# Has a Non-State Armed Group Conducted a Revolution in Military Affairs?
## A Case Study of al Qaeda

Master of Arts in Law and Diplomacy Thesis

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*"…for if prepared to die, what can they not achieve?"*
Sun Tzu[1]

## Introduction

The 1990's saw the emergence of non-state armed groups such as al Qaeda as major strategic threats to mature states. The 1990's also saw a period of study and debate on two related concepts, the Revolution in Military Affairs (RMA) and Fourth Generation Warfare (4GW). While al Qaeda and its attacks have been referred to as examples of both notions, these contentions have not been systematically explored.

The purpose of this paper is to examine whether a non-state actor, in this case al Qaeda, (1) put into practice a fourth generation of warfare, and (2) in so doing, conducted an RMA. The question will be approached by first asking whether a new kind of warfare has emerged, as evidenced by the innovation, departure from norms, and effectiveness of the September 11th attacks. Examining these attacks, the beliefs and motivations behind them, and the forces that carried them out, leads to the conclusion that the use of force on 11 September did not fit into traditional categories or notions of generations of warfare. This paper will argue that, while the model of 4GW is imperfect and incomplete, it provides a useful framework for understanding the September 11 attacks and al Qaeda's activities, and is a basis for further study of the evolving use of force in the post-Cold War era. Once it has been established that al Qaeda has put into practice a fourth generation of warfare, the question remains as to whether the effective conduct of 4GW constitutes an RMA. A brief distillation of a Revolution in Military Affairs can be expressed as "a discontinuous increase in military effectiveness."

[1] Sun Tzu, *The Art of War*, trans. S.B. Griffith (New York: Oxford University Press, 1981), 134.

If a non-state armed group indeed conducted an RMA during the 1990's, it would be a telling commentary on the national security community's effectiveness in observing paradigm shifts. What are the implications of this? Some national security thinkers warned of the rising threats posed by armed groups such as al Qaeda, but these thinkers were for the most part "strategic iconoclasts"[2] outside the mainstream of the community. The RMA framework is chosen for the purpose of analyzing al Qaeda because the national security community considers it a fairly mainstream concept. As such, it is a useful measure with which to assess whether the community missed something that by its own standards would have been a critical development. This paper argues that defense thinkers could have used their own tools to gain an earlier warning of al Qaeda's emergence as a strategic threat.

**Strategic Context: a Rise in Non-State Threats**

Globalization[3] and the post-Cold War security environment produced a unique setting for non-state armed groups to innovate and gain a footing from which to challenge state power. The interplay of numerous forces served to weaken the Westphalian state system. In his book *In the Heart of War: On Power, Conflict and Obligation in the Twenty-first Century*, Gwyn Prins describes a shift from the state to the individual as the empowered actor in international relations.[4] Writing in 1999, Thomas Friedman issues a warning about the shifting of global threats from

[2] Richard H. Shultz and Andreas Vogt, "It's War! Fighting Post-11 September Global Terrorism through a Doctrine of Preemption," *Terrorism and Political Violence* 15, No. 1 (Spring 2003): 7.
[3] Globalization is defined as "a gradually expanding process of international interpenetration in the economic, political, social, and security realms, uncontrolled by (or apart from) traditional notions of state sovereignty." Victor D. Cha, "Globalization and the Study of International Security," *Journal of Peace Research* 37, no. 3 (2000): 391-93. Cited in Audrey Kurth Cronin, "Sources of Contemporary Terrorism," in *Attacking Terrorism: Elements of a Grand Strategy*, Audrey Kurth Cronin and James M. Ludes, eds., (Washington DC: Georgetown University Press: 2004).
[4] Gwyn Prins, *In the Heart of War: On Power, Conflict and Obligation in the Twenty-first Century*, (London and New York: Routledge, 2002), xxii, 24.

superpowers to "super-empowered angry men," who use the powers embedded in globalization to attack the superpowers.[5]

**Non-State Actors' Increasing Influence**

The proliferation of non-state armed groups and their enhanced effectiveness occurred in the context of a rise in influence of non-state actors vis-à-vis state institutions. Globalization has been a key cause of this rise, as non-state actors acquired new tools and capabilities with which to exert influence. For the purpose of this paper, Amnesty International's definition of non-state actor will be used: "the term 'non-state actor' encompasses people and organisations acting outside the state, its organs and its agents."[6]

James Rosenau describes non-state actors as a sub-category of "spheres of authority" (SOA's), meaning units of activity or authority that are not instruments of states or governments and may not correspond to national borders.[7] Citing a global shift in scope and influence from the state to the non-state realm, Rosenau highlights the increasing significance – relative to governmental authority – of SOA's, examples of which include "NGO's, nonstate actors, sovereignty-free actors, issue networks, policy networks, social movements, global civil society, transnational coalitions, transnational lobbies, and epistemic communities."[8] Rosenau attributes the rising influence of non-state actors, and the corresponding decline in the power of states, to what he calls *fragmegration*, or the simultaneous and often opposing integrating and fragmenting effects of globalization, which have altered the nation-state system. Integrating effects, according to Rosenau, result from the increasing interconnectedness and interdependence of markets, populations, and organizations, and the adoption of shared norms. Globalization's fragmenting

[5] Thomas L. Friedman, *The Lexus and the Olive Tree*, (New York: Farrar, Straus and Giroux, 1999), 322-329.
[6] Amnesty International, *Respect, protect, fulfil - Women's human rights: State responsibility for abuses by 'non-state actors'*; (accessed 25 March 2005); available from http://web.amnesty.org/library/index/ENGIOR500012000.
[7] James Rosenau, *Along the Domestic-Foreign Frontier*. (Cambridge, UK: Cambridge University Press, 1997), 39-40.
[8] Ibid., 40.

effects result from groups' increasing emphasis on communal allegiances, often expressed with violence.

Kalevi Holsti offers another perspective on the shift in influence from the state to the non-state realm. In his book *The State, War, and the State of War,* Holsti analyzes the impact on international politics of declining numbers of interstate wars and the increasing occurrence of wars within states.[9] He attributes this shift in types of wars primarily to a decline in state legitimacy. Pointing to a rise in weak and failing states, Holsti argues that these states will be central locales of future conflict, and that efforts to end and prevent wars, based on an outdated interstate system, need to be revisited.

**The Growing Threat Posed by Non-State Armed Groups**

In the 1990's, non-state armed groups (NSAG's), a violent subset of non-state actors, were transformed from a peripheral threat to a primary strategic threat to states, capable of inflicting major strategic blows on powerful countries.[10] Several factors contributed to this development. Non-state armed groups were empowered by several aspects of globalization. Taking their lead from changes in the 1990's business world, they adopted networked organizational structures and functions. Advances in communications, information technology, and transportation allowed non-state armed groups to become transnational and highly mobile. The post-Cold War security system, marked by the erosion of the Westphalian nation-state system and increasing incidences of state failure, has been another important factor.

In summary, the transformation of the non-state armed group threat was fueled in part by the legitimacy-eroding domestic dynamics within states discussed by Holsti, and the juxtaposed integrating and fragmenting effects on the international system outlined by Rosenau. The post-Cold War era – to date – has seen numerous state failures, a dramatic rise in the amount of

[9] Kalevi Holsti, *The State, War, and the State of War,* (Cambridge, UK: Cambridge University Press, 1996).
[10] For an exposition of this contention, see Shultz and Vogt.

ungoverned territory, and increasing levels of sub-state conflict, many over one form or another of identity. State governments, whose legitimacy is often contested, have repressed elements of their populations, and this has fueled the rise of armed groups.

Shultz, Farah, and Lochard identify four categories of non-state armed groups: insurgents, terrorists, militias, and organized crime. The authors note several aspects that all armed groups have in common. They seek to challenge the power, authority, and legitimacy of the state, either by overthrowing the state's government, or by weakening or co-opting it. All armed groups use violence in pursuit of their aims, and this violence can take conventional or unconventional and asymmetric forms. Armed groups operate both locally and globally and, enabled by information age advances, are able to challenge their state opponents at home and abroad. Armed groups are not democratically based organizations and do not rely upon the rule of law to resolve disputes.

The authors propose a six-point framework for constructing profiles of armed groups. The six areas for analysis are leadership; followers; organizational infrastructure; ideology; strategy, doctrine, and tactics; and linkages with other non-state armed groups. By constructing accurate profiles of the groups, strategies can then be developed to confront or co-opt them as appropriate.

Shultz, Farah, and Lochard identify four conclusions of their study, pointing to non-state armed groups as a tier-one security threat that will continue to pose serious challenges into the 21st century. First, weak and failed states, which provide armed groups with a hospitable environment, remain a significant problem. Second, extensive lawless and ungoverned areas within these states provide armed groups with formidable bases of operations. Third, non-state armed groups and the conflicts they participate in pose the most recurrent cause of global instability. The groups are becoming more lethal as they deploy increasingly indiscriminate weapons, and the conflicts, many of them over communal differences, will be enduring and difficult to terminate. Fourth, the

severity of the non-state armed group threat is increased by the stated intention of some groups to acquire and use weapons of mass destruction.

The authors of this study lay the foundation for the contention that armed groups are sophisticated and effective political entities. This contention will be made later in this paper, in support of the argument that Clausewitz's nature of war applies to conflict with non-state armed groups.

Concurrently with rising influence of non-state armed groups, analysts in the late 1980's and early 1990's began to articulate the concept of a new generation of warfare. They called this concept Fourth Generation Warfare, the main tenets of which are that small, empowered groups, often employing networked organizational structures, can turn states' strengths against them by applying force asymmetrically and targeting the vulnerable economic and social nodes of a society through unconventional means.[11] Armed groups such as al Qaeda and Hezbollah appear to have applied this emerging concept to great effect. Al Qaeda is the first non-state armed group to be considered truly global in presence and mission. It established its global reach by adopting a unique organizational structure, in effect a network of networks.

# Chapter 1: What is an RMA?

### Origins

According to historian Williamson Murray, the RMA concept emerged as the notion of a "military revolution" in the 1955 lecture and subsequent article by British historian Michael

[11] Jason Vest; "Fourth-generation warfare," *The Atlantic Monthly*, December 2001. Accessed 25 March 2005. Available from http://www.theatlantic.com/issues/2001/12/vest.htm.

