The Conjunction of Terrorist Opportunity: A Framework for Diagnosing and Preventing Acts of Terrorism.

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Abstract

This paper outlines a framework which draws together the currently fragmented understandings of, and actions against, terrorism. The Conjunction of Terrorist Opportunity (CTO) stems from a widely-known equivalent in crime prevention. Detailed distinctions emerge which clarify the relationship between crime and terrorism. There is special emphasis on historical and higher-level, emergent causes, including terrorists' pursuit of strategic objectives and the career of the terrorist organisation itself as it co-evolves with the society trying to frustrate and destroy it. But the framework seeks to anchor these understandings by reference to terrorist events and their immediate causes. Based on this analysis a suite of interventions can then be chosen to match terrorist problem and context and to reflect tactical and strategic priorities. Although the framework is only sketched here, it appears sufficiently promising to test out on a range of case studies by diagnosing causes and describing or suggesting interventions.

Key Words: Terrorism; opportunity; co-evolution, prevention, conceptual framework.

Introduction

The cliché 'One person's terrorist is another person's freedom fighter', illustrates the difficulty with defining terrorism. In English law, however, an act of terrorism is one where:

> 'The use or threat is designed to influence government or to intimidate the public and the use or threat is made for the purpose of advancing a political, ideological or religious cause'.[4]

The use or threat refers, of course, to some destructive action which includes one or more of:

- Serious violence against the person.
- Interference with or serious disruption of an electronic system.
- Serious damage to property.
- Creation of a serious risk to the health or safety of the public or a section of it.
- Endangering of life other than that of the person committing the action.

The temptation to dismiss terrorism as acts of mindless, random violence must be overcome as terrorist acts usually entail a strategic use or threat of violence against a target (individual or group) aimed at influencing a specific audience. Terrorists should be regarded as highly goal-directed with means consistently linked to ends. In this sense they are rational, requiring sophisticated analysis and response.

Professional understanding of terrorist groups, individual members' motivations and acts extends well beyond the mindless violence view, of course, but it is highly fragmented. No framework yet exists which:

- Draws together the separate threads of understanding
- Guides analysis of terrorist problems and their causes to support:
    - Understanding and investigation of past events,
    - Risk and threat assessment, and
    - Prevention of specific events, classes of event and their wider consequences
- Identifies the full range of preventive responses which could be implemented by different agencies acting at different levels and over different timescales
- Facilitates the sharing of good practice (and avoidance of ineffective or counterproductive practice)

And above all acknowledges the evolutionary nature of the problem in which move and countermove between terrorists and preventers co-evolve, where gaining the upper hand and keeping the risk at 'tolerable' levels requires constant intelligence, innovation and deployment. [5]

Consequently, actions against terrorism, although individually of high quality, may be inefficiently targeted, uncoordinated and compartmentalised, ineffective or even antagonistic. Battles may be won but not wars. Good practice is difficult to co-ordinate and to share nationally and internationally if it lacks a common descriptive language which also allows for adaptation to local contexts. Such contexts may be as diverse as an Irish seaport or an Indonesian bazaar. The aim of this article is to suggest a conceptual framework which could help join up the domestic and international responses to terrorism and which complements the top-down analyses more commonly done.

Opportunity-based approaches to crime reduction consider the necessary conditions for criminal events to occur. A simple and popular 'primer' for this approach is the 'crime triangle' which focuses on victim/target, offender and location.[6] The logic is that knocking out one or more of these causes, prevents the crime. Simplicity is an advantage where elementary responses to straightforward crime problems are being sought, but for complex crimes committed by sophisticated, highly-determined, persistent and well-resourced offenders it is inadequate. In practice, too, simple opportunity models have tended to neglect offenders, treating them as a kind of constant background presence rather than a factor to be analysed in depth.

Ekblom's Conjunction of Criminal Opportunity (CCO) builds on these simple beginnings and in particular gives sharper focus to the offender.[7] The CCO focuses analysis on an exhaustive map of 11 immediate, generic causes of criminal events which come together to create criminal motivation and opportunity, and onto which can be mapped 11 generic principles of intervention. It is a kind of universal story of the criminal event, in which a predisposed, motivated and resourced *offender* encounters, or engineers, a crime *situation* involving an attractive, vulnerable or provocative target, in an environment that is conducive to crime. This is facilitated by an *absence* of crime preventers who are alerted, motivated and empowered to act and the *presence* of crime promoters – individuals such as fences who make crime more likely to happen.[8] The CCO also aims to integrate enforcement-based approaches to intervention with 'civil' ones involving changes to the everyday world of institutions, buildings, schooling etc such that people strategically or tactically responsible for reducing crime have at their disposal, a map of *all* the alternative families of intervention from which to select methods.

The identification of the immediate causes of criminal events will have implications for how distant factors can be blocked or deflected, before they travel downstream and affect the immediate ones. The remote causes of a criminal event (such as the effects of 'poor parenting'), although diverse and many, must all eventually act through the immediate ones. The same is true of causes that stem from the emergent properties of culture, networks and markets – they ultimately act through patterns of changes in the 'molecular', immediate causes. Prevention at these higher levels involves selecting, mixing or matching from methods which operate at a whole range of spatial and temporal scales and ecological levels (ie. acting on, or through, individual, family, community etc). But in each case the focus is on how these methods ultimately affect individual offenders in individual crime situations, both potential and actual.

CCO has been extended to cover organised crime and drug dealing, which required getting to grips with more complex, multi-staged crimes.[9] These applications of CCO, and all the features described above, made application to terrorist acts seem worth exploring.

The Conjunction of Terrorist Opportunity (CTO)

Terrorism and its prevention are different enough from 'ordinary crime' to merit a version of their own – the Conjunction of *Terrorist* Opportunity (CTO). Setting out the CTO in this

paper helps to identify how terrorism differs from the rest of crime, and thus limits uncritical importation of ideas and assumptions from the crime reduction world, which may detract from the response to terror. Equally, the terrorism perspective gives further insights into how to depict 'ordinary' and organised crime. For example, single events are not the whole problem to be addressed: to achieve their ultimate ends terrorists aim to create a wider *climate of terror*, which in important respects is the opposite of community safety.[10]

CTO, like its progenitor, potentially allows each family of causes of terrorism to be tackled by an equivalent family of intervention principles, using clearly specified and targeted methods (set out below). As such it has the potential to support a 'gearing up' against terrorism, in a way which acknowledges the co-evolutionary nature of the relationship between preventers and terrorists.[11]

Terrorism has a richer historical dimension than crime, whose causes (and preventive interventions) are mainly confined well within individual lifetimes. Events decades or even centuries ago (eg The Battle of the Boyne) can have a lingering influence over those that happen in the here and now. More recent events (eg the invasion of Iraq, or the sudden availability of huge numbers of weapons following the end of the Cold War) modulate the influence of, and are modulated by, these earlier ones resulting in a stream of contemporary terrorist events intended to serve some wider strategy. The CTO acknowledges this historical dimension but views all such ancient causes *as they are projected onto the immediate circumstances of individual terrorist events*. For example, the immediate 'carriers' of a longstanding hatred may include the ideological predisposition that an individual terrorist holds in their head at the time of choosing to detonate the bomb, together with the readiness to act that was provoked by a recent action of their enemies and channelled by orders from their leader.[12] Historical perspectives can, however, be diverse. For example, Sim[13] argues that certain violent Muslim extremists are acting not within a framework of 'restoring the past', but one of simply transforming societies so they meet some timeless ideal. Gray[14] though views Al Qaeda as less of a medieval throwback and more of a modern organisation which emerged as a by-product of globalisation.

The main part of this paper begins firstly, by setting out the 11 immediate causes of the CTO, which bear a close family relationship to those of CCO, whilst in some aspects distinct. These can be considered the necessary *micro*-components which must come together for the terrorist event to happen, in the 'here and now'. Secondly, some wider, prior causes will be listed which are needed to understand and prevent terrorist events. Some of these wider causes are still relatively close in time and space to the terrorist event (such as higher-level, 'emergent' properties of contemporary networks and cultures); others stretch way back into history, but nevertheless shape the present. To complement this 'anatomy' of causation the discussion also brings to the foreground the 'physiology' – how the causes come together in dynamic processes; and on a far wider scale, how the terrorist organisation itself grows and develops, pursues its strategic aims and coevolves with the society that is trying to frustrate and destroy it. Lastly, the perspective shifts from causation to *intervention*, using the above analysis of causes to suggest how a suite of actions can then be chosen to match terrorist problem and context and to reflect tactical and strategic

priorities (immediate prevention of an attack versus the disruption of preparations, or recruitment of young people versus the attenuation of a source of terrorist motivation); geographic scales (single, critical event to local pattern to international); and the capabilities of the preventing agency. Different agencies can then be identified to lead or support in each of these tasks in scope with their remit and capabilities. In this analysis, the focus is mainly on international, networked or 'franchised' terrorism rather than state-sponsored terrorism.[15]

(1) Diagnosis – the immediate causes of terrorist events

Anatomy of the event

The CTO identifies eleven immediate, generic causes of any terrorist event, the necessary precursors of opportunity and motivation for that event to occur. These causal components are 'carried' by common defining features of the terrorist event which at their most basic comprise the **terrorist** and the **situation** in which the event occurs. The situation in turn includes various features of the environment and a range of dramatis personae playing particular roles. The 11 causes are shown diagrammatically in the CTO '*Diagnosis Wheel*' (Appendix 1); a fuller explanation of each immediate cause with appropriate examples follows.

The terrorist side[16]

Ideological predisposition– The authors acknowledge that labelling terrorists as merely having a predisposition to criminality (as in the CCO) is to grossly oversimplify their motivations for engaging in terrorism. At the most general level, ideology legitimises the terrorist action because it may involve a complete rejection of the laws and values of the society and state which terrorists are attacking. Terrorists do not perceive themselves as acting criminally/ as terrorists. Within this (to most eyes) distorted framework the terrorists' behaviour is as rational as any other – and it is necessary to try to cross cultures and viewpoints to 'get inside' that rationality to understand, predict and hopefully to influence the decisions made within that frame.

This rationality and awareness may however exist more at a group or leadership level than for individual terrorists, some of whom may be kept at a lower level of understanding, or even deliberately psychologically conditioned. Certainly, some powerful psychological processes of compartmentalisation are in operation for individual terrorists. For example, where they are able to remain focused and self-justified in their intent, despite living submerged covertly for years in a Western culture (as was the case with the perpetrators of 9/11 – and with similarities to Soviet spies such as the Rosenbergs).

Theorists have attempted to explain how terrorists become so, by adopting a sequential process that leads to an ideological predisposition to terrorism:

Socialisation[17]– The potential terrorist is introduced to the values and attitudes of the existing terror group. Through a process of socialisation they begin to take on those values and attitudes. As Whittaker (2004) notes, social, economic and ideological factors may assist with the process.

Moral disengagment[18]– This process re-orders the existing moral codes of conventional behaviour of the potential terrorist. It reduces the terrorist's part in any death and destruction psychologically by mis-representing the harm done and blaming (or de-humanising) the victims (akin to the process where offenders 'neutralise' any feelings of guilt and remorse for their victims).

Attachment [19] Having achieved socialisation and moral disengagement the individual becomes psychologically attached to the terrorist group which now gives meaning to their lives (especially where there is religious overlay). The individual then finds it impossible to leave the group where such withdrawal simply cannot be contemplated – *attachment is complete.*

The lack of skills and other personal resources to avoid terrorism – On the recruitment side, the individual's (or group's collective) lack of skill in getting and maintaining a stake in their society may lead to the socialisation effect above. They may lack the skills to resist social pressure to join. They may simply though, be unaware of any choice in the matter (for example, some IRA operatives born into the conflict have spoken of how they did not know why they joined, it was just that, that was what you did!).

Terrorists individually and collectively may lack the psychological or the political skills, power or bargaining resources to avoid conflict or resolve grievances in peaceful ways. But not all terrorists are recruited or retained on the basis of lack of alternative options for life – the phenomenon of educated/wealthy terrorists (such as the Baader Meinhoff gang or even Osama Bin Laden), and/or those who undergo some kind of religious or ideological 'conversion' experience is significant[20]. Even here, though, psychological 'immunity' processes identified by early writers such as Maguire require certain mental resources of resistance to persuasion and thence to being led astray.[21] And lack of status or advancement *despite* wealth or education may be a powerful motivator for upsetting the established order.

The readiness to act – This refers to short-term motivational influences on behaviour, such as the emergence of a direct desire/intention to commit some act or achieve some goal. This readiness may simply originate from a leader's specific orders to act here and now; it may however involve some altered emotional state – presumably, few terrorists commit their acts entirely 'cold', although not all will be consumed with passion. Behind these short-term changes may lie longer-term 'life circumstances' or external events such as increased IRA activity post 'Bloody Sunday'. These – particularly when perceived in terms of a conflict of fundamental values or rights – can magnify a sense of grievance or otherwise prime or permit the individual to use terror[22].

The resources for committing acts of terrorism – The resources that the terrorist requires to prepare for, perpetrate or exploit the event and the wider climate of intimidation in effect help to *create* the opportunities they are capable of taking. An example that comes readily to mind is the idea of the relatively easy-to-fly airliner. Resources include technical and financial skills, knowledge of targets, diverse and innovative MOs, tools, weapons

(impromptu or purpose-built), psychological capabilities such as courage and techniques for neutralisation of guilt, and collaborative networks.[23] Complex actions against hardened targets and alert security personnel require more than just strength in numbers of conspirators – they need organisation and pooling of *diverse* resources. Collective efficacy/social capital[24] and especially trust are vital interpersonal assets here. All these features are held in common with mainstream organised crime – and the overlap is practical as well as conceptual since systematic robbery, fraud and extortion are often used to fund terrorist operations. Training camps (as in Afghanistan) go one step further in capacity-building by deliberately imparting skill, generating trust and building ideology and motivation. Two particular sets of resources that terrorists need if they are to be effective are an understanding of their target audience, its values and valued icons (see below) and a related ability to exploit the media. Another resource is the ability to mount original and unexpected attacks using novel methods and new targets – which contributes both to the success of the attack, its news-value and increased uncertainty engendering greater fear.

The decision to commit an act of terrorism– In the immediate terror situation (ie where the terrorist has to act to make the culminating event happen), all the causes in the CTO finally come together. The by now motivated and equipped offender will usually have to perceive that risk, effort and reward are satisfactory. Decision leads to action – and the button is pressed. This is Cornish and Clarke's 'Rational Choice Theory' view of the process.[25] There is, though, a rich literature in both crime prevention and economics questioning the limits of rationality[26]. Clarke and Cornish themselves, of course, do not argue for such a pure process, and indeed Clarke in his 25 techniques of situational prevention[27] now takes in inhibitions due to conscience or fear, and psychological processes of prompting and provocation introduced by Wortley.[28] Wright and Decker[29] showed the importance of 'psyching up' among ordinary offenders which may even lead them to shut down their critical faculties once they have decided to go in (a process perhaps aided by alcohol or drugs). One presumes that something similar but more extreme has to happen with the suicide bomber on their one and only mission.

Ideology 'programs' the parameters of the decision to commit the terrorist act. For a religiously-motivated suicide bomber, the risk of arrest and the gruelling effort of a training camp are perhaps minor concerns provided the objective is accomplished and the reward of paradise awaits (the preventive intervention principle of lowering the perceived value of the reward becomes difficult when religious beliefs are involved, for example eternity in paradise). Here the risk to worry about is being caught *before* the act; with others, however, (eg. animal rights activists) they will also be concerned with being caught *after*. Terrorist ideologies provide permission and some kind of conscience-neutralising 'absolution' for killing their victims and/or themselves (for example placing specific interpretations on the Bible or the Koran); they may also supply the psychological resources for dehumanising the victims, thus disabling empathetic inhibition.

The terrorist's (tele)presence in the situation –The terrorist does not have to be physically present when a bomb is detonated as this can be done remotely, by post or by timer, as was the case with the Brighton bomb in the 1980's; or by proxy, as with delivering the bomb through some innocent party whose family is held hostage. Shifting perspective from

terrorist events to the climate of terror, it is the *potential* presence of the terrorist or *potential* occurrence of terror events that comprises the perceived risk and instilled fear in the minds of citizens, communities, businesses or governments, and which has the costly effects intended by the terrorists.

On the situational side

Targets – The CCO's straightforward crime target person or property has to be split into **'***target vector'* (using one group to convey a message to another) and *'target audience'*.[30] Terrorists often choose the former to vicariously communicate a specific message to the latter. The IRA for example intimidated builders in Northern Ireland not to repair/construct RUC buildings. The builders were used as vectors to convey messages to different target audiences. The message to the population of builders (and tradespeople) was that working for the RUC was colluding with the 'enemy'. The message to the RUC was that the IRA saw them as a weapon of the enemy. The message to the British Government (and people) was that the struggle would go on and the message to their own supporters was that the 'struggle' would go on until victory. As such the builders in this example were a target vector for multiple target audiences. This concept is not entirely indigenous to terrorism, as kidnapping
involves the use of a target vector (ie. the hostage) to communicate the message to the target audience (ie. ransom demand to rich businessman).

Focusing on possible target audiences is an important consideration in understanding why specific target vectors are chosen. Crudely everyone is an audience, but some are primary target audiences and some secondary, depending on whom the terrorists are ultimately seeking to influence. In the example above the builders should be perhaps considered as a primary target vector, and also a primary target audience. The RUC and British Government in this example might be considered as primary target audiences (other audiences include the wider populace, the supporters of the terrorists, rival terrorist organisations etc.). The target vector could be a building, for example the World Trade Centre and the Pentagon, attacked not because of the people inside, but because of what they signified to the terrorists (e.g. American/Western imperialism). As such they were used to convey the message to the target audience (the United States/ West) that imperialism would be met with extreme violence. Not all terrorist acts are aimed at symbolic target vectors. For example, an attack on a British Army barracks in Belfast by Republican terrorists may be better understood as a tactic to deplete the enemy's resources and demoralise their forces' resolve. As such it is different from the deliberate targeting of the BBC in London which was chosen because it signified a
'bastion of Britishness' around the world. How we delineate such acts of war from terrorist incidents is therefore problematic.

Enclosures – *Target* enclosures are any compound, building, or container, which are vulnerable to penetration and enclose attractive, provocative and/or vulnerable target vectors. *Offenders'* enclosures (strictly *resources* for terrorism) conceal or defend people (as in terrorist camps and hideouts), tools and weapons being smuggled, stored, or ready to

detonate. Enclosures can be characterised by a periphery, boundary, access points and interior, all of which may facilitate or inhibit terrorist events.

The **wider environment** – This is geographically wider than the immediate target enclosure, and could be for example a town centre, central business district, airport or rail station. Wider environments may *attract* terrorists for their contents (capital city centres normally contain many target vectors of high symbolic value, with the added benefit of an influential audience) – or *generate* terrorism in the shorter or longer term due to conflicts they contain or law enforcement facilities they lack – for example, failed states such as Afghanistan or Somalia. Environments can also be logistically or tactically favourable for the terrorist in terms of escape v pursuit, concealment v surveillance and ambush v vigilance.

The absence or incapacity of terrorism preventers – People or organisations who make terror events *less* likely by their action or mere presence – either before the events (e.g. disruption by intelligence agencies), during (e.g. vigilant, trained and equipped security personnel and well-briefed members of the public at airports) or afterwards (and before the *next* event, eg arrest and incapacitation). Preventers include 'capable guardians' of property or persons, 'influencers' of offenders (eg an older generation which strives to exert social control on the young and prevent them from being recruited or from committing specific acts of terror) and managers of places[31] and designers, manufacturers and providers of products, systems, services and environments.

The **presence of terrorism promoters** – The presence of people who make acts of terror more likely, whether as individuals, organisations or cultures. For example, the families of imprisoned IRA activists during the troubles received help from the organisation, and the imprisoned were held as role models (promoters), which boosted organisational recruitment. Weapons suppliers, passport forgers, money launderers and the suppliers of 'inside information' all promote. Note that both preventers and promoters are *roles*, not specific individuals or groups (the same applies to people who are target vectors or audience). One individual, for example, could simultaneously be a preventer, making terrorist events harder eg by being vigilant, and a promoter, eg by being lax with security information. Interestingly, and challengingly, there exists a particular 'preventer paradox' with terrorism (but also with mercenary crimes of control such as blackmail) – a target audience which surrenders is perhaps a preventer of one immediate event but a promoter of several later ones. Promotion need not be done with 'evil intent' – a counter-terrorism operation may, as an unfortunate side-effect, engender perceptions of injustice from communities who feel they have unfairly been targeted, and may ultimately encourage alienation and extremism.

(2) Other influential factors: dynamics, emergent causes and history

The focus of CTO is on individuals and events, with an understanding of groups, networks, and organisations overlaid. But it is worth noting that the latter share some features with individuals – eg. an organisation could be said to have a 'predisposition' to terrorism. Beyond the individual terrorist and the other immediate causes of the CTO are a range of higher ecological levels. The *pattern* of interacting immediate causes can engender higher-

level *emergent* causes which have an agency of their own. These relate, for example, to processes and properties of groups, communities, networks, markets, niches, economies and cultures.[32] Working bottom-up from the 'molecular' analysis of CTO and individual events to higher-level causes, and judging these against criteria of parsimony and utility, promises a more rigorous and anchored approach to understanding and intervention than being cast adrift in an unstructured sea of higher-level ones. (When higher-level causal theories *are* used, a test of their rigour could be to see whether they can be restated in terms of how they affect the various components of the CTO or bring them together.)

Dynamics: terrorism as a process

The CTO in this paper provides a framework for the immediate causes of terrorist events to be identified. But as said, the immediate causes not only link up as emergent, higher-level ones; they stretch back in time to the remote. Terrorist events cannot be fully understood through a static 'anatomical snapshot'. To do so requires complementary consideration of dynamics – which can occur within a single event, in a sequence of events best seen as goal-driven acts and over the wider historical perspective.

Within-event processes

During an event terrorists, preventers and promoters may all make *decisions* based on their diverse perceptions of risk, effort, reward etc, and this will include, game-theory fashion, what each believes the other parties will do. They may physically or remotely *interact* with one another – threat, attack, or surrender. They may engage in a tactical sequence of *move and countermove* in pursuit of their goals and in perception of the activities and intentions of the other, which may differ from reality. What particularly brings the CTO alive, is the *Modus Operandi* – characteristic ways in which terrorists apply their resources in preparing for, executing and completing a terrorist event to minimise the effort and risk and maximise the reward.

Between-event processes

Terrorist *events* must be seen as the product of a highly goal-directed series of acts intended to *bring the components of the CTO together*. A *'campaign'* pursues the wider strategy of creating a climate of terror, to influence the target audience and to achieve the ultimate goals of the organisation or cultural group. This persistent, organised and goal-directed nature of terrorism, motivated by ideology/religion rather than pursuit of money, and directed towards control or destruction of key symbols, means that displacement is likely to be a bigger problem than with ordinary, materialistic crime. The return of Al Qaida to the World Trade Center is a prime example, in which the very act of returning to a target vector where they were once frustrated makes an additional point to the target audience.

Such acts are often very complex because they involve the terrorist negotiating a series of *scenes* and using a sequence of *scripts* both to negotiate those scenes successfully and proceed to the next.[33] An example of scenes and scripts involved in a car bombing:

- Preparation – obtain information about a target's security procedures, obtain vehicle, obtain explosives;

Execution – drive car to target location, prime explosives;

- Escape – dump getaway car, blend into crowds;
- Covering of tracks – destroy fingerprints, DNA evidence, pay off inside informant;
- Consummation – enjoy/promote media exposure, enjoy accolade from fellow group members.

In the CTO what might be a low-level target in one scene (eg. a car to obtain) may be a resource in another (eg. a car bomb). The same diagnostic map of CTO causes can be applied to each scene that completes the overall event, and used to give a synoptic view of the terrorists' 'flowchart' of strategic and tactical options.

Historical processes

Historical perspectives range from micro to macro. One micro-historical process is the *career pathway of the individual terrorist*. Some recruitment and retention factors have already been discussed; additional issues include what makes a terrorist cease being a terrorist (as has happened with some 'conversions' eg of IRA or Loyalist prisoners). Do terrorists grow up and out of terrorism in the same way that many petty criminals do? And what sort of institutional career do terrorist organisations and networks have, and what influences these?

Moving to the wider historical tapestry, acknowledging the process of *co-evolution* of terror and counter-terror is vital to understanding and forecasting terrorism. In co-evolution each party constitutes a significant aspect of the environment in which the other evolves and adapts, introducing a feedback loop which generates patterns and directions of evolution under the complete control or awareness of neither party. Co-evolution at the highest level may link the terrorism-sponsoring ideology and its host community and the counter-ideology

and society. Understanding how to avoid, manage or exploit co-evolution – particularly how to become aware of a loop, and to jump outside it – is vital for strategic control.

Emergent causes and dynamics of course interact. Events happen through channelling of movement by transport and the rest of the built environment; the target vectors and offenders' current life circumstances, routine activities and lifestyle cause them to encounter each other regularly in time and space. Group-level conflicts such as between gangs, or ethnic and religious communities, often have an extended history, as said.

If we are to use the CTO to guide interventions in the causes of terror events, we have to recognise that the components of the CTO are just the first level of analysis, as the immediate causes of an event are brought together through the 'social, economic and psychological processes' alluded to by Ekblom.[34] There is not space here for minute detail, but below is a brief list of the different levels (or perspectives) of analysis necessary in order to design and target interventions more comprehensively. [35]

Level A – the *immediate causal components of the CTO* as described above, for a given act of terrorism or more particularly for a given scene in preparation or commission.

Level B – the individual *act or scene* itself, which results from the conjunction of causes just described.

Level C – the **logistical structure of scenes** comprising the flow chart of M.O. and scripts, understood not only in terms of cause and effect but tactical and strategic goals.

Level D – the **career** of the individual terrorist.

Level E – the **day-to-day operation of a terrorist group**. At the simplest, this could include funding. More complex processes include 'offender replacement', in which arresting one terrorist means only that another takes his/her place. From another angle, what do the terrorists do during periods of non-operation? Evidence suggests that some maintain 'ordinary lives' whilst plotting their plans. The perpetrators of September 11 assimilated within US society and lay undetected prior to their atrocity. The IRA, it is alleged, managed taxi firms in Belfast and engaged in more mainstream criminal activities (e.g. bank robbery, extortion and kidnap) whether or not operationally active at the time.

Level F – a set of interrelated **wider structures and perspectives**, such as:
The **strategy and career of the terrorist enterprise** – changes in size, personnel, targets, threats to the organisation, factional splitting and the use of criminal and legitimate business opportunities. Diagnosing the terrorist acts of well-established groups needs a different approach to analysing recent arrivals. **Franchised** operations are a means of growth which reduce the burden and risks of central planning and enable a better reflection of local needs and concern. Related to career, the longer–term **strategy** of the terrorist group.
Terrorist networks – collaboration with other groups is essential for terrorist organisations to survive. For example, it has been said that the IRA had strong links with ETA, the Basque separatists.

Level G **– Co-evolution,** including **arms races** and metamorphoses of individual organisations in response to pressure from security forces (as with Al-Qaida)

Level H **– Wider historical circumstances**, which could for example cover the increased availability of weaponry and arms trading, which has seen a proliferation since the fall of the Eastern Bloc.

This array of analyses centred on CTO has focused on explicitly *conjectured* causes and causal sequences. But it is important to note that, as with CCO, remoter causes are in practice difficult to track from, say, early childhood experiences right down to individual incidents. A complementary, developmental, *risk-focused* approach therefore involves drawing on public health concepts to identify (and manipulate) *risk and protective factors* – *empirical* correlates in early life of individuals' later offending, at a range of ecological levels: individual, family, school or community.[36] This approach could perhaps be extended to

cover risk and protective factors centring on places, groups, organisations, cultures or countries. With a small shift in perspective, both causal and 'risk factor' analyses could contribute to approaches such as risk assessment, horizon-scanning, and 'terrorism impact assessment' or proofing, with the aim of making policy and practice robust in the face of a range of forecast changes in future circumstances.

(3) Intervention

Intervention to reduce the frequency and seriousness of terrorist events, and to limit their influence on the rest of social, economic and political life from climates of terror to the fall of governments and regimes, can be seen from several perspectives. *Prevention* is the most general and refers to any intervention in the *causes* of terrorist events. *Disruption* frustrates the terrorists' operations in pursuit of tactical and strategic *goals*. *Degradation* reduces the organisation's or network's capacity to pursue goals, resist disruption, defend and maintain itself, adapt to changing environments (including running arms races) and grow. Various kinds of *reassurance* and *resilience* action such as encouraging greater adoption of business continuity limit or counter the immediate effects of terrorism, defending or re-establishing community safety, and *resisting* the cultural, ideological or political changes that terrorism seeks to make at the highest level. Prevention underlies all the other perspectives – for example, a causal intervention can 'get in the loop' in military parlance and disrupt achievement of a terrorist goal. For reasons of space and degree of development of ideas prevention is the main focus and no attempt is made to cover these subsidiary perspectives systematically.

Prevention

Having diagnosed the immediate causes of an act of terrorism in the CTO, we must then decide how and where to intervene in them. Earlier, it was said that the CTO is a projection, onto the here and now of the immediate causes of specific events, of a variety of prior causes
stretching back into individual, group, societal or national history. Interventions in these causes, whether on situations or terrorists, can be directed to any point in this stream of influence. For the sake of manoeuvrability it helps to cut this continuum into three broad zones of intervention, successively further upstream from the terrorist event:

- **Immediate interventions** – directly manipulating the components of the CTO (below), in the here and now, such as hardening a specific target, remedial efforts to de-indoctrinate a terrorist, or deterring a particular decision to offend.
- **Midstream interventions** – influencing factors with a fairly direct influence on the CTO – centring mainly on resources for offending, sources of 'readiness to offend' motivation and various kinds of promoter and preventer not in the immediate terror situation. Examples might include influencing the activities of manufacturers who produce items which may unwittingly provide material for terrorists, or disrupting financing arrangements.
- **Upstream interventions** – an example might be intervening to disrupt the formation of terrorist training camps, as were evident in Afghanistan. Even remoter examples are

attempting to resolve a historical ethnic conflict or the conditions which bring about the failure of a state and thus facilitate hosting of terror.

None of these sets of factors are mutually exclusive. Up to a point, the remoter the cause, the longer one might expect the intervention to take to have its effect – but not necessarily, for
history has shown that centuries-old conflicts can sometimes be brought to a close in years. It is to the immediate CTO causes that we now cast an interventionist eye.

There are no 'one size fits all' solutions. Interventions have to be customised to particular problems and contexts, geographical and temporal scales and 'ecological levels'[37] such as individual, family, organisation, community or nation. As noted for the CCO[38], local solutions have to be designed to match local *configurations* of cause, to respect different local priorities and to reflect 'troublesome tradeoffs' between, for example, security and convenience, fire safety, aesthetics and privacy. 'Cookbook' approaches where a fixed recipe is slavishly replicated are unlikely to deliver results.[39] Individual interventions in the terrorism sphere have to be planned as part of a wider strategy in which networks, markets, niches and so forth are addressed, and adaptive moves/countermoves anticipated.

Preventing immediate causes

Eleven generic kinds of intervention can be mapped on to the eleven immediate causes in the CTO, in order to block, weaken or divert them. On the *terrorist* side we have:

Reducing terrorist predisposition – This can entail intervening in the early lives of potential terrorists (upstream) in order to reduce identified 'risk factors' and to promote known 'protective factors'. These measures could involve working with families, schools or peer groups to promote for example diversity and racial, cultural, religious and political tolerance. Reducing terrorist predisposition will have an effect on factors such as terrorist recruitment. Interventions to reduce the degree to which individuals and communities are socialised in or converted to a particular ideology associated with terrorism, are also possible, as may be remedial interventions aimed at converting them to peaceful ways of achieving goals. Interventions aimed at changing an entire ideology or movement are too ambitious (although they happened with the de-Nazification effort in Germany after World War 2), but knocking out individual props of an underpinning belief system may not be – in theory. However, even this could have unpredictable, perhaps counterproductive, results and it may be both less risky and more appropriate to tackle remoter causes which are driving people towards *extremist* versions of belief, rather than directly targeting those beliefs themselves. Whatever the case, some kind of ethical framework would need to be developed to set acceptable limits on this.

Supplying resources to avoid terrorism – not just to individuals but to institutions and cultures as well. This includes providing potential terrorists with non-violent means of pursuing their causes (eg. debating, media, negotiating and lobbying skills). Terrorism is a form of political action and interventions must be developed that open more democratic avenues that terrorists might perceive as 'just' and worth pursuing. But the extremist views

held by terrorists make these types of interventions particularly hard to develop and successfully implement. Contentious, but the IRA agreed to give up their use of terror to concentrate more on mainstream politics, and would not have done so had they thought that the democratic process in Northern Ireland still held no prospect of progress for them. An alternative example of supplying resources would be finding rewarding and dignified employment for ex-Soviet scientists and military personnel.

Reducing the readiness to use terror – this covers such interventions as reducing conflicts (both domestically and internationally) and reducing 'stressors' such as perceived religious intolerance and injustice (political, economic and social).

Restricting the resources available to the terrorist – this covers such interventions as controlling the weaponry, tools and information (e.g. targets and tactics) available; detecting/penetrating *offenders'* enclosures; and controlling the promoters who may supply them. An international clampdown on arms smuggling, with increased international intelligence exchange, is an example of a situational measure which addresses global issues. Control of recruitment is of obvious importance, as is the group size, growth and efficiency to carry out their acts. Interventions that disrupt the organised crime which funds terrorist groups (or those states that sponsor terrorist organisations) are further examples.

Excluding terrorists from the situation – for example detaining suspected terrorists using legislative powers, extraditing suspected terrorists and co-operating with other states to prevent suspects entering the country. Excluding suspects from places within a country is also possible (e.g. injunctions to stop suspected animal rights activists from going near the homes of pharmaceutical company employees).

Deterrence – raises the perceived risk of getting caught or failure for terrorists; **discouragement** makes the terrorist think that the effort to commit the act is too great for the reward to be gained. As previously mentioned, rewards are personal to the terrorist and range from having a product withdrawn from sale to achieving glory in heaven. Discouragement interventions need to be specifically targeted to the individual motivations, as do interventions involving *awakening conscience* and *increasing empathy***,** implemented to counter the terrorists' strategies for neutralising the pain, shame and guilt caused by their acts (for example, through condemnation by their community leaders/members). These interventions have to be designed in full awareness of the *'ideological predisposition'* they are intended to counter. As such, they require deep knowledge of cultural anthropology to minimise the risk of backfiring, (eg by misinterpretation of quotations from religious texts).

On the *situational* side are a range of familiar techniques to: increase the effort for the terrorist, increase the risk, reduce the reward, reduce provocations, remove excuses and enhance empathy.

Targets

- **Target vectors** – Interventions that prevent people and things becoming target vectors will be largely situational. The targeting of builders in Northern Ireland during the

troubles led to them receiving protection from the British Army and police. The use of the twin towers in New York by Al Quaida as a target vehicle (and the concern about nuclear power-plants becoming targets) has led to the introduction of many situational prevention measures (e.g. increased airport screening and the increased monitoring of pilot training, anti-aircraft installations etc) to reduce the likelihood of such a tragedy happening again. Construction of buildings which are not obviously 'head and shoulders above the rest' or with names that are not symbolically provocative to anti-capitalist or anti-Western movements may be prudent. But there is again a trade-off between being prudent versus giving some kind of 'surrender' message to target audience and the enemy. Dispersal of targets is a method used (eg with the components of expensive car radios, which are distributed around a vehicle, and the same approach can be applied to buildings and facilities). However, too much dispersal in some cases can pose difficulties too. Entire networks, physical, such as electricity grids or water supplies need to be protected - new attack-monitoring systems developed (eg CBRN) and procedures for limiting the damage once an attack is happening (secondary safety) or has happened (tertiary safety). Some principles can be developed to aid the selection of which targets to protect. Clarke[40] introduced the concept of 'hot products' to identify and predict features of things like mobile phones, cash etc which are likely to make them at risk of being stolen – characterised by the acronym CRAVED (Concealable, Removable, Accessible, Valuable, Enjoyable, Disposable). It should be possible to identify some similar features of products, places, systems, people or organisations that make them prone to use as target vehicles of terror.

- **Target audience** – Interventions to protect target audiences are hard to define. The target audience for the Warrington bombing (IRA) was the British Government, probably because a previous attack in the North East of England had been foiled the previous week. The Government did not need protecting in the literal sense of the word their vulnerability was a political one, with the public's dismay at why the bombers had got through. More recently the bombing of Madrid can be seen as a contributory factor in the incumbent Spanish Government failing to win an election, when they had been forecast to do so.

Target enclosure – well-established techniques such as 'target hardening' and 'access control'[41] used to modify situations to prevent crime, are applicable to preventing acts of terrorism. Multi-layered target enclosures and associated access control (the 'onion skin' approach) can confer defence in depth.

The wider environment – changes which make the environment less attractive, less likely to generate offending or less logistically/tactically favourable for offenders. Preventing ordinary crime by environmental interventions normally has a local focus. Anti-terrorism interventions however range from changes for example, in the design and management of shopping centres, stations and airports to ones of a much grander scale, extending to national and international levels. Areas containing specific national icons may attract terrorist attention; so may require broad protection via surveillance, redesign of road layouts, access points etc. *Reducing conflict* is a major intervention principle on the social side which bridges

environment and 'readiness to offend'. Methods include various kinds of mediation and arbitration.

Boosting preventers (including 'capable guardians') – this can be through 'formal control' (e.g. increased security patrolling, surveillance, intelligence-gathering and investigation, and the acquisition/placement of informants) or 'informal social control' (e.g. increased employee and public vigilance).

Discouraging and deterring terrorism promoters – where promotion is *deliberate* and knowing, these interventions can include measures that awaken the conscience of any supporting community (e.g. supplying images of innocent people mourning their lost ones) or tough legislation to deal with active sympathisers**.** Positive 'hearts and minds' actions can be implemented alongside sanctions. Measures against *careless* promoters can include anything from reminding people to lock doors or take their bags when leaving trains, to campaigns warning that purchasing pirate DVDs may be funding terrorists.

Intervention at more strategic levels

The families of interventions just described are highly-specific and directed against specific terrorist threats/risks. The interventions make *specific opportunities* more risky, more effort and less rewarding for offenders, or focus on disrupting, inhibiting, removing or reforming *specific offenders*. The reduction of terrorism particularly needs to operate at the higher strategic levels to disrupt and degrade and thus permanently reduce the terrorist activity. Without this, as said, we may win the battles but still lose the war. (There is also the possibility of dealing at the political level with terrorists' strategic demands – which has arguably happened with the IRA but which is unlikely to do so with extreme international, anti-Capitalist, anti-abortion or animal rights terror, due to the absolutism of these movements.) Lessons from the past reveal that illegal organisations and networks tend to find ways round individual barriers, new organisations will replace those closed down if the niches are still available and the markets persist. So high-level interventions often have to be realised through a structured set of activities at the lower levels – reaching right down to individual barriers to individual terrorist scenes.

Strategic interventions can link closely to the levels of causation of terrorism described above and might involve, for example:
Targeting *key offenders* including leaders or *'lynchpins'* in a network
Tackling those crimes that financially nourish terrorism
Considering *wider patterns of displacement, diffusion of benefit and offender replacement* which may otherwise limit the sustainability of specific interventions
Running co-evolution strategically (eg deliberately improving our capacity to spot/ anticipate new Modus Operandi, and build in variety and upgrade ability to preventive methods).[42]

Who implements the interventions?

Official or formal terrorism preventers such as governments and their agencies cannot operate alone but must often act at a distance – by mobilising other public and private institutions and ordinary citizens better-placed to play particular roles in terrorist prevention. These roles may involve directly intervening in the causes of terrorism, or facilitating the interventions of others by motivating and enabling them or alleviating constraints. To set alongside efforts to
boost these preventive roles, we also need to influence those who accidentally or recklessly promote terror by their everyday private, public or commercial activities.

Acting at a distance involves a sequence of steps to mobilise the community and its members and institutions to take on specific terrorism reduction tasks or assume responsibility for wider roles, which also applies to the more symmetrical relationship of *Partnership.* A procedure for identifying who should be mobilised and how, has been developed within crime prevention[43] and is summarised by the acronym CLAMED:
Clarify the terrorism reduction tasks or roles that need to be achieved externally rather than delivered directly by government/ counterterrorist/ law enforcement professionals.
Locate the preventive agents – identify institutions and individuals with the potential to carry out the tasks effectively and acceptably. Once located, secure their co-operation and enhance their performance in pursuit of the designated goals by:
Alerting them to the terrorism problem, that they or others might be affected by it, that they might be contributing to its cause and/or might be capable of contributing to its cure.
Motivating them to take on the terrorism reduction task – through whatever levers are available.
Empowering them – building enabling capacity by supplying competence (know-how and technical aids), operational resources such as funds, staff and information, and appropriate legal powers; alleviating constraints, but at the same time ensuring checks and balances are in place to limit over-zealous action.
Directing them (if appropriate) to follow particular guidelines, select particular targets or implement particular activities.

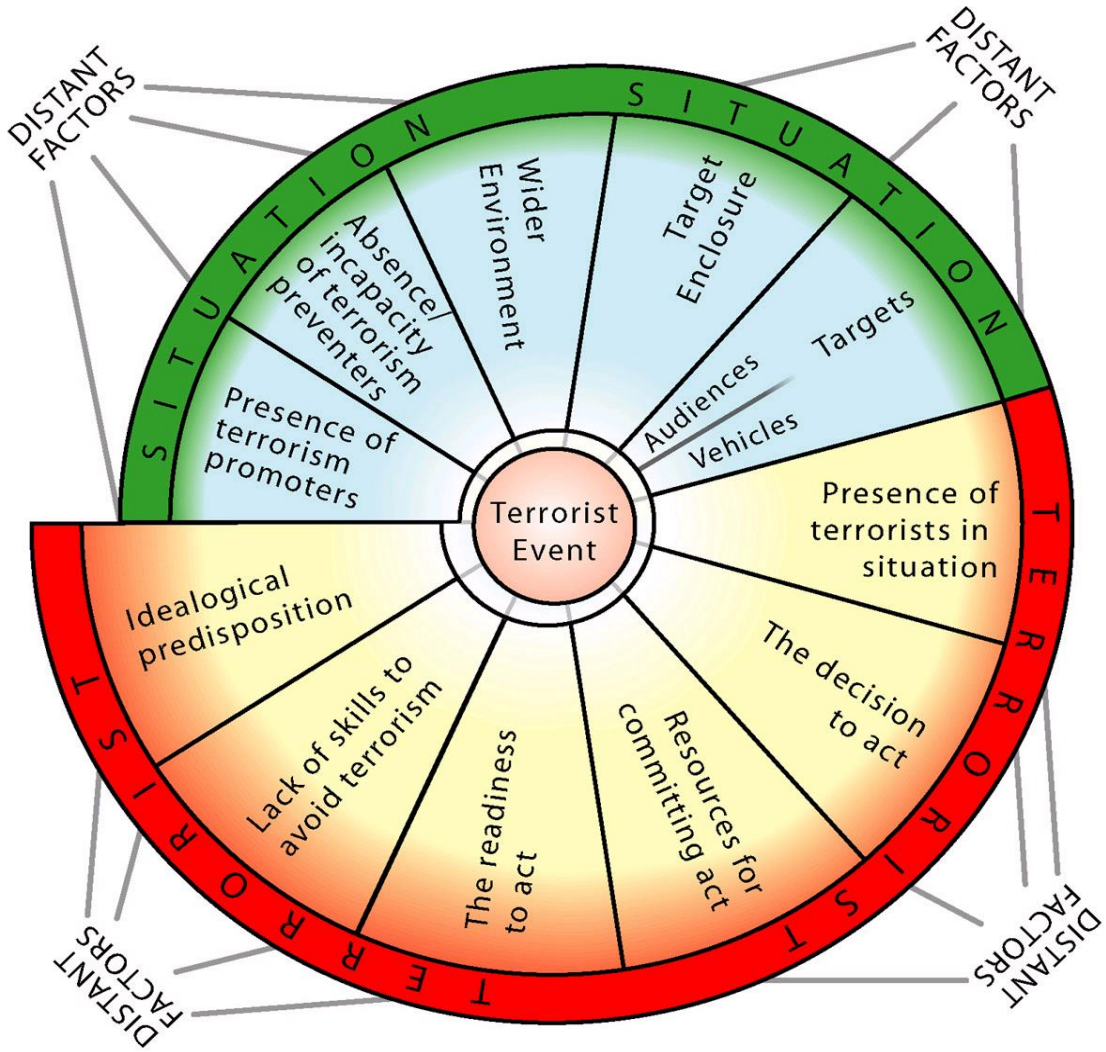
Tackling terrorism by an equivalent process obviously involves more demanding challenges – for example, alerting without unnecessarily alarming, or making particular vulnerabilities more widely known.

Conclusion

The CTO seeks to provide a conceptual framework with which to analyse the immediate, generic causes of terrorist events such as opportunity, resources, motives and predisposition.
The analysis is intended to facilitate reduction of the risks and seriousness of those events, and the wider climate of terror which they create, by guiding interventions in their causes.
The CTO does not promise to be a new way of countering terrorism. On the contrary, it is a framework for co-ordinating and integrating much of the effective work already being done. By offering a 'bottom-up' platform it provides a way of anchoring and sharpening our understanding of the higher-level causes and longer term dimensions of acts of terrorism and developing our ability to intervene in them. In this it is not mechanistic but is sensitive

to terrorism's fluidity, adaptability and co-evolution with counter terrorism. CTO is undeniably a fairly complex framework to grasp (and if practically applied would need some investment in training and guidance materials). But to understand and integrate a field that itself is as extremely varied and complex in both theory and practice as terrorism would be a task too demanding for something simplistic to handle[44]. The authors acknowledge that the CTO is a work in progress and the next step is to test its utility by applying it to several 'real' case studies.

Appendix 1: A diagnosis wheel for the 11 immediate causes of acts of terrorism [45]



The diagram shows how the 11 generic immediate causes of a terrorist act link together to provide the opportunity for that act to occur.

Notes

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[4] Terrorism Act (2000) section 1 (1),(2)
[5] (Ekblom 1997, 1999)
Ekblom, P (1997) 'Gearing up against Crime: a Dynamic Framework to Help Designers Keep up with the Adaptive Criminal in a Changing World', *International Journal of Risk, Security and Crime Prevention*, 214: 249-265.
Ekblom, P (1999) 'Can we Make Crime Prevention Adaptive by Learning from other Evolutionary Struggles?', *Studies on Crime and Crime Prevention*, 8/1: 27-51.
[6] see eg Clarke and Eck (2003) *Become a Problem-Solving Crime Analyst in 55 small steps.* Cullompton, Devon: Willan Publishing; and downloadable from www.jdi.ucl.ac.uk/publications/manual/crime_manual_content.php

[7] Ekblom, P. (2001) The Conjunction of Criminal Opportunity: A Framework for Crime Reduction Toolkits. www.crimereduction.gov.uk/learningzone/cco.htm

[8] This statement reveals CCO's origins in Routine Activity Theory, Environmental Criminology and Rational Choice Theory, all widely used in situational crime prevention. Routine Activity Theory (Cohen and Felson 1979), Environmental Criminology (Brantingham and Brantingham 1995) Rational Choice Theory (Cornish and Clarke 1986)
Cohen, L. and M. Felson (1979). 'Social Change and Crime Rate Changes: A Routine Activities Approach.' *American Sociological Review* 44:588-608.
Brantingham, Patricia and Brantingham, Paul (1995) Criminality of Place: Crime Generators and Crime Attractors. *European Journal on Criminal Policy and Research.* Vol. 3, No. 3, pp 5-26
Cornish, D. and Clarke, R. (eds) (1986) *The Reasoning Criminal: Rational Choice Perspectives on Offending* New York NY: Springer-Verlag.
[9] See Dorn et al. 2003; Ekblom 2003; Levi & Maguire 2004.
Dorn, N., Bucke, T. and Goulden, C. (2003) 'Traffick, Transit and Transaction: A Conceptual Framework for Action against Drug Supply.' *The Howard Journal of Criminal Justice*, 42/4: 348-365.
Ekblom, P (2003) 'Organised Crime and the Conjunction of Criminal Opportunity Framework', in A. Edwards and P. Gill (eds.) *Transnational Organised Crime: Perspectives on global security.* London: Routledge, pp. 241 - 263.
Levi, M. and Maguire, M (2004 in press). 'Reducing and Preventing Organised Crime:
An Evidence-Based Critique', in Special Issue of *Crime, Law and Social Change*
[10] In the CCO context this has been defined in terms of the quality of life, centring on the freedom from certain real or perceived hazards and the ability to cope with those that remain, building on these conditions, to get on with life's social and economic necessities and pleasures. See www.crimereduction.gov.uk/learningzone/cco.htm for more details.
[11] Ekblom 1997 and 1999 op cit
[12] Crenshaw's (1981) analysis of the precipitation of violence distinguishes between (immediately prior) events and preconditions. Whittaker (2004) states that the latter can include social, economic, ideological factors. The CTO perspective is perhaps still closer to

the terrorist event than these views. In effect it sees the entire set of immediate causes as precursors – a precipitating event will have set the terrorist up with a certain readiness to offend, which is a very immediate precondition. From a more dynamic perspective that treats terrorist events as processes, these distinctions become rather less useful.

Crenshaw, M. (1981).'The causes of terrorism' Comparative Politics, July 1981 p381-385.

Whittaker. (2004). Terrorists and Terrorism in the Contemporary World. London: Routledge.

[13] Sim, S. (2004). *Fundamentalist World. The Dark Age of Dogma.* Cambridge, UK: Icon Books.

[14] Gray, J. (2003). Al Qaeda and What it Means to be Modern. London: Faber and Faber.

[15] For a discussion of the differences see eg Schweitzer and Shay 2003.

Schweitzer, Y. and S. Shay (2003). The globalisation of Terror. The Challenge of Al-Qaida and the Response of the International Community. Somerset, NJ: Transaction Publishers.

[16] Individual terrorists within an organisation may play various roles – eg planners, propagandists, bombers – but space precludes exploring these.

[17] For example see Bion (1961)

[18] For example see Bandura (1990) or Bandura (1996)

[19] Post, J. M. (1998) "Terrorist Psycho-Logic: Terrorist behaviour as a product of psychological choices," in Reich, *Origins of Terrorism*, pp. 25-40.

[20] Despite 80% of the Baader Meinhoff gang having a university education Merkl (1986) found they were hyper-emotional, excessively dogmatic and held crude and ill-informed political judgements, with little finesse to their thinking. Many of these terrorists had disturbed childhoods which may have contributed to their impulsivity and tendency to violence (Dingley, 1997).

Dingley, J. (1997) The Terrorist –Developing a Profile. International Journal of Risk, Security and Crime Prevention. Volume 2 No 1 pp 24-36.

Peter Merkl, "West German Left-Wing Terrorism," in Crenshaw (1995) .Terrorism in Context. (University Park, PA: Penn State Press, 1995),

[21] see eg Maguire (1985). But note that from their community/ local context, getting involved in terrorism will not necessarily be defined as being led astray but a positive act.

McGuire, W. J. (1985). Attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.), *The Handbook of Social Psychology* (3rd ed., Vol. 2, pp. 233-346). New York: Random House.

[22] Whittaker, op cit

[23] Ekblom, P and Tilley, N (2000). 'Going Equipped: Criminology, Situational Crime Prevention and the Resourceful Offender' *British Journal of Criminology* 40:376-398.

[24] Sampson, R (2004). Neighborhood and Community: Collective Efficacy and Community Safety. *New Economy* 11:106-113. Putnam, R (2000). *Bowling Alone: The Collapse and Revival of American Community* New York: Simon & Schuster.

[25] Cornish, D. and Clarke,.R.(eds) (1986).op cit

[26] Niggli, M (1997). Rational choice and the legal model of the criminal. In R. V. Clarke, G. Newman, and S. Shoham (eds) Rational choice and situational crime prevention, 25-46. Aldershot: Dartmouth Press .

[27] Clarke, R. and Eck, J. (2003*).* op cit

[28] Wortley Op Cit (2001)

[29] Wright, R. And Decker, S. (1994) *Burglars on the Job* Boston: Northeastern University Press.

[30] The first author would like to acknowledge David George, University of Newcastle, for his help in development of this distinction in the early 1990's.

[31] Modified from Clarke, R. and Eck, J. op cit. Their original term for 'Influencers' was 'Handlers', but this has prior meaning in intelligence circles

[32] Ekblom 2003 op cit; Brantingham, P. and Brantingham, J. (1991). *'Niches and Predators: Theoretical Departures in the Ecology of Crime.* Presented at Western Society of Criminology, Berkeley, California.

[33] Cornish, D.(1994). '*The Procedural Analysis of Offending and its Relevance for Situational Prevention'*, in R.Clarke, ed, Crime Prevention Studies, 3 151-196. Monsey, NY:Criminal Justice Press.

[34] Ekblom 2003 op cit

[35] Please note that these do not form a single hierarchy of causes but a number of alternative ways of exploring higher levels of causation.

[36] Farrington, D. (2002). 'Developmental criminology and risk-focussed prevention.' In: M. Maguire, R. Morgan and R. Reiner (eds.), *The Oxford Handbook of Criminology* (3rd edition). Oxford: Clarendon Press. There has been considerable research on terrorists, identifying some common early life experiences: see Dingley (1997); Merkl (1986) both op cit [note 17]

[37] World Health Organisation (2004). *Handbook for the Documentation of Interpersonal Violence Prevention Programmes* - Geneva: WHO. Available at:www.who.int/entity/violence_injury_prevention/publications/violence/handbook/en

[38] See for example ODPM/Home Office (2004) *Safer Places: the Planning System and Crime Prevention*. London: HMSO. Also at: www.odpm.gov.uk/stellent/groups/odpm_planning/documents/page/odpm_plan_028449.pdf

[39] Ekblom, P (2002). 'From the Source to the Mainstream is Uphill: The Challenge of Transferring Knowledge of Crime Prevention Through Replication, Innovation and Anticipation.' In: N. Tilley (ed.) *Analysis for Crime Prevention*, Crime Prevention Studies 13: 131-203. Monsey, N.Y.: Criminal Justice Press/ Devon, UK: Willan Publishing.

[40] Clarke, R.V (1999). *Hot Products: Understanding, Anticipating and Reducing Demand for Stolen Goods.* Police Research Series Papers 112. London: Home Office.

[41] Clarke, R.V. ed. (1997) *Situational Crime Prevention: successful case studies* (2nd edition). NY: Harrow and Heston**.**

[42] Ekblom 1997, 1999 op cit

[43] Ekblom 2001 op cit

[44] The impression gained from conversations that the authors have had with some working in the counter-terrorism field.

[45] The authors would like to thank Michael Hawtin for his valued help in the design of the 'CTO Diagnosis Wheel'.