**Department of Social Sciences and Security Studies**

**The OODA Loop and Salafi-Jihadi Inspired Home-Grown Terrorism**

**A Tactic of Asymmetric Warfare**

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**of**

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# Declarations

## Candidate's Declaration

I, Jason Thomas, hereby confirm that this PhD thesis has been solely written by me, that it is a record of work carried out by me and has not been submitted in any previous application for a higher degree.

I was admitted as a candidate for the degree of Doctor of Philosophy in 2012, at Curtin University of Technology.

Date: 12 April 2016

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I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate for the degree of Doctor of Philosophy at the Curtin University of Technology and that the candidate is qualified to submit this thesis in application for that degree.

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# Abstract

A central theme in the current terrorism phenomenon has been al Qaeda's Salafi-Jihadi narrative and its ability to inspire home-grown terrorism.  In the minds of generally young, unexceptional Muslim males and some Western converts to Islam, this narrative is recreated in the context of their own personal circumstances and networks.   The predominant strategic models of terrorism are inadequate for critically analysing a phenomenon that is adaptable, dynamic, evolving and regenerative.   Through the application of Colonel John Boyd's Observe-Orientate-Decide-Act Loop (OODA Loop) as an adaptable, alternative strategic model of terrorism and case study research methodology, this thesis tested the theory that Salafi-Jihadi inspired home-grown terrorism is a tactic of asymmetric warfare.  According to Boyd, defeating an opponent requires penetrating its OODA Loop.  The case studies demonstrated al Qaeda's strategy that transformed from the use of: i) unexceptional individuals from western countries, to avoid detection; ii) western domestic-planned attacks to overcome tactical challenges and to adapt to OODA Loop penetration; and iii) western domestic individuals with no known links to al Qaeda, inspired by the Salafi-Jihadi narrative.  These case studies also provided examples of al Qaeda's evolution into a regenerative brand, in a conflict where the whole world has become the battlefield, including within people's minds.  This includes securing the mindset of a borderless, interconnected community while Governments and their citizens fear the unpredictable, irreconcilable nature of home-grown terrorism emanating from within their society.   Significantly, al Qaeda determined that inspiring home-grown terrorism, synthesising its Salafi-Jihadi narrative with the use of the internet to broadcast graphic and brutal acts of violence, and shifting from spectacular terrorism to 'do-it-yourself' attacks against soft targets in a Western urban environment, penetrates Western moral principles and its conventional view of warfare within a democratic construct.  Penetrating the West's moral principles is an important aspect of al Qaeda's broad strategy.   This research described the concept of al Qaeda manoeuvring within and exploiting Western moral and mental boundaries while simultaneously inspiring more a new generation of followers, as moral manoeuvrability.  Further research could use this concept to understand how to exploit the Salafi-Jihadi narrative to force terrorist organisations such as al Qaeda and now the so-called Islamic State to fold back inside themselves and self-immolate.

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# Table of Contents

# Tables

# Figures

# Abbreviations

| Acronym | Meaning |
| --- | --- |
| ASG | Abu Sayyaf Group |
| ASIO | Australian Security Intelligence Organisation |
| a.k.a | alternatively known as |
| AQ | Al-Qaeda |
| CCTV | Closed Circuit Television |
| CIA | Central Intelligence Agency |
| COL | Colonel |
| DHA | Department of Homeland Security |
| DIY | Do-it-Yourself |
| EM | Energy Manoeuvrability |
| FBI | Federal Bureau of Investigation |
| F3EA | Find, Fix, Finish, Exploit, Analyse |
| FSB | Federal Security Service (Russia) |
| FX | Fighter Experimental |
| GEN | General |
| IED | Improvised Explosive Device |
| ISIS | The Islamic State of Iraq and Syria |
| JI | Jemaah Islamiyah |
| LeT | Lashkar-e-Taiba |
| LTTE | Liberation Tamil Tigers of Ealam |
| MAJ | Major |
| MCDP | Marine Corp Doctrinal Publication |
| NATO | North Atlantic Treaty Organisation |
| NCTA | National Counter Terrorism Academy |
| NGO | Non-Government Organisation |
| NYPD | New York Police Department |
| OODA Loop | Observe Orientate Decide Act Loop |
| OSC | Open Source Centre |
| SOE | Special Operations Executive |
| UK | United Kingdom |
| UN | United Nations |
| US | United States (America) |
| USAF | United States Air Force |
| USMC | Unites States Marine Corp |
| WASCA | Western Australia Supreme Court of Appeal |

# Chapter 1 - Introduction

## 1.1 The OODA Loop and Salafi-Jihadi Inspired Home-Grown Terrorism

The dynamic and adaptable nature of al Qaeda's (AQ) Salafi-Jihadi inspired home-grown terrorism and its ability to penetrate technologically advanced security and intelligence efforts continues to present a major strategic challenge for governments around the world. This challenge is significantly increased given that home-grown terrorists are predominantly unexceptional, Muslim males and Western converts to Islam, who for the most part blend into the very society they intend to attack.

This thesis employed Colonel (COL.) John Boyd's conceptual framework – the Observe-Orientate-Decide-Act Loop - to test the theory that Salafi-Jihadi inspired home-grown terrorism is a tactic of asymmetric warfare used by AQ and other Salafi-Jihadi terrorist organisations. This was achieved through the application of case study research methodology, using three cases of Salafi-Jihadi inspired home-grown terrorism. United States Air Force (USAF) pilot, COL. John Boyd (1927 – 1997), developed the conceptual framework or strategic loop of Observe, Orientate, Decide, Act - the OODA Loop. This was the result of lessons learned from Boyd's aerial combat experiences during the Korean War (1950 -1953), combined with his epistemological analysis of military history, as well as an examination and reconstruction theoretical principles contained within disciplines such as engineering, mathematics and science. Boyd developed this strategic framework to provide an understanding of how to survive against an adversary in combat. However, what was most important to Boyd was educating people on how to think differently; to analyse and synthesise the multi-faceted aspects of the world around them to create novelty that would enable them to succeed in war, business, sport, science, engineering or other endeavours.

According to Boyd (1986), in a contest for survival, decision-making occurs in a recurring cycle of *Observe-Orientate-Decide-Act*. In fact, Boyd's conceptual spiral could be described as a paradigm for survival. An entity that can rapidly process through this cycle, observing and reacting to unfolding events faster than an opponent, can thereby "get inside" the opponent's decision-making cycle and gain the advantage. However, it is not simply a matter of making decisions faster than one's opponent. The speed relates to the ability to

analyse and synthesise new information, systems, patterns and processes and to create novelty and adapt more quickly to changes in the environment. Boyd's theoretical model suggests that decisions are based on observations of the evolving situation as a consequence of our actions. These observations include the social and moral construct of ourselves and our opponent, as well as the raw information on which actions are based. The ability to manoeuvre within the moral, mental and physical boundaries of an opponent, to create novelty that is disorientating, is more likely to result in one's survival.

The OODA Loop is an applicable conceptual framework from which to explore, describe and analyse how AQ created a prophetic Salafi-Jihadi brand and adapted to Western counterterrorism responses by inspiring impressionable, young, Western-based Muslims to become home-grown terrorists. For Western governments, media and the general public, home-grown terrorism is disorientating and creates a high state of internal entropy. This entropy frustrates Western governments in their efforts to determine the most effective policy, military, community and policing response. Care must be taken to avoid an overreaction that feeds into the narrative AQ has constructed. Inciting an overreaction by an opponent that further exacerbates conflict is a common objective of those who use the tactics of asymmetric warfare. In the case of AQ, an overreaction by Western governments can simultaneously divide policy makers attempting to develop a strategy to defeat AQ, and inspire more followers to AQ.

The objective of this thesis is to use the OODA Loop as a strategic model to explore how AQ manoeuvred within Western society through their Salafi-Jihadi narrative that inspired small sections of the Muslim community to carry out acts of terrorism in the Western country in which they were born or raised. Significantly, this thesis argues that the ability to inspire and shape the use of home-grown terrorism is a tactic of asymmetric warfare. This research will describe how AQ achieved this by shaping the conflict environment, through disorientating, novel and adaptable forms of home-grown terrorism. For AQ and its network of followers the battlefield of this war is located as much in the minds of followers and opponents as it is in any physical location. The current terrorism phenomenon has witnessed the emergence of new brands of Salafi-Jihadi organisations, such as the so-called Islamic State of Iraq and Syria (ISIS), Boko Haram and al Shabbab. ISIS in particular has been prolific in the use of graphic violence, framed with a prophetic Salafi-Jihadi narrative to inspire impressionable, unexceptional, Western-based Muslims or converts to Islam to conduct acts of home-grown terrorism. While an important inspirational driver of many

home-grown terrorists and foreign fighters is the Salafi-Jihadi narrative, this research did not focus on the foreign fighter phenomenon. Nevertheless, the issue of foreign fighters is an area of inquiry that could benefit from using the OODA loop to explore and critically analyse in order to develop countering strategies.

A key focus of this research is how Western moral and humanistic values, are seen as asymmetric weaknesses to be exploited by AQ and now other Salafi-Jihadi groups. This notion is significant to the development of the concept of moral manoeuvrability that is proposed as one of the major contributions from this research. Further, while pursuing a theoretical examination of Salafi-Jihadi inspired home-grown terrorism is a worthy academic exercise, this is a dynamic and evolving field of inquiry. As such, academic research should also aim to make an applicable contribution to neutralising this threat to society. This novel application of the OODA Loop may provide an additional frame of reference from which to develop counter-terrorism and countering violent extremism strategies to manipulate the Salafi-Jihadi movement into self-immolation.

The following sections of this introduction set out the definitions and conceptualisation of the fundamental themes used, before detailing the structure and organisation of this research.

## 1.2 Definitions and Conceptualisation of Key Themes

### 1.2.1 Terrorism

While describing the predominant definitions of terrorism remains a compulsory aspect of research within this field of inquiry, this thesis does not intend to add to the tautological academic debate by attempting to create a new definition. There appear to be as many definitions of terrorism as there are people researching this topic, even though it is not a new phenomenon. As Crenshaw (1981) explains, the term terrorism has been used to describe the inducement of fear and anxiety to control and direct a civilian population. In some cases, the phenomenon of terrorism was a challenge to the authority of the state and grew from the difficulties revolutionaries experienced in trying to recreate the mass uprisings of the French Revolution. Other important contributions to the definition of terrorism have been made by Thornton (1964), Schelling (1966), Thackrah (1987), as well as Schmid & Jongman (1988).

There are also varying definitions held by governments, law enforcement agencies, such as the Federal Bureau of Investigation (FBI) and international multilateral organisations, such as the United Nations (UN) and the European Union (EU). For example, in a declaration on measures to eliminate terrorism, the UN describes terrorism as "a criminal act intended or calculated to provoke a state of terror in the general public, a group of persons or particular persons for political purposes, which are in any circumstance unjustifiable, whatever the considerations of a political, philosophical, ideological, racial, ethnic, religious or any other nature that may be invoked to justify them" (UN General Assembly Resolution 49/60, December 9, 1994). Irrespective of which definition is applied, terrorism is used as a tool of conflict or war by numerous organisations and individuals seeking to influence governments or other opponents. As this thesis will argue, AQ frames the use of terrorism as part of a war to defend Islam.

As with war, terrorism is a human phenomenon driven by a range of motivations and contexts that attempt to describe how and why terrorism is used. One of most cited authors who has described the challenge of defining "terrorism" is Thackrah (1987). In his examination of the historical discourse on defining terrorism, Thackrah (1987) said:

> No definition in principle can be reached because the very process of definition is in itself part of a wider conflict between ideologies or political objectives [...] the problem is not one of the comprehensiveness or degree of detail of definition, but is one of the framework of that definition. (Thackrah, R. 1987, p.25)

In this regard the definition to be used in this thesis is framed in the context of how AQ perceives its conflict with the dominant Western hegemony as a war and not merely a violent form of social or political protest. This notion of not only a war but an unconventional, fourth generation concept of war as described by Lind (1984), is strongly argued and explored in Chapter Two and Chapter Five and is important for the theoretical context of this research.

The concept of terrorism as a weapon used by a political organisation was explored by Thornton (1964), who described terrorism as a "symbolic act" and said:

> Insurgents use terror because they lack political support. They attempt to provoke the incumbents into repressive measures, which create a justification for their violent tactics. Because terrorists cannot tactically eliminate their

opponents, they rely on methods, which simply make an opponent's withdrawal less costly than continued fighting. Terrorist acts also serve to build morale within the insurgent organisation, to disorient the lives of the target population and to advertise the insurgency. (Thornton, T.P. 1964, p.1)

Western governments are presented with a conundrum when dealing with Salafi-Jihadi inspired home-grown terrorism, as they cannot physically withdraw, as if on a conventional battlefield or in the contest for independent territory within a sovereign state.

Incredibly, Schmid and Jongman (1988) noted that in their first *Research Gazette,* published in 1985, they analysed twenty-two word categories contained within 109 definitions of terrorism in an attempt to establish a common theme or a number of common elements to describe terrorism. However, this thesis accepts the definition of terrorism offered by Schmid and Jongman (1988) who describe it as an "indirect method of combat in which random or symbolic victims serve as an instrumental target of violence" (Schmid & Jongman, 1988, p.2). Their definition continues by stating:

> The purpose of this indirect method of combat is to either immobilise the target of terror in order to produce disorientation and/or compliance, or to mobilise secondary targets of demands (e.g. a government) or targets of attention (e.g. public opinion) to changes of attitude or behaviour favouring the short or long-term interests of the users of this method of combat. (Schmid & Jongman 1988, p.2).

The Schmid and Jongman (1988) definition of terrorism is applicable in the context of this research for two reasons. Firstly, it supports the argument in this research that home-grown terrorism is a tactic of asymmetric warfare employed by AQ. Secondly, it adopts the language used by Boyd, who emphasised the need to produce mismatches, fast-transients and disorientation in the mind of an adversary by penetrating their OODA loop. This has been achieved through the use of what AQ describes in its 2004 publication, *Management of Savagery*, as graphic and unvarnished violence. When synthesised with the use of the internet and replayed incessantly by the 24-hour mainstream media cycle, the effect is morally and mentally traumatising for Western society and frustrates domestic public opinion (Lynch 2006; Frias, Samuel & White 2012; Farwell 2015).

**1.2.2 Home-Grown Terrorism**

The term "home-grown terrorism" appeared in academic literature following the 7 July 2005 terrorist attacks on the London Metropolitan Transport system (7/7 London attack). This was because the four terrorists were individuals who had been either born or raised in the United Kingdom. While the use of the term "home-grown terrorism" may be new, the act itself is not. For example, the Anarchists of the late nineteenth and early twentieth centuries were at the time feared to be a potential global terrorist phenomenon. In her work on French anarchists exiled in London, Bantman (2013) explores what was then described as a transnational threat from anarchist-inspired terrorism. These anarchists often carried out terrorist attacks against the Government of the country in which they were citizens. In other words, they were home-grown terrorists.

In a detailed epistemological account of terrorism, O'Kane (2014) describes how following the invention of gelignite in 1875, the 1890s in Europe become known as the decade of the bomb. In a comparative analysis of lone wolf terrorism, Feldman (2013) describes a 150-year history of the anarchist-terrorism phenomenon where the majority of the terrorist attacks were perpetrated by individuals against institutions, representatives or economic targets of their own country of origin or birth. As Feldman (2013) outlines, the 1894 bombing of the Café Terminus in France, the assassination of King Umberto of Italy in 1900 and the 1920 bombing of Wall Street, which killed 33 people, are examples of terrorist attacks carried out by individuals against their home country.

Even Australia at that time did not escape the impact of anarchist terrorism. Feldman (2013) also provides other examples, including the bomb exploded at the front of Daniel Maloney's house in the Melbourne suburb of Fitzroy on 28 May 1898, described at the time as another example of the global violence being spread by anarchists. The Italian Red Brigade, the West German Red Army Faction as well as a range of right-wing groups and individuals in the United States (US), all interviewed by Jessica Stern (2003), could fall under the umbrella of being defined as home-grown terrorists. Before the 11 September 2001 (9/11) attack on the United States, the largest bombing on American soil by a US citizen occurred on 19 April 1995, when Timothy McVeigh destroyed the Alfred P. Murrah Federal Building in Oklahoma City, killing 168 people (Michel and Herbeck, 2001). The term "home-grown" appears to have been applied retrospectively to the Oklahoma bombing as a consequence of events and changes in the paradigmatic perspectives on terrorism since the

terrorist attacks of 9/11. Terrorist attacks by citizens against their own countries in the West, inspired by the Salafi-Jihadi narrative, are a relatively recent occurrence.

In their examination of the major academic works on home-grown terrorism, Crone and Harrow (2011) attempt to differentiate between individuals born or raised in the West who autonomously become a terrorist and those who have external support from AQ. For Crone and Harrow (2011), the two important identifiers of home-grown terrorism are "belonging" and the level of "autonomy." The identifier of "belonging" refers to whether the individual or members of the group were born in a Western country or spent more than half their life living in the West. This could include individuals who migrated to a Western country with their parents. The identifier of "autonomy" refers to the extent to which the individual or members of the group had an association or links with a Salafi-Jihadi terrorist organisation such as AQ. As Crone and Harrow (2011) explain, when it was discovered that perpetrators of the 7/7 London terrorist attack had travelled to Pakistan and received terrorism training, the strength of the home-grown label was reduced. The level of "autonomy" is not a disqualification factor for identifying an individual or group as home-grown for this research. The level of AQ involvement in home-grown terrorism may depend on a range of strategic and tactical factors, but it does not reduce or remove the nature of the terrorist attack as being home-grown.

Perhaps the simplest description of home-grown terrorism is provided by Precht (2007), who described it as "acts of violence targeting Western countries in which the terrorists themselves have been born or raised" (Precht, 2007, p15). For the purposes of this research, there is no intention to create a new definition of home-grown terrorism. Instead, it is irrelevant if those who were born and/or raised in a Western country, who planned to carry out a terrorist attack on that country, received external support or not; they are still described as home-grown terrorists.

### 1.2.3 Asymmetric Warfare

An important concept for this research is asymmetric warfare because this research considers home-grown terrorism as a tactic of asymmetric warfare by AQ and other Salafi-Jihadi terrorist organisations. Asymmetric warfare is a term used to describe how one opponent can identify and exploit the weakness of another in conflict. The military strategist Sun Tzu, who in 500BC wrote *The Art of War*, said: "if the enemy is superior in

strength, evade him. If his forces are united, separate them. Attack him where he is unprepared. Appear where you are not expected." Identifying and exploiting an adversary's weaknesses, while utilising one's own strengths against those weaknesses, is at the heart of asymmetric warfare, as explained by Metz and Johnson (2001) and Arreguin-Toft (2001). In the context of this research, asymmetric warfare is how AQ is applying its brand of terrorism and violence against Western targets, as opposed to fighting them on a conventional battlefield.

In a historical examination of asymmetric warfare and lessons for the US military, Franklin Miles (1999) explained that the United States Department of Defence identified the following common threads in their historical interpretation of asymmetric warfare including:

- Pitting one's strengths against selected enemy weaknesses.
- Using unexpected, unconventional, or innovative methods of attack or defence.
- A disproportionate effect of the military or financial investment and oucome.
- Asymmetric threats can be either technologically or culturally based.

(Miles, B. Franklin, 1999, Asymmetric Warfare: An Historical Perspective, p. 3)

One of the most cited modern works on asymmetric warfare is Mac (1975), who described how, since World War Two (WWII), "technological superiority may be a highly unreliable guide to the outcome of wars" (Mac, 1975, p.1). An example of AQ's use of a tactic of asymmetric warfare is the failed bombing attempt by Richard Reid, a.k.a the "Shoe–Bomber". On 22 December 2001, Richard Reid, a British-born citizen, attempted to blow up American Airlines flight 63 from Paris to Miami, with a bomb inside his sneakers. Even though the attempt failed, this unsophisticated attack penetrated multiple layers of advanced security and forced Governments and airports around the world to respond.

This research frames home-grown terrorism as a tactic of asymmetric warfare. Tactics of asymmetric warfare can also involve exploiting an opponent's perceived moral weaknesses. In this regard, what the West believes to be the strengths of a democratic society, human rights and secular rules of law are seen by AQ as weakness to be exploited. In his book, *Why I am Not a Muslim*, Ibn Warraq (1995), explained:

> Americans tend to think that deep down we all have the same values. Americans believe that all these terrorists, if you scratch beneath the surface, are looking for religious equality and justice. That's complete and utter nonsense. Americans can't face the reality that different people have different values. (Ibn Warraq, 1995, p.95)

As Barnett (2003) argues, Western political leaders, policy makers and even military commanders have lost sight of the fact that people and ideas are the essence of not only why wars are fought, but also how. In terms of the US and its allies, such as Australia, the perceived weakness is our moral rejection of certain methods of retaliation and our propensity to uphold international rules of war and principles of human rights. Identifying these weaknesses, whether moral, mental or physical, is fundamental to asymmetric warfare and one of the most important themes in this thesis.

**1.2.4 Structure and Organisation of the Research**

This thesis is presented as seven chapters comprising an introduction, a review of the literature, analysis and conclusion.

Chapter Two critiques, explores and describes Boyd's OODA Loop and the available academic literature on his conceptual framework. The simplicity of the OODA Loop can be deceiving and many authors and students of management, law, military strategy and even healthcare, who have applied the OODA Loop to their field of expertise often neglect to deconstruct the principles, theories and intellectual discourse that sits behind this concept for survival. While there are a number of papers published in military journals contesting and exploring Boyd's theoretical framework as applied to aerial combat or military strategy, no academic, peer-reviewed papers using the OODA Loop to analyse and explore Salafi-Jihadi-inspired home-grown terrorism exist. Chapter Two extends the concept of asymmetric warfare to the notion of manoeuvre warfare and fourth generation warfare. Finally, Chapter Two analyses each component of the OODA Loop in relation to Salafi-Jihadi-inspired home-grown terrorism.

Chapter Three explores the strategic model of terrorism as a working concept underpinning this study. As such it also offers a critique of established strategic models or typologies of terrorism. For example, Thomas Thornton (1964), who proposed five strategic constructs; Crenshaw's (1981) strategic model of control and outbidding; and Pape (2006) who argues that political ends are the overriding strategic objective of terrorist organisations. Other contributions analysed include Kydd and Walter (2006), Abrahms (2008), Sageman (2008) and Bakker (2006). Further, Chapter Three seeks to evaluate the predominant approaches in the literature to describe the implementation of home-grown terrorism. For example, whether it is applied through a leaderless network or one that continues to be directed by a

command structure where the AQ leadership remains in direct control of planning terrorist attacks. Chapter Three also explores the religious, social, moral and political symbolism implicit within the Salafi-Jihadi narrative. The cultural context of this research sits within Islamic fundamentalism and several insightful and accessible theological explanations of the core strands of Islam has been provided by the likes of Majid (1984), Mousalli (2009), HRH Prince Ghazi bin Muhammad Professor Ibrahim Kalin Professor Mohammad Hashim Kamali (2013) in their work on the *War and Peace in Islam: the uses and abuses of Jihad*, as well as the work by Mohamed Abdel Dayem and Fatima Ayubt (2008) in their interpretations of Jihad and modern challenges and Lauziere (2016), in his examination of the Islamic reform and Salafism. In Chapter Three, these works form the primary and secondary sources used to explore key concepts such as *jihad*, *takfir*, Wahhabism and Salafism, as they form an important element of the narrative. Understanding the narrative and the symbolic language used to inspire, such as *jihad* and *takfir*, is an important aspect of this research. In this context, all Salafi-Jihadi movements, such as AQ, ISIS, Boko Haram and al Shabbab, are defined as terrorist movements.

Chapter Four presents the methodological approach to this study and establishes the foundation for the case study research methodology that is applied in this thesis. This involves examining the important academic work of Yin (1981, 1984 and 2003), Gillham (2000) and Thomas (2011). The multiple case study research design is descriptive, evaluative and used to test the theory that home-grown terrorism is a tactic of asymmetric warfare used by AQ. Case study research methodology is a well-established research discipline within social science and qualitative research practices, used to conduct exploratory analysis using real-life examples within a conceptual framework. Research of the Salafi-Jihadi movement is essentially a sociological enquiry into people, events, decisions, periods of time and institutions, as well as a belief system that requires a theoretical focus. Three case studies are used to test this theory, through descriptive and evaluative critical inquiry against John Boyd's OODA Loop, the conceptual framework and strategic model of terrorism employed for this research. The three case studies selected for this research are:

1. The Australian case of Jack Roche
2. 7 July 2005 London transport network attack
3. 15 April 2013 Boston Marathon Bombing

Each case selected for this research represents a unit of human activity embedded in the real world, which can only be studied in context and cannot be manipulated or contrived to suit the objectives of the research.

The case studies are presented descriptively in the Chapter Five. Leading academic experts on case study methodology, such as Yin (1981, 1984) and George and Bennett (2005), state that case study research is a particularly useful research tool where the boundaries between the phenomenon and the set of circumstances are not clearly defined. As a phenomenon, Salafi-Jihadi inspired home-grown terrorism involves a complex set of occurrences, without concrete boundaries or borders. Part of the challenge for counterterrorism strategies is that while Salafi-Jihadi terrorism lacks concrete boundaries, it is powerfully connected through a mindset where the battlefield includes mental, moral and social concepts.

Following from this, Chapter Six offers an analysis of the case studies through the application of the OODA Loop in order to illuminate the evolving nature of the current terrorism phenomenon. Significantly, Chapter Six synthesises the elements of terrorism, AQ's use of the Salafi-Jihadi narrative, warfare and Western humanistic morality to present and describe the concept of moral manoeuvrability; a contribution to this field of inquiry developed from this research. Moral manoeuvrability is a dynamic, theoretical concept to describe the ability of AQ to exploit Western democratic principles and engineer an over-reaction or a compromise by governments or members of the community. The reaction by Western governments, or public action taken by elements within the community, contradict that Western government's very own moral principles. Simultaneously, the Western government's policy decision or a community's negative reaction, such as anti-Muslim protests, feeds back into AQ's Salafi-Jihadi narrative, legitimising the use of violence and further inspiring more followers to their cause. Those who already felt marginalised within the Muslim population now have that perception confirmed. It is also the case that open, considerate and responsible debate by the public or indeed the government, to explore and understand the phenomenon of Salafi-Jihadi inspired home-grown terrorism, is stifled, out of a concern that this will be misinterpreted as "Islamophobic". Freedom of expression, speech and debate are fundamental to Western democracy. This forms the definition of moral manoeuvrability.

Moral manoeuvrability cultivates disharmony and paralysis within governments and the public, unsure if they should compromise, while simultaneously building a stronger and wider connection, or an *esprit de corps,* among the Salafi-Jihadi movement. The overreaction (e.g. security and surveillance laws) or the accommodation by the government through a change of social policy (a hypothetical example would be allowing communities in Australia with a majority of Muslim residents to apply *sharia* law) causes the Western government to compromise its own principles. This is about the transformation of morality or principles between two opposing sides. Chapter Six explains how AQ and ISIS have been applying moral manoeuvrability in order to penetrate deep inside the OODA Loop of Western countries.

Finally, the Conclusion draws together the theoretical constructs described, evaluated and tested in this research. Potential weaknesses in the research are also highlighted, along with suggested applications and areas for further work.

**1.2.5 Significance and Contribution of the Research**

In summary, the aim of this thesis is to make a significant contribution to the understanding of how AQ has created its own Salafi-Jihadi narrative to inspire home-grown terrorism, as a tactic of asymmetric warfare. This current terrorism phenomenon has created and continues to create tremendous suffering and social dislocation within many countries. It is therefore important to make a contribution through a rigorous process of analysis and synthesis to better understand how this threat to our society can be neutralised. The application of the OODA Loop as a strategic model of terrorism to test the theory that Salafi-Jihadi inspired home-grown terrorism is a tactic of asymmetric warfare used by AQ against Western countries has not been presented previously in academic research.

In addition, this research develops the concept of moral manoeuvrability as an important contribution to this field of inquiry. Moral manoeuvrability is being used by AQ, ISIS and other Salafi-Jihadi terrorist organisations in a war directed against Western society. It is a concept that can also be used to understand how AQ and ISIS connect with and exploit the minds of two kinds of individuals:

i)      Those who have a perverse, almost pornographic attraction to violence where the AQ or ISIS narrative releases their inner psychopath. It is as if this attraction

to and the graphic demonstration of violence is *a priori* to their belief in Islam, but gives their violence a kind of theological justification; and

ii)     Those who are susceptible to the narrative that Islam is under attack and the only way to defend against this is through violence.  They personally regenerate this narrative cultivated and shaped by AQ as a fight for a sense of justice.

Those who believe Islam is under attack anchor their use of violence in the defence of Islam, and in fighting side-by-side with their Muslim brothers, their family and the wider Muslim community.

The research also uses the OODA loop to explore what it labels "do-it-yourself" (DIY), home-grown terrorism.  That is, simple acts of brutality with basic, unsophisticated tools targeting ordinary urban or city locations.  This is an emerging, evolving and adaptable asymmetric threat, as opposed to complicated mass attacks against Western targets or attacks aimed at highly guarded symbolic buildings such as Parliament, international airports or government building.  These DIY-style, home-grown terrorist attacks require little planning, few resources and no training at a terrorist camp. Despite the cacophony and scale of many global political, economic, environmental or business issues that may affect tens of thousands of people, one act of simple brutality can captivate a global audience.  For example, while they are not cases of home-grown terrorism, the beheadings of international journalists and humanitarian workers by one man, with a knife, standing in the desert can terrorise the nation of that victim.  To a certain extent it feels like home-grown terrorism, especially when the terrorist who beheads the Western hostages is himself a Westerner.

This tactic is highly disorientating for Western audiences.  It is as if the simplicity of the attack combined with the fact that the perpetrator is one of 'us' generates a mental and moral mismatch that penetrates our OODA loop. The way this intimate and traumatising act of brutality is broadcast across the internet and replayed through the 24-hour news-cycle, severely enhances the fear we have of this enemy.  Boyd would have recognised this as a tactic of asymmetric warfare - to distort the image in our minds, resulting in an under- or over-shooting in our domestic and foreign policy and our law enforcement approaches that can result in second and third tier consequences.

# Chapter 2 - The Boyd Cycle - Observe Orientate Decide Act Loop

## 2.1 Introduction

This Chapter will critically analyse the components of the OODA Loop and the theoretical constructs that sit behind Boyd's conceptual framework. This provides a grounded foundation from which to employ the OODA Loop as the analytical lens for the case study research methodology used in this thesis. The critical analysis is conducted in the context of AQ and its own prophetic Salafi-Jihadi narrative. Importantly, regardless of how terrorism and home-grown terrorism is defined, Salafi-Jihadi organisations that inspire home-grown terrorism operate within a competitive environment. Not only does AQ face competition from counterterrorism strategies and tactics but also from other competing Salafi-Jihadi terrorist groups, such as the so-called ISIS.

Salafi-Jihadi terrorist organisations frame themselves as being at war with Western cultural, social and political constructs. The conflict is not confined to a conventional battlefield but extends into our own domestic, civilian environment that includes our moral principles and values. Home-grown terrorism attacks against everyday venues such as cafés, train stations and buses in Western cities are examples of tactics used in what Lind et al (1989) called fourth generational warfare. If one accepts the notion of Salafi-Jihadi terrorist groups operating within a competitive environment, then the OODA Loop is an applicable conceptual model to explore the strategy of Salafi-Jihadi terrorist organisations, framed as a war with the West. The OODA Loop could be described as Boyd's contribution to strategy, just as *The Origin of Species* was Charles Darwin's contribution to evolution. Darwin's concept of survival of the fittest is analogous to Boyd's emphasis on the ability to adapt in war in order to survive. In the context of terrorism, if neither the terrorist nor the counterterrorist learns to adapt then neither will remain a viable force into the future. Through the OODA Loop this thesis argues that Salafi-Jihadi inspired home-grown terrorism is not only a tactic of asymmetric warfare but also an example of AQ's capacity to adapt to a range of counter-measures that enable it to pursue a global strategy and to regenerate.

While this Chapter does not intend to be a biography on the life of COL. John Boyd, it is fundamental to the application of the OODA Loop to peel back the influences and complex layers of his discourse. This provides a deeper understanding of the OODA Loop and

illustrates its relevance as a lens through which to analyse Salafi-Jihadi terrorist organisations such as AQ and their use of home-grown terrorism as a tactic of asymmetric warfare. The simplicity of the OODA Loop is often a distraction - as Colin Gray (1999) warns, the humble appearance of the OODA Loop can be misleading. For example, the OODA Loop is often used by disciplines such as healthcare, (Enck, 2012), business (Richards, 2004) and even in the area of litigation (Dreier, 2012) and software development (Amsden & Shashidhar, 2012) with little or no acknowledgement of Boyd and no analysis of the concepts behind the OODA Loop.

In fact, Boyd's conceptual spiral was developed following the analysis and synthesis of many systems, concepts, theoretical constructs, principles and consequences of strategies, tactics and actions. For example, the second law of thermodynamics, Heisenberg's theory of relativity (uncertainty principle) and Gödel's concept of the incompleteness of closed systems could be described as the DNA of the OODA Loop. Boyd's detailed study of military history from Sun Tzu, Genghis Khan, Napoleon Bonaparte, Carl von Clausewitz and Mao Tse Tung heavily influenced the design of the OODA Loop. Boyd studied the Greek and Roman wars, such the Spartan battle of Leuctra, as well as the Vicksburg battle of the American Civil War and he was particularly fascinated by the guerrilla style warfare of TE Lawrence in World War I and the German Blitzkrieg of World War II (*Patterns of Conflict*, 1986). Boyd was determined to reveal the common strategic threads that flowed through these historical case studies of warfare.

Boyd studied the laws of physics, engineering, inventions and scientific discoveries that created novelty or were born from adaptation and broke closed systems of analysis. One of Boyd's most important developments was how he quantified and measured energy manoeuvrability, or EM Theory. Boyd's quantification of EM Theory revolutionised the design of future fighter aircraft. In the context of this thesis EM theory is applicable and relevant. Firstly, because its development is an important example of Boyd's analysis and synthesis of components of different systems and theories; secondly, because AQ's ability to manoeuvre along the mental and moral continuum of war requires it to be an agile, adaptable and regenerative movement, similar to the aircraft Boyd designed. Each of these areas needs to be disentangled so that the application of the OODA Loop to Salafi-Jihadi inspired home-grown terrorism can be critically analysed with an open mind.

Even with many top AQ leaders now dead or in custody, following military and counter terrorism actions since 9/11, the transnational Salafi-Jihadi network is continually transforming, adapting and regenerating in response. In *The Lesser Jihad*, Mastors and Deffenbaugh (2007) provides an analysis of how AQ inspires followers to continue to devise and implement acts of terror in response to the West's counterterrorism measures. The post-9/11 responses, such as the invasion of Afghanistan in 2001 that destroyed AQ's training bases, also penetrated al-Qaeda's own Observe Orientate Decide Act Loop. This forced AQ to evolve and adapt into a more decentralised and network-based organisation. In fact, with the super-conductive ability of the internet, it did not matter whether leaders such as Osama bin Laden and Ayman al-Zawahiri continued to exert full control. Independent cells of radicalising Salafi-Jihadists could begin to act and regenerate on their own or with minimal or even no direction and support from the global AQ structure. The 2013 conviction of Irfan Naseer, Irfan Khalid and Ashik Ali in Birmingham, UK (Laville, 2013, February 23) demonstrated that even after the death of bin Laden, home-grown terrorism remains a real threat and is a core tactic of choice to penetrate the West's OODA Loop. Each counter-terrorism adaptation by Western governments becomes a catalyst for Salafi-Jihadi terrorist organisations and those inspired by them to also adapt in order to survive.

As mentioned, this thesis argues that home-grown terrorism is an example of how AQ penetrated the West's OODA Loop and how it was forced to shift its own structure and strategic and tactical capability in order to survive. Once AQ's own OODA Loop was penetrated, home-grown terrorism implicitly evolved and became part of its broader strategy and tactical application of that strategy. As Western governments reacted and sought to reduce the ability for AQ to train home-grown terrorists in the tribal areas of Pakistan, it evolved again. It no longer needed to train the aspirational and impressionable members of the young Muslim community living in countries such as Australia, the UK, the US, Canada, France and the Netherlands. Instead AQ sought to develop a globally-dispersed network, through the dissemination of its inspiring mixture of violence and a prophetic narrative, via the internet and Western-based self-appointed Salafi-Jihadi preachers. These elements combined to become powerfully alluring to impressionable young Muslims and converts who were encouraged to develop their own novel ways of becoming home-grown terrorists. Each adaptation is an example of AQ regenerating by revolving through its own OODA loop, allowing them to penetrate the West's OODA loop.

This Chapter begins with a brief overview of Boyd, as it is almost impossible to separate his work from his life. The chapter will then set out the essence of the OODA Loop through a discussion of Boyd's main bodies of work, such as *Destruction and Creation* and *Patterns of Conflict*, and the composition of all his work contained within *A Discourse on Winning and Losing*. Throughout the chapter, the inter-weaving layers of science, logic, mathematics, physics and biology, as well as Boyd's unprecedented study of the history of warfare, are explored to explain how the OODA Loop was developed. This enables a better understanding of the OODA Loop and its application as a lens through which to analyse Salafi-Jihadi inspired home-grown terrorism.

## 2.2 An Overview of COL. John Boyd (1927 – 1997)

COL. John Boyd was a United States Air Force (USAF) pilot who flew the F-86 *Sabre* during the Korean War; he was considered one of the best fighter pilots of his time. As Hammond (2001), Coram (2004) and Osinga (2005) explain, the experiences from the Korean War formed the foundations of his contribution to the development of air-to-air combat, aircraft design, manoeuvre warfare and, ultimately, the theories that are embedded within the OODA Loop. Following his air-to-air combat experiences against enemy aircraft and from listening to other USAF pilots who survived their own aerial duals, Boyd sought to understand how even though the Russian built MiG-15 was faster, could operate at a higher altitude and turn tighter than the USAF F-86, the kill ratio was 10:1 in favour of the F-86 (Hammond, 2001; Coram, 2004). Boyd determined that while speed and altitude were important, the difference was a combination of the superior visibility provided by the F-86 canopy, the ability to transition from one manoeuvre to the next and the training of US pilots that taught them to use the manoeuvrability of the aircraft.

Following the Korean War, in the 1950s and 1960s Boyd developed air combat tactics and trained pilots at the US Fighter Weapons School at Nellis Air Force Base near Las Vegas, Nevada. Along the way Boyd acquired a number of nicknames - such as 'the Mad Major' or 'Genghis Boyd' - many of which reflected his intense and often overwhelming personality. He was also referred to as 'Forty-Second Boyd'. This was the result of a bet he made with US fighter pilots from the Air Force, Navy or Marines who attended the Miramar Naval Air Station in California. As Hammond (2001) and Coram (2004) describe, Boyd would bet other pilots that if he could not out-manoeuvre them in an aerial dog-fight and get on their

tail in forty seconds, he would pay them forty dollars.  In six years he never lost a bet.  During this period, and as a result of his examination of the F-86 and MiG 15 air-to-air combat encounters, Boyd wrote what became known as the *Aerial Attack Study*, which was declassified in 1964 by the USAF.  It was the first time that anyone had documented how air-to-air combat worked and it became the official tactics manual for fighter aircraft (Hammond, 2001; Coram, 2004).  At the time, the *Aerial Attack Study* was the most sought after document in the USAF.

In 1960, Boyd sent himself to study industrial engineering at Georgia Tech, Atlanta.  It was during this period that he began to learn about thermodynamics, or the science of energy.  Thermodynamics also describes how energy is transferred.  It was the Second Law of Thermodynamics, or the study of entropy, that caught Boyd's attention, in relation to the manoeuvrability of jet fighters in aerial combat.  As explained by Dugdale (1996), the second law of thermodynamics describes how heat transfers from hot to cold and never the other way around.  According to one of the 'founding fathers' of thermodynamics, Nicolas Carnot (1796-1832), whenever a difference in temperature exists between two systems (when there is not thermodynamic equilibrium) work can be produced from it (cited in Dugdale, 1996).  The second law of thermodynamics was one of the three theories of physics, mathematics and logic that Boyd (1976) combined to reveal the beginning of his strategic concepts in *Destruction and Creation*.

Boyd's paper, *Destruction and Creation*, is an early example of how he synthesised various components of seemingly unconnected concepts and disciplines.  This is key to understanding both Boyd and how the OODA Loop can be applied as a strategic model in this field of inquiry on home-grown terrorism.  While the *Aerial Attack Study* placed great emphasis on situational awareness, it was not simply a matter of being physically aware of enemies; it included an awareness of how they thought, how they were trained and how they responded.  One needed to pull all these factors apart to understand an opponent.  As with the second law of thermodynamics and the effects of entropy, if pressure is placed on any closed system - in this case a pilot with poor situational awareness outside their own system - then internal disorder will increase and the capacity to function accurately will decrease.

Following his graduation from Georgia Tech, Boyd went on to Eglin Air Force Base, Florida and continued to develop his energy manoeuvrability theory up until 1965.  From Eglin,

Boyd was assigned to the Pentagon to work on the F-X (Fighter Experimental) project. The F-X became the F-15 and from there the lightweight fighter, or F-16, was born. The F-16 was championed by Boyd and a group of like-minded mavericks known as the 'fighter-mafia', which comprised Boyd, Pierre Sprey and COL. Rich Riccioni (Burton, 1993; Hammond, 2001; Coram, 2002). The application of Boyd's theories also appealed to the US Marine Corp (USMC). The USMC were first introduced to Boyd when he was invited by COL. Michael Wyly to present *Patterns of Conflict* at the US Marine Corp Command and Staff College, Quantico. During the five-hour lecture, Boyd explained his time competitive OODA Loop (Hayden 1995). By working with COL. Michael Wyly and William Lind, Boyd's influence on the USMC culminated in the Fleet Marine Force Manual-1 (FMFM-1 Warfighting Manual) and engineered a paradigm shift in how the USMC conducted warfare in the future (Hooker, 1993; Hayden, 1995; Coram, 2002).

Following his work with the USMC, Boyd became more than a fighter pilot and designer of aircraft. His theories on military strategy were to have the most profound impact on the United States military doctrine on warfare. In the lead up to the first Gulf War following Saddam Hussein's invasion of Kuwait in 1990, Boyd was engaged by then United States Secretary of Defence Richard Cheney as an advisor. (Cheney later became U.S Vice President under George W. Bush, 2000 – 2008.) In this capacity, Boyd has been attributed with heavily influencing the strategy employed by the US military during what was labelled *Operation Desert Storm (*17 January 1991 – 28 February 1991). Boyd's concept of manoeuvre warfare culminated in what became known as the 'left-hook' design of the plan, resulting in the US military disorientating and overwhelming Saddam Hussein's forces (Coram, 2002; Wheeler and Korb, 2007). It has been suggested this was the first real-world use of Boyd's OODA Loop by the US military (Ford 2010). The ground attack by the Marines was said to have got inside the 'Boyd Cycle' or OODA Loop of the Iraqi forces (Hayden 1995). Two years after the end of the Gulf War, Boyd was diagnosed with cancer.

After Boyd's death, General C.C. Krulak, the then 31st Commandant of the Marine Corps, described Boyd as:

> a towering intellect who made unsurpassed contributions to the American art of war. Indeed, he was one of the central architects in the reform of military thought which swept the services, and in particular the Marine Corps, in the 1980's. From John Boyd we learned about the competitive decision-making on the battlefield - compressing time, using time as an ally. Thousands of officers in all or services knew John Boyd by his work on what was to be known as the Boyd Cycle or OODA loop. His writings and his

lectures had a fundamental impact on the curriculum of virtually every professional military education program in the United States-and many abroad [..] he was the quintessential soldier-scholar - a man whose jovial outgoing exterior belied the vastness of his knowledge and the power of his intellect. (GEN. Krulak, cited 13 March 2007, inside the Pentagon,)

While Presidents and their Generals tend to be those remembered for great military defeats or indeed victories, those who had a hand in the design of strategy and execution tend to remain in the shadows. This was the case with Boyd, who died on 9 March 1997 almost unnoticed by academia, military scholars and the popularising practitioners of his strategy.

## 2.3 Lessons from Others on Boyd

One of the challenges with unpacking Boyd's conceptual framework - the *Observe Orientate Decide Act* Loop - in the context of Salafi-Jihadi inspired home-grown terrorism, is the limited number of academic peer-reviewed publications applying Boyd's ideas to the current terrorist phenomenon. Further, there are no primary source publications in the academic literature written by Boyd. An aspect of Boyd's nature was that he never believed any of this theoretical concepts were ever finished. For example, despite completing *Patterns of Conflict* in 1977, Boyd continued to revise the presentation up until 1995. The version used as a primary source for this research was completed in 1986. The only book published specifically on Boyd and AQ was written by Ford in 2010. This was completed by Ford (2010) for his online Master's dissertation through King's College, London and published as "A Vision so Noble: John Boyd, the OODA Loop and America's War on Terror." There are no available academic papers published that focus specifically on Salafi-Jihadi inspired home-grown terrorism using Boyd's OODA Loop.

One of the rare, in-depth, peer-reviewed academic works on Boyd was completed by Osinga (2006), who explains that if one wants to read Boyd's mind and study his work, all that is left are a loose collection of slides. They have not been officially published and are photocopies of old acetate slides used for overhead projectors. Nor are they in themselves self-explanatory, as one set of slides or presentation often refers to the context of a previous set of slides. While there are numerous essays and papers on the OODA Loop in relation to manoeuvre warfare, many do not critically deconstruct the theories that sit behind Boyd's conceptual framework (Bolger, 1993; Polk, 2010; Ford, 2010). The majority

of literature published on Boyd continues to explore and critique the relevance of his theories to the US army (such Polk, 2010) or are monographs completed by US armed services personnel completing their dissertations, at one of the US Advanced Military Warfare Schools, such a Fort Leavenworth, Kansas. For example, Major Richard Fournier (2013) examined the utility of how Boyd used the study of ancient history to develop modern theories of warfare. The importance of understanding history as a guide to improving the future of any social system would appear obvious - as Winston Churchill said, "those who fail to learn from history are doomed to repeat it."

United States military advisor and strategist, William Lind, recognised the application of Boyd's theories for the USMC. However, the work by Lind (1985) is not a peer-reviewed, critical examination of Boyd or an academic exploration to test his theories against a hypothesis. Instead, Lind (1985) recast Boyd's theories for the USMC and argued that future ground combat would be dominated by those who could decentralise their actions and accept confusion and disorder, while avoiding predictive behaviour. This culminated in the USMC Doctrinal Publication-1 (MCDP), *Warfighting 1989*, which integrated Boyd's theories, initiating a paradigm shift from the attrition warfare of the late Napoleon era and World War I to "manoeuvre warfare". The *MCPD-1 Warfighting 1989* describes manoeuvre warfare as a "warfighting philosophy that seeks to shatter the enemy's cohesion through a variety of rapid, focused, and unexpected actions which create a turbulent and rapidly deteriorating situation with which the enemy cannot cope" (MCPD-1 *Warfighting* 1989; p.73). This doctrine of manoeuvre warfare is as appropriate for nation-on-nation conflict as it is for organisations that use terrorism against a dominant, hegemonic power with opposing belief systems.

Many works on Boyd provide descriptions of the applicability of his theories to other disciplines. For example, the Introduction noted the use of Boyd's theories in the fields of business, health and litigation. While these are secondary sources, they demonstrate the applicability of the OODA Loop as a general, strategic model that will be important for the context of Chapter Three. How Boyd thought and how he applied intellectual rigour to his analysis and synthesis of science, biology, mathematics and history provide lessons for academic research into almost any field of inquiry. Effectively, a mature application of the OODA Loop is inseparable from how Boyd evaluated competitive systems. For example, one of Boyd's associates and colleagues, Richards (2004), published an overview of Boyd's ideas as they apply to business. The majority of Richards' (2004) presentation is spent

explaining Boyd's concepts and is predominantly centred on the OODA Loop. However, one of the most important lessons from Richards (2004) is the requirement to have a mindset open to adaptation and novelty creation. For a detailed investigation into the politics of weapons design and procurement within the US military, Fallows (1982) offers a sound analysis of this highly competitive environment. In *National Defense*, Fallows (1982) uses not only Boyd's theories but also his "fighter mafia" acolytes as examples of those who personified how to challenge an establishment locked into design paradigms on how to fight wars.

There are only three comprehensive attempts in the literature to describe the intellectual calculus Boyd pursued in the construction of the OODA Loop. The first is by Robert Coram (2002), *Boyd: The Fighter Pilot Who Changed the Art of War*. In his book, Coram provides a detailed account of Boyd's life but only offers a summary of Boyd's OODA Loop in Chapters 23 and 24. This is not a criticism, as Coram's work is a biography on Boyd and not an academic analysis solely focused on the OODA loop. Coram has continued to present and produce articles and commentary on Boyd to explain how Boyd merged Sun Tzu, Clausewitz, B. H. Liddell Hart and others into a comprehensive appreciation of a mind-time-space continuum within which wars are fought. The second attempt to detail COL. John Boyd's theoretical constructs is by Grant Hammond, *The Mind of War: John Boyd and American Security,* published in 2001. Here Hammond (2001) presents a more thorough explanation of the development of Boyd's ideas. Importantly, Hammond (2001) dissects the physics, logic, philosophy and history of warfare Boyd analysed and synthesised to develop the OODA Loop. However, Hammond's (2001) is not an academic peer-reviewed study of the OODA loop and only briefly relates the OODA Loop to terrorism. There is no reference in Hammond (2001) to Salafi-Jihadi terrorist organisations or home-grown terrorism.

Finally, Osinga (2006) - *Science, Strategy and War: The Strategic Theory of John Boyd* - provides one of the only academic attempts to describe the modern strategic analysis and implementation of Boyd's work focused on the concepts behind the OODA Loop. Osinga (2006) offers a contextual analysis of *A Discourse on Winning and Losing* and a detailed exploration on how Boyd developed his strategic framework. The work by Osinga (2006) is the most thorough analysis of Boyd's theories on strategy, logic, science and military historians and practitioners. Importantly, Osinga (2006) recognises Boyd as the first strategist to introduce epistemological debates of the sixties and seventies into strategic

thought, leaving a multilayered and multidimensional legacy. One of the implications from Osinga (2006) is the idea that Boyd's theories can be applied to many competitive environments. As Osinga (2006) explains, many authors and practitioners of other fields of inquiry or disciplines who adopt Boyd's work are not aware of the origin of the conceptual framework they are using. For example, when business and corporate strategist Peters (1987) wrote *Thriving on Chaos*, he had been indirectly influenced by Boyd's theories through the work of James Fallow (1982), but without recognising Boyd as the original creator of this conceptual framework. While Osinga (2006) encourages further research applying the OODA Loop to other fields of inquiry such as the study of terrorism by Islamic extremists, there is no direct or indirect reference to the use of the OODA Loop to critically analyse Salafi-Jihadi inspired home-grown terrorism as a tactic of asymmetric warfare.

As mentioned Boyd acquired a dedicated team of like-minded acolytes such as Franklin Chuck Spinney, Ray Leopold and Chet Richards. A number of them continued presenting Boyd's strategic framework and demonstrating their applicability to conflict and strategic thinking in general. For example, Spinney (2014) offers a presentation on the evolution of epistemology and focuses on Boyd's *Destruction and Creation* paper written in 1976. Similarly, Chet Richards (2006) provides an illustrative description of Boyd's theories and compares them to other strategic theorists on warfare, such as William Lind, Martin van Creveld, COL. T.X. Hammes, Thomas P.M. Barnett, Michael Scheuer and Antulio Echevarria. In addition, Richards (2008) offers another presentation on the application of Boyd's OODA Loop to crisis management. While these presentations are not academically peer-reviewed papers or even published, they are informative secondary source documents for anyone attempting to understand and apply Boyd's theoretical constructs.

A limited number of published works question the originality of Boyd's theories and are critical of the fact that Boyd never published his work so it could be reviewed academically. One of the better, published papers that questions Boyd's work is by Hasik (2013), who argues that comparative analysis suggests Boyd's strategic theory, the OODA Loop, is highly ambiguous. The suggestion made by Hasik (2013) is that many of Boyd's assumptions made from scientific or mathematical theories, such as Gödel's incompleteness theory and Heisenberg's uncertainty principle, are questionable. Hasik (2013) also questions Boyd's interpretations of Clausewitz and suggests that perhaps Boyd viewed Clausewitz too narrowly. There is also a question about how Boyd could make generalisations at the grand strategic level of warfare from the tactical requirements of aerial combat. However, when

analysing Boyd's presentations, there is no inference or implied suggestion that he is claiming to have discovered the Holy Grail of strategy for warfare. If anything, Boyd spent his whole life demonstrating the need to challenge closed systems, processes and doctrine. The very nature of Boyd's theoretical design requires it also to be pulled apart, critically analysed and tested. Further, it would be anathema to constrain research from the freedom to explore theories and principles from other disciplines and determine how they may be reassembled to form a novel approach for an entirely different field of inquiry. This is the point of *Destruction and Creation* and Boyd's use of the works of Gödel and Heisenberg and the second law of thermodynamics. Finally, Boyd never claimed or pretended in any of his presentations and papers to have invented anything original. Instead, his contribution to social science and strategy, and indeed to anyone undertaking research, was his ability to recast old ideas or forgotten constructs and demonstrate how their various components could be synthesised. As Osinga (2006) explains, Boyd did not aim to be novel *per se*; in fact, Boyd recognised that there are essential threads of continuity in strategic experiences.

One of the more direct criticisms of the OODA Loop was written by Storr (2001), who attempted to explore whether the discipline of military warfare was an art or a science. In his analysis, Storr (2001) argues there is no such thing as an OODA loop and that the idea of getting inside an opponent's OODA loop is deeply flawed. The first observation about the Storr (2001) paper is that the author describes the OODA loop as the Lind OODA loop, as in William Lind. This is so factually incorrect that it is hard to understand why Storr (2001) would make such an assertion. The second observation is that Storr (2001) demonstrates the kind of linear, mechanical thinking that is opposite to Boyd's theory of a dynamic, adaptive and evolving approach to strategy in a competitive environment such as warfare. The third observation is that Storr (2001) describes war as "adversarial, dynamic, dangerous, complex, uncertain and, critically, human" (p.40). In his conclusion, Storr (2001) goes as far as to say the conduct of warfare should be founded on pragmatism, empiricism, dynamism and a robust belief in the exercise of free will. This is exactly how Boyd described war and some of the characteristics required to succeed in it. Not that this means that Storr (2001) should agree with Boyd on the strategy of warfare; however, Boyd's theories are directly relevant and applicable to surviving the kind of war Storr (2001) describes.

Given the available literature on Boyd's theories, in the context of this thesis the application of the OODA Loop to the analysis and synthesis of Salafi-Jihadi inspired home-grown terrorism is a novel contribution to this field of inquiry. However, before explaining the OODA Loop it is important to understand the concept of "manoeuvre warfare". As a description of how people or organisations can dynamically shift and manipulate their position in a competitive environment, this will assist in morally, mentally and physically applying one's mind as to how to explore the OODA Loop.

## 2.4 Energy Manoeuvrability, Manoeuvre Warfare and the OODA Loop

One of the most profound contributions Boyd made to the understanding of jet fighters in combat was his quantification of energy manoeuvrability (Hammond 2001; Coram 2002; Osinga 2006). As Hammond (2001) explains, the term "energy manoeuvrability" had been used for years but without being defined. Boyd managed to quantify and plot an aircraft's ability to change altitude, airspeed and direction for every airplane in the USAF against its Soviet competitors. Fundamentally, Boyd established the measure for manoeuvrability, or the transfer of energy and the trade-offs or compromises required when designing a system. No one had done this before Boyd. An appreciation of energy manoeuvrability is fundamental to understanding the OODA Loop and demonstrating its applicability to any field of inquiry. An important contribution made by this research is the extension of this concept of manoeuvrability into the ability of an opponent to simultaneously exploit the moral principles of both its followers and its adversary in the contemporary application of asymmetric warfare.

In summarising his energy manoeuvrability theory (EM theory), Boyd (1986) argued a fighter pilot needed to be capable of both "losing and gaining energy more quickly while out turning an adversary," (Boyd, 1986, slide 4). Despite the sections on energy manoeuvrability found in Hammond (2001), Coram (2004) and even in Osinga (2006), none performs a "Boydian", paradigmatic shift and turns EM theory into the mental and moral aspect of warfare being inspired by AQ's Salafi-Jihadi narrative in the form of home-grown terrorism. Boyd said that, "a fighter who can pick and choose engagement opportunities, yet has fast-transient characteristics that can be used to either force an overshoot by an attacker or stay inside a hard turning defender is more likely to win." (Boyd, 1986, slide two). An important contribution by Boyd was his capacity to deconstruct the theorists,

wars and principles of human endeavour and to identify the particles that were common to each, from which to reconstruct a theory of strategy.

Manoeuvrability and the speed at which it can be accomplished in conflict is critical - whether in the air, on the ground or in business. The same could be said for many sports, such as rugby, basketball, martial arts and football, as well as ice hockey and motor sports like Formula One. These are activities that require the ability to transfer energy rather than only having to display a linear application of speed. Manoeuvrability combined with unconventional or irregular warfare on the battlefield is a formidable tactical application of a war strategy for opponents attempting to morally, mentally and physically defeat a much larger adversary. As will being continually explored and described throughout this thesis, the moral and mental levels of warfare are fundamental aspects of how AQ operates. The use of home-grown terrorism by AQ and the ability to continually regenerate its formation and implementation is one example of energy manoeuvrability in the context of the current terrorism phenomenon. In other words, it is the ability of AQ to shift its approach and implicitly inspire followers of the Salafi-Jihadi narrative to devise novel approaches to home-grown terrorist attacks.

The strategy and tactics of manoeuvre warfare appropriately describe how the Salafi-Jihadi organisations, such as al-Qaeda and ISIS, embark on their campaigns in Western countries. Home-grown terrorism is an unpredictable, disorientating tactic and a means of manoeuvre warfare along a moral-mental-physical continuum. Other terms often used in conjunction, or even interchangeably, with manoeuvre warfare are the concepts of irregular or guerrilla warfare. Irregular warfare or guerilla warfare include the struggle between state and non-state organisations or revolutionary movements for legitimacy and influence over relevant populations. Irregular warfare, as described by Jones (2012), includes groups or individuals who employ methods such as guerrilla warfare, terrorism, sabotage, subversion and criminal activities. Irregular warfare favours indirect and asymmetric approaches that involve acting, organising and thinking differently than one's opponent, in order to circumvent or undermine their strengths while exploiting their weaknesses. The use of home-grown terrorism could be an example of a tactic used in irregular warfare.

Another term used to describe the tactics and grand strategy of manoeuvre warfare in these unstructured, irregular conflicts is the indirect approach to war or conflict. The term "indirect" is commonly found to describe soldiers, revolutionary fighters and theorists such

as T.E. Lawrence, Liddell Hart, Genghis Khan, Che Guevara and Sun Tzu, or conflicts such as the French in Algeria (1954 – 1962), the Portuguese wars in Africa (1961 – 1974) and the Selous Scouts in former British Colony of Rhodesia.  One of Boyd's most important and influential military theorists, Liddell Hart, developed the concept of the indirect approach in *Strategy: The Indirect Approach* (first published in 1929).  Liddell Hart had witnessed first-hand the high human cost of attrition warfare employed along the Western front during the First World War.  As with Boyd in his study of military history to discern the common attributes of strategy, Liddell Hart offers lessons from many wars to describe and develop his theory on the indirect approach.  For example, Liddell Hart explains how Epaminondas led the Thebus army against the Spartans in the Greek Wars (370 – 490BC).  Hart (1929) recognised that the Spartans would not be drawn out into the open and Epaminondas did not want to enter into a prolonged war.  Instead, Hart (1929) describes, Epaminondas chose an indirect approach.  This involved establishing a new base at Mt Ithome and building insurgent support among the local population.  Epaminondas's indirect approach also included systematically destroying the economic and political ability of the rulers of Sparta to maintain their military supremacy.  Also, in summarising the campaigns of Caesar, Hart (1929) concluded, "Caesar met failure each time he relied on the direct, and retrieved it each time he resorted to the indirect" (Hart, 1929, p. 40).

Attacking an opponent's mind during war was also recognised by Liddell Hart (1929) as an integral component of the indirect approach.  In a London *Times* interview with military historian Sir Lawrence Friedman, Liddell Hart explained, "the profoundest truth of war is that the issue of battle is usually decided in the minds of the opposing commanders, not in the bodies of their men". (Hart, 1928, p.20)  From his examination of the Napoleonic conflicts, Hart stated that, "soldiers universally concede the general truth of Napoleon's much-quoted dictum that in war the moral is to the physical as three to one". (Hart 1929, p. 13)  Further, Hart determined that the indirect approach to war was one of the surest ways to dislocate the minds of an opponent.  This indirect approach is well practiced by the Salafi-Jihadi terrorist organisations such as AQ and, more recently, the so-called ISIS, as well as those who follow their direction.  For example, the *Atlantic Monthly* columnist Wood (2015) conducted an interview on ISIS with the former leader of the banned British group Al Muhajiroun, Anjem Choudary.  While he may or may not have studied Liddell Hart or COL. John Boyd, Choudary explained to Wood the ISIS approach to war.  As Wood (2005) reported, "he told me the State has an obligation to terrorise its enemies—a holy order to scare the shit out of them with beheadings and crucifixions and enslavement of women and

children, because doing so hastens victory and avoids prolonged conflict" (Wood, March 2015, p1.). Choudary understood the concept of warfare being contested in the minds of opposing forces.

The term "unconventional" is also used and often interchanged with guerrilla warfare or irregular warfare. Most recently, the US Department of Defence defined unconventional warfare as: **"**Activities conducted to enable a resistance movement or insurgency to coerce, disrupt, or overthrow a government or occupying power by operating through or with an underground, auxiliary, and guerrilla force in a denied area, also called Unconventional Warfare**"** (JP 3-05). Terms used today to describe the type of wars in Afghanistan and Iraq, like "irregular warfare" and "unconventional warfighting", would be typical of how Boyd would have described these combat environments. One of the combined objectives throughout unconventional wars is for the irregular and often weaker opponent to both demoralise, drain and mentally disorientate the conventional army and to inflict political pressure on the conventional army's government through its population. This is particularly relevant to Western democracies whose military is directed by policy from elected governments. These unconventional conflicts are not about force-against-force or the physical and material destruction of the enemy. As inferred by Sun Tzu, at all costs a conventional army must avoid a protracted war. This not only drains a government of material and funds to fight the war but also erodes the support of the population, as witnessed during the US-led Coalition campaigns in Afghanistan and Iraq. For Sun Tzu the first priority was to attack an opponent's strategy and plans, then its alliances and finally its army. As Liddell Hart (1929) argues, success in conflict has rarely been brought about by direct clashes of forces, but instead usually involves prior psychological and physical dislocation of the enemy. The Salafi-Jihadi organisations do not require absolute material defeat of its enemy, as they understand that fostering and exploiting the clash of public opinion within Western democratic nations is an important consequence from their form of asymmetric warfare.

The strategic and historical exploration of manoeuvre warfare by Boyd was further developed through his examination of the German infiltration tactics of WWI, employed by German Generals such as Ludendorff, Andre Laffargue and Hutier. Infiltration involved sending small, irregular units of lightly armed, highly mobile troops into the weakest areas of the enemy following a disorientating bombardment of gas and artillery (Hammond 2001; Osinga 2006). Boyd then studied how infiltration tactics evolved into the *Blitzkrieg*

approach during WWII, as the result of the German military's ability to synthesise technological advances such as the combustion engine that allowed motorised infantry, advances in aircraft and the advent of radio that advanced communications. It was the coordination and speed provided by these technological advances which enabled the German military to deploy multiple points of disorientation and seemingly unstructured combinations of forces that confused and disintegrated the enemy. As Hammond (2001) explains, this tactical dispersion was exploited for strategic impact. A similar case could be made for how AQ and now ISIS inspire home-grown terrorism as a tactic to be cultivated, regenerated and adapted for strategic impact.

The ongoing synthesis of historical examples of manoeuvre warfare saw Boyd explore Paul von Lettow-Vorbeck and T.E. Lawrence for their application of guerrilla warfare. German General, Paul von Lettow-Vorbeck, was described by Hoyt (1981) as having implemented one of the greatest guerrilla campaigns in history when he confounded the British during WWI in British East Africa. Using the local population within British East Africa in his guerrilla campaign, Lettow-Vorbeck occupied the time of thousands of British troops, enticing them into an endless and costly pursuit of Lettow-Vorbeck's units. This diverted the British high command from its ability to concentrate these forces back onto the Western front in Europe. In T.E. Lawrence's *Seven Pillars of Wisdom,* the focus on manoeuvrability and unconventional tactics were key factors in how Lawrence led the Arab revolt against the Turkish army across the deserts of Jordan and Syria during WWI. There is an interesting analogy here between how Lawrence viewed using the openness of the desert where it was impossible for the Turkish to protect every asset and how the Salafi-Jihadist terrorist organisations viewed the world as its battlefield. In other words, the vast openness is almost impossible to secure and any attempt consumes enormous resources. The unpredictable, unexceptional and sporadic nature of home-grown terrorism that can take place in any Western city is equally difficult for law enforcement and intelligence services to detect and defeat.

In the vast expanse of the desert, Lawrence determined that Arabs would be an idea, an influence, a thing intangible, invulnerable, without front or back, drifting about like a gas vapour. Lawrence's use of speed, as well as unsystematic movements and tip-and-run tactics, appealed to Boyd's view on what was required to disrupt and confuse an opponent. Further, both Lawrence and Boyd believed that no technical solutions could remove the responsibility of the person on the ground directly engaged with the enemy. This is an

important point as this section sets out Boyd's framework that began as a theory for humans controlling machines. Boyd thought technology could never change the true nature of warfare, with its uniquely human qualities that made warfare ultimately a human-only event. Lawrence also believed in "arranging the mind" of the local population, who could become troops or supporters of his troops, and the minds of the enemy. These descriptions are applicable to Salafi-Jihadi terrorist organisations such as AQ and their ability to implicitly recognise the impact of home-grown terrorism. For example, these theories of T.E. Lawrence, Hart and Boyd reinforce the significance of the 2003 statement by al-Alyiri when he said, "the war is based on a strategy to widen the battlefield. The entire world has become a battlefield and not in theory". (al-Alyiri, September 2003, p. 18)

Boyd also studied the theories of Mao Tse Tung as well as the revolutionary principles of the philosopher and economist Karl Marx and of communist Vladamir Lenin. It must be stressed that to conceive of how to apply the OODA Loop to multiple competitive environments it is critical not to see actions, tactics and approaches to conflict as being locked into any one paradigm or doctrine. In this regard, for Mao Tse Tung, Marx and Lenin the term "infiltration" could be used to describe their emphasis on the moral and psychological approach to disorientating and exploiting a State from within. Marx and Lenin advocated fuelling and exploiting alienation within the population while causing the ruling class to weaken itself and thus become entangled and internally unsure of how to counter the internal movement. As described by Hammond (2001), this combination of political, social and military components could be interpreted as a new kind total war- in other words, a war that attacks and invades all facets of an opponent's society and not only a "Clausewitzian" version of war where the focus is on the physical defeat of an opponent's military. The notion of manoeuvre warfare that combines technology, infiltration, disorientating attacks and a continual attempt to engineer and exploit disharmony has many similarities with the tactics being used by AQ and ISIS. Paradoxically, AQ does not require home-grown terrorist attacks to be successful or spectacular for there to be further strategic opportunities to exploit. For instance, an overreaction by the police, intelligence or Government policy, or indeed certain sections of the population rallying against all Muslims, feeds back into the Salafi-Jihadi narrative. It is an example of what Boyd described as the moral-mental-physical continuum of war. This is the kind of manoeuvre warfare being used by AQ through tactics such as home-grown terrorism.

As mentioned earlier, Boyd's theories on manoeuvre warfare were synthesised from history, and further expanded and reconstituted by other military theorists. William S. Lind and his co-authors described the notion of fourth-generational warfare, which in the context of this thesis is revealing. Lind, Nightengale, Schmitt, Sutton and Wilson (1989) present the concept of fourth-generational warfare and even the potential for "Islamic or non-Western traditions" and of terrorists living amongst the American population. Lind et al (1989) also describe how the distinction between military and civilian will disappear. At the time of the Lind et al (1989) publication, there had never been a single instance of Salafi-Jihadi inspired home-grown terrorism in the US, Australia, Canada or the United Kingdom. It is what retired British Commander, General Sir Rupert Smith (2005) meant when he described the new age of "war amongst the people" (Smith, 2005). Whether referred to as manoeuvre warfare, irregular warfare or fourth-generational warfare, these terms accurately describe how AQ and other terrorist organisations exploiting a Salafi-Jihadi narrative approach conflict against the West. It is the kind of warfare that Boyd recognised for its capacity to confuse, disorientate and ultimately defeat an opponent who may be economically, technologically and numerically superior.

Boyd insisted that large, modern, conventional armed forces could also adopt and apply the lessons of manoeuvre warfare. The use of General Epaminondas' indirect approach used at the battle of Leuctra (371 BC) and Lettow-Vorbeck's guerrilla war tactics are good examples. In April 1991, Boyd outlined his basic ideas on warfare in a testimony he gave before the House Armed Services Committee to discuss the U.S. victory in the first Gulf War following Saddam Hussein's invasion of Kuwait:

> There are three basic elements [to win wars] and in order of importance they are: People because wars are fought by people not weapons. Strategy and tactics because wars fought without innovative ideas become … blood baths winnable or not. Hardware, because weapons that don't work or can't be bought in quantity will bring down even the best people and best ideas … Next our military needs to be trained in innovative tactics and strategies that will lead to quick decisive victories at minimum cost to American lives … This requires, first, an understanding of conflict. Conflict can be viewed as repeated cycles of observing-orienting-deciding-acting by both sides (and at all levels). The adversary that can move through these cycles faster gains an inestimable advantage by disrupting his enemy's ability to respond effectively … These create continuous and unpredictable change. Therefore our tactics and strategy need to be based on the idea of adapting to and shaping this change faster than the enemy. Why? Because confusion and disorder generated permits us to win quickly at minimum cost in American lives … New hardware needs to be evaluated in terms of its effects on our people and our tactics. Effective hardware helps our people adapt

to change and permits them to act, react and move faster than the enemy. Any hardware that makes our military slow and predictable is unsuitable. (Boyd, 30 April 1991, cited in Cowan, 2000, p.14).

As Nevah (1997) remarked, the significance of Boyd's contribution was that for the first time a conceptual tool had been designed to explain manoeuvre warfare that could operationalise initiative, agility, depth and synchronisation. The strategy of AQ cannot endure without adaptable tactics to implement home-grown terrorism in Western countries. However, with respect to AQ it may be that the novelty comes from the regeneration of ideas. The regeneration takes place in the minds of their target audience in ways that are perceived to be relevant to their personal situations and immediate environment. Most significantly, AQ (and its Salafi-Jihadi narrative) has transformed from a physical and tactical force to an ephemeral brand with vastly broader impact and appeal.

While the weapons used by home-grown terrorists may be simple, when their effects are synthesised with internet, social media and the demands of the 24/7 news cycle, AQ's capacity to shape the conflict environment is magnified. This is part of the essence of manoeuvrability in any conflict. These concepts will now be further developed through analysing Boyd's formative lectures and presentations that sit behind OODA Loop. These are important primary source references for how to use the OODA Loop as the analytical lens of the three cases studies selected for this thesis.

## 2.5 A Discourse on Winning and Losing

Accurately applying Boyd's OODA Loop to any field of inquiry requires an examination of his lectures and presentations, not just of each component of the OODA Loop. The OODA Loop could be described as the diagrammatic summary or synthesis of all Boyd's theoretical discourse contained in his presentations. The centrepiece is *A Discourse on Winning and Losing* (1992) that includes five lectures, otherwise known as *The Green Book*. On the first page of *A Discourse on Winning and Losing*, Boyd (1992) sets out the five lectures:

1. *Patterns of Conflict* represents a compendium of ideas and actions for winning and losing in a highly competitive world;

2. *Organise Design for Command and Control* discusses the implicit arrangements that permit cooperation in complex, competitive, fast moving situations;

3. ***The Strategic Game of ? and ?*** emphasises the mental twists and turns we undertake to conduct appropriate schemes or designs for realising our aims and purposes;

4. ***Destruction and Creation*** lays out in abstract but graphic fashion the ways by which we evolve mental concepts to comprehend and cope with our environment.

5. ***Revelations*** makes visible the metaphorical message that flows from this Discourse.

(Boyd 1992, p.1)

As with EM theory, in *A Discourse on Winning and Losing*, Boyd (1992) never claimed to have invented anything new. Instead, his genius was his unique ability to weave together components from seemingly unrelated theories and approaches and synthesise them into a novel conceptual framework. Boyd (1992) recognised particles of similarities from which to create novelty by marrying different concepts. The key passage in *A Discourse on Winning and Losing*, which should be the disclaimer for anyone studying or applying Boyd's theories, is:

> The theme that weaves its way through this Discourse on Winning and Losing is not so much contained within each of the five sections, per se, that make up the Discourse; rather, it is the kind of thinking that both lies behind and makes-up its very essence. For the interested, a careful examination will reveal that the increasingly abstract discussion surfaces a process of reaching across many perspectives; pulling each and every one apart (analysis), all the while intuitively looking for those parts of disassembled perspectives which naturally interconnect with one another to form a higher order, more general elaboration (synthesis) of what is taking place. As a result, the process not only creates the Discourse but it also represents the key to evolve the tactics, strategies, goals, unifying themes, etc, that permit us to actively shape and adapt to the unfolding world we are part of, live-in, and feed-upon. (Boyd, 1992, p.4)

Boyd indicated this passage opened the way for the development of a conceptual spiral for understanding, adapting and surviving in the world.

This research will not systematically investigate each presentation in the order Boyd sets out in *A Discourse on Wining and Losing*. Nor is there scope in this research to investigate and diagnose the concepts contained in each presentation; that is an opportunity for further research. Instead, this research will begin with *Destruction & Creation* because its core theme is to avoid being locked into a closed system of analysis and thinking. Written in 1976, *Destruction and Creation* is a synthesis of the second law of thermodynamics and

entropy, Gödel's incompleteness theorem and Heisenberg's uncertainty principle. It could be said that these form the physics, logic and mathematical basis of his conceptual framework. In his abstract of *Destruction and Creation*, Boyd (1976) states:

> To comprehend and cope with our environment we develop mental patterns or concepts of meaning. The purpose of this paper is to sketch out how we destroy and create these patterns to permit us to both shape and be shaped by a changing environment. In this sense, the discussion also literally shows why we cannot avoid this kind of activity if we intend to survive on our own terms. (Boyd 1976, p.1)

Boyd was demonstrating the limits of using closed-systems to understand and form mental images of reality. As Polk (2010) argues, Boyd used these theories to propose that the uncertainty and related disorder associated within a closed system can only be overcome by creating a higher and broader, more general concept to represent reality through the dialectic cycle of destruction and creation. This offers a guide for analysing and critiquing the dominant strategic models of terrorism and the adaptability of how AQ implements its asymmetric warfare against the West. It could be said that the notion of looking beyond closed systems is essential to applying the OODA Loop to any field of inquiry.

Boyd's second presentation, *Patterns of Conflict,* was produced in 1977 and is an extensive, historical analysis of warfare. The next section will focus more on *Patterns of Conflict* to unveil the essence of the OODA Loop. Effectively, in *Patterns of Conflict* Boyd went in search of the common strategic thread through the history of warfare, revolutions, conflicts and military theorists. Boyd's reading list and exploration of those he believed had made innovative contributions to these fields is exhaustively impressive, even if Fournier (2013) criticises Boyd for using secondary sources in some instances. *Organic Design for Command and Control,* otherwise known as *C2,* completed in 1982, summarises Boyd's ideas on the importance of recognising that human decision-making remains at the forefront of warfare. In *Organic Design for Command and Control*, Boyd argued that despite advancing technology it was the implicit nature or substance of "what" was being communicated rather than "how" (Coram 2002; Polk 2010). Boyd proposed that command and control requires leadership that is not based on strict, rigid instructions that prevent innovation and creative adaptation; it also requires appreciation via a clear perception, discernment and understanding that inspires others. When taken together, Hammond (2001) explains, the secret of command and control is what is not stated explicitly. As will be explained, Boyd recognised the *Orientate* phase as integral to implicit command and control.

One the most eclectic of all of Boyd's works produced in 1986 is the presentation called *The Strategic Game of ? and ?* This is where Boyd attempted to demonstrate the dividend from combining both analysis and synthesis to create novelty and adaption. This presentation holds lessons for academic research with a focus on critically evaluating the range theories and constructs to describe Salafi-Jihadi inspired home-grown terrorism. In other words, there should be no limits placed on how to frame academic inquiry or how to create novel constructs and arguments; that is, how unique contributions are made to almost any field of inquiry. The final piece of work outside of *The Green Book* is *The Essence of Winning and Losing* completed in 1995. This is a condensed version of all Boyd's ideas and contains a drawing of his OODA Loop. Effectively, Boyd squeezed his thirteen-hour presentation of *A Discourse* into four slides; this is described as the penultimate synthesis of all Boyd's work (Hammond 2001; Coram 2002; Osinga 2006). Critically analysing the theories and ideas contained within each of the five pieces of work is fundamental to understanding the OODA Loop and its application to Salafi-Jihadi inspired home-grown terrorism. The final presentation, *Revelations,* is perhaps the least well-known and almost never referred to by those who use Boyd's theories, or even in more in-depth studies of Boyd such as in Hammond (2001), Coram (2002) and Richards (2006); even Osinga (2006) only mentions *Revelations* in passing. This research will not use *Revelations* as a source.

The following sections will examine each component of the OODA Loop and the theoretical principles and influences on its design. They will begin with a thorough description of *Destruction and Creation* because this is where the DNA of the OODA Loop begin. It is important to explore the principles of the OODA Loop as this contextual analysis will give rise to a deeper understanding of the applicability of this framework to the subject of this research and case study methodology. It is important to understand that Boyd was a disruptive thinker. His ideas on warfare and strategy require a mindset open to complete flexibility and an awareness of the dangers in attempting to understand external events and phenomenon while confined within a closed system of analysis. Therefore, any study of Boyd and his conceptual framework must be prepared to accept the least expected rather than the most likely conclusions when applying the OODA Loop to Salafi-Jihadi inspired home-grown terrorism.

## 2.6 Deconstructing the OODA Loop

To provide a rigorous introduction to the OODA Loop, it is important that we attempt to understand how Boyd developed his most influential conceptual framework. A deconstruction of his OODA Loop has at its foundations Gödel's Incompleteness Theorem (developed in 1931), Heisenberg's Uncertainty Principle (devised in 1927) and the Second Law of Thermodynamics. Through this analytical process the applicability of the principles behind the OODA Loop to Salafi-Jihadi inspired home-grown terrorism will become evident. From there an exploratory breakdown of the OODA Loop will be presented.

As mentioned, *Destruction and Creation* was the beginning of Boyd's epistemological exploration and is what Spinney (2014) argues is central to the OODA Loop. Kurt Gödel (1906 – 1978) was an Austrian mathematician, logician and philosopher, best known for his Incompleteness Theorem published in 1931. As explained by Dawson (1996) in *Logical Dilemmas: The Life and Work of Kurt Gödel*, Gödel proposed that any logical model of reality is incomplete and must be constantly changed because of fresh observations. This is one of the most important disciplines in warfare, sport, corporate competitiveness and human adaptation, as the world around us is constantly changing. One cannot remain so fixed to a plan and fail to accept the changes in environment, new information, the reaction of an opponent or unpredictable anomalies in nature. Boyd understood that according to Gödel we cannot determine the consistency, hence the character or nature, of an abstract system within itself. In the context of this research, the shift by AQ from importing individuals to Western countries to conduct terrorism to inspiring them from within challenged fixed notions as to where Islamic fundamentalist-inspired terrorist acts may come from and the means to prevent such attacks. The Australian Federal Government understood this incompleteness theory as described in its 2004 White Paper *Transnational Terrorism: The Threat to Australia*:

> AQ's domain is not exclusive. It is better studied as part of an evolutionary process. It has built links among Muslim extremist groups, spreading its influence and radicalising other loosely connected affiliates. Many act alone, inspired only by example. This is a movement that is amorphous, widely dispersed and constantly regenerating and evolving. And it is succeeding in embracing more localised groups into its fold. As Al Qaida loses its Afghanistan-veteran leaders, its influence may cede to other lesser-known forces. (*Transnational Terrorism: The Threat to Australia* 2004, ix; Commonwealth of Australia White Paper)

The second influential construct in *Destruction and Creation* was Heisenberg's Uncertainty Principle. Physicist Werner Heisenberg (1901 – 1976) published his theory in a 1927 paper while working on the mathematical foundations of quantum mechanics. Heisenberg asserted that any two variables that do not commute cannot be measured simultaneously — the more precisely one is known, the less precisely the other can be known. In his most cited work, Heisenberg wrote:

> It can be expressed in its simplest form as follows: One can never know with perfect accuracy both of those two important factors which determine the movement of one of the smallest particles—its position and its velocity. It is impossible to determine accurately *both* the position and the direction and speed of a particle *at the same instant*. (Heisenberg, W., *Die Physik der Atomkerne*, Taylor & Francis, 1952, p. 30)

Essentially this means there is a finite capacity to observe and understand more than one object at a time, particularly when those objects are in direct competition. In *Destruction and Creation*, Boyd (1976) explained that the Heisenberg Principle implicitly depends upon the indeterminate presence and influence of an observer. Significantly, the magnitude of the uncertainty represents the degree of intrusion by the observer upon the observed. In other words, those observing a community will affect members of that community who will respond by changing their behaviour. This principle helps to explain the challenges and limits of external people placing suspected supporters of AQ within the Muslim community under surveillance.

The third most significant theory to influence Boyd in the development of the OODA Loop was his study of the Second Law of Thermodynamics. In *Destruction and Creation*, Boyd (1976) explained that confusion and disorder are related to the notion of entropy and the Second Law of Thermodynamics. Entropy is a concept that represents the potential for doing work, the capacity for taking action, or the degree of confusion and disorder associated with any physical or information-generating activity. A high degree of entropy implies a low potential for doing work and a low capacity for taking action. It is a state of confusion and disorder. Low entropy implies just the opposite. Viewed in this context, the Second Law of Thermodynamics states that all observed natural processes generate entropy. From this law it follows that entropy must increase in any closed system, or, for that matter, in any system that cannot communicate in an ordered fashion with other systems or environments external to itself. Boyd (1976) explained that the entropy of any closed system always tends to increase and thus the nature of any given system is

continuously changing, even as efforts are directed toward maintaining it in its original form.  Essentially, Boyd (1976) argued any attempt to do so in the real world will expose uncertainty and generate disorder.

However, Boyd (1976) proposed that there is a way to adapt and avoid states of high entropy.  First, he determined one must identify common qualities, attributes or operations to link isolated facts, perceptions, ideas, impressions, interactions and observations together as possible concepts to represent the real world.  Second, Boyd (1976) argued we must repeat this un-structuring and restructuring until a concept is developed that begins to match-up with reality.  By doing this, in accordance with Gödel, Heisenberg and the Second Law of Thermodynamics, the uncertainty and disorder generated by an inward-oriented system talking to itself can be offset by going outside and creating a new system.  Simply stated, uncertainty and related disorder can be diminished by the direct artifice of creating a higher and broader more general concept to represent reality.  This can describe the process of change that any organisation or species of individual must go through in order to adapt and survive.

Terrorist organisations and networks are the same.  The shift from an inward-focused or "near enemy" attack to one that focused on the "far enemy" was arguably one of the most important changes in the mental model of the global Salafi-Jihadi terrorist organisations.  In *Understanding Terror Networks*, Sageman (2004) explains that while headquartered in Sudan, al-Qaeda debated the shift from attacking the near enemy.  According to Sageman (2004), internationally-astute members of AQ, such as Mamdoush Mahmud Salim, argued that their priority had to be switched from the "near enemy" to the "far enemy", including the United States and its allies.  Sageman (2004) argues that two terrorist attacks in the mid-1990s carried out in Saudi Arabia illustrated this shift.  On 13 November 1995 the National Guard training centre in Riyadh was bombed and on 25 June 1996 an explosion at the Khober Towers in Dhahran killed 19 U.S personnel.  As Sageman (2004) explains, these attacks coincided with the change of target from the "near enemy" to the "far enemy".

Given the scientific and mechanical dimensions to these theories, they may seem at odds with this field of inquiry, which is a study in the social and cultural dimensions.  To be fair, at the time of writing *Destruction and Creation*, Boyd was developing a new theory for fighter pilots attempting to perfect conflict in the air involving highly sophisticated mechanical structures.  However, it was humans who controlled the machines and it was

human behaviour and adaptation under extreme circumstances that Boyd was most interested in. Boyd deduced that to have a sense of reality and to be able to effectively respond one must accept change as a constant, omnipresent feature of the environment. This is by no means a unique conclusion. However, one must consider the cultural context that Boyd was attempting to change. The military culture is an incredibly disciplined and closed system; it is a hierarchical and conservative institution where - at the time of Boyd's work - conventional military engagement was constructed through national armed forces underpinned by tightly controlled and defined strategic and tactical engagements. Nations tend to operate in the same fixed structure as opposed to non-state actors as mentioned earlier.

Charles Darwin's (1809-1882) theory of evolution, based on natural selection, could be said to explain how a species, an organisation, a company or even a nation can survive when it adapts to the ever-changing world. One of the most important lessons from Darwin and Boyd is that an organism does not need to perfect adaptation in order to survive. Boyd believed that radical uncertainty is a necessary precondition of physical and mental vitality: all new opportunities and ideas spring from some mismatch between reality and ideas about it. In a 'dog-fight' between two humans controlling a mechanical object, the one who remains predictable will find it difficult to defeat the unpredictable opponent. In regards to countering radical extremism, the Australian Government's White Paper on Transnational Terrorism captured the essence of adapting to an unpredictable social construct when it stated:

> Australia must also now face the threats of ambiguity and the unknown. This is part of the 'asymmetric' nature of terror. This transnational terrorism works through loose networks rather than through hierarchy or within borders. It is neither dependent on nation-state sponsors, nor responsive to conventional deterrents. To defeat one is not to defeat all. It is constantly evolving, with a capacity to regenerate and adapt where its forces are degraded. There will be new individuals, groups and networks that we simply do not know about. (Transnational Terrorism: The Threat to Australia, 2004, p. vii)

While there is no reference to Boyd's theories in this White Paper, a closer examination reveals themes and terms in the Australian Government's attempt to articulate the challenge it faces in its own efforts to adapt and evolve to the asymmetric nature of Salafi-Jihadi inspired terrorism that are consistent with Boyd's thinking. The recognition of threats that are ambiguous and unknown demonstrates the central themes of *Destruction and Creation*. The important aspect of this passage is that the Australian Government

appreciates it cannot meet this uncertain, incomplete and entropy-inducing challenge through a closed system of analysis.

## 2.7 The Origins of the OODA Loop

The origins of the OODA Loop are contained within Boyd's most in-depth piece of work, *Patterns of Conflict,* which is the longest of his presentations with 193 slides.  On Slide Two of *Patterns of Conflict*, Boyd explains that his objective was to:

- Make manifest the nature of moral-mental-physical conflict
- Discern a pattern for successful operations
- Help generalise tactics and strategy
- Find a basis for grand strategy

The intent was to unveil the character of conflict, survival and conquests.  Boyd (1986) explains: "as with the duel predator and prey in nature, wars are at the sharp end of conflict and survival and make for ideal case study analysis". (Boyd, 1986, slide 2)

In *Patterns of Conflict,* Boyd (1986) offers an intense study of classic military theory and strategy such as that of Sun Tzu, Antoine-Henri Jomini and Karl von Clausewitz.  As explained by Hammond (2001 and 2012), Coram (2002), Osinga (2006) and Fournier (2013), Boyd travels in time to Genghis Khan, Tamerlan, Hannibal and the Spartans while studying Stonewall Jackson and Maurice de Saxe; he was particularly drawn to German Commanders such as Eric von Mainstein, Hermann Balck and Paul von Lettow-Vorbeck.  *Patterns of Conflict* dissects the theories of significant leaders in the field of strategy (such as Basil Liddell Hart and MAJGEN John Fredrick Charles Fuller) providing a breakdown of great military battles fought throughout history.  It even includes drawings of the Spartan battle of Leuctra (371BC), Alexander the Great against Darius (331BC), the Napoleonic wars and the Mongols.  The German *Blitzkrieg* and Russian revolutionary wars feature prominently in his analysis.  Lessons learned are then synthesised with science, biology, engineering, physics and logic, as well as Chinese notions of *Cheng* and *Ch'i'* to identify those common elements across all these seemingly different systems and paradigms.

On slide 14 of *Patterns of Conflict*, Boyd (1986) explains that *Cheng* manoeuvres were employed by early Chinese commanders to expose an adversary's vulnerabilities and weakness, while the exploitation and decisive strokes against those weaknesses were the

*Ch'i'*. It was irrelevant to Boyd whether the war was fought in the desert, like T.E. Lawrence, in the air (as in his role as a fighter pilot in the Korean War) or at sea, as detailed in his study of British Naval strategist Julian Corbett (1911; reprinted 1988). Boyd understood how Corbett recognised manoeuvrability for tactical advantage being the key to defeating an enemy at sea. In a 2012 lecture on Boyd, Hammond explained that not only was it the depth and breadth of research into military history, strategy, biology and science that was unique to Boyd's approach, it was the way Boyd worked backwards through history. Hammond (2012) believed this technique was effective in isolating the common strategic elements that result in victory and culminated in Boyd's conceptual framework.

Importantly, *Patterns of Conflict* describes the conceptual model for which Boyd is most famous: the *Observe, Orient, Decide, Act Loop* (OODA Loop). While *Destruction and Creation* could be considered the genome of his conceptual spiral, *Patterns of Conflict* reveals the combined lessons of winning that form the historical bedrock of the OODA Loop and Boyd's grand strategy for manoeuvre warfare.

Boyd's concept is set out on slide 7 in *Patterns of Conflict*:

| Action | Idea |
|---|---|
| Exploit operations and weapons that:<br><br>- Generate a rapidly changing environment (quick/clear observations, orientation and decisions, fast-tempo, fast transient manoeuvre, quick kill)<br><br>- Inhibit an adversary's capacity to adapt to such an environment (cloud or distort his observations, orientation and decision and impede his actions) | Simultaneously compress time and stretch out adversary time to generate a favourable mismatch in time/ability to shape and adapt to change. |
| **Goal** | |
| Collapse adversary's system into confusion and disorder by causing him to over- and under-react to activity that appears simultaneously menacing and ambiguous, chaotic or misleading. | |

**Table 2.1. Boyd's Combined Lessons on Winning, re-drawn from slide 7 of *Patterns of Conflict***

While *Patterns of Conflict* begins with air-to-air combat through the use of machinery (in this case supersonic jet fighters with air-to-air missiles, radar and other technological advances), Boyd slowly builds up the case for the moral-mental-physical continuum of war

and conflict. The use of terrorism by Salafi-Jihadi terrorist organisations, in all its forms no matter how it is defined, is as much about the moral and psychological exploitation of their enemy as it is the physical. The *Management of Savagery*, translated into English by McCants (2006), specifically describes the social and psychological power of using violence against AQ's enemies. This idea is at the very core of this research and fundamental to one of the contributions made in this thesis that will be known as "moral manoeuvrability". The evolving nature of this phenomenon will also be explored further in Chapter Five.

One of the underlying premises of this thesis is that AQ, and its various networks and affiliates, determined how to exploit what it observed to be the West's moral weaknesses. This research contends that the tactics of asymmetric warfare applied by AQ are about penetrating our moral weaknesses to incite responses that conflict with the West's stance on human rights and freedoms while simultaneously inspiring more followers. The physical destruction caused by the use of home-grown terrorism is a secondary consequence, unless the physical target is of symbolic significance - such as Britain's House of Commons or the Houses of Parliament in Canberra, Australia. Boyd would have considered this approach to be part of the mental, moral and physical continuum of conflict. What this means is that al-Qaeda and ISIS penetrate the West's OODA loop by breaking the moral boundaries that underpin Western concepts of justice, human rights and the rule of law. Western governments are torn between their duty to protect their citizens and the principles upon which Western democratic governments are based. Boyd understood this dilemma as set out in *Patterns of Conflict* where Boyd (1986) established what he believed were the three components of war:

1. Moral Warfare: the destruction of the enemy's will to win, disruption of alliances (or potential allies) and induction of internal fragmentation. Ideally resulting in the "dissolution of the moral bonds that permit an organic whole [organization] to exist.

2. Mental Warfare: the distortion of the enemy's perception of reality through disinformation, ambiguous posturing, and/or severing of the communication/information infrastructure.

3. Physical Warfare: the abilities of physical resources such as weapons, people, and logistical assets.

These components are key features of AQ and ISIS in their strategic approach to warfare and communicated through their Salafi-Jihadi narrative.

As discussed earlier, Boyd's reflections on revolutions in *Patterns of Conflict* led him to comment on conflict within social systems with the explosive expansion of capitalism in the 19th century and the Marxist revolutionary movement in Russia. As with the personal circumstances of impressionable, young, aspiring followers of the Salafi-Jihadi narrative within the Muslim community, Marx and Lenin identified a growing sense of frustration, anger, isolation and deprivation, as well as a disdain of the very system within which they were living. A conflict arose through low paid wage-earners exhibiting discontent and hatred for a system that permitted others to live in comfort, while they had to live a life subject to strict and harsh factory conditions. For the likes of Marx, the only way out was via a revolution of the workers in order to smash the capitalistic system. According to Boyd, Lenin and Joseph Stalin exploited the idea of crisis and vanguards arising out of Marxist contradictions within capitalism to lay out a Soviet revolutionary strategy. The result was a scheme that emphasised moral and psychological factors as a basis to destroy a regime from within; in other words, the "near enemy". It is also similar to how AQ uses its Salafi-Jihadi narrative to reach and exploit frustrated young Muslim men already living in Western countries (and many Western converts to Islam) and inspires them to conduct home-grown terrorism.

In Boyd (1986) there is an attempt to describe the necessary conditions for success in this era of revolution. The central element is an exploitation of a crisis generated by misery of the masses and vacillation by authorities who indicated an unwillingness or inability to come to grips with the existing instability. The second factor is the existence and rise of a vangaurd, or disciplined hard core, that offers leadership, provides a way out and has support of the masses. The hard core vanguard are focused on shaping and guiding the followers as well as participating in action to exploit and expand the confusion, disorder and fear. Boyd's key insight is that crisis and vanguards are the "golden keys" that permit us to penetrate the core of insurrection, revolution and modern guerilla warfare. In *Patterns of Conflict* Boyd (1986) describes a conceptual analysis based on interaction between the physical, moral and mental elements of revolutionary movements that could explain communist insurrection following WWI or the Islamic extremism of today that has embarked on global conflict through the use of terrorism against Western society. On Slide 71 of *Patterns of Conflict* Boyd (1986) explains:

> Blitz and guerillas infiltrate a nation or regime at all levels to soften and shatter the moral fiber of the political, economic and social structure. Simultaneuously, via diplomatic, psychological, and various sub-rosa or other activities, they strip-away

potential allies thereby isolate the intended victim(s) for forthcoming blows.  To carry out this program, à la Sun Tzu, Blitz and Guerillas:

- Probe and test adversery [sic], and any allies that may rally to this side, in order to unmask strengths, weaknesses, maneuvers and intentions.

-  Exploit critical differences of opinion, internal contradictions, frictions, obsessions, etc., in order to foment [sic] mistrust, sow discord and shape both adversery's [sic] and allies' perceptions of the world, thereby:

  - Create atmosphere of "mental confusion, contradiction of feeling, indecisiveness, panic,"…
  - Manipulate or undermine adversary's plans and actions.
  - Make it difficult, if not impossible, for allies to aid adversary during his time of trial.

(Boyd, 1986, slide 71).

This is a concise explanation of how to get inside an opponent's OODA loop from a moral, psychological, social, economic and political perspective.  Boyd would have identified AQ's terrorist attack on the United States on 9/11 with this theoretical construct, particularly with the reaction by the United States.  For example, the resulting consequences of the war in Afghanistan and Iraq, the straining of relations between allies, and the international contradictions between the West's position on human rights juxtaposed with the the Abu Graib Prison in Iraq and Guantanomo Bay in Cuba, the internal tensions generated within Western countries population and media, as well as how it changed the way the United States and many of its allies and viewed the world.   Broadly, Boyd would have seen the internal contradictions, frictions and divisions within Western society that these reactions caused.  It is not the place of this research to judge those actions, but to use them to illustrate the theorectical and epistimological discourse within *Patterns of Conflict*.

Critical to this thesis, is how AQ's exploitation of its Salafi-Jihadi narrative and brand evolved from attacking its enemy from without to attacking it from within via the inspiration of isolated members of the Islamic community resident in Western countries.  What made this inspiration even more pervasive was the global connectivity through the internet and other forms of social media communication. (Aly 2009; Stern & Berger 2015)  It is similar to the synthesis Boyd deduced had occurred when the German military developed and deployed *blitzkrieg* as a form of maneouvre warfare in an age of advancing technology.  In a paper to the Australian Counterterrorism Conference in 2010, Dr Anne Aly explains:

  A simple Google search on the internet using the term 'mujahideen' yields well over 1 million returns. Sifting through the various conservative think tanks,

blogs and policy documents takes only minutes and the discerning user is quickly and easily able to access a plethora of extremist content: terrorist propaganda videos; graphic videos of beheadings and other terrorist operations; and how to manuals such as —The preparatory manual of explosives; —Illustrated Manual of Sniper Skills; and the —Organic Chemistry of Explosives‖ all of which are freely available through the *Unjustmedia* website. (Proceedings of the 1st Australian Counter Terrorism Conference, Edith Cowan University, Perth, Western Australia, 30 November 2010.)

An illustrative and revealing anecdote in the use of the internet to infiltrate the West's OODA loop is that of Younis Tsouli, also known as Irhaby 007, one of the most notorious terrorist coordinators for al-Qaeda. Kohlmann (2008) describes an incident involving British police breaking down Tsouli's West London bedroom door in late 2005, finding a long-haired 22-year-old student. He was still hunched over his computer working on a website called "YouBombit". His father was staggered at how his son could be involved with international terrorism, since he never left his bedroom. As Kohlmann (2008) sets out:

the realities of a globalized society now allow international terrorist organizations like AQ to dramatically expand their potential reach by courting sympathizers in dark corners around the world and teaching them how they can best serve AQ's interests—without necessarily visiting an actual military training camp or even speaking directly with AQ. (Kohlmann, 2008, p.95)

This is an illustrative example of al-Qaeda getting inside the West's OODA loop and a good place from which to explore each phase of the OODA loop cycle.


## 2.8 The Essence of the OODA Loop

It was only in his final presentation, *The Essence of Winning and Losing*, produced in 1996, that Boyd actually sketched the OODA Loop. In Hammond (2001), *The Essence of Winning and Losing* is referred to as the "big squeeze" because the presentation condenses all Boyd's arguments into four slides. Hammond (2001) explains how *The Essence of Winning and Losing* is the "synthesis of all of Boyd's work, from *Aerial Attack Study* and OODA loops to his most recent interests in coevolution, socio-biology, genetic engineering, chaos theory, complexity, and non-linearity." (Hammond 2001, p. 188)

After critically examining and interpreting Boyd's work, culminating in the OODA Loop, *The Essence of Winning and Losing* contains the following five key statements that summarise the essential themes in his theoretical inquiry:

1. **Without our genetic heritage, cultural traditions, and previous experiences,** we do not possess an **implicit** repertoire of psychophysical skills shaped by environments and changes that have been previously experienced.

2. **Without analysis and synthesis** across a variety of domains or across a variety of competing/independent channels of information, we cannot evolve new repertoires to deal with unfamiliar phenomena or unforeseen change.

3. **Without a many-sided, implicit cross-referencing process of projection, empathy, correlation,** and **rejection** (across these many different domains or channels of information), we cannot even do **analysis** and **synthesis**.

4. **Without OODA loops**, we can neither sense, hence observe, thereby collect a variety of information for the above processes, nor decide as well as implement actions in accord with these processes.

Or put another way:

**Without OODA loops** embracing all of the above and w**ithout the ability to get inside other OODA loops** (or other environments), we will find it impossible to comprehend, shape, adapt to and in turn be shaped by an unfolding evolving reality that is uncertain, ever-changing, and unpredictable.
(Boyd 196, The Essence of Winning and Losing, slide 1; reproduced by Chet Richards and Chuck Spinney, September 2012)

Boyd then suggests on slide 2 that these statements can be clarified in a figure:
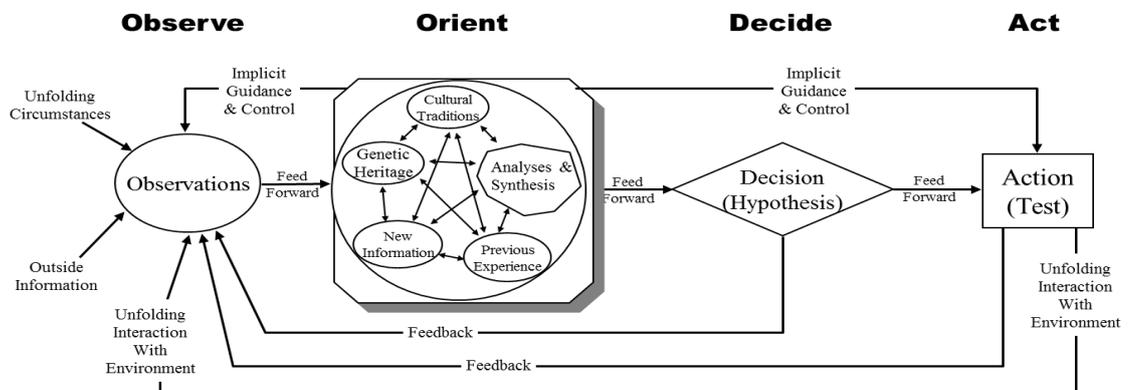


*Figure 2.1. Boyd's Drawing of the OODA Loop from The Essence of Winning and Losing*

One potential criticism of Boyd's entire work, including the OODA Loop, is that it can be summarised into one word, *adaptation*; and that is not a novel concept in the context of survival. As Osinga (2006) argues, Boyd "deliberately adopts a neo-Darwinist/CAS

perspective, hence the centrality of the theme of adaptation". (Osinga 2006, p. 274) However, it has been emphasised in this chapter that simple illustrations or summaries often mask the underlying complexity of a model or theoretical construct that is also the case for concepts of adaptation.

According to Boyd (1986), decision-making occurs in a recurring cycle of Observe-Orient-Decide-Act (OODA).   Decisions are based on observations of the evolving situation or raw information on which actions are based. (Hammond (2001), Osinga (2006), Greene (2007) and Polk (2010)).   An entity (whether an individual or organisation) that can process this cycle of observing and reacting to unfolding events more rapidly than an opponent can thereby "get inside" the opponent's decision-making cycle and gain the advantage.  Boyd emphasized that "the loop" is actually a set of interacting loops that are to be kept in continuous operation during combat.  Osinga (2006) described the usual interpretation of the OODA Loop as a tool for strategy:

> In the popularized interpretation, the OODA loop suggests that success in war depends on the ability to out-pace and out-think the opponent, or put differently, on the ability to go through the OODA cycle more rapidly than the opponent. Boyd's name will probably always remain associated with the OODA loop and this popular interpretation. (Osinga, 2006, p. 6)

Thus the study of conflict is reduced to duelling OODA loops, with the side that can go through its loop more quickly building an insurmountable competitive advantage.  One of the interesting descriptions used by Boyd, but not explored more deeply by Hammond (2001 and 2012), Coram (2002) or Osinga (2006), is the notion that the ability to operate at a faster tempo or rhythm than an adversary enables one to fold the adversary back inside himself.  The affect is that the opponent can neither appreciate nor keep up with what is going on.  This description of "folding an adversary back inside himself" appears to be Boyd's way of describing the second law of thermodynamics and the high entropy inflicted on a closed system.  It could also be analogous to the Marx and Lenin revolutionary condition during a social revolution where hostile forces tangled themselves in conflicting ways to respond and where the political leadership mistakenly exposed themselves to be morally and socially bankrupt, (Hammond, 2001).

This idea of social manipulation through folding an opponent back into itself is a powerful, albeit intangible, notion contained within the moral-mental-physical continuum of warfare being inspired by Salafi-Jihadi terrorist organisations such as AQ and ISIS. This idea should

be retained for interpretive analysis during the following section as it seeks to explain each of the Observe-Orientation-Decide-Act components in the context of Salafi-Jihadi inspired home-grown terrorism.

**2.8.1 Observe**

Before a fighter pilot, basketball player, entrepreneur or terrorist can orientate, decide and then act, they need to have observed the world around them, in particular their opponents. For example, in the absence of observation, it is difficult to detect mismatches before your opponent and then correct your orientation, enabling you to take action and exploit the new and unfolding situation. Observations within the OODA Loop are not merely about the physical terrain or having good situational awareness. These could be described as explicit requirements of *Observation*. In the context of Boyd's strategic framework, *Observe* is also about identifying those elements in the human domain, not only the physical reactions or consequences. For example, hypothetically Salafi-Jihadi terrorist organisations could observe how a Western country reacted to an act of home-grown terrorism, irrespective of whether AQ or ISIS had any direct link. If it causes social unrest between the Muslim and non-Muslim communities, this can confirm for those who are inspired by the Salafi-Jihadi message that the West is against Muslims. Did it cause Western communities to question their own systems? Perhaps important sections of the population will demand that the Government allow *sharia* law, believing this acquiescence will stop terrorism. In this hypothetical example, these social and political reactions will be closely observed by AQ and other Salafi-Jihadi terrorist organisations. Boyd determined that, "Genghis Khan closely observed the reaction of fear, anxiety and dislocation his clever and calculated use of propaganda and terror had on his adversaries in order to undermine their resolve and destroy their will to resist" (Boyd 1986, slide 25).

Linking back to Boyd's analysis of the German military's *blitzkrieg* during the second World War was the synthesis of the tactics of infiltration from WWI with the superior advances in technology, that when combined were devastating for their opponents. Modern day Generals have also synthesised manoeuvre warfare with advances in technology to increase their ability to observe what is happening in their dynamic and unfolding environment. During the second US-led war in Iraq (2003 – 2010), GEN Stanley McChrystal, at the time Commander of Joint Special Operations Taskforce, combined all available modes of observation, from internal reporting, field observations and telecommunications to

unmanned aerial observations, signals and human intelligence that began to have a dramatic impact on al-Zarqawi's AQ network in Iraq. In his autobiography, McChrystal (2013) explains the faster his team could collect and assess the information, the more precisely he could orientate the allocation of his kinetic and non-kinetic resources on the battlefield to defeat his opponents.

This was explicitly applied through the United States Special Operations Forces' targeting cycle that came to be known as *Find – Fix – Finish – Exploit – Analyse* (F3EA). According to McChrystal (2013), a target was first identified and located (*Find*), then kept under constant surveillance (*Observe*) to ensure it had not moved and to understand its habits (*Fix* or *Orientate*), while a raid force moved to capture or kill the targets (*Finish*, or *Decide* and *Act*). Material of intelligence value was deliberately secured and mined (further observation), while detainees were interrogated to find follow-up targets (*Exploit*); the information this exploitation yielded was then studied to better know the enemy and identify opportunities to further attack its network (*Analyse*). While never referred to in McChrystal's description of F3EA, it has all the hallmarks of Boyd's OODA Loop. This becomes immediately obvious when McChrystal states the, "military had used targeting cycles like this for a generation. But the task in Iraq – finding and stopping insurgents, not Soviet tank columns – demanded radically faster and often very precise execution" (McChrystal, 2013, p.153).

AQ and ISIS understand the impact graphic visual images have on followers and opponents. The simultaneous dividend is hyper-powered by the internet, social media and Western media's obsession with the 24-hour news cycle that replays the brutality. In *Patterns of Conflict*, Boyd explains the idea is to "create tangles of threatening and/or non-threatening events/efforts as well as repeatedly generate mismatches between those events/efforts adversary observes or images and those he must react to". (Boyd 1986, slide 175) The graphic use by ISIS of the internet to film and publish beheadings of kidnapped Westerners or members of the Muslim community who they have judged to be *Kafir* (or unbeliever), feeds into and exploits the fear caused by the reaction to what we observe, thereby generating a high level of entropy. Simultaneously, it inspires followers and creates new converts, building an *esprit de corps* between physically isolated and dispersed groups or individuals. That said, as a result of the calculated use of information technology by ISIS to mould what its audience observes, the West may be viewing ISIS as merely AQ 2.0. This further clouds our mental image and our understanding of how to respond. In an assessment of ISIS, Graeme Wood (2015) explains:

There is a temptation to rehearse this observation—that jihadists are modern secular people, with modern political concerns, wearing medieval religious disguise—and make it fit the Islamic State. In fact, much of what the group does looks nonsensical except in light of a sincere, carefully considered commitment to returning civilization to a seventh-century legal environment, and ultimately to bringing about the apocalypse. (Wood, 2015, p.1)

Observations are also an important part of inspiring followers and supporters. There is a paradigmatic connection between the OODA Loop and the trajectory towards becoming a home-grown terrorist. In *Radicalization in the West: The Home-grown Threat* Silber and Bhatt (2007) set out four stages of radicalisation. While acknowledging that there may be criticisms of their model, the point for the purposes of this section is how Observation is necessary for what Silber and Bhatt (2007) describe as the "Indoctrination" phase. This occurs when individuals begin to adopt this virulent ideology, interpreting the world from this newly formed context provided by the ability to observe images, language and actions propagated by the likes of AQ.

Cloaked with a veil of objectivity, the internet allows the aspiring Salafi-Jihadist to view the world and global conflicts through this extremist lens, further reinforcing the objectives and Koran-laced political arguments of the Salafi-Jihadi agenda. In the *Jihadisation* phase, when an individual commits to *jihad*, the internet can serve as an enabler, providing broad access to an array of information on targets, their vulnerabilities and the design of their weapons. It is another example of what Lind et al (1989) described as Fourth Generational Warfare. While not an academic, peer-reviewed work, the observations in Wood (2015) support Boyd's argument on slide 148 of *Patterns of Conflict*. On slide 148 Boyd (1986) poses the rhetorical question: how do we want to appear to our adversaries or what kind of mental image do we want to generate in their minds? In the context of this thesis, this proposition is equally applicable to the kind of impression AQ and ISIS want to shape in the minds of Muslims resident in Western countries.

**2.8.2 Orientate**

The most significant part of Boyd's OODA loop is *Orientate* or *Orientation.* In *Organic Design for Command and Control*, Boyd (1987) said, "Orientation is the repository of our genetic heritage, cultural tradition, and previous experiences – it is the most important part of the OODA loop since it shapes the way we observe, the way we decide, the way we act". (Boyd, 1987, slide 26) For Boyd, *Orientation* was the *schwerpunkt* within an organisation, or

the implicit harmonising and unifying concept. The *schwerpunkt* of an organisation is a term Boyd adopted from the German military. Understanding the *Orientation* of an adversary is critical to successfully penetrating its OODA loop, but it cannot be done within a closed system. That is why understanding *Destruction and Creation* is so important for a workable knowledge of the OODA Loop.

Boyd (1976) argued that through the second law of thermodynamics, Gödel and Heisenberg demonstrate "one cannot determine the character or nature of a system within itself." Similarly, closed systems will struggle to create the correct mental images of the outside world or of other conflicting systems. An example of Boyd's attempt to demonstrate the importance of *Orientation* and its significance to strategy for either distorting reality or creating new reality is the snowmobile metaphor. In *The Strategic Game of ? and ?* Boyd (1987) attempted to illustrate this idea through what he described as a mental experiment. *The Strategic Game of ? and ?* is Boyd's briefing that connects *Destruction and Creation* with the OODA Loop. While the primary source document is Boyd's 1987 presentation, another useful source is the presentation put together by Richards (1996), one of Boyd's former colleagues, who turned Boyd's hand written notes into a lecture.

In *The Strategic Game of ? and ?,* Boyd (1987) would get his audience to imagine they were on a ski slope and fix that image in their mind. He then asks them to imagine they are at a sunny beach resort on motorboat. Now he gets them to think of other ways of moving around such as on a bicycle. Boyd then tells them to imagine they are a parent at a department store where their child notices toy tractors with rubber caterpillar wheels. Taking all those retained images at once, what could they create? Boyd's punch line was: if you took the skis, the motor from the boat, the handlebars from the bicycle and the rubber from the toy tractor and threw away the rest, you would have designed a snowmobile. Boyd (1987) argued that the ability to synthesise all these components was the essence of strategy that enabled us to survive on our own terms. Importantly, *The Strategic Game of ? and ?* was another way of describing how Boyd had analysed and synthesised the key components from Gödel's Incomplete Theorem, Heisenberg's Uncertainty Principle and the Second Law of Thermodynamics. In other words, this kind of strategic thinking can only be accomplished by looking outside our own physical, mental and moral systems. In *The Strategic Game of ? and ?,* Boyd explained the point of all this is that:

> We can't just look at our own personal experiences or use the same mental recipes over and over again; we've got to look at other disciplines and activities and relate or connect them to what we know from our experiences and the strategic world we live in.
>
> if we can do this
> We will be able to surface new repertoires and (hopefully) develop a *Fingerspitzengefühl* for folding our adversaries back inside themselves, morally-mentally-physically—so that they can neither appreciate nor cope with what's happening—without suffering the same fate ourselves.
> (Boyd, 1987, slide 45)

In his 2014 presentation, Spinney explains that, "*Observations* of the external world are filtered through the cognitive apparatus of the observer and therefore observations cannot be separated from the various interior mental processes of each observer." (Spinney 2014, Evolutionary Epistemology, slide 7). As the global vanguard of the Salafi-Jihadist narrative and brand, AQ demonstrated its capacity for designing the metaphorical snowmobile when on 11 September 2001 they turned commercial airplanes, with innocent passengers and crew on board, into fuel-filled torpedoes. This was an example of AQ penetrating the OODA loop of the US - morally, mentally and physically - by destroying one of the most recognisable symbols of the Western system. At that moment AQ aligned its tactics of asymmetric warfare with its strategic objectives. This had the effect of generating mismatches and discontinuities and of sowing the seed for a reaction that could feed back into its plan for a new epoch of conflict. Effectively, each reaction by the West could then be used again by AQ to further inspire and shape the *Orientation* of others through an intangible and existential view of war.

In reaction to the terrorist attacks of 9/11, Bobbit (2002), Lynn (2003), Coker (2002) and Osinga (2006) make the argument that the West needs to re-conceptualize war for its instrumental view of war is severely challenged by the clash with groups who experience war as existential. It is as if the West is constantly playing catch-up every time AQ builds or evolves into a new version of the snowmobile or implicitly evolves into an entirely new instrument in the application of its strategic objectives. An applicable example of a new Salafi-Jihadi metaphorical snowmobile is ISIS. The OODA Loop may provide a tool that generates more accurate mental images and orientations of the current terrorist phenomenon. As Osinga (2006) determines,

> Boyd's work offers important insights for understanding the threats of the "post-9/11" world. So-called asymmetric responses to western modes of

warfare too become a natural feature only to be expected from adversaries. An adversary is a complex adaptive system attempting to adapt, to survive and prosper. The attacks of "9/11" introduced the contours of a new war form, and the West has been challenged to understand the nature of this new game of survival. In no small measure is it waged in the cognitive and moral domain. (Osinga, 2006, p.316)

As the US-led war in Afghanistan escalated and began to target the Federally Administrated Tribal Areas (FATA) of Pakistan, AQ shifted and adapted its approach. At a conference in Leicester, United Kingdom, organised by the radical *Al-Muhajiroun* faction in October 2002, Abu Hamza al-Masri told followers, "We need to resist, we need to fight, even alone. And you can't go now to learn in Afghanistan or Eritrea as before. A lot of skills you need for the frontline, you can learn from here [...] Where are you? What can you do in your area?" (Kohlmann, 2008, p.99) In his critical inquiry into the transformation of war, van Crevald (1991) describes future wars as being waged by terrorists or criminals embedded in and inseparable from the population they are seeking to combat. In the context of this thesis, the way that AQ created its Salafi-Jihadi brand, connecting with impressionable members of the Muslim population in Western countries and in combination with the communicative power of the internet, is an example of building a new snowmobile.

In the context of this thesis, the relevance and applicability of *Orientation* cannot be overstated in relation to Salafi-Jihadi terrorist organisations and their need to constantly adapt and survive. Orientation also involves moral codes, symbolism and language as well as the mental images already mentioned. While bin Laden and Abu Musab al-Zarqawi mastered the ability to use the internet and social media to exploit and shape the moral codes, language, symbolism and mental images of both adversary and potential recruits, ISIS has super-charged this combination to become one of the most powerful, inspirational forces using the Salafi-Jihadi narrative. The combination of social media and the internet with graphic and barbaric acts of violence by ISIS, laced with intoxicating language from the time of the Prophet Mohammed and replayed endlessly by the West's 24-hour news cycle is a demonstrative example of analysis and synthesis to create and shape orientation. (Seib and Janbek, 2010; Archetti, 2012; Stern and Berger, 2015) For example, Wood (2015) describes a declaration by ISIS spokesman, Sheikh Abu Muhammad al-Adnani who called on Muslims in Western countries to find an infidel and "smash his head with a rock, poison him, run him over with a car", or "destroy his crops." While there has been some criticism of Wood (2015), he makes a few relevant observations. For example, he notes that to audiences in the West the contrast between the medieval style of punishment by poisoning

crops and the modern suggestion of vehicular homicide may sound strange. However, Wood (2015) explains:

> His speech was laced with theological and legal discussion, and his exhortation to attack crops directly echoed orders from Muhammad to leave well water and crops alone—unless the armies of Islam were in a defensive position, in which case Muslims in the lands of *kuffar*, or infidels, should be unmerciful, and poison away. (Wood, 2015, p.2)

In the context of Boyd's OODA Loop, ISIS is using its prophetic methodology to shape the *Orientation* of all its audiences, both supporters and enemies. The proliferation of these powerful Islamic symbols, the prophetic language and the morally and mentally distorting violence maintains relevance in the minds of disconnected followers and self-radicalising members of the Muslim community resident in Western countries. As will be discussed in Chapter Five, a further revolution or regenerative capacity of the Salafi-Jihadi's OODA loop is its ability to inspire individual home-grown terrorists. Through the internet where the graphic nature of single acts of brutality, such as publishing the beheading of Westerners, shapes the *Orientation* of followers who have had no physical connection to ISIS. This shaping of followers was described in Brachman (2007) as AQ's ability to transform consumers into producers of terrorism. Turning consumers into producers ensures the sustainability of AQ's form of insurgency within Western countries.

In *Patterns of Conflict,* Boyd (1986) explains the need to "inhibit an adversary's capacity to adapt to an environment (cloud or distort their observations, orientation and decisions) and impede his actions". (Boyd, 1986, slide 7) The *Orientation* of the US and its allies is important relative to how the West reacts to the current terrorism phenomenon. According to Boyd (1986), the goal is to collapse an adversary's system into confusion and disorder by causing them to over- or under-react to activity that appears simultaneously menacing, ambiguous, chaotic or misleading. The use of multiple passenger jets, already within US airspace, piloted by individuals who had been taking flying lessons in the US, inspiring home-grown terrorists, and declaring a new Caliphate and publishing graphic beheadings of Westerners by ISIS are relevant examples. Whether through the use of home-grown terrorists or foreign fighters who slip back into Western communities, the West has its own reality challenged and as a consequence is forced to re-orientate how it responds. As Richards (2008) explains, degrading an enemy's perception of "reality" is a key concept in Boyd's theory of warfare. One needs to employ a variety of measures that

interweave menace, uncertainty and mistrust with tangles of ambiguity, deception and novelty as basis to sever adversary's moral ties and to disorient.

The distortion of an enemy's ability to accurately determine the *Orientation* of the adversary increases their entropy and folds them back into themselves. Any reaction by Western governments may be perceived to be targeting the Muslim community. This consequence is to reinforce the Salafi-Jihadi narrative, allowing AQ and ISIS to exploit and manipulate the *Orientation* of their core constituency. For example, on 23 February 2015 the then Australian Prime Minister, Tony Abbott, announced that the Australian Government would introduce measures making citizenship and immigration laws tougher and targeting those who supported and advocated religious and racial hatred. This was interpreted by groups such as *Hizb-ut-Tahrir* (an Australian based Salafi-Jihadi organisation) as evidence of discrimination against the Muslim community in Australia. In response to the proposals by the Australian Prime Minister, on its website *Hizb-ut-Tahrir* describes how "the objective of such talk is to threaten and intimidate Muslims into not accounting the Australian government for its foreign policy crimes and to have them accept a localised, secular version of Islam that is not the Islam revealed by Allah to Muhammad. This must be staunchly rejected." (*Hizb-ut-Tahrir*, 4 February 2015) This demonstrates the juxtapositions of the *Orientation* of these two intellectual positions.

### 2.8.3 Decide

In the context of the OODA Loop, decisions are based on the observations made and filtered through an individual's or group's orientation. Osinga (2006) argues that Boyd aligns the decision component of the OODA Loop with hypothesis testing. The theoretical discourse on decision-making is a complex and significantly explored field of inquiry in areas such as psychology, businesses, economics, medicine, sport and warfare. For example, Söllner, Bröder, Glöckner and Betsch (2014) explored the question: when decision-makers are confronted with different problems and situations, do they use a uniform mechanism as assumed by single-process models or do they choose adaptively from a set of available decision strategies as multiple-strategy models? It was determined by Söllner et al (2014) that the uniformity of these findings underlines the adequacy of the novel information intrusion paradigm. This is said to comprehensively promote the notion of a uniform decision-making mechanism as assumed by single-process models. Boyd would have interpreted this as a linear and explicit process.

The decision does not necessarily always involve deciding to take action; it can also involve deciding not to take action at all.  For example, the social psychological phenomenon known as "bystander intervention" was first explored by John Darley and Bibb Latane (1968) following the 1964 murder of Kitty Genovese in the United States.  (This incident is used in Chapter Four to describe the significance of single case-study research methodology.)  In Darley and Latane (1968) it was determined that people are less likely to intervene to help another person in an emergency while in the presence of a group than when they are alone.  In the context of Boyd's theory, this would describe decisions being made within a closed system that overlooks the possible consequences from a lack of synthesis.  In relation to terrorist decision making, McCormack (2003) reviewed the existing literature and explained that efforts to answer these questions have centred on three sets of theories comprising of: 1) strategic theories, in which the decision to employ terrorism and related forms of political violence is considered to be an instrumental choice; 2) organisational theories, in which the sources of violence are found in the internal dynamics of the terrorist group itself; and 3) psychological theories, in which the decision to employ terrorism is explained within the framework of individual psychology.  When applied to the OODA Loop, these three general theories could equally describe the *Orientation* that shapes the decision.

Decisions may evolve as more observations are made and filtered through one's *Orientation*.  In fact, Shapiro (2012) describes how terrorism is a contextual phenomenon and that successful analysis of terrorist group decision-making needs to take into account a variety of contextual factors.  These contextual factors could be equivalent to those that make up *Orientation*.  In his analysis of the psychology of terrorism from the Provisional Irish Republican Army (IRA), the Red Army Faction of Alfred Herrhausen and AQ, Horgan (2005) refers to a rational choice perspective.  Horgan (2005) argues the decision-making process that underpins and arises from terrorist acts is determined by the immediate and proximal context to the individual's involvement.  Further, Horgan (2005) notes the group plays a significant role in shaping the behavioural process inherent in deciding to become a terrorist.  However, Horgan (2005) does not mention home-grown terrorists or lone, individual terrorists who may have no immediate or even proximal engagement with the group but for whom the internet overcomes the physical tyranny of distance to allow individuals to feel existentially connected.  Irrespective of what decision-making strategy is applied, it could be argued that the filter for a decision is contained within the

organisation's *Orientation*.  For a combatant to make a decision, Ford (2010) explains they must filter new information (or unfolding circumstances) through the lens of previous experience, genetic heritage, and cultural traditions.

In a competitive environment that requires defeating an opponent, restricting their capacity to make decisions is an important tactic.  For Boyd it is the ability to constrict the time an opponent has to make decisions that will cause them to misinterpret the situation, create inaccurate mental images and begin to experience increasing entropy.  In his exploration of air power as the dominant force of military power in the modern world, Meilinger (1995) explains the conquest of time as the result of superior air power provides surprise, and surprise leads to confusion and disorientation.  To reinforce the importance of compressing time in conflict and the pressure it places on the decision-making ability of the enemy, Meilinger (1995) states, "John Boyd's entire theory of the OODA Loop is based on the premise that telescoping time – arriving at decisions or locations rapidly – is the decisive element in war because of the enormous psychological strain it places on an enemy". (Meilinger, 1995, p.31)  This may seem incongruent to the threat of home-grown terrorism, but Western governments are increasingly under pressure to stop the next attack and when they do happen governments are forced to respond rapidly to the confusing and unfolding situation.  In other words the pressure of time needs to be measured through the context of the situation.

While the ability to telescope time to outmanoeuvre an opponent is important, Boyd continually emphasised the significance of the implicit over explicit form of decision-making for reducing the time taken to analyse the opponent's *Orientation* and synthesise the potential courses of action.  Explicit decision-making is slower, as one does not have the relevant information, trust, communication or other sources of data to allow implicit decisions to be made by the group or individual in the field.  Explicit decisions are also those which are mechanical (Lindley 1971) or linear and unlikely to lead to free-flowing adaptive action, as explained by Coram (2002).  This form of decision-making is not conducive to the kind of manoeuvre warfare being used by AQ.  This is in contrast to conclusions reached by Pretz (2008) who evaluated intuition over analysis for strategy in decision-making.  Pretz (2008) describes how the research on dual processes in cognition has shown that explicit, analytical thought is more powerful and less vulnerable to heuristics and biases than implicit, intuitive thought.

Several other studies have shown that holistic, intuitive processes can outperform analysis, documenting the disruptive effects of hypothesis testing, think-aloud protocols, and analytical judgments.  In Pretz (2008), the research examined the effects of intuitive versus analytical strategy and level of experience in problem solving.  The analysis was found to be appropriate for more experienced individuals, while intuition was more effective for those less experienced.  However, it could be argued that more experienced or senior individuals become locked into a fixed paradigm of decision-making, whereas less experienced individuals are not locked into endless analysis.  What would have made the Pretz (2008) experiment interesting would have been to establish a head-to-head competition between those who make decisions based on analysis and those who make decisions by both analysis and intuitive or implicit synthesis.  In his systematic explanation of each component of the OODA Loop, Richards (2006) explains explicit decisions are needed when no effective action is available via the implicit link, such as when training or experimenting.  However, actions will still be influenced by (existing) implicit guidance and controls until these are reset by learning.  Explicit decision-making and reorientation (learning) always take time.  Boyd argued that analysis alone did not lead to adaptive decisions.  The implicit aspect was not the analysis but in the intuitive ability to observe connections, or in other words the synthesis of what is happening.  As Hammond (2001) explains, this is the theme weaving its way through *A Discourse on Winning and Losing.*

If we consider AQ and Western governments and either their military or counterterrorism entities as dueling OODA loops, one of the objectives is for either side to place enough pressure on the opponent that they find it difficult to look externally and thus become trapped in a suffocating decision cycle.  The theme of suppression, explains Richards (2008), is having the tendency to build up explicit internal arrangements that hinder interaction with the external world.  This clouds mental visibility and distorts an interpretation of the adversary's *Orientation*.  This becomes more complicated when it involves social structure of command and control.  It is why, Richards (2008) explains, organisations need to arrange circumstances so that leaders and subordinates alike are given the opportunity to continuously interact with the external world and with each other.  In other words, an accurate appreciate of the context of the situation on the ground is critical for determining the right course of action.  This will enable them to quickly make many-sided, implicit, cross-referenced projections and correlations, hence a similar implicit orientation.

As Hammond (2001) explains, the faster tempo at the lower levels of an organisation should work within the slower tempo of the higher levels in the organisation. Successful decisions come from implicitly giving the lower levels freedom to be creative and to shape and direct their own actions. In the context of this thesis, the OODA loop of the smaller tactical units (or home-grown terrorists) are revolving within the larger OODA loop of the strategic, global entity - in this case AQ. The internet and social media have globally super-charged this capacity for AQ. This enables small groups or individuals to make implicit decisions and to regenerate even after setbacks, based on a carefully manipulated *Orientation* assisted through the Salafi-Jihadi narrative. This may be where Hoffman (2008) and his strict command-and-control view of AQ has overlooked the implicit nature of a movement that is a state of mind more than it is a physical, explicitly-designed structure.

In a contest of survival, such as warfare, it is all about distorting an opponent's ability to make the right decision, in a timely manner. Conversely, it is about increasing the utility of our own decision-making. Even though the Salafi-Jihadi narrative may resonate with some residents in Western countries, there has not been a constant barrage of terrorist acts since 11 September 2001. However, the reaction of Western governments and the media, whether to failed attempts of home-grown terrorism or single acts of graphic brutality broadcast by ISIS, is illustrative of a powerful, distorting effect. As shall be explored in the three case studies selected for this research, the distorting, psychological effect is even more profound when Western governments find the home-grown terrorists are unexceptional and virtually indistinguishable from the rest of a diverse society and the planning is *ad hoc* and crude. For example, in *Talking with the Enemy*, Atran (2011) describes the almost farcical organisation and planning that resulted in the Madrid train bombing on 11 March 2004. In this case study, Atran (2011) describes an almost chaotic, irrational and *ad hoc* approach to organising what eventuated into one of the worst terrorist attacks in European history. There was nothing mechanical, linear or symmetrical about the entire process of the terrorist attack on the Madrid train network.

The level of uncertainty, lack of definitive information on potential home-grown terrorists and the pressure from informed and uninformed stakeholders within the Western communities place pressure on authorities to make the most effective decisions. In the immediate aftermath of a terrorist's actions, Western governments need to be wary not to be drawn into the distorted mental image that AQ and ISIS is attempting to create. The consequence may be to reduce the utility of counterterrorism decisions. Western

Governments need to determine the right strategy, implemented with a balanced mixture of tactics along the moral, mental and physical continuum of war, which forces AQ and ISIS to fold back into themselves.

**2.8.4 Act**

The only academic research to mention the *Act* component of the OODA Loop is in Osinga (2006) and this is only briefly.  As mentioned earlier, while Boyd saw the *Decision* component as being a form of hypothesis formulation, he viewed the *Act* component as a test.  Richards (2008) provides an explanation that returns to *Orientate,* where he notes how orientation shapes observation, decision and action, and in turn is shaped by the feedback and other phenomena coming into our sensing or observing window.  In other words, the *Action* is not necessarily final; it may be undertaken to test a theory or a hypothesis, or to initiate a reaction that further shapes the opponent's mental image and *Orientation*.

In the context of Salafi-Jihadi inspired home-grown terrorism, the act can involve attempting or planning to carry out a terrorist attack.  Following the Silber and Bhatt (2007) definition, the "jihadisation" phase is where "members of the cluster accept their individual duty to participate in jihad and self-designate themselves as holy warriors or mujahedeen. Ultimately, the group will begin operational planning for the jihad that can involve a terrorist attack. These "acts in furtherance" will include planning, preparation and execution". (Silber and Bhatt 2007, p. 7)  When viewed through the lens of the OODA Loop, the act itself is a reflection of the individual's or group's *Orientation,* as well as the *Orientation* of the target.  Individuals becoming progressively more inspired associate themselves with like-minded others and these networks or friends appear "almost essential to progressing to the Jihadisation phase, critical for a terrorist act". (Silber and Bhatt 2007, p.9)  For small groups or individual home-grown terrorists the internet is an enabler in this process of deciding to act in support of or conduct a terrorist attack.

In relation to a larger group involved in home-grown terrorism, Silber and Bhatt (2007) assert that "group think" is one of the most powerful catalysts for leading a group to actually committing a terrorist act.  "Group think" is a force multiplier for radical thought, while creating a competitive environment among the group members for being the most radical and the most committed.  In the context of the OODA Loop, the terrorist act or

planned attack comes back to how it is shaped by the orientation of that individual or group. This insight from Silber and Bhatt (2007) reinforces another argument made in this thesis, whereby ISIS has evolved even further in exploiting the inspirational effect of increasingly barbaric acts of violence. Any reaction to those acts are observed and evaluated by ISIS in order to analyse the effect of these actions. For example, despite the act of beheading kidnap victims on YouTube being graphic enough, ISIS then moved to burn alive a Jordanian fighter pilot, First Lieutenant Muadh al-Kasasbeh, who was captured on 24 December 2014. This was an act of brutality that not even AQ had carried out. It was also an act that illustrated ISIS evolving and adapting through its own OODA loop, testing and shaping the mental images of its enemies to observe how they would react.

While there is no academic research or empirical evidence to confirm this, it could be deduced that AQ launched its 9/11 attack in order to test its hypothesis or to cause actions by the US that may have fuelled a spiral of clashing OODA loops. The 2001 US-NATO invasion of the Islamic country of Afghanistan and the US-led invasion of Iraq in 2003, as well as a range of anti-terror laws implemented by Western Governments, assisted in shaping how AQ was able to adapt its moral, mental and physical *Orientation*, strengthening the legitimacy of its narrative to a global support base. ISIS has profoundly exploited the *Orientation* of its enemies and the resulting actions. For example, the act of graphically tormenting Japan by parading Kenji Goto and Haruna Yukawa on YouTube and then broadcasting their beheadings across the internet (RT.com, 31 January 2015) terrified a nation and fed into the *Orientation* of Japan. This action can also be interpreted as a form of coercion to force Japan and its allies into some kind of action, which again reinforces the ISIS cause. The Japanese media's OODA loop was also penetrated as it continually played the humiliating images on the enormous television screens in Tokyo and other Japanese cities. Both the *Orientation* of ISIS and the understanding of their anticipation of how Japan and the West would react could be said to have shaped the decision to perform these actions. An interesting question then is: how would ISIS's own *Orientation* have been shaped if the Japanese and Western media had refused to act? What if the Western and Japanese media decided not to show any of these images and prevented them from appearing on their nation's accessible internet sites? This may have had a neutralising effect on ISIS, or resulted in actions that were even more horrific to force the attention and reaction they strive to exploit.

As explained earlier, the predominant German military concept that Boyd argued was key to his interpretation of the *Act* component of the OODA Loop, was the *schwerpunkt* contained within the organisation's *Orientation*. It was a concept that resonated throughout the German military chain of command. As Coram (2002) attempts to explain, *schwerpunkt* is the overarching goal, or the glue that holds the various units together and the freedom given to those units to carry out the required tactics in pursuit of that goal. It is equally applicable to describing how AQ organically fosters and encourages freedom of movement and decision-making that shapes commitment and intent among followers. It may also suggest the regenerative capacity of AQ to shape the *schwerpunkt* for those who are inspired by the Salafi-Jihadi narrative, and then to put that into action. For example, even though the Madrid terrorist attack, as described by Atran (2011), illustrates a seemingly dysfunctional organisation, when analysed through the OODA Loop this did not matter.

What mattered was that those involved in the decision-making and implementation displayed *schwerpunkt,* or freedom to manoeuvre and shape the tactical application of the intent. Those involved in the Madrid bombing went through their own tactical OODA cycle within a broader, longer-term strategic OODA loop inspired by AQ's Salafi-Jihadi narrative. Another important point is that for Boyd the *Act*, or in this case the terrorist attack, did not signal the end of the OODA Loop cycle. For a suicide bomber, that act may be the end of their explicit involvement in the Salafi-Jihadi OODA loop process. However, the consequences may generate further OODA cycles such as inspiring others and shaping the reactions of opponents. It is not as simplistic as a mechanical model of decision-making; it can also be used to detect how a new home-grown terrorist attack or application signals the regenerative capacity of the AQ.

As explained, it is a mistake to view the OODA Loop as a mechanical process whereby a group of variables can be dropped into the *Observe* repository and out comes action at the end. In his application of the OODA Loop to cybernetic command and control, Brehmer (2005) describes the OODA Loop in purely mechanical terms. If the *Act* is successful, argues Brehmer (2005), then there is simply nothing more to *Observe* and the OODA Loop stops. This analysis misses the significance of tactical actions influencing strategic objectives. If one air force pilot shoots down another, following Boyd's theory, this does not simply end the OODA Loop. The effect of the elimination of the opponent influences the broader OODA Loop of the larger entity that pilot represents. Similarly, the feedback for the

successful pilot shapes how he may or may not engage in future air-to-air combat. As Richards (2006) explains, such a sequential model would be ponderous and does not properly describe how successful competitors operate. Instead, as Richards (2006) argues, sometimes it might seem as if competitors are simply observing and acting. For instance, there will be a number of potential courses of action for any situation and a thinking opponent does not provide its competitors with a list of tactics so they can work out reflex-type responses in advance. The USMC Warfighting manual explains the "essence of maneuver is taking <u>action</u> to generate and exploit some kind of advantage over the enemy [...] that advantage may be psychological, technological, or temporal as well as spatial". (USMC Doctrinal Warfighting Manual, 1997, p.74) The understanding is that taking action to generate an outcome is not the end of the broader strategic objective.

One of Boyd's favourite tests was to show people three images (see below) and ask them what they are. He used this test to demonstrate how people often have their mental images shaped and manipulated by the actions of others. In other words, individuals act in a way that reinforces the mental image they have constructed about events, experiences or even the interactions between themselves and other individuals. This in turn feeds into their agenda. As described by Hammond (2001), Boyd would argue the images below are all the same.
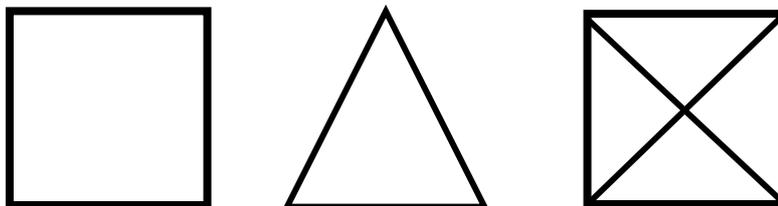


*Figure 2.2. A Boyd Quiz (Hammond 2001, p.181)*

Boyd would state each is a pyramid observed from a different perspective, depending on your viewpoint. As Hammond (2001) explained, it was Boyd's way of demonstrating how it is possible to let others see what they want to see. How Western governments and society respond to acts of Salafi-Jihadi inspired home-grown terrorism may actually feed into how home-grown terrorists want to be perceived. For example, a 2006 Dutch Government white paper on violent jihad in the Netherlands and the current trends in the Islamist terrorist threat, points out that:

Extremist Islamists who propagate violence against perceived enemies of Islam in order to effect social and political change which accords with their radical religious (jihadist) ideals are referred to as jihadists. Jihad4 - in the sense of holy war - is their principal focal point. If they truly support or commit acts of violence, we label them jihadist terrorists (violence against unarmed citizens) or jihadist fighters/mujahedeen (violence against military or paramilitary units in war zones). (Ministry of the Interior and Kingdom Relations, 2006, p.11)

By describing an act of terrorism as part of a jihad, this description could actually play into the hands of AQ. Labeling them jihadists or violent jihadists may become a badge of honour that resonates across a global network of existentially connected peers. Lakoff (2004) explores the power of framing in shaping political debate and explains that even "when we negate a frame, we evoke the frame". (Lakoff, 2004, p.3) The home-grown terrorist may have carried out an act of terrorism but we do not need to reinforce and strengthen their own frame of reference by continuing to refer to it. For example, highlighting the jihadist, apocalyptic nature of ISIS simply feeds into the mental image that group has generated for followers and opponents alike. This thesis argues acts of home-grown terrorism or barbaric brutality, socialised on the internet, have a powerful, distorting effect along the moral-mental-physical continuum of war. Novel strategies need to be found to neutralise that power and influence.

## 2.9 Conclusion

As with T.E. Lawrence, Liddell Hart, JFC Fuller, Sun Tzu, Colin Gray and other military strategists, Boyd identified the significance of the moral and mental levels of war. It is irrelevant how one models the terrorist's decision-making process or indeed how terrorism is defined; instead, it is the uncertainty inflicted by the fear of terrorism penetrating the minds of a variety of audiences that is important in the context of the OODA Loop. In other words, irrespective of the tautological debate on definitions, terrorism generates disorientating moral and mental repulsion in the minds of the enemies of the terrorists. As illustrated and described in the three case studies selected for this thesis, the act is not merely a mechanical or linear event; it is wrapped in layers of social, psychological and morally-grounded themes. It is not only the act of home-grown terrorism that is terrifying to the population; it is morally and mentally disorientating because - in the case of home-grown terrorism - it was perpetrated by an individual or group of individuals who live among us, and who are protected by and raised on Western moral values, freedoms and principles.

This kind of exploitation is indicative of a new kind of manoeuvre warfare that forms part of the current terrorism phenomenon and is expanded upon throughout this thesis. Groups like AQ and ISIS exploit what they identify as the West's moral weakness by attacking the very system that protects their Western-based followers under the rule of law. For Western Governments they create moral confusion about how to react, in case any response is manipulated as being an attack on Muslims or labeled Islamophobic. As Lind et al (1989) asserted in their description of fourth generational warfare, terrorists would be able to move freely in our society while actively working to subvert it, by using our democratic rights not only to penetrate it but also to defend themselves. Simultaneously, reactions can be used to further inspire others to join the cause. This is a form of manoeuvre warfare that will be described as "moral manoeuvrability" and elaborated upon in Chapter Six as a key contribution from this thesis. It also demonstrates the "orientational" power of Salafi-Jihadi inspired acts of home-grown terrorism that will be explored in Chapter Five through the three cases selected for this thesis.

The focus of the following chapter is the predominant, strategic models of terrorism and an examination of the Salafi-Jihadi narrative that inspires home-grown terrorism.

# Chapter 3 – The Strategic Model of Terrorism and AQ's Methodology

## 3.1 Introduction

This chapter examines and critiques the established, strategic models of terrorism in the context of Salafi-Jihadi inspired home-grown terrorism. This phenomenon is analysed through the lens of the OODA Loop and the use of case study research methodology. At the core of the model is the notion that violence has a strategic purpose and is not senseless. As Kydd and Walter (2006) and Abrahms (2008) point out, effective counterstrategies cannot be designed without first understanding the strategic logic that drives terrorist violence. Defeating an opponent, argued Boyd (1986), requires analysing and synthesising the components that make up the adversary's strategic intent along a moral-mental-physical continuum. Determining the strategic model of terrorism, in which the OODA Loop will be applied to test a theory, is significant for underpinning the theoretical basis of this thesis. A strategic model of terrorism can offer an understanding of how the use of home-grown terrorism as a tactic of asymmetric warfare has evolved and regenerated.

This chapter also evaluates the predominant approaches in the literature used to describe the phenomenon of home-grown terrorism; for example, whether it is a leaderless network approach or one directed by a command-and-control structure through Salafi-Jihadi terrorist organisations such as AQ and ISIS. The chapter explores the symbolic, religious, social, moral and political imperatives implicit within the Salafi-Jihadi narrative. Understanding the narrative and the symbolism used to inspire are important aspects of this thesis because they make up the *Orientation* of both the terrorist organisation and those who are inspired to join it or carry out acts of terrorism on its behalf. In addition, Chapter Three critically analyses the dominant academic theories on the implementation of the strategic model as it relates to the phenomenon of home-grown terrorism. In other words, examining how the intent of the strategy is explicitly or implicitly understood and actioned by those prepared to plan and/or carry out home-grown terrorism.

Further, this chapter describes the religious, political, social and moral components behind Salafi-Jihadism. As Moussalli (2009) meticulously describes, it is a complex synthesis of neo-Salafism, neo-Wahhabism and radical Islamism. In other words, Salafi-Jihadism represents the transformation of different, and at times contradictory, Islamic thought into

radical *takfiri* jihadists, of which AQ is one of the most notorious manifestations. Similarly, ISIS is a further evolution in that manifestation of *takfiri* jihadists. In describing the components of Salafi-Jihadism, this chapter focuses on how it employs violence in the form of home-grown terrorism as: 1) an asymmetric tactic to exploit the West's moral principles, thereby continually shaping the mental images it wants the West to perceive; 2) an inspirational driver that transforms consumers of Salafi-Jihadi terrorism into implicitly guided, self-perpetuating producers of home-grown terrorism and; 3) as part of its long-term strategy. While it is beyond the scope of this thesis to provide an historical account of Islam in its entirety, it is necessary to establish the contextual fundamentals of Salafi-Jihadism in contrast to other forms of Islam. As Moussalli (2009) argues, Islamism, Salafism, Jihadism, Islamic radicalism and Sunni extremism are often used interchangeably by commentators, with little understanding that they are different applications of Islam. It would be like assuming that because the Philippines, China, Japan, Thailand and Vietnam are in Asia they can be interpreted as a homogeneous group for social and anthropological research. It could be argued that when viewed through the analytical lens of the OODA Loop, this chapter forms the *Orientation* of this thesis and sets the stage for the use of case study research methodology that is described in Chapter Four.

## 3.2 A Strategic Model of Terrorism

A strategic model, or typology, provides a logical construct for understanding why a particular form of behaviour or action is occurring. One of the most important examples of a strategic framework was developed by Ivan Pavlov, following his psycho-physiological experiments with his dogs, which focused on the nervous system (Straleu 1997). When it comes to terrorism, a strategic model is considered useful as a rational frame of reference from which to conduct empirical and epistemological research. In their *Handbook on Terrorism*, Marsden and Schmid (2011) explain how the ubiquity of typologies demonstrates that robust frameworks capable of encompassing theoretical, empirical, and philosophical components can aid knowledge development and generate new paths of thinking. Regardless of the plethora of definitions on terrorism, it does not spontaneously arise in a vacuum. Instead, there is a strategic imperative that drives the use of terrorism as a tactic, irrespective of the enemy or target audience - such as a government, an occupying power, a dominant social and political hegemony or a support base whose inspiration and commitment is required for the terrorist organisation's on-going survival.

In the strategic model of terrorism based on political objectives, terrorist organisations are assumed to be rational actors calculating the costs versus the benefits of using terrorism, as opposed to other forms of action, to achieve the same political objective. In other words, a rational choice is being made around actions that will maximise utility. While there may be an overriding strategic imperative, the model of terrorism can also contain a sub-set of complimentary or parallel objectives. One of the early contributions to determining a strategic model of terrorism was put forward by Thornton (1964), who argued that terrorist acts also serve to build morale within the insurgent organisation, to disorient the lives of the target population and to advertise the insurgency. From here, Thornton (1964) proposed there were five proximate objectives: morale building, advertising, disorientation (of the target population), elimination of opposing forces, and provocation. In her work on the causes of terrorism, Crenshaw (1981) finds additional factors, including weakening the government, controlling the population and outbidding. These additional factors identified by Crenshaw (1981) still suggest the deliberate choice of rational actors who have calculated the potential impact of their terrorism.

In their opening analysis on the strategic model, Kydd and Walter (2006) state: "Terrorism often works. Extremist organisations AQ, Hamas and the Liberation Tigers of Tamil Ealam (LTTE) engage in terrorism because it frequently delivers the desired outcomes" (Kydd and Walter 2006, p.1). In their cost signalling model, Kydd and Walter (2006) assume terrorists employ one of five strategies: 1) attrition, 2) intimidation, 3) provocation, 4) spoiling, and 5) outbidding - as originally described by Thornton (1964) and Crenshaw (1981). Using empirical data from between 1980 and 2003, Kydd and Walter (2006) argue half of all suicide terrorist campaigns were closely followed by substantial concessions by the target governments. Kydd and Walter (2006) offer examples of success, such as: the US withdrawal of soldiers from Lebanon following the 1988 bombing of the US Marines Barracks in Beirut; the withdrawal of US forces from Saudi Arabia and drawing the US into a war that would mobilise Muslims against the West after the 9/11 terrorist attacks by AQ; and the evacuation of Philippine forces from the Second Gulf War (2003-2011) after a Filipino truck driver was kidnapped. While not in their data set, Spain's withdrawal from its participation in the US-led war in Iraq (2003 – 2011) is often mistakenly interpreted as a result of the terrorist attack on the Madrid train network on 11 March 2004.

In their analysis of the goals and strategies of successful and unsuccessful terrorist attacks, Kydd and Walter (2006) argue terrorist violence is a form of "cost signalling" and in fact has

been successful in achieving political objectives. This typology of terrorism is parallel to the game theory of terrorism described by Acre and Sandler (2009) that assumes terrorists and Government counterterrorism actions are chosen on the basis of cost minimisation. Similarly, Sautter (2010) explores domestic terrorism through a microeconomic model, using mathematics to demonstrate the logical calculations terrorist organisations use to determine the utility of carrying out an attack. Both models treat terrorists as rational, although Acre and Sandler (2009) make the case that terrorist organisations are operating on the basis of procedural rationality rather than assuming they are rational actors. An insightful observation is made by Acre and Sandler (2009), who describe how terrorists may choose tactics that hide their capabilities and signal their intent. This is relevant for analysing Salafi-Jihadi inspired home-grown terrorism through the OODA Loop because, according to Boyd, a vital aspect of surviving in conflict is to distort the mental image that opponents perceive as this may force them to make the wrong strategic and tactical decisions. Western governments must be careful in how they interpret the actions by Salafi-Jihadi terrorist organisations, as they could be a diversion from their real intentions and capabilities.

It has also been proposed that the use of suicide attacks is a tactic that exists within a broader strategic model of terrorism. In his analysis of suicide terrorism, Robert Pape (2006) used data collated by the *Chicago Project on Suicide Terrorism* that includes every suicide terrorist attack between 1980 and 2005. In that period, the *Chicago Project* recorded 315 completed suicide terrorist attacks by 462 suicide bombers. Rather than religion or any other ideology, Pape (2006) argues what almost all suicide terrorist attacks since 1980 have in common is a specific, strategic, political objective that seeks to compel a democratic state to withdraw combat forces. As Pape (2006) goes onto say, "terrorists almost always seek a withdrawal from territory that they consider to be their homeland or which is greatly prized. From Lebanon, the West Bank, Sri Lanka, Kashmir, and Chechnya, every suicide terrorist campaign since 1980 has been waged by terrorist groups whose principal goal has been to establish self-determination" (Pape 2006, p.28). In the case of AQ, the overriding objective, as issued in a so called *fatwa* by its then leader bin Laden in 1995, was to force the US to withdraw its forces from Saudi Arabia.

There also exists contrasting, empirically-ground conclusions as to whether the strategic model of terrorism based on political objectives has been successful. One of the most

significant academic contributions to challenging the strategic model was made by Abrahms (2008). In his paper, Abrahms (2008) questions the external validity of the strategic model and questions the assumption that, "terrorists are rational actors who attack civilians for political gains" (Abrahms, 2008, p.79). Abrahms (2008 and 2012) argues that the strategic model is based on three theoretical assertions: 1) that governments respond to terrorism by making concessions to the perpetrators in order to spare their populations additional pain; 2) disenfranchised groups turn to terrorism because of its tactical effectiveness in forcing government compliance; and 3) terrorism is adopted when the expected political pay-off is higher than other possible courses of action. Abrahms (2008 and 2012) goes on to explain that from these assertions, the strategic model assumes that successful counterterrorism policy and actions must remove or neutralise the political utility of terrorism to be effective.

Abrahms (2012) sets out how the basis of the strategic model comes from the international relations of bargaining theory that began with the work of Schelling (1960 and 1966) and not with empirical evidence. Bargaining theory presumes the coercive power of an attacking state over another in its resolve to escalate the costs beyond what the defending state is prepared to pay instead of complying. Abrahms (2012) believes the legacy of Schelling is that the threat of escalation promotes concessions. Essentially, the attacker is signalling that these threats are not hollow and the attacker is prepared to raise the scale of punishment for non-compliance. Here it is assumed the scale of punishment by a state is the threat of war to such a cost that the defender is not prepared to or able to endure.

The weakness in the theoretical foundation of the strategic model is that bargaining theory derives from an assumption that one is examining a contest between state actors or governments. Abrahms (2012) explains that the research behind bargaining theory was not developed through an examination of a contest between a government and non-state actors, such as AQ or other terrorist organisations. Significantly, Abrahms (2012) points out that, "since the September 11 attacks, a series of large-n observational studies has offered a firmer empirical basis. These indicate that although terrorism is chillingly successful in countless ways, coercing government compliance is not one of them" (Abrahms 2012, p. 587). In fact, in the study by Abrahms (2006) examined twenty-eight groups listed as Foreign Terrorist Organisations by the US Department of State and found less than ten percent achieved their political objectives. Abrahms (2012) also cites a Jones and Libicki (2008) study that investigated the universe of known terrorist groups between 1968 and

2006. Of the 648 groups identified in the RAND-MIPT Terrorism Incident database, only four percent obtained their strategic demands. Abrahms (2012) argues that terrorist groups only obtain their long-term strategic goals when they abandon violence and participate in the political process through dialogue, as did the IRA and the Palestinians. These groups may have had more success with achieving short-term material goals such as the release of prisoners.

In further research challenging the strategic model of terrorism based on political rationalism, for the period of 1982 to 1983 the Rand Corporation (1984) reported a sixty-two percent rise in the number of civilians killed or injured in terrorist attacks across Europe and noted the increased lethality and indiscriminate nature of these attacks. Despite this rise in the tactical effects of terrorism, the Rand Corporation (1984) observed that, "modern-day terrorists have not succeeded in attaining their stated long-term goals". Further, the Rand Corporation (1984) research argues that despite these political failures, many terrorist groups continue either to maximise their publicity or to engage in violence for its own sake with little commitment to an overriding objective. This is reinforced by Schelling (1991), who argues that terrorist organisations never achieve their political objectives. While using organisational theory, Crenshaw (1981) argues terrorism is a function of the internal politics of the terrorist organisation rather than an external political strategy. While the Kydd and Walter (2006) research was completed before the end of the Sri Lankan civil war in 2009, the use of terrorism by the LTTE failed in securing their political objective to secure an independent Tamil state.

In contrast to the strategic model, Abrahms (2008) proposes that individuals become involved in terrorist organisations to build closer bonds or relationships with fellow terrorists. In other words, Abrahms (2008) argues for a social model. This social model has also been proposed by Oberschall (2004) and Beck (2008), who describe it as a form of collective action. In his sample of 150 subjects, Sageman (2004) finds that sixty-eight percent joined the jihad because of social bonds such as friendship and kinship. Sageman (2004) explains that the social context, in which this adherence to the strict and rigorous behavioural code demanded by Salafi-Jihadi terrorist organisations, makes the bonds even stronger within the group. However, Sageman (2004) also argues that a critical element to joining a Salafi-Jihadi terrorist organisation is the, "accessibility of a link to the Jihad. Without it, the group of friends, kin, pupils, and worshippers will undergo progressive

isolation" (Sageman 2004, p.120). The internet and social media have made the ability to find a link to the jihad very easy; also, they help overcome the tyranny of physical distance. This does not mean the Crenshaw (1981) strategy of outbidding is defunct or that the political and social strategic models are mutually exclusive. In other words, the social model could be a subset of the political model, in that friends and like-minded social networks are more likely to join the same cause or group. As Boyd argued, the OODA loop of an individual can operate at the tactical level and within the OODA loop of a larger organisation operating at the higher strategic level. Terrorist organisations require followers and supporters; further, they look to create an environment where networks of close friends and even family members join. Terrorist organisations may also be competing for members. This has direct relevance in the current climate, as it could be said that ISIS has outbid AQ as the pre-eminent global Salafi-Jihadi terrorist organisation. While terrorist organisations have always looked to gain notoriety through the media, ISIS' synthesis of its graphic violence with the instantaneous nature of social media and the 24-hour mainstream media cycle, as well as their creation of a jihadi warrior image, has a powerful effect on aspiring supporters. This is relevant when viewed through the OODA Loop for two reasons: firstly, Boyd (1986 and 1987) argued the significance of shaping and exploiting the mental images in the minds of followers and enemies; and secondly, the OODA Loop challenges the notion of the prevailing strategic models of terrorism because they appear to be fixed, closed systems or frameworks.

There are alternatives to both the strategic model and Abrahms' (2008) model of terrorism based on social networks. For example, Juergensmeyer (2003) argues that terrorism is motivated by threatened values or idealised religious doctrine, while Sageman (2004) and Bendle (2003) refer to the strains of modernisation in society. Alternatively, Ayoob (2005) considers terrorism partly a consequence of foreign military occupation; while Stern (2003) argues broad grievances are important triggers. However, grievance alone has been widely dismissed as a major factor in home-grown terrorism by Sageman (2004) and Horgan (2005), who argue many people have grievances but do not become terrorists to kill their fellow citizens.

One of the most cited authors in academic literature on terrorism is Rapoport (2001), who proposed four waves of modern terrorism. While Rapoport (2001) does not offer a new strategic model, his wave theory could be used to support the political model as it has progressed throughout history. The Rapoport (2001) wave theory of terrorism suggests the

first wave of terrorism began with the anarchist movement in the nineteenth century. The second wave was waged by the anti-colonial movement in the 1920s, while the third wave began in the 1960s with the socialist-revolutionary movements. By 1979, Rapoport argues, the fourth wave was religion-based and began with the Iranian revolution. In their exploration of grand strategies of terrorism, Cronin and Ludes (2004) also contend the events and consequences of the Iranian revolution coincided with the Soviet Union's invasion of Afghanistan (1979 – 1989), significantly influencing this "religious" wave. However, in the context of Salafi-Jihadi inspired home-grown terrorism, Rapoport's (2001) wave theory is not an applicable model of terrorism because Salafi-Jihadi inspired home-grown terrorism is a phenomenon that is more complex than the correlation between major international events and terrorist organisations. The Rapoport (2001) wave theory could be used to argue that international events inspire new waves of terrorism, but it is not applicable for Salafi-Jihadi inspired home-grown terrorism. Further, as Marsden (2013) explains, the Rapoport wave theory neglects whole genres of terrorism, such as right-wing terrorism. She goes on to say, "its high level of abstraction, whilst indicating broad trends, is limited in the extent to which it helps us interpret how individual groups rise and fall" (Marsden, 2013, p.36).

In the context of Salafi-Jihadi inspired home-grown terrorism, when examined through the OODA Loop, this thesis supports Abrahms' (2008 and 2012) critique of the strategic model of terrorism based on political objectives. One argument in its favour is that a key aspect of Salafi-Jihadi terrorism is its powerfully communicative effect on supporters and the ability to inspire a mass base of followers, many of whom are friends. The communications model is also another alternative to the predominant strategic model of terrorism. In fact it compliments Abrahms (2008) where he offers a model based on organisational or social networks because it is hard to imagine a social network without communication. The challenge for proposing a different model is that the notion of inspiring others and the goal of communicating through mass media is considered neither strategic nor material according to the predominant strategic models of terrorism. However, this does not mean this thesis completely supports Abrahms' (2008) social model. The argument being made here is that in order to survive, organisations need to adapt and regenerate. This means not being confined to a strategy that is inflexible to changing circumstances or events, in order to create new frameworks. This may result in the use of increasingly brutal and barbaric acts of terrorism for their communicative value or indeed the synthesis of new

communications and media technology with violence to continue to inspire others and communicate to an audience physically disconnected by the tyranny of distance.

Along with the evidence from the empirical research, another potential argument against using the predominant strategic model is that it is a closed or linear argument. Despite being underpinned by bargaining theory, nothing in the academic literature has created a rule that confines the strategic model to political objectives. It does not take into account that terrorism is controlled by humans interacting within a dynamic, fluid, disorientating and evolving environment. The same argument could be used to challenge Abrahms' (2008) typology of terrorism, because even the reason for building or sustaining or belonging to a social movement or network is too confined and not conducive to the use of terrorism by the Salafi-Jihadi movement as a tactic of asymmetric warfare. Even the original reason why a group used terrorism may change over time. The terrorist organisation may have formed to pursue a political objective, but as that failed, the reason for being has evolved. As Moussalli (2009) explains, the war in Afghanistan against the Soviet Union brought together all sorts of Islamic groups under the umbrella of *jihad*. In this environment bin Laden and the now leader of AQ, Ayman al-Zawahiri, were able to engineer the beginnings of a new Salafi-Jihadi terrorist organisation even after the Soviet Union withdrew from Afghanistan in 1989. For these reasons, this thesis challenges Abrahms (2008), the predominant strategic model and the other fixed models. When analysed through the OODA Loop, it is evident that an evolving, adaptive and dynamic strategic model is more applicable to the phenomenon of Salafi-Jihadi inspired home-grown terrorism.

### 3.3 The OODA Loop as a General Strategic Model

Given the dynamic, manoeuvring and adaptable nature of terrorism, a more enduring and applicable model is the OODA Loop as a general strategic model. Terrorism is essentially a conflict witnessed through the tactical and strategic application of violence and the OODA Loop is a general theory of conflict that can be applied at the tactical and strategic level. In his presentation *The Strategic Game of ? and ?,* Boyd (1987) states:

> What is strategy? A mental tapestry of changing intentions for harmonising and focusing our efforts as a basis for realising some aim or purpose in an unfolding and often unforeseen world of many bewildering events and many contending interests. (Boyd, 1987, slide 59)

This is a strong argument for challenging how the predominant strategic model is confined to political objectives. Salafi-Jihadi inspired home-grown terrorism is itself an evolving, dynamic phenomenon that adapts to both internal and external contending interests. The very nature of asymmetric warfare requires a mindset that cannot be confined to a strategic model that is linear or closed.

As Osinga (2006) explains, good strategic theory does not equate to an ability to provide certainty and predictability. This is perhaps one of the flaws the predominant strategic models of terrorism have faced, in that they are seeking certainty, and any deviation from certainty is interpreted as a weakness within other strategic theories. Osinga (2006) argues, "even if an underlying pattern is discovered and some level of predictability established, the paradoxical nature of strategy guarantees that the pattern will be altered" (Osinga, 2006, p.30). Instead, a sound, relevant and applicable strategic model in the context of the current terrorism phenomenon should be evolutionary and able to withstand novelty, intense competition and penetration. It should also avoid being a predictive tool or be seen as a mechanical process. Importantly, and relevant to this research, any strategic model of terrorism should be dynamic so as to accommodate what Boyd saw as the important interaction between the alternating struggles of the moral, mental and physical levels of conflict.

As explained in Chapter Two, in his essay *Destruction and Creation*, Boyd (1976) took the second law of thermodynamics, Heisenberg's "Uncertainty Principle" and Gödel's incompleteness theorem to support the idea that "any inward-oriented and continued effort to improve the match-up of concept with observed reality will only increase the degree of mismatch" (Boyd 1976, p.6). Fortunately, Boyd offers a way out of this metaphorical clash between closed theoretical frameworks and comprehending phenomena that continually move away from that theory. Boyd explained that the first requirement is to shatter the rigid conceptual pattern, or patterns, firmly established in our mind. The second requirement is to find some common qualities, attributes or operations to link together isolated facts, perceptions, ideas, impressions, interactions and observations as possible concepts to represent the real world. Finally, Boyd argued it is necessary to repeat this deconstructing and restructuring until a concept is developed that begins to match up with reality. Boyd (1976) said:

> by doing this in accordance with Gödel, Heisenberg and the Second Law of
> Thermodynamics—we find that the uncertainty and disorder generated by an

inward-oriented system to talking to itself can be offset by going outside and creating a new system. Simply stated, uncertainty and related disorder can be diminished by the direct artifice of creating a higher and broader more general concept to represent reality. (p. 6)

It is important to continually be reminded that the OODA Loop is not merely a simple, conceptual framework but is comprised of a complex synthesis of scientific, engineering, mathematical and biological principles, as well as an epistemological evaluation of strategic theories of warfare. This multi-faceted approach to constructing an adaptable general strategic model of terrorism highlights that the prevailing models are too restrictive and static, while offering an understanding of why each theory appears equally plausible at any one time. An applicable example of this adaptable, strategic model used by AQ, in its early days before the terrorist attacks on 11 September 2001, is demonstrated in the writings of Ayman al-Zawahiri, now AQ's leader. In his book, *Knights Under the Prophet's Banner*, Zawahiri describes his decision, during his time as a leading figure in the Egyptian Islamic Group, to shift from attacking the "near enemy" (the governments of Muslim countries in the Middle East), when that approach had failed, to attacking the "far enemy", namely the US and other Western countries. The strategic adaptability and manoeuvrability of AQ's leadership, as evident in Zawahiri's work, has been translated by Mansfield (2006). Sageman (2004) also points to Zawahiri's work as a clear indication of "this new global Salafi-Jihad, where young Mujahedin left their families, country, studies and jobs in search for jihad arenas" (Sageman 2004, p.20).

Similarly, this thesis argues that the use of home-grown terrorism is another demonstration of the adaptable capacity of AQ within a broader theme of manoeuvre warfare against the so-called "far enemy". The application of this form of manoeuvre warfare can be tactically applied by individuals as well as by groups who are cognitively networked through an implicit mindset along the moral, mental and physical continuum of conflict. Boyd (1986) provides this explanation for a moral design of grand strategy:

> Use moral leverage to amplify our spirit and strength as well as expose the flaws of competing or adversary systems, all the while influencing the uncommitted, potential adversaries and current adversaries so that they are drawn toward our philosophy and empathetic toward our success; or put another way

> Preserve or build-up our moral authority while compromising that of our adversaries' in order to pump-up our resolve, drain-away adversaries' resolve, and attract them as well as others to our cause and way of life. (p.54)

For Boyd the aim of a general theory of strategy is to improve the ability to shape and adapt to unfolding circumstances, so that individuals (or groups, a culture or a nation) can survive. In order for a terrorist organisation to survive, Crenshaw (1988) argues it needs to continue to adapt through such means as innovation, surprise and escalation. As governments respond to the terrorists' tactics, they implement counter-measures, which then force the terrorist organisation to shift tactics again. Crenshaw (1988) explains how terrorist organisations are constantly engaged in a process of adaptation to the strategic environment. Similarly, those who are inspired by terrorist organisations may have a variety of self-activating factors. Further, each individual who carries out a terrorist attack may not have easily-defined objectives where the rationale between cognitive decisions, actions and outcomes are clear to any external observer. As Boyd (1992) described in *A Discourse on Winning and Losing,* his conceptual spiral represented a general way of comprehending, shaping and adapting to the world around us.

Therefore, this thesis will employ the OODA Loop as the adaptable, general strategic model to be applied in the analysis of Salafi-Jihadi inspired home-grown terrorism as a tactic of asymmetric warfare, through the use of case study research methodology.

## 3.4 Theoretical Approaches to Salafi-Jihadi Inspired Home-grown Terrorism

There has been significant debate around the organisational nature of AQ and its approach to implementing terrorism, including home-grown attacks. In other words, how AQ's organisation is structured and how it provides support or direction to followers. In the context of critically assessing Salafi-Jihadi inspired home-grown terrorism, this is an important distinction. However, as with the search for a strategic model of terrorism, the various approaches do not have to be mutually exclusive. The two leading theories are: 1) the leaderless jihad, proposed by Sageman (2008), in which it is suggested that AQ central does not exist; and, 2) the most prominent theory, argued by Bruce Hoffman (2008), proposes the opposite and argues that the AQ leadership continues to be directly relevant in planning and implementing terrorist attacks.

However, there is a potential third approach involving the construction of an AQ brand through a symbolically powerful and prophetic Salafi-Jihadi narrative. For example,

Kimmage (2008 and 2010) provides an informative analysis of AQ's branding through its media production entity, al-Sahab, in a new media age. Interestingly, Kimmage (2010) raises the conflicting power in jihadi circles between the AQ brand and the brand of bin Laden, and points out that the bin Laden brand was arguably more powerful. Compare this to other Salafi-Jihadi groups such as al-Shabab, Boko Haram and even ISIS where little is known about the leaders of these groups. In fact the branding of these groups appears to be as synonymous with brutal violence as it is with an Islamic cause, even if they have become affiliates of AQ. In fact, the attempt to expand the AQ brand through a franchise approach is examined in Mendelsohn (2011). Interestingly, Mendelsohn (2011) points out that the franchise of AQ in Iraq (AQI) provided AQ a lifeline largely due to AQI's leader Abu Musab al-Zarqawi, who offered both Iraqi and foreign jihadi fighters the opportunity to fight the US military in the heartland of the Middle East.

In his examination of AQ's unique selling points - a key requirement for a brand - Lia (2008) explains AQ's support is based on three factors:

> First, al-Qaida *propagates a simple popular message*, which resonates strongly with deeply held grievances in the Muslim world. The organisation strives to follow the popular mood in many respects. Second, al-Qaida has created for itself *a powerful and captivating image*. It has become the world's most feared terrorist organisation, which has an immense attraction for certain groups of young people. In some countries in Europe, it has become "cool" to be a jihadi. Third, the strength of al-Qaida's appeal lies in *its global character*; unlike most terrorist groups of today, membership of al-Qaida is open to virtually everyone, irrespective of ethnicity and nationality. As long as one is willing to accept its extremist ideology, anyone can, in principle, become an al-Qaida member. (Lia, 2008, p.3)

This analysis by Lia (2008) describes the core components of a strong brand in the modern era. It has global name recognition, it represents a powerful image and it makes people feel good about having a connection to this brand. This concept of branding and AQ was poignantly summarised by Brachman (2008), who described AQ as a movement that mastered the art of transforming consumers of its ideas and acts of terrorism into producers of them. It could also be argued that the making and reinforcing of the AQ brand was greatly assisted by the so-called global war on terror and the Western media's 24-hour news cycle. When describing how the internet gave AQ's leader in Iraq, Abu Musab al-Zarqawi, the means to build a brand quickly, Greenberg (2005) argued the point of building a brand in this way is that it magnified the impact of that violence.

In an analysis of the creation of the AQ brand through communications, Archetti (2015) uses the *Kapferer identity* prism to examine the brand identity of AQ. It could be argued that ISIS is now creating a further brand built on graphic violence, power and the physical symbolism of a declared Caliphate. In their critical review of the online AQ magazine, *Inspire*, researchers Lemieux, Brachman, Levitt and Wood (2014) used an Information-Motivation-Behavioural framework to examine the publication's impact around what they describe as the "social normative support for violence," as well as its encouragement for do-it-yourself style terrorism. From the work of Lemieux et al (2014), there is a strong case for an AQ brand that it not locked into any confined operational paradigm.

One of the most cited critical analyses of the AQ brand is from Feiser (2004), who explained:

> The key attribute of al-Qaeda's role at the moment and of the future must rely on the illusive power of its manufactured symbolism. This characteristic rests on the empowerment gained from its Islamic message and the emotional appeal to universal brotherhood via the external process of jihad that rests on the success of a powerful propaganda campaign. These elements are essential to maintaining any true impression of al-Qaeda's global power, both real and perceived. (Feiser 2004, p1).

This description makes an important addition to the branding notion of AQ summarised by Lia (2008) and that is the idea of emotional appeal to universal brotherhood. More significantly, this building of an enduring, universal brand, as described by Feiser (2004), reinforces the arguments made in the previous section on the adaptable strategic model of terrorism, instead of a strategic model confined to closed system. Perhaps one of the most important, but least referred to figures, in the creation and adaptation of an AQ brand through a paradigm shift in strategy, is Syrian born Abu Mus'ab al-Suri. Before his arrest in November 2005, Abu Mus'ab al-Suri was regarded as one of AQ's best strategists and most effective producers of a global Salafi-Jihadi narrative (Lacey 2008, Cruickshank and Ali 2007; Zackie 2013).

The *Call to Global Islamic Resistance* (GIR), written by al-Suri, is a valuable primary source with which to analyse the construction of a powerful message to justify ideological or political-based violence. Abu Mus'ab al-Suri saw the ability for the AQ brand not only to be the vanguard of the Salafi-Jihadi global fight against US-led Western constructs, but also to appeal to the ordinary person. As described by Ryan (2013), "Al-Suri summarises three dimensions to the call to Jihad that he is proposing in the post-Desert Storm era, in which

he sees the entire world as against the Salafi-Jihadist current. The call is designed to appeal to the ordinary people and not the extremists" (Ryan 2013, p.209). Perhaps even more significantly, Abu Mus'ab al-Suri envisioned a new strategic model based on a military or warfare strategy and not a model based on political objectives that he recognised were easily defeated by the West.

In their analysis of Abu Masab Al-Suri (real name Mustafa Setmariam Nasar), considered the architect of the new al Qaeda, Cruickshank and Hage Ali (2007), explain how, "the loss of its training camps in Afghanistan and the killing or capture of much of its pre-9/11 senior leadership meant that if Al Qaeda was to continue to be relevant it had to switch toward inspiring and steering jihadist groups…" (Cruickshank & Hage Ali, 2007, p.2). The OODA loop can be used to explain how as a Salafi-Jihadi terrorist organisation, al Qaeda transformed its approach through an adaptable, regenerative strategic process. Following study of al-Suri's lectures and teachings on strategy obtained from his published videos, Cruickshank and Hage Ali (2007), explain that al-Suri's strategic concept was based in "individual terrorism". Cruickshank & Hage Ali (2007) quote al-Suri who said:

> "We ask the Muslim youth to be a terrorist. Why do we ask for such individual terrorism? First because secret hierarchical organizations failed to attract Muslims. The youth fear joining such an organization because if there is a mistake then the authorities will reach them. Second because we need to give the youth the chance to play a role without being part of an organization. Some youth don't want to join an organization and don't know how to act on their beliefs. Third due to pressure from the Jews, Crusaders and lapsed Muslim regimes."(cited in Cruickshank & Hage Ali 2007, p. 8).

In effect through this adaptable strategy to broaden the base, AQ brand became more enduring and able to withstand setbacks through the use of the Salafi-Jihadi narrative and symbolism, not via a rigid strategic framework but through an adaptable model of terrorism that could be regenerated in the minds of inspired followers. This alternative, theoretical approach to describe the functional paradigm of AQ is one that is adaptable to a dynamically competitive environment, continually manoeuvring within Western moral, mental and physical boundaries that are treated as asymmetric weaknesses. This is a core theme throughout this thesis and important for critically analysing the use of Salafi-Jihadi inspired home-grown terrorism. The strategic impact of Abu Mus'ab al-Suri is a shift to a global military strategy implemented through the grassroots, or what Sageman (2008) calls a leaderless network.

**3.5 AQ - Leaderless Network or Top-Down Direction?**

One of the dominant, contemporary, operational approaches to describing how AQ implements its terrorism against the far enemy is offered by Sageman (2008), who argues that AQ has evolved into a leaderless jihad. In other words, AQ has transformed into a decentralised network or social movement of self-perpetuating individuals or small groups. In his empirical analysis of Salafi-Jihadi and Islamic-based terror networks, Sageman (2008) describes how they often form organically through friendship and family relationships, as opposed to a "top down", heavily controlled structure. This is congruous to Abrahms' (2008) social or organisational strategic model of terrorism.

In his analysis of the personal backgrounds of those who linked up with like-minded followers of AQ and the Salafi-Jihadi narrative, Sageman argues it is inaccurate to refer to ''AQ strategy, tactics, leadership, membership, recruitment and 'divisions of labor' (operators, communicators, financiers, supporters, logisticians)'' (Sageman 2008, p. 31). This analytical assumption is shared by Atran (2010) who argues that there is "no AQ central" or hierarchical, command-and-control structure. In his field-based case study analysis, *Talking to the Enemy: Faith, Brotherhood, and the (Un)Making of Terrorists*, Atran (2010) cites investigations following the suicide bombings in Bali (12 October 2002), Madrid (11 March 2004) and London (7 July 2005), as well as Canadian Police surveillance of the so-called "bunch of guys" Millennium bomb plotters, suggest an unstructured arrangement of like-minded individuals, and weak and distant relationships with al-Qaeda. Sageman (2008) describes those who become involved in the AQ Salafi-Jihadi "movement" (note the use of the term "movement" by Sageman as any way to describe AQ) as informal groups of "wannabes". This leaderless jihad concept has been made seamless because of the internet, where these physically disconnected individuals and groups can connect through social media and virtual chat rooms. However, in a T E Lawrence and Boyd-like observation, Archetti (2015) argues that "it is always humans (governments, citizens and extremists among them) who *use* technology as a tool to advance their own goals and that audiences, as already indicted, actively select and embrace – rather than merely absorb – messages they are interested in" (Archetti 2015, p.50). It also allows AQ's publicity to be freely and virally distributed and shared.

A number of studies have since sought to substantiate this theoretical notion regarding the leaderless jihad organisational and operational approach. For example, in his paper on

understanding the self-organising dynamics of leaderless jihad, Bousquet (2012) uses complexity theory to test the Sageman (2008) construct. Bousquet (2012) describes how terrorist networks are best understood as complex, adaptive systems that self-organise in a decentralised fashion. The recognition of the adaptive, complex and evolving nature of the jihadist movement reinforces the applicability of the OODA Loop and its fundamental premise of strategy and adaptation. Further, Bousquet (2012) identifies a system of "distributed intelligence" allowing networks to pursue terrorist attacks on the basis of partial localised information. As discussed, Boyd argued that the significance of the German command-and-control paradigm during the World War II emphasised a decentralised execution. This allowed for varying patterns, speed, and methods of achieving the overall objective, or *schwerpunkt*, implemented through an implicit understanding.

The concept of *schwerpunkt* is very similar to how Bousquet (2012) described the way these seemingly isolated jihadist terrorist cells operated. Further, it reinforces the significance of the Abu Mus'ab al-Suri's military strategy of a loose network of Salafi-Jihadists involved in a perpetual global war to defend Islam. Anyone can become a Salafi-Jihadist and participate. For example, a relevant phenomenon that demonstrates this in action and reinforces the Sageman leaderless jihad theory is that of foreign fighters. Sageman (2008) explains how the foreign fighters, who at that time were travelling to Iraq to fight against the US-led Coalition, are part of the AQ social movement. Whether conducting jihad at home or becoming a foreign fighter in Syria and Iraq or Mali or Somalia, it is all self-initiated.

The decentralised, leaderless conceptual framework argued by Sageman has been strongly countered by the likes of Bruce Hoffman (2008 and 2011), who insists that AQ is a top-down, command-and-control network. In "*The Myth of Grass-Roots Terrorism: Why Osama Bin Laden Still Matters",* published in *Foreign Affairs,* Hoffman (2008) provides a strong critique of Sageman's leaderless jihad concept. Hoffman (2008) states that at the time (note: that was before the death of bin Laden in May 2011), the evidence accumulated points to AQ's and bin Laden's oversight of the most consequential terrorist attacks. In a further critique of Sageman's theory, Hoffman (2011) extends his alternative view by presenting a number of examples from the evidence gathered by the US Special Forces unit that carried out the raid that killed bin Laden in Abbottabad, Pakistan. As Hoffman (2011) points out, analysis by US intelligence of bin Laden's personal diary concluded that he was

involved "in every recent AQ threat". Hoffman (2011) goes on to say bin Laden remained involved in planning future attacks and urged his followers to recruit non-Muslims and minorities – especially African Americans and Latinos - for attacks on New York City and Los Angeles, as well as smaller cities.

Another example Hoffman (2011) uses to challenge the leaderless jihad theory was a plot discovered by the FBI and NYPD in September 2009, to stage simultaneous suicide attacks on the New York City subway system to coincide with the eighth anniversary of the 9/11 attacks. The ring-leader was Najibullah Zazi, an Afghan-born Green Card holder who lived in the New York suburb of Queens. He and his two fellow conspirators had been trained in bomb-making at an AQ camp in Pakistan. Senior AQ commanders had overseen and directed the operation, which was linked to another set of attacks planned for April 2009 in Manchester, England. The US Department of Justice's indictment of Zazi and the two others, filed on 7 July 2010, unambiguously describes how this "American-based al-Qaeda cell" was commanded by "leaders of al-Qaeda's external operations program dedicated to terrorist attacks in the United States and other Western countries" (Hoffman, 2011, p. 1). It further describes how three longstanding senior AQ operatives - Saleh al-Somali, who is said to have participated in attacks on US and coalition peacekeeping military forces in Somalia during 1993; Adnan El Shukrijumah, who in 2003 was placed on the FBI's "Most Wanted" list as a result of his growing role in al-Qaeda attack planning; and Rashid Rauf, who played a key role in two December 2003 assassination attempts on the then Pakistani President Pervez Musharraf - oversaw the plot.

To understand the mindset of those who join home-grown terrorism networks, Kohlmann (2008) argues that these networks do not emerge merely as the result of coincidence or happenstance but, rather, with the active support and endorsement of particular high-ranking AQ spokesmen and military commanders. As Maliach (2010) explains, together with the late Abdullah Azzam, bin Laden formed *Mujahideen* (*Maktab Khadamat al-Mujahideen*, or MAK) as a unifying vehicle to lead the jihad or "struggle in the defence of Islam" against the Soviet Union following the invasion of Afghanistan in 1979. Maliach (2010) explains that it was Azzam who organized the arrival, training of, and deployment to the battlefield of Muslim volunteers who came to fight the Soviets in Afghanistan, with bin Laden working by his side. After Azzam's death in 1989, bin Laden took control and a more traditional structure followed, with various deputies and senior members such as al-Zawahiri, Dr Fashl el-Masry, Abu Ubadiah al-Banshiri, Muhammad Atef, Jamal Ahmed al-

Fadl, Abu Faraj al-Yemeni, Abu Musab al-Saudi and Abu Burhan. In other words, there was a distinct command and leadership organisational structure. The terrorist attacks on the US African embassies in 1998 and the *USS Cole* in 2000, as well as the attack on the United States on 9/11 were organised, planned, funded and implemented involving the direct command-and-control from AQ's central leadership.

There are a number of cases examined in the literature where clear direction has been given by either AQ or its affiliated networks. For example, in his analysis of home-grown terrorism in Australia, Mullins (2011) examined AQ and its affiliated networks, including Lashkar e-Taiba (LeT), Jemaah Islamiyah (JI) and al-Shabaab. Mullins (2011) explores the role of the Salafi-Jihadi leadership on inspiring home-grown terrorism in Australia. The sample used by Mullins (2011) included sixteen publicised cases of suspected Islamist terrorist activity involving thirty-six Australians. Mullins (2011) finds that more than half (55 percent) of those individuals are alleged to have trained with, been part of or at least been in communications with foreign organised terrorists. Further, 88 percent of Australian cases included members with foreign organisational affiliation. Even though the Mullins (2011) work is five years old and does not take into account the foreign-fighter phenomenon, it does assist in explaining that the associations or links with foreign terrorists appear to be based on encouragement and limited facilitation rather than substantial control. The Mullins study found that Jack Roche, the Ayub twins, David Hicks, Jack Thomas, Willie Brigitte, Izhar Ul-Haque and Faheem Lodhi received quite high levels of support from foreign Islamic terrorist organisations. This does not categorically refute the idea that home-grown terrorists can be autonomous and conduct their own leaderless jihad, instead it shows how the foreign terrorist organisations, including AQ, adapted and manoeuvred in form and outreach.

A critique of Sageman's leaderless jihad theory is that he never acknowledges that it was in fact Abu Mus'ab al-Suri who originally advocated this strategic shift. In other words, a member of AQ's leadership circle developed this concept. This potentially challenges the Sageman position because the idea of shaping the environment to cultivate and inspire a leaderless jihad appears to have been a strategy developed from the leaders of AQ. It is precisely what this chapter refers to when analysing the limitations of the various closed systems of terrorism models. The shift by AQ demonstrates the capacity for both tactical and strategic OODA loops to be operating simultaneously through the use of asymmetric warfare in a global conflict. The fact that Abu Mus'ab al-Suri recognised the need to

destroy existing paradigms within AQ and create novel approaches illustrates the adaptability of AQ. This thesis will attempt to argue that the OODA Loop offers a different frame of reference from which to examine and explore both the leaderless and the command-and-control involvement of AQ in the application of Salafi-Jihadi inspired home-grown terrorism.

While examining the predominant strategic models of terrorism through the OODA Loop, closed systems of analysis appear to be at risk of being redundant at the moment of their conclusion. In *A Discourse on Winning and Losing,* Boyd (1992) said that while we can comprehend and predict some portions of the ever-changing world that unfolds before us, other portions seem forever indistinct and unpredictable. That may explain why, to Hoffman (2011), the leaderless jihad appears inconclusive. Similarly, in her evaluation of how AQ created its ideology, Hellmrich (2008) criticises many of the predominant paradigms for being "outside-in" perspectives on the underlying logic of AQ. According to Hellmrich (2008), the risk of such conduct is that one ends up with a misrepresentation of the very issue he or she seeks to comprehend. Both theoretical propositions also neglect the premise that to continue to survive, organisations need to create novelty. Boyd (1992) described how "novelty is produced by a mental and physical feedback process of analysis and synthesis that permits us to interact with the world so that we can comprehend, cope with and shape that world as well as be shaped by it" (Boyd 1992, p.24). This argument could be applied to AQ in its attempt to create a novel approach to how it functions. In other words, the leaderless jihad and the AQ central command-and-control theory could be equally applicable in different contexts and times.

### 3.6 The Strategically Adaptable AQ Brand

This thesis proposes a paradigm shift in describing the organisational and operational manoeuvring of AQ to become the dominant, strategically adaptable brand of the Salafi-Jihadi movement. As the work of al Suri demonstrates, the descriptions offered by Sageman or Hoffman are not exclusively unequivocal propositions. They can both exist in parallel, shaped and re-shaped by their effect on the world depending on the context and time. For Boyd, the goal of human nature is to survive on our own terms or improve our capacity for independent action, while at the same time denying our adversaries the capacity to survive on their own terms. To achieve this it is necessary to employ a variety of responses. The need to shape and adapt to change cannot be passive; instead one must

take the initiative.  Variety, rapidity, harmony and initiative are qualities that permit one to shape and adapt to an ever-changing environment.  As the vanguard of the Salafi-Jihadi movement, AQ have shaped and empowered the minds of individuals, just as T E Lawrence and Boyd emphasised as important in an asymmetric conflict.

The decision for individuals to become involved in home-grown terrorism is then a reflection of the power of the AQ narrative and brand to be personalised by individuals in their local context; as described by Braniff and Moghadam (2011), AQ "enables the violence of others".  It is a powerful brand because of its regenerative capacity; that is, the story is re-written by individuals who personalise the narrative from their own situations.  For example, the majority of foreign fighters who were born and raised in Western countries or young Muslim males living in Australia, the United Kingdom, Canada or the US have never suffered in Gaza or been targeted by the Syrian regime.  However, AQ and the ISIS narrative appeal to them because it resonates with their identity and personal circumstances.  The brand and what it stands for is localised, personalised and becomes their identity.  An illustration of this can be found in the blog, *'From Melbourne to Ramadi: My Journey'* by the Australian teenager Jake Bilardi, who carried out a suicide attack on behalf of ISIS in March 2015.  For example,

> My Atheist secularist views led me to support the aspirations of the Palestinian state and blinded me from realising what the true problem was, not Israel, nor Israelis but the religious ideology that governed them. I began to support the violent resistance in the Gaza Strip… AND

> I could wrap this up very shortly but I want to divert away from my interest in violent Islamic movements for a minute to explain how I developed a wider world view and how I transitioned from being a reluctant-supporter of Islamic militant groups in different lands to become certain that violent global revolution was the answer to the world's ills. (Jake Bilardi Blog January 13, 2015, *From Melbourne to Ramadi: My Journey*)

Using single case-study research methodology, Moghadam (2013) examines the role played by middle- or lower-ranking operatives in AQ's innovation process.  The Moghadam (2013) research focused on the planning of the 9/11 attacks, which is before any US-led attack on AQ training camps in Afghanistan or drone attacks in Pakistan or Yemen.  Moghadam (2013) finds that the 9/11 attacks involved a combination of high-ranking, lower order and who Moghadam describes as independent terrorist entrepreneurs.  Moghadam (2013) concludes that the findings suggest that the conventional wisdom of the predominance of top-down innovation in terrorism is dependent on a problematic assumption, namely that

terrorist groups are centralised, hierarchical and localised entities. As more terrorist groups adopt decentralised structures, they are increasingly likely to display multi-directional processes of innovation. This conclusion by Moghadam (2013) is more relevant to reinforcing the adaptable model, dependent on the context and events at the time, as described through the OODA Loop.

Evidence of both leaderless jihad and direct AQ involvement can be found in a case involving the conviction of Irfan Naseer, Irfan Khalid and Ashik Ali who were convicted in 2013 in Birmingham, UK for planning to conduct a suicide bombing campaign across Great Britain (Laville, 2013, February 22). This case also gives weight to the strengthening of the AQ brand. Investigations by West Midlands Police determined that two districts in the City of Birmingham were key localities of AQ activity propagated by the preaching of the late Anwar al-Awlaki through the *Inspire* magazine – the publication produced by AQ in the Arabian Peninsula, which is available online. Al-Awlaki was the US-born leader of AQ in the Arabian Peninsula until he was killed by a US drone strike in September 2011. In their examination of the *Inspire* magazine, Lemieux et al (2014) describe its radicalising and mobilising force:

> With its slick production values and graphics, *Inspire* is characterized by a streamlined and seamless fusion of ideologically driven material with pragmatic instructional and skill-building content. Taken together, these elements are intended simultaneously to increase motivation and lower the barriers of entry to terrorism, with the aim of fostering a do-it-yourself ethos resulting in terrorist behaviors. (Lemieux et al 2014, p.355)

Not only did Naseer and Khalid receive training in a Pakistan-based AQ terrorist camp but they were instructed to return home and train others because it was getting too dangerous to stay in Pakistan. At the same time Shinkman (2013) reported in a *US News* article that evidence collected by wiretaps from the Birmingham trio revealed AQ's new strategy of training aspiring terrorists to train others at home, a do-it-yourself form of terrorism.

What the Birmingham case demonstrates is the ability of AQ to shift from being actively involved to shaping and nurturing self-perpetuating home-grown terrorists, as and when the broader strategic environment changed. This notion has been reinforced by research completed by the Henry Jackson Society, entitled *Al-Qaeda in the United States: A Complete Analysis of Terrorism Offenses,* published in February 2013, and in their *Islamist Terrorism:*

*The British Connections* research, published in 2011. Both documents present comprehensive overviews of the US's and the UK's links to Islamism-inspired terrorism worldwide. The authors of the US study, Robin Simcox and Emily Dyer (2013), provide profiles, statistical breakdown and analysis of 171 cases in the US from 1997-2011. Data from Simcox and Dyer (2013) showed 38 percent of individuals were linked to AQ or an AQ-affiliated group such as LeT or *al Shabbab*. This followed a similar 2010 study by the Henry Jackson Society, where Robin Simcox, Hannah Stuart and Houryia Ahmed profile 140 Islamism-inspired terrorist convictions and attacks in the UK, from 1999 – 2010. Both sets of data showed a roughly even distribution in the relationship between individuals preparing to carry out a terrorist attack in the US or the UK, and links or no links with AQ, even after the death of bin Laden.

This thesis does not reject the leaderless jihad theory or the proposition that AQ central remains in control. When viewed through the strategic, adaptable model of the OODA Loop, they are not mutually exclusive. Instead it is an applicable example of adaptation by AQ. However, Sageman (2008), Atran (2010) and Hoffman (2008) have confined their structural and operational paradigms too rigidly. Alternatively, the leaderless jihad could be a product of AQ's capacity to adapt and regenerate in the face of counter terrorism strategies. It could also be a product of the AQ brand built along the Boyd notion of the moral-mental-physical continuum of conflict. As demonstrated through the works of Abdullah Azzam, Zawahiri, Abu Mus'ab al-Suri and Al-Awlaki, AQ has shaped its brand through the Salafi-Jihadi narrative by arranging and inspiring the minds of followers through stories, images, fantasies and prophetic messages delivered across a global network. As General Stanley McChrystal (2013), former Commander of US-NATO Forces in Afghanistan, argued, AQ represents three things in one: an organisation, an idea and a brand.

It could be argued that bin Laden began shaping the Salafi-Jihadi narrative through the brand of AQ as early as 1998. In February 1998, bin Laden published a so called *fatwa*, publicly declaring that it was God's decree that every Muslim should try his utmost to kill any American, military or civilian, anywhere in the world, because of American occupation of Islam's holy places and aggression against Muslims. In the minds of disenfranchised impressionable young Muslims or new converts to Islam living in Australia, the US or the UK this could be interpreted as direction to participate in, to plan and to implement acts of terrorism in their Western country of residence. As mentioned earlier, the call by Abu

Hamza al-Masri (Kohlmann, 2008) to resist and to learn terrorism skills in one's own backyard was used as an example of AQ recognising its OODA loop had been penetrated, and therefore it had to adapt. It also offers another example of an attempt to strengthen the globalised brand, to inspire followers to be their own interpretation of AQ. However, it is difficult to determine whether Hamza al-Masri is merely actively promoting the strategy of Zawahiri (2001), as expressed in the *Knights of the Prophet's Banner,* or taking his own initiative.

Before he was killed in mid-2003, al-Alyiri, one of the most trusted AQ operatives, became a key communicator to radicalised Muslims around the world (Kohlmann 2008). In 2003 al-Alyiri said, "the war is based on a strategy to widen the battlefield. The entire world has become a battlefield and not in theory" (al-Alyiri 2003a). A relevant example to reinforce that idea that the world has become a battlefield can be found in Storm (2014), as he describes his journey from being a Salafi-Jihadi convert to becoming a spy for MI5 and the CIA. Storm attended many lectures by the then UK-based Salafi-Jihadi preacher Omar Bakri Mohammed, where he recognised that to many who attended Bakri Mohammed's lectures, "the enemy was everywhere, in uniform and out of uniform, in Baghdad and Birmingham" (Storm, 2014, p.76). Following the 7 July 2005 attacks on the London transport system, even Storm (2014) asks himself, "We had all talked about jihad; we had cheered on our brothers in Iraq. Now it was on our doorstep. Was England the next frontline in this war of religions" (Storm, 2014, p.85).

While the example by Kohlmann (2008) further supports the argument being made in this thesis for the OODA Loop as a broad strategic model or a new lens through which to examine the phenomenon of Salafi-Jihadi inspired home-grown terrorism, first it is important to evaluate the narrative of Salafi-Jihadism that has been exploited and shaped by AQ.

## 3.7 Salafi-Jihadism and the Prophetic Brand of AQ

The following section examines and explores the significance of the Salafi-Jihadi narrative created and exploited by AQ. Through a powerful prophetic brand and symbolic language, AQ has shaped the mental images of followers and enemies. For example, the term *jihad* has been virtually monopolised by AQ and along with terrorism provides the basis for a mainstream, generalised mental image of Islam. An understanding of jihad, and other

important Islamic concepts, is important for analysing the tactical use of the AQ brand for its inspirational effect on home-grown terrorism and for luring Western governments into numerous cultural, social, community and military ambushes as a result of the reaction to both AQ's actions and the actions of home-grown terrorists. These actions by Western governments in turn reinforce the AQ narrative, effectively penetrating the Western government's OODA loop. This section will draw largely from one of the most comprehensive discussions on defining the complexities within Islamic theology, produced by Moussalli (2009). The contribution by Moussalli is relevant to this thesis because it provides a contextual understanding for being able to evaluate how AQ has shaped the Salafi-Jihadi narrative to inspire home-grown terrorists. As Archetti (2015) argues, the terrorist action is the outcome of an identity and a corresponding narrative that legitimises violent action.

Violence can be used for its communicative value when justified through a prophetic narrative to effect the reinforcement of a powerful identity. As Brachman (2008) explains, it was AQ that crafted a symbiotic relationship between graphic violence and the use of the media to publicise and magnify their movement around the world. This was especially the case with AQ in Iraq. Given the apparent brand competition between new and evolving Salafi-Jihadi groups, such as ISIS, the graphic nature of that violence in the bid for followers increases the threat against Western interests, both domestic and foreign. A 5 February 2015 *Time* magazine article reports how two of the terrorists involved in the attack on the offices of *Charlie Hebdo* (a French satirical magazine) in Paris had separately pledged allegiance to AQ and ISIS. This presents potential long-term challenges for neutralising an outbidding contest that competitively manoeuvres for the hearts and minds of Western-based Muslim youth and converts to radical Islam. However, first it is important to discuss some of the Islamic concepts that have been assimilated and manipulated by AQ and its brand managers.

The work by Moussalli (2009) provides a clear understanding of the complex discourses that are generally placed under one belief system, variously termed Islamism, radical Islam, militant Islamism, fundamental Islam, Salafism and/or Wahabbism. Although, Lauziere (2016), offers a comprehensive examination of how the meaning of Salafism has been expanded by self-proclaimed Salafis to make it easily confusing. This thesis is focused on Salafi-Jihadism and Mousalli (2009) demonstrates how this is defined. As he explains,

Salafism is a diversified and complicated ideology and a religiously-motivated trend that is not constructed by one unified discourse or group or authority; and:

> As a rule, all Wahhabis are salafists, but not all salafists are Wahhabis. Islamism is also another complex trend that includes moderate and radical movements, but it is not equivalent to Wahhabism: it is actually its antithesis. While Islamism and Wahhabism/salafism share a few theological and intellectual doctrines, they are theologically and politically very different. However, after September 11, 2001 and the invasion of Iraq, some Wahhabis and salafists merged together with radical Islamists and consequently have created neo-salafism and takfiri-jihadism (p.3)

First theologised and driven by Muhammad bin Abd al-Wahhab (1703 – 1792), Wahhabis are differentiated from orthodox Sunnis by calling themselves "salafists", on the assumption that they follow the Prophets' Companions (*sahaba*), the Companions' followers (*tabi'in*), and the followers' followers (*tabi'i al-tabi'in*). Heavily influenced by the Islamic medieval scholar Ibn Taymiyya (1263-1328), Wahhabism rejects traditional practices such as visiting tombs and shrines, labelling them as *shirk* (polytheism) and *bida* (innovations) and promoting excommunication for Muslims who stray from what Wahhabism believes is pure Islamic behaviour. Through a familiar reasoning to many of modern-day Salafi-Jihadists, Muhammad bin Abd al-Wahhab perceived at the time that a crisis existed in Islam and this required a "fundamentalist return to the Quran and *sunnah*." (Armstrong, 2000, 114). As Armstrong (2000) explains Abd-Wahhab tried to create "an enclave of pure faith, based on his view of the first *ummah* of the seventh century," (Armstrong, 2000, p.114). In addition, Abd al-Wahhab labelled all Shia as unbelievers for their *kufr*, or unbelief, in contrast to Wahhabism's drive to restore what he believed was the real meaning of *tawhid*. As Moussalli (2009) explains, through a series of attacking moves by Abd al-Aziz bin Abd al-Rahman in 1902 (founder of Saudi Arabia), Wahhabism resurfaced and by 1929 was turned into a state institution in the Arabian Peninsula. In a similar symbolic act on 28 June 2014, through its spokesperson Abu Mohammed Al Adnani, ISIS declared the establishment of a Caliphate between Syria and Iraq, (Bradley, 2014, June 29 and ABC News, 2014, July 2).

Alternatively, Salafism, or those who follow the concept of *al-salaf al-salih* (the pious predecessors), is an alternative theological model (Stanley 2005 and Moussalli 2009). In general, Salafism is centred on transforming individuals and communities to the pure Islam of the Prophet Muhammad and the prophetic s*unna,* as understood and practiced by *al-salaf al-salih*. Salafists believe they are the true practitioners of Islam and that neglecting

'the purist' interpretation of Islam, or that of *al-salaf al-salih,* is tantamount to neglecting Islam itself or *kufr*. Even other Muslims are labelled non-believers if they engage in certain ways of life of or are distracted by infidels, including participation in democracy. A total rejection of democracy is another distinction between Salafists and mainstream forms of political Islam. For example, as Islamic historian Majid Khadduri explains, "in conformity with its public order, political justice in Islam, indeed – all other aspects of justice, proceeds from God," (Khadduri, 1984, p.14). In addition, as Wiktorowicz (2006) describes, Salafists are united by a common religious creed. In summarising the positions of Khadduri (1984), Wiktorowicz (2006) and Moussalli (2009) it could be concluded that they explain the salafi creed centres on a unilateral definition of *tawhid* (the oneness of God) and the total rejection of a role for human reason, logic, and desire. This could partly explain the challenge faced by Western governments when implementing secular frameworks to counter the AQ brand that builds the commitment of this creed through a global campaign of violence.

Salafists are not known to use violence against non-believers or use violence as an inspirational tool between Muslims to promote revolutionary activism. However, loyalty to the Prophet Muhammad, *al-wala'*, and hostility towards heresy and unbelief, *al-bara,* are important tests of whether followers of Islam are true Muslims. Salafists also proclaim the need to remove themselves from mainstream society so as to avoid the corrupting influences of innovations and to live in accordance with the example of *al-salaf al-salih*. Moussalli (2009) explains that all religious, political, intellectual and social doctrinal conflicts have resulted from failure to follow the method of *al-salaf al-salih*. As noted earlier in this section, in his discourse on the making of Salafism, Lauziere (2016), describes how confusion has often accompanied the definition of Salafism, particularly in more modern times. Lauziere (2006), explains how traditional religious scholars such as Yusuf al-Dijwi argued listed, "Salafi's [*Salafiyyin*]", along with "reformers [*muslihin*]", "renewers [mujaddidin]", and "proponents of ijtihad [mujtahdin]", (Lauziere, 2016 p. 93)   As Lauziere (2016) points out, confusion over who could be a Salafi was partly the fault of self-proclaimed Salafis who the more they sought broaden the meaning of Salafi, the more confusion they created.

Importantly for this thesis, it is the Salafi-Jihadists, or neo-Salafi-Jihadists, such as AQ, who promote and agitate for violence against non-believers and infidels, not only to counter the corrupting effect on a pure form of Islam from external influences but also to reinstate a

global Caliphate. It appears ISIS has gone further and uses extreme graphic violence as the only interpretation of jihad to inspire and promote its brand of Salafi-Jihadism. However, this may be what ISIS wants its followers and enemies to believe (manipulating their mental image as Boyd would have described) and begs the question whether the current terrorist phenomenon is merely about strategic power and control.

In regards to interpretations of jihad and its role in Islamic society, mainstream media and commentary on Islam tends to only equate this term with terrorism (Moussalli 2009; Antúnez and Tellidis 2013). Similarly, Ghazi bin Muhammad, Ibrahim Kalin and Mohammad Hasim Kamali (2013) explain that the translation of Jihad, "in the Western media as 'holy war' would in Arabic be equivalent to *al-harb al-muqaddasah*, which is totally unfamiliar and unknown to Arabic speakers." (Ghazi bin Muhammad et al, 2013, p. XII). As Hegghammer (2010) explains, "most works on militant Islamism use generic terms such as "jihadists" or "salafi-jihadists" to describe any transnational violent Islamist" (Hegghammer 2010, p.58). It is as if a homogenisation of Islam has been constructed without comprehension of the complexities and diversities across the lexicon of Islamic theology. As Dayem and Ayub (2008) argue,

> This has allowed individuals and groups to manipulate the concept for temporal ends. Bin Laden's perversion of Islamic theology and specifically of Islam's conceptions of war and peace are not new; several others have improperly invoked 'holy war' or 'armed *jihad.'* Such improper invocations coupled with Western misconceptions about Arabia that predate Islam itself,' have contributed to an image of a violent and intolerant tradition. (Dayem and Ayub 2008, p.69)

In order to isolate the elements of Islamic thought that are shaped and exploited to release triggers for violence, it is important to have an understanding of which school of thought and strain of belief system is at the centre of AQ's interpretation of jihad. For example, Antúnez and Tellidis (2013) explain al-Qaeda has based and justified its confrontation model on a partial and extremist interpretation of jihad (also Bergen 2001). While it is beyond the scope of this thesis to provide a full historical and epistemological examination of jihad, it is a central concept in Islam for all Muslims, where AQ has created a monopoly over its meaning and implementation. An examination of jihad by Dayem and Ayub (2008) finds that its original Arabic meaning from the Arabic noun *jihad* is a derivative of the root *j-h-d,II*, literally translated as "to exert oneself," "to struggle" or "to make an effort" (Dayem and Ayub 2008, p.71). In his early work on jihad, Peters (1979 and 1996) describes jihad to

mean striving towards a religiously commendable aim. Further, Dayem and Ayub (2008) go onto explain that, "the Qur'an explicitly distinguishes between the notions of war *(harb)*, fighting (or more accurately, battling with the intent to kill) *(qital)* and exerting oneself (in the path of God) *(jihad),* while contemporary discourse on Islam and war has often conflated these three" (Dayem and Ayub 2008, p. 72). Similarly, Streusand (1997) explains,

> A *hadith* defines this understanding of the term. It recounts how Muhammad, after a battle, said, "We have returned from the lesser jihad (*al-jihad al-asghar*) to the greater jihad (*al-jihad al-akbar*)." When asked, "What is the greater jihad?" he replied, "It is the struggle against oneself." Although this *hadith* does not appear in any of the authoritative collections, it has had enormous influence in Islamic mysticism (Sufism). (Streusand 1997, p.11)

Even though Wahhabism, Salafism and Salafi-Jihadism are divergent strands of Islam, they still share a symbolic language drawn from the same texts. The concept of jihad is one of many examples. As Stanley (2005) and Wiktorowicz (2006) explain, because all Salafis accept the same religious precepts, whether someone in the community becomes a jihadi depends on the resonance of the contextual analysis made by jihadi scholars and entrepreneurs. However, Delong-Bas (2004) points towards Ibn Taymiyya for "his espousal of the division of the world into two absolute and mutually exclusive spheres—the land of Islam (*dar al Islam*) and the land of unbelief (*dar al-kufr*) which for him described both a status (Muslim or unbeliever) and a necessarily hostile relationship between the two" (Delong-Bas 2004, p.248). In other words, for Salafi-Jihadists, Ibn Taymiyya's influence has seen jihad justify prosecution against Westerners and any non-Salafi-Jihadi Islamic belief, such as Shia. Historically and importantly, this has not only focused on Western hegemonic power, but has also targeted corrupted Muslim leaders. As Saba Mahmood (2005) explains, a popular hadith cited in support of violence against immoral rulers or those considered takfir, is "the most excellent type of jihad [striving in the way of Allah], is peaking a true word in the presence of a tyrant ruler, (Mahmood, 2005, p.60). For example, Dayem and Ayub (2008) and Ghazi bin Muhammad et al (2013) point to how the modern calls for jihad as 'holy war' by such Muslim extremists as Abd al-Salam Faraj, author of *al-Fariat al-ghai'bah* (The Neglected Duty) justified the assassination of Anwar Sadat in 1981. In relation to the current terrorist phenomenon, the historical Islamic theologians have been replaced by jihadi scholars, or 'google and twitter imams', and terrorist entrepreneurs as leading figures of AQ and ISIS.

From this amalgamation of the Salafism of Abdullah Azzam, the Wahhabism of bin Laden and the radical Islamism of Ayman al-Zawahiri, new *takfiri* jihadism or Salafi-Jihadism arose

with AQ as its global vanguard.  In his book *Suicide Bombers in Iraq: The Strategy and Ideology of Martyrdom*, Mohammed M. Hafez (2007) describes Salafi-Jihadism as an extreme form of Sunni Islamism that rejects democracy and Shia rule.  Hafez (2007) distinguishes Salafi jihadists from apolitical and conservative Salafi scholars (such as Muhammad Nasiruddin al-Albani, Muhammad ibn al Uthaymeen, Abd al-Aziz ibn Abd Allah ibn Baaz and Abdul-Azeez ibn Abdullaah Aal ash-Shaikh), but also from the *sahwa* movement associated with Salman al-Ouda or Safar Al-Hawali.  According to Hafez (2007), Salafi-Jihadism is characterized by five features that can be summarised as follows:

1. an immense emphasis on the concept of *tawhid* (unity of God)
2. God's sovereignty (*hakimiyyat Allah*) which defines right and wrong, good and evil, and which supersedes human reasoning and unIslamic other ideologies such as liberalism or humanism
3. rejection of all innovation (*Bid'ah*) to Islam
4. permissibility and necessity of *takfir* (the declaring of a Muslim to be outside the creed, so that they may face execution)
5. centrality of jihad against infidel regimes

For Salafi-Jihadists, infidel regimes can include Muslim states if they rule according to secular laws and allow democracy, both of which violate God's sovereignty and therefore mean they are no longer considered Muslim, (Mahmood 2005).  According to Haykel (2001), Hellmrich (2008) and Moussalli (2009), it has been Ibn Taymiyya who remains the inspiration for Salafi-Jihadists in his willingness to "hereticise" fellow Muslims and Muslim rulers who did not apply Shari'a law.  For example, Hafez (2007) argues that for Sunnis in Iraq, the heresy of Shia is justification for the violent jihad against them.  As Moussalli (2009) explains, Islam's interaction with democracy is of key importance for neo-Salafi-Jihadi groups, which hold as sacred doctrine their rejection of both Western democracy and man-made laws in favour of the principle of al-shari'a.  Attempts by the US to bring democracy to the Arab region are not only seen as heresy by the Salafi-Jihadists but also as part of the new "crusader" campaign against the Muslim world.

Moussalli (2009) describes AQ as the most notorious manifestation of the various strands of Islamic belief that came together and evolved out of the fight against the Soviet invasion of Afghanistan, in 1979.  An important contribution to the academic and policy discourse on AQ's construction of its own Salafi-Jihadist master narratives was made by the Open Source Center (OSC), Monitor 360 and the Center for Strategic Counterterrorism Communications (2011) - the "Master Narratives" researchers.  In their analysis of online counter-communications campaigns against terrorism, Aly, Weimann-Saks and Weimann (2014),

explain that, "unlike narratives, master narratives transcend localised differences, are deeply embedded in culture and, importantly, are constantly re-interpreted according to the historical context" (Aly et al, 2014, p.9). The researchers analysed what they identified as the six master narratives AQ has constructed to build its message of a global attack on Islam. This is aimed at promoting the need for all Muslims to embark on a violent campaign to defend Islam. The six master narratives identified are:

1. A war on Islam
2. Agents of the West (corruption of leaders in Muslim countries by Western imperialism)
3. The Nakba (the catastrophe of Israel's existence)
4. Violent Jihad
5. Blood of the Martyrs
6. Restoring the Caliphate

(Open Source Center, Monitor 360 & Center for Strategic Counterterrorism Communications, 2011, p.5)

The Master Narratives research explains that the "narratives emphasise themes of shared humiliation, injustice, faithful duty and the promise of establishing a golden age" (Open Source Center, Monitor 360, and Center for Strategic Counterterrorism Communications, 2011, p.7). The first Master Narrative establishes the foundation for each subsequent narrative. By instilling fear and anger around a global conspiracy against Islam, AQ appeals to subscribers and sympathisers in its justification for global war. Under these Master Narratives, and significantly for this thesis, the global war is both military and ideological. In other words, the themes running through the Master Narratives parallel Boyd's emphasis that conflict exists along a mental, moral and physical continuum.


The analysis by the Master Narratives researchers is reinforced by Zackie (2013), through the use of Eidelson and Eidelson's five-belief model in an examination of Abu Mus'ab al-Suri's *Call to Global Islamic Resistance*. As mentioned earlier, Abu Mus'ab al-Suri was instrumental in the AQ narrative. Zackie (2013) explains that the Eidelson and Eidelson (2003) five-belief model includes the triggering themes of superiority, injustice, vulnerability, distrust and helplessness. These were identified by Eidelson and Eidelson (2003) as beliefs that could be directly correlated with conflict, in the realms of both individuals and groups. In conclusion, Zackie (2013) contends that al-Suri's narrative in the *Call to Global Islamic Resistance* "presents the reader with a powerful story that they can connect to (via symbols) and one that they can potentially play a leading role in; a story that will not properly climax to its resolution *for the reader* without them *actively participating* in it – by joining the Jihadist in-group" (Zackie 2013, p. 18). The strategic influence of al-Suri

also reinforces the argument in this thesis that through their strategic brand managers such as al-Suri, AQ's leadership implicitly directed home-grown terrorists to become part of the AQ brand. While al-Suri may not have had operational control, he cultivated what Boyd constantly referred to as *schwerpunkt* (a term Boyd had learned from the German military command doctrine). Through his symbolic narrative, al-Suri encouraged Salafi-Jihadis, especially those living in Western countries, to adopt brutal methods in order to achieve their goals, with scant regard for civilian life (Cruickshank and Ali 2007). This sat within what the OSC identified as AQ's fourth master narrative of violent jihad.

While this has been a brief overview of the manifestation and transformation of Salafi-Jihadism, it demonstrates the symbolic impact and inspirational effect on Muslim communities, including those born or resident in Western countries. Given the deep, cognitive and existential significance of terms such as *da'wa,* and commitment to important pillars of Islam such as *tawhid*, the doctrines of *al-wala' wa al-bara*, as well as *shura* and *ijma,* it is evident that AQ can shape the narrative to exploit what connects with impressionable Muslims and converts to Islam, along the mental, moral and physical continuum of war. Like any powerful brand, the effectiveness of the AQ brand has been to create the impression in the minds of followers that they can be their own AQ, irrespective of where they are located. As Jones (2012) notes, it was the kind of strategy AQ's Abu Mus'ab al-Suri supported, whereby Muslims can be involved in their own jihad and small-scale terrorism. Yet, they are not on their own because the AQ narrative connects them through a shared identity. As Sarah Lawler (2002) explains, narratives are "social products produced by people within the context of specific social, historical and cultural locations" (Lawler, 2002, p.242). The web of social identity can be woven between the narrative of an individual narrative and a group or collective narrative, or what Archetti (2013) refers to as a "constellation of relationships" (Archetti, 2013, 133). These relationships are then reinforced by AQ's call to action to the uncommitted.

The OSC (2011) research relates this call to action as falling within a master narrative that directs the blame for the humiliation of Islam on the *umma* (the wider Islamic community) for failing to fulfil their individual duty. Inspiring home-grown terrorism is an example of the asymmetric adaptation of that strategic narrative in action. Once again, Boyd's own discourse on the core themes behind the OODA Loop and its application as a new strategic model can be identified in his presentation *Patterns of Conflict*, in which he said the central theme is to:

Evolve and exploit insight/initiative/adaptability/harmony together with a unifying vision but also influence the uncommitted or potential adversaries so that they are drawn toward our philosophy and are empathetic toward our success…[sic]. (Boyd, 1986, slide 185)

In other words, AQ understood how to connect with the individual narrative of this diaspora of Muslims in Western countries whose uncommitted minds could be shaped into supporting this post-modern form of warfare.

For AQ's leaders it could be argued that because they implicitly understood the broad themes and values within Islam that are deeply significant to all Muslims they were able to connect these themes with a range of grievances already held by many Muslims, particularly those who may have felt disenfranchised living in Western countries.  The AQ "master narratives" simply built an identity that connected with these values and mental images held by these individuals that reinforced how they already felt about themselves and the world.  Western attempts at a counter-narrative cannot assume that individuals who connect with AQ's narrative can be deflected through Western-based constructs of Islam, especially when the values of those individuals holding these grievances are irreconcilable with Western values; even if they have been raised in a Western social context.

In his work, Ibn Warraq (1995) summed up this notion when he said, "Americans tend to think that deep down we all have the same values. Americans believe that all these terrorists, if you scratch beneath the surface, are looking for religious equality and justice. That's complete and utter nonsense. Americans can't face the reality that different people have different values" (Ibn Warraq; *Why I am Not a Muslim.* 1995).  In the context of the OODA Loop, this means Western-based narrative strategists have misunderstood the orientation of those members of the Muslim community who are adopting the AQ narrative; whereas AQ has demonstrated its ability to connect with the orientation of its audience through a prism built on a prophetic set of "master narratives", creating an existential brotherhood of resistance.  As Archetti (2013) explains, the prism is about the internal and external dimensions of a brand.  That is, the picture or image constructed by the sender and the picture or construction of that image in the mind of the receiver.

Significantly for this thesis, the identity prism can be interpreted as forming an important element within the *Orientation* of the individual's OODA loop. As argued through this chapter, in presenting the case for a new general strategic model of terrorism, Salafi-Jihadi inspired home-grown terrorism reflects the product of AQ's adaptive capacity to cultivate a shared identity that grants its followers permission for violence. That violence then becomes indistinguishable from the narrative, the brand and the orientation of the Salafi-Jihadi inspired home-grown terrorist. As Braniff and Moghadam (2011) concluded in their assessment of AQ's adaptations since 9/11, "Al-Qaeda continues to enable the violence of others, orient that violence towards the United States and its allies in a distributed game of attrition warfare, and foster a dichotomous "us versus them" narrative between the Muslim world and the rest of the international community" (Braniff and Moghadam, 2011, p.7). This is the mental, moral and physical environment, in which inspired individuals interact within their own search for identity and connectivity to something beyond themselves.

## 3.8 Conclusion

This chapter began by examining and critiquing the established models of terrorism in the context of Salafi-Jihadi inspired home-grown terrorism. It was argued that the predominant models are closed systems and lack adaptability. While the contributions by Thornton (1964), Crenshaw (1981), Pape (2006) and Abrahms (2008) remain significant and applicable in this field of inquiry, they are systems or frameworks that suffer from what Boyd would have described as succumbing to Gödel's incomplete theorem. For example, in *Destruction and Creation* Boyd (1976) said:

> Gödel's Proof indirectly shows that in order to determine the consistency of any new system we must construct or uncover another system beyond it. Over and over this cycle must be repeated to determine the consistency of more and more elaborate systems. (Boyd 1976, p.4)

As described in Chapter Two, the Second Law of Thermodynamics is directly applicable to a closed system. As Boyd (1976) argued, all observed natural processes or systems generate entropy when placed under pressure. In comparison, the predominant strategic model begins to suffer from entropy when the political objectives fail but the terrorist organisation has evolved and continues to exist. This chapter attempted to question why the strategic model needed to be confined to political objectives, when the objectives,

context, time and events in which the terrorist groups exists may evolve. According to Boyd (1986), the objective in a conflict is to survive on one's own terms. In order to contend with the changing context in which a terrorist organisation exists, it was argued that the most enduring and adaptable strategic model of terrorism for this thesis was Boyd's OODA Loop.

This chapter also compared and contrasted the existing theories in the literature that have been used to describe how AQ has evolved in its application of home-grown terrorism; for example, whether it is has adopted a leaderless network approach or one that remains directed by a command-and-control structure. When analysing these positions through the OODA Loop, it was argued that there is no reason why both the leaderless jihad and the command-and-control theories could not exist. How AQ prosecutes its application of terrorism may depend on the context and events at the time. Further, by evaluating AQ leaders and strategists such as Zawahiri and al-Suri, it was determined that the leaderless jihad model was a decision directed by those in command and control of AQ.

Significantly, this chapter also explored how AQ had built an adaptable brand of Salafi-Jihadism through a calculated symbolic narrative. Understanding the narrative and the symbolic language AQ uses to inspire home-grown terrorism that enables the violence of others as tactic of asymmetric warfare, is a core objective of this thesis. It was determined that AQ's narrative, symbolism and prophetic methodology make up not only the *Orientation* of AQ but also connect with the *Orientation* of those who are inspired to join AQ and carry out acts of terrorism on their behalf. The following chapter describes the case study research methodology used for this thesis.

# Chapter 4 - Application of the OODA Loop & Case Study Methodology

## 4.1 Introduction

This chapter explains the case study research methodology or approach applied in this research. The multiple key case study research design is exploratory and descriptive, and used to test the theory that home-grown terrorism is a tactic of asymmetric warfare by the Salafi-Jihadi movement, based on historical or retrospective comparative use of the selected case studies. Salafi-Jihadi terrorist organisations are represented by Islamic extremist entities such as AQ, LeT, Jemaah Islamiah (JI), the Abu Sayyaf Group (ASG), al Shabaab, al Nusra and ISIS. Three case studies have been selected to test this theory, through descriptive and evaluative critical inquiry, against Boyd's OODA Loop, the conceptual framework employed for this research and used as the analytical lens.

Case study research methodology is a well-established research discipline within social science and qualitative research practices. It is used to conduct exploratory analysis using real-life examples within a conceptual framework. This chapter justifies the use of case study research by reviewing, comparing and contrasting the predominant academic literature on case study research methodology. This includes critiquing the works of Thomas (2011), Yin (1981; 1984 and 2003), Flyvbjerg (2006), Gillham (2000) and George and Bennett (2005). A brief examination of the weaknesses of case study research methodology from established academic literature is also identified. The chapter then presents the case study methodology and its applicability to the research for this thesis. This provides the opportunity to describe the selection criteria used for this research.

Importantly, the argument for using the OODA Loop as the analytical lens is also made. This involves further examination of the OODA Loop and in particular, the *Orientation* component. The internal dynamics of the orientation component have direct applicability to AQ's construction of its own Salafi-Jihadi brand. It is also essential for a general, adaptable strategic model of terrorism.

**4.2 Aim of the Research Using Case Study Methodology**

This research aims to make a contribution to the field of inquiry into Salafi-Jihadi inspired home-grown terrorism through the use of the OODA loop as a novel and adaptable strategic model of terrorism. It seeks to develop a new contextual explanation for the phenomenon of AQ generating a unique Salafi-Jihadi narrative to inspire home-grown terrorism as a tactic of asymmetric warfare.

These aims are determined through the following broad questions:

a) How can the OODA Loop be applied to key case studies in Salafi-Jihadi inspired home-grown terrorism?

b) How do cases of home-grown terrorism demonstrate AQ's strategically adaptable approach to implementing its war against Western targets?

c) How does AQ and the home-grown terrorist demonstrate a capacity to manoeuvre within and to exploit Western moral, mental and physical boundaries while simultaneously manipulating Western-born or resident Muslim males through a Salafi-Jihadi narrative?

**4.3 The Case Study: Subject of an Inquiry**

Case study is an established research strategy that can provide detailed contextual analysis of a field of inquiry. Thomas (2011) describes case study research as "analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically by one or more methods" (Thomas, 2011, p.513). Research on the Salafi-Jihadi movement is essentially a sociological enquiry into people, events, decisions, context and institutions, as well as a belief system that requires a theoretical focus. Yin (2003) explains that case study design should be considered when: (a) the focus of the study is to answer "how" and "why" questions; (b) you cannot manipulate the behaviour of those involved in the study; (c) you want to cover contextual conditions because you believe they are relevant to the phenomenon under study; or (d) the boundaries are not clear between the phenomenon and the context. The subject of inquiry of this thesis is to focus on the "how" and "why" questions of the Salafi-Jihadi movement and its use of home-grown terrorism. The behaviour of those involved cannot be manipulated and, significantly, the thesis intends to explore the contextual conditions of how the Salafi-Jihadi movement has adapted to pressure placed on it by counter-terrorism strategies employed by Western governments.

Therefore, case study research methodology is an appropriate and applicable research methodology for this thesis.

The use of case study research methodology is applicable to testing a theory, as well as describing and evaluating a field of inquiry focused on the notion of home-grown terrorism as a tactic of asymmetric warfare employed by the Salafi-Jihadi movement. Flyvbjerg (2006) argues that the case study is a necessary and sufficient method for certain important research tasks in the social sciences and it holds up well when compared to other methods in the gamut of social science research. Yin (1981; 1984) and George and Bennett (2005) explain that a case study as a research strategy is used to test a contemporary phenomenon in a real-life scenario. Further, it is particularly helpful where the boundaries between the phenomenon and the scenario are not clearly defined. It could be argued that home-grown terrorism, as a phenomenon, is complex, without concrete boundaries. Gillham (2000) describes a case as a unit of human activity embedded in the real world that can only be studied in context. Gillham's (2005) definition is an entirely appropriate description of case study research in relation to this thesis, given Boyd emphatically declared that people fight wars, not machines, and they use their minds. It is through people's minds that a movement of groups or individuals is created, radicalised through an existentially moral dimension to support terrorism or to become a terrorist in one's country of residence - that is, home-grown terrorism.

In his earlier work, Yin (1981) demonstrated how a case study can contribute to research. Firstly, Yin argues that the case study does not imply the use of a particular type of evidence; case studies can be done by using either qualitative or quantitative evidence. That evidence may come from fieldwork, archival records, verbal reports, observations, or any combination of these. Secondly, Yin goes onto explain "nor does the case study imply the use of a particular data collection method" (Yin, 1981, p.59). Similarly, Thomas (2011) argues that the case study is a focus on one thing, looked at in-depth from a range of perspectives; in other words, pulled apart, broken-up, to explore tensions between various constructs and angles. Stakes (1995) addresses the issue of triangulation of data and argues that this enables researchers to understand a phenomenon from multiple perspectives. In other words, triangulation can balance the researcher's socially-constructed understanding of that phenomenon. Yin (1981 and 2003) also emphasises the importance of multiple sources of evidence for case study research, with data needing to converge in a triangulating fashion.

In relation to the epistemological basis of Boyd's theoretical construct, Boyd sought to assimilate scientific, mathematical and logical principles into what he believed was required to pull apart, from all angles, a design, a system or a structure. This is an approach that can be compared to case study research. As Hammond (2001) explains, in *Destruction and Creation* Boyd (1976) sought to describe how humans or organisations must be prepared to destroy models, concepts, perceptions and methodologies in order to create truly novel and fresh constructs, or change. While Boyd did not specifically state that he was employing the use of case study research, it is exactly what he did in devising his OODA Loop strategic model. Boyd conducted a multiple case study research approach to the study of human conflict in war, insurgency or guerrilla warfare. Through retrospective inquiry, Boyd sought to study the strategy employed by military commanders and theorists, generals and guerrilla warfare leaders - from Sun Tzu, Genghis Khan and the Mongol armies, to Clausewitz, Napoleon, T.E. Lawrence and German Generals Ludenorff and Blumentritt - in order to analyse why these innovative leaders of war were successful, and, in some cases, what led to their demise.

French sociologist Wieviorka (1992), in his work on terrorism, violence and social movement, determined that there are two essential components to a case study. Wieviorka (1992) explains there must be i) a practical, historical unity or the essence of the subject (the thing being studied); and ii) the theoretical, scientific basis, which is the analytical frame, or the object (of what is being studied). Thomas (2011) describes how the analytical frame must extend beyond a mere description of the thing being studied. Flyvbjerg (2006) explains that according to the conventional view, a case study cannot be of value in and of itself; it needs to be linked to hypotheses, following the well-known hypothetico-deductive model of explanation. For example, in the case studies chosen by Boyd, it was not enough for him to merely relay the details of how each military strategist or commander engaged in battle; neither was it enough to describe conventional war, insurgency or guerrilla warfare. Instead, Boyd embarked on an in-depth analysis of each of his chosen military commanders and strategists (the subjects) to determine what each had in common in their application of strategy in war (the analytical frame).

Given Wieviorka was a sociologist focused on violence, terrorism and social movement, his interpretation of what case study means as a social science research methodology is entirely appropriate in the context of this thesis. Wieviorka (1992) explains that for a 'case' to exist:

we must be able to identify a characteristic unit[…] This unit must be observed, but it has no meaning in itself. It is significant only if an observer […] can refer it to an analytical category or theory. It does not suffice to observe a social phenomenon, historical event or set of behaviours in order to declare them to be 'cases'. If you want to talk about a 'case', you also need the means of interpreting it or placing it in a context." (Wieviorka 1992, p.160)

Thomas (2011) offers a simple illustration to describe what a case study is, by using a capsule or pill that can be split in half. The separate ingredients in each half are required in order for the other half to work; that is, it has to contain the 'practical, historical unity' (the subject) and the analytical frame (the object). For example, a description on its own of the 9/11 terrorist attacks on the United States would <u>not</u> be a case study; analysing those terrorist attacks as a new phase of terrorism employed by AQ <u>would</u> form a case study. Even if this was the only terrorist attack by AQ that was analysed, it would still constitute a case study. The use of one sample to form a case study is an often-criticised aspect of case study methodology, since it is argued that one example cannot provide reliable evidence or data from which to draw generalised conclusions or even revelations.

## 4.4 Single or Multiple Case Studies

In regards to single or multiple case study research, Flyvbjerg (2006) debunks a number of misunderstandings, including the criticism that one cannot generalise from a single case, therefore the single case study cannot contribute to scientific development. Galileo's rejection of Aristotle's law of gravity through the application of a single conceptual experiment is used by Flyvberg (2006) to address criticisms of a single case in research. Yin (2009) explains that single case studies are relevant for critical cases in order to test theory, or to analyse cases that may be extreme, typical, revelatory or longitudinal. Before Galileo, Aristotle's law had existed for two thousand years. Galileo determined that if two objects of equal weight are released from the same height at the same time, they will hit the ground simultaneously. If the two objects are then stuck together into one, this object will have double the weight and therefore, according to the Aristotelian view, will fall faster than the two individual objects. This conclusion seemed contradictory to Galileo. The only way to avoid the contradiction was to eliminate weight as a determinant factor for acceleration in free fall. Galileo did not use a large random sample of trials of objects falling from a wide range of randomly selected heights under varying wind conditions; instead, he used a single experiment, or a case study.

According to Gillham (2000) a case study can be an individual or a group, such as a family, a class, an office or a hospital ward. It can be an institution such as an educational institute, a company or organisation, or indeed a large community or profession and industry. Case study research can also involve multiple cases such as a number of football coaches, or World War II allied Generals, or individuals dealing with post-traumatic stress disorder. Regardless of whether an individual sample is used or a number of samples, Gillham (2000) argues that the use of multiple sources of evidence, each with its strengths and weaknesses, is a key characteristic of case study research. Yin (2009) believes multiple case study design has its advantages in constructing a framework in which either literal replication predicts similar results across multiple cases, or it aims at theoretical replication whereby different results are likely for theoretical reasons.

Single case study research is common in the field of psychology and a number have become ground-breaking pieces of research. For example, one of the most famous single cases used in social psychology on the phenomenon of bystander intervention is the murder of "Kitty" Genovese in New York on 13 March 1964 (Rosenthal 1964; Manning, Levine & Collins 2007; Dubner and Levitt 2009). During the rape and murder of Ms Genovese, carried out by Winston Moseley over a 30-minute period, it is estimated that between twelve and thirty people heard her call for help, with some even witnessing initial parts of the attack. Relaying the details of the attack, even to the point of the estimated number of people who were witnesses, does not form the case study; the Kitty Genovese murder became a case study when analysed in the context of social behaviour, in particular the reluctance of bystanders to intervene (the analytical frame). This social phenomenon became known as "the bystander effect". While a number of the reported facts of the murder have since been questioned, the murder of Kitty Genovese became one of the most significant examples of the use of single case studies as an established research methodology.

## 4.5 Case Study Research in the Field of Terrorism

There are a number of examples where single or multiple case study research design has been applied to the field of terrorism and home-grown terrorism. For example, the New York Police Department (NYPD) model of radicalisation was developed through case study research by Silber and Bhatt (2007). The methodology employed by the NYPD involved comparative case study analysis of five home-grown terrorist events - including Madrid's 2004 attack, Amsterdam's Hofstad Group, the London-Leeds 2005 attack, Australia's

*Operation Pendennis* (which thwarted an attack(s) in November 2005) and Canada's Toronto 18 Case (which thwarted an attack in June 2006). From these case studies Silber and Bhatt (2007) developed a conceptual framework that was then tested against five post-9/11 home-grown terrorism cases in the US. These included the Lackawanna, New York, Portland, Oregon and Northern Virginia cases, as well as two New York City cases (34th Street/Herald Square and the radicalisation of two al-Muhajiroun members). Finally, Silber and Bhatt (2007) applied the framework to the Hamburg cluster, who led the 9/11 hijackers. The NYPD research observed that all the cases of home-grown terrorism used in their research had been carried out by seemingly "unremarkable" groups of individuals who sought to attack their country of residence.

In an Australian context, Mullins (2011) sought to clarify the nature of the contemporary security threat within Australia by analysing the involvement of Australian citizens and residents in Islamist terrorism, both at home and abroad. To do this Mullins used sixteen cases of terrorist activities in an Australian context and found that whilst the Australian context is quite unique, overall patterns in terrorist activity are comparable to other Western countries. Similarly, Atran (2010) used multiple cases from the individuals involved in the 2002 Bali, 2004 Madrid and 2005 London terrorist attacks in an attempt to answer the question: why do people believe in a cause, and why do some die and kill for it? The use of multiple case studies was employed by Taylor (2010) to undertake the analysis of terrorism as a group behavioural phenomenon. In his analysis on terrorist networks, Sageman (2004) used the cases of 172 terrorist biographies gathered from open sources to examine the social movement that he calls "global salafi jihad". In an examination of the strategic model of terrorism, Pape (2003) selected 188 cases of suicide terrorist attacks from 1980 to 2001 to analyse the use of this phenomenon as a tactic by groups to force political objectives.

To understand the functions and structures of terrorist networks in order to be better at tackling terrorists, Qin et al (2005) used the global Salafi-Jihad network as a single case study. Qin et al (2005) explain how their study is unique compared to other works on terrorism:

> First unlike most previous studies, which used unreliable data sources such as news stories and media-generated incident data-bases, our study was based on reliable data collected in a large-scale, in-depth empirical study on the GSJ network. Second, our study introduced multiple advanced network analysis

methodologies into the study of terrorist networks including the Web structural mining techniques, which, to the best of our knowledge, has never been used in this domain. Third, our results provide not only insights for terrorism research community but also empirical implications that may help law-reinforcement, intelligence and security communities to make our nation safer. (Qin J et al, 2005, p. 288.)

The Qin et al (2005) research is a good example of the use of a single key case study analysis providing a powerful level of information and data from which to evaluate and draw a picture of how a global enterprise held together by expansive personal, organisational and social connections can have far-reaching economic, psychological, political and social consequences.

Multiple case study design was employed by Arquilla and Ronfeldt (2001), where they analysed multiple cases from criminal organisations, terrorists groups, drug-cartels and protest movements to examine, illustrate and test their theory on "netwars." Arquilla and Ronfeldt (2001) describe "netwars" as being composed of conflicts waged, on the one hand by terrorists, criminals, and ethno-nationalist extremists, and on the other by civil-society activists. What distinguishes "netwar" as a form of conflict is the networked organisational structure of its practitioners—with many groups actually being leaderless - and the suppleness in their ability to come together quickly in swarming attacks. Arquilla and Ronfeldt (2001) argue the concepts of cyberwar and netwar encompass a new spectrum of conflict that is emerging in the wake of the information revolution.

In the context of this research, the use of case study methodology was also critical to the work of Boyd in developing the OODA Loop. While Boyd did not explicitly state he was employing the use of case study research methodology, his exploratory and historical, deep evaluation of science, logic and military strategy and conflict used a multiple case study approach. For example, in his 196-slide presentation, *Patterns of Conflict*, Boyd (1986) compared and contrasted the cases of multiple Commanders, Generals and military theorists throughout history and their use of military strategy.

These are summarised in table 4.2 below:

| Commander / General / Tactician / Army | Battle or War or Theory |
|---|---|
| Sun Tzu | Art of War |
| German vs. French | Blitzkrieg vs. Maginot Line Mentality (1940), |
| Israel | Raid in 1976 |
| Wars fought between 300BC and 1400AD | Battle of Leuctra in 371 BC<br>Battle of Arbela 331 BC (Alexander Great vs. Darius)<br>Battle of Canmae 216 BC |

Table 4.2. Summary of Military Theorists and Wars from *Patterns of Conflict*

In *Patterns of Conflict*, Boyd analyses each General and battle in a multiple case study design to test his theory on conflict. For example, in *Patterns of Conflict*, Boyd (1986) set out to:

- Make manifest the nature of moral-mental-physical conflict
- Discern a pattern for successful operations
- Help generalise tactics and strategy
- Find a basis for grand strategy

Importantly, in line with Stake's (1995) explanation, each case used by Boyd is a specific, complex, functioning thing in itself; they are not generalisations. Boyd's intent was to unveil the character of conflict, survival and conquest. While a single case study approach may have provided an example to generate theory, it would not have been enough to create a grand theory or generalisation. In the context of this thesis, the same multiple case study approach will be taken to test a generalised or grand theory of home-grown terrorism.

## 4.6 Criticisms of Case Study Methodology

While the case study as a research strategy or methodology is widely used, it remains subject to a number of criticisms. The main criticisms attempt to highlight flaws in methods of sampling, data collection, analysis, generalisation, reliability and validity. For example, in his examination of case study research, Flyvbjerg (2006) explains there are five common criticisms of case study research. These are:

1. Theoretical knowledge is more valuable than practical knowledge
2. One cannot generalise from a single case, therefore the single case study cannot contribute to scientific development
3. The case study is most useful for generating hypotheses, while other methods are more suitable for hypothesis testing and theory building
4. The case study contains a bias toward verification; and
5. It is often difficult to summarise specific case studies

The use of case study research has also been criticised when the research has been limited to pilot studies. Flyvbjerg (2006) explains the criticisms describe how these case studies are too subjective, and the validity of the case studies is undermined by the researcher's own bias or interpretations.

A major criticism of case study research highlighted by Gillham (2000) comes from positivist philosophers, who argue that only observable and verifiable phenomena can be the subject of science. For example, Mohd (2008) criticises case studies for lacking in scientific rigour and reliability and believes that they do not address the issues of generalisation (Mohd, 2008). Stake's (1995) explanation of what is a case can help deal with this kind of criticism. Stake explains that:

> Custom has it not everything is a case. A child may be a case. A teacher may be a case. But her teaching lacks the specificity, the boundedness, to be called a case. An innovative program may be called a case. All the schools in Sweden can be a case. But a relationship among schools, the reason for innovative teaching or the policies for school reforms are less commonly considered a case. These topics are generalities rather than specifics. The case is a specific, a complex functioning thing. (Stakes, 1995, p.2)

The use of case study as a research strategy is defended in Gillham (2000) who argued that the naturalistic style of study research makes it entirely appropriate to human phenomena in the real world. The importance of context in the learning experience through case study research is also argued by Flyvbjerg (2001). Nearly all subjects of inquiry have an enormous amount of complexity and it is the focus on complexity that makes a case study (Thomas 2011, Simons 2009, Stake 1995, Yin 1985). Simons (2009) explains a case study is, "an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, program or system in a 'real life' context" (Simons, 2009, p.21).

Similar criticisms could be applied to this thesis given it uses case study research methodology. However, study of people or groups involved with promoting, supporting, planning and carrying out terrorism is a field of inquiry with a number of obstacles that prevent direct contact with those involved. Members of terrorist organisations such as AQ, al Shabaab, Boko Haram, JI, Abu Sayyaf Group (ASG), or other terrorist groups, are reluctant to meet anyone not closely associated with their group. In his working on understanding the psychology of terrorism, Horgan (2005), explains there is a major challenge in how data

is collected when studying terrorism, "because to say that terrorism does not lend itself to investigation by traditional research methods is a considerable understatement" (Horgan 2005, p. 35). Obtaining interviews with any members of the AQ network who are hiding from international counter-terrorism authorities poses ethical as well as other risks, making it almost impossible for academic researchers to obtain ethical approval. In his guide to research on terrorism, Dolnik (2013) describes the conventionally accepted view in academia regarding research involving actual terrorists and their organisations as restricting genuine field-based case study research. In his work on the collection of data from the field in terrorism research, Silke (2004) explains that:

> Due to reasons of personal safety, political sensitivity and perceived methodological difficulty, researchers have largely shied away from action and actor-based research, largely leaving those topics to a handful of individuals who encounter the terrorists as part of their professional work and for whom research is both a peripheral and generally sporadic activity (for example, prison psychiatrists). The inevitable result has been a very lopsided literature, which says surprisingly little on some very important aspects of the subject. (Silke 2004, p. 9).

In his work on what makes a terrorist leave a group, Horgan (2009) describes the personal challenges of conducting field-based case study research on terrorism. In relation to home-grown terrorism, it would be difficult to expect those convicted of committing, or attempting to commit terrorism, to openly divulge the personal circumstances that led to them becoming involved in Salafi-Jihadi terrorism against the country of their residence of citizenship, especially if their first-hand information could risk them being prosecuted or subject to further police investigation. Effectively, the appropriate case study research approach offers a recognised, academically accepted methodology that can overcome the practical and ethics-based obstacles faced by this research.

The rebuttals to criticisms of case study research provided by Thomas (2011), Simons (2009), Stake (1995), Yin (1984) and Gillham (2000) apply to this research. While this research is focused on a specific field of inquiry, it is not a science. That does not mean that data collection, statistical analysis and other instruments of scientific inquiry could not be applied. However, it is not a field of inquiry that could use human-based experimentation, which is typical in the field of science. A positive argument for the use of case study methodology for terrorism can be made by examining the research by Qin, Sageman, Xu, Hu, Chen, and Hsinchun (2005). Qin et al (2005) successfully collected reliable data in a

large-scale, in-depth empirical study on the Salafi-Jihadi network. Their study introduced multiple, advanced network analysis methodologies into the study of terrorist networks.

Perhaps the arguments of Flyvbjerg (2001) and Simons (2009) offer the strongest applicable defence of case study research for this thesis. The use of home-grown terrorism as an asymmetric tactic is an example of a "real life", contextual subject matter, with multiple perspectives of complexity and uniqueness. This research undertook an in-depth exploration of those complexities and sought to critically analyse and evaluate the phenomenon from multiple perspectives of a particular system - in this case, a religious, faith-based system of the Salafi-Jihadi movement. As set out further in this chapter, there are numerous examples of academic inquiry using case study research methodology focused on terrorism, home-grown terrorism and Salafi-Jihadi inspired or supported terrorism by movements and networks such as AQ.

## 4.7 Different Kinds of Case Study

One of the challenges of the case study, as explained by Thomas (2011), is the misconception that the researcher needs to do and cover everything. When "completeness" is emphasised, Thomas states, "this does not mean that *everything* has to be covered. The trick is to get a line of inquiry running through the study" (Thomas 2011, p. 89). This will be made easier when the researcher has decided how they will relate the subject to the analytical frame. A specific line of inquiry can be the research question one is attempting to answer (theory-testing) or the research question one is attempting to develop (theory-generating). In relation to this thesis, the subject is the Salafi-Jihadi movement and its use of home-grown terrorism. The analytical frame is Boyd's OODA Loop, to test the hypothesis that home-grown terrorism evolves as an asymmetric tactic. Regardless of whether the intention is theory-testing or theory-generating, there are different kinds of case studies that can be applied.

The quantum of possibilities available for research can be defined through the kind of case study chosen. As Yin's (1981) explanation of a case study suggests, there is a wide range of descriptions of the kinds of case studies that can be employed. That said, Yin (1981), Stake (1995) and Thomas (2011) say differentiating between types of evidence, data collection method and research strategy are critical in defining case studies. As such, Yin (1981)

defines three kinds of case studies that are exploratory, descriptive and explanatory. He goes further by explaining the types of case study designs and explains:

> all must cope with the essential problem that, because the context is part of the study, there will always be too many "variables" for the number of observations to be made, thus making standard experimental and survey designs irrelevant). (Yin, 1981, p.59)

Stake (1995) sets out three distinct kinds of case studies that he calls intrinsic, instrumental and collective. An *intrinsic* case is one of specific interest for its own sake and not because there is an attempt to learn about a general problem. Instead, it is about trying to learn something particular about that case. An *instrumental* case is one where the researcher is analysing or collecting data about – for example - a person, in order to obtain a general understanding or to answer a research question. In other words, the case is a means to an end, not the end itself. To describe his definition of *collective,* Stake (1995) argues if several teachers are chosen to be studied - as opposed to just one or several schools - then each case study is instrumental to learning about the specific issue being studied. In Stake's example, it was new marking regulations for teachers. He goes on to explain that there would be important coordination between the individual studies and this would form what Stake (1995) calls *collective* case study. However, Stake's explanation is just one set of definitions to explain the different kinds of case studies. The scope of established kinds of case studies, as defined by academic experts on case study methodology, is summarised in the following table, provided by Thomas (2011):

| Merriam (1988) | Stake (1995) | Bassey (1999) | De Vaus (2001) | Mitchell (2006) (drawing on Eckstein1975) | Yin (2009) |
|---|---|---|---|---|---|
| Descriptive | Intrinsic | Seeking a theory | Descriptive/ Explanatory | Illustrative | Critical |
| Interpretative | Instrumental | Testing a theory | Testing or building a theory | Social analytical | Extreme or unique |
| Evaluative | Collective | Storytelling | Single or multiple cases | Extended (overtime) | Longitudinal |
| | | Drawing a picture | Holistic embedded | Configurativeidiographic | Representative |
| | | Evaluative | Parallel or sequential | Disciplined, configurative | Revelatory |
| | | | Retrospective or prospective | Heuristic | |
| | | | | Plausibility probes | |

Table 4.3. Summary of Kinds of Case Studies Defined by Academic Authors (Thomas. G., 2011, p.91)

Despite the summary by Thomas (2011), a great deal of overlap is shown in the way case studies are described. It may be the interpretation and use of words and language by particular authors seeking to establish their unique academic framework in the area of case study theory. However, it is more important when deciding which kind of case study definition to use that it is focused on the *subject* (already discussed) and through the quality of case study research. Both starting points are not mutually reinforcing and may assist in establishing the purpose, process and approach, or how to conduct the case study research. Thomas determines three kinds of subjects for case studies. These are:

1) Key cases
2) Outlier cases; and
3) Local knowledge cases.

*Key cases* are those that have significant interest. Thomas gives the example of Hurricane Katrina (23 August 2005) as a key case because of its enormous size and the unprecedented amount of destruction it caused to the city of New Orleans, in the US. In the context of this thesis, the 7 July London terrorist attack is another example of a key case. *Outlier cases* on the other hand are unique or special. They are not ordinary, nor do they stand out as distinct examples of what may be normal in particular field of research, science, industry or sport. The 9/11 terrorist attack on New York and Washington DC could be described as an outlier case, in that it was the first time AQ successfully carried out a terrorist attack on the United States using hijacked civilian aircraft as the method of attack and destruction.

*Local knowledge cases* involve special knowledge about something unusual or particularly interesting with which you are highly familiar. This could be one's own work, home, family environment, children's school or business sector. The fact that you have been embedded within these groups or environments gives you unique and personal knowledge. A potential weakness in the local knowledge case study may be that researchers could find themselves becoming part of the research itself. Because of their intimate understanding of the subject they may anticipate the expected results, or may unknowingly guide the subjects to those results, thereby confirming the expected outcome. This is known as the self-fulfilling prophecy or *Pygmalion effect* (named after the George Bernard Shaw play) and Gillham (2000) believes not recognising this is bad science. This research adopted evaluative case study design and used three key cases because of their significance and because they provided an appropriate and relevant source of qualitative data collection.

**4.8 The Application of Case Study Methodology Used for this Research**

This research adopts the explanation of case study methodology provided by Yin (2009), which describes case study research to be:

> an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. In other words you should use the case study method because you wanted to understand a real-life phenomenon in depth, but such understanding encompasses important contextual conditions-because they were highly pertinent to your phenomenon of study. (Yin & Davis, 2007 cited in Yin, 2009:18).

This research employs a multiple case study design using three key cases to conduct an empirical inquiry into the contemporary phenomenon known as Salafi-Jihadi inspired home-grown terrorism. The following section establishes the selection criteria and provides an informative description of each case chosen for this research.

As with the definitions of case study research and the kinds of case study, there is no "one size fits all" definition of how to conduct case study research. Evidently it depends on the research purpose, process and approach upon which one decides - and whether the research intends - to test a theory or create a theory. However, there appear to be three conditions that are necessary for conducting case study research. They consist of 1) the type of research question posed; 2) the extent of the control an investigator has over actual behavioural events; and 3) the degree of focus on contemporary as opposed to historical events. Table 4.4 summarises the broad, but generally agreed ways to conduct case study research.

| Types | From Research | Required Control | Focus on Contemporary Events |
|---|---|---|---|
| Experiment | How, Why? | Yes | Yes |
| Survey | Who, What, Where, How Many, How much? | No | Yes |
| Actual Analysis | Who, What, Where, How Many, How much? | No | No |
| History | How, Why? | No | No |
| Case Study | How, Why? | No | Yes |

Table 4.4 Forms of Research *(Cosmo Corporation, 1998 cited in Yin, 2009, p.80)*

In relation to this research topic, the type chosen was case study research exploring the "how and why". Controls were not required in this instance and the case studies selected can be defined as contemporary events. The rationale for defining the research question is explained in Eisenhardt (1989) as the same as it is in hypothesis-testing research and for theory generating. Without a research focus, it is easy to become overwhelmed by the volume of data. A logical place to begin is an initial definition of the research question, at least in broad terms, and this is important in building theory from case studies. Eisenhardt cites Mintzberg (1979) who noted: "No matter how small our sample or what our interest, we have always tried to go into organizations with a well-defined focus to collect specific kinds of data systematically" (Eisenhardt, 1989, p.536).

According to Eisenhardt (1989), defining the research question within a broad topic is also important as it permits researchers to isolate the kind of organisation to be approached and the kind of data to be collected. Following Eisenhardt's guidance, the question for this research was defined to the use by AQ of Salafi-Jihadi inspired home-grown terrorism as a tactic of asymmetric warfare against the West. This defined the core group and organisation, namely AQ and those individuals inspired through AQ's Salafi-Jihadi narrative and brand to commit home-grown terrorism. This is similar to the example, used by Eisenhardt in citing Pettigrew (1988), who defined the research question in terms of strategic change and competitiveness within large British corporations. Following the decision on whether to use single or multiple case studies, as well as defining the research question, there remains the requirement to describe and link all elements of the study.

As Thomas (2011) explains, the research subject, purpose, approach and process are all related to one another and can be categorised, or mapped out, to illustrate the design for a case study. The table below adopts the guidance provided in Thomas (2011) and summarises the application of the case study methodology used for this research on Salafi-Jihadi inspired home-grown terrorism.

| Subject | Purpose | Approach | Process |
|---------|---------|----------|---------|
| Key | Evaluative Exploratory | Testing a theory | Multiple ⟶ Retrospective (historical) |

Table 4.5. Design for the Case Study Approach used in this Research

Table 4.5 demonstrates the key components of the approach applied for this research topic using case study methodology. As Thomas (2011) explains, the researcher must decide on the subject and explain why that particular subject has been chosen - for example, it might provide a unique example and stand out. For this research topic the subjects were chosen because they were key cases of Salafi-Jihadi inspired home-grown terrorism, while the purpose of it is evaluative and exploratory, because the research aims to analyse and examine the nature of relationships by going deep into the background and to provide granular detail of each case. The approach chosen for this study was to test a theory. The next stage in research design is the selection criteria of the key cases used, followed by an explanation of using the OODA Loop as the analytical lens through which to test the theory in this research.

## 4.9 Case Study Selection Criteria

To mitigate the risk of this research project becoming too broad or having too many objectives, the recommendations in Yin (2003) and Stake (1995) were applied, in which they advised placing boundaries on case study research. An appropriate method of introducing boundaries to research is to establish the selection criteria. The following sets out the selection criteria used to elect the three cases and then provides a brief summary of each case. The selection criteria relates to the context in which they occurred and the characteristics of the cases themselves. A detailed case study analysis is undertaken in Chapter Five.

### 4.9.1 Context
#### (i) Salafi-Jihadi inspired

The use of Salafi-Jihadi inspired home-grown terrorism as a selection criterion for this research is comparable to previous research into home-grown terrorism. For example, Mullins (2011) established that to be included in his sample cases had to involve individuals who espoused rhetoric or justification for their actions in terms of Sunni Islamist, jihadi ideology and were involved in one or more related activities including: a) promoting jihadi ideology, b) recruiting others to the jihad, c) engaging in paramilitary-style terrorist training, and/or d) planning acts of violence in furtherance of Salafi-Jihad. For the three cases used

in this research the available open-source data confirms a direct or indirect connection with Salafi-Jihadi terrorist organisations, even if this connection does not involve any contact by or with members of Salafi-Jihadi terrorist organisations, such as the AQ leadership.  It can include those who obtained their inspiration from the internet or attended mosques where extremist Islamic ideology was taught, without the members of the mosque being members of AQ, JI or other Salafi-Jihadi groups.

A key case used in Jones (2012) describes the successful counter-terrorism actions in 2007 that stopped the Fort Dix plot by a group of Muslim men who had been long-term US residents.  The group had no direct link or contact with AQ, but, as Jones explains, they were inspired by messages from bin Laden, al-Zawahiri and Anwar al-Awlaki, that also demonstrated a change of strategy of AQ:

> It was the kind of strategy that some extremists, including the Syrian strategist Abu Mus'ab al-Suri, had embraced.  Al-Suri, whose work was widely circulated on jihadist websites, encouraged Muslims to become involved in individual jihad and small cell terrorism.  (Jones, 2012, p.289).

One of the most effective producers of Salafi-Jihadi narrative and inspiration for AQ's movement to a global strategy to generate home-grown terrorists was Anwar al-Awlaki. Jones (2012) explains that al-Awlaki's clever use of language, his passion for Jihad and his internet and social media skills were "a powerful combination" (Jones, 2012, p.293).   Al-Awlaki was continually making DVDs and YouTube and Facebook presentations of his sermons on Jihad, whereby impressionable young Muslims could connect anywhere in the world.  Al-Awlaki's most effective publication that continues today is the *Inspire* magazine. One of the first issues contained an article with the title "*Make a Bomb in the Kitchen of Your Mom*".  Until the time of his death on 30 September 2011, al-Awlaki had become one of the most influential figures promoting the Salafi-Jihadi narrative through AQ in the Arabian Peninsula, after he moved back from the United States to his original homeland of Yemen.

In 2009, al-Awlaki published *44 Ways to Support Jihad*, which became one of the most widely read of all his publications.  It outlines the obligation of violent jihad on every Muslim, which can be achieved by assuming either a direct or supporting role.  It was an easily readable document that connected with young, disaffected and unexceptional Muslim men.  A *CBS News Online* article reported that according to a January 2009

intelligence document obtained by The Associated Press, about eleven percent of visitors to al-Awlaki's website are in the United States. Essentially, here is an illustrative example of the Salafi-Jihadi narrative inspiring Western-based, unexceptional and impressionable Muslim men, where no direct connection or contact is required to be prepared to commit home-grown terrorism.

Another report demonstrates the irony of how AQ promoted the Salafi-Jihadi narrative through US-based registered websites. A 2010 *ABC News* report from an FBI Intelligence assessment determined that approximately 80 percent of those sites existed on US-based computer servers. US officials said these sites rapidly gained popularity when Abu Musab al-Zarqawi, the leader of AQ in Iraq, began to post beheading videos on the internet in 2003. Former US White House Counterterrorism Adviser, Richard Clarke, was quoted in the *ABC News* report saying, "this is what we have feared for a very long time—that finally the ideology of radical Islam is effectively reaching into the United States to disaffected people here over the Internet" (Ryan, Thomas and Olivares, 22 July 2010).

This research will not look at terrorism or acts of terrorism that occur within the context of a civil war, insurgency or guerrilla war between a government and an internal anti-government movement. Typical examples of this, involving the use of terrorism, would be the conflict in Northern Ireland, the civil war in Sri Lanka, or the Muslim and Communist insurgencies in the Philippines. Even though these conflicts involved versions of home-grown terrorism within their own specific contexts, they were not inspired by the Salafi-Jihadi narrative and therefore are out of context for the study of this phenomenon. It is not possible to consider all cases of Salafi-Jihadi inspired home-grown terrorism and therefore this thesis has selected three key cases, one each from the United Kingdom, Australia and the United States.

### (ii) **Home-grown terrorism**

The second contextual criterion for selection as a key case for this research is that the terrorism must be home-grown terrorism. For each case, the individuals involved must have either succeeded in carrying out a terrorist attack, conducted activities that were intended to directly assist a terrorist attack, or were involved in the direct planning of a terrorist attack on their Western country of residence, or the Western country where they were a citizen. According to Wilner and Dubouloz (2010), the source of home-grown

terrorism influence is AQ, who has created a Salafi-Jihadi movement that found pockets of opportunity within certain groups or individuals resident in Western society.

In 2007, the US Congress defined home-grown terrorism in legislation in the Violent Radicalization and Home-grown Terrorism Prevention Act of 2007. In that Act, it defined the term as follows:

> The term 'home-grown terrorism' means the use, planned use, or threatened use of force or violence by a group or individual born, raised, or based and operating primarily within the United States or any possession of the United States to intimidate or coerce the United States government, the civilian population of the United States, or any segment thereof, in furtherance of political or social objectives. (*Violent Radicalization and Home-grown Terrorism Prevention Act of 2007*)

This definition is similar to the themes and indicators described in other research into home-grown terrorism. For example, in their work for the NYPD on radicalisation, Silber and Bhatt (2007) explained that rather than being directed from AQ abroad, these plots have been conceptualised and planned by "unremarkable" local residents or citizens who sought to attack their country of residence, utilising AQ as their inspiration and ideological reference point. Silber and Bhatt (2007) point out some of these home-grown terrorism cases include:

- Madrid's March 2004 attack
- Amsterdam's Hofstad Group
- London's July 2005 attack
- Australia's Operation Pendennis (which thwarted an attack(s) in November 2005)
- The Toronto 18 Case (which thwarted an attack in June 2006)
  (Silber and Bhatt 2007, p 7).

In Thachuk, Kimberley, Bowman and Richardson (2008), home-grown terrorists are said to fall into three categories:

> 1) immigrants and visitors: legal or illegal; 2) second- and third-generation members of the Muslim diaspora community; and 3) converts to Islam. These groups are not mutually exclusive, as, for example, immigrants who may undergo religious conversion after arriving in the country in which they eventually plot acts of terrorism. (Thachuk et al, 2008, p.2).

For the most part, home-grown terrorists have been citizens and residents born, raised and educated in the countries they attack, and groups have been self-generated and

independently organized. A study by Bakker (2006) of over two hundred European jihadists, revealed that over 90 percent were residents of a European country and almost 60 percent retained European citizenship. In their comparative research into home-grown in the US and the UK, Gartenstein-Ross and Grossman (2009) explain that home-grown terrorism describes terrorist attacks perpetrated by individuals who were either born or raised in the West. "In recent years, over two hundred men and women born or raised in the West have participated in, or provided support for Islamic terrorist plots and attacks" (Gartenstein-Ross and Grossman 2009, p.11). In a paper by Khatchadourian (2007), an FBI official is reported as stating that home-grown terrorists are those who "have picked up the sword of the idea" and are willing to attack their own countries, even if they are themselves killed in the process." This could be just as easily used to describe convicted terrorists such as Timothy McVeigh, a US born-and-bred white male who was convicted, tried and executed for the 1995 Oklahoma bombing which killed 168 people. However, McVeigh did not intend to take his own life in the process. Nevertheless, this research will be confined to the Salafi-Jihadi movement's use of terrorism within Western countries. It will not focus on terrorist attacks against governments or regimes in the Middle East or other Islamic countries.

### 4.9.2 Characteristics

Under *Characteristics* there were three prerequisites to qualify for selection as a key case in this research.

#### (i) Conspiracy to commit and attempt to commit a successful attack

For selection in this research a key case must have involved an individual or group who have either conspired to plan, attempted and failed, or successfully carried out a home-grown terrorist attack. Under the legal system of most Western countries, conspiracy to commit a serious criminal offence such as armed robbery, murder or terrorism is an offence of which one can be convicted. In his review of Australian legislation on terrorism since the September 2001 attacks on the US, Crowley (2010) explains the disjunction between the traditional criminal law principles of attempted offences and modern counter-terrorism legislation becomes obvious in the Benbrika and Elomar trials where no terrorist act occurred. Crowley argues "this lack of a completed terrorist act is a consistent fact in the conduct of all 21 persons convicted in Australia since 2001" (Crowley 2010, p. 62).

In 2005, the Australian Government amended the key provisions in the Criminal Code Act 1995, to extend the legal responsibility and accountability for terrorism.

*Section 101 - Terrorism*

101.1 Terrorist acts
(1) A person commits an offence if the person engages in a terrorist act.
Penalty: Imprisonment for life [...]

101.2 Providing or receiving training connected with terrorist acts
(1)[...]
(2)[...]
(3) A person commits an offence under this section even if:
        (a) a terrorist act does not occur; or
        (b) the training is not connected with preparation for, the engagement of a person in, or

          assistance in a specific terrorist act; or
        (c) the training is connected with preparation for, the engagement of a person in, or

          assistance in more than one terrorist act[...ix]

 The Australian Criminal Code is explicit and therefore provides a sufficient guide to this aspect of the selection criteria.

### (ii) Availability of adequate open-source data

For selection as a key case in this research there also had to be available adequate open-source data.  As Thomas (2011 and 2009) explains, gathering data from documents represents an entirely different proposition from gathering data from people.  As this research did not involve interviewing subjects involved in terrorism, the primary source of data gathering is from documents such as court transcripts, government reports and official evidentiary findings.  Use of documentary evidence only is not uncommon in academic research.  For example, historians and anthropologists rely on this form of data collection as many of their areas of academic research involve people and events where there is no one alive to interview.  In his work on the use of documentary evidence for research, McCulloch (2004) emphasises the potential power of documentary studies in education, history and the social sciences and states that to understand documents is to read between the lines of our material world.

The seal of good case study research is the use of multiple data sources to enhance data credibility (Baxter and Jack 2008; Patton 1990; and Yin 2003). Data for this thesis was obtained from a variety of open-source material in the form of academic journals, media publications, official published government reports and findings from investigations, archival records and published interviews recorded with those involved in the attempted or successful terrorist attacks. This variety was a primary component of the research strategy to triangulate and test the veracity of the multiple sources of information. No direct observations or participant observations were possible or practical for this research.

Open-source data and information for this research included, but was not limited to, the following:

1. All traditional and online media reports from magazines, major newspapers, TV and radio interviews and reports; these were particularly useful when there was limited availability of Official Government reports of information.

2. Publications, pamphlets, online articles, speeches, interviews and written sources from members of the Salafi-Jihadi movement, the convicted terrorists and Government officials, terrorism analysts and Government law enforcement, security and intelligence officials.

3. Legislation, court reports and judges' statements, Government Department policy statements, white papers, counter-terrorism policy and other formal government documents, where available.

4. Non-fiction books and other published works on terrorism and home-grown terrorism.

5. Academic peer-reviewed journal articles, conference papers and presentations.

**(iii) Unexceptional individuals**

The final characteristic selection criterion required the Salafi-Jihadi inspired home-grown terrorists to be unexceptional individuals. This may seem like an unnecessary or irrelevant requirement; however, what makes these key cases significant and relevant is the fact that unexceptional residents or citizens of Western countries could be inspired to carry out terrorism on their home soil. It would be obvious if the terrorists were already hardened members of AQ or JI and somehow covertly entered Australia, Canada, the UK or the US.

As established in Sageman (2004), Mullins (2010) and Jones (2012), before the home-grown terrorists selected in their research had travelled to Pakistan, Afghanistan or Yemen for basic military training, none had any experience in the military. They did not come from a hard-core of guerrilla fighters or former special force soldiers, nor had they served on the front lines in Iraq with al Zarqawi, against US forces. For example, the first US citizen to be charged with treason in over 50 years was Adam Gadahn, who Jones (2012) describes from FBI reports as being an unexceptional, ordinary person. As reported by Khatchadourian (2007) and Jones (2012), Gadahn was born in Oregon, grew up in rural California and converted to Islam at age 17. Khatchadourian (2007) describes how no one who knew Gadahn before his religious awakening ever thought he would join AQ. However, as Khatchadourian (2007) explains, in a short timeframe Gadahn, or "Azzam the American", became a senior operative for AQ.

In his analysis, Sageman (2004) aimed to empirically test traditional theories of terrorist behaviour, psychology, social status and other potential profile factors. After analysing 172 cases of Salafi-Jihadi inspired terrorists, including members of AQ, he found that they had received a wide range of education, and many who had been radicalised in the West were from caring, middle-to-upper-class, mainstream families. The vast majority of the men had no criminal records or history of mental disorders. In their case study research leading to the development of the NYPD model of radicalisation, Silber and Bhatt (2007) determined that those vulnerable at the pre-radicalisation stage tended to be educated and from middle-class backgrounds, with little if any previous criminal involvement. In fact, they were described as ''having 'ordinary' lives and jobs'' (Silber and Bhatt 2007, p.23). In other words, they were unexceptional people. The one single specific trait they all had in common was their shared support of the cause inspired AQ's Salafi-Jihadi narrative. The table below summarises the selection criteria for this research:

| | Contextual | Characteristics |
|---|---|---|
| **Case Study Selection Criteria** | 1. Salafi-Jihadi inspired | 1. Conspiracy to commit (attempted or successful) attack |
| | 2. Home-grown | 2. Enough open source data |
| | | 3. Unexceptional individuals |

Table 4.6: Summary of Selection Criteria

Even with the selection criteria established, it is important to place limits on the scope of the case studies chosen to ensure feasibility and to maintain a focus on the research objective. The three cases have been chosen because they provide distinct examples of Salafi-Jihadi inspired home-grown terrorism, while their geographical spread covers different operational environment settings.

This scope assists with the analysis of the data and adheres to a warning by Yin (2003), who argued there is a temptation during the analysis phase to analyse data out of the scope of the research question. These particular cases are from three different countries and demonstrate the operational and environmental adaptation of home-grown terrorism. That said, they have not been treated independently, but as part of a focused analysis that continues to test and challenge the research hypothesis. Baxter and Jack (2008) explain:

> one danger associated with the analysis phase is that each data source would be treated independently and the findings reported separately. This is not the purpose of a case study. Rather, the researcher must ensure that the data are converged in an attempt to understand the overall case, not the various parts of the case, or the contributing factors that influence the case. (Baxter and Jack, 2008, p.555)

This thesis adopts the recommendations of Baxter and Jack (2008) and Yin (2003) by critically assessing the relevance of the three cases chosen and identifying a convergence of themes and common elements that either confirm the hypothesis or are rejected. The validity of this research could be criticised because it only uses three key cases. In an examination of case study research on terrorism, Sheehan (2012) argues that insights gained from the study of small-$n$ qualitative case studies may be relevant to the development of standards to assess and compare large-$n$ terrorism datasets. Equally important to consider is what Sheehan (2012) argues - that ever since Geddes' (1990) paper on "how the cases you choose affect the answers you get," small-$n$ qualitative researchers have quite self-consciously tried to improve the quality of small-$n$ data. Importantly, the insights and illustrative lessons from testing a theory can be relevant and equally applicable to any number of key case studies in the area of Salafi-Jihadi inspired home-grown terrorism. Further, the three cases chosen for this thesis were selected to ensure transparency and to debunk criticisms of self-fulfilling examples to pre-determine the outcome or research objective.

**4.10 The OODA Loop – Unit of Analysis**

While Chapter Three established the OODA Loop as the strategic model of terrorism to be used in this thesis, critical to the significance of this research are the contextual conditions in which the Salafi-Jihadi movement has evolved. These contextual conditions include terrorism against Western countries and, more specifically, how the movement adapted to use home-grown terrorism as an asymmetrical tactic. These conditions are important for understanding the current terrorism phenomenon and case study research methodology is a relevant and appropriate tool. In this research the aim is to analyse the adaptation of the Salafi-Jihadi movement and its use of home-grown terrorism through the use of Boyd's OODA Loop. This is the unit of analysis for this research.

It is critical to the case study methodological design of this research to understand the use of the OODA Loop as the unit of analysis, or the analytical lens; it is the point at which the theory is tested for this research. Boyd's theory of strategy, as described in his *Theme for Disintegration and Collapse*, describes the need to repeatedly and unexpectedly penetrate vulnerabilities and weaknesses. Home-grown terrorism is definitely a method of achieving this strategic objective. In relation to strategy, Boyd was heavily influenced by Sun Tzu's *The Art of War* and, overwhelmingly, by Sun Tzu's discourse on strategy. Osinga (2005) describes Sun Tzu as Boyd's conceptual father and distils Sun Tzu's strategic advice down to the following: "Preserve harmony, create chaos and achieve victory by continually keeping the enemy off balance through a superior capability to adapt" (Osinga 2005, p.64). The ability to inspire impressionable Muslim men to carry out terrorist attacks on the Western countries in which they live is a representation of Sun Tzu's advice on strategy. Given how Boyd built his conceptual framework, the OODA Loop, with a heavy influence from Sun Tzu, this adaptation by the Salafi-Jihadi movement is a relevant and highly applicable analytical lens for this research.

The purpose of the case study is descriptive and evaluative and the research approach used is theory testing, through a process using multiple case studies. A multiple case study approach, each subjected to a detailed assessment, offers greater scope of comparison against the analytical frame used in this thesis. The use of multiple, historical case studies allows for triangulation of contextual issues and actions of influence from which to explore and test the hypothesis in this thesis. It also allows for cross-case comparisons as a means of drawing inferences and conclusions. Further, access to information on historical cases is

easier, as the most prominent Salafi-Jihadi home-grown incidents have been widely reported through open-source data collection points.

This research focuses on three cases of home-grown terrorism - from Australia, the United States and the UK - using Boyd's OODA Loop as the conceptual or analytical lens. One of the few academic attempts to apply the OODA Loop to Salafi-Jihadi terrorism was published by Ford (2010). However, Ford (2010) provides very little direct comparison with terrorism at all, even though there is a chapter entitled "The War on Terror". It is only towards the end of the paper that there is a real focus on AQ, but this is more in relation to the recent wars in Iraq and Afghanistan. Essentially, there is no use of the OODA Loop as the analytical lens by Ford (2010). While it is feasible to argue that the US-led wars in Iraq and Afghanistan provided AQ the opening in Iraq to start a jihad defensive war, Ford (2010) offers no discussion on actual terrorism and none on the use of home-grown terrorism as a tactic by the Salafi-Jihadi groups.

As discussed in Chapter Two, Osinga's 2006 work is one of the few academically, peer-reviewed research contributions available on Boyd and modern conflict. Even though he does not entirely focus on the Salafi-Jihadi movement, Osinga (2006) provides an excellent contextual and theoretical discussion on Boyd and the paradigm shift required to analyse and examine terrorism inspired by the Salafi-Jihadi movement. Osinga (2006) delivers a critical analysis of the eclectically dynamic paradigms that Boyd explores in his development of the OODA Loop. However, Osinga (2006) does not use case study research methodology to test a theory or critique a unique human phenomenon. In fact, there appears to be no available academic, peer-reviewed publications using case study methodology with the OODA Loop as the analytical lens used to examine Salafi-Jihadi inspired home-grown terrorism.

## 4.11 Three Key Cases of Salafi-Jihadi Inspired Home-grown Terrorism

The following sets out the three key cases selected for this research and establishes how they meet each of the selection criteria. Chapter Five contains the detailed case study analysis.

**4.11.1 Case Study 1 - The Australian Case of Jack Roche**

The first key case study explored and evaluated for this research involves Jack Roche, widely known as Australia's first convicted terrorist. In 2000, it was discovered that the Salafi-Jihadi movement, in this case Jemaah Islamiyah (JI), considered attacking Israeli and American interests, or assassinating a prominent Melbourne-based Jewish businessman. The details of this case study are well established in the Supreme Court of Western Australia case, R. v. Roche 2005. There is also significant open-source reporting and academic, peer-reviewed research that together meet the selection criteria requirement for this research project. The Jack Roche case also meets the selection criteria of being inspired by the Salafi-Jihadi movement. According to R. v. Roche, WASCA 4 2005, Roche's acceptance of and inspiration from the Salafi-Jihadi movement is evidenced by the letter he wrote to his son, making reference to:

> The greater sacrifice worthy of the highest reward from Allah that I am about to undertake. As Muslims we are obligated to perform jihad to uphold the laws of Allah. As we see today, the disbelievers are now out of control and believe that their ways based on inequality, arrogance, et cetera, are right. I hate them for that and need to learn more about how to combat them. (R. v. Roche, WASCA 4, Supreme Court of Western Australia, January 14, 2005)

This quote alone is not enough to confirm Roche is a Salafi-Jihadist himself. However, the rhetoric around injustice, insult and Western transgression of Islam, and the need to punish them for this, is a common theme among those who have been inspired by the Salafi-Jihadi narrative. Further, it fits with first of the AQ master narratives identified by the OSC (2011) as discussed in Chapter Two. In this quote, Roche is expressing what Aly (2011) described as the violent, religious aspects of the Salafi-Jihadi narrative as opposed to the secular aspects. Aly (2011) explains that the secular aspects involve political, economic and social contexts in the radicalisation process of an individual. A commitment to the Salafi-Jihadi movement is a criterion for selection as a relevant case study for this thesis. As Aly and Striegher (2012) established, cognitive radicalisation (the adherence to radical *Salafi-Jihadi* ideologies) is a key predictor for violent behaviour. In this regard Roche was an ideal and impressionable candidate for the Salafi-Jihadi movement. In 1997, Roche joined Jemaah Islamiyah (JI) in Australia and in 2000 he travelled to Afghanistan and met with senior AQ leaders (including bin Laden). While in Afghanistan, Roche received military training, including a 10-day explosives course. It was at this time that Roche was given instructions to carry out surveillance on potential Israeli targets in Australia. As Mullins (2011) explains,

Roche received money and training in Afghanistan, as well as advice and direction from JI and AQ.

While not part of the criteria, Roche was also intent on recruiting others to establish a local AQ cell in Australia. As established in the Supreme Court Appeal Case of R. v. Roche, WASCA 4, 2005, the "central core" of the conspiracy, had it proceeded, would have involved the manufacture of some kind of bomb or explosive device, the acquisition of some means of conveying that device to the Israeli Embassy, its detonation and (presumably) the escape of those involved. In November 2002, Roche was arrested under suspicion of conspiring to bomb the Israeli embassy in Canberra in 2000. In 2004, he was convicted under the Crimes (Internationally Protected Persons) Act 1976 and sentenced to nine years in prison, effective from the date of his arrest. Roche subsequently appealed the sentence on the grounds that it did not take into account the extent of his full cooperation with Australian authorities. His appeal was rejected and Roche served the full term of his sentence; he was released on 7 May 2007.

The Roche case meets the home-grown selection criteria for this thesis because Roche was born in a Western nation, the UK, and migrated to Australia around 1979, where he remained a long term resident. In 2004 Roche was convicted and sentenced for terrorism after conspiring and planning to carry out an act of terrorism in Australia. There is a need to deal with the potential criticism that while Roche originally intended to carry out terrorism in Australia, it was aimed at an Israeli target. This does not detract from the relevance of the Roche case as an example of the Salafi-Jihadi movement inspiring an impressionable, potential home-grown terrorists. It remains illustrative of home-grown terrorism being employed as a tactic of asymmetric warfare against Australian citizens, including members of the Jewish community in Australia. It is likely that Roche's planned attack would have resulted in collateral damage, thereby injuring or killing other Australians, regardless of their ethnic or religious background.

Perhaps the most interesting aspect of the Roche key case is how it meets the selection criteria of a planned attack, attempted or successful. As is known from open-source data, and specifically from the R. v. Roche, WASCA 4 case notes, Roche eventually abandoned the plot. A fair criticism could be that the Jack Roche case did not involve a successfully completed or even attempted act of terrorism, therefore how can this be used as a credible key case of Salafi-Jihadi inspired home-grown terrorism? In responding to this criticism,

simply because an act of terrorism was abandoned, did not proceed for a range of conflicting influences, or proceeded but was not successful, its significance or relevance in relation to this thesis (nor in relation to Salafi-Jihadi home-grown terrorism) is not reduced.

There is an appropriate analogy within criminal law in relation to conspiracy or an attempt to commit an offence. This is succinctly stated by Justice Murray, in the Supreme Court of Western Australia appeal case of Jack Roche. Murray ACJ stated that the "conspiracy to commit an offence, like an attempt to commit an offence and incitement to commit an offence, is an inchoate offence chargeable although the acts necessary to complete the commission of the principal offence have not occurred" (R. v. Roche, WASCA 4, Supreme Court of Western Australia, 14 January, 2005). In other words, it is irrelevant whether Jack Roche successfully completed or conspired but failed to carry out the terrorist attack in Australia; therefore this is considered a legitimate case study for the purpose of this thesis.

In their own case analysis of Roche, Aly and Striegher (2012) noted that while Roche disengaged behaviourally with terrorism (that is, he did not carry out the act), he retained the radicalised worldview through which he regarded himself as a "potential soldier", fighting against perceived injustices. Roche believed that there are conditions and circumstances in which militant *jihad* is justified (such as the US war in Iraq and Afghanistan and plight of Palestine). This is a belief or frame of reference that is consistent with what Silber and Bhatt (2007) described as the indoctrination phase in their model of radicalisation. Roche also saw himself as a "warrior in a holy war"—a belief consistent with Silber and Bhatt's (2007) jihadisation. The fact that Roche did not in the end follow through with a terrorist attack in Australia is not what is relevant to establishing the *prima facie* case in this thesis; what is relevant is that AQ and other vanguards of the Salafi-Jihadi movement, such as JI, changed their strategic construct of terrorism to home-grown terrorism.

The Roche case meets another selection criterion because it involved an unexceptional individual. Even though Roche received training in Afghanistan, he hardly comes across as a hardened, professional terrorist and or Jihadist fighter. Similar to the four London Underground terrorists, there was nothing extraordinary about Jack Roche or his life that set him apart or pre-determined his trajectory towards being attracted to the Salafi-Jihadi movement. As Porter and Kebbell (2010) establish, numerous studies have compared terrorists with non-terrorists and have found no differences in psychopathology or family

138

background, socioeconomic or educational factors. As determined in Atran and Sageman (2006), Bakker (2006) and Copland (2005), no common terrorist profile exists. As explained by Horgan (2008), "a temptation has been to assume that some qualities of specialness exist within a specific group of terrorists, in terms of both what makes them alike as well as what presumably makes them different from the rest of us (or at least from those who do not engage in terrorism)" (Horgan, 2008, p.83).


**4.11.2 Case Study 2 - 7 July 2005 London Transport Network Attack**


The second key case selected for this research was the 7 July 2005 terrorist attacks on the London metropolitan transport network (7/7 London terrorist attack). The British House of Commons Intelligence and Security Committee report into the London terrorist attacks recorded that on that day three explosions occurred at around 0850 on the London Underground system: the first on the Circle line between Aldgate and Liverpool Street; the next at Edgware Road station; and the third on the Piccadilly line between Russell Square and King's Cross. At 0947 a fourth explosion occurred on the upper deck of a London bus in Tavistock Place. The bombers, who were also killed in what are known to have been suicide attacks, were identified as Mohammad Sidique Khan, Hasib Hussain, Shehzad Tanweer and Germaine Lindsay. (House of Commons Intelligence and Security Committee: Report into the London Terrorist Attacks; May 2006).

The terrorist attack on the London public transport system was chosen as a key case because it meets the selection criteria outlined in Table 4.6. For instance, the terrorists were inspired by the Salafi-Jihadi movement, in this case AQ. The House of Commons report describes the terrorists' individual and collective pathways to seeking closer association with the Salafi-Jihadi movement, including possible connections with members of AQ networks in Pakistan and Afghanistan. While the House of Commons Report is not unequivocal about the terrorists' direction or instruction from AQ, it is irrelevant to the strategic context of this research. Atran (2010) explains that "most present-day Takfiris are "born again" in their late teens and early twenties and have little knowledge of religion beyond the fact that they consider themselves true Muslims who must fight enemies near and far" (Atran 2010, p 271).

This key case also meets the second requirement under the *contextual* selection criteria - that is, the attack needed to be home-grown. The 7/7 London terrorist attack assailants self-connected with the *takfiri* theme of violent consequences against the very same Western society and social structure in which they had all been raised and educated. This is a classic indication of being inspired by the Salafi-Jihadi movement and a confirmation of home-grown terrorism. The London public transport terrorist attack also met the selection criterion of the terrorists being unexceptional individuals. Aside from Jermaine Lindsay, the members of the group were second-generation British citizens of Pakistani descent. As the initial House of Commons report sets out, their parents had come to West Yorkshire from Pakistan many years before, found work, settled and taken British citizenship. Jermaine Lindsay was born in Jamaica and moved to the UK with his mother at an early age, around 1986, where they both converted to Islam.

Apart from Jermaine Lindsay, the other three terrorists were born into families who were moderate followers of Islam. That is, for most of their life they were unexceptional, moderate followers of Islam, from families who were also unexceptional. As the British House of Commons report states:

a) this case demonstrates the real difficulty for law enforcement agencies and local communities in identifying potential terrorists. All four were open about their strict religious observance but there was little outward sign that this had spilled over into potentially violent extremism. Khan generally appeared to others as a role model to young people; Tanweer as mature, modest and balanced. Hussain's character did not stand out much: extremist doodling on his schoolbook was picked up but it is a long jump from this to identifying a potential suicide bomber. Lindsay, particularly towards the end, appears to have behaved erratically and possibly criminally, but not in a way that aroused suspicion of terrorist intentions.

b) there is little in their backgrounds which mark them out as particularly vulnerable to radicalisation, with the possible exception of Lindsay. Khan, Tanweer and Hussain were apparently well integrated into British society. Lindsay appears to have had more instability at various points in his life, but not exceptionally so.
(House of Commons, 2006, p.26)

Lindsay became a Muslim after his mother converted to Islam following their emigration from Jamaica to the UK. Mohammed Sidique Khan was described by his wife, when she first met him, as "sensible, polite…a good family man and he came from a good family" (Jones, 2012, p. 188). As this detail describes, this key case meets the relevant contextual criteria to qualify for selection.

Finally, this key case qualifies because there is a substantial amount of open-source data and information. This is in the form of academic papers, media reports, official government inquiries and published intelligence reports. The House of Commons report is a highly informative open-source data collection point, because unlike many media reports, it sticks firmly to known facts and does not emotively express a view that influences the reader's judgement. Even so, there is a substantial amount of information from all others sources to triangulate the data and draw logical and rational conclusions through evaluative and descriptive case study analysis.

**4.11.3 Case Study 3 – 15 April 2013 Boston Marathon Bombing**

The third key case selected for this research is the Boston Marathon bombing. The United States District Court for the District of Massachusetts, Case 1:13-mj-02106-MBB, details that on 15 April 2013, two explosions hit spectators situated near the finish line of the Boston Marathon, killing three people and injuring just over 200. Two brothers, Tamerlan Tsarnaev and Dzhokhar Tsarnaev, separately detonated backpacks comprising so-called "pressure cooker" bombs, by the use of their mobile phones. In 2004, the United States Department of Homeland Security (DHS), issued an official warning about pressure cooker bombs:

> Typically, these bombs are made by placing TNT or other explosives in a pressure cooker and attaching a blasting cap at the top of the pressure cooker. The size of the blast depends on the size of the pressure cooker and the amount of explosive placed inside. Pressure cooker bombs are made with readily available materials and can be as simple or as complex as the builder decides. These types of devices can be initiated using simple electronic components including, but not limited to, digital watches, garage door openers, cell phones or pagers. As a common cooking utensil, the pressure cooker is often overlooked when searching vehicles, residences or merchandise crossing the U.S. Borders.
> (United States Department of Homeland Security Information Bulletin on
> pressure cooker bombs: Cited on
> http://www.cbsnews.com/htdocs/pdf/PotentialTerrorist.pdf)

Following forensic investigation of CCTV footage, Boston Police and the Federal Bureau of Investigation (FBI) were able to determine the movements of the brothers up to the time of the explosions and as they escaped from the scene. (*United States vs. Dzhokhar Tsarnaev, Case 1:13-mj-02106-MBB*, United States Department of Justice. 21 April 2013)

The Boston Marathon terrorist attack has been selected as a key case for this research because it meets all of the selection criteria.  Firstly, not only was it inspired by the narrative of the Salafi-Jihadi movement, but also it represented a further adaptation of the movement's ability to enable self-perpetuating producers of home-grown terrorism.  Of the two brothers, it is reported that in the three to four years leading up to the Boston Marathon bombing, Tamerlan Tsarnaev increased his commitment to Islamic extremism and became a follower of Salafi-Jihadi secular and religious ideology.  For example, as a 27 June 2013 District of Massachusetts Grand Jury Indictment alleged, "at time unknown to the Grand Jury but before or on April 15, 2013, Dzhokhar Tsarnaev downloaded to his computer a digital copy of a book entitled, "The Slicing Sword Against the One Who Forms Allegiances with the Disbelievers and Takes them as Supporters instead of *Allah,* His Messenger and Believers.""(District of Massachusetts Grand Jury Indictment, 27 June 2013, p.6).  Dzhokhar Tsarnaev had also downloaded several other AQ publications encouraging followers to commit violence against the perceived enemies of Islam.  It appers the AQ master narratives were a key source for the Tsarnaev brothers as they progressed through their trajectory towards an attack against their own citizens.  Yet the FBI did not find any support from or direct link to a terrorist organisation.  Following his arrest, Dzhokhar Tsarnaev told police that:

> […] he and his brother had not been acting with any terrorist groups, the officials said, and told the investigators that they had learned about building explosive devices from Inspire, the online English magazine of the AQ affiliate in Yemen.  (Cooper, Schmidt & Schmitt, 2013, April 23).

As stated, the Tsarnaev brothers learned how to make pressure-cooker bombs from AQ's *Inspire* magazine.  They did not go to Afghanistan, Pakistan or Yemen to attend an AQ training camp or participate in training from any other AQ connected Salafi-Jihadi terrorist organisation.  Before his death in Yemen in 2010, a 24-year old American, Samir Khan, was the editor of *Inspire* and published an article entitled "*Make a Bomb in the Kitchen of Your Mom*."  Through the use of a modern, global interconnected tool such as the internet, the Salafi-Jihadi movement demonstrated its capacity to further evolve through the OODA Loop cycle to inspire self-generating, home-grown terrorism.

Available open-source reports explain how in 2008 Tamerlan Tsarnaev became a devout Muslim and both brothers began attending the Islamic Society of Boston mosque, in Cambridge, Massachusetts.  Along with its sister mosque, the Islamic Society of Boston

Cultural Center, both places have a history of thier members being arrested and convicted for their direct involvement in Salafi-Jihadi terrorism (Dorrell, 2013, April 25).  In relation to the Islamic Society of Boston Cultural Center, The *USA Today* media report went on to say it:

> […] has invited guests who have defended terrorism suspects. A former trustee appears in a series of videos in which he advocates treating gays as criminals, says husbands should sometimes beat their wives and calls on Allah (God) to kill Zionists and Jews, according to Americans for Peace and Tolerance, an interfaith group that has investigated the mosques. (Dorrell, 2013, April 25).

The Islamic Society of Boston mosque and the Islamic Society of Boston Cultural Center take advantage of frustrated young Muslims who are resident in Western countries.  By exposing them to the Salafi-Jihadi narrative that connects their religious and secular feelings of disrespect and injustice, they continually tell their audience they are being humiliated by Western infidels.  This process seriously infects the audience's *orientation* of their own OODA loop at the tactical level.  It begins to develop that *schwerpunkt* or implicit understanding between the strategic and tactical level of command and control, as identified by Boyd.  The next step in the cycle is when the members of the audience *act* upon this strategy for inciting violence through home-grown terrorism.  In 2012, Tamerlan Tsarnaev went to the North Caucuses, Chechnya and Dagestan, areas known for Islamic extremists.  According to US travel records, Tsarnaev arrived at Moscow's Sheremetyevo airport on 12 January 2012, returning on 17 July that same year.  He spent time in Makhachkala, Dagestan that summer (Huffington Post 21 April 2013; the UK Guardian 25 April 2013).  Even so, there are a number of conflicting reports as to whether he met and trained with militant Islamic extremists.

The brothers were also unexceptional people.  As with the other key cases in this research, they were not raised as hardened Islamic fundamentalists, they lived uneventful working class lives in Boston and did not perform above average academically.  While open-source information is ambiguous as to whether they received any military training, they certainly had no exceptional military training.  These factors meet the selection criteria of being unexceptional individuals and therefore qualify them for this research.

This Boston Marathon bombing case demonstrates the full transformation from radicalised consumers to being self-generating producers of Salafi-Jihadi home-grown terrorism. Frustrated, hyper-sensitive, networked and impressionable young men who follow the

Salafi-Jihadi narrative, requiring few, if any, outside resources or assistance, are ideal candidates to become producers of Salafi-Jihadi terrorism.  More importantly relevant to this thesis is that the Boston Marathon bombing highlighted a further morphing of Salafi-Jihadi home-grown terrorism.  In other words, the Boston Marathon bombing provided a third case that is descriptive, evaluative and tests the theory that AQ penetrated the Western government's OODA loop through the use of the Salafi-Jihadi inspired home-grown terrorism as a tactic of asymmetric warfare.

Even though there are few academic, peer-reviewed papers on the Boston Marathon bombing there is a significant amount of open-source data.  Nearly all information and qualitative data has been obtained from newspaper articles, opinion pieces and open-source court and intelligence reports.

## 4.12 Conclusion

This chapter establishes that the subject of inquiry of this thesis is to focus on the "how" and "why" questions of the Salafi-Jihadi movement and its use of home-grown terrorism. This chapter also determines that the use of multiple case-study methodology is a relevant and applicable research design for this complex human phenomenon.  Further, each case selected for this research represents a unit of human activity embedded in the real world that can only be studied in context and cannot be manipulated or contrived to suit the objectives of the research.  It has also been established that the analytical framework from which to test the theory is COL. John Boyd's OODA loop - a conceptual framework on strategy that has also been selected as the strategic model of terrorism, as established in Chapter Two.

The three cases selected for this thesis from Australia, the UK and the US, are not only relevant, they also illustrate a progression in how the Salafi-Jihadi movement adapted through the OODA Loop in response to counter-terrorism strategies from Western nations - for example, from direct connection into Pakistan and Afghanistan and AQ terrorist training camps to the ideal model of self-generating home-grown terrorists who sat on their computer, mixed with close friends and were citizens or long-term residents of Western countries.  This chapter also established the selection criteria for determining the three case studies that consisted of contextual and characteristic prerequisites.  Even though

numerous cases of Salafi-Jihadi inspired home-grown terrorism could have been chosen, it is not possible to study all known cases from available open-source data.

Chapter Four also aimed to bring together key concepts and the critical theory from previous chapters. This established a theoretically based understanding of the context in which the research methodology was applied. Additionally, it set the foundations for the substantiative aspect of the case study analysis. For example, as mentioned in Chapter Three, Brachman (2008) puts forward a very insightful argument about Salafi-Jihadism and supports an alternative theoretical application of home-grown terrorism that has been dominated by the debate between Sageman's (2004) leaderless network and Hoffman's (2006) command-and-control theory. It was argued in Brachman (2008) that the Salafi-Jihadi movement convinced a multitude of angry Muslim men to support and commit violent acts of terrorism through a puritanical call and interpretation of Islam. The insightful part of Brachman's argument is that the leaders of the global Salafi-Jihadist movement have mastered the art of transforming consumers of its ideas into producers of them. In other words, the Salafi-Jihadi movement has got inside the Western government's OODA loop, the fundamental objective for defeating an opponent. The three cases set out in this methodology are significant and relevant in this context.

Chapter Five examines and explores each case in detail to provide a descriptive and illustrative analysis to test the theory that home-grown terrorism is a tactic of asymmetric warfare by AQ and other Salafi-Jihadi terrorist movements, using the OODA Loop as the strategically adaptable model of terrorism.

# Chapter 5: The Case Studies

## 5.1 Introduction

This chapter presents a descriptive and evaluative explanation of the three case studies selected for this thesis. The qualitative data obtained through this case study research approach informs the critical analysis for Chapter Six by using the OODA Loop as the strategically adaptable model of terrorism. The overall objective is to test the theory that Salafi-Jihadi inspired home-grown terrorism is a tactic of asymmetric warfare by AQ. Effectively, AQ observes, orientates, decides and acts, enabling it to cultivate terrorists to come from within the very population of the enemy it plans to attack. The use of home-grown terrorism demonstrates AQ's strategically adaptable and dynamic approach to implementing its war against Western targets.

Chapter Four established that the use of case study methodology is an appropriate research approach for the contemporary phenomenon of Salafi-Jihadi inspired home-grown terrorism because it is a complex set of occurrences without concrete boundaries or borders (Yin 1981, George and Bennett 2005). Through the detailed account of each case of home-grown terrorism presented in this chapter, it becomes evident that concrete boundaries and closed systems do not exist in regards to Salafi-Jihadi inspired home-grown terrorism. As described in the previous chapter, the three case studies selected include the Australian home-grown terrorism case of Jack Roche, the 7/7 London terrorist attack, and the Boston Marathon Bombing that occurred on 15 April 2013.

Using evidence obtained from primary and secondary open-source material, each case is presented as an example of tactical adaptability. The use of Roche as an example of an unexceptional individual to avoid detection; the London Transport attack as an example of Western domestic planned attacks to overcome tactical challenges and penetrate the West's OODA loop; and the Boston case of the Western domestic individuals with no known links to AQ but inspired by a narrative as an example of the evolution of AQ into a regenerative brand. In effect the purpose of this Chapter is to highlight how the OODA Loop can be used to explain and explore the transformative, adaptability of AQ because the OODA Loop is itself a theoretical construct of continual transformation. These are by no means the only cases of Salafi-Jihadi inspired home-grown terrorism that could be used for this research.

**5.2 Case Study 1 – The Australian Case of Jack Roche**

Jack Roche (also known as Khalid Roche) - born George Paul Holland in the United Kingdom in 1953 - was arrested in 2002 and became the first person in Australia to be convicted and jailed for terrorism offences, under the Crimes (Internationally Protected Persons) Act 1976.  His conviction related to conspiring between 15 February 2000 and 30 September 2000 to commit a terrorist attack against the Israeli Embassy in Canberra (R -v- ROCHE [2005] WASCA 4).  As established in the Western Australian Supreme Court of Appeal, the Commonwealth offence of conspiracy is punishable "as if the offence to which the conspiracy relates had been committed" (R -v- ROCHE [2005] WASCA 4, p.5).  Significantly for this research, the preparations and planning for the conspiracy were directed and funded by AQ and inspired by its Salafi-Jihadi narrative.  Roche served the full term of his sentence until his release in 2007.

As covered in Chapter Four, the Roche case succeeds in meeting the selection criteria.  For example, Jack Roche was unexceptional, with no history as a violent jihadist or experienced guerrilla fighter prior to converting to Islam or joining JI.  Roche was born into a military family and attempted to pursue a military career until he was dishonourably discharged only 18 months after joining the Royal Army Medical Corp.  As established in the previous chapter, Jack Roche also met the home-grown terrorist criteria having been born in the United Kingdom and living half of his life in Australia after moving to Sydney in 1973 following his first marriage.  Not long after migrating to Australia his life began to fall apart as the result of alcohol abuse that led to his first divorce.  In 1992, Roche converted to Islam where the combination of pursuing Islam and the bonds built with other like-minded individuals filled a void in his life and provided a new sense of purpose (Squires 2004, Aly and Striegher 2012).

The availability of open-source data was a key criterion for selection.  Information used to inform the analysis of the Jack Roche case was obtained from open-source documents that include court transcripts, academic published papers and media reports.  Nearly all available published academic work and media analysis on the Jack Roche case, when reporting the facts and chronology of events, draw on the 2005 Supreme Court Appeal, R -v- ROCHE [2005] WASCA.  This research has also been fortunate to benefit from previous academic work by Aly and Striegher (2012), who as part of their primary source data

collection interviewed Jack Roche and were therefore able to record further contextual qualitative information.

The objective in presenting the Jack Roche case is to use the OODA Loop to critically test the theory, that even before the 9/11 terrorist attack on the United States AQ had identified the tactical significance of using Western-born or resident Muslims who were attracted to their Salafi-Jihadi narrative. However, Roche's religious conversion both to Islam and then to Salafi-Jihadism did not occur in a vacuum. In their analysis of the role of religion in radicalisation and violent extremism in which they used Jack Roche as a case, Aly and Striegher (2012) conclude that religion plays a far lesser role in radicalisation toward violent extremism than other factors. These other factors may include the combination of being intimately exposed to extremist views through the social bonds of an increasingly tight group and a deep sense of injustice as a result of Western foreign policy against Muslim people, led by the United States. Roche's conversion to Islam and trajectory towards violent Salafi-Jihadism came gradually and coincided with difficult personal circumstances in his life such as divorce and binge drinking.

Before converting to Islam in 1992, Roche found solace within a close network of friends in Australia who happened to be Muslim, leading to an association with members of JI in Indonesia. Upon becoming a Muslim, a sense of identity was built that became even stronger as the in-group felt it was under attack by the West and even Muslims who did not agree with its extreme interpretation of Islam (Porter and Kebbell 2010). As argued by Sageman (2004) and Abrahms (2008) a social model of terrorism, or networks of friends, associates and family are strong factors in driving individuals towards extremism and even terrorism. Through their proliferation of a Salafi-Jihadi narrative, AQ also created powerful bonds connecting physically disassociated individuals to become global network. When this global community is perceived to be under attack, as presented by the AQ Master Narratives, the drive to defend Islam can be very strong. For example, Squires (2004) reported Roche explaining that, "if someone punches you, you are allowed to punch them back. I am very concerned about my brothers and sisters of Islam who are being punched by these people" (Squires, 2004, p.9).

The most concise primary source record of Jack Roche's Salafi-Jihadi inspired terrorist planning is set out in the 2005 Supreme Court Appeal Case, otherwise cited as Court Appeal, R -v- ROCHE [2005] WASCA. Qualitative data, detailing the background and a

chronology of events leading to Roche's arrest and conviction, was also established in interviews Roche gave to *The Australian* newspaper journalist Sally Neighbour in 2007, six months after his release from jail.

Jack Roche's conversion to Islam in 1992 saw him attend the Dee Why Mosque in Sydney and become a member of the Mantiqi Four, the Australian branch of JI that operated from the 1990s up until 2002 (see Neighbour 2007; Aly and Striegher 2012; Zammit 2010). At that time JI was not a well-known Islamic organisation within Australia. According to a 2004 Department of Foreign Affairs (DFAT) report, *Transnational Terrorism: The Threat to Australia*, JI epitomises the evolution of Muslim militancy in South-East Asia. The report explains that, "from origins as a separatist movement in Indonesia, it has evolved into an extremist organisation with links to AQ and is strongly influenced by bin Laden's ideology and methodology" (DFAT, 2004, 39). Despite the emergence of JI as a terrorist group in Australia, evidence from the Supreme Court transcript and public interviews show that initially Jack Roche did not begin with the intention of being a Salafi-Jihadist or plan to conduct terrorist acts in the country in which he had become a long term resident.

During the 2007 interview with Sally Neighbour, Jack Roche described this cognitive transition as taking place over several stages: first, around 1994, when he became JI's Australian translator after he spent time teaching in Indonesia; then, in 2000, Roche was sent by JI to Malaysia to meet the group's chief of operations, Riduan Isamuddin, otherwise known as Hambali. During this time, Hambali was transforming JI from a group devoted to securing an Islamic state in Indonesia into a fully-fledged terrorist organisation. It is alleged that Hambali was responsible for seven terrorist attacks in 2000 (Magouirk, Atran and Sageman 2008). The Sally Neighbour interview details how "Roche recorded in the notebook he kept during his journey that Hambali raised "the possibility to do something in Sydney during the Olympic Games."" Roche's time with Hambali is relevant in the context of this research for its illustrative effect. As Aly and Striegher (2012) explain following their interview with Roche, Hambali was not just an important conduit to JI but also served as a spiritual leader. This personal connection and experience is significant for its inspirational effect, positively reinforcing the cognitive transition Roche would have been experiencing at the time.

According to the details established in the Supreme Court transcript, Roche became further embedded with the Salafi-Jihadi movement during visits to Pakistan and Afghanistan

between 15 February and 30 September 2000.  While in Afghanistan he met with bin Laden, where he was selected to join an AQ plan to attack Israeli and US targets in Australia (Aly and Striegher, 2012).   During this period in Afghanistan, Roche also met with other significant senior AQ figures such as Mukhtar (who turned out to be Khalid Sheikh Mohammed, the mastermind of the 11 September 2001 attacks on the United States) and AQ's military commander, Mohammed Atef, also known as Abu Hafs al-Masri.   These meetings were coordinated by Hambali.  While in Afghanistan, Roche underwent a ten-day military and explosives training course at AQ's Khandahar training camp.  Further, at this time Abu Hafs al-Masri asked him to recruit two or three white Australians to join a cell and carry out operations in Australia.  This is significant, as it may suggest that even before 9/11 AQ had begun to recognise the potential, asymmetric utility of recruiting and supporting long-term residents or citizens of Western countries to conduct home-grown terrorist attacks.  In testimony released in the case *United States of America v. Zacarias Moussaoui (2006)*, Khalid Sheikh Mohammed acknowledged the need for recruits with visas from non-Arab countries for attacks inside the United States.  As described by Jones (2012), the case of US citizen Jose Padilla demonstrated that as early as 1998 AQ began training Western citizens, inspired by the Salafi-Jihadi narrative, to carry out attacks inside the US.  As Jones (2012) explains, Padilla's US citizenship made him very useful for AQ.  Given Roche was born in a Western country and was a long-term resident in Australia, it is possible AQ began to determine the tactical and strategic significance of his attributes.

The available open-source information on the Roche case describes how through a coordinated Salafi-Jihadi terrorist network between JI and AQ, Roche was provided with indoctrination, training, finances and direction as a British born, long-term resident of Australia (Zammit 2010; Aly and Striegher 2012; Neighbour 2007; Mullins 2011 and Court Appeal, R -v- ROCHE [2005] WASCA).  Despite this, in the statement of facts set out in the Court of Appeal transcript, upon returning to Australia Roche began to have doubts about fulfilling the planned attack.  Even so, Roche continued to conduct surveillance of potential targets and expressed his support for the Salafi-Jihadi cause in a letter to his son.  During Roche's interview with Australian law enforcement agencies on 18 November 2000, the statement of facts explains the idea was either to destroy these targets or get rid of the person who was considered high up in the organisation or administration of US or Israeli interests in Australia.  In the letter to his son, Roche said:

The greater sacrifice worthy of the highest reward from Allah that I am about to undertake. As Muslims we are obligated to perform jihad to uphold the laws of Allah. As we see today, the disbelievers are now out of control and believe that their ways based on inequality, arrogance, et cetera, are right. I hate them for that and need to learn more about how to combat them. (Court of Appeal, R -v- ROCHE [2005] WASCA)

In the context of this research it is irrelevant whether Roche became reluctant to carry out the terrorist attack in Australia, as he continued planning and preparations. For example, in June 2000 Roche used funds provided by Hambali in Malaysia to purchase a mobile phone and a car that he then drove from Perth to Sydney, where he took photos of the Israeli Consulate. Roche then drove to Canberra and took video footage of the Israeli Embassy. The Court of Appeal statement of facts describes how during surveillance of the Israeli Embassy, Roche commented to his son how it would be a good place to put a truck. In addition, it is described in Aly and Striegher (2012) how Roche retained views that could be described as "extremist" and saw himself as a "potential soldier." As Roche's letter (used in evidence in the Court of Appeal case) to his son describes, Roche was at that time full of zealousness and fanatical belief and had accepted the use of violence, as described by Justice Bongiorno. Even after Roche began to reconsider his actions and informed the Australian Security Intelligence Organisation (ASIO), he did not stop his activities in support of JI and AQ. For example, in September 2000 Roche searched on the internet for igniters that could be used for detonating a bomb; he then went ahead and purchased the igniters. This was even after the leader of JI, Abu Bakar Bashir, had called Roche in mid-August telling him to stop whatever he was doing. In the end Roche did not send any of the video recorded surveillance or notes to Hambali or any other JI or AQ member.

The Australian security and law enforcement agencies began to fully investigate Roche in 2002 and obtained the recording of an interview between Roche and *The Australian* journalist, Colleen Egan (cited in Cornford 2002, November 27). In that interview Roche is alleged to have detailed the full extent of his involvement with JI and AQ to plan and carry out a terrorist attack in Australia. From available open-source information, following investigations by ASIO and the Australian Federal Police (AFP), Roche was eventually arrested in November 2002; in 2004 he was convicted and sentenced to nine years in prison. Roche served his full sentence and was released on 7 May 2007.

### 5.2.1 Case Analysis using the OODA Loop

In his essay *Destruction and Creation*, Boyd (1976) described how in order to comprehend and cope with an ever-changing environment we develop mental patterns or concepts of meaning. The purpose of Boyd's paper was to explore how people or groups progress through the destruction and creation of designs, novelty and innovative constructs to respond and adapt to a changing environment. Boyd (1976) argued that this process cannot be avoided in order to survive on one's own terms. This re-occurring cycle of creating novel mental images confuses the *Orientation* of an opponent and generates a high state of entropy. This conceptual framework of strategy is significant in the critical analysis of the Roche case. The OODA Loop can be used to emphasise the tactical importance of the unexceptional characteristics of Roche, as opposed to the use of highly experienced terrorists whose profile is what Western governments and their security forces would expect.

Using the OODA Loop as the analytical lens, there are two aspects to the Jack Roche case which require critical analysis in relation to the relevance of this case to the research question. The first is that Jack Roche's inspiration through the Salafi-Jihadi movement and his active planning to carry out terrorist attacks in Australia occurred before 9/11, and also preceded the US-NATO war in Afghanistan and the US invasion of Iraq in 2003. The second is that Jack Roche did not carry out the terrorist attack he had been planning. This has been used by Michaelsen (2005 and 2010) to argue that there has been an overreaction to the threat of terrorism in Australia. Other aspects used by Michaelsen (2010) to demonstrate the Australian government's overreaction to terrorism relates to Roche's amateurism. For the purposes of this research the failure to carry out the attack is not relevant. The fact is Roche was inspired through a network of friends by the Salafi-Jihadi narrative to such as extent that he became a strong advocate for the use of violence and began planning to carry out an act of terrorism.

One of the selection criteria for this research was that the cases involved individuals who were ordinary and unexceptional. This may result in amateurish planning and implementation of a terrorist attack. While Jack Roche may have received a ten-day crash course in bomb making by AQ, he was hardly a professional guerrilla fighter or a terrorist with extensive combat experience. A ten-day explosives training course would not necessarily enable Roche to be competent in making a bomb. However, when analysed

through the OODA Loop, Roche represented an unexceptional, Western born, long term resident of Australia that did not fit the mental image held by Western security services. Other ordinary, unexceptional individuals who were inspired by the Salafi-Jihadi movement to become home-grown terrorists also undertook explosives training with AQ and failed to successfully carry out their attack. For example, the so-called "shoe-bomber", Richard Reid, on 22 December 2001; the 21 July 2005 attempted bombing of the London Metropolitan transport system; and Umar Farouk Abdulmutallab who on Christmas Day 2009 attempted to blow up a US domestic flight with explosives hidden in his underwear. In Australia, since the Roche case twenty people have been convicted of terrorism-related offences under the criminal code (according to the Australian Government's 2010 White Paper, *Securing Australia, Protecting our Community, Counter-Terrorism)*. None has been successful in carrying out any attack. The point of this analysis is to use these examples to demonstrate that even ordinary individuals, whose attempts to conduct a home-grown terrorist attack failed, still saw AQ successfully penetrate the Western government's OODA loop.

In his analysis of Australian citizens involved in Salafi-Jihadi inspired home-grown terrorism, Mullins (2010) noted that in the sixteen cases he focused on, no definite target was ever identified (the closest being Jack Roche), relatively few weapons were acquired and very little was accomplished as far as actually manufacturing explosives is concerned. In an examination of the ordinariness of terrorists, Atran (2010) explains how the majority of Salafi-Jihadi inspired terrorist attacks are neither well planned nor organised by people with extensive military experience, and are not under clear command and control. In his analysis of the Madrid train bombing on 11 March 2004, Atran (2010) asserts that the ordinariness of many Salafi-Jihadi inspired terrorist plots makes them difficult to detect. Conversely, Atran (2010) determines that if they were organised through a highly structured organisation they would have been caught much sooner. The RAND Corporation paper, *Understanding Why Terrorist Operations Succeed or Fail* (Jackson and Frelinger 2009), examined factors that determine successful or unsuccessful terrorist attacks to assist the design of counterterrorism measures. Jackson and Frelinger (2009) describe how in some unsuccessful or partially successful terrorist operations, the attackers involved are authors of their own misfortune. The research defines a framework that is structured around three characteristics to determine the success or failure of a terrorist attack.

These involved:

- Terrorist group capabilities and resources
- Requirements of the operation it attempted or is planning or attempt
- Relevance and reliability of security countermeasures

Jackson and Frelinger (2009) determined that a terrorist or terrorist group did not require absolute compatibility with all three characteristics, but it was the relationship or mismatch between them that determined success or failure.  As already indicated, ordinariness and limited capability - not expertise in the tactics, techniques and procedures of terrorism - is one of the primary selection criteria for this research.  Ordinariness does not erode the fundamental concern in that a citizen and long term resident of Australia, such as Roche, would be inspired enough by the Salafi-Jihadi movement to even contemplate carrying out a home-grown terrorist attack.  Michaelsen (2010) cites Justice Bongiorno in his judgement during the trial of Abdul Nacer Benbrika, who was arrested in 2005 for leading a terrorist organisation planning attacks in Australia.  Justice Bongiorno said:

> […]terrorist acts as they have been experienced in modern times are often carried out by amateurs whose principal attribute has not been skill, but rather zealous or fanatical belief in some ideology or other which seeks to promote itself by the use of violence (cited by Michaelsen, 2010, p. 22).

Despite these observations, the ordinariness of Salafi-Jihadi inspired home-grown terrorists such as Roche is on the one hand a distorting mental image.  In other words, individuals such as Roche are not what Western governments and security agencies would initially expect.  In their consideration of asymmetric conflicts Dunne, Garcia-Alonso, Levine and Smith (2006) argue that one way a guerrilla force can overcome a stronger government opponent is through "exploiting second mover advantage by choosing to attack the opponent in ways that had not been prepared for, because it was locked into past investments" (Dunne, Garcia-Alonso, Levine and Smith 2006, p. 183).

On the other hand, when the characteristics of these people (Western citizens or residents, Muslims or Muslim converts inspired by Salafi-Jihadi extreme violence, globally connected and unexceptional in nature) are analysed and synthesised they present a novel, mental image, which in turn offers AQ the tactical ability to penetrate the West's OODA loop.  As Boyd (1987) argued in his presentation the *Strategic Game of ? and ?*, those who can synthesise seemingly unrelated components of a range of objects or images can survive on their own terms by creating novelty, ambiguity and adaptability.  As with T E Lawrence's

epiphany in transforming the Arab revolt into a constantly manoeuvring idea across the vast desert, rather than a static physical target, made it almost impossible for the Turkish forces to defend or attack. It created a distorting mental image and penetrated the Turkish force's OODA loop; it was also a unique example of a successful tactic of asymmetric warfare that heavily influenced Boyd's development of the OODA Loop. However, it would be a false assumption to suggest the use by AQ of home-grown terrorists happened through a linear process.

As Hammond (2013) explained, "for Boyd the OODA loop contains a complex interrelationship of feed forward and feed backward, along with implicit guidance and control. It was an on-going, many-sided, cross-referencing process of projection, empathy, correlation and rejection" (Hammond, 2013, p.601). In other words, the OODA Loop should not be applied in a simplistic, mechanical fashion in order to explain how AQ realised the tactical, asymmetric opportunity offered by Western citizens or residents inspired by their Salafi-Jihadi narrative. In applying the OODA Loop to strategic approaches to crisis management, Richards (2008) explains that getting inside an opponent's OODA loop requires constant probing and testing of an adversary to unmask strengths, weaknesses, manoeuvres and intentions. Employing a variety of measures that interweave menace-uncertainty-mistrust with tangles of ambiguity-deception-novelty form the basis to sever an adversary's moral ties and disorient its ability to respond. It is plausible to deduce that AQ travelled through this conceptual strategic process.

The analytical lens needs to be broadened and as part of this it is significant to note, as already mentioned, that Roche's conversion to Islam and radicalisation trajectory through the Salafi-Jihadi narrative did not happen in isolation. Roche's escalation from Muslim convert to planning and conspiring to commit terrorism occurred as a consequence of his personal life events and his network of friends. While this research does not intend to provide a critique of varying models of the radicalisation process, they are important theoretical road maps that provide contextual discourse underpinning where the Salafi-Jihad movement manipulated an opportunity to exploit Western interests through the employment of home-grown terrorism. Two of the predominant models of radicalisation were developed by Silber and Bhatt (2007) for the NYPD and by Innes et al (2007) in the United Kingdom. Both described a "radicalization window", where an individual is susceptible to being pulled towards joining a group that not only gives him or her bonds of friendship but also cultivates extremist views. Aly and Striegher (2012) reinforce the

significance of these social bonds for the process of being inspired by the Salafi-Jihadi movement. The Innes et al (2007) model also describes the importance of a connection to a global Islamic community. With the benefit of the internet and other modern mediums of communications, the discourse of social justice and global jihad is promoted, supported by jihadist propaganda on the internet.

Proponents of the Salafi-Jihadi narrative, such as AQ and JI, drive this motivation towards legitimising the use of violence against those who it believes are responsible for perceived injustices against the Muslim community. In the case of Roche, the downward spiral of his life through alcoholism, divorce and a loss of meaning and direction conspired to make him vulnerable to JI's Salafi-Jihadi ideology. At the same time, JI and AQ are adaptive, globally networked organisations, conducting a war against materially superior, conventional opponents. As such, when analysed through the conceptual framework of the OODA Loop, it is rational to deduce that JI and AQ could have recognised the opportunity to conduct terrorist attacks inside Australia through the use of a vulnerable and impressionable Western-born convert to Islam. It is also cost-effective in terms of financing and people, as there is no risk to any high-ranking AQ member and the planning, preparation and attack required only modest financing. All these factors limit the potential of exposure and discovery by Western government security and police forces. The Roche case may have been the beginning - even if by accident - of the Salafi-Jihadist movement's trial-and-error approach to motivating, directing and supporting home-grown terrorism in Australia. Progressing through the OODA Loop is not a concise, structured and rhythmic process.

## 5.3 Case Study 2 - 7 July 2005 London Transport Network Attack

The 7 July 2005 terrorist bombing on the London metropolitan transport system was the first ever Salafi-Jihadi inspired, home-grown suicide attack in the UK. This terrorist attack demonstrated a paradigm shift in how the Salafi-Jihadist movement adapted and evolved from attacking Western interests in foreign countries (such as the 1998 US Embassy bombings in Tanzania and Kenya) to inspiring citizens and long-term residents of Western countries to carry out attacks on their home soil. Former Scotland Yard Assistant Commissioner for Counterterrorism, Andy Hayman, noted that his thinking before 7 July 2005 "had been dominated by the threat of al-Qaeda mounting a 9/11-type attack from outside the UK, executed by terrorists from abroad. An attack by home-grown terrorists

with broad Yorkshire accents required a complete rethink of all our plans"(*The Times* July 7, 2010). As a case study, the 7 July 2005 terrorist attack on the London metropolitan transport system demonstrates - through the adaptive process of the OODA Loop – that those inspired by AQ's Salafi-Jihadi narrative transformed from consumers to producers through their act of home-grown terrorism.

The events on the day of the attack and the individual profiles of each of the bombers have been thoroughly published and predominantly drawn from the *House of Commons Report of the Official Account of the Bombings in London on 7th July 2005* and the subsequent *Intelligence and Security Committee: Report into the London Terrorist Attacks on 7 July 2005; May 2006*. While all published academic papers, opinion pieces and media reporting start by using the data from both the House of Commons reports, this research has sought to gather information from additional open-source data that has had the privilege of time, in order to shed more light on the background to the events and the four terrorists. For example, Brigg, Cole, Gilmore and Soria (2011) describe and analyse the findings from the Coroner's Inquest into the London attacks. There has also been a significant amount of counter-terrorism activity since 7 July 2005, which provided further publically available data describing deeper links and connections between the four London bombers and their inspiration and involvement with AQ. This information would not have been available at the time both House of Commons reports were published.

The chronological events on the day of the London attack and the background to the four terrorists have been well documented and largely taken from the *House of Commons Report of the Official Account of the Bombings in London on 7th July 2005*. In a detailed account of the attack, Hayman (2009 and 2010) also provides extensive qualitative data on the background of the four suicide bombers. Hayman (2009), who was in charge of the Metropolitan Police investigation into the London suicide attack, said "over the weeks and months our investigations led us to realise that the bombers had indeed been inspired by, and had learned their deadly skills from, AQ groups" (Hayman, 2009, p.113). In addition, the ordinariness of the terrorists and their unexceptional backgrounds generated confusion not only across Western governments and security forces but also with friends and family.

As with Roche, the four terrorists - Mohammad Sidique Khan, Germaine Lindsay, Hasib Hussain and Shehzad Tanweer - were unexceptional individuals. As the House of Commons official report explains, little distinguishes their formative experiences from those of many

others of the same generation, ethnic origin and social background. Findings from the Gartenstein-Ross and Grossman (2009) study into home-grown terrorism in the US and the UK reinforced those of previous studies that suggest there is no general "terrorist profile." That is, none of the terrorists studied displayed any distinguishing demographic, economic, marital, educational or social characteristics. This illustrates how AQ was able to penetrate Western government's security apparatus through the ordinariness of its home-grown terrorists. What is also important is to understand how the four individuals became inspired by the Salafi-Jihadi narrative. In Briggs et al (2011), findings from the Coroner's Inquest provide details in regards to the surveillance conducted by MI5 on the networks of Salafi-Jihadi inspired UK residents who were becoming persons of interest due to their growing links with AQ and proponents of conducting violence against civilians in Britain. Briggs et al (2011) describe how the most interesting aspect of the Inquest is how it reveals the way the four suicide bombers became inspired by their network of friends and acted as a cell. The Briggs et al (2011) paper describes how, "fresh evidence on how the four became radicalised reveals the importance of working as a group and bonding through sport and communal activities" (Briggs et al 2011, p. 1). Even so, despite how Briggs et al (2011) provide details into the preparation and planning in the lead up to the attacks, many friends and family who were not within the cell or group could not describe any notable change in the four suicide bombers even on the day before the attack.

Mohammad Sidique Khan was the oldest of the group. Born in Leeds on 20 October 1974, he was 30 at the time of the bombings. He appears to have been the group's ringleader as demonstrated in more in-depth investigations that allege Khan being at head of all organisation and preparation, and involvement with AQ contacts. It was also Khan who created a martyr's video recording that was made public by AQ and published by the BBC and Al Jazeera on 1 September 2005. As Phillips (2006) describes, Khan declared that suicide bombing was the only way to make Britain acknowledge Muslim grievances. Tanweer was born on 15 December 1982, Hussain on 16 September 1986 - 22 and 18 respectively when they died. All three were second-generation British citizens whose parents were of Pakistani origin. Their respective parents had come to West Yorkshire from Pakistan many years before, found work, settled and taken British citizenship. Khan was the youngest of 6 children, Tanweer the second of four and the eldest son, Hussain the youngest of four. Hayman (2009) reports that in July 2003 Khan travelled to Pakistan and in 2004 he took extensive sick leave and resigned from the special needs school where he was employed at the time. During this time he continued to be active as a youth worker in

Beeston. The BBC profile of Khan goes onto describe that by the time he began this job in 2001, he was clearly serious about his Islamic faith. He prayed regularly at school and attended the local mosque on Fridays. However, this is no different to the way many other people, regardless of the religion they follow, become more committed to their faith. Khan told associates that he had turned to religion after a far from blameless youth that had seen him involved in fights, as well as bouts of drinking and drug-taking.

Similar to Roche, Khan's personal circumstances coincided with a reinvigorated immersion in Islam and an association with networks who held the extreme, Salafi-Jihadi violent views. For example, Hayman (2009) reported that in 2002 Tanweer became more extreme in his following of Islam and in 2003 established a close relationship with Khan. Further information from police and UK intelligence found that Tanweer and Khan travelled together to Pakistan towards the end of 2004. It is reported by the BBC profile of the bombers, both Tanweer and Khan became known to the security services, but were on the periphery of other surveillance operations. Tanweer's uncle, Tahir Pervez, said his nephew and Khan had spent a great deal of time together in Pakistan before they returned to Britain in February 2005. Pervez said: "They used to be up all the night talking to each other whenever Khan visited Tanweer during this period." Tanweer's DNA, along with that of two other suicide bombers, was found at 18 Alexandra Grove in Leeds, the location where the attackers made their bombs. On 6 July 2006, a video allegedly showing Tanweer was aired by Al-Jazeera television. In the video, speaking in a Yorkshire accent, Tanweer said: "What you have witnessed now is only the beginning of a string of attacks that will continue and become stronger" (Tanweer, 2006, July 6).

Unlike his three companions, Germaine Lindsay was born in Jamaica, on 23 September 1985, and moved to the UK with his mother in 1986. Lindsay is reported to have been a bright student and good at sport. Along with his mother, Lindsay converted to Islam in 2000. The House of Commons official report says his behaviour around this time was mixed. At school, he is said to have begun associating with troublemakers and was disciplined for handing out leaflets in support of AQ. At his local mosque and in Islamic groups around Huddersfield and Dewsbury, he was admired for the speed with which he achieved fluency in Arabic and memorised long passages of the Quran, showing unusual maturity and seriousness. He began wearing the traditional white robe. Although Lindsay lived in Huddersfield, Leeds, it is not known exactly when he met and became friends with Khan, but both are alleged to have frequented the same gyms, mosques and local venues in

the Huddersfield area. It is believed that he was strongly influenced by the extremist preacher Abdallah al Faisal (also of Jamaican origin), who is now serving a prison sentence for soliciting murder, incitement to murder and incitement to racial hatred and distributing material of a racial hatred nature. The Gartenstein-Ross and Grossman (2009) study determined that around 20 percent of the home-grown terrorists examined had a *spiritual mentor*, a more experienced Muslim who gave specific instruction and direction during the radicalisation process. In the same study it was found that 25.6 percent of the home-grown terrorists studied had a *spiritual sanctioner* in their plot (an individual with perceived religious authority who provided specific theological approval for the violent activity).

The only member of the London 7 July 2005 attack who publically demonstrated any outward sign of being interested in or supportive of the Salafi-Jihadi movement was Hasib Hussain. Hussain was not a high achiever academically; he was keen on sport but not outstanding; he left school in 2003 with a few GCSEs at C grade and below. He then went on to College to study an Advanced Business Programme. Hussain undertook a Hajj visit to Saudi Arabia with his family early in 2002. While in no way does the Hajj visit imply any hint of a direct or indirect cause of radicalisation, the House of Commons report describes how it was after this that he began wearing traditional clothing and a prayer cap and would wear white on Fridays. Sometime after this it was noticed that he had written "AQ No Limits" on his RE schoolbook. He was open about his support for AQ in school and said he regarded the 9/11 bombers as martyrs.

In 2003, Mohammad Sidique Khan flew to Pakistan and was picked up at Islamabad International Airport by Omar Khyam and Mohammad Junaid Babar, a Pakistan-American who ran training camps in Pakistan for AQ. In his account of the London attack, Jones (2012) sets out how Khan's training at the camp was overseen by senior AQ leader Abl al-Hadi al-Iraqi as well as AQ's head of external operations, Abu Ubaydah al-Masri. Upon his return to the UK, it is highly likely that Khan's reputation and sense of confidence would have grown, as well as his ability to influence his three other friends and collaborators. In an assessment, McGrory et al (2007) explain, "these young men were no ordinary students. They had come to Pakistan to study violent jihad with AQ instructors specialising in explosives, firearms and urban terrorism" (McGrory et al, 2007, 1 May). McGrory et al (2007) describe how for six months Khan and Tanweer kept a very low profile until they returned to Pakistan in November 2004 and made their way back to the Abl al-Hadi al-Iraqi training camps. In analysing this junction along their route to the attack it could be

deduced that Khan and Tanweer had already been inspired by the Salafi-Jihadi narrative and totally accepted the use of violence. The opportunity to train and mix with other like-minded individuals and AQ fighters was part of their operational preparations. It was during this period that they were groomed to be suicide bombers, encouraged to recruit other "martyrs" and taught how to make explosives (McGrory 2007; Jones 2012). In his examination of home-grown terrorism in the United Kingdom. Brandon (2009), who explains:

> In the United Kingdom, the discovery of new terrorist plots generally follows a clear trend. In a blaze of publicity, the would-be terrorists are arrested or, more rarely, succeed in carrying out an attack. Soon afterward, their friends and family are quoted as saying that the suspects are innocent and that they would never be involved in terrorism. Meanwhile, journalists speculate that these men (of whom little is yet known) apparently acted alone and had few if any links to known terrorists or extremist groups. This is often accompanied by learned speculation that this is a sign that more terrorists are becoming "self-starters," operating alone and forming fully independent cells as outlined in Abu Mus`ab al-Suri's *The Global Islamic Resistance Call*. This in turn often triggers further speculation that al-Qa`ida no longer exists as an organization or even as a network, an impression that is often only strengthened by the internet ranting of apparently isolated figures such as Ayman al-Zawahiri. (Brandon, 2009, p.1)

As Jones (2012) reports, by February 2004 MI5 in the UK had covertly recorded a conversation between Khan, Mohammed Qayum Khan and Omar Khyam, who up until their arrest in early 2005 were two of the UK's most wanted terrorists with ties to AQ.

In their radicalisation model, Silber and Bhatt (2007) determine the "jihadisation" phase occurs when members of a select group usually appoint themselves as "warriors in a holy war" and thus see it as a religious duty to begin planning, preparing and undertaking a terrorist attack. As the *House of Commons Report of the Official Account of the Bombings in London on 7th July 2005* and Briggs et al (2011) describe, the inspiration to conduct the terrorist attack may have coincided with the combination of personal circumstances and a network of close friends that bound them together as so-called holy warriors. The Briggs et al (2011) paper also examines the role of having a place where these linked networks can interact outside of their family or other friends who are not interested in Salafi-Jihadi extremism. From the Coroner's Inquest, Briggs et al (2011) reveal how the Iqr Bookshop in Leeds provided such a place. From the available evidence it can be assumed this bookshop provided a venue for these groups of males to build a bond around AQ's extremist Salafi-Jihadi narrative.

The Kirby (2007) case analysis of the London bombing describes how the Iqr bookshop was a place where videos of AQ's graphic violence were sold and watched. Similarly, Kirby (2007) describes a series of paintball sessions that often followed after the group had watched these videos. In critically examining the phenomenon of home-grown terrorism, Cone and Harrow (2011) describe cases from Denmark where terrorism emerges from heterogeneous communities in which people with a higher degree of belonging mix with others of a lower degree of belonging. That is, people may not have been born in the West but they were raised there or spent a significant part of their life living there. This analysis is important for understanding how Lindsay became involved through friendships with Khan, Hussain and Tanweer and ultimately how they all became inspired and evolved into terrorists, culminating in their attack on London.

In addition to the collective viewing of these graphically violent videos, the direct influence of AQ in inspiring and training these four young, home-grown terrorists was confirmed following release of the Court Transcripts that included recordings made of Khan and Khyam's conversations as they prepared to undertake terrorist training in Pakistan:

> **Omar Khyam**: Take your own passports through the airport. Whoever is your Emir he will take all the wealth. If you or your brother need a doctor he will arrange for you to see a doctor. He will pay for it. If you need to make a phone call home he will arrange for the telephone call. Anything you think needs to be done he will do it. But Islam works through the Emir ... everything goes through him.
>
> Don't tell your real name to no one, even to your Emir. Just say you are from Manchester.
>
> Some of you will be enrolling in the colleges, doing electronic courses, computer courses, whatever you want to do. You are British guys who have come to study in Pakistan because it's a lot cheaper.
>
> **Mohammed Siddique Khan**: How long does it take to get to the training camp [to be selected in Pakistan] ... the actual camp.
>
> **Omar Khyam:** You'll be going to the tribal areas, stay with families, you'll be with Arab brothers, Chechen brothers. The only thing I will advise you, yeah, is total obedience to whoever your Emir is ... whether he is Sunni, Arab, Chechen, Saudi, British - total obedience. I'll tell you up there you can get your head cut off. (cited in Jones, 2012, p.202).

These recordings were made by MI5 in 2004, after they bugged Flat 4, 56 Hencroft St, Slough, the residence of Omar Khyam.  As the *House of Commons Report of the Official Account of the Bombings in London on 7th July 2005* explains, the transformation of Khan, Tanweer, Hussain and Lindsay from unexceptional UK citizens into suicide bombers was only partly clear in the early stages of the investigation; however, this recorded dialogue is revealing.  Interestingly, the dialogue from Omar Khyam reveals a strange mix of nationalities and even selects those who are Sunni as being equally under threat if they are not totally committed to the Salafi-Jihadi cause.  In their examination of home-grown terrorism from the context of the US and the UK, Gartenstein-Ross and Grossman (2009), explain how as "home-grown terrorists internalise rigid interpretations of Islam, many come to view alternative interpretations and practices as not just incorrect theologically, but as personal affronts" (Gartenstein-Ross and Grossman 2009, p.15).  As the authors go onto explain this can result in violence even against other Muslims.  For example, the same report describes how Khan and Tanweer visited Pakistan from November 2004 to February 2005 and then sets out that between April and July 2005 the group was in contact with an individual or individuals in Pakistan.  However, the report admitted that, "it is not known who this was or the content of the contacts but the methods used, designed to make it difficult to identify the individual, make the contacts look suspicious" (*House of Commons Report*, 2006, p. 21).

There is a limit to how far this research or any post-attack investigations can accurately delve into the minds of the four suicide bombers.  Certainly, the London case appears to reinforce Sageman's (2008) analysis in the significance of networks and friends to facilitate and strengthen the Salafi-Jihadi inspiration.  However, there is nothing in the background, upbringing, education or family of the London bombers that points to a propensity or susceptibility to be inspired enough by the Salafi-Jihadi movement to the extent that they would become suicide bombers.  It is not until further analysis of information and data, made available since the two House of Commons reports, that it has been revealed how the bombers became drawn into and closely associated with AQ and its network.  For example, Hayman (2010), who was Assistant Commissioner, Special Operations at the time of the 7 July 2005 terrorist attacks, explained it would take two years before it was publically revealed that MI5 had covertly filmed Khan fraternising with another group of terrorists planning to carry out an attack in London using a fertilizer-based bomb.

The *House of Commons Report of the Official Account of the Bombings in London on 7th July 2005* explains it is not known when the four suicide bombers first developed the idea of an attack in the UK, but a visit by Khan and Tanweer to Pakistan from late 2004 to early 2005 may have been important for developing the plan to attack London. However, when analysed through Boyd's conceptual framework, the 7 July 2005 London terrorist attacks strongly suggest the use of Salafi-Jihadi inspired home-grown terrorists as an adaptation by AQ in the face of growing security challenges and a tactic of asymmetric warfare that penetrated the West's OODA loop.

### 5.3.1 Case Analysis using the OODA Loop

As the strategic framework for this research describes, Boyd's OODA Loop is essentially an evolutionary process and requires the person or entity to adapt and evolve in the face of external changes in their environment. The OODA Loop can also be applied to unpredictable events. When one's opponent is pressured with time and ambiguity, creating a high state of entropy, it is more likely the opponent can be defeated. Evidence for this is contained within Hayman (2010), as he details the confusing and overwhelming demands on police, the intelligence services, government and media following the 7 July 2005 terrorist attacks. In 2007 the US Army published its revised *Counterinsurgency Field Manual No. 3-24* in which it states, "In COIN, the side that learns faster and adapts more rapidly – the better learning organisation – usually wins" (US Army COIN Field Manual, No.3-24, 2007, p.ix). In the case of AQ's Salafi-Jihadi inspired terrorism, this has meant a constant adaptation and disruption strategy to carry out home-grown terrorist attacks; an important operational requirement for asymmetric warfare.

As mentioned in Chapter Three, the call by Abu Hamza al-Masri for all Muslims to conduct attacks in their Western country of residence is a good example of this OODA loop adaptation to inspire a potentially unlimited number of self-perpetuating producers of AQ's brand of terrorism. This adaptation is an example of fourth generational warfare described by Lind et al (1984) and by van Creveld (1991), who at that time argued future wars would shift to being waged by groups of terrorists, driven by ideological fanaticism. As with T E Lawrence's view of turning the Arab revolt into an intangible movement that was as much of a mindset as a physical force, AQ was demonstrating the capacity to continue to flourish through its ability to adapt that made it difficult to counter. Significantly, the moral and

mental distorting image of British citizens conducting suicide attacks against their fellow civilians generated the kind of internal entropy Boyd (1987) refers to in *The Strategic Game of ? and ?*. These are important areas of analysis when using the OODA Loop as an analytical lens.

The moral and mental distorting effect was evident in Khan and Tanweer's martyr videos released by the UK police and intelligence agencies (*House of Commons Report of the Official Account of the Bombings in London on 7th July 2005*).  Not only did the videos further demonstrate the four terrorists had been inspired through their friends and associates by AQ's Salafi-Jihadi narrative, but the fact that they had thick Yorkshire accents distorted the mental image the police and public had of who they assumed would be terrorists.  In his martyr video, released by the Qatar-based Al-Jazeera news agency, Khan said:

> "We are at war… I am a soldier… I am going to keep this short and to the point, because it's all been said before by far more eloquent people than me.
>
> "But our words have no impact upon you, therefore I'm going to talk to you in a language that you understand. Our words are dead until we give them life with our blood.
>
> "I'm sure by now the media has painted a suitable picture of me, this predictable propaganda machine will naturally try to put a spin on it to suit the government and to scare the masses into conforming to their power- and wealth-obsessed agendas.
>
> "I and thousands like me are forsaking everything for what we believe. Our driving motivation doesn't come from tangible commodities that this world has to offer. Our religion is Islam, obedience to the one true God, Allah and follow in the footsteps of the final prophet and messenger Muhammad.
>
> "This is how our ethical stances are dictated. Your democratically elected governments perpetuate atrocities against my people and your support of them makes you responsible, just as I am directly responsible for protecting and avenging my Muslim brothers and sisters.
>
> "Until we feel security, you'll be our target. Until you stop the bombing, gassing, imprisonment and torture of my people, we'll not stop this fight. We are at war and I am a soldier. Now you too will taste the reality of this situation."  (Mohammad Sidique Khan; 1 September 2005; al Jazeera News)

In *Patterns of Conflict*, Boyd (1986) describes how one needed to manoeuvre an adversary beyond his moral-mental-physical capacity to adapt so that he can neither divine your intentions nor focus his efforts to cope with the unfolding strategic design or related decisive strokes as they penetrate, and even isolate the opponent's capacity to respond. Further, Boyd (1986) argues for the need to Observe-Orient-Decide-Act more inconspicuously, more quickly and with more irregularity as a basis to keep or gain initiative as well as to shape and shift the main effort. As AQ demonstrated in the 7 July 2005 London attacks, to repeatedly and unexpectedly penetrate vulnerabilities and weaknesses ties-up, diverts, or drains-away an adversary's attention elsewhere.

From the period between 11 September 2001 until after the London attacks the scale of potential threats, information from the public and leads on persons of interest generated a high degree of entropy in the UK Government, police and security agencies, as described by Hayman (2010) and Briggs et al (2011). For example, as listed by Wilner and Bubouloz (2010): in December 2001 Muslim convert Richard Reid attempted to ignite a bomb in his shoe on American Airlines Flight 93; in 2004 a British-Pakistan terrorist cell was disrupted, with all eight members jailed in 2007; the July 2005 failed attempted suicide attack on the London transport system; the defeated liquid bomb plot targeting transatlantic flights between the UK and North America; the 2007 car-bombing of Glasgow airport, in addition to the two attempted car-bombs by four doctors; and in 2008 an internet inspired home-grown terrorist exploded a bomb at an Exeter restaurant. This list does not include having to pursue the number of connections, associates, friends and family who may or may not have been suspected of being involved in planning or supporting other terrorist attacks.

In his critical analysis of the reporting on the London attacks, Kirby (2007) describes how the UK security agencies appeared unwilling or unprepared to accept that the attack has been planned and perpetrated by a handful of people, all of them whom were British. Further, Kirby (2007) explains the home-grown element was so troubling that all the international links received nearly all the attention from the security agencies. In the context of the OODA Loop, this suggests the distortion that had been created by AQ's ability to inspire home-grown terrorists. Further, as the introduction to this chapter set out, the London attacks reinforce what Crone and Harrow (2011) explain has been a significant increase since 2003 in internal (home-grown) terrorism that is not autonomous.

While there is no confirmation from open-source data to determine when or how London was to be the target, this period of time is relevant in understanding the adaptation of AQ's operational strategy and manoeuvrability tactics through the OODA Loop. During the period Khan had travelled in Pakistan for training in 2003, 2004 and 2005, the US-NATO military and counterterrorism operations in Afghanistan and the border region of Pakistan had increased dramatically. These actions placed significant pressure on AQ and its ability to train terrorists. As Atran (2010) and Sageman (2004) explain, the growth and development of terrorist networks became largely a decentralised and evolutionary process, based on adaptations to unpredictable events. In other words, the London 7 July 2005 bombings reflect AQ penetrating the UK's counterterrorism strategy because its own OODA loop was being penetrated in Afghanistan and Pakistan.

At the same time AQ realised that its narrative that bound violence to its brand of Islam could see individual jihad carried out without a perpetrator having to join a traditional *mujahideen* on a conventional battlefield. Referring again to the speech by Abu Hamza al-Masri in Kohlmann (2008) - regarding his call to train, prepare and conduct home-grown attacks - also provides an account of how AQ changed tack through a strategy that saw the battlefield extend to include one's own backyard, synthesised with the global connectivity provided by the internet. It epitomised the maxim: "think global, act local." As Storm (2014) recalls, following the 7 July 2005 attacks on London, Omar Bakri Mohammed told followers, "Jihad has come to the UK. You can do whatever you wish" (Storm, 2014, p.86). As Kohlmann (2008) explains, this change of strategy was greatly assisted by the internet and the ability it gave AQ to inspire a growing number of Western raised or born self-perpetuating home-grown terrorists who no longer required training in Afghanistan. Even Storm (2014) admits that at the time "intellectually I was already on the battlefield" (Storm, 2014, p. 82). This next phase of strategic adaptation is effectively described by Wilner and Dubouloz (2010) who explained that AQ inspired home-grown terrorism of unaffiliated individuals tapping into AQ's message of violence against the West and its citizens as a relatively new development. This is exemplified in the next case involving the Boston Marathon bombing.

**5.4 Case Study 3 – 15 April 2013 Boston Marathon Bombing**

On 15 April 2013, Chechen brothers and long-term residents of the United States, Dzhokhar and Tamerlan Tsarnaev, carried out a terrorist attack near the finish line of the Boston Marathon.  The simultaneous explosions involved two improvised explosive devices (IEDs), using pressure cookers contained in back-packs carried by the brothers and left on the ground near spectators.  The explosions killed three people, wounded 264 others and resulted in a massive search, before Tamerlan was killed and Dzhokhar was captured; he now awaits trial (Kotz, April 24, 2013; United States District Court of Massachusetts v. Dzhokhar Tsarnaev).  When analysed through the OODA Loop, the Boston Marathon bombing is another illustrative case study demonstrating the regenerative capacity of AQ's Salafi-Jihadi narrative.  The Boston bombing involved unexceptional Western domestic individuals with no known links with or funding from any AQ members, being inspired by the Salafi-Jihadi narrative to become home-grown terrorists.

Turning consumers of AQ's brand of terrorism into self-generating producers was an evolving phenomenon.  This adaptation, was identified in the *Los Angeles Times* (2013, April 20) by US federal counterterrorism and law enforcement investigators who believed the crude nature of the bombs and behaviour of the suspects made the Boston Marathon attack look less like a plot planned from overseas.  Instead, authorities believed it was an example of home-grown terrorism, inspired by "jihadist" propaganda on the internet.  In terms of future counter-terrorism strategies, the Boston Marathon case is an example of a disconnected, self-generated act of home-grown terrorism that is very difficult to detect and defeat.  Alternatively, this phenomenon could also be an example of what Aly (2015) describes as AQ regenerative capacity:

> The wisdom of employing an orthodox military response against an unorthodox enemy whose regenerative capacity relies on its ability to employ 'soft' strategies of influence and mobilisation has, rightly, been questioned. The so called 'war on terror' was co-opted and reconstructed by AQ and its affiliates as a 'war on Islam'- providing a powerful rally cry to potential recruits and sympathisers.

(Aly, 2015, blog, Huffington Post, http://www.huffingtonpost.com.au/anne-aly/time-to-get-smart-about-c_1_b_8064110.html)

Together these case studies highlight how the OODA Loop can be used to explain and explore the transformative and adaptive nature of AQ, with a brand of terrorism that remains dynamic.

In order to examine the Tsarnaev brother's trajectory towards conducting the Boston Marathon bombing, it is first necessary to examine their background. Dzhokhar and Tamerlan Tsarnaev arrived in the United States with their parents in 2002, from Kyrgyzstan. Their mother, Zubeidat Tsarnaev, was from the former Russian Republic of Dagestan. Originally, the Tsarnaev family lived in Dagestan, which in the 1990s had indirectly felt the effects of the war in Chechnya. It was from Dagestan that the Tsarnaev family applied for asylum to the United States. While the Tsarnaev parents were followers of Islam, there is no available, open-source information to suggest links to any Chechnya-based, Islamic terrorist organisation and nothing to suggest an association with AQ or any AQ- affiliated groups. Significantly, for this research, there was nothing extraordinary about the Tsarnaev family compared with any other working class, immigrant family as they settled and lived in the suburbs of Cambridge, Massachusetts.

Tamerlan Tsarnaev gradually increased his interest and commitment to Islamic extremism and became inspired by the Salafi-Jihadi narrative in approximately 2008. From her research, McMahon (2013) explains Tamerlan's religious transformation appeared to come as other aspects of his life were falling apart. Similar to the Roche case, the allure of Islam coincided with a change in Tamerlan's personal circumstances. For example, Tamerlan failed in his goal of being selected for the US Olympic boxing team and around the same time was arrested for domestic assault of an ex-girlfriend in 2009. Then in 2011, his friend, Brendan Mess, was murdered along with two other men in an apartment in Waltham, Massachusetts. In her critical analysis, McMahon (2013) reported that Tamerlan's neighbours recalled how he went from wearing tight jeans, flashy shoes and slicked-back hair, to growing a beard and wearing more traditional dress.

It was around 2008 that Tamerlan began attending the Islamic Society of Boston mosque which along with its sister mosque, the Islamic Society of Boston Cultural Center, has a history of members being arrested and convicted for their direct involvement in Salafi-Jihadi inspired terrorism. In a *USA Today* article, Dorrell (2013) reports that Aafia Siddiqui, Tarek Mehanna, Ahmad Abousamra and Jamal Badawi of Canada had all attended the Islamic Society of Boston mosque and subsequently had been convicted and sentenced to

imprisonment, or are wanted by US law enforcement authorities for their direct or indirect involvement in Salafi-Jihadi inspired terrorism or terrorist groups. As with Roche, Tamerlan's connection to Islamic extremism appears to have coincided with his search for a personal identity following a series of failures in his life. In relation to the Islamic Society of Boston Cultural Centre, the *USA Today* media report went on to say, it has:

> invited guests who have defended terrorism suspects. A former trustee appears in a series of videos in which he advocates treating gays as criminals, says husbands should sometimes beat their wives and calls on Allah (God) to kill Zionists and Jews, according to Americans for Peace and Tolerance, an interfaith group that has investigated the mosques. (Dorrell, 2013, p.1)

According to Morales and Otis (2013), it was in 2009 that Tamerlan demonstrated a radical change towards Islamic extremism. However, to date US law enforcement and security agencies have been unable to find a link between the Tsarnaev brothers and AQ or any AQ-networked terrorist organisation. In addition, and unlike earlier Salafi-Jihadi inspired home-grown terrorists, the Tsarnaev brothers had not gone to Afghanistan, Pakistan or Yemen to attend an AQ training camp or participate in training from any other AQ-connected terrorist organisation. The only indication or warning came from the Russian Government's Federal Security Service, or FSB, that Tamerlan was a follower of radical Islam. For example, Shane (2013) reported that Russian authorities had informed the FBI in March 2011 that Tamerlan Tsarnaev, an ethnic Chechen who had lived in the United States for about a decade, had changed dramatically, had adopted extremist views and planned to travel to Russia to meet with underground groups. The FBI sent agents to interview Tamerlan and his parents and found no evidence of any crime or links to a terrorist organisation. The Russian authorities passed the same information on to the CIA in September 2011.

It is easy to be critical of law enforcement and intelligence agencies for not taking this information more seriously. However, there are many followers of Islamic extremism, just as there are other people who follow extreme, ideological views of the world, who do not become terrorists. For example, Cooper, Schmidt and Schmitt (2013) reported the Russian warning in 2011 was viewed by FBI officials mainly as an expression of concern that Tamerlan Tsarnaev or his mother, both of whom had become far more religious, might carry out an attack on Russian soil. Both of their names were added to the American TIDE database. The TIDE database is a list of people suspected of some connection to terrorism; in 2011 it contained more than 500,000 names. The scale of maintaining watch on these

suspected terrorist sympathisers is enormous.  Further, just because a person's name appears on the TIDE list does not mean they are planning to implement an act of terrorism on one's fellow citizens.  This makes a distorting array of signals and information creating what Boyd refers to as a high state of entropy.

As the FSB reported to the FBI, Tamerlan travelled to Dagestan, where he visited the Central Dzhuma Mosque in Makhachkala.  It is alleged this occurred during the two times Tamerlan travelled to Dagestan in 2011 and for six months in 2012.  As mentioned, it was following this period that the FSB began monitoring Tamerlan and notified the FBI.  The Central Dzhuma Mosque was known to Russian authorities as being a place preaching Islamic extremism and from where a number of members involved in hostile engagements with the Russian police had originated.  A *Time* magazine article reported that:

> The FBI said it had received information from an unidentified "foreign government" that Tsarnaev was "a follower of radical Islam and a strong believer, and that he had changed drastically since 2010 as he prepared … to join unspecified underground groups. In response, the FBI said it interviewed Tsarnaev and checked its records for relevant information, but "did not find any terrorism activity, domestic or foreign. (Shuster, 2013, p. 1)

According to US travel records, Tsarnaev arrived at Moscow's Sheremetyevo airport on 12 January 2012, returning on 17 July.  He spent time in Makhachkala, Dagestan that summer (Cornwell & Hosenball, 2013; Roberts & Gabbatt, 2013).  Even so, there are a number of equivocal reports as to whether he met and trained with militant Islamic extremists. Despite the FBI finding no terrorism activity, the visit to the Central Dzhuma Mosque could be a potential point of reference that facilitated the influence of the Salafi-Jihadi narrative for Tamerlan.

In Shuster's 2013 *Time* magazine article, he describes a long history of Salafi-Jihadi inspired acts of terrorism and attacks on Russian military and police, by members of the Central Dzhuma Mosque.  Shuster found that interviews with the brothers' acquaintances point to an increase in Tamerlan's move towards Salafi-Jihadi inspired extremism following time spent in Dagestan at the Central Dzhuma Mosque.  However, as Shuster (2013) determines, there is no qualitative data to explain how a person such as Tamerlan, in less than three years, is drawn into the Salafi-Jihadi narrative and conducts a terrorist attack in his adopted country.  There is no evidence that the brothers received any instruction, finance or support to carry out the Boston Marathon terrorist attack.  Similarly, there is no evidence that the

brothers received any training or instruction in bomb-making or terrorist tactics, techniques and procedures while attending the Central Dzhuma Mosque.

Even with Tamerlan's name on the TIDE database and his trips to Dagestan, his brother Dzhokhar was not displaying any indications of being inspired by Salafi-Jihadi terrorism. While not everything in his life was easy, upon graduation from his high school in 2011, Dzhokhar received a USD2500 education scholarship, after which he enrolled at the University of Massachusetts, Dartmouth and elected to study nursing (*CBS News* Profile of the Tsarnaev Brothers *April 23, 2013*). According to Bump (2013), on 11 September 2012 Dzhokhar became a US citizen, less than a year before the Tsarnaev brothers carried out their terrorist attack on the Boston Marathon. From what can be ascertained through available open-source data, even at this stage there was no indication of a dramatic spiral of radicalisation towards Salafi-Jihadi inspired home-grown terrorism.

On 27 June 2013, a US Federal Grand Jury released a 30-count indictment against the Tsarnaev brothers, in which it alleged that sometime before the bombings, Dzhokhar Tsarnaev downloaded extremist Islamic propaganda from the internet. This included online content that directed Muslims against giving their allegiance to governments that invaded Muslim lands. Also included was material by Anwar al-Awlaki, the American citizen who became a senior operative in AQ's branch in Yemen and who was killed in a 2011 drone strike. Following forensic investigation of CCTV footage, Boston Police and the FBI were able to determine the movements of the brothers up to the time of the explosions and as they escaped from the scene. (*United States vs. Dzhokhar Tsarnaev, Case 1:13-mj-02106-MBB*, United States Department of Justice. April 21, 2013).

The United States District Court for the District of Massachusetts, Case 1:13-mj-02106-MBB details that on 15 April 2013, two explosions hit spectators situated near the finish line of the Boston Marathon, killing three people and injuring just over two hundred. Two brothers, Tamerlan Tsarnaev and Dzhokhar Tsarnaev, separately detonated backpacks comprising of so-called "pressure cooker" bombs, by the use of their mobile phones. In 2004, the United States Department of Homeland Security (DHS) issued an official warning about pressure cooker bombs:

> Typically, these bombs are made by placing TNT or other explosives in a pressure cooker and attaching a blasting cap at the top of the pressure cooker.

The size of the blast depends on the size of the pressure cooker and the amount of explosive placed inside. Pressure cooker bombs are made with readily available materials and can be as simple or as complex as the builder decides. These types of devices can be initiated using simple electronic components including, but not limited to, digital watches, garage door openers, cell phones or pagers. As a common cooking utensil, the pressure cooker is often overlooked when searching vehicles, residences or merchandise crossing the U.S. Borders.
(United States Department of Homeland Security Information Bulletin on pressure cooker bombs:
http://www.cbsnews.com/htdocs/pdf/PotentialTerrorist.pdf)

From all open-source reporting, it has become evident that the Tsarnaev brothers learned how to make pressure-cooker bombs from AQ's internet published *Inspire* magazine. Dzhokhar Tsarnaev himself admitted to obtaining bomb-making lessons from the June 2010 issue of AQ's *Inspire* magazine.  Before his death in Yemen in 2010, a 24-year old American, Samir Khan, was the editor of *Inspire* magazine and published an article entitled "*Make a Bomb in the Kitchen of Your Mom*."  Through the use of a modern, global inter-connected tool such as the internet, one of AQ's Salafi-Jihadi narrative strategists was able to inspire self-generating, home-grown terrorists.  The Tsarnaev brothers were also inspired through the internet preaching of Anwar al-Awlaki, who was one of the most influential Salafi-Jihadi narrative strategists whose prolific use of the internet motivated many home-grown terrorists.

Before he was killed in a US drone strike in Yemen on 30 September 2011, Anwar al-Awlaki was the leader of AQ in the Arabian Peninsular.  As Bergen (2014) explains, one year after the Boston Marathon bombings and three years after his death, the New Mexican-born American cleric continued to be a major influence on violent Salafi-Jihadi extremists in the United States.  Individuals or internet-connected ideological communities can still access Anwar al-Awlaki's sermons online.  In a CNN article, Bergen (2014) sets out how in June 2014 Justin Kaliebe, an 18-year old New Yorker, pleaded guilty to attempting to travel to Yemen to join AQ in the Arabian Peninsula.  According to his plea agreement, Kaliebe told an undercover officer, "my standard is Sheik Anwar Al-Awlaki and Sheik Osama [bin Laden], both who bore witness to the truth."  This example also illustrates that it is easier to eliminate the leader than the prophetic narrative that is recreated in the minds of individuals and groups around the world.

The 27 June 2013 US Federal Grand Jury indictment of Dzhokhar Tsarnaev also disclosed a note in which Dzhokhar said he wanted to punish the United States for the "evil" of hurting Muslims. The 30-count indictment alleged that the Tsarnaev brothers had been inspired by AQ publications and that Dzokhar left a confession in the boat in a Watertown backyard where he was captured four days after the bombings, saying, "I don't like killing innocent people." Even though he noted that "it is forbidden" in Islam to kill innocent people, he justified his actions as a response to US military involvement in Muslim countries, according to the indictment. "The US government is killing our innocent civilians," Tsarnaev allegedly wrote. "[...] I can't stand to see such evil go unpunished […] We Muslims are one body; you hurt one, you hurt us all. Stop killing our innocent people, we will stop." (*United States vs. Dzhokhar Tsarnaev, Case 1:13-mj-02106-MBB*, United States Department of Justice. April 21, 2013).

As already described, while difficult to identify an exact cause or obvious series of events in their lives, the Tsarnaev brothers did become motivated and inspired by Salafi-Jihadi interpretations of Islam. Even their seemingly short period of time attending the Boston Mosque and Tamerlan's visits to the Central Dzhuma Mosque in Dagestan may have been enough to fulfil and drive their motivation or personal justification to become terrorists. While there may have been no direction or assistance from AQ to carry out an attack, these small but intense periods of association with other like-minded Salafi-Jihadists may have reinforced their own feelings of injustice. By being directly exposed to the Salafi-Jihadi narrative that reinforced a growing feeling of disrespect and injustice, their personal identity was infected to such an extent that they decided to conspire, plan and carry out an act of home-grown terrorism.

**5.4.1 Case Analysis using the OODA Loop**

As explained previously, Boyd (1986) placed significant emphasis on the use of the German military's concept of *schwerpunkt* throughout all levels of the chain of command, so that each part of the organic whole can operate at its own natural rhythm. In other words, there is an implicit understanding by those down the chain of command as to the overall strategy. The *schwerpunkt* is the strategic glue that is operationalised throughout the organisation via an implicit understanding. Boyd (1987) accepted that orientation is the *schwerpunkt* and argued that:

Expose individuals, with different skills and abilities, against a variety of situations—whereby each individual can observe and orient himself simultaneously to the others and to the variety of changing situations.

In such an environment, a harmoney, or focus and direction, in operations is created by the bonds of implicit communications and trust that evolve as a consequence of the similar mental images or impressions each individual creates and commits to memory by repeatedly sharing the same variety of experiences in the same ways. (Boyd, 1987, slide 18)

Richards (2008) defines this kind of leadership as that which "implies the art of inspiring people to enthusiastically take action toward the achievement of uncommon goal" (Richards, 2008, slide 5). This is particularly relevant and applicable to the analysis of the Boston Marathon Bombing. The Boston Marathon bombing was conducted by two brothers with no connection, funding or explicit instructions from AQ and yet they became so inspired by the Salafi-Jihadi narrative that they implicitly knew their mission coincided with the overall grand strategy. It is as if they knew unreservedly how their tactical actions, of their own OODA loop, sat within the broader OODA loop of the Salafi-Jihadi strategy. In his presentation on the OODA Loop and leadership, Richards (2008) explains actions should flow from orientation via the implicit guidance and control link. In his paper *Organic Design for Command and Control*, Boyd (1987) argued implicit over explicit was essential in order to gain a favourable mismatch in friction and time for superiority in shaping and adapting to circumstances. When analysed through the theoretical discourse behind the OODA Loop, the Boston Marathon bombing demonstrated the implicit effect of the Salafi-Jihadi narrative to shape the tactical application of its asymmetric war against the West.

The Tsarnaev brothers' transformation from working-class immigrants to terrorists is comparable to how King and Taylor (2011) critically analyse the case of Zakaria Amara, who was convicted in 2009 of planning to carry out a terrorist attack in Canada. While their research explores psychological models of radicalisation, they identified that the Salafi-Jihadi narrative is an important ingredient for the inspiration of home-grown jihadists. As Sageman (2008) explained, well before the Boston Marathon bombing, the growing threat was from local groups and individuals with no connection to AQ, but inspired by them. What is comparable between the research of King and Taylor (2011) and the Boston Marathon bombing is how they describe that at some point in his life, between joking in the classroom and building a detonator, Amara underwent a transformation with no links to or instructions from AQ, and became inspired enough to want to carry out an act of home-grown terrorism.

Similar to Zakaria Amara, the Tsarnaev brothers became inspired to such an extent that they were motivated enough to successfully plan and carry out a terrorist attack on the country they had adopted as long-term residents and citizens. Both the case of Zakaria Amara and the Boston Marathon bombing case further demonstrate the adaptive capacity of the AQ brand to regenerate. Once again, it is the implicit aspect of this regenerative phenomenon that is relevant for this research when using Boyd's strategic model. In other words, the OODA Loop can be used to explain and explore the transformative nature of AQ because both the loop and AQ are not static. As with the OODA Loop, AQ - and its use of the Salafi-Jihadi narrative - is dynamic and evolutionary, generating fast-transients and mental images that inspire followers and confuse opponents. When the OODA Loop is used as the analytical lens, the Boston Marathon bombing case represents an organic transformation of observing and internalising an implicit message or messages that are regenerated into personal mental images that drive an action; in this case, to conduct an act of terrorism.

A potential criticism of previous analysis of Salafi-Jihadi inspired terrorism is the continued search for direct, tangible links to AQ. For example, the Hoffman (2008 and 2011) AQ central leadership argument failed to recognise how AQ's Salafi-Jihadi direction could have evolved to become a self-actualised inspiration. In his critique of Sageman's (2008) *Leaderless Jihad*, Hoffman argued AQ's central leadership is still highly relevant to planning and attempting to implement terrorist attacks against the West. Hoffman (2008) pointed to the 7 July 2005 London Underground bombings, the 2006 failed attempts to blow up flights over the Atlantic and the September 2009 plan by Najibullah Zazi to blow up the New York City subway system as examples of direct AQ involvement. In fact, both Hoffman and Sageman are correct. As AQ's direct involvement in the current Syrian civil war (through their affiliated group Jabat al Nusra) indicates, even with the death of bin Laden, the core AQ leadership should not be ignored or dismissed. Similarly, ISIS has directly reached out to impressionable Muslims in dozens of Western countries to either join them in Syria and Iraq, or conduct attacks in the Western country in which they live.

The Tsarnaev brothers' case study reinforces the Sageman (2008) leaderless jihad theory in the application of Salafi-Jihadi inspired terrorism, whereby there is no direct planning, funding or direction from AQ. However, Hoffman (2008) completely dismisses the bottom-up, self-generating reformation of AQ and its ability to build this notion of what the German military command described as *schwerpunkt*. For example, not long after the death of bin

Laden, AQ's online al-Fajr Media Centre issued a statement telling every "mujahid Muslim, if there is an opportunity, do not waste it […] Do not consult anyone about killing Americans or destroying their economy [..] We also incite you to carry out acts of individual terrorism with significant results, which only require basic preparation" (cited by Burke, 2011, May, 31). This is an example of AQ adapting, analysing and synthesising the *Orientation* of its followers and opponents, and its global, inter-connected and open-source battlefield. Further, it is another example of the tactics of asymmetric warfare which can only be truly implemented through continual adaptation, analysis and synthesis of the evolving world and operating environment. It is Boyd's OODA Loop in action and this case provides strong evidence to demonstrate the effects of this dynamic strategic model. Now anyone could become a *mujahedeen* in their own backyard or re-create their own fantasy in their own identity in the application of AQ's Salafi-Jihadi narrative. Through the use of the OODA Loop, the Boston Marathon bombing case demonstrated this paradigm shift or evolution and dynamic adaptation by AQ.

## 5.5 Conclusion

The three case studies selected for this research demonstrate how the theoretical constructs within the OODA Loop can be used to analyse the transformative nature of modern terrorism as warfare. These theoretical constructs include, but are not limited to, generating entropy in an opponent, distorted mental images, orientation, implicitly comprehending the overriding mission as well as tactical OODA loops working within broader strategic OODA loops. Using the OODA loop as the analytical lens enabled a deeper examination of the three case studies to illustrate the adaptation of Salafi-Jihadi inspired home-grown terrorism as a tactic of asymmetric warfare - from the case of Jack Roche and the use of unexceptional individuals from Western countries to avoid detection, to the 7 July 2005 London attack where Western groups of friends were used to plan attacks to overcome tactical challenges as a way of adapting when AQ had its own OODA loop penetrated, and finally, the Boston Marathon bombing case where two brothers with no known links were inspired by the Salafi-Jihadi narrative as an example of the regenerative adaptability of the AQ brand. Now anyone could be their own band of AQ terrorists, just like those who follow a brand of a sports clothing can imagine themselves being their sporting heroes who represent the values and narrative of that brand.

According to Richards (2006), the OODA Loop can be considered a grand strategy for vitality and growth. A necessary application of this strategy involves operating inside an adversary's OODA loop in order to distort an opponent's *Orientation*. As Richards (2006) explains, one needs to get inside an opponent's "mind-time-space, to create tangles of threatening and/or non-threatening events/efforts as well as repeatedly generating mismatches between those events/efforts an adversary observes, or imagines, and those they must react to, to survive" (Richards, 2006, slide 5). The three case studies also demonstrated the relevance to this fundamental component of the OODA Loop. For example, in terms of the Boston Marathon bombing case, as pointed out earlier, the Tsarnaev brothers were two of 500,000 people on the TIDE list. The sheer scale of this in relation to the US and other Western governments monitoring and prioritising this number of people, in the words of Boyd (1976) from his paper *Destruction and Creation*, generates a high degree of entropy.

As Bjelopera (2013) recognised, the amateurish nature of home-grown terrorists and their lack of connections with Salafi-Jihadi groups present challenges for law enforcement, intelligence and security officials. A vital aspect of operating inside an opponent's OODA loop is to disrupt their operations, overload their system and produce paralysis. As discussed in Hammond (2004), Boyd spent much time studying the Mongols' application of warfare and he saw their ability to combine mobility, communications and leadership with propaganda and terror allowed the Mongols to operate inside their opponent's OODA loop. As Fournier (2013) explains, this leadership was developed and communicated with a single purpose in mind - that of winning. The relevance to this research and this case study is that AQ had created a similar, overriding narrative through propaganda, communications, innovations and adaptability that enabled others to understand implicitly what was required to implement the grand strategy.

For Boyd, the OODA Loop in action is about penetrating, isolating, subduing, subverting, re-orientating and re-harmonising. These terms can be summarised through the use of the concept of manoeuvrability, another important aspect of the OODA Loop. The concept of "energy manoeuvrability", as developed by Boyd, will form a core aspect of the critical discussion in Chapter 6, that will discuss the OODA Loop's applicability to the current terrorism phenomenon. The comparative difference is that Boyd was interested in "energy manoeuvrability", whereas this thesis will attempt to shift Boyd's manoeuvrability paradigm from energy to the moral component that simultaneously inspires violence while

distorting and penetrating the weaknesses in Western moral values in relation to modern warfare. Boyd argued that the moral level of war was also a critical component to defeating an enemy.

In Tetlock (2003), he investigates the peculiar character of moral boundaries in relation to what the public believes is acceptable in warfare. Similarly, van Creveld (1991) raised the uncomfortable question that the West still believes only Governments are morally allowed to conduct war. In an important contribution to the discourse on military ethics and contemporary warfare, Kaurin (2014) reflects on how bombing the Marine barracks in Lebanon or the attack against the USS Cole, or dragging dead US military personnel through the streets of Mogadishu may have little conventional military value but those actions have a tremendous impact on audiences that are not directly involved in the conflict. Those audiences are often the media, politicians and voters who have their own moral boundaries challenged and consequently force moral-based decisions, through their government, on Generals trying to defeat an unconventional enemy. As Kaurin (2014) explains, one cannot win a war by restricting oneself to what might be considered acceptable military targets. This is why Boyd placed great emphasis in his development of the OODA Loop in the physical-moral-mental continuum of warfare and it important for the following chapter.

# Chapter 6 - Case Analysis

## 6.1 Introduction

This chapter expands on the descriptive analysis from the three case studies by applying the OODA Loop to the current terrorism phenomenon. This includes using the OODA Loop to examine how AQ and other proponents of the Salafi-Jihadi narrative have been using what this research describes as "moral manoeuvrability" to penetrate deep inside the OODA loop of Western countries. This involves taking one of the fundamental concepts within the OODA Loop - energy manoeuvrability - and attempting to present a novel concept. The Chapter then employs the OODA Loop to critically analyse the adaptation or tactical asymmetric shift to Do-it-Yourself (DIY), soft target, home-grown terrorist attacks. Further, the OODA Loop is used to critically examine the foreign fighter issue, in relation to Western resident Muslims leaving to join ISIS and Jabhat al-Nusra in Syria and Iraq.

For this chapter, and in fact for this research, it is important to look beyond the tactical use of home-grown terrorism to the broader Salafi-Jihadi strategy of legitimising its position in the wider community. This involves manipulating the use of Western-based constructs, such as the rule of law, protection of human rights, classical liberal principles of freedom and democratic systems from within. It may be an example of what Boyd meant when he described the ultimate point of entropy was folding opponents back into themselves. Combined with the inspiration of individual, home-grown terrorists, and small scale attacks against soft-targets, this would be an example of the Salafi-Jihadi movement demonstrating its dynamic capacity to continue to move inside the West's OODA loop.

## 6.2 Inside the OODA Loop and the Mindset of Contemporary Terrorism

While the analytical lens used for this case study research is the OODA Loop, the intellectual discourse, critical analysis and synthesis Boyd developed behind the OODA Loop are equally as relevant as the loop itself and therefore applicable to the current terrorist phenomenon. As Polk (2010) explains, part of the challenge in accepting Boyd's ideas often stems from difficulty in defining what his theory represents. While Chapter Two provided a discussion and literature review of Boyd's work, this chapter intends to apply his epistemological approach to Salafi-Jihadi-inspired home-grown terrorism, particularly as it relates to the moral aspect of this tactic of asymmetric warfare. As Osinga (2005)

explained, following the attacks of 9/11, the West had to understand that this new game of survival is waged at the cognitive and moral domain. In his *Discourse on Winning and Losing*, Boyd (1992) said:

> People using theories or systems evolved from a variety of information will find it increasingly difficult and ultimately impossible to interact with and comprehend phenomena or systems that move increasingly beyond and away from that variety – that they will become more and more isolated from that which they are trying to observe or deal with, unless they exploit the new variety to modify their theories/systems or create new theories/systems. (Boyd, 1992, slide. 14)

This quote highlights why research into a physically unconstrained, borderless ideology, such as that proliferated through AQ's Salafi-Jihadi narrative, can send academic debate down confined paths of inquiry. These theoretical discourses can quickly become trapped when the phenomena evolves away from its original system or path. For example, Hoffman (2008 and 2011) faced this analytical cul-de-sac when continuing to pursue a discourse fixed on how AQ fought in the past. This is the kind of linear analysis that Boyd would not have supported and is in contrast to the three case studies illustrating the dynamic and regenerative nature of this form of asymmetric warfare. Hammond (2001) explains that, "from these mismatches, discontinuities, things that don't fit reality or our perceptions of it, progress comes" (Hammond 2001, p.172). Attention to irregularities and change are what is required in this field of inquiry that is so dynamic. Boyd firmly believed this was the essence to the creation of innovative mechanisms, systems, process, inventions or instruments that are designed, tested and built.

During Boyd's *Discourse on Winning and Losing* presentation he explains:

> To examine novelty we speak of it in terms of those features that seem to be part of that novelty. In other words, we reduce a novel pattern down to some features that make up that pattern. Different people in examining such a pattern may see differing features that make it up. In other words, these are different ways by which a pattern can be reduced hence the possibility for differing features or parts. Regardless of how it comes out, we call this process of reduction: <u>analysis.</u>
>
> Pushing this process even further we can reduce many different patterns (analyses) to parts that make up each patter and use these parts, or variations thereof, to make a new pattern. This is done by finding some common features that interconnect some or many of these parts so that a new pattern – whether

it be a new concept, new system, new process, new etc – can be created. We call this process of connection: <u>synthesis.</u>

Now if we test the results of this process with the world we're dealing with, we have an <u>analytical/synthetic</u> feedback loop for comprehending, shaping, and adapting to that world. (Boyd, 1992, slide 21)

As examined through the three case studies, and by using the OODA Loop as an adaptable model of terrorism, it was possible to analyse and synthesise key elements of the three case studies to demonstrate how AQ's regenerative capacity has enabled it to continue to simultaneously penetrate the mindset of those who it inspires as well as its opponents. This regenerative capacity produces novelty at the individual and group level across the physical, mental and moral level of asymmetric warfare.

In warfare the inability of opponents to adapt and evolve through an analytical and synthetic process to create novelty means they are less likely to succeed. However one major challenge for Western governments is creating novel strategies to defeat the threat from Salafi-Jihadi-inspired home-grown terrorism, when it is primarily not a physical contest. In *The Psychology of Military Incompetence,* Dixon (1976) describes the contest during the Boer War between the British military - locked into frontal assaults and set piece battles - and the Boers, who were not wedded to a regimented military doctrine. The British were incredulous to discover that their methods of running the war had not be been adopted by the Boers. Dixon (1976) cites Lord Kitchener, who described how the "Boers are not like the Sudanese who stood up to a fair fight. They are always running away on their little ponies […] there are a good many foreigners among the Boers but they are easily shot as they do not slink about like the Boers themselves" (Dixon, 1976, p.55). Lord Kitchener was expressing the British military's contempt for an opponent who changed the nature of warfare, constantly moving and adapting; engaging in what could be described as energy manoeuvrability on horseback - this tactic penetrated the British military's OODA loop.

At the beginning of WWII, British Prime Minister Winston Churchill launched a clandestine war-fighting unit called the Special Operations Executive (SOE). It was tasked with conducting sabotage behind enemy lines, with a particular focus on German and Italian forces occupying Greek Islands (Lewis 2014; Foot 1999 and MacKenzie 2000). Ironically, it was Churchill, as a young war correspondent (1899-1900), who reported how the British

forces were constantly out-manoeuvred by the Boers. The SOE disguised themselves as local fishermen, goat herders and even German soldiers, blending in with the local population; they launched numerous deadly hit-and-run raids. One of the most audacious was stealing three German warships anchored in the Santa Isabel harbour on the island nation of Fernando Po, on 14 January 1942 (Lewis, 2014). The SOE units specialised in instigating Boyd mismatches, discontinuities and novelty, and disorientating the enemy's mental image of how an opponent should fight. Compared to conventional military engagements by regular army battalions, the SOE units did not actually kill many German and Italian soldiers, but they set fear into those soldiers, undermined their morale and diverted enormous German resources away from other Allied campaigns in Europe. However, as Lewis (2014) writes, surprisingly, despite their success the SOE were often criticised for their un-gentlemanly way of fighting, not only by the German military but also by members of the British Parliament. For example, Conservative Member of Parliament Simon Wingfield-Digby (House of Commons) asked Prime Minister Churchill, "is it true, Mr Prime Minister, that there is a body of men out in the Aegean Islands, fighting under the Union Flag, that are nothing short of being a band of murderous, renegade cutthroats?" (Lewis, 2014, p.102).

Boyd would have approved of the Boers' tactics and the actions of the SOE during WWII, both penetrating their opponent's OODA loop. They were behaving and thinking like the fighter pilots Boyd describes in the *Patterns of Conflict.* Boyd argued that a fighter pilot needed to pick and choose engagement opportunities and utilise what he referred to as "fast-transients"; in other words, characteristics that force an opponent to overshoot an attacker or stay inside a hard-turning defender. The tactics used by AQ are examples of "fast-transients". As the three case studies illustrated, the use of Western raised or born Muslims of converts to Islam shifted conventional defensive posture for Western nations from protecting borders to now being attacked from within. The three case studies also describe how AQ went from being directly involved (Jack Roche case) to inspiring entrepreneurial home-grown terrorists (Boston Marathon case) who had no tangible connection to AQ other than through their minds and the internet.

In *Patterns of Conflict,* Boyd intended to unveil the character of conflict, survival and conquest through a critical inquiry of military history and warfare. Despite his use of science, technology and engineering to describe the need for fast transients and the discovery of energy manoeuvrability, fundamentally Boyd believed in the indispensability of

the people who control the application of science, technology and engineering. Boyd agreed with the assessment by T.E. Lawrence, who insisted that people fight wars, not machines, and they use their minds. It is through people's minds that an organisation or movement is able to connect with individuals, through an existentially moral and mental dimension. As described in Chapter One, Boyd was heavily influenced by T.E. Lawrence, who turned a conventional war against the Turkish army, in Jordan and Syria, into an unconventional, asymmetric fight. Lawrence saw his piece of the conflict as being about a state-of-mind as opposed to a contest of physical, military destruction. In his classic eclectic discourse, Lawrence said:

> […] but suppose we were an influence (as we might be), an idea, a thing invulnerable, intangible, without front or back, drifting about like a gas? Armies were like plants, immobile as a whole, firm-rooted, nourished through long stems to the head, we might be a vapour, blowing where we listed. Our kingdoms lay in each man's mind, as we wanted nothing material to live on, so perhaps we offered nothing material to the killing. It seemed a regular soldier might be helpless without a target. He would own the ground he sat on, and what he could poke his rifle at. (Lawrence, 1920, p.5)

This is a powerful eclectic insight that could equally describe how AQ went from directly controlling and implementing terrorist attacks to inspiring others, through the creation of an intangible, borderless movement, drifting like T.E. Lawrence's gas - except now hyper-powered by social media. As with the Turkish military, tangible, physical targets are only part of the challenge when dealing with home-grown terrorism. Ironically, an equally powerful observation made by Lawrence was his recognition that the printing press (in 1917) was the most powerful weapon a commander could have in his arsenal. Little did Lawrence know, the internet would become one of the Salafi-Jihadist's most influential tools for building a global network of aspiring terrorists. It is equally important as a means to infect the moral compass of AQ's enemy through their graphic videos of beheadings and other brutal violence.

It is in the minds of the contemporary producers of Salafi-Jihadi inspired terrorism that an existential connection is built and sustained to create moral leverage over those it seeks to nurture and those it seeks to destroy. As will be discussed in more detail in the next section, Boyd believed it was critical to "use moral leverage to amplify our spirit and strength as well as expose the flaws of competing adversary systems, all the while influencing the uncommitted potential adversaries and current adversaries so that they are

drawn towards our success" (Boyd, 1986, slide 185).  As Khadduri (1984) and Mousalli (2009) explains, for Salafism, submission to God is not a personal or public act but the focal point that engulfs members of Muslim society in all aspects of their lives.  Consequently, the distinction between the personal and the public is replaced by the distinction between the religious and the non-religious, beyond a material and physical dimension; between those who assume all direction and justification from Allah and not the democratic or other human-developed, Hobbesian principles or social contract.  As explained in Chapter Three, AQ and ISIS prosecute this through abject violence against those who are *takfir*, while simultaneously penetrating Western notions of democracy, morality and the rule of law.

In reaction to the terrorist attacks of 9/11, Osinga (2005) explains that academic discourse from the likes of Bobbit (2002), Lynn (2003) and Coker (2002) makes the argument that the West needs to re-conceptualise war, for its instrumental view of war is severely challenged by a clash with groups who experience war as existential.  Groups such as AQ are stateless and more agile in their capacity to manoeuvre their nation-State adversaries beyond their moral-mental-physical capacity to adapt.   It is not a static entity where consensus is required along a Western-designed, organisational human resource chart.  General Stanley McChrystal (retired) recognised this during his time as Commander of the US Special Operations Task Force in Iraq from 2000 to 2008.  In his article, *It takes a Network to Defeat a Network,* McChrystal (2013) said, "we desperately wanted AQ in Iraq to be organised like we were, so that we could understand it, analyse it, pick it apart and ultimately defeat it" (McChrystal, 2013 p.2).   GEN. McChrystal describes how during one discussion with his team, he drew the classic Western corporate organisation chart and then drew what resembled AQ's networked organisation; the two were completely different:
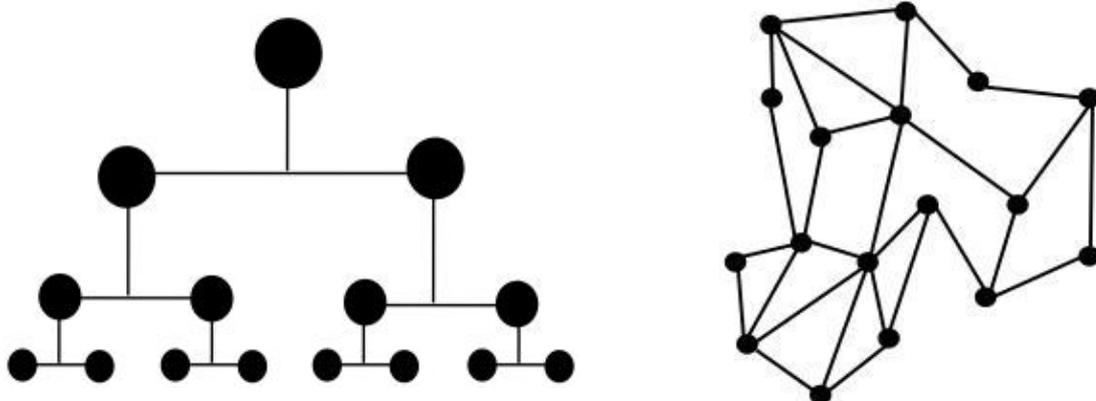


Figure 6.3 *How the US Joint Operations Task Force viewed itself vs. How AQ was organised in Iraq* (McChrystal, 2013 p.2)

Ultimately, GEN. McChrystal adapted his Joint Operations Task Force to be more like AQ, not only in its tactical acceptance of change but, most importantly, he continually evaluated the organisation's strategy to defeat AQ in Iraq through what he called, "shared consciousness and purpose." In addition, GEN. McChrystal dramatically increased the collection, analysis and synthesis of intelligence gathered from special force operation raids on AQ. This enabled his Joint Operations Task Force to comprehend the enemy's orientation. The US Special Operations Joint Task Force evolved to become dynamically more effective at disrupting AQ in Iraq and penetrating its OODA loop. As Clausewitz recommended:

> The first supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish by that test [of policy] the kind of war on which they are embarking: neither mistaking it for, nor trying to turn it into, something that is alien to its nature. This is the first of all strategic questions and the most comprehensive. (Clausewitz, 1989, p.88-89)

Coram (2004) explains that in *Destruction and Creation* Boyd argued that if our mental process becomes locked into our internal dogma and isolated from the unfolding, uncertain world then we experience mismatches between our mental images and reality. That is what GEN. McChrystal determined in his own destruction and creation discovery. It also reflects how much of the academic research into home-grown terrorism and the Salafi-Jihadi terrorist movement is from a Western context of leadership base along a linear organisational structure, while the mindset that connects AQ and ISIS to its followers connects beyond the Western constructs of physical and organisational structures.

In their critical examination of terrorism in an era of unconventional warfare, Martin and Weinberg (2014) describe how these ''new'' terrorists view themselves as being members of a larger community that crosses state boundaries, much as religious beliefs do; further they view themselves as being involved in a global war, or jihad, against those who threaten their existence. Through his analysis of Boyd and the OODA Loop, Osinga (2005) describes how AQ is engaged in a conflict or war along cognitive and moral parameters:

> Boyd's work offers important insights for understanding the threats of the "post-9/11" world. So-called asymmetric responses to western modes of warfare too become a natural feature only to be expected from adversaries. An adversary is a complex adaptive system attempting to adapt, to survive and prosper. The attacks of "9/11" introduced the contours of a new war form, and the West has been challenged to understand the nature of this new game of survival. In no small measure is it waged in the cognitive and moral domain. (Osinga, 2006, p.316).

It is important to recognise that while home-grown terrorism is an example of an OODA loop cycle of adaptation and regeneration, the home-grown terrorism act itself remains a tactic that feeds into a broader strategy. It would be applicable to consider this broader strategy, as Lind et al (1989) explained, that is about attempting to establish a crisis in the legitimacy of the state. As Lind et al (1989) describes, the goal is to focus on the enemy internally rather than physically. In other words, where targets include the population's support for its own Government's decision to use its military, forcing us to question our own culture, causing any questioning of extreme Islamic views that are counter-cultural to Western belief systems, to be labelled intolerant, or "Islamophobic" and likely to be socially reprimanded. It is not only the brutality that the likes of AQ and ISIS are using as an inspiration factor, it is also their ability to generate disorientation, mismatches and discontinuities within Western countries and our capacity to respond.

As Boyd (1976) described in *Destruction and Creation*, the observer has a measurable effect on what they are observing, creating entropy. For example, this can involve the reaction by society to a home-grown terrorist succeeding, a Western Government expanding surveillance laws, or the media and legal system lobbying to ensure a home-grown terrorists' legal rights are protected. It can also involve observing how AQ and other proponents of the Salafi-Jihadi narrative can create confusion in Western societies so that criticism of Islamic extremism is seen as criticism of the Muslim community. This feeds further into what Boyd highlighted in the Marx and Lenin theories of creating tensions and alienation within an internal community. A strong hypothesis could be that AQ anticipated that its attack on the World Trade Centre would cause the US and its Western allies to respond by sending military forces to Afghanistan, thereby generating animosity not only within the West's political and public discourse but also within the Western-resident Muslim communities. What they may not have predicted was the decision by the US to invade Iraq in 2003, thereby generating even deeper animosity in the Muslim community and deep divisions within the Western public and political systems.

## 6.3 OODA Loop and the Current Terrorism Phenomenon

The ability to adapt and remain dynamic has been demonstrated by AQ and ISIS in the context of the current terrorism phenomenon. For example, the shift to individual attacks on simple targets and the publicised brutal killing by one person of another using nothing more than a knife, have deep psychological and mobilising effects on sympathisers and opponents alike. This adaptation is also potentially harder to detect and defeat. The shift by AQ from recruiting, training and directing terrorist attacks by radicalised Western-based Islamic extremists to inspiring independent, self-perpetuating 'do-it-yourself' (DIY) style of home-grown terrorism is another example of being able to penetrate the West's OODA loop. As described by Wilner and Dubouloz (2010), it involves unaffiliated individuals and groups cognitively connecting with AQ's Salafi-Jihadi narrative that justifies violence against Western states and citizens in the very country those individuals were born or have become long-term residents. In its 2004 – 2009 Strategic Plan, the US Federal Bureau of Investigation (FBI) anticipated lone-wolf terrorism would be the biggest domestic terrorism threat over the following five-year period. The FBI Strategic Plan also said lone-wolf terrorists draw ideological inspiration from formal terrorist organisations, but operate on the fringes of those movements. The FBI report also states that "despite their ad hoc nature and generally limited resources, they can mount high-profile, extremely destructive attacks, and their operational planning is often difficult to detect" (FBI 2004, p.17). This style of attack is what this chapter refers to as DIY, home-grown terrorism.

While not a new form of terrorism, so called lone wolf attacks, when analysed through the OODA Loop, offer an example of the regenerative capacity of Salafi-jihadi inspired terrorism. By using qualitative case studies from 1968 to 2010, Spaaij (2012) offers one of the few analytical studies on lone-wolf terrorism and describes its three main elements. Firstly, the perpetrators operate individually; secondly, they do not belong to an organised group or network; and thirdly, the *modus operandi* is conceived without outside assistance. Spaaij (2012) excludes small autonomous cells and duos, such as the Boston bombers. This research thesis supports Spaaij's three key, descriptive, contextual criteria for lone-wolf terrorists, but also includes small cells and duos, as does Pantucci (2011) in his paper on the typology of lone wolves. According to the quantitative data used by Spaaij (2012), the database includes 198 attacks that have been committed by 88 lone wolves, across 15 countries. While this represents only a very small portion of all terrorist attacks during the period identified by Spaaij, it is not the point in the context of this research.

The relevant attributes of Salafi-Jihadi inspired lone-wolf home-grown terrorism are: 1) the simplicity of this style of attack; 2) they penetrate the West's OODA loop; 3) the attacks generate enormous publicity (even if they are not successful) that further inspires others; and 4) these attacks generate internal entropy for Western governments and the public. These individuals can plan and initiate their own attacks with minimal material, no direction and no funding from any group. The AQ magazine *Inspire* describes this growing phenomenon of lone-wolf or individual style terrorism as open-source jihad. The English version of the 16 January 2011 *Inspire* magazine includes a to-do list, telling readers to "buy handguns", "make a bomb in mom's kitchen", "blow up Times Square", and "pull-off a Mumbai attack near the White House till martyrdom." It also provides practical instructions on how to make explosives and shoot guns. An article entitled "Open Source Jihad", which has appeared in different variations in past editions of *Inspire*, provides step-by-step instructions on how to destroy buildings with chemical and mechanical explosions and how to use an automatic weapon to carry out an attack.

Since 2001 there has been an increase in Salafi-Jihadi inspired home-grown terrorist attacks by individuals, compared with this tactic for other political or ideological reasons. Notable examples include the attack by US-born citizen Abdulhakim Mujahid Muhammad, formerly known as Carlos Bledsoe, who on 1 July 2009 opened fire at the Army-Navy recruiting centre at Little Rock, Arkansas, killing one person and wounding another. In his key case-study analysis of the Little Rock shooting, Gartenstein-Ross (2014) described it as an act of lone-wolf Islamic terrorism, one of only two fatal lone-wolf attacks inspired by Salafi-Jihadi ideology since 9/11. Then on 5 November 2009, US soldier MAJ. Nidal Malik Hasan killed twelve and wounded thirty-one of his fellow soldiers at Fort Hood, Texas. In Canada on 20 October 2014, Islamic convert Martin Rouleau (known on his Facebook page as Ahmad the Converted) ran over and killed a Canadian solider (*Independent* Tuesday 21 October 2014). In Pantucci (2011), the key cases of Roshonara Choudhry (the British woman who tried to kill MP Steven Timms) and Taimour Abdulwahab al-Abdaly (an Iraqi-Swede who blew himself up outside a shopping mall in Stockholm around Christmas 2010), are also highlighted, illustrating how AQ drew in these individuals through a 'borderless idea.' These are just a few examples of individual attacks and they illustrate how through their randomness, simplicity and unconnected planning, they can penetrate the West's OODA loop, as a tactic of asymmetric warfare. They also demonstrate the power of the Salafi-Jihadi narrative to inspire and implicitly create *schwerpunkt* across a movement or organisation.

The American Islamic convert and AQ-inspired home-grown terrorist, Adam Gadahn, appeared in several videos published in 2006 promoting lone-wolf terrorism (Jones, 2012). For example, in March 2010 he promoted the Fort Hood attacker, Major Nidal Malik Hasan, as a role model for other aspiring lone-wolf terrorists.  In June 2011, as reported in the *Huffington Post* (3 June 2011), Gadahn appeared in another video entitled ''Do Not Rely on Others, Take the Task Upon Yourself", in which he urged Muslims in America to take advantage of lenient firearm laws to purchase guns and carry out attacks on their own initiative.  As Pantucci (2012) determines, AQ seeks to bridge the gap between the random nature of these individual home-grown terrorists and their jihadist global outlook. Gartenstein-Ross (2014) argues that lone-wolf attacks have not been the success AQ had hoped them to be; however the success or otherwise of the attacks is not the point.  When interpreted using the OODA Loop, each attempt, successful or not, creates enormous mismatches, discontinuities and fast-transients within Western communities and inspires other would-be home-grown terrorists.  Even failed attempts create discontinuities, fear and confusion.

The current terrorism phenomenon is also witnessing strong competition between different organisations seeking to out-bid each other in owning the Salafi-Jihadi narrative.  For example, ISIS and AQ are now competing to inspire potential home-grown terrorists and claim credit for their actions – crudely put, a battle of the global Salafi-Jihadi brands for the hearts and minds of the home-grown producers of terrorism.  For example, on 10 January 2015, ISIS released a promotional video on YouTube, calling on lone-wolf attackers to kill US police officers, soldiers and others.  In the footage, the ISIS spokesman Abu Mohamad Al-Adnani appears and says: "Do not let the battle pass you by wherever you may be. Strike their police, security and intelligence members, as well as their treacherous agents."  Al-Adnani then calls on supporters to smash a target's head with a rock "or slaughter him with a knife, or run him over with your car."  A similar video was released by AQ in the Arabian Peninsular (AQIP) leader, Nasser bin Ali al-Ansi, calling for lone-wolf attacks in Canada. However, what is of particular interest is how Nasser bin Ali al-Ansi recognised the distorting impact lone-wolf attacks have on the Western countries in which they occur or are attempted.  In the AQ video, he said:

> If he is capable to wage individual jihad in the Western countries that fight
> Islam, such as America, Britain, France, Canada, and others of the countries
> that represent the head of disbelief in waging war against Islam, and

participate in this Crusader campaign — if he is capable of that then that is better and more harmful. (Nasser bin Ali al-Ansi, 2015, January 20)

In June 2014, ISIS defeated the Iraqi forces across much of northwest and central Iraq. It has also held ground against Syrian government forces and in doing so declared it had established a Caliphate. This provided ISIS with a symbolic beachhead from which to inspire a new wave of home-grown terrorism. Success on the battlefield is being combined with graphic beheadings of Western hostages published on YouTube, and the execution by ISIS of thousands of unarmed civilians, including women, children and the elderly, who are members of the Yazidi, Christian or Shia communities. Masked by the image of the Salafi-Jihadi warrior ethos, the battlefield success and extermination of all those deemed *kafir* are being synthesised to inspire both affiliated and un-connected DIY, home-grown terrorists in Western countries. A June 2014 report by the Soufan Group compared data from a range of primary and secondary sources, estimating that ISIS and the AQ-associated Jabat al-Nusra have attracted an estimated 12,000 foreign fighters. The Soufan Group, a US-based security and intelligence consulting company, reported this is significantly more than the number of foreign fighters who went to Afghanistan to join the Taliban and AQ's fight against the US-NATO forces between 2001 and 2014.

In the context of this research, the point of highlighting the issue of foreign fighters is that when a Western born or raised individual joins ISIS as a foreign fighter it penetrates our OODA loop by eliciting the same mental distorting image as generated by home-grown terrorism; in other words, a sense of moral betrayal and confusion. Those inspired by the Salafi-Jihadi narrative of ISIS and AQ become soldiers on the battlefield and that battlefield can be in Iraq and Syria or in their home town. For example, on 2 October 2015, teenager Farhad Jabar shot dead an employee of the New South Wales (NSW) Police Force in broad daylight in a Salafi-Jihadi inspired attack (Benny-Morrison, Ralston, Olding, & Aubuson, 2015; *ABC Online*, 2015, October 19). While Farhad Jabar did not join the fight in Iraq and Syria this unexceptional, Australian-born teenager become inspired by the Salafi-Jihadi narrative and conducted a single act of brutality. Significantly, in the context of the current terrorist phenomenon, whether it is inspiring foreign fighters or home-grown terrorists, ISIS has cast the use of violence as almost *a priori* to being a good Muslim. In other words being prepared to conduct barbaric violence is interpreted as a pre-requisite to being affiliated to ISIS and, as such, a true Muslim, willing to submit to the highest form of self-sacrifice.

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The brutal level of violence, graphic beheadings and military prowess on the battlefield in Syria and Iraq form the basis of this globalised, borderless mindset, promoted on the internet. While the common thread is Islam, it appears that the barbaric violence, justified through a powerful narrative that creates the image of a warrior fraternity, is deeply inspiring to many converts and Western born or raised Muslims. In a comprehensive study on violent Islamic extremism in the Netherlands, the authors note that, "it is alarming that certain youth groups among the younger generation of Muslims in the Netherlands not only appear receptive to radicalisation, but perceive violent jihad as positive and 'cool'" (*Violent Jihad in the Netherlands*, 2006, p8). The report, notes that this fascination with violence may be analogous to the culture of violence among apolitical youth gangs in the major cities. When these acts of violence are committed by lone individuals, they generate moral, physical and operational discomfort and uncertainty within the West. These dynamics suggest a by-product of the current terrorism phenomenon.

Even when an act of brutality against Westerners does not happen in a Western country, it has the equivalent level of moral distortion, because of the use of the internet and how the acts are broadcast into our homes. The publishing on social media the beheadings of journalists - James Foley on 19 August 2014 and Steven Sotloff on 2 September 2014 - as well as humanitarian aid workers - David Haines on 12 September 2014 and Alan Henning on 3 October 2014 - had a powerful moral and mental disturbing impact on Western audiences. In the case study of a disrupted UK-based beheading plot of Muslim British soldiers who had served in Afghanistan or Iraq, Lentini and Bakashmar (2007) describe the use of beheadings by Islamic terrorist groups as a contemporary, evolving tactic. Publicised beheadings are used to dissuade opponents and recruit fighters by demonstrating the power of ISIS in the face of materially far superior Western nations. Western media outlets also inadvertently assist in this process, increasing the publicity and infamy of the terrorists by showing images in the lead up to the beheadings and other incidents of brutality. Significantly for this research is the power of a single act by an unexceptional individual or individuals born or raised in the West, against soft targets that are almost impossible to protect. In the current terrorism phenomenon, this is another evolving tactic of asymmetric warfare incited through the Salafi-Jihadi narrative that penetrated the West's OODA loop along the moral, mental and physical continuum of conflict.

The next section will discuss how these evolving tactics of asymmetric warfare could be uniquely described as moral manoeuvrability. This is the power to penetrate Western

society's mental and moral weaknesses, while simultaneously inspiring a new generation of self-perpetuating producers of home-grown terrorism. The chapter will then use examples of single-acts of brutality and DIY style terrorism as illustrations of moral manoeuvrability in the current terrorism phenomenon, using the OODA Loop.

## 6.4 Boyd's Law and the Concept of Moral Manoeuvrability

Manoeuvrability and the moral aspect of war are two critical components contained within the OODA Loop and Boyd's law on survival and conflict. They are also both relevant and applicable to analysing the current terrorism phenomenon inspired by the Salafi-Jihadi narrative. As described in Chapter Two, one of Boyd's most important discoveries, which, it could be argued, is the fundamental genome of the OODA Loop, was energy manoeuvrability, or EM theory as it is known. As Hammond (2001) explains, "EM was truly revolutionary, not only as an assessment tool but also as a design parameter in the development of tactics and doctrine for combat engagements" (Hammond, 2001, p.60). While Boyd had discovered a mathematically quantifiable method of defining manoeuvrability, using physics, that gave the US Air Force a defined process for comparing one aircraft against another, it is applicable to competitive organisms or entities in other environments or contests. In any conflict, competition or conquest situation, manoeuvrability is important for success, which in the case of AQ or ISIS also means the capacity to regenerate in the face of its own OODA loop being penetrated.

In the context of Salafi-Jihadi inspired home-grown terrorism, it is evident that AQ and ISIS recognise and apply what this research describes as moral manoeuvrability, in its war against the West. The idea of moral manoeuvrability is a tactic of asymmetric warfare that describes the ability to manoeuvre inside an opponent's moral constructs causing internal, public and government entropy while simultaneously inspiring followers whose novel actions regenerate the terrorists organisation's capacity to survive. Essentially, it is about the penetration of moral principles as a tactic of asymmetric conflict between opponents and their ability to morally re-engineer the justification for their actions. This simultaneous nature of the moral component of conflict is described in Richards (2006) and summarises the military and strategic thinking of Boyd, Lind et al, van Creveld and General Hermann Balck. Moral manoeuvrability does not fit with Western-based principles of law and the application of state-sponsored force, either by the police or the military. It could be argued that the lack of moral manoeuvrability constrains how Western Governments can respond,

through their police, intelligence or armed forces, even in defence of the very ideals that are under direct and lethal challenge by an opponent. This is not to suggest the West abandons these principles but rather to make the point about an asymmetric weakness that has been identified and penetrated by opponents.

Three years before the 9/11 attack on the World Trade Centre, two senior serving Officers from the Chinese military, COL. Qiao Liang and COL. Wang Xangsui (2002), wrote *Unrestricted Warfare.* A major component of this piece of work, developed for Chinese military strategists, advocates manipulating the West's commitment to international rules and conventions, such as the Laws of Armed Combat. Qiao Liang and Wang Xangsui (2002) believed in fully exploiting how the West imposes political and moral restraints on how its military can fight. Perversely, the authors describe a potential attack on the World Trade Centre or a bombing attack by bin Laden. In his work on terrorism and moral constraints, Gross (2010) describes another example of a Western-imposed moral dilemma in how to define terrorists as combatants or criminals. If they are *combatants* then certain international rules of war apply, as described above, or in the four treaties and three Protocols that comprise the Geneva Convention. If they are *criminals* then the rule of law applies and Gross (2010) explains that this presents an uncomfortable problem in that terrorists treated as combatants will be afforded equal rights as uniformed soldiers if caught as prisoners of war; and terrorists defined and apprehended as criminals must be treated innocent until proven guilty in a court of law.

As Dew (2008) argues, imposing costs for non-compliance with moral boundaries and rules of war is difficult when the actor is a non-state entity, especially when states must continue to abide by these norms. Howard, Andreopoulos and Shulman (1994) explore the limitations Western society has placed on itself in how it fights wars, not only in legislation and international conventions but also the cultural acceptance of what the public and elected representatives believe is tolerable. Similarly, Barnett (2003) discusses the legal and moral constraints on the ability of the US to use military force and describes how asymmetric warfare includes an opponent exploiting these constraints with the knowledge of how the US is unable to respond. While ISIS and AQ can behead its civilian prisoners on YouTube, massacre civilians from other religious and ethnic groups and execute soldiers it captures from the Iraqi, Kurdistan and Syrian government forces, Western governments would be morally and politically forced to treat all captured ISIS fighters humanely and in accordance with Western rules of law. As Lind et al (1984) explain, if we treat terrorists

within the Western rule of law, they gain protection; if we shoot them, they can be described by the media, academics and opinion leaders as victims. According to Lind et al (1984), "terrorists can effectively wage their form of warfare while being protected by the society they are attacking" (Lind et al 1984, pp.25-26).

In *The Strategic Game of ? and ?* Boyd (1987) argued that "with respect to adversaries we should reveal those harsh statements that adversaries make about us – particularly those that denigrate our culture, our achievements, our fitness to exist, etc. – as the basis to show that our survival and place in the scheme of things is not necessarily a birthright, but is always at risk" (Boyd, 1987, slide 56). In an interview with mainstream media in 1998, bin Laden said to the BBC, "the truth is the whole Muslim world is the victim of international terrorism, engineered by America and the United Nations. We are a nation whose sacred symbols have been looted and whose wealth and resources have been plundered. It is normal for us to react against the forces that invade our land." Work by Pregulam and Burke (2012), as well as Sageman (2004), Hoffman (2008), Pape (2006), O'Duffy (2008) and Atran (2010), all describe how AQ's use of Salafi-Jihadi narrative in relation to the US-led wars in Iraq and Afghanistan played a substantial role in shaping the narrative and justification of home-grown terrorists. The US invasion of Iraq (2003 – 2011), the US-NATO war in Afghanistan (2001 – 2014) and unmanned aerial vehicle (drone) missile strikes against terrorists in Pakistan and Yemen have been portrayed by AQ as direct attacks against all Muslims. Following the 7 July 2005 London transport terrorist attack, a *Guardian* (2005) ICM poll was conducted asking members of the United Kingdom's Muslim community if they thought any further attacks by British suicide bombers in the UK were justified or unjustified. Of the 500 people questioned, five percent said that further attacks were justified. This is an example of moral manoeuvrability by the Salafi-Jihadi movement within its own globalised constituency.

A descriptive and illustrative example of the moral manoeuvrability phenomenon is how the Taliban in Afghanistan forced the US and Coalition Forces in Afghanistan to stop the use of night-raids by Special Operation Forces during the war in Afghanistan 2001 - 2014. In Afghanistan night raids were manipulated into being declared a highly insensitive attack on the conservative values within the patriarchal Afghan society, where the mere act of male strangers entering a home and seeing another man's wife or wives is considered a grave offense. US Special Operations Forces also targeted individuals who were suspected of supporting or knowing senior Taliban leaders. These individuals were often not

combatants; however, in an insurgency war where the insurgents rely on the support of the community, targeting this support is a logical, operational tactic.  Night raids involved Special Operations Forces launching a surprise attack on a Taliban militant's house, in the middle of the night, with concentrated amounts of aggression that overwhelmed a stunned and surprised adversary - in what could be described as a classic OODA Loop tactic.  Sun Tzu wrote, "if the enemy is superior in strength, evade him.  If his forces are united, separate them. Attack him where he is unprepared.  Appear where you are not expected."  At that time in 2011, U.S. Army LTGEN. Curtis Scaparrotti, who headed the Coalition's Joint Command Special Operations Forces, determined that night raids allowed US-NATO forces to put constant pressure across the entire insurgent network.  The Taliban then applied tremendous moral and cultural pressure on the US-NATO Commanders through the Afghanistan district and provincial leaders.  Further, in 2010 the Afghan Analyst Network, a non-government organisation (NGO), conducted a study of night raids in Nangarhar Province and reported that from October to November 2010, all night raids were targeting people who had met with a local religious cleric who was believed to be the Taliban shadow provincial governor.

The Afghan Analyst Network concluded that deliberately targeting and rounding up civilians who are not suspected of being insurgents, merely to exploit possible intelligence value, "may constitute an arbitrary deprivation of liberty" and thus "inhumane treatment" in violation of Article 3 of the Geneva Convention.  A US-based NGO and think tank founded by George Soros, the Open Society Foundation, published a separate report on 19 September 2011, *The Cost of Kill/Capture: Impact of the Night Raid Surge on Afghan Civilians,* and concluded - with respect to night-raids - that human rights concerns remain, particularly in relation to detention for intelligence value and a failure to consider less harmful alternatives.  The Taliban not only used a Western cultural and political framework of human rights to lobby for the night raids to be stopped, but they also succeeded in indirectly securing support from NGOs, US think tanks and Western journalists, all citing Western rules of war and civil liberties.  However, the Taliban wanted the night raids stopped not because of any offense to women or because they infringed civilians' human rights, but because the night raids were successful at capturing or killing senior Taliban leaders, those who manufactured improvised explosive devices and the Taliban's community intelligence and support network.  Before they were stopped, night raids had successfully got inside the Taliban's OODA loop and were undermining the moral fibre of the Taliban and anyone who thought of joining or supporting them.  Instead of fighting back

physically, the Taliban revolved through its own OODA loop to engage in moral manoeuvrability, in an attempt to undermine its opponent.

As Gross (2010) argues, when it comes to conflict, a commander, person, tribe or nation has to be placed into a position to ask whether it still has the stomach for the fight when the opponent has generated moral and mental torment. An applicable example of this notion comes from an Ismaili poem, retold in Belfield (2005), that says, "by one single warrior on foot, a king may be stricken with terror, though he own more than a hundred thousand horsemen" (Belfield, 2005, p.57). This was the fear and terror unleashed by Ismailia Nizari in the 13th Century, more popularly known as the Hashshashin (Assassins), founded by Hasan ibn el-Sabah. The Hashshashin's tactic was a simple but effective act that psychologically undermined a more powerful opponent at little cost. The Hashshashin's reputation for tactically discrete violence and killing generated moral and mental internal friction within their opponents, dislocating and frustrating their decision-making. Boyd (1987) explained that, "friction is generated and magnified by menace, ambiguity, deception, rapidity, uncertainty, mistrust, etc" (Boyd 1987, slide 8). As with AQ and ISIS, the Hashshashin often planted or cultivated assassins within the ranks of the political leaders or commanders they were planning to eliminate. This created a high state of entropy within the leader's camp and great suspicion within the general population. Belfield (2005) explains how following a direct threat from the former Sultan of Egypt and Syria, Ṣalāḥ ad-Dīn Yūsuf ibn Ayyūb (1138 – 1193) the Assassins responded to him in a letter that said:

> The common proverb says "do you threaten a duck with the river? Prepare means for disaster and don a garment against catastrophe, for I will defeat you from within your own ranks and take vengeance against you at your place and you will be as one who encompasses his own destruction. (Belfield, 2005, p. 66)

Belfield (2005) goes onto explain how Ṣalāḥ ad-Dīn Yūsuf ibn Ayyūb initially prepared to engage the Assassins in battle but with no explanation suddenly withdraw. Essentially, the Hashshashin penetrated their opponent's OODA loop physically, mentally and morally.

In *Essence of Winning and Losing,* Boyd argued that as well as the tactical, operational and strategic levels of war, it was also important to understand the application of the physical, mental and moral levels of war. As described through the use of the OODA Loop, one of the most effective ways of doing this is to analyse an opponent's *Orientation*. In a USAF

Academy Harmon Memorial Lecture, Hammond (2012) explains that Boyd was concerned about better understanding the orientation of the adversary. This means establishing what our opponents value, what they fear, and how they have acted in the past; it means establishing their cultural anthropology and ethnography. Hammond (2012) says Boyd wanted to develop a 'psychological order of battle'. This means knowing an opponent's intentions as well as capabilities, so as to devise a strategy that creates moral and psychological leverage, as well as the physical capability to defeat an opponent.

Chapter One discussed how Boyd's *Patterns of Conflict* was an historical analysis of survival and conquest in war, as seen through military strategists such as Napoleon, Sun Tzu, Liddell Hart, Jomini, Clausewitz and T E Lawrence. In it Boyd also assessed the principles of warfare as applied by the German military during the Blitzkrieg and deduced they employed a *nebenpunkte/schwerpunkt* manoeuvre philosophy to generate ambiguity, realise deception, exploit superior mobility, and focus violence. As Richards (2006) succinctly explains, Boyd provides a summation of the German *blitzkrieg* fundamental tenets of warfare as a basis to:

- **Create many opportunities** to **penetrate** weaknesses in the form of any moral or mental inadequacies as well as any gaps or exposed flanks that open into an adversary's vulnerable rear and interior, hence -

- **Create** and **exploit opportunities** to repeatedly **penetrate** an adversary's organism, at all levels (tactical, grand tactical, and strategic) and in many ways, in order to splinter, envelop and roll-up/wipe-out isolated remnants, thereby generating confusion and disorder, hence -

- **Create** and **exploit opportunities** to disrupt an adversary's system for communication, command, and support, as well as undermine or seize those connections or centers that it depends upon, thus shake its will or capacity to decisively commit its back-up echelons, operational reserves, and/or strategic reserves, thereby magnifying an adversary's confusion and disorder and convince it to give up. (Richards, 2006, slide 87).

As Richards (2006) explains, the implication of "Blitzers", are those elements being able to infiltrate or penetrate an adversary's system, generating many moral-mental-physical non-cooperative (or isolated) centres of gravity. It then involves undermining or seizing those centres of gravity an adversary depends upon, in order to magnify friction, produce paralysis and bring about adversary collapse. Boyd referred to these concepts as the application of *Cheng* and the *Ch'i* manoeuvres in warfare. As explained in Chapter One, Boyd learnt about the importance of *cheng* and *ch'i* from the works of Sun Tzu.

In the examination of the moral imperatives of war, Atran and Ginges (2011) argue that judgements about the use of war are bound by rules of deontological reasoning and parochial commitment. Their study has implications for understanding the trajectory of violent political conflicts, including Salafi-Jihadi inspired terrorism. Essentially, Atran and Ginges apply Boyd's propensity to pull things apart, in search of their opposites, or trade-offs. In the context of this thesis, Atran and Ginges' study reinforces the significance of pulling apart the components of war and synthesising them into the concept of moral manoeuvrability. Individuals and networks of friends being inspired by the Salafi-Jihadi narrative have strong social and moral bonds. These moral bonds are juxtaposed against the Western construct of war where soldiers fight for their sovereign country. In relation to group-level moral and social obligations, Rappaport (1999) explained that religious beliefs and prescriptions reinforce cooperative norms by associating them with "sacredness". The use by AQ of the Salafi-Jihadi narrative takes any transgression against sacredness as justification for extreme violence. Sacredness is without boundaries and connects through a global community of minds where groups or individuals can be inspired and enraged through moral manoeuvrability. As Ginges and Atran (2010) argues, these sacred assumptions are ineffable, "they cannot be fully expressed and analysed—unlike secular social contracts—because they include a logic of moral appropriateness that is, at least in part, immune to instrumental calculations. To be effective, 'sacred propositions' must be immune to instrumental calculations, otherwise they would be undermined by free-riders." (Ginges and Atran, 2010, p.2930).

In *The State, War and the State of War*, Holsti (1996) argues that wars or fighting are often beyond the nation-state framework and more about the "clash over different conceptions of community and how these conceptions should be reflected in political arrangements and organisations," (Holsti, 1996, p.17). Boyd considered *Orientation* to be the window into the moral bonds of an opponent and could include what Rappaport (1999) describes as instrumental calculations and scared propositions. These are powerful human factors that cannot be manufactured through the conventional Clausewitzian way of war. As Hammond (2001) and Coram (2002) explain, Boyd believed that in relation to conflict it was people first, then ideas and equipment or physical terrain. When it comes to applying Boyd's propositions behind the OODA Loop to the current Salafi-Jihadi inspired terrorist phenomenon and Western governments, it is almost as if the two OODA Loops are at times rotating on completely different deontological planes; and this is why moral

manoeuvrability is potentially a significant concept when attempting to understand this kind of asymmetric warfare.

In *Destruction and Creation*, Boyd (1976) explored the second law of thermodynamics and explained there is a tendency for entropy to increase within a closed system. This suffocates the capacity for the system to process and communicate with the external environment. Boyd's (1976) analysis could also describe the challenge faced by two cultures, akin to two closed systems of thinking with completely different ideological foundations, in conflict with one another. Boyd (1976) believed that over time, as entropy increases, energy dissipates, efficiency decreases, and confusion and disorder increase. Therefore, the character of a system, its consistency, does not remain constant and is unpredictable. Thus, the use of unexceptional, Western born or raised, young males who live in our own neighbourhoods and who carry out home-grown terrorism, increases entropy, creating a high degree of confusion and disorientation. It is a tactic that does not fit neatly into Western conventional constructs of war. This is because it creates too many potential threats to cross-reference, as the perception is being created that the enemy is among us. Applied through the tactics of asymmetric warfare, moral manoeuvrability is an example of increasing entropy, disorder and creates unpredictable and uncomfortable cultural, political and moral challenges for the West. In the context of the current terrorism phenomenon, examples of these evolving tactics of asymmetric warfare that involve the use of moral manoeuvrability, are the use of the single act of brutal violence and DIY-style home-grown terrorism against soft targets. These dynamic terrorist actions that penetrate the West's OODA loop will be discussed in the following section.

## 6.5 The Performative Power of the Single Act of Violence

In the context of the current terrorism phenomenon AQ and ISIS have used the Salafi-Jihadi narrative to inspire small-scale acts of brutal violence that simultaneously have an exponentially powerful effect on followers and enemies alike. Most notably this can be perpetrated by a single individual, inspired by the Salafi-Jihadi narrative. An immediate criticism of introducing this observation as an example of further adaptation of the dynamism of this kind of Salafi-Jihadi inspired terrorism, is that many of these single acts of violence are not carried out in Western countries. However, as will be explained in this section, AQ and ISIS penetrate our OODA loop by using Westerners with British accents to carry out these single acts of brutality. This is on top of the home-grown terrorism acts

committed in Western countries that appear to have transformed from large attacks to single acts of violence. Hyper-driving the profound effect of the communicative and psychological value of both these tactics, is that these acts can be broadcast almost instantaneously to a globalised audience. It is an example of the regenerative capacity of AQ and ISIS to create a new wave of fast transients, discontinuities and mismatches, which also generate moral manoeuvrability.

In his empirical study of violence in civil war, Kalyvas (2006) describes how violence becomes a resource requiring a distinction between victims and targets. For example, if a Westerner is threatened with beheading by ISIS, in order to stop that person from continuing to implement their function (e.g. humanitarian work) on behalf of their government, then the person is simultaneously a victim and a target. If, on the other hand, the person is threatened with beheading to stop their country from continued intervention and to intimidate their population, then the target is the Western government and the victim is the Westerner who is beheaded. Effectively, the violence is intended to shape the behaviour of the targeted audience. In order to reinforce the powerful effect of the single act of violence, Kalyvas (2006) cites a number of historical revolutionaries. Trotsky (1961) said, "the revolution […] kills individuals and intimidates thousands," while he cites the lessons of a British agent in German-occupied Greece in 1944 who described how the partisans were masters of the psychology of the "exemplary atrocity". The powerful psychological and moralistic effect of single acts of brutality is also true for the reverse scenario; in other words, saving one person compared to thousands. For example, Slovic (2007) uses a quote by Mother Teresa who said, "if I look at the mass I will never act. If I look at the one I will." As Slovic explains, Mother Teresa's statement captures the powerful and deeply unsettling insight into human nature, in that society will spare nothing to save one person but will remain indifferent to the plight of many in equal peril.

An example of the communicative and psychological power of a single act of brutality is the way ISIS, through the use of the internet, managed the beheading of the two Japanese citizens caught in Syria, Kenji Goto and Haruna Yukawa (RT.com, 2015, January 31). On 20 January 2015, ISIS published a video on several jihadist websites, showing the two Asian men wearing orange fatigues and kneeling, while a masked man in black holds a knife. In the video, ISIS demands a USD200 million ransom to be paid for the hostages' lives within 72 hours. Consequently, ISIS published footage of the beheading of both men on various social media forums. As is the nature of the repetitive mainstream 24-hour news cycle, the

Japanese media indirectly served the interests of ISIS by replaying footage on the enormous TV screens around Tokyo. This further amplified the psychological, moral and communicative impact on the Japanese public and other nations. On behalf of ISIS, the act of one man with nothing more than a knife as the executioner, could terrorise an entire nation. It was as if Japan itself had been attacked.

As exemplified by the beheading of the two Japanese hostages, the single act does not even need to take place in one's country, especially when perpetrated by a Westerner. For example, the British citizen, so-called "Jihadi John", who is alleged to have conducted the beheadings of James Foley and Steven Sotloff, generated enormous shock and confusion (De Graff & Boyle 2014). It is believed Jihadi John is a former musician and rapper, Abdel-Majed Abdel-Bary, born and raised in the UK. This tactic deeply penetrates the West's OODA loop and, in the context of this research, creates the sensation of home-grown terrorism. In September 2014, the FBI director, James Comey, revealed that intelligence services had identified the man, but Mr Comey could not confirm whether the FBI believes the man talking actually carries out the murders himself or if that is done by someone else when the camera is turned off (*The Telegraph*, 20 January 2015). This is a very clever and manipulative tactic by ISIS. To create the image that a Western-born individual with a thick British accent carries out these single acts of brutality is a demonstration of what Boyd described as penetrating the OODA Loop. This is a tactic of contemporary asymmetric warfare, by setting the scene of one Westerner beheading another to generate cognitive and social repulsion in the enemy while inspiring followers, is also an example of the use of moral manoeuvrability against an adversary.

As mentioned, these single acts of brutality, broadcast globally through mainstream and social media, also provide an inspiration to followers. For example, in late 2014, Khaled Sharrouf, an Australian citizen who joined ISIS, received international coverage and condemnation following the photo he posted on social media of his seven-year-old son holding the decapitated head of a Syrian soldier. While this single act resulted in public, political and moral outrage in the West, and especially Australia, it turned this individual into a Salafi-Jihadi celebrity in the minds of other aspiring Western resident Salafi-Jihadi friends and followers. The more it was publicised by mainstream media, and the more the individual was condemned by the very people he and his network of Salafi-Jihadists hate, the more his act of brutality became an act of inspiration and notoriety. While this is not intended as a research topic on lone-wolf terrorism, in the context of single acts of brutality

by lone individuals, Kaplan, Lööw and Malkki (2014) make an astute observation in that whether they are doing good or bad, individuals can have a disproportionate influence in a highly globalised world. As summarised by Richards (2006), the aim is to:

> Pump-up friction via negative factors to breed fear, anxiety, and alienation in order to generate many non-cooperative centers of gravity, as well as subvert those that adversary depends upon, thereby sever moral bonds that permit adversary to exist as an organic whole. Simultaneously; build-up and play counterweights against negative factors to diminish internal friction, as well as surface courage, confidence, and esprit, thereby make possible the human interactions needed to create moral bonds that permit us, as an organic whole, to shape and adapt to change. (Richards, 2006, slide 122)

The beheadings of Western journalists and aid workers by ISIS, published on social media, illustrate the powerful moral dissonance these single acts of brutality can have on Western society. As will be discussed in the next section, when these single acts of brutality are synthesised with the DIY nature of these attacks against soft-targets, this combines to demonstrate the applicability of the OODA Loop to the current, evolving future of the Salafi-Jihadi terrorist phenomenon.

## 6.6 DIY Home-grown Terrorism and Soft-Targets

Acts of Salafi-Jihadi inspired home-grown terrorism do not need to be successful or result in a large number of casualties to penetrate the West's OODA loop. Following analysis and synthesis of the available literature on home-grown terrorism and its effects, the current terrorism phenomenon appears to be about DIY-style, home-grown attacks that generate an inverse ratio between the simplicity of the attack and the global publicity, fear, confusion and moral repulsion as a consequence. Here we are referring to the impact of simple, unsophisticated acts of violence carried out by unexceptional, Salafi-Jihadi inspired, home-grown terrorists. They are difficult to detect, deter and defeat when the perpetrator is one among a plethora of potentially inspiring or inspired home-grown terrorists who can acquire their weapon of choice from a hardware store or their own house with no explicit connection or direction from any group. As described in Chapter Three, it is a demonstration of the dynamic application of abu Musab al Suri's strategy that creates an omnipresent, implicit and simple understanding of what is required by these globally dispersed "foot-soldiers". This section presents a number of examples to illustrate the

penetrating effect of Salafi-Jihadi inspired home-grown, DIY terrorism on Western countries.

The murder of off-duty British soldier, Lee Rigby, in broad daylight in Woolwich, London, by Michael Adebolajo and Michael Adebowale on 22 May 2013 is an illustrative case of a simple, DIY-style home-grown terrorist attack that generated global horror and moral bewilderment. The incident did not involve a sophisticated network, nor did it require training or funds to plan and implement. Further, the attack killed one person and was not spectacular or complex in the way that preparing and planting an explosive device would be. As described in *The Daily Telegraph*, the two men ran Lee Rigby down with a car, then used knives and a cleaver to stab and hack him to death in broad daylight (Duffin, 23 May 2013). In Sydney on 19 September 2014, the New South Wales Police arrested and charged Omarjan Azari for conspiring to abduct a member of the public and publish his or her beheading on the internet. As the Commonwealth prosecutor, Michael Allnutt, alleged, the plan to commit the act was designed to "shock, horrify, and terrify the community" (Levy, 2014, September, 19). Simultaneously, these attacks also inspire others while manoeuvring between the Salafi-Jihadi narrative that provides moral justification and Western moral repugnance for such brutal, public acts of violence.

The attack and killing of a Canadian armed forces reservist on the grounds of the Canadian War Memorial, by Muslim convert Michael Zehaf-Bibeau on 22 October 2014, and the machete attack on two police officers in New York on 23 October 2014 by Salafi-Jihadi inspired, Muslim convert Zale Thompson, did not result in mass casualties and were confined to very specific locations in two major Western cities. That is to say, there was no mass attack across either city and yet the horror and impact tactically, morally and cognitively penetrated the enemy's OODA loop. As in the case of Lee Rigby, the attackers were armed with simple instruments. In a comparative review of lone-wolf terrorism, Feldman (2013) explains that lone wolves have tended to see their acts as symbolic strikes in an asymmetrical war against parts of their own society. This self-directed terrorism is personally constructed and undertaken in terms of motivation, targets, and justification. In the context of AQ it maintains the dynamic and regenerative capacity to evolve and disperse. The global reaction to each DIY, unsophisticated act generated enormous publicity, confusion and distortion of how Western governments should respond, while simultaneously generating a moral *esprit de corps* with other aspiring Salafi-Jihadists.

These DIY-style attacks against soft targets could become more prevalent and epitomise the current terrorism phenomenon, when it comes to home-grown terrorism, especially as more self-generating Salafi-Jihadists realise that only very basic resources are required and any attempt on a low profile, soft target will illicit enormous publicity and potential terror across a community. In addition, they are incredibly difficult to detect by materially and technologically superior police and government intelligence and security services, further illustrating their asymmetric effect. The Pantucci (2012) case study analysis of the effect of lone-wolf attacks, or terrorism conducted by individuals, describes how Roshonara Choudhry's attempted murder of British MP Stephen Timms was illustrative of the undetectable dimension of DIY lone-wolf terrorist attacks. The paper does not use the term "DIY terrorism", but explains how, seemingly in complete isolation, Choudhry became inspired, obtained her weapon and selected her target. That the weapon she chose was a knife available at any number of shops meant security services would have had no way of detecting her through this purchase; further, she had no explicit connect to any terrorist organisation, such as AQ.

Through the application of the OODA Loop, it is evident how this DIY-style of attack perpetrated against soft targets is potentially the new and unfolding Salafi-Jihadi home-grown terrorist phenomenon. A descriptive key case reinforcing this paradigm shift is the 2014 Sydney siege, in which Man Haron Monis held eighteen people hostage at the Martin Place Lindt Café on 15 December 2014. Available open-source data describe how Monis, an individual with a number of serious criminal charges, including being an accessory to murder, had pledged his allegiance to "the caliph of the Muslims", believed to be referring to ISIS leader Abu Bakr al-Baghdadi, and had denounced moderate Islam (Safi, 2014, December 21). In all the analysis following the siege, what has been overlooked is that Monis demonstrated that, with few resources, an ordinary, unexceptional individual can become a globally-recognised, Salafi-Jihadi terrorist by attacking a soft-target in a major international city.

While operational security protocols would prevent a descriptive analysis of the exact security measures at places such as the Sydney Opera House, the Federal Houses of Parliament in Canberra and all international airports, Monis demonstrated that these highly secure locations are no longer the only targets to consider. It would be impossible to secure all cafés, supermarkets, fast-food outlets and other innocuous locations in Australia, New York, Paris or London. The Monis attack penetrated his enemy's OODA loop. In his

analysis and proposition of leaderless resistance, Michael (2012) explains how jihadists operating in the United States do not need to attempt "spectacular" attacks like 9/11 to be effective. As with the examples provided in this section, any kind of random assassinations and bombings can be equally psychologically devastating to the public they intend to influence.

**6.7 Conclusion**

This chapter analysed the applicability of the OODA Loop to the current terrorism phenomenon. The analysis required a deeper exploration of the mental and moral fabric of the OODA Loop. As Chapter One explained, the essay *Destruction and Creation* synthesised the concepts and theories of Gödel's Proof, Heisenberg's Uncertainty Principle and the Second Law of Thermodynamics. Boyd (1976) described how Heisenberg argued it was impossible to measure the velocity and position of a particle at the same time, while Gödel's Proof ascertained that certain aspects of a system could not be determined while observing them from within that system. To illustrate Boyd's synthesis contained within *Destruction and Creation*, this chapter described how GEN. Stanley McChrystal and his US Special Operations Joint Task Force struggled to understand and defeat AQ in Iraq, while they persisted in viewing AQ as a mirror image of their own system. The Second Law of Thermodynamics is a principle that determines the effect two systems have on each other, or what is described as entropy, while Boyd used Gödel's Proof to show that in order to understand a new system it was necessary to unveil another system beyond it. The powerful effect a single barbaric act, such as the beheading of a Western journalist published on social media, can have on the Western moral level of conflict is a good example of entropy and the effect two systems can have on each other.

The dynamics of the OODA Loop were then applied to the mindset of contemporary Salafi-Jihadi inspired terrorism. This was important because as well as Salafi-Jihadi inspired home-grown terrorism being a tactic of asymmetrical warfare, it is connected through the minds of people and the impact each can have on the other. In relation to AQ, it has been their dynamic ability to inspire home-grown terrorism that creates discontinuities and mismatches, producing entropy within Western society in the form of how to respond, even to the extent that Western public debate can begin to contemplate actions that counter the very freedoms the West upholds. As explained by Pantucci (2012), the evasive

and oppressive surveillance required to detect and defeat an attack like that would not be tolerated by the electorate. Similarly, moral and social entropy is generated within Western governments and communities when they are labelled Islamophobic in reaction to any public policy response to Salafi-Jihadi inspired home-grown terrorism. The decision by the Australian media, many politicians and commentators to support the *#illridewithyou* hashtag on Twitter is an illustrative example. While the victims were those held hostage by Monis this social and mainstream media movement implied that the Muslim community may become victims of a public backlash. The *#illridewithyou* hashtag had the consequence of confusing criticism of Salafi-Jihadi inspired terrorism with criticism of the Muslim community, or the Ummah. Any response to the siege as an act of terrorism now had the potential to further alienate the Muslim community in Australia. This notion of entropy is also an important component of what this chapter describes as moral manoeuvrability.

The analysis and synthesis conducted in this research took one of Boyd's most important contributions to the design of fighter jets, *energy manoeuvrability*, and, in the context of the current terrorist phenomenon, recast Boyd's theorem into *moral manoeuvrability*. Developing the concept of moral manoeuvrability is an example of the synthesis Boyd encouraged when creating novelty. In the context of Salafi-Jihadi inspired home-grown terrorism, manoeuvrability and the moral continuum of war are two critical components for penetrating an opponent's OODA loop. Moral manoeuvrability is not explicit nor would it be recognised as a doctrine of conflict within AQ's approach to war. However, its implicit application leads the dynamic adaptations of tactics such as single acts of brutal violence that have powerful communicative and moral impact. The moral, manoeuvrable impact from these single acts of violence is further amplified further when carried out in a DIY-style attack against a soft target within the urban life of Western society. In summary, this chapter has made a strong case for the applicability of the OODA Loop as an adaptable, strategic model that can be applied to examine and analyse the dynamic and evolving nature of Salafi-Jihadi inspired home-grown terrorism as a tactic of asymmetric warfare. Not only must one operate inside an opponent's time scale, one must also operate within its moral scale of warfare.

## Chapter 7 - Conclusion

### 7.1 Summary of Research & Discussion

Through the use of case study research methodology, this research tested the theory that Salafi-Jihadi inspired home-grown terrorism is a tactic of asymmetric warfare used by AQ and other proponents of the Salafi-Jihadi narrative. The research aimed to establish that home-grown terrorism is an effective tool of warfare, implicitly inspired by AQ's Salafi-Jihadi narrative that penetrates the West's OODA loop. As Lind et al (1989) explained, "the fourth generation battlefield is likely to include the whole of the enemy's society." In other words, those applying the tactics of asymmetric warfare in this modern era will use their enemy's moral and social constructs against them. For AQ, and others who shape and apply the violence justified through the Salafi-Jihadi narrative, the enemy is Western society and its global hegemony of democracy, human rights and the Hobbesian liberal principles or social contract. These values and principles, seen as strengths and even pillars of Western society, are seen by AQ as weaknesses to be exploited. These principles are also an antithesis to the uncompromising worldview that through his Prophet Mohammed, Allah and the hadiths are *a priori* to all human-devised principles. In other words, the Islamic doctrine (as with other religious doctrine) necessitates that revelation from one God, who Muslims believe created everything, must supersede reason. In this existential kind of conflict or war, as van Creveld (1991) argued, the side with the more rational interests will lose.

Three case studies were used to test this theory, through descriptive and evaluative critical inquiry, using John Boyd's OODA Loop as the analytical lens. As described in Chapter Three, case study research methodology is applicable to the study of home-grown terrorism because it is a well-established research discipline within social science. The use of qualitative research practices to conduct exploratory analysis, using real-life examples within a conceptual framework, was also demonstrated to be applicable to this field of inquiry. While there will continue to be a tautological debate around definitions of terrorism and home-grown terrorism, research of Salafi-Jihadi inspired home-grown terrorism is essentially a study of people, events, decisions, periods of time and institutions, as well as belief systems that are appropriate for a theoretical course of inquiry. The objectives of this research were to make a unique contribution to academic inquiry by:

a) using the OODA Loop as the strategic model of terrorism to evaluate and describe Salafi-Jihadi inspired home-grown terrorism, and

b) proposing the concept of moral manoeuvrability, through an examination of the role of Western moral and humanistic values, identified as asymmetrical weakness to be exploited by proponents of the Salafi-Jihadi narrative while simultaneously inspiring more followers when Western governments and citizens contradict those principles through their actions towards the Muslim community.

This research has also attempted to further develop this field of inquiry by expanding the understanding of how AQ created and exploited its own brand of Salafi-Jihadism to inspire home-grown terrorism. This has the potential to inform the development of adaptable counterterrorism strategies that are better at anticipating the least expected tactics of this form of asymmetric warfare, as opposed to only the most likely.

While the thesis elected to use two key conceptual selection criteria - Salafi-Jihadi inspired and home-grown terrorism - it did not intend to expand, redefine or contribute to the current discourse on the definitions of terrorism and home-grown terrorism. The academic literature is already well served by analysis into the definitions of home-grown terrorism as it is with the definition of terrorism itself. This thesis accepted the definition of home-grown terrorism given in the US Congress under its legislation, *Violent Radicalization and Home-grown Terrorism Prevention Act of 2007,* as described in Chapter Three. In summary, the key elements of home-grown terrorism are that the violence was planned, carried out or threatened by groups or individuals who were born or raised in the Western country where they planned to or succeeded in carrying out a terrorist attack. Home-grown terrorism was succinctly described by Precht (2007) as violence against Western countries perpetrated by individuals in the country in which they were born or raised.

A key selection criterion related to home-grown terrorists was that the individuals or members of a group were unexceptional. That is, they were not specially trained guerrilla fighters, hardened terrorists or highly trained assassins; there was nothing about them that made them stand out from any other member of the community. They may have gone to Afghanistan or elsewhere to receive training by AQ, but this did not turn them into special force operatives. The individuals were unexceptional in their education, up-bringing, friends, sports and hobbies. This criterion is in fact a crucial aspect of AQ's ability to penetrate the OODA loop of Western government counterterrorism and security measures. There are undoubtedly hundreds of unexceptional, young Muslim males living in Western

countries who would not register on the radar of police and security agencies. While AQ may or may not have explicitly realised, the ability to inspire unexceptional young males to plan and attempt to carry out a terrorist act in their Western country of residence is an example of a tactic of asymmetric warfare. Similarly, the manipulation of Western moral constraints on the use of force and the protection of human rights, including those of terrorists, is another example of a tactic of asymmetric warfare. As Arreguin-Toft (2001) described, asymmetric warfare is how a weak actor's strategy can make a strong actor's power irrelevant.

Chapter Two described how the OODA Loop was devised as a strategic framework for combat operations by US fighter pilot COL. John Boyd (1927-1997). According to Boyd, an entity that can process through this cycle of observing, orienting and reacting to unfolding events more rapidly than an opponent can "get inside" the opponent's decision cycle and gain the advantage. As explained in Chapter Four, one of the most disorientating aspects of the 7 July 2005 London transport network attack was the broad Yorkshire accent of the terrorists in their YouTube videos published after the attack. This was not what the public or the UK government expected and it demonstrated the effect of penetrating the UK's OODA Loop, in response to AQ previously having its own OODA Loop penetrated by Western intelligence and security forces.

As AQ observed it was not necessary to send outsiders into Western countries to carry out a terrorist attack when young Muslim males and converts to Islam who had become consumers of the Salafi-Jihadi narrative could be turned into producers of home-grown terrorism. This process is also an example of the synthesis of various components of systems Boyd identified as being important for developing the kind of novelty that is least expected by one's adversary. As described in Chapter Two, the creation of the OODA Loop was the culmination of Boyd prising apart theories of mathematics, physics and energy as well as exploring an extensive number of wars in history. Boyd then synthesised the core elements of their strategic successes to combine their elements to form a novel construct. An example of this synthesis is Boyd's presentation entitled *the Strategic Game of ? and ?,* where he takes the audience through a mental game to design a snowmobile from a random list of mechanical components. Boyd synthesised these theories to develop what is often mistaken to be a simple, conceptual framework on strategy.

An important aim of this research was to examine Boyd's own eclectic, theoretical and critical inquiry. While this is not a thesis on Boyd, (Osinga, 2005, does a rare and comprehensive study on Boyd's strategic thinking), it was essential to the integrity of the research to evaluate Boyd's most important works - including *Destruction and Creation*, *Patterns of Conflict*, *The Essence of Winning and Losing* and the embodiment of his work, *A Discourse on Winning and Losing*. As discussed in Chapter Two, in 1986 Boyd also wrote and presented *Organic Design for Command and Control* otherwise referred to as *C2*. Without this examination it would not have been possible to appreciate and understand how to apply the OODA Loop as an adaptable strategic model for the study of Salafi-Jihadi inspired home-grown terrorism. It would be analogous to turning on a light switch and claiming to understand electricity. Anyone can draw the OODA Loop and describe the four components, but this does not qualify as an understanding and the application of the OODA Loop.

It was through his multidimensional process of analysis and synthesis that Boyd determined that the key to beating an opponent was the ability to get inside the mental core of their decision processes. The OODA Loop was the conceptual framework Boyd developed to explain this process. As Hammond (2001), Coram (2002) and Polk (2010) explain, the result of penetrating an adversary's OODA Loop means the adversary is dealing with distorting mental images and mis-information, leading to confusion and disorientation. This has direct applicability to analysing and synthesising the components of Salafi-Jihadi inspired home-grown terrorism and its ability to penetrate the moral, physical and cognitive levels of war against Western society. While Osinga (2005) provides one of the few detailed and thorough academic works on the OODA Loop, and discusses asymmetric warfare and terrorism since 9/11, he does not use the OODA Loop to evaluate AQ's use of the Salafi-Jihadi narrative to inspire home-grown terrorism. By using the OODA Loop as an adaptable strategic model, this research offers a novel approach to the study of how AQ has exploited and cultivated the Salafi-Jihadi narrative to inspire home-grown terrorism as a tactic of asymmetric warfare.

As Boyd explained, *Orientation* is the most important element within the OODA loop (Lind et al 1989, Hammond 2001, Coram 2002, Osinga 2005, Polk 2010). Understanding the *Orientation* of an opponent means determining its culture, previous experiences, genetic heritage and moral compass, which is a non-linear feedback system in itself. The principles of Western society and moral constructs such as the sanctity of human rights would be

examples of elements contained within a Western framed view of *Orientation*; while the unilateral truths - as prescribed by the Prophet Muhammad or the Hadiths - would form elements of an Islamic based view of *Orientation*. Applying the concept of *Orientation*, Chapter Three described the predominant strategic models of terrorism and offered a new adaptable model, more applicable to accommodating the dynamic, regenerative nature of the current terrorism phenomenon. Chapter Three also analysed the core elements of AQ's manipulative use of the Salafi-Jihadi narrative to inspire followers and converts of Islam. Conclusions drawn from current academic research into home-grown terrorism and Islamic extremism continue to be framed by Western constructs of organisations, managerial structures and decision making. Further, there is more to *Orientation* than simply being able to rapidly list the elements that might form the *Orientation* of an adversary; fundamentally it is about being able to do this implicitly.

Using the term "leaderless" in academic research, to describe a shift in home-grown terrorist attacks where there appears to be no direct and explicit connection to AQ (Sageman 2008, Michael 2012, and Gray 2013), overlooks the *implicit* nature of this Salafi-Jihadi inspired asymmetric warfare that is being waged in a way that T.E. Lawrence described as "arranging the minds". Boyd's interpretation of *implicit* comes from his epistemological inquiry into historical military strategy, through examining German battlefield tactics and their use of the expression *fingerspitzengefuhl*, or "finger-tip feel". German military doctrine described *fingerspitzengefuhl* as a Commander's instinct or intuition, on the battlefield, to make decisions when confronted by a dynamic and changing environment. As Coram (2001) explains, Boyd believed that when one developed *fingerspitzengefuhl* one was able to bypass the explicit "Orientation" and "Decision" part of the OODA Loop to "Observe" and "Act" almost simultaneously.

Polk (2010) describes how Boyd was concerned that the explosion of technology in the information revolution risked overshadowing the human dimensions of *C2* in favour of hardware solutions. His organic notion of *C2* was how he recast *fingerspitzengefuhl,* or the freedom to seamlessly apply both variety and initiative. While Gladwell (2005) may not have mentioned Boyd or *fingerspitzengefuhl* when he developed his blink theory, he described it as "thinking without thinking." While it is an important contribution, the focus on "leaderless" only identifies that which is explicit about Salafi-Jihadi inspired home-grown terrorism; it does not grasp the possibility of implicit or existential adaptation. This could explain why US law enforcement and security agencies initially dismissed the threat posed

by the Tsarnaev brothers in the lead up to the Boston Marathon bombing. Alternatively, the law enforcement agencies could have been overwhelmed with the sheer number of unexceptional, young males being inspired by the Salafi-Jihadi narrative that identifying the Tsarnaev brothers was a disorientating task.

This approach to the research and the use of Boyd's OODA Loop has resulted in several findings that make a contribution to this field of inquiry.

## 7.2 Key Findings and Contributions

### 7.2.1 The OODA Loop as an Adaptable Strategic Model of Terrorism

The generally accepted strategic models of terrorism have come from important academics such as Thornton (1964), who proposed five strategic constructs, Crenshaw (1981) who developed strategic models of control and outbidding, as well as Pape (2006) who finds political ends to be the overriding, strategic objective of terrorist organisations. While Kydd and Walter (2006) argue terrorist violence is a form of costly signalling, Abrahms (2008) offers a strategic theory based on organisational behaviour or social networks (a sense of belonging), which compliments the theoretical work of Sageman (2004). In unique contrast to these models, the OODA Loop provides a strategic model that is more suited to the adaptive, dynamic and evolving nature of Salafi-Jihadi inspired home-grown terrorism. Significantly, since it was developed by Boyd, the OODA Loop has not been used as a strategic model of terrorism. The dominant strategic models present as restrictive and static frameworks, particularly when analysed through important works such as *Destruction and Creation*, which can be considered the DNA of the OODA Loop.

As with other fields of theoretical inquiry involving social and behavioural phenomena, a strategic model or typology is considered useful for a rational frame of reference from which to conduct empirical and epistemological research. This is also the case for the study of terrorism and home-grown terrorism. A strategic model provides a logical construct to understand why and how a particular form of behaviour or action is occurring. In his presentation *The Strategic Game of ? and ?,* Boyd (1987) states:

> What is strategy? A mental tapestry of changing intentions for harmonising and focusing our efforts as a basis for realising some aim or purpose in an unfolding and often unforeseen world of many bewildering events and many contending interests. (Boyd, 1987, slide 59)

In his essay *Destruction and Creation*, Boyd (1976) says, "any inward-oriented and continued effort to improve the match-up of concept with observed reality will only increase the degree of mismatch" (Boyd 1976, p.6).  In order to ensure academic research into the field of terrorism and home-grown terrorism does not become locked into a closed system of analysis, Chapter One explained that the first requirement is to shatter the rigid conceptual pattern, or patterns.  The second requirement is to constantly seek to thread together common qualities, isolated facts, perceptions, ideas, impressions, interactions, and observations, as they take shape and change how our actions or the actions of others represent the real world.  Finally, Boyd (1976) argued it is necessary to repeat this un-structuring and restructuring until a concept is developed that begins to match-up with reality.  However, this concept will also need to be evaluated and reconstructed, as it too may become incomplete following changes in the external environment.  In *Destruction and Creation*, Boyd (1976) said,

> by doing this in accordance with Gödel, Heisenberg and the Second Law of Thermodynamics—we find that the uncertainty and disorder generated by an inward-oriented system to talking to itself can be offset by going outside and creating a new system. Simply stated, uncertainty and related disorder can be diminished by the direct artifice of creating a higher and broader more general concept to represent reality. (Boyd, 1976, p. 6)

This research has emphasised the importance of understanding that the OODA Loop is not merely a simplistic, linear conceptual framework.  Instead, it is comprised of a complex synthesis of scientific, engineering, mathematical and biological principles as well as an epistemological evaluation of strategic theories of warfare throughout history.  From this dialectic approach to constructing an adaptable, general strategic model used for a study of terrorism, it is possible to determine that the prevailing models are too restrictive and static.  Home-grown terrorism is essentially an aspect of conflict witnessed through the tactical and strategic application of violence.  The OODA Loop is a general theory of conflict that can be applied at the tactical and strategic level to understand this evolving and dynamic phenomenon of asymmetric warfare as it applies to the contemporary phenomenon of home-grown terrorism.

**7.2.2 Current Terrorist Phenomenon – A Different View on War**

While there is a plethora of academic literature debating the definition of terrorism, this thesis finds that AQ's use of Salafi-Jihadi inspired home-grown terrorism is a tactic of asymmetric warfare against Western society. That is, the implicit and dynamic adaptations in the application of home-grown terrorism should simultaneously be seen as part of the current terrorist phenomenon and as acts of war. In *Patterns of Conflict*, Boyd (1986) argues that modern manoeuvre warfare, as expressed through the OODA Loop cycle, magnifies friction and induces paralysis by dislocating enemy forces. Success in competition depends on simultaneously sustaining tempo while "abruptly adapting to changing circumstance without losing cohesion or coherency of the overall effort". This description by Boyd (1986) is central to understanding how Salafi-Jihadi inspired home-grown terrorism, when viewed through the lens of the OODA Loop, can be described as a tactic of asymmetric warfare.

It is a war not aimed at the physical destruction of Western armed forces or key aspects of our critical infrastructure in order to win. Instead, it is a war aimed at disembowelling and confusing the legal, moral, social and democratic constructs of Western society. This conflicts with Western strategies on war and may therefore distort potential counter-terrorism measures. The Western strategy of war has been dominated by von Clausewitz's *On War* (1832). The "Clausewitzian" principles were devised for inter-state war between conventional armed forces: the physical domination and destruction of one sovereign state by another through the authority of large and increasingly more sophisticated weapons. However, this attachment to Clausewitz has not benefitted Western strategic approaches to war against adversaries who are weaker in terms of technology and capital in the application of force. As Osinga (2005) explains, even though Clausewitz may be significant for his contribution to shaping the nature of war and strategy, his theories may also limit understandings of other constructs or paradigms of war and conflict. Osinga (2005) goes even further and argues that, "the current Western mode of thinking and waging war, which is founded on Clausewitzian principles, is giving rise to non-Clausewitzian styles of warfare, with obvious consequences for the state of strategic theory" (Osinga, 2005, p.28). This research determined that even after over a decade since the attacks on the World Trade Centre and the Pentagon on 9/11 and the rise of ISIS, there continues to be a juxtaposition between the Salafi-Jihadi narrative of conflict as promoted by AQ and that of Western governments.

This thesis argued that through the use of the Salafi-Jihadi narrative, AQ is engaged in a stateless war. Home-grown terrorism is a tactic in the application of that war. The description of state versus non-state actors is widely discussed in the literature, especially in the areas of terrorism, counterinsurgency and guerrilla warfare, and it is a particular theme in what is referred to as fourth-generation warfare, as described by Lind et al (1989). The stateless war, engaged by powerful narrative strategists within AQ and ISIS, is socialised by what could be described as cognitive-connectivity, built through deep faith-based, fundamentalist moral guides to life. Victory is securing the mindset of the borderless, interconnected community where Western citizens and their Governments fear the unpredictable, fast transient and morally irreconcilable nature of potential home-grown terrorists living within their society. While this thesis is not a critical inquiry on how warfare has evolved, it is evident that AQ is unequivocal in its belief and through its actions that it is indeed engaged in war against the West and all those who it accuses of being against Islam. The OODA Loop is directly applicable to understanding not only the mindset of the current terrorist phenomenon but also the strategic nature of how AQ plans and implements its stateless war. The OODA Loop can also assist in exploring the question of how to penetrate, isolate and neutralise this non-state threat, as Lind said:

> Col John Boyd, USAF, America's greatest military theorist, defined grand strategy as the art of connecting to—while isolating the enemy from—as many independent power centers as possible. The grand strategic question facing the US is how to do that in a 21st century that will increasingly be dominated by non-state, Fourth Generation forces. (Lind 2004, November 22).

In asymmetric conflicts, conventional battles with large armies are normally avoided, and if required, are only in the form of tactical activity, that must not be at the expense of the broader, strategic objective. Deliberately destroying the distinction between conventional opponents and civilians is, as Osinga (2005) explains, an explicit part of the strategy of these conflicts. In the context of this research, this simply describes the kind of stateless war waged by AQ and other proponents of the Salafi-Jihadi narrative.

**7.2.3 Bypassing OODA Loops**

An important finding from this research is that AQ's OODA Loop and that of Western governments and their counterterrorism policies are bypassing each other. In other words, the two OODA Loops have been operating, and in some cases continue to operate, on different cultural dimensions of time, as well as moral and mental boundaries.

Surviving in combat requires rapidly and implicitly understanding the *Orientation* of an opponent. That can be difficult or misleading when done from a closed system, as Boyd argued, or when one is analysing an opponent's *Orientation* as a mirror image of one's own OODA Loop. This research provided the example of retired GEN. Stanley McChrystal's comparison between how the US military viewed AQ in Iraq and how AQ actually operated as a network. The research also discussed the cognitive dissonance this can generate and used Dixon (1994) and his insightful analysis of historic instances of military incompetence to illustrate this notion. Multiple case study analysis is used by Dixon (1994) to highlight such traits as the ignoring of intelligence reports which did not fit with preconceived ideas, a delusional underestimation of the enemy (a "magical" attempt to minimise the external threat), the fear of failure and an implacable resistance to the "uncertainties" of innovation.

The academic debate between Sageman (2008) and Hoffman (2008) over "leaderless" jihad or the continued involvement of the AQ core is an example of analysing Salafi-Jihadi inspired terrorism from a Western construct of *Orientation,* or a closed-system. It demonstrates an inability to construct Boyd's snowmobile metaphor. As Richards (2006) explained, mentally we interact by selecting information from a variety of sources or channels in order to generate mental images or impressions that match-up with the world of events or happenings that we are trying to understand and cope with. Often these mental images are reflections of our own perspective, what we feel comfortable with, reinforced by our own *Orientation*. This can cause a great deal of cognitive dissonance, when in fact if the West wants to deter or defeat AQ's use of Salafi-Jihadi inspired home-grown terrorism, cognitive dissonance is exactly what needs to be created within the minds of individuals residing in Western countries.

An alternative explanation is that conventionally-minded, Western-based academic research overlooks nuances such as implicit decision-making, *fingerspitzengefuhl*, or the creative, dynamic freedom of action inspired by the Salafi-Jihadi narrative, or *schwerpunkt*.

As discussed in Chapter Two, this meant not only developing a fingertip sense of the *Orientation* of an adversary, but also creating a unifying medium that flows into the freedom of action, initiative, independent creativity and a sense of duty.  This notion of *schwerpunkt* ties the initiative of many subordinate actions with superior intent in order to generate a mismatch, preventing the ability of an opponent to shape and adapt to unfolding circumstances.  As Lind et al (1989) describe, it is the conceptual focus.  It could explain the freedom of action that home-grown terrorists initiate in the application of existential will implied by AQ through the Salafi-Jihadi narrative.

T E Lawrence described it as the use of the smallest force in the quickest time and the farthest place, giving the impression of a threat everywhere.  This is a clear and demonstrable tactic of asymmetric warfare by AQ in the inspiration of home-grown terrorists.

### 7.2.4 Moral Manoeuvrability

This research has developed the concept of moral manoeuvrability in relation to Salafi-Jihadi inspired terrorism, although the concept can be applied to any conflict or competitive system.  The theoretical design of moral manoeuvrability resulted from employing the OODA Loop to conceptualise the premise that warfare has mental and moral dimensions to be exploited to instil fear and confusion, or result in an overreaction by an opponent, or even in an opponent acquiescing to the adversary's demands, while simultaneously inspiring followers who regenerate the Salafi-Jihadi narrative in their own application violence.  The overreaction or compliance with the adversary's demands forces the opponent to compromise on its own moral values and principles.  The notion that there is a moral level of war is not new.  This idea has been widely discussed by a range of military historians and leaders in the strategy of warfare and conflict - such as Sun Tzu, Napoleon, T. E. Lawrence, Liddell Hart and Colin Gray - all of whom Boyd analysed in his epistemological development of the OODA Loop.

The novelty of this research has been to re-synthesise the notion of the moral level of war using the OODA Loop and Boyd's theory on energy to develop the concept of moral manoeuvrability.  The use by AQ of Salafi-Jihadi inspired home-grown terrorism to penetrate the West's moral constraints and fundamental principles of human rights to instil

terror, while simultaneously inspiring followers, describes the use of moral manoeuvrability. For example, any reaction by Western governments, media, police or the general population is closely monitored by proponents of the Salafi-Jihadi narrative, such as Hizb-ut-Tahrir in Australia, in the hope it magnifies any distrust and suspicion the Muslim community may hold about the Australian government.

Boyd strongly argued that demonstrating an opponent's moral contradiction between its stated value system and how it actually carries out these values is fundamental to inspiring a vanguard of revolutionary change. For example, in the *Strategic Game of ? and ?,* Boyd, uses an extract from Alexander Atkinson's Social Order and The Theory of Strategy that argues:

> "Moral fibre is "the great dam that denies the flood of social relations their natural route of decline towards violence and anarchy"…In this sense, "moral order at the center of social life literally saves society from itself." "Strategists must grasp this fact that social order is, at once, a moral order …If the moral order on which rests a fabric of social and power relation is compromised, then the fabric (of social order) it upholds goes with it." (cited in Boyd, 1987, *Strategic Game of ? and ?,* slide 21)

Any reaction, even to an act of home-grown terrorism, can be re-cast and labelled "Islamophobic", causing moral discomfort in the governments, media and public commentary. The application of moral manoeuvrability can be a highly corrosive strategy in asymmetric warfare against an opponent. This is a classic illustration of what Boyd referred to as folding an adversary back inside itself. In the end, the public, political and social elite prevent the government from pursuing the courses of action required to win.

This research discussed and analysed Mack (1975) and his astute observation that the greater the gap in relative power, the less resolute and more politically vulnerable strong actors are; similarly the more resolute and less politically vulnerable are weak actors. Big nations lose small wars because frustrated publics force a withdrawal short of victory. This is one of the consequences of moral manoeuvrability.

**7.2.5 Dynamic Evolving Tactics – The Power of the Single Act**

Through the use of the OODA Loop as the analytical lens, this thesis determined that AQ and ISIS have understood the power of the single act of brutality to simultaneously inspire home-grown terrorists to regenerate AQ's application of asymmetric warfare and create disharmony, confusion and fear within the West. The single acts of brutality are also demonstrations of the power of moral manoeuvrability. For example, the kidnapping and beheading of Western aid workers and journalists, and the burning alive of a Jordanian fighter pilot, simultaneously penetrate our moral values while inspiring and building cognitive bridges into the minds of aspiring home-grown terrorists. In the context of the OODA Loop, these single acts of brutality are further examples of the asymmetric adaptability of AQ and its exploitation of the Salafi-Jihadi narrative.

The synthesis of a single act of brutality (in this case beheading) with the use of a Westerner to kill a Westerner (in the case of James Foley) generated moral repulsion and a sense of betrayal akin to home-grown terrorism. As a tactic of asymmetric warfare, the act of kidnapping and denigration of Kenji Goto and Haruna Yukawa was continually replayed by the Japanese mainstream media, terrifying a nation, while the beheadings of both men forced Japan to change its foreign policy direction. While this research did not have scope to explore the direct or indirect connection between single acts of brutality and the inspiration value for aspiring home-grown terrorists, this could be one area for further research.

The applicants of the current terrorist phenomenon have recognised the tremendous power of the single barbaric act to penetrate the West's OODA Loop. The disharmony is amplified and the penetration even deeper when the single act is simple and carried out by an unexceptional person born or raised from within our own society. This does not mean AQ explicitly designed single acts of brutality as a powerful inspirational tool for home-grown terrorists. Truly novel adaptations are rarely contrived and constructed in a mechanical process. Further, it is not even as if these kidnappings or beheadings are a new tactic. Kidnapping for ransom has been a lucrative business for many criminal and terrorist organisations - such as Somali pirates, the FARC rebels in Colombia, drug and criminal cartels in Mexico, the Taliban in Afghanistan and Sunni extremists during the second US-led war in Iraq. The beheading of Daniel Pearl (on 1 February 2002) was a single act of brutality and perhaps an early example of AQ's use of this as a tactic of asymmetric warfare.

Finally, while each shift in the application of home-grown terrorism may not have been explicitly designed, AQ observed the disharmony this tactic caused and the subsequent counterterrorism reaction. The three case studies selected for this research demonstrated how the OODA Loop analysis can be used to explain the transformative nature of modern terrorism as a tactic of asymmetric warfare - from (i) the case of Jack Roche and the use of unexceptional individuals from Western countries to avoid detection, to (ii) the 7 July 2005 London attack where Western groups of friends were used to plan attacks to overcome tactical challenges as a way of adapting when AQ had its own OODA Loop penetrated, and, finally, to (iii) the Boston Marathon case where two brothers with no known links to terrorism were inspired by the Salafi-Jihadi narrative as an example of the regenerative adaptability of the AQ brand.

The OODA Loop offers a different view of this kind of warfare further evolving in the context of the current terrorism phenomenon through single acts of brutality, hyper-powered by social media, which implicitly provide a further inspirational dividend for potential Salafi-Jihadi home-grown terrorists. Using the OODA Loop has provided a lens through which we can analyse and synthesise these components, as this phenomenon continues to remain dynamic and evolve.

## 7.3 Application of the Research

The OODA Loop and the findings from this research could be used to determine how the West develops more effective counters to moral manoeuvrability and AQ's dynamic regenerative capacity. How do we undermine this powerful arranging of the minds taking place on a global scale? The message in this research and its applicability is to ask governments, academics and the security sector to develop tactics, techniques and procedures that detect the least expected adaptation by AQ, and not just the most effective or most likely.

The anxiety that comes with the possibility of having made a bad decision can lead to rationalisation, the tendency to create additional reasons or justifications to support one's choices. The most famous case in the early study of cognitive dissonance was described by Leon Festinger in the book *When Prophecy Fails* (1964). While this thesis did not explore how Boyd challenged the entire collective thinking and practice of the US Air Force, his own destruction and creation approach to thinking is informative. Perhaps one of the most

important potential applications of this research is to use the OODA Loop as the conceptual framework in any and all facets of academic research.  In other words, it could applied to historical and epistemological research, case study research methodology, raw data collection, or analysis of empirical research of AQ's use of Salafi-Jihadi inspired home-grown terrorism, to avoid the trap of cognitive dissonance.  Further, it would be logical to recommend that the adaptable, strategic model and the concept of moral manoeuvrability could be used to explore how a grand strategic policy could be developed to penetrate the OODA loop of Salafi-Jihadi terrorist organisations.  The objective would be to engineer a high degree of entropy and confusion, while suffocating their capacity to inspire followers who may be considering conducting home-grown terrorism.

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