Roberts, who described the military innovations of Gustavus Adolphus of Sweden.[12] Colin Gray notes that military historians had been studying military revolutions for some time longer. He points to several early and mid-20th century historical works addressing advances in military technology by European armed forces.[13]

Soviet writings in the 1980's, warning of an impending dramatic increase in military effectiveness (a "military-technical revolution") posed by America's development of highly advanced conventional weapons, developed the RMA concept and led to its adoption by policy-makers. In 1983, Marshal N.V. Ogarkov, then chief of the Soviet general staff, noted that "the creation of non-nuclear means of armed combat with great destructive force... is sharply changing the nature of war, the methods of unleashing it, and its possible consequences.[14] To the Soviets, American technological advancements meant that new precision conventional weapons could approach the effectiveness of tactical nuclear weapons and negate their utility.[15]

The Soviet writers were responding to the execution of what former U.S. Secretary of Defense Harold Brown called the "offset strategy." In the event of a surprise Warsaw Pact armored attack on Western Europe, the U.S. would counter Soviet numerical superiority with technological superiority in information-based support systems that would multiply combat effectiveness. The offset strategy centered on support systems in the areas of C3I, defense

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[12] Williamson Murray, "Thinking About Revolutions in Military Affairs," *Joint Forces Quarterly* 16, (Summer 1997): 69. Accessed February 10, 2005. Available from http://www.dtic.mil/doctrine/jel/jfq_pubs/summer97.htm.
[13] Colin S. Gray, *Strategy for Chaos: Revolutions in Military Affairs and the Evidence of History*, (London: Frank Cass, 2002), 19.
[14] Mary C. FitzGerald, "Marshall Ogarkov and the New Revolution in Soviet Military Affairs," Center for Naval Analyses, CRM 87-2, January 1987. Accessed April 10, 2005. Available from http://www.cna.org/documents/2787000200.pdf.
[15] Ibid., 8.

suppression, and precision guidance.[16] The initial Soviet concerns were raised by junior officers in the late 1970's, and rose to the general staff.[17]

Ogarkov and his peers were particularly concerned by the development of "reconnaissance-strike complexes"[18] that could target and destroy columns of Soviet tanks at great distance and with little cost. Such systems could negate Soviet strategies for war in Europe, for example by deploying "…conventional missiles showering self-guided antitank weapons, in an operation conducted from a distance of several hundred miles and with as little as 30 minutes between detection and assault."[19] In 1984, Ogarkov noted that the nature of warfighting would be altered by the introduction of "automated search-and-destroy complexes; long-range, high-precision, terminally guided combat systems; remotely piloted vehicles; and qualitatively new electronic control systems," all of which were used in the Gulf War seven years later.[20]

Ogarkov foresaw a potentially unbridgeable chasm between the emerging future of conventional warfare and the Soviet state's decrepit technological capabilities. More conservative thinkers in the Soviet establishment preferred not to contemplate the implications of his assessment. Ogarkov's against-all-odds push for the Soviet Union to confront the reality of the situation, and counter the American innovations by developing new generations of conventional weapons systems, is reported to have resulted in his demotion.[21]

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[16] Elinor C. Sloan, *The Revolution in Military Affairs: Implications for Canada and NATO,* (Montreal: McGill-Queen's University Press, 2002), 25-26.
[17] Ibid., 26
[18] FitzGerald, "Marshall Ogarkov and the New Revolution in Soviet Military Affairs," 8.
[19] Eliot A. Cohen, "A Revolution in Warfare," *Foreign Affairs*, March-April 1996. Accessed February 10, 2005. Available from http://www.foreignaffairs.org.
[20] Mary C. FitzGerald, "The Soviet Military and the New Air War in the Persian Gulf," *Airpower Journal*, Winter 1991. Accessed March 22, 2005. Available from http://www.airpower.maxwell.af.mil/airchronicles/apj/fitzg.html.
[21] FitzGerald, "Marshall Ogarkov and the New Revolution in Soviet Military Affairs."

**Concept Development**

The U.S. Department of Defense's Office of Net Assessment (ONA), led by Andrew W. Marshall, picked up the military-technical revolution concept from the Soviets, and developed it throughout the 1980's. Marshall was intrigued by the Soviet writings, and built on the concept with his own historical and strategic perspective. In line with the Soviet assessment, he outlined two major directions for the evolution of future warfare. The first was the future importance of long-range precision strike warfare, possibly extending into space, and the second was the emergence of information warfare.[22] It is the latter force that Marshall expects an RMA to arise from.[23] Departing from Ogarkov's assessment, Marshall concluded that the Soviet vision was too narrow and overemphasized the technical aspects of an impending military revolution. Marshall writes that the human dimension of innovation, which he describes as "…developing the appropriate concepts of operations, making the organizational changes, and creating the doctrine and practices that fully exploit the available technologies[24]," is more important than technology. Accordingly, Marshall and his colleagues dropped the term "military-technical revolution" and began to use "revolution in military affairs" in order to avoid excessive technological connotations.[25]

ONA-sponsored studies, works by Marshall protégés, support from senior defense officials during the Clinton administration, and the 1991 Gulf War – which defense officials saw as a

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[22] Andrew W. Marshall, "Some Thoughts on Military Revolutions," *Memorandum for the Record*, OSD Office of Net Assessment, July 27, 1993; Andrew W. Marshall, Director of Net Assessment, OSD, *Revolutions in Military Affairs*, statement prepared for the Subcommittee on Acquisition & Technology, Senate Armed Services Committee, May 5, 1995.

[23] For an exposition of Marshall's views, see Thomas E. Ricks, "Warning Shot**:** How Wars Are Fought Will Change Radically, Pentagon Planner Says**,"** *Wall Street Journal*, July 15, 1994, A1.

[24] Marshall, 1993.

[25] Andrew Krepinevich, *The Military-Technical Revolution: A Preliminary Assessment*, July 1992 (Published 2002), ii. Accessed March 20, 2005. Available from http://www.csbaonline.org/4Publications/Archive/R.20021002.MTR/R.20021002.MTR.pdf.

crystallization of what an RMA is all about[26] – fueled research and debate on the RMA concept and resulted in an avalanche of literature during the 1990's. The RMA debate produced several schools of thought and intellectual disagreements.

Writing in 1996, Eliot Cohen identifies three major schools of RMA thinking.[27] The first is the Soviet school, with its heavy emphasis on the technological aspects, as represented by Ogarkov's writings. The second is the airpower school, characterized by the contention that airpower had proved decisive in achieving victory in the Gulf War, representing the arrival of the long-heralded milestone when airpower alone could be relied upon to secure decisive victories. The third is what Cohen calls the Owens school, named for Admiral William Owens, which holds that information warfare, realized through a "system of systems" of complex networks and sensors, will dramatically accelerate military capability and bring transparency to the battlefield, overcoming Clausewitzian limitations of friction and fog.[28] Cohen argues that these three schools are incomplete, and that the emerging RMA will be more profound, take more time to develop, and be characterized by changes in the appearance of combat, the structure of armies, the composition of military elites, and states' relative power positions.[29]

**The RMA Debate**

The RMA debate during the 1990's was extensive, and it continues today. The RMA issue is especially prone to debate in part because, as Jeffrey Cooper comments, there are at least three

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[26] Cohen.
[27] Writing the same year, Andrew Krepinevich and Michael Vickers identify nine schools, arranged along a spectrum from most skeptical to most enthusiastic. Andrew Krepinevich and Michael Vickers, *Perspectives On The Revolution In Military Affairs*, The Center for Strategic and Budgetary Assessments. April 24, 1996. Accessed March 27, 2005. Available from http://www.csbaonline.org/4Publications/Archive/B.19960424.Perspectives_On_Th/B.19960424.Perspectives_On_Th.htm.
[28] An exposition of this school of thought can be found in Admiral William A. Owens, with Ed Offley, *Lifting the Fog of War* (New York: Farrar Straus Giroux, 2000).
[29] Cohen.

different models of military innovation, which complicates both definition and recognition.[30] The first type of RMA is driven by new, purely military technology, as exemplified by the gunpowder and nuclear/long-range strike revolutions. According to Cooper, while this type of RMA has come to dominate the popular perception, it may also be the least common variety. The second RMA type is driven by operational and organizational innovation directed against a specific problem, as was the case with Blitzkrieg warfare. Cooper's third type of RMA is a product of fundamental economic, political, and social changes outside the military domain, as exemplified by the Napoleonic Revolution.

Looking back from a point several years past the debate's peak, some characteristics of the RMA writings are evident. First, the debate engaged some of the West's most prominent strategic thinkers in developing what has become a highly influential concept. The RMA concept, despite a proliferation of interpretations as to what it means, is today widely referenced by national security planners.

Second, the debate has been very much focused on states, and developed Western states most significantly.[31] All of the historical case studies put forth appear to be innovations linked to the rise of the West in the last 500 years.[32] This writer could not find in the literature, for example, a discussion of whether Mao's concept of Peoples' War constituted an RMA. As is the case in all high profile policy debates, many dollars are at stake in the RMA debate. Because the debate has centered on optimal U.S. force structure and weapons platforms, there has been

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[30] Jeffrey Cooper, "Another View of the Revolution in Military Affairs," Conference Proceedings of the Fifth Annual Conference on Strategy, April 1994. Strategic Studies Institute, U.S. Army War College. Accessed April 20, 2005. Available from http://www.rand.org/publications/MR/MR880/MR880.ch5.pdf.

[31] A report that addresses potential RMA impact on intrastate conflict is Michael Vickers and Robert Martinage, "The Military Revolution and Intrastate Conflict," Center for Strategic and Budgetary Assessments, October 1997. Accessed April 13, 2005. Available from http://www.csbaonline.org/.

[32] Williamson Murray describes RMA theory as "the idea that revolutions in military affairs (RMAs) have been occurring throughout the history of the rise of the West to world domination over the past 500 years, and that we are on the brink of another period of revolutionary change in which men (and increasingly women) wage war." Williamson Murray, foreword to Colin S. Gray, *Strategy for Chaos*, x.

discussion of how to use what is seen as the contemporary U.S. RMA to counter unconventional threats, but not on whether non-traditional actors themselves could conduct a revolution.

Notably, the question of whether non-state armed groups could conduct RMA's was not addressed. This is significant considering that most of the debate took place while non-state armed groups were gearing up in the 1990's to become significantly more effective at the turn of the millennium. Milestones in armed group effectiveness – such as the first World Trade Center bombing, the African embassies bombings, and the Cole attack – and growing armed group strategic significance (for example, the use of cruise missiles against a non-state actor for the first time in 1998) do not seem to have had much impact on the debate. This paper argues that the RMA concept is applicable to the assessment of non-traditional threats. However, for most of the RMA debate's duration, discussion has centered on more conventional areas such as long-range precision strike, battlespace awareness and control, unmanned combat, jointness and interoperability, and force projection and stealth.

Third, the RMA debate had some notable parameters. Most of the serious writers on the RMA concept have been military officers or civilians with military affiliations. By contrast, other national security policy debates, for example the debates over nuclear strategy and deterrence, have had a wide range of participation across the military and civilian sectors. Most RMA writings have heavily emphasized the military component of grand strategy, and there has not been much discussion of military force in relation to other forms of national power. In light of its potential implications for national security strategy, the RMA debate has been notably value-neutral, lacking normative prescriptions.[33] An example of an area of study where values and

[33] Steven Metz and James Kievit, "Strategy and the Revolution in Military Affairs: From Theory to Policy," June 1995. Strategic Studies Institute, U.S. Army War College. See Conclusion. Accessed April 29, 2005. Available from http://carlisle-www.army.mil/ssi/pdffiles/PUB236.pdf.

normative concerns come into play would be the issue of whether RMA's create incentives for preemption.

**Some Prominent RMA Thinkers**

Numerous writers have supplied iterations of the RMA concept, with a majority of analysis taking place in the last 20 years. Writing in 1983, Peter Paret notes that military revolutions were studied by earlier generations of interpreters who included Scharnhorst (Clausewitz's mentor), Clausewitz, and Jomini.[34] Paret highlights a distinction between these early analysts, uniformly soldiers or former soldiers, and today's analysts – often civilians – who also have expertise in disciplines such as sociology, political science, and economics. What follows are a few of the definitions of and criteria for an RMA that have been influential in shaping both the ongoing policy debate and today's common conception of what an RMA is.

**Andrew Marshall**

One of the best known RMA definitions is the one provided by Marshall: "…a major change in the nature of warfare brought about by the innovative application of new technologies which, combined with dramatic changes in military doctrine and operational and organizational concepts, fundamentally alters the character and conduct of military operations."[35] He emphasizes the impact of military innovations rather than how rapidly they take place, noting that "the term 'revolution' is not meant to insist that the change will be rapid, but only that the change will be

[34] Peter Paret, "Revolutions in Warfare: An Earlier Generation of Interpreters," in *National Security and International Stability*, eds. Bernard Brodie, Michael D. Intriligator, and Roman Kolkowicz, (Cambridge, MA: Oelgeschlager, Gunn & Hain: 1983), 157-169.

[35] James Blackwell, et. al., "The Revolution in Military Affairs," in *Battlefield of the Future: 21st Century Warfare Issues*, (Maxwell AFB, Ala.: Air University Press, 1995). Accessed March 25, 2005. Available from http://www.airpower.maxwell.af.mil/airchronicles/battle/chp3.html. It is important to note that an analysis of Marshall's writings suggests that by "nature," he means how wars are fought. He does not appear to depart from Clausewitz's conception of why wars are fought, as do some theorists discussed later in this paper.

profound, that the new methods of warfare will be far more powerful than the old."[36] He puts forth the development of armored warfare, carrier aviation, and ballistic missiles armed with nuclear warheads as examples of past military revolutions.[37]

Marshall compares the early 1990's, specifically the Gulf War, to the battle of Cambrai, when British armored forces achieved the first breakthroughs into the German lines, but lacked the doctrinal and organizational attributes necessary to exploit their achievements.[38] He argues that the United States is in a period equivalent to the 1920's and 30's, when the technologies, doctrines, and organizational principles that would shape the next war were just emerging. Marshall notes that the most compelling lesson of the interwar period is that some militaries did better than others in exploiting the same existing technologies, depending on how open their cultures were to debate, creativity, and innovation.[39]

As discussed in the previous section, Marshall considered the Soviet conception of the RMA too narrow and technologically focused. Marshall stresses that the present RMA is in its infancy, that it is by no means certain the US will be its first beneficiary, and that its human elements will be the most important.[40] The contemporary RMA he sees unfolding has two aspects: 1) the likely future dominance of "long-range precision strike weapons coupled to very effective sensors and command and control systems;" and 2) the emergence of information warfare.[41] Offering cautionary notes, he points out that the nature of the information revolution may suit itself more to enhancement of existing weapons systems than to development of new platforms, and that the information aspects of warfare are difficult to model and analyze.

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[36] Marshall, 1995.
[37] Ibid.
[38] Marshall, 1993.
[39] Ibid.
[40] Gray, xi.
[41] Marshall, 1995.

Consequently, it may be difficult for the U.S. military establishment to take full advantage of the RMA's potential.[42]

Marshall has a reputation for not producing much of a written record himself, but rather for mentoring a network of protégés who have produced studies that some observers say provide the best window on Marshall's own views. While serving as Marshall's military assistant in the Office of Net Assessment, Andrew Krepinevich produced an extensive study of the Soviet military-technical revolution (MTR) concept in 1992.[43] Ten years later, this document was published by Krepinevich's think tank, the Center for Strategic and Budgetary Assessments. In his foreword to the 2002 publication, Marshall commented that its assessment had held up quite well. The Marshall-Krepinevich collaboration is illustrated by the similarities of their RMA definitions.

**Andrew Krepinevich**

Andrew Krepinevich's 1992 study for the Office of Net Assessment, the most extensive work on the subject to date, analyzed the Soviet MTR concept and addressed its implications for U.S. defense policy.[44] In the study, Krepinevich concludes that, "What is revolutionary is not the speed with which the change takes place, but rather the magnitude of the change itself" and notes that RMA's comprise four elements, each a necessary but not sufficient condition for realizing breakthroughs in military effectiveness. They are technological change, military systems evolution, operational innovation, and organizational adaptation.

In an influential 1994 article in *The National Interest,* Krepinevich broadened his historical analysis of past military revolutions. He offers a an RMA definition condensed from his 1992 definition of a military-technical revolution:

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[42] Ibid.
[43] Krepinevich, 1992/2002.
[44] Ibid.

> It is what occurs when the application of new technologies into a significant number of military systems combines with innovative operational concepts and organizational adaptation in a way that fundamentally alters the character and conduct of conflict. It does so by producing a dramatic increase--often an order of magnitude or greater--in the combat potential and military effectiveness of armed forces.[45]

Krepinevich identifies seven characteristics of RMA's:

- To realize emerging technologies' full potential, they must be incorporated within new processes and executed by new organizational structures.
- Competitive advantages of RMA's are increasingly short-lived, as competitors are quick to offset or copy them.
- Asymmetries in national objectives and strategic cultures, as well as limitations on resources and the potential number and strength of enemies, allow for niche, or specialist, competitors.
- War and revolution in warfare are quite separate entities, in that war is not essential for military organizations to seize opportunities.
- War will not guarantee that military organizations will recognize and exploit a military revolution.
- Technologies that underwrite a military revolution are often originally developed outside the military sector, and then "imported" and exploited for their military applications.
- An RMA does not ineluctably imply a quantum leap in the cost of maintaining military forces.[46]

Krepinevich identifies ten military revolutions since the 14th century, including the gunpowder revolution, the Swedish military system, the revolution of sail and shot, the Napoleonic Revolution, and the Industrial Revolution.[47] Assessing where the United States was in 1994 with regard to the RMA, he echoes Andrew Marshall by referring to Cambrai and suggesting that the Gulf War may offer a look into what a future RMA will look like, but does not

[45] Andrew Krepinevich, *Cavalry to Computer: The Pattern of Military Revolutions*, The National Interest, Fall 1994. Accessed January 10, 2005. Available from Expanded Academic.
[46] Ibid.
[47] Ibid.

represent one itself because the US military employed no dramatic doctrinal changes during the war.[48] Like Marshall, Krepinevich believes that information advances will be a large part of an emerging American RMA.

**Alvin and Heidi Toffler**

The well-known futurists the Tofflers provided high-level themes that have taken hold among some members of the defense planning community. In their book *War and Anti-War*, the Tofflers argue that types of warfare are linked to societies' economic systems, which have undergone two "waves" of change and are in the midst of a third.[49] Revolutions in economic systems trigger corresponding revolutions in systems for making war. The first wave of societal and economic organization was based on agriculture, and what the Tofflers call First Wave warfare was linked to the agricultural way of life. Warfare was seasonal in nature; landowners raised the armies, and fought wars over agricultural land.

The Industrial Revolution produced the Second Wave of societal change, introducing industrial economies with mass production as their core principles. Mass production enabled industrial age warfare, with the objective of mass destruction by attrition. The professionalization of militaries was enabled by the rise of bureaucracy, standardization, and mass conscription.

The Tofflers believe that a Third Wave of economic change is in progress, driven by an information revolution and characterized by the "demassification" of production. The information revolution is driving advancements in precision, range, and lethality that are changing the way wars are fought. They cite the 1991 Gulf War as an example of Third Wave versus Second Wave warfare.

[48] Ibid.
[49] Alvin and Heidi Toffler, *War and Anti-War*, (New York: Warner Books, 1993).

**Eliot Cohen**

Writing for a relatively large audience in *Foreign Affairs*, Eliot Cohen makes the case that the United States is in the midst of a sweeping RMA driven by larger societal forces. Using an analogy to the past, Cohen compares the emerging contemporary RMA to the French Revolution, a societal change in which war, to paraphrase Clausewitz, became the business of France's population of 30 million. The essence of the French revolutionary armies' successes, Cohen writes, lay not in their battlefield skill but in their ability to replenish themselves, enabling the transition for limited to total war.

Cohen discusses the impact of the telegraph on command and civil-military relations in the Civil War and the wars of German unification, and sees parallels today. He argues that the most powerful driving forces behind the emerging RMA will be 1) the rise of information technologies; and 2) the efflorescence of capitalism, which has led to the increasing privatization of defense industries and military functions. Cohen emphasizes that both of these forces, like the transformation of French society, are from the civilian realm.

Cohen sees forthcoming changes in the forms of combat, or "the fundamental relationship between offense and defense, space and time, fire and maneuver." Just as the advent of carrier warfare transformed naval combat from tightly choreographed maneuvers within visual range to massed air raids from hundreds of miles away, so information-driven warfare may take the form of long-range standoffs with precision weapons. Cohen foresees that new technologies will require changes in the structure of military organizations, arguing that to be effective in the modern age, military organizations will need to imitate leading corporations by stripping out layers of middle management. Furthermore, the need for new skill sets and types of experts in military leaderships will have an impact on the nature of command.

Cohen, noting that technological advances are not sufficient to conduct an RMA, highlights the importance of strategy, asserting that "revolutionary change in the art of war stems…from an adaptation of the military instrument to political purposes." Cohen opens the door for non-state actors to shape both the strategic landscape and the emerging RMA – if not to conduct one themselves – arguing that the future military order may resemble the Middle Ages, when sovereignty was dispersed among state and non-state entities.

**Richard O. Hundley**

Having studied a set of historical RMA's, the Rand Corporation's Richard O. Hundley emphasizes the need for a paradigm shift and the emergence and/or negation of military core competencies. In his monograph, he proposes the following RMA definition: "An RMA involves a paradigm shift in the nature and conduct of military operations which either *renders obsolete or irrelevant* one or more *core competencies* of a dominant player, or creates one or more new core competencies, in some new dimension of warfare, or both."[50]

Hundley endorses the common theme that RMA's have technological, doctrinal, and organizational components, and that the latter two are as important as the first. Fleshing out dimensions of the concept to a greater degree than most of his contemporaries, Hundley list the following characteristics of RMA's.

I. A sweeping change in the conduct of warfare, with societal and strategic implications
II. Rendering obsolete a military core competency, or creating a new one
III. A military force's transformation of itself, resulting in new capabilities and strategic possibilities

[50] Richard O. Hundley, *Past Revolution, Future Transformations: What Can the History of Revolutions in Military Affairs Tell Us about Transforming the U.S. Military?*, (Santa Monica: RAND, 1999), 9. Accessed July 15, 2004. Available from http://www.rand.org/publications/MR/MR1029/#contents.

IV. The adoption of developments from outside the immediate military realm
V. RMA's frequently do not involve weapons, or even technology
VI. RMA's are frequently adopted and fully exploited by someone other than the nation that invented the new technology, because that nation's military often failed to make the necessary doctrinal or organizational changes.
VII. Technology-driven RMA's are usually brought about by combinations of technologies, rather than individual technologies
VIII. All successful technology-driven RMA's appear to have three components: technology, doctrine, and organization.
IX. RMA's often take a long time to come to fruition.
X. There are as many failed RMA's as successful ones.
XI. The military utility of an RMA is frequently controversial and in doubt up until the moment it is proven in battle.[51]

Hundley offers prescriptions for those who want to be prepared for RMA's carried out by others, which he believes is difficult but possible. He highlights the need to look for observable signals in various areas such as the press, the arms markets, and in military research and development activities. Because of the difficulties of identifying emerging RMA's, he recommends that observers establish a permanent and ongoing collection and assessment process.

Hundley also believes that some RMA's are deliberate, and that organizations can intentionally create them. He lists criteria that need to be met by organizations seeking to bring about RMA's, noting that without any one of these elements, even a brilliant idea is likely to fail.

I. A fertile set of enabling technologies (assuming the RMA is technology-driven).
II. Unmet military challenges.
III. A focus on a definite "thing" or a short list of "things."
IV. A requirement to challenge someone's core competency.

[51] Ibid., 8-17.

V. A receptive organizational climate that fosters continually refined visions and encourages vigorous debate.

VI. Support from the top, in the forms of senior officer sponsorship and new promotion pathways for junior officers.

VII. The mechanisms for experimentation, in order to discover, learn, test, and demonstrate.

VIII. A way of responding positively to the results of successful experiments -- in terms of doctrinal changes, acquisition programs, and force structure modifications.[52]

Commenting on the state of the potential emerging U.S. RMA, Hundley identifies disconnects between transformation rhetoric and action. Using the above criteria, his assessment is that there is an abundance of new enabling technology, but little progress on new operational concepts, and very little progress on new doctrine and force structure.

**Macgregor Knox and Williamson Murray**

Historians Macgregor Knox and Williamson Murray present a detailed, historically rigorous analysis in which they distinguish between military revolutions and revolutions in military affairs (RMA's). A military revolution is a systemic, sweeping societal change that "…fundamentally changes the framework of war" and can be understood using the geological metaphor of an earthquake.[53] Such revolutions recast society and state, force military institutions to adapt to them, and have an additive effect by overlaying each other.

Five examples of military revolutions in Western history are given: the creation of the modern nation-state in the 17th century (making possible a large-scale, disciplined, professional military), the French Revolution (merging warfare and mass mobilization based on secular ideology), the Industrial Revolution (making massive resources and abundant weaponry available

[52] Ibid., 59-70.
[53] Williamson Murray and MacGregor Knox, "Thinking about Revolutions in Warfare," in *The Dynamics of Military Revolution, 1300-2050,* eds. MacGregor Knox and Williamson Murray, (Cambridge: Cambridge University Press, 2001), 6.

to leaders), World War I (combining the legacies of the French and Industrial Revolutions), and the advent of nuclear weapons and ballistic missile delivery systems (inhibiting a third world war). The authors raise but do not answer the question of whether the information revolution will be a military revolution on a par with the preceding examples.[54]

The authors' differentiation between RMA's and military revolutions, and the contention that the former takes place in the context of the latter, is in line with the contentions of the Tofflers and Cohen. Knox and Murray highlight the distinction between military revolutions and lesser innovations, such as RMA's, with the following illustration:

> A British or German battalion commander from summer 1918 could have understood the underlying concepts governing warfare in 1940, 1944, or even 1991. But a 1914 battalion commander magically transported to the Western Front battlefields of summer 1918 would have had great difficulty in understanding what he saw.[55]

RMA's, the authors write, are clusters of changes less all-embracing than military revolutions but closely associated with them, analogous to pre-tremors and aftershocks associated with an earthquake (the military revolution).[56] The authors argue that RMA's appear to be susceptible to human direction, and require "…a complex mix of tactical, organizational, doctrinal, and technological innovations in order to implement a new conceptual approach to warfare, or to a specialized sub-branch of warfare."[57] An RMA is distinguished from an ordinary innovation by a dramatic leap in military effectiveness. Some examples include Blitzkrieg operations (a product of the World War I military revolution), the Fisher revolution in naval warfare (a product of the French and Industrial Revolutions), and Swedish tactical reforms (a

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[54] Ibid., 7, 11.
[55] Ibid, 11.
[56] Williamson Murray, "Thinking about Revolutions in Military Affairs," *Joint Forces Quarterly* 16, (Summer 1997). Accessed March 20, 2005. Available from http://www.dtic.mil/doctrine/jel/jfq_pubs/summer97.htm.
[57] Murray and Knox, "Thinking about Revolutions in Warfare," 12.

product of 17th century nation-state creation).[58] Knox and Murray emphasize the leadership and organizational aspects of RMA's and are critical of what they describe as an overemphasis on the technical aspects by many of today's RMA thinkers. Murray notes that RMA's do not replace but overlay each other.[59]

Based on their analysis of historical case studies, Knox and Murray set out four distinguishing characteristics of RMA's:

- RMA's are rarely driven by technology, which is more likely to be a catalyst.
- RMA's emerged from evolutionary problem-solving directed at actual operational and tactical issues in an actual theater of war against an actual enemy.
- RMA's require coherent frameworks of doctrine and concepts built on service cultures that are realistic, reward open discussion, and are effective at implementing and disseminating lessons. (Another term for the authors' third characteristic would be *learning organization.*)
- RMA's remain rooted in and limited by the nature of war. RMA's are not a substitute for strategy but merely an operational or tactical means, the results of which are never final because countermeasures and responses are inevitably summoned. War is still about uncertainty and the clash of wills.

The authors further note that RMA's mostly consist of peacetime evolutionary changes, the results of which are seen against "the audit of a war," conducted against an inept or behind the times enemy who highlights the differences between old and new.[60] Thus the authors conclude that it is extremely difficult to see an RMA in the absence of its validation in battle.

[58] Ibid., 12-13.
[59] Murray, "Thinking about Revolutions in Military Affairs."
[60] Williamson Murray and MacGregor Knox, "Conclusion: The Future Behind Us," in *The Dynamics of Military Revolution, 1300-2050,* eds. MacGregor Knox and Williamson Murray, 185.

**RMA Critiques**

One of the RMA critics' most central messages is that the significance of an RMA should always be placed in the context of grand strategy. When examining a successful outcome where military innovation was a factor, one should focus on the strategic decision on how to implement the RMA, rather than simply a breakdown of the innovation. Steven Metz and James Kievit note that states that achieve revolutionary military breakthroughs – the Mongols under Genghis Khan, Napoleon, and Imperial and Nazi Germany – often lose their wars to states that lag in RMA understanding but are better at strategy.[61]

Colin Gray does not deny the RMA concept's validity and acknowledges that RMA's exist, but offers cautions in the form of a "warning label" that should accompany the use of this analytical tool.[62] First, inherent in the RMA tool is a bias in favor of attributing developments to "revolutions" and against continuity in strategic history, discouraging careful consideration of the periods before and after RMA's.[63] Second, users of the tool should beware that the concept has become so popular that it is easy to suspend skepticism when considering whether something constitutes an RMA.

Gray advocates an emphasis on rigorous historical study to validate whether RMA's have indeed occurred, and a offers a critique of strategists and political scientists playing fast and loose with history in their enthusiasm to promote the RMA concept. He argues that the RMA debate focuses on an emerging US-led, information-based RMA and the debate participants have been "officials and theorists more than content to limit their attention to second-order military-technical topics."[64] Gray asserts that the meanings of World War I and other RMA historical case studies – such as the Napoleonic revolution and the 1949-1989 nuclear standoff between the US and Soviet

[61] Metz and Kievit, 18. Colin Gray makes a similar point. Gray, 10.
[62] Gray, 31.
[63] Ibid., 32.
[64] Ibid., 281.

Union – can be best derived by studying strategy in the service of policy, not military innovations.[65]

Gray argues that RMA thinkers missed the big strategic picture in the wake of the Cold War, focusing instead on narrow technological aspects.[66] His criticism echoes Marshall's and Cohen's criticism of the Soviets' technical focus. According to Gray, this narrow focus, on the means of strategy rather than the ends, is sure to mislead and contribute to flawed policies.[67]

Gray draws from Clausewitz is his critique, arguing that RMA theory is undercut by strategy's adversarial nature and war's fluid dynamic as a clash of living wills. An enemy's responses and adaptations quickly make military innovations fleeting and ephemeral. War's complexity and nonlinearity will defeat theories that are limited to a single element of strategy, and it should not be forgotten that strategy is multidimensional. A better way to view RMA's, Gray argues, would be as expressions of strategic behavior.[68] Looking through the prism of strategy will explain increases in military effectiveness better than RMA theory.[69]

Gray uses three historical case studies -- the Napoleonic revolution, World War I, and the 1949-1989 nuclear standoff between the US and Soviet Union – to test RMA theory. He concludes that other elements of strategy, notably the political, do more to explain the outcomes than the technical and operational aspects.[70] He notes that the winners of all three contests were maritime alliances, pointing to the importance of oceanic linkages in geopolitics.[71] He points out that using the ethical dimension of strategy to view the contests also identifies the winners. In sum, Gray writes, what matters most in strategic history are the political and human factors, not

[65] Ibid., 287.
[66] Ibid., 282.
[67] Ibid., 275, 288.
[68] Ibid., 275.
[69] Ibid., 274.
[70] Ibid., 279.
[71] Ibid., 276.

the technical factors.[72] Gray concludes that "the structural complexity and substantial nonlinearity of strategy is always likely to frustrate some or all of the promise in an RMA."[73]

Skeptics have also targeted what they see as RMA proponents' excessive enthusiasm for technology and unrealistic faith in its ability to overcome war's inherently chaotic and unpredictable nature. This criticism is directed at the RMA schools of thought that emphasize the RMA technological aspects, for example the works of Admiral Owens. Stephen Blank points to excesses by RMA proponents, who he says have "vastly and needlessly exaggerated the potential of new technologies adapted to warfare, thus inducing a corrosive skepticism concerning the real advantages they offer."[74] Blank cites as an example the promise of a wholly transparent battlefield and perfect situational awareness.

Michael O'Hanlon argues that just as it would be a mistake to put too much faith in technology, so to would be insisting that efforts to overcome Clausewitz's friction and fog are doomed to failure.[75] O'Hanlon argues that excessive skepticism of technology can impede innovation. O'Hanlon argues that the RMA debate is healthy but advocates a degree of skepticism. He cautions against RMA proponents' tendencies to see military innovation in terms of big leaps rather than continuous steps, and notes that incremental military innovation is more common than the revolutionary variety. He further warns that RMA theorists have tended to put forward some highly improbable scenarios, a tendency that could obscure discussion of more realistic but less imaginative events. Munitions, sensors, and integrated communications systems, argues O'Hanlon are some of the most important drivers of military effectiveness today, but their pace of improvement should be seen as evolutionary rather than revolutionary. O'Hanlon notes

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[72] Ibid., 280.
[73] Ibid., 8.
[74] Stephen Blank, "Rethinking Asymmetric Threats," Strategic Studies Institute, U.S. Army War College, September 2003, 23. Accessed April 20, 2005. Available from http://carlisle-www.army.mil/ssi/Pubs/display.cfm/hurl/PubID=103.
[75] Michael E. O'Hanlon, "Beware the 'RMA'nia!'" *Paper presented at the National Defense University*, September 9, 1998. Accessed April 2, 2005. Available from http://www.brook.edu/views/ohanlon1998ndu.html.

that computer technology has less of an impact on the U.S. economy than is commonly believed, and that its importance as a military effectiveness driver may be overstated, in part because of limitations on obtaining the reliable and accurate data needed for situational awareness. O'Hanlon quotes retired Marine Corps Lieutenant General Paul K. Van Ripper, who commented, "We had information dominance in Somalia."[76]

**Utility of the RMA Concept**

As discussed above, the RMA concept is weighted by connotations of high-technology standoff warfare, and much of today's RMA debate centers on U.S. force structure and priorities. Hence the debate is contentious with such large implications at stake. This paper is concerned with RMA as a more neutral concept: a discontinuous increase in military effectiveness, whether driven by technology, organizational adaptation, or societal factors; and whether conducted by a state or by a non-state entity. This paper argues that the RMA concept can be a useful analytical tool in evaluating the military and strategic effectiveness of non-state armed groups as well as states. As such, the RMA concept is presented in the next section as a framework that should be applied without prejudice to emerging threats. To generate this tool, this paper first presented several prominent thinkers' RMA definitions and characteristics. The paper now attempts to distill key themes of these RMA theories to form an analytical framework. The framework will then be applied to al Qaeda's organization and activities in the 1990's, culminating in the September 11 attacks.

Writing in 1995, Steven Metz and James Kievit touch on the possibility of a rogue state or a non-state actor conducting an RMA:

> Initiation of a revolution requires revolutionaries. RMAs are led by armed forces that tolerate and, at the appropriate time, empower visionaries. The

[76] Ibid.

> decision to do this is a vital juncture in military revolutions. In the past, only a peer competitor could offer enough of a threat to empower military visionaries and dispel the miasma of inertia and petrified thinking. This may be changing. In the future, the United States might face real threats from "niche" challengers that cannot match American capability across the board, but can in some specific type of conflict, perhaps terrorism.[77]

Concepts such as the RMA and, for example, Fourth Generation Warfare, may have more of an impact when applied by what Metz and Kievit call niche challengers -- rogue states or non-state actors – than when applied by large forces such as the U.S. military. Non-state actors such as armed groups are more agile and less constrained by tradition and process than mature defense establishments, which may be impeded by cultural barriers to innovation, a case in point being the U.S. military's priority on new platforms over doctrinal and organizational changes.

**An RMA Framework**

This paper attempts to construct a framework using elements of each of the selected thinkers' RMA definitions and major characteristics. While many RMA definitions and criteria have been put forward during a period of extensive debate, this 14-point framework attempts to identify common themes. The purpose of the framework is to capture the essential nature of an RMA: a discontinuous increase in military effectiveness.

1. A sweeping change in the conduct of warfare, with societal and strategic implications. (Hundley)
2. Rendering obsolete a military core competency, or creating a new one. (Hundley)
3. Taking place in the context of, and closely associated with, a larger societal revolution. (Knox and Murray)
4. The increase in effectiveness is largely a product of strategic behavior (and strategic factors can to a large extent explain the conflict's outcome). (Gray)

[77] Metz and Kievit, 15.

5. A military force's transformation of itself, resulting in new capabilities and strategic possibilities. (Hundley) RMA's frequently do not involve weapons, or even technology. (Hundley)
6. A complex mix of tactical, organizational, doctrinal, and technological innovations. (Knox and Murray) The organizational component of the innovation is usually the most important. (Cohen and Marshall)
7. The importation and adoption of developments from outside the immediate military realm. (Krepinevich and Hundley) An RMA consists largely of peacetime evolutionary changes, the results of which are seen against the backdrop of a war. (Knox and Murray)
8. An RMA emerges from evolutionary problem solving directed at actual operational and tactical issues in an actual theater of war against an actual enemy, and from an environment where free expression and debate are encouraged: a learning organization. (Knox and Murray)
9. RMA's are frequently adopted and fully exploited by someone other than the nation that invented the new technology. (Hundley)
10. Combinations of technologies, rather than individual technologies, usually bring about technology-driven RMA's. (Hundley) All successful technology-driven RMA's appear to have three components: technology, doctrine, and organization. (Hundley)
11. The innovation can take advantage of advantage of a "niche" provided by asymmetries in competitors' national objectives or strategic cultures. (Krepinevich)
12. The military utility of an RMA is frequently controversial and in doubt up until the moment it is proven in battle. (Hundley) RMA's often take a long time to come to fruition. (Hundley)
13. Not necessarily causing a quantum leap in the cost of maintaining military forces. (Krepinevich)
14. The military advantages produced are often short-lived, as competitors' responses can nullify them. This is Clausewitz's concept of war as a clash of living wills. (Krepinevich and Gray) There are as many failed RMA's as successful ones. (Hundley)

The above RMA analytical tool is intended to elicit sources and building bocks of an actual or potential RMA, as well as its vulnerabilities. This framework uses as criteria for an RMA

several elements that would seem to weaken an RMA. One example that comes to mind is that strategic behavior can often best explain an increase in military effectiveness, as well as the outcome of the conflict (criteria number 4). The second is that RMA advantages are frequently short-lived (criteria number 14). Paradoxically, RMA's have qualities that make them less formidable than popular mythology would suggest. The fact that RMA wielders often lose their advantage to opponents who react nimbly, or go on to lose their wars (usually, as Gray, Metz, and Kievit point out, to opponents who are better at strategy), does not detract from this analytical tool's usefulness. A successful military innovation has both strengths and weaknesses, and an analytical tool should elicit both.

That an RMA can be fleeting and that conducting one does not guarantee winning a war brings the RMA concept down to size, but does not detract from its usefulness as an analytical tool. Temporary military breakthroughs can have far-reaching effects, and provide a template for subsequent competitors. In al Qaeda's case, that the organization may be losing its war does not diminish the political impact of the September 11 attacks, or potential future impact as other groups adapt and apply al Qaeda's innovations.

The above RMA literature review and framework construction reveal that an RMA is not necessarily technology-driven, but rather can be a product of organizational and doctrinal innovation, challenging the popular conception of the RMA concept as overwhelmingly technological in nature. Interestingly, some Fourth Generation Warfare theorists are highly skeptical of the RMA concept, likening it to Vietnam era pie-in-the-sky visions of technological dominance of the battlefield.[78]

[78] See Franklin Spinney, "What Revolution in Military Affairs?" *Defense Week*, April 23, 2001. Accessed April 6, 2005. Available from http://d-n-i.net/fcs/comments/c410.htm/.

# Chapter 2: Fourth Generation Warfare

## Concept Origins and Development

A small group of military officers and analysts put forth the concept of Fourth Generation Warfare in 1989 and developed it in the early 1990's. The theory posits that there have been three successive but overlapping generations of warfare and that a fourth generation, highly irregular and marked by asymmetry, is emerging. 4GW thinkers are linked to the Military Reform movement of the early 1980's, and are influenced by the works of the late maverick Air Force colonel and military reform advocate John Boyd.[79]

The notion of successive generations of warfare, as well as other tenets of Fourth Generation Warfare theory, is reflected in Boyd's presentations, or "briefings," some of which can be found on Franklin Spinney's extensive web site.[80] 4GW most closely resembles Boyd's concept of "moral conflict," described in the Boyd briefing, *Patterns of Conflict*.[81] According to 4GW thinkers, the first generation of warfare originated with the rise of the nation-state system in the 17th century and was marked by linear infantry tactics by professional military forces armed with rudimentary weapons. The first generation period saw the development of column and line

[79] The relationship between John Boyd, the Military Reform Movement, and leading 4GW thinkers can be seen in the Franklin Spinney article, "Genghis John." Boyd is credited with developing the concept of the decision cycle (i.e., the Observation - Orientation - Decision – Action, or OODA Loop) and analysis of how it shapes competitive behavior. Boyd's writings emphasize the desirability of disrupting the opponent's OODA Loop, while compressing one's own. Boyd wrote that the adversary that consistently completes the OODA cycle faster gains an advantage that increases with each cycle. By contrast, the other adversary's reactions become increasingly slower and therefore less effective until, finally, he is overcome by events. Franklin C. Spinney, "Genghis John," *Proceedings of the U. S. Naval Institute*, (July 1997). Accessed March 15, 2005. Available from http://www.d-n-i.net/fcs/comments/c199.htm#Reference.

[80] See http://www.d-n-i.net/second_level/boyd_military.htm. The briefing "Patterns of Conflict" contains Boyd's breakdown of warfare into the categories of attrition warfare, maneuver warfare, and moral conflict. John Boyd, "Patterns of Conflict." Accessed March 15, 2005. Available from http://www.d-n-i.net/boyd/patterns.ppt.

[81] Boyd, "Patterns of Conflict."

tactics, and the refinement of time, space, sequence, and linearity.[82] The Napoleonic Age represented the culmination and high point of first generation warfare.

The rise of second generation warfare was enabled by the Industrial Revolution, which brought about advancements in small arms and artillery. The second generation was characterized by the introduction of new technologies and firepower management combined with linear doctrine and first generation infantry tactics, producing industrialized attrition warfare. Commanders presided over what they tried to keep a strictly controlled battlefield, often relying on highly detailed maps and graphical representations of the battlespace.[83] Second generation warfare reached its high point in the first part of World War I. 4GW proponents hold that the Germans initiated the World War I RMA mid-course during the war, while the U.S. stuck with a second generation approach throughout the war's duration.[84]

The third generation of warfare was based on combined arms, massive firepower, and maneuver, having its origins in the innovations forged by the Germans in the 1918 Spring Offensive. The tremendous advances in battlefield lethality in World War I, combined with the need for innovative tactics to break the stalemate, enabled this new generation, marked by fast decision-making, decentralized command and control, and initiative at the tactical level. Blitzkrieg warfare in the spring of 1940 was a milestone in the development of third generation warfare, which reached its high point in the 1980's with the US Army's AirLand Battle doctrine.

Fourth Generation Warfare entered the lexicon with the appearance of a 1989 article in the *Marine Corps Gazette* by William S. Lind and four other authors.[85] The article sketched out three successive generations of warfare and questioned whether a fourth was emerging. This

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[82] James Fallows, "Fallows @ Large: Dialogue with Robert Coram and Donald Vandergriff," *The Atlantic Online*, January 8, 15, and 23, 2003. Accessed April 10, 2005. Available from http://www.theatlanticmonthly.com.
[83] Ibid.
[84] Ibid.
[85] William S. Lind, Keith Nightengale, John F. Schmitt, Joseph W. Sutton, and Gary I. Wilson, "The Changing Face of War: Into the Fourth Generation," *Marine Corps Gazette*, (October 1989): 22-26. Accessed March 27, 2005. Available from http://d-n-i.net/fcs/4th_gen_war_gazette.htm.

generation, the authors suggested, would be characterized by accentuated nonlinearity, blurring of distinctions between civilian and military targets, and targeting of an opponent's culture and society. According to the authors, 4GW could be driven by new technologies or by ideas, particularly those ideas hostile to the West. The article suggested that the fourth generation of warfare could emerge from non-Western cultural traditions, and raised the possibility of terrorism from a non-national or transnational source, such as an ideology or religion.

Donald Vandergriff attributes the rise of Fourth Generation Warfare to 1) the advent of nuclear weapons, which diminished the utility of conventional forces, made second and third generation warfare less likely, and opened up opportunities for alternative types of warfare to emerge on the scene; 2) the breakdown in the loyalty of individuals and ethnic or other groups to their established national governments.[86]

4GW thinkers who developed the concept further in the early 1990's include Pentagon analyst and former Boyd colleague Franklin Spinney, who maintains a web site devoted to 4GW and military reform topics[87]; Ralph Peters, a retired Army colonel who wrote extensively in military journals during the 1990's warning of the emergence of fourth generation enemies; and Colonel Thomas X. Hammes, a Marine who recently authored a book on Fourth Generation Warfare entitled *The Sling and the Stone*.[88] In a 1994 article, Hammes defines 4GW as "complex engagements fought across the spectrum of human activity. Antagonists will fight in the political, economic, social, and military arenas and communicate their messages through a combination of networks and mass media."[89]

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[86] Franklin Spinney, John Sayen, and Donald E. Vandergriff, *Spirit, Blood and Treasure*, (Monterey: Presidio Press, 2001), Introduction. Accessed April 6, 2005. Available from http://www.belisarius.com/modern_business_strategy/vandergriff/sbt_intro.htmhttp://www.belisarius.com/modern_business_strategy/vandergriff/sbt_intro.htm.

[87] See http://www.d-n-i.net/index.html.

[88] Thomas X. Hammes, *The Sling and the Stone: On War in the 21st Century*, (St. Paul, MN: Zenith Press, 2004).

[89] Thomas X. Hammes, "The Evolution of War: The Fourth Generation," *Marine Corps Gazette*, (September 1994). Accessed April 5, 2005. Available from http://d-n-i.net/fcs/hammes.htm.

4GW thinkers incorporated the "cyberwar" and "netwar" concepts put forth by John Arquilla and David Ronfeldt in a 1993 article and subsequent works.[90] Arquilla and Ronfeldt outlined two future visions of warfare. Cyberwar is a high-tech version of potential future war, empowered by the information revolution, where sensors and machines were arrayed against each other. The authors note that while states and groups have planned for cyberwar, examples of it in practice have not yet been seen. Netwar, according to Arquilla and Ronfeldt, is societal-level low-intensity conflict waged by decentralized networks, in which information played a key role. The authors cite the Zapatista rebellion in Mexico as a classic example of contemporary social netwar. The netwar concept aligns very closely with the Fourth Generation Warfare concept as it has been articulated to date.

4GW theorists incorporate the concept of asymmetric warfare into 4GW, but point out that 4GW is a broader concept. Asymmetric force, the theorists note, is as old as warfare itself and a major component of maneuver warfare, which seeks to direct strength towards weakness. For some 4GW theorists, 4GW departs from the Clausewitzian conception of warfare. One article comments that instead of resembling a "conflict between opposing wills much like a boxing match between states, 4GW more resembles a boxer versus a viral infection."[91]

4GW theorists were influenced by military historian Martin van Creveld's 1991 book *The Transformation of War*, which caused a stir by predicting that interstate war would vanish from the scene and that war would revert to primordial forms.[92] Van Creveld writes:

> In the future, war will not be waged by armies but by groups whom we today call terrorists, guerrillas, bandits, and robbers, but who will undoubtedly hit on more formal titles to describe themselves. Their organizations are likely to be constructed on charismatic lines rather than institutional ones, and to be

[90] John Arquilla and David Ronfeldt, "Cyberwar is Coming," *Comparative Strategy*, Vol. 12, (November 1993); John Arquilla and David Ronfeldt, eds. *Networks and Netwars;* (Santa Monica, CA: RAND, 2001). Accessed March 10, 2005. Available from http://www.rand.org/publications/MR/MR1382/index.html.
[91] Commentary on d-n-i-net website. Accessed April 6, 2005. Available from http://d-n-i.net/second_level/4gw_continued.htm.
[92] Martin van Creveld, *The Transformation of War*, (New York: The Free Press, 1991).

> motivated less by "professionalism" than by fanatical, ideologically-based, loyalties.[93]

Van Creveld writes that as future war is no longer characterized by high technology standoffs between rational states, war threatens to lose what has been its rational nature. He foresees the eventual elimination of interstate conflict:

> If no nuclear holocaust takes place, then conventional war appears to be in the final stages of abolishing itself…As war between states exits through one side of history's revolving door, low-intensity conflict among different organizations will enter through the other.[94]

Van Creveld goes on to say that complicated low-intensity conflict will move from its present confines in the developing world to afflict the developed world. Published in the wake of the Gulf War, van Creveld's book was not taken seriously by the national security community, in contrast with his earlier works. 4GW thinkers, however, incorporated many of van Creveld's tenets into their work.

Several 4GW proponents have adopted Martin van Creveld's argument that warfare is becoming nontrinitarian. The concept's originators describe 4GW as "nontrinitarian, cultural conflict, outside the nation-state framework,[95]" meaning that Clausewitz's concepts of the relation of war to politics and of the trinity no longer apply. 4GW proponents' willingness to depart from Clausewitz's fundamental observations on the nature of war has opened them up to criticism from mainstream defense analysts.

4GW proponents were quick to identify the September 11 attacks as a crystallization of the theory of war they had been warning against. Writing in October 2001, Harold Gould and

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[93] Ibid., 197.
[94] Ibid., 224
[95] William S. Lind, Maj John F. Schmitt, and Col Gary I. Wilson, "Fourth Generation Warfare: Another Look," *Marine Corps Gazette*, (December 1994). Accessed March 19, 2005. Available from http://www.d-n-i.net/fcs/4GW_another_look.htm.

Franklin Spinney stated the attacks marked 4GW's coming of age, with the blurring between war and peace having "happened on a massive scale, and consequently neither America nor any other nation-state will ever be the same."[96]

In support of their contention, 4GW proponents highlight the reported citation of early 4GW writings by Abu 'Ubeid Al-Qurashi, an alleged al Qaeda member who published an article on a now-defunct al Qaeda affiliated website called *Al-Ansar: For the Struggle Against the Crusader War*.[97] In the article, translated by MEMRI, Qurashi cites the 1989 Lind, *et. al.* article and Hammes 1994 article "The Evolution of War: The Fourth Generation"[98] as sources for al Qaeda's development of a 4GW strategy and its execution in the form of the September 11 attacks.

To a striking degree, the Bush administration endorsed the principles of 4GW in the wake of the attacks, as reflected in public pronouncements. In a September 27, 2001 *New York Times* op-ed entitled "A New Kind of War," Donald Rumsfeld described the U.S. as engaged in a new kind of war, which he described as marked by a non-traditional enemy. Rumsfeld captured the main tenets of Fourth Generation Warfare, indicating the concept's resonance with policy-makers in the wake of the September 11 attacks.[99] Rumsfeld writes:

> This war will not necessarily be one in which we pore over military targets and mass forces to seize those targets. Instead, military force will likely be one of many tools we use to stop individuals, groups and countries that engage in terrorism.
>
> Our response may include firing cruise missiles into military targets somewhere in the world; we are just as likely to engage in electronic combat to track and stop investments moving through offshore banking centers. The

[96] Harold A Gould., and Franklin C. Spinney. "Fourth-Generation Warfare Is Here," *Defense Week*, October 15, 2001. Accessed April 3, 2005. Available from http://d-n-i.net/fcs/gould_spinney_4GW.htm.
[97] Middle East Media Research Institute "Bin Laden Lieutenant Admits to September 11 and Explains Al-Qa'ida's Combat Doctrine," *Special Dispatch*, No. 344, February 10, 2002. Accessed April 6, 2005. Available from http://memri.org/bin/articles.cgi?Page=archives&Area=sd&ID=SP34402.
[98] Available from http://d-n-i.net/fcs/hammes.htm.
[99] Donald Rumsfeld, "A New Kind of War," *New York Times*, September 27, 2001. Accessed April 11, 2005. Available from http://d-n-i.net/fcs/rumsfeld_9-27.htm.

> uniforms of this conflict will be bankers' pinstripes and programmers' grunge just as assuredly as desert camouflage.
>
> This is not a war against an individual, a group, a religion or a country. Rather, our opponent is a global network of terrorist organizations and their state sponsors, committed to denying free people the opportunity to live as they choose. While we may engage militarily against foreign governments that sponsor terrorism, we may also seek to make allies of the people those governments suppress.
>
> Even the vocabulary of this war will be different. When we "invade the enemy's territory," we may well be invading his cyberspace. There may not be as many beachheads stormed as opportunities denied. Forget about "exit strategies"; we're looking at a sustained engagement that carries no deadlines. We have no fixed rules about how to deploy our troops; we'll instead establish guidelines to determine whether military force is the best way to achieve a given objective.[100]

President Bush, in his 2002 graduation speech at West Point, echoed Rumsfeld's sentiments and called for a new doctrine emphasizing preemption:

> [N]ew threats also require new thinking. Deterrence – the promise of massive retaliation against nations – means nothing against shadowy terrorist networks with no nation or citizens to defend. Containment is not possible when unbalanced dictators with weapons of mass destruction can deliver those weapons on missiles or secretly provide them to terrorist allies.
>
> We cannot defend America and our friends by hoping for the best. We cannot put our faith in the word of tyrants, who solemnly sign non-proliferation treaties, and then systemically break them. If we wait for threats to fully materialize, we will have waited too long…Yet the war on terror will not be won on the defensive. We must take the battle to the enemy, disrupt his plans, and confront the worst threats before they emerge.[101]

**Examples of 4GW Conflicts**

In his book *The Sling and the Stone*, Hammes describes Fourth Generation Warfare as an evolved form of insurgency that uses all of society's networks to carry on its fight.[102] 4GW does not seek to defeat the enemy's military forces, according to Hammes, but rather to attack the minds of the enemy's decision makers through available networks and destroy his political will.

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[100] Ibid.

[101] President George W. Bush, Remarks by the President at 2002 Graduation Exercise of the United States Military Academy West Point, New York. Accessed April 10, 2005. Available from http://www.whitehouse.gov/news/releases/2002/06/20020601-3.html.

[102] Hammes, *The Sling and the Stone*, 2, 208.

Hammes contends that while its antecedents lie in the British colonial wars and elsewhere, 4GW originated with Mao's concept of Peoples' War and has been refined by each subsequent practitioner. Hammes credits Mao with several innovations integral to 4GW's development, chiefly the idea that political power is the key to insurgency.[103] From an initial position of military weakness, Mao used political, economic, and social power to change the "correlation of forces" between the government and the insurgents. He understood both the international aspects of his struggle, and the power of networks. Hammes argues that Mao developed and exploited networks to undercut the Nationalists' political support abroad, and formed elaborate domestic social networks among his supporters – in the form of interlocking party group memberships – in order to maintain effective control of his followers and prevent any one of them from amassing enough power to depose him.

The fourth generation warriors following Mao that Hammes cites are Ho Chi Minh's forces, the Sandinistas, Palestinian elements in both Intifadas, al-Qaeda, Afghan tribal networks, and Iraqi insurgents. He credits the North Vietnamese with improving on Mao's doctrine and applying it using a wise variety of information channels to erode the will to fight of distant foreign powers, namely France and the United States. The Sandinistas refined the political warfare aspect of insurgency to the point where Mao's third stage conventional offensive to overthrow the government was no longer needed. Hammes writes that in Intifada I, the Palestinians waged societal conflict at the grassroots level through decentralized, networked organizations channeling spontaneous popular sentiment. This effort, aimed at the Israeli public and world opinion, is partly responsible for winning territorial concessions from Israel. In the second Intifada, Palestinian elements squandered their earlier 4GW victory through an incoherent political message and inappropriate, ineffective tactics.

[103] Ibid., 44-55.

Hammes sees al Qaeda's attacks as the result of a logical progression of 4GW over 70 years. He notes that al Qaeda practiced effective Fourth Generation Warfare through its transnational structure, emphasis on political message and use of the media, unconventional tactical innovations, and long timeframes. According to Hammes, bin Laden ultimately failed in his use of 4GW because, based on his misunderstanding of American culture and attitudes, he miscalculated the impact his attacks would have on the U.S. population and the response they would provoke.

**Principles of Fourth Generation Warfare**

Richard Shultz has distilled a set of Fourth Generation Warfare principles articulated by the concept's proponents:

- Warfare will be highly irregular, unconventional and decentralized in approach.
- Unconventional operations will be employed to bypass the superior military power of nation-states to attack and exploit political, economic, population, and symbolic targets.
- Both the organization and operations of 4th generation warriors will be masked by deception, denial, stealth and related techniques of intelligence tradecraft.
- Terrorist organizations and operations will be profoundly affected by information age technologies, which will provide these non-state actors with global reach.
- Modern communications and transportation technologies will have a profound impact on this new battlefield. There will be no fronts and no distinctions between civilian and military targets.
- Laws and conventions of war will not constrain terrorists and their state sponsors from seeking innovative means, to include WMD, to attack nonmilitary targets and inflict terrible carnage.

- 4th generation warriors, frequently in the name of religion, will be remorseless enemies for the states they challenge. Their operations will be marked by unlimited violence, unencumbered by compassion.[104]

**Fourth Generation Warfare Critiques**

Antulio Echevarria argues that 4GW theory is fundamentally flawed and bereft of accurate historical analysis.[105] He argues that sequencing war into generations is artificial because developments in warfare do not necessarily evolve from or replace themselves, noting that firepower has played as large a role in some modern conflicts as in what 4GW proponents call first generation wars. He further notes that insurgency dates back to classical antiquity and cannot be said to follow second and third generation warfare. Second, Echevarria argues that 4GW thinkers' logic is flawed because the next step after an evolutionary progression from 1GW to 3GW would be something resembling network-centric warfare, rather than the super-insurgency envisioned by 4GW proponents. Third, he states that 4GW theorists confuse techniques of warfare such as firepower and maneuver with forms of warfare such as insurgency, implying that past participants in war focused on military means alone, when in reality they integrated all aspects of national power, just as 4GW actors are purported to do.

Not mentioning 4GW proponents specifically, Echevarria in another article questions the contention that new forms of warfare are not Clausewitzian.[106] He notes that Clausewitz had a broad definition of politics that included the motivations of non-state armed groups such as the Turkic raiders who impinged on Prussian history. Echevarria argues that Clausewitz's trinity remains intact and can be applied to situations of war today.

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[104] Professor Richard H. Shultz, Jr., class presentation to students at the Fletcher School of Law and Diplomacy, December 2003. Accessed March 27, 2005. Available from http://fletcher.tufts.edu/faculty/shultz/ppt/bushdoctrineII.ppt. Also in Shultz and Vogt, "It's War."

[105] Antulio J. Echevarria II, "The Problem with Fourth-Generation War," *Strategic Studies Institute Newsletter*, February 2005. Accessed March 31, 2005. Available from http://www.carlisle.army.mil/ssi/newsletter/opeds/2005feb.pdf.

[106] Antulio J. Echevarria II, "War, Politics, and RMA – The Legacy of Clausewitz," *Joint Forces Quarterly*, (Winter 1995-96). Accessed March 31, 2005. Available from http://www.dtic.mil/doctrine/jel/jfq_pubs/1810.pdf.

Some Fourth Generation Warfare proponents have been criticized for allowing a moralistic and culturally partisan worldview to influence their writings.[107] A review of 4GW literature indicates that some writers' organizational affiliations and commentary on domestic social and political issues place the writers on the right of the U.S. political spectrum. Critics contend that this contributes to a sense of stridency and a tendency to overstate things:

> The third idea that shapes our understanding of fourth generation warfare ties in our situation here at home. In the United States of America, our traditional, Western, Judeo-Christian culture is collapsing. It is not collapsing because it failed. On the contrary, it has given us the freest and most prosperous society in human history. Rather, it is collapsing because we are abandoning it.
> Starting in the mid-1960s, we have thrown away the values, morals, and standards that define traditional Western culture. In part, this has been driven by cultural radicals, people who hate our Judeo-Christian culture. Dominant in the elite, especially in the universities, the media, and the entertainment industry (now the most powerful force in our culture and a source of endless degradation), the cultural radicals have successfully pushed an agenda of moral relativism, militant secularism, and sexual and social "liberation." This agenda has slowly codified into a new ideology, usually known as "multiculturalism" or "political correctness," that is in essence Marxism translated from economic into social and cultural terms.[108]

A partisan worldview may lead Fourth Generation Warfare proponents to choose examples selectively, making 4GW actors seem opposed to the theorists' worldview and in conflict with the West. For example, the two People Power movements in the Philippines, as well as Israel's *Irgun*, could arguably be cited as examples of successful 4GW practitioners, but the authors reviewed do not do so.

Just as 4GW theorists tend to focus on implications for the U.S. military, criticism of 4GW theory is largely directed at the proponents' prescriptions. 4GW thinkers are faulted for possibly

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[107] Erik J. Dahl, "Planning for Fourth Generation Warfare," Unpublished paper, The Fletcher School of Law and Diplomacy, April 2003.
[108] William S. Lind, Maj John F. Schmitt, and Col Gary I. Wilson, "Fourth Generation Warfare: Another Look," *Marine Corps Gazette*, December 1994. Accessed April 4, 2005. Available from http://www.d-n-i.net/fcs/4GW_another_look.htm.

oversimplifying both the post-Cold War threat environment and the optimum force posture and doctrine to meet the new challenges.[109] Critics say that 4GW advocates underestimate conventional challenges and discount the continued need for high technology, firepower-heavy conventional forces.

Other thinkers, who have not adopted the term Fourth Generation Warfare, have nonetheless set out elements of new forms of warfare. Stephen Blank describes the rise of asymmetric strategies (which he sharply distinguishes from asymmetric threats) employed by non-traditional opponents. Blank sees a new type of warfare characterized by 1) a three-dimensional nature, with no front lines; 2) multiple theaters of war in a global setting; and 3) opponents who deliberately seek prolongation of the conflict, and our subsequent disorientation.[110]

**The Utility of Fourth Generation Warfare Theory**

This paper argues that Fourth Generation Warfare is a useful analytical concept for categorizing and assessing the effectiveness of non-state armed groups. Because it is an amalgam of earlier introduced models and components, 4GW is by its nature nebulous and imperfectly defined. As various scholars point out, none of the components of 4GW are new. Martin van Creveld discusses religiously motivated conflict waged by armed bands before the advent of the nation-state system. Asymmetric conflict, or using an opponent's strengths against him by attacking in an unexpected way, is also not new. The Visigoths used the roads built by the Romans in attacks that brought about the end of the Roman Empire. Asymmetry is integral to warfighting. As Sun Tzu wrote, "Now the shape of an army resembles water. Take advantage of the enemy's unpreparedness; attack him when he does not expect it; avoid his strength and strike

[109] Dahl, 17-23.
[110] Blank, 14.

his emptiness, and like water, none can oppose you."[111] The notion of an undergunned enemy bypassing a militarily superior state's armed forces and striking vulnerable nodes of its society is not a new one. The September 11 attacks can be viewed through the prism of Liddell Hart's indirect approach, wherein a combatant attempts to avoid direct, head-on operations against the opponent's front lines but tries to achieve surprise, deception, and psychological dislocation by taking the line of least expectation, on or off the battlefield.[112]

The Fourth Generation Warfare model may be flawed and incomplete, but it explains better than any single existing model what al Qaeda has accomplished. The components of 4GW – such as Peoples' War, insurgency, and catastrophic terrorism – are the elements that al Qaeda fused together and enhanced with globalization and technology. The full strategic impact of Fourth Generation Warfare is seen when its components are combined, and when it is put into practice by an agile non-state actor. Al Qaeda has been effective at casting a wide net and integrating what it learned in the areas of warfare types; organizational structures; command, control, and communication (C3) techniques; denial and deception; terror strategies; and assessing opponent vulnerabilities.

Criticisms of Fourth Generation Warfare are not persuasive when considered in light of al Qaeda's actions, impact, and effectiveness, which suggest the emergence of a new form of warfare. Al Qaeda's September 11 and related attacks do not fit squarely within traditional models such as insurgency and terrorism. The 4GW model does the best job of integrating and synthesizing existing conceptions of warfare, just as al Qaeda integrated existing technologies and developments in the global system.

The contentions that 4GW proponents may have taken too far – interstate conflict exiting through history's revolving door, or the need to realign U.S. military forces for 4GW by de-

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[111] Sun Tzu, 89.
[112] Basil H. Liddell Hart, *Strategy*, (New York: Signet Books, 1974).

emphasizing high-tech conventional weapons, to cite two examples – should not detract from the model's utility in analyzing and predicting the activities of non-state armed groups. To use the model judiciously is not to infer that 4GW will become the predominant mode of conflict.

That the 4GW model makes Clausewitz's trinitarian nature of war obsolete is one of its proponents' most contentious, and least supported, claims. An alternative conception of 4GW, ascribed to by this writer, holds that the means, some of the motivations, and the composition of some of the participants have changed, but warfare's essential nature remains. In this conception, war is still a clash of living wills, marked by chance and uncertainty, and an extension of politics, but non-state forces have formed a new type of trinity.

This new trinity consists of 1) a transnational group's leadership; 2) its ideological supporters, wherever they may be; and 3) its armed force commanders. The respective elements of this new trinity still manage to correspond to the elements of a) war subordinated to policy and reason; b) primordial violence and passion; and c) chance and probability, influenced by creativity.[113] That the armed group is dispersed into cells across the globe, and that its supporters ("the People") are unified by an ideology and not a territory and government, should not invalidate the trinity. The transnational group has a political agenda, a corresponding strategy, and launches warfare in support of them. That the group is not a nation-state and is not tied to a particular geographical territory does not detract from its standing as a political entity.

Van Creveld and others have asserted that motivations in non-state war tend to be irrational. When considering the issue of rationality, Western observers should be cautious not to mirror-image their own conceptions of rationality onto leaders of non-state armed groups. That bin Laden's policy and strategy strike Westerners as abhorrent does not mean that they are not products of rational calculations.

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[113] Carl von Clausewitz, *On War*, trans. and ed. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 75, 89.

**A Fourth Generation Warfare Framework**

This paper proposes a framework of the main characteristics of Fourth Generation Warfare. The purpose of the framework is to assess the degree to which state or non-state strategies and actions resemble the concept of 4GW as articulated by its proponents. Most of the 4GW elements are taken from Shultz's and Vogt's distillations.[114] The characteristics "Reliance on materials available in the target society" and "protracted timeframes" are taken from Hammes.[115]

1. Irregular, decentralized warfare.
2. Asymmetrical operations aimed at societal nodes.
3. At the tactical level, a reliance on materials available in the target society.
4. Use of denial, deception, and intelligence tradecraft.
5. Use of information-age technologies.
6. Unconstrained by norms, possibly to include WMD use.
7. Unlimited violence, frequently in the name of religiously based ideologies.
8. Protracted timeframes.
9. Difficult to target with conventional means.

# Chapter 3: Al Qaeda

Al Qaeda is characterized by an inclusive, religion based ideology and reason for being, a widely dispersed, networked organizational infrastructure, and a multinational membership and support base. Al Qaeda, through its September 11 attacks, had a staggering impact on the world order. Many commentators see September 11 as an event on par with the fall of the Berlin Wall or the beginning of the Cold War, marking a new era in international politics.

[114] Shultz and Vogt, "It's War," 6-7.
[115] Hammes, *The Sling and the Stone*, 220.

The event set in motion tectonic changes. Bruce Hoffman writes that the September 11 attacks ushered in a new era of conflict.[116] Major powers shifted their policies, for example the United States elevated preemption from a last resort to a prominent policy tool. Developed and not so developed societies experienced changes in their ways of life as security concerns escalated. States realigned their alliances and fundamental priorities, as Pakistan did when it answered the Bush Administration's appeal to cooperate against al Qaeda and the Taliban. How did a non-state group manage to accomplish this?[117]

**Al Qaeda's Context: The Rise of Religious Terrorism**

David Rapoport contends that international terrorism occurs in consecutive but overlapping waves, or cycles of activity in given time periods, each driven by a different energy.[118] Rapoport writes that the modern form of terrorism conducted by al Qaeda is part of a religiously inspired "fourth wave" of terrorism. This wave follows three earlier historical waves that were associated with the breakup of empires, decolonization, and leftist anti-Westernism.

The first he calls the "Anarchic wave," which originated in Russia and was largely the product of the unmet expectations of a mobilized population in the wake of the Czar's efforts to placate his subjects with political and economic reforms. Russian revolutionaries, seeing that traditional revolutionary tactics based on pamphlets and leaflets were obsolete, looked for a new form of political communication, adopting what Peter Kropotkin called "Propaganda by the Deed." Terror was chosen as a strategy (as opposed to an end) because it was seen as the most

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[116] Bruce Hoffman, "Rethinking Terrorism and Counterterrorism Since 9/11," *Studies in Conflict & Terrorism* 25: (2002), 303–316.

[117] For the purposes of this paper, al Qaeda's organization and activities are examined up to and including 11 September 2001. The question of whether the group, in its subsequent evolution to an even more decentralized movement in response to the hunting of its leadership and the disruption of its bases of operation, retains a revolutionary degree of military effectiveness is an area for further research.

118 David C. Rapoport, "The Four Waves of Modern Terrorism," in *Attacking Terrorism: Elements of a Grand Strategy*, eds. Audrey Kurth Cronin and James M. Ludes, (Washington DC: Georgetown University Press: 2004), 46-73.

effective way to destroy conventions. The Anarchist movement spread to Europe, and the first wave reached its high point with the "Golden Age of Assassination" in the 1890's. This wave is exemplified by the 1914 assassination of Archduke Franz Ferdinand.

According to Rapoport, the second wave, or the "anticolonial wave," began in the 1920's with the conclusion of World War I and lasted approximately forty years. The settings for the second wave were troubled territories of defeated empires – such as Palestine, Northern Ireland, Cyprus, and Algeria. The motivation was self-determination – the new wave of terrorists called themselves "freedom fighters" – and the strategy and tactics shifted from assassination to hitting military and government targets. Diasporas and foreign states provided support and funding.

The third, or "New Left" wave was stimulated by the Vietnam War, which Rapoport says motivated groups such as the Red Brigades, the Red Army Faction, Action Directe, and the Weather Underground to cast themselves as vanguards for the world's oppressed masses. The PLO inherited the Viet Cong's heroic image, and targets such as airliners were selected for their sensational value. Kidnapping and assassination, less common during the second wave, returned to prominence, and the term "international terrorism" was revived. Factionalism in terrorist movements such as the PLO made it difficult to agree on limited ends. State sponsorship became a key aspect of third wave terrorism.

Rapoport's "religious wave" was launched at the time of the 1979 Iranian Revolution, the Soviet invasion of Afghanistan, and the beginning of a new Islamic century. This fourth wave of terrorism has Islam at its heart. Third wave terrorism aims at creating secular states, while fourth wave movements seek to establish societies organized around religious principles. The fourth wave saw the rise of suicide bombing[119], its most deadly tactical innovation. The number of terrorist groups worldwide dramatically declined, possibly because the size of the potential

[119] Rapoport notes, however, that a secular organization – the Tamil Tigers – conducted more suicide bombings (many of them by women) between 1983 and 2000 than all Islamic groups combined.

support bases, religion versus nation, grew. Former Soviet republics with large Muslim populations became key locales for Islamic rebels, and the Balkans and Kashmir became flashpoints. The United States came to be seen as the Great Satan, and groups sought to expel American forces from Lebanon, Somalia, and the Arabian Peninsula. Rapoport notes that Islamic groups sought to destroy their targets, a pattern not seen in the third wave.

It is within this setting of a religious wave of terrorism that al Qaeda evolved its mission, strategy, and organizational attributes. It is in Egypt, home to many of the most prominent fourth wave terrorists, that al Qaeda got its start.

**Al Qaeda's Origins: Egypt**

Al Qaeda's motivations and reason for being align closely with Van Creveld's warnings of a return to primordial forms of conflict. The group is the vanguard of the global Salafi jihadist movement, the ideological development of which Marc Sageman outlines as follows.[120] Tensions between Islam's grand mission and its prolonged period of political and cultural decline, following a period of spectacular gains, sparked periodic revivalist movements seeking to inject new energy into the faith. One of the most resonant such revivalist initiatives has been the Salafi movement, which preaches *salafiyyah*, or the restoration of pure, authentic Islam from the state of *jahiliyya*, meaning conditions of barbarism and ignorance that existed on the Arabian Peninsula before the Prophet Mohammed. The creed holds that deviance and departure from the faith has recreated *jahiliyya* and that a jihad in defense of Islam, with the goal of recapturing the glory of Islam's Golden Age, is every Muslim's responsibility. The Salafi creed has historically called for a defensive jihad, but now has an offensive variant. In parallel, a tradition of Salafi peaceful political activism also developed.

[120] This chapter draws heavily on Marc Sageman, *Understanding Terror Networks*, (Philadelphia: University of Pennsylvania Press, 2004).

There were several key milestones in the evolution of the global Salafi jihadist movement. The concept of defensive jihad originated with Ibn Taymiyya (1263-1328), who wrote *fatwas* judging that Muslims had a duty to fight the Mongol invaders who had conquered Muslim territories. Ibn Taymiyya judged that even though these Mongols had converted to Islam, they were apostates punishable by death because they practiced Genghis Khan's *Yasa* legal code instead of the *Sharia*.

Ibn Abd al-Wahhab (1703-1791) an Arabian Peninsula preacher, built upon the works of ibn Taymiyya and added another component of the evolving Salafi creed. Al-Wahhab wrote that the Peninsula's tribes had reverted to the state of *jahiliyya* by practicing idolatry and deserved death. He preached a return to a strict, austere form of Islam that offered no room for local spiritual practices (Wahhabism is fiercely anti-Sufi) and articulated a doctrine of *Tawhid*, meaning a monotheistic concept of God with no possibility of intermediaries. Al-Wahhab allied with an ambitious tribal chief, Mohamed ibn Saud, and this alliance conquered most of the Arabian Peninsula, ruthlessly imposing the Wahhabi version of Islam that provided legitimacy for the al-Saud's dynastic rule. The alliance held up over time and forms the basis for the contemporary Saudi state.

The Muslim Brotherhood originated as a peaceful Salafi political party founded in Egypt in 1928 by Hassan al-Banna (1906-1949), who advocated creating a pure Islamic state by imposing *Sharia*. Sayyid Qutb, the movement's ideologist, played a pivotal role in developing the concept of an offensive jihad focused on the "near enemy," meaning corrupt Muslim states, and the global variant calling for an offensive jihad targeting the "far enemy," meaning the Western states that have prevented reestablishment of a true Islamic state. Qutb, a radical whose worldview was shaped by imprisonment in Egypt and his exposure to what he saw as the corrupt and decadent West, extended the ideas if al-Wahhab and ibn Taymiyya. Qutb judged that mid 20$^{th}$ century Arab

societies were in a state of *jahiliyya* and, departing from his predecessors, called for a jihad to establish a pure Muslim state. The parallel Qutb drew between ibn Taymiyya's period and modern times helped bypass the traditional Sunni prohibition on conducting revolts that would lead to *fitna*, or the traumatic disorder that afflicted the Muslim community in the half century following the Prophet's death. Qutb's concept of jihad would be used to justify the violent overthrow Muslim governments in order to pave the way for establishing an Islamist state. His writings established the conviction among jihadists that Islam was not only a religion but also an all-encompassing way of life with imperatives for how society should be governed. Qutb published *Milestones*, his manifesto for the Salafi jihad, in 1964.[121] The Egyptian government executed Qutb for sedition in 1966, ensuring the enduring influence of his ideas.

In the late 1960's and 1970's the jihadist movement that produced al Qaeda was focused on finding ways to operationalize Qutb's ideas. The first target was Egypt. Muhammad Abd al-Salam Faraj, a leader of the jihadist organization that killed President Sadat, used Qutb's teachings to justify the assassination. Faraj likened Muslim governments, which he called the "near enemy," to the Mongols, and called for the violent overthrow of Muslim states. While stressing that Islam had been spread by the sword and that jihad was not defensive, Faraj believed that fighting the "far enemy," or western states supporting corrupt Muslim governments, would be counterproductive to the cause.

**Internationalization of the Movement: Afghanistan**

The emerging Egyptian jihadist movement operationalized Qutb's teachings internationally in the Afghan conflict, and in doing so, removed the distinction between the near and far enemies. Egyptian Qutb disciples such as Egyptian Islamic Jihad leader Ayman al-

[121] The text of this book is available online from: http://www.youngmuslims.ca/online%5Flibrary/books/milestones/hold/index_2.asp.

Zawahiri – brutally repressed at home – gravitated to Afghanistan, where militants from across the Muslim world converged and bonded. Arab governments, such as those of Egypt and Saudi Arabia, encouraged their radical jihadist elements to refocus on the Soviet enemy.

One of the most influential people during this time was Sheikh Abdullah Azzam, who took up the Afghan cause and played a key role in unifying Afghan faction leaders. Azzam was a Jordanian Palestinian and Muslim Brotherhood member who had long been involved in Islamist causes and had taught Islamic Studies at several universities. Azzam co-founded with Osama bin Laden the MAK (*Mekhtab al-Khidemat*, or "Service Bureau") in 1984 to recruit, train, field, and logistically support foreign volunteers in Afghanistan. Osama bin Laden was a Saudi construction magnate's son who studied economics and public administration at Saudi Arabia's King Abdul-Aziz University, graduating in 1981 and subsequently working in his father's construction business.

At university, Osama studied under Azzam, with whom he developed a close relationship, and Muhammad Qutb, brother of Sayyid Qutb.[122] Azzam mentored bin Laden, who served as the MAK's deputy and contributed his considerable fundraising and practical skills. Bin Laden established himself as a natural leader of the Arab Mujahidin through his wealth, battlefield courage and influence. The MAK fielded an estimated 25,000-50,000 foreign fighters during the conflict.[123]

Flushed with victory with the Soviet withdrawal from Afghanistan, wanting to maintain the jihadist movement's momentum, and discouraged by the Afghan leaders' reversion to infighting, the MAK leadership generally agreed that the group would evolve into a global base (*al-qaeda*) from which to support jihad. Azzam and other elements of the MAK leadership agreed

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[122] Rohan Gunaratna, *Inside Al Qaeda: Global Network of Terror*," Berkley Trade Paperback ed. (New York: Berkley, 2002), 22.
[123] Ibid., 28.

on the jihad's global scope but were sharply divided on its nature. Azzam believed in a traditional, defensive jihad, of which the Afghan struggle was a classic example, and he did not authorize the targeting of secular or religious Muslim governments. Throughout his past involvement in the Palestinian cause, he had avoided internecine Arab conflicts such as Black September. He rejected Faraz's justifications for overthrowing Muslim states, and believed that after defeating the Soviets, jihadists should focus on conquered Muslim lands such as Kashmir, the Philippines, Bosnia, Andalusia, and the central Soviet republics.

This put Azzam into conflict with Egyptian Islamic Jihad leaders such as Zawahiri, and with Bin Laden, who during his time in Afghanistan had tilted towards the Egyptian jihadist perspective, allied with this more radical Egyptian-led group. In November 1989, Azzam and his two sons were killed in a remote controlled car bomb explosion. The Egyptian faction is believed to have killed Azzam with bin Laden's acquiescence.[124] Many of the foreign jihadists that converged in Afghanistan did not know each other; the Egyptians, however, had known each other from their antigovernment activities, and now became the movement's leadership.[125]

**Globalization of the Movement: The United States Becomes a Target**

Bin Laden, Zawahiri, and the other Egyptians now had freedom to shape al Qaeda's strategy and actions. They chose to operationalize Qutb's philosophies globally, and moved the organization toward a strategy of global terrorism aimed at both near and far enemies. The Soviet defeat in Afghanistan prompted the traditional foreign jihadists to return home, and the Salafists to remain with Zawahiri and bin Laden.[126] Hijacked by al Qaeda, the Afghan victory became a cornerstone in Salafi jihadist mythology. While their contributions to the victory were minimal

[124] Ibid., 31.
[125] Sageman, 25.
[126] Ibid., 54-55.

(the Afghans themselves did almost all of the fighting), the foreign jihadists got a chance to write the history of the conflict because the Afghans did not, possibly due to illiteracy or the subsequent turmoil in the country.[127]

With little to do in Peshawar, al Qaeda relocated to Khartoum, where the Islamist government of General Omar Hassan al-Bashir had recently taken power. Sageman writes that at this point the organization was still focused on the "near enemy" and only designated the United States as a target after the Sudanese exile, as marked by the 1996 declaration of war.[128] In Sudan, the movement came to see the United States as the "head of the snake" and the chief obstacle to establishing a Muslim state. Factors behind this change of course may include the continuing presence of U.S. troops on the Arabian Peninsula, and U.S. presence in East Africa. France, having recently backed Algeria's government in denying power to the Islamist party that won an election, was also included as the group began to target the "far enemy." International pressure on Sudan, especially following a 1995 attempt on President Mubarak's life in Addis Ababa, led the Sudanese to expel al Qaeda in 1996. The group returned to Afghanistan as the Taliban was in the final stages of assuming control.

Ensconced in Afghanistan, Osama bin Laden consolidated his control of the global Salafi jihad and shifted its focus from Egypt to the United States. The February 23, 1998 declaration against Jews and crusaders was signed by bin Laden, Zawahiri for the EIJ, and Rifai Taha for the Egyptian Islamic Group.[129] The twin embassy bombings followed, initiating a wave of successful and aborted attacks against Western targets, culminating in the September 11 attacks.

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[127] Ibid., 59.
[128] Ibid., 39.
[129] Ibid., 47.

**Organization**

Gunaratna writes that al Qaeda created its decentralized global network while based in Sudan from 1991 to 1996.[130] He identifies the organization's extensive presence and reach, ranging from well-established cells in North American and Europe – and a strong presence in Southeast Asia through affiliation with and leadership of Jemaah Islamiyah – to footholds in Sub-Saharan Africa and Latin America.

Sageman describes al Qaeda's organization as consisting of four major clusters.[131] The Central Staff cluster at the top, which connects to each of the remaining three, is an informal self-organizing group based on relations forged in the Soviet-Afghan wars. Bin Laden heads and imposes a quality of hierarch on this group, the staff of which is divided into four committees: finances, military affairs, religious affairs, and public relations. The first Arab cluster consists of Core Arabs close to the EIJ and similar organizations. The second is the Maghreb Arab cluster, consisting of Algerian and Moroccan Salafist armed groups. Both clusters function as small-world networks, which Sageman defines as networks composed of nodes linked to well-connected hubs, some of which receive much more traffic than others. The third cluster is the Southeast Asians, anchored by Jemaah Islamiyah and the MILF (Moro Islamic Liberation Front).[132] Each cluster reaches deeply into pools of sympathizers who may want to participate in jihad. Because much of the organization evolves from the bottom rather than the top, it is especially resilient in the face of efforts to destroy it.

Sageman credits bin Laden for departing from typical terrorist group leadership styles and allowing the organization to develop naturally and spontaneously, providing only high-level

[130] Gunaratna, 128.
[131] Sageman, 171-173.
[132] Sageman notes that JI was largely rolled up in the wake of the Bali bombing because the group was hierarchically structured and it was established by a top-down method, in contrast to the Core Arab and Maghreb Arab networks.

guidance, as well as incentives through resource allocation.[133] Bin Laden practices a hands-off leadership style and is publicly self-effacing, showing his disapproval not by killing his rivals but by withdrawing funds until they come back into the fold.

**Membership**

While passionate primordial motivations may animate al Qaeda's leadership and support base, Sageman paints a different picture of Salafi jihadist group members, offering the following conclusions in his study. He writes: "Members of the global Salafi jihad were generally middle-class, educated young men from caring and religious families, who grew up with strong positive values of religion, spirituality, and concern for their communities."[134]

Sageman found that recruitment and brainwashing was not the method of entry into the jihad. Rather, individuals are first socially affiliated with the jihad through friendship, kinship, and discipleship. With mutual support, they progressively intensