applied to determine the set of opportunities (to combine actions) that could be expected to generate efficient or optimal amounts of media attention at each given level of risk. This produced, for the first time in this context, a series of efficient frontiers depicting the terrorist groups' opportunities to obtain media attention by combining attack methods in different ways.

The mean-variance perspective highlights the positive relationship that exists between the expected amount of media attention and its variability or risk. The efficient frontiers are positively sloped. Importantly, the efficient frontiers are also concave to some degree. This reflects the gains from combination that terrorist groups may yield. Higher expected amounts of media attention can be obtained at each level of risk than we would expect if we only analysed attack methods individually. Terrorist groups who naïvely avoid putting all of their eggs in one basket

will obtain these increments in media attention, something that would be overlooked by other types of analysis. The determination of the efficient frontier generates the sets of attack method combinations that generate the highest expected amount of media attention at each level of risk. It is possible to identify the constituents of those combinations and identify the structure of attack method combinations consistent with different levels of risk. Because the terrorist group's risk aversion is the primary determinant of choice in this context, it is then a straightforward matter to identify the types of choices that would be consistent with groups' different levels of risk aversion.

Both expected utility analysis and mean-variance analysis are orthodox approaches. The analysis was complemented by the application of a behavioural model, (cumulative) prospect theory. This model incorporates several behavioural features that are absent from the other models. Most prominently, prospect theory includes the effects of non-linear decision-weights, loss aversion and reference points in the decision-making process. This model allows us to consider situations where terrorist groups underweight or overweight different outcomes and, importantly, assess the gains and losses expected to be generated by a particular action against a reference point (rather than absolutely). Prospect theory provides a rich complementary perspective on terrorist group choice in this context. The overarching tendency implied by the model and reflected in the preference orderings that were determined in the analysis is that higher reference points will be associated with a tendency to seek risk and, therefore, a tendency towards engagement in those actions with higher but more uncertain outcomes in terms of the media attention they can be expected to generate.

Together, these three decision-making models provide a unique analytical perspective on terrorist choice that can be applied in any context. During the 1970s, West-Germany experienced a terrorism context that is still accorded much scholarly interest today. The application of decision theory to this context generates a number of new insights into the ways in which the choices of terrorist groups may have been shaped by the evolving media and socio-political environment. Rather than simply



conclude that terrorist groups must have chosen those actions they expected to generate the highest amount of media attention, we have developed richer analytical vocabulary with which to facilitate discussion of the actions of these groups and of terrorist groups active at other times and in other places. Terrorists are risk-averse, experience diminishing marginal utility, naïvely or knowingly combine attack methods, consider the ups and downs in media attention accorded to different actions, assess gains and losses against a reference point and take risks to avoid losses. More deeply than this, terrorist groups that choose in a particular way may be identified as being more or less risk-averse, expectations may be formed regarding their future actions and, if terrorist groups adjust their reference points in light of the outcomes achieved by other groups, may be expected to engage in certain types of activity, some of which may be quite different from that which the group has been observed to perpetrate in the past.

## Chapter 7 - Conclusion

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### 7.0 Introduction

It is the purpose of this thesis to present an analysis of terrorist choice in a context where media attention is the desired but risky or uncertain outcome of terrorist activity. Although 'terrorism and the media' is a longstanding research program that has collected contributions from several different disciplines, on those few occasions when studies focus their attention on the ways in which the amount of media attention accorded to different actions may shape terrorist choice, there has been a tendency to emphasise the absolute amount of media attention accorded to an action as the primary consideration of the terrorist decision-maker. The implication that the terrorist group will choose the action that can be expected to attract the highest amount of media attention leaves the matter of risk and uncertainty to one side and results in the improper classification of terrorist actions as guaranteed manufacturers of media attention. Terrorist actions are risky and the outcomes are uncertain. Terrorist actions can be expected to be accorded some amount of media attention but the actual amount may be quite different from that which was expected. Terrorist actions are risky prospects. Decision theory, both orthodox and behavioural, provides a number of complementary models of decision-making that can be applied to develop a more satisfactory interpretative and analytical framework for terrorist choice in the media context.

In this final chapter of the thesis, the approach that has been taken to the adaptation and application of orthodox expected utility theory, mean-variance analysis and cumulative prospect theory to the terrorism and media context is summarised. The conclusions that can be reached from the new perspectives constructed by this analysis overcome the weaknesses with existing approaches and open new paths towards a more complete understanding of terrorist choice and the ways in which terrorist decisions may be shaped by the media attention accorded to different types of terrorist actions. Several behaviours that terrorist groups are observed to engage in in this context are encompassed, for the first time, in an analytical framework. The choice of actions that are not expected to generate the highest amount of media

attention can be explained with reference to expected utility (rather than expected value) and risk aversion. The choice to combine actions can be explained with reference to the advantages pertaining to risk management that may accrue to groups that diversify, even naïvely. The choice to compete with but *not* necessarily to copy the actions of rival groups can be explained by utilising the reference point concept that lies at the heart of prospect theory. These observed terrorist behaviours have not received satisfactory analytical treatment up until now.

## **7.1 Overview of the Chapter**

This chapter is organised as follows. In Section 7.2 the main contributions of the thesis are listed. The nature of the thesis means that its contributions stretch across several dimensions of the domain of the media and terrorism context. In Section 7.3 the generalisability of the insights that have been generated by an application of decision theory to terrorist choice and its operationalisation within the particular context of West-German terrorism is explored. In Section 7.4 the ongoing relevance of left-wing extremism and the legacy of the archetype examples of terrorist groups that were active at the time is discussed with reference to the modern terrorism landscape. In Sections 7.5 and 7.6 the limitations of the study are outlined and ways in which these may be overcome by future research are identified. Section 7.7 concludes the thesis.

## **7.2 Summary of Contributions**

The application of decision theory to terrorist choice and the analysis of what this allows us to say about how those choices may be shaped by the media attention accorded to different terrorist actions represents the main focus of the thesis. However, the contributions to the literature are much broader and derive from the ways in which the main focus of the thesis has been approached, and situated within, a multidisciplinary field with many interconnected parts. The thesis deals with an area of study within terrorism studies that has been called ‘terrorism and the media’. This area of study aims to understand the interaction, in a very broad sense, between terrorism and the popular and mainstream press. Here we find a range of studies, from more targeted investigations exploring, for example, the amount of media

attention that certain actions have been accorded, to essay length discussions of the potential for symbiosis between terrorist groups and the media. A characteristic of the more focused analytical studies is their placement within a particular media and terrorism context.

The choice of historical or contemporary period is not inconsequential, although general conclusions can almost always be reached. Sometimes, the absolute contemporary obtains its significance from its very contemporariness. This does not necessarily mean that the absolute contemporary should always be chosen to frame an analysis, nor does it mean that the 'best' insights will always be found by doing so. In dealing with any problem, apart from a purely contemporary one, certain advantages may be found to characterise other periods in terms of their suitability and relevance as a setting within which to apply new analytical methods. A study of the interaction of terrorist groups with the social media is a purely contemporary problem requiring, for the moment, a purely contemporary setting. A study of the interaction of terrorist groups with the popular and mainstream press is not a purely contemporary problem. Furthermore, certain settings will be richer than others in terms of terrorist activity and the awareness that terrorist groups may plausibly have exhibited with regards to the media attention accorded to their actions and those of their counterparts. Some settings are rich enough to provide archetype examples of certain behaviours that are observed to run in a continuous stream through the literature. The experience of West-Germany from 1970 onwards is one such setting. The type of terrorist activity, the nature of the active groups, the extent of their activities and their demonstrated awareness of the media attention have made a number of these groups, and the period in general, a point of reference within the literature.

The first contribution of the thesis is the attempt presented in Chapter 2 to organise a statistical overview of terrorist activity in West-Germany (and Europe) during the period from 1970 to 1990 and fold this contextual narrative into the more detailed profiles of several prominent groups with particular emphasis on their interactions with each other and their more or less sophisticated strategies governing their

interactions with the media. Drawing on data from the GTD to provide the starting point for the statistical overview, a picture of a very active terrorism context begins to emerge that is, from a modern perspective, surprising in its scale and diversity. It is too easy to forget the tumultuousness of the past. In the midst of this tumultuousness and contributing to it, at least several groups rose to prominence and have retained their place as archetypal architects of left-wing political violence. Drawing on the extensive literature that has been devoted to these groups and their actions, a series of profiles were presented in Chapter 2 that pointed to the reasons for this prominence and, by highlighting the very scope of the literature devoted to them, provided an indication of the richness of the historical and the contextual material on which we may draw in trying to advance our understanding of the decisions that terrorist groups make and the ways in which the media attention accorded to their actions may shape those decisions.

The second contribution of the thesis is its survey of the global terrorism studies literature. There is a 'literature of literature surveys' within terrorism studies and this highlights the volume and the multidisciplinary nature of the field. Providing a complete survey of the whole field (and even some sub-fields) is no longer possible but providing a literature survey of some sort is, of course, necessary in order to identify the place occupied within terrorism studies by this thesis. Rather than simply cover a sample of papers and books from each area, the approach taken in this thesis was designed to create a clearer picture of how the studies of terrorism program has developed and evolved over the past four decades from its origins through to its most recent criminological turn. In working towards this goal, it was decided to structure the literature survey around the 'most read' and the 'most cited' papers published in two of the major multi-disciplinary and interdisciplinary academic journals (*Terrorism and Political Violence* 1989 (Vol 1/Issue 1) to 2015 (Vol 27/Issue 4) and *Studies in Conflict and Terrorism* 1977 (Vol 1/Issue 1) to 2015 (Vol 38/Issue 10)). This allowed the development of a structured literature survey based on major themes, driven on the one side by publishers and editors and authors and on the other by readers. The preparation of the literature survey traversed more than 640 research articles and books.

The third contribution of the thesis derived from the intensive periods of archival research necessary to obtain the material that would form the basis for our measurements of 'media attention'. Although the media and terrorism literature does contain some quantitative analysis, it is primarily driven by word searches; for example, the number of times an event or a group or even just the word 'terrorism' is mentioned in some period of time. For this thesis, the objective of the archival research was to identify the actual amount of media attention measured in page space or column inches accorded to each terrorist attack perpetrated in West-Germany between 1970 and 1980. The limits imposed on a project undertaken by a single researcher prevented every news outlet from being covered. Guided by the approaches taken in similar types of studies by researchers in other comparable fields, three prominent newspaper publications were selected as targets for the archival research. The rationale for this selection was provided in Chapter 5 and references the geographic coverage and readership characterising the chosen publications as well as the nature of newspaper readership in the Federal Republic of Germany during the period under consideration.

The ambitious objective of identifying and collecting all of the press accorded by these selected publications to each act of terrorism perpetrated in West-Germany during the tumultuous 1970s required two international trips (from Australia) and a total of several months in Berlin accessing the archives. Each terrorist incident was identified from the GTD and then the records of each publication were accessed in order to collect the media attention accorded to each incident. This required visual scanning and detailed reading of over 15,000 pages of newspaper text in the German language, stored on microfilm. Of course, there is no index for a newspaper issue and one must search manually for any mention of each terrorist event. This must be carried out not just for the day after the terrorist event, when reporting may be expected, but for many days following the terrorist event. Sometimes, this involves searching each newspaper issue published on each day for a period of many weeks following an incident. Once each newspaper article was found, it still needed to be selected and prepared for transfer from microfilm to flash-drive. Eventually, this process resulted in the data-storage of around 1,475 pages of newspaper text.

Most newspaper pages, of course, contain several stories, and material belonging to one and the same story is often located in more than one place on a single page and across pages. As such, it was necessary to measure manually the amount of page space or column inches occupied by each relevant section and article. From the almost 1,500 newspaper pages collected and stored, it was eventually determined that 51,586.61 column inches (c") were devoted to acts of terrorism across the 10 year period by the three newspapers. This total amount of media attention accorded to terrorist incidents was divided amongst hostage-taking (57.4%), assassination (27.1%), bombing/explosion (7.3%), armed-assault (3.5%), hijacking (2.6%), facility/infrastructure attack (2.2%), and unarmed assault (0.03%). Interestingly, the relative share accorded by *Bild* to each of the seven attack method categories follows the aggregate order exactly. Apart from a small variation, the same is true of the *Süddeutsche Zeitung* and *Die Welt*. In addition, no evidence was found for a significant difference between the space accorded to the reporting of terrorism incidents in tabloid, 'serious' and 'medium quality' newspapers. Each of the three newspapers contributed about equally to the aggregate coverage of terrorism: *Bild* (35%), *Die Welt* (33%) and the *Süddeutsche Zeitung* (32%). Because the analysis is based on relative amounts of attention accorded to different types of terrorist activity, rather than absolute amounts, the result provides a degree of reassurance that the proportions of media attention accorded to terrorist incidents are similar across different publications and that the three selected publications reflect the tendencies that would be observed by the broader media market.

Even without the decision theory that is applied as an interpretative framework for the choices characterising this setting, there is much to be learned from the picture that emerges from the collected data. Exploring all of these elements must be left for future research but a number of them were picked up in Chapter 6. Media attention varies substantially across different attack method categories, yet terrorist groups do not limit their actions to those attack types which are more likely to attract a high volume of media attention. Media attention also varies significantly between terrorist incidents involving the same type of action. Media attention can be missed through the inopportune timing of a terrorist attack; for example, just prior to a day

on which no newspaper is issued or when unforeseen or competing events attract editorial focus, relegating terrorist attacks to the margins. While the total volume of newspaper space that each of the three newspapers devoted to the coverage of terrorist attacks is very similar, finer differences are evident; for example, many column inches in *Bild* can be taken up by super-sized headlines and numerous photographs, while in the *Süddeutsche Zeitung* and *Die Welt* comparatively more space is devoted to reports and discussions of a more substantial length. Articles in the *Süddeutsche Zeitung* are generally printed in smaller text font sizes with modestly-sized headlines, thereby reaching a higher word-count as well as more depth and breadth of coverage per area of space relative to *Bild*.

Perhaps, however, the most important facet to emerge from the collected data, even before the complementary models of decision-making under risk and uncertainty are applied, is the picture of the context that it reveals. The data is not just a series of column inches. Constituting the column inches are stories of real attacks, pictures of real victims, real terrorist groups and real responses by governments and law enforcement. These events unfolded, not in isolation, but encompassed within the day to day news and the events of ordinary and not-so-ordinary life. They were part of the context, but do not represent the whole context. The media attention accorded to even the most 'successful' terrorist actions occupied only part of the newspaper space available on any given day. The juxtaposition of terrorist actions against the most mundane of advertisements is stark and so is its juxtaposition against issues and problems that had perhaps an even more direct impact on the lives of ordinary people. Sometimes terrorism was but a small ripple; sometimes it was a wave that substantially upset the daily rhythm.

The overarching objective of the thesis is to contribute to the development of our understanding of terrorist choice in circumstances where the media might shape those choices. It is not the objective of the thesis, of course, to prove that media attention shapes terrorist choice in particular ways. Rather, the premise that media attention shapes terrorist choice is the starting point for the thesis. Attention accorded to terrorism by the media is strongly suspected, if not generally accepted,



to be a desire, a motivation, an operational objective of terrorist groups because it plays a key role in identifying the terrorist group as being responsible for certain actions and this has flow-on effects in terms of propaganda, communication and, perhaps, recruitment and public support.

The fourth contribution of the thesis derives from the application of decision theory to the analysis and interpretation of terrorists' choice of action when the media attention expected to be accorded to those actions is a desired but risky and uncertain outcome. In the first instance, in Chapter 4 and parts of Chapter 6, this application proceeds purely analytically, without reference to any specific context. The insights that are generally capable of being derived from these decision-making frameworks emerge during this phase of the application and are then emphasised by examples crafted from the data gathered for the thesis. Existing studies imply that terrorist group strategies pertaining to media attention accorded to their actions are guided by the absolute amount of media attention that is expected. A further implication evident in some studies is that terrorist groups can 'manufacture' media attention or somehow guarantee that attention will be accorded to their actions. This is not the case and, as a foundation for understanding terrorist choice and how it might be shaped by a desire for media attention, is both incomplete and open to logical problems.

It is well known that expected value cannot form the foundation for a logically consistent theory of decision-making under risk and uncertainty. At the very least it is susceptible to the St Petersburg Paradox. Rather, as von Neumann and Morgenstern showed, it is the expected value of a utility function that is required for a basic theory of risky decision-making that avoids the St Petersburg Paradox and other related shortcomings. As soon as we cast terrorist actions such as bombing, armed assault and assassination as risky prospects, it becomes clear that the expected value model is insufficient as an interpretative framework. The basic expected utility model provides a simple but more advanced theoretical framework with which to interpret terrorist choice when media attention is the desired outcome. Because of the risk and uncertainty and the decision-maker's risk

preferences, it is not necessarily the case that the terrorist group will choose the action with the highest expected amount of media attention. The expected amount of media attention, the degree of uncertainty surrounding it and the decision-maker's risk preferences all shape the decision as to which action the terrorist group will choose to perpetrate.

Overemphasising the absolute amount of media attention expected to be accorded to an action as the only consideration of the terrorist group also restricts the analysis by ignoring combinations of actions over time. Terrorist groups are observed to combine actions rather than always choosing one single type of attack method. This behaviour can be encompassed into a framework of decision-making under risk and uncertainty by the Markowitz mean-variance technique. This approach depicts the terrorist group as choosing on the basis of reward and risk, thereby improving upon extant analysis, with risk aversion a primary behavioural characteristic. If a decision-maker must bear more risk, more reward must be forthcoming as compensation. This approach most clearly highlights the positive relationship between risk and reward.

Although not completely orthodox, both mean-variance analysis and expected utility are somewhat interconnected. The advances that were made in our understanding of decision-making under risk and uncertainty during the period from 1960 onwards culminated in the development of behavioural economics and its most well-known theoretical model, prospect theory. To incorporate these advances into the analysis of terrorist decision-making, cumulative prospect theory was applied, in this thesis, to the study of media and terrorism. The structure of prospect theory includes a number of behavioural characteristics that are omitted from the other models. Some of these allow us to highlight, interpret and analyse behaviour that has been observed to characterise terrorist groups. The more technical features of prospect theory, such as non-linear probability weighting, may form the foundation for a more accurate preference ordering. However, it is concepts such as loss aversion and reference point dependence that generate the most penetrating new insights. Reference point dependence may encompass such behaviour as emulating, but not copying, the actions of other groups and together with loss aversion allows us to

explain why terrorist groups may be compelled towards taking more risky actions when their reference point is higher or when losses are ubiquitous (or almost so).

When these complementary models of decision-making are applied to the archival data and the picture of the media and terrorism context in West-Germany, their value as an interpretative and analytical framework becomes very clear. Of course, the insights generated purely analytically are borne out. It is not always the case that terrorist groups choose the action with the highest expected amount of media attention. It is not always the case that terrorist groups choose one single action. Both expected utility theory and the mean-variance analysis encompass these observations and allow us to interpret the choices that terrorist groups made with more sophisticated and nuanced conclusions. This, of course, does not hinge on the direct alignment of the preference orderings that emerge from these models and the actual choices of terrorist groups. Even though the preference orderings are more accurate than the existing (expected value) model, it is not solely the preference orderings and the optimal action or combination of actions that is at issue. The models predict or lead us to expect or allow us to better interpret and understand not simply the choice of a single action but why that action may not be the one with the highest expected amount of media attention and, it must be emphasised, why that action might not be chosen stand-alone but as part of a combination of actions.

Likewise, cumulative prospect theory allows us to compute a preference ordering of actions for each reference point. Again, this represents a step forward in the prediction of what a terrorist group might choose but this is not the sole purpose or the sole factor determining the value of this approach. Reference points formalise the observation that rivalry, competition and benchmarking are inherent features of terrorist group behaviour. Terrorist groups with different reference points will behave in different ways; understanding the impact of a reference point on risky decision-making allows us to better understand this behaviour. Because of loss aversion, as explained previously, terrorist groups with higher reference points must be compelled to engage in more risky actions because only those actions will offer the prospect of avoiding an outcome below the reference point. When rival groups

are particularly successful, therefore, we should generally expect more risk-taking from their counterparts. At the extremes, terrorist groups will be compelled to choose the most risky action in order to avoid a loss. This emerges quite clearly in the West-German context.

### **7.3 The Generalisability of the Analysis**

The context, the time and place must not be allowed to distract from the generality of the conclusions that can be reached from the analysis. In any time and place and for any type of outcome, it is a mistake to conclude that terrorists will choose those actions that have the highest expected value. The alternatives explored in this thesis help to avoid the shortcomings that emerge from the emphasis that has been placed on the magnitude of media attention accorded to different actions. In the process of developing and working through these alternatives, a number of general conclusions are reached. The action with the highest expected amount of media attention will not necessarily be chosen. There is a positive relationship between the amount of media attention expected and the variability of attention across attacks. Terrorist groups will be observed to diversify or combine actions across time or within periods. This behaviour potentially enhances the amount of media attention received at each level of risk because the outcomes of different actions are imperfectly correlated. Reference points may emerge for several reasons and when they do they shape choice. Specifically, when reference points are higher, riskier actions may be necessary in order to avoid losses. These statements hold their validity in any media context where the media attention accorded to a terrorist action is uncertain. This is the case regardless of the nature of the media attention that the terrorist desires.

### **7.4 The Contemporary Interest in Left-Wing Extremism**

In certain periods of time, certain types of terrorism dominate others and whichever type of terrorism is dominating, contemporary considerations obscure the other types and the other periods. However, types of terrorism come and go and most never completely fade away. Many of the most prominent groups that were active in West-Germany from 1970 onwards were leftist or nationalist and this type of terrorism may be overlooked in periods where, for example, religious extremism

appears to present the major challenge to governments and law enforcement. Terrorism studies must continue to encompass in its frameworks all varieties of terrorism. One type or the other can always experience a resurgence. In terrorism studies, leftist terrorism has continued to attract dedicated research (Brockhoff, Krieger, & Meierrieks, 2016, pre-print) and within more general analysis many of the groups that have been mentioned in this thesis are referenced as the archetypal examples.<sup>87</sup> The thesis represents a contribution that is relevant to the broader research programs of terrorism studies. Also, finally, it should be noted that the insights that have been generated and the interpretative and analytical frameworks that have been developed are generalisable not only across periods of time but across different types of groups whenever those groups desire media attention and their terrorist actions are risky prospects that result in some uncertain amount of coverage in the media.

## **7.5 The Limitations of the Study**

As with any investigation there are some limitations to the study presented in this thesis. Some of these are more important than others and some are more appropriately called perceived limitations which, upon further reflection, are not major obstacles to the acceptance of the main threads of the argument. First, it may be suggested that more newspapers be used in order to develop some fuller picture of the media attention accorded to terrorist actions. Also, the newspapers may be supplemented by news magazines such as *Der Spiegel* and *Stern*. In Chapter 5 a thorough rationale for the choices that were made was provided. The news magazines are weekly or monthly publications and this adds more complexity to the data collection and analysis in the sense that it is not commensurable with the daily newspaper cycle. The three newspapers that formed the basis for the examples and applications presented in Chapter 6 were chosen by following a similar methodology or approach to that used in media studies; that is, selecting representatives from

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<sup>87</sup> Several contemporary studies focus on leftist-terrorism and use groups covered in this thesis as archetypal examples (Brockhoff et al., 2016; Hanshew, 2016; Kaplan, 2016; Karcher, 2016; Morris, 2016; Skoll, 2016; Pfahl-Traughbar, 2014; Abrahms, 2008; Kentsch, 2008; Geipel, 2007; Cronin, 2006; Siqueira & Sandler, 2006; Nacos, 2005).

readership tiers. The picture of the terrorism context that can be constructed by using the archival material that was gathered in combination with the statistics provided by the GTD is a rich one. This is evident from the beginning of Chapter 6. On a more technical note, the study is focused on relative proportions of media attention accorded to different actions, not absolute amounts. Coverage of terrorist action in each of the three newspapers that were selected is characterised by similar proportions. It is likely that inclusion of additional newspapers would simply scale up the absolute amount of media attention ( $c''$ ) without influencing the relative proportions accorded to different actions and, therefore, the outcomes of the analysis. This is especially likely to be the case if the additional newspapers are national in scope such that minor events with special interest for a small local readership do not enter into consideration.

From a contemporary perspective, a newspaper study may seem quaint. As explained above, however, the results of this analysis are generalisable beyond the medium. It might be asked, though, whether the study could be enhanced by including television coverage accorded to terrorist actions. This would make an interesting task for future research. Restraints on time and access, among other things, restricted the study to the single medium. A strong rationale was provided in Chapter 5 to justify the focus on print media. As explained in Chapter 5, the print media remained a dominant source for people's daily news in West-Germany during the 1970s. According to a report by *Der Bundesminister des Inneren* in 1982 (cited in Schoenbach, 1987, p. 376), newspaper circulation in West-Germany grew by 41 percent from 17 million in 1965 to 24 million in 1979. On an average workday, newspapers (76%) were reaching about as many members of the West-German adult population as did television (77%), with radio audiences being somewhat smaller (69%) as reported by *Media Perspektiven* 1985 (cited in Schoenbach, 1987, p. 385). While the rise of television has been accompanied by a fall in newspaper readership in many countries around the world, the effect has been far less prominent in Germany. A high newspaper readership of 85 percent on an average workday in Germany in the mid-1970s declined by just 5 percent over 20 years to 1997 (Atanassoff, 1997; cited in Schoenbach et al., 1999, p. 226).

The study focused its attention on the experience of West-Germany with terrorism during the 1970s. A rationale for this has been provided and the resource constraints that prevented further data collection have been noted. The inclusion of a longer dataset would supplement the study. Including the 1980s and 1990s up to the period when the RAF finally dissolved, in 1998, may encompass and reflect broader patterns in the media attention accorded to terrorist activity. At the very least, the structure of the opportunities would be identified. The West-German context served as the basis for examples and applications in this thesis. It has already been explained that many of the most important aspects of our interpretation and explanation for terrorist choice, when media attention is desired but uncertain, are generalisable. Although the structure of opportunities and choices evolved during the 1970s, and undoubtedly evolved beyond 1980, the decision-making models that facilitate the interpretation of the media and terrorism context could be applied in exactly the same manner to other time periods as has been shown throughout this thesis.

## **7.6 Suggestions for Future Research**

The task of preparing the thesis began with a fairly well-defined objective which became refined during the course of the project's development.<sup>88</sup> This came to be encapsulated in the overarching objective of the thesis provided in Chapter 1. This overarching objective guided the study along the path towards its timely completion. During the course of the investigation, especially following the two separate periods of archival research, data collection, data organisation and measurement, a number of interesting avenues for research opened up. Some of these have been incorporated within the thesis. Others had to be left for future research. A selection of the most important of these directions for future research is provided in this section.

The material gathered from the archives is much richer than that used in other studies relating to media and terrorism. As such, a more detailed picture emerges from it. While the thesis presented this overall picture and explored some of the most

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<sup>88</sup> The project was commenced in 2010 and completed towards the end of 2016.

prominent active terrorist groups of the period, it is possible to explore the choices of individual terrorist groups in more detail. Because these groups retain a place of prominence in terrorism studies, such an investigation would represent a worthwhile contribution to the literature. Such an investigation would proceed by identifying all of the actions of each individual group. This was done for this thesis but with a different objective in mind; that is, to ascertain the amount of media attention accorded to different types of actions. The media attention accorded to each action of each particular group was not explored in detail. Using the material gathered from the archives it would be possible and useful to determine media attention accorded to the actions and combinations of actions chosen by each individual terrorist group. This would provide a more fine-grained picture of the settings in which terrorist groups decisions are made and the outcomes achieved.

A more technical consideration that would be interesting to consider, though perhaps not completely generalisable, is the fitting of the prospect theory parameters to the terrorist groups' decisions within the West-German context. This would contribute something towards a more detailed description of the decision-making processes of specific groups. It will be recalled that the application of prospect theory requires values for several parameters, including loss aversion. The values for these have been estimated in laboratory settings by many researchers, including Tversky and Kahneman. The parameter values for this study were taken from this literature. It would be possible to overlay the choices of individual groups with the prospect theory framework and attempt to determine values for loss aversion and the curvature parameters for the value function and probability weighting functions that are consistent with the observed choices. Because applications of prospect theory in empirical settings are still rare within the economics literature, such an exercise may have implications for both terrorism studies and microeconomics.

One aspect of the media attention data that was recognised even before the archival research was undertaken was the possibility of decay. During the collection phase, this was noted as a more and more interesting phenomenon. The archival research



involved starting with the newspaper edition published the day following an event and proceeding until the attention was interrupted. This was explained in Chapter 5. This part of the process, therefore, generated an interesting picture of how media attention accorded to events declines over time. The decay for a selection of specific events was reported as part of Table 6.2. A more detailed investigation of decay represents a promising task for future research. Not only would this research focus on identifying the general patterns, if there are any, in the decay of the media attention following an event but it may also focus on the application of the decision-making models to such choice objectives as, for example, the maximisation of attention span or, conversely, the minimisation of the rate of decay. Rather than aiming to maximise the volume of expected media coverage with a few high impact attacks, some groups may aim at perpetrating a long string of lower impact attacks with smaller but more sustained expected media attention.

## **7.7 Closing Remarks**

Through a combination of archival research, theoretical argument, application and analysis the overarching objective of this thesis has been addressed. There are weaknesses inherent in both the decision-making models that are implicit in the existing literature that deals with terrorism and the media and the data that is used as the foundation for existing arguments and analysis. This thesis has taken some steps towards overcoming these limitations. A complementary framework of decision-making under conditions of risk and uncertainty was developed using three prominent models: expected utility, mean-variance analysis and cumulative prospect theory. The application of this framework to a context in which terrorist groups desire media attention and seek to obtain it by perpetrating acts of terrorism was worked through both purely analytically and empirically in the context of West-German terrorism during the period from 1970. The outcomes of this thesis are multifaceted but, in general terms, the thesis represents a new lens through which to interpret terrorist decision-making in this context and identify broad patterns of behaviour. In a dynamic, evolving and seemingly complex setting, the analysis presented in this thesis represents a valuable and practicable contribution to the literature that can be further augmented by future research.

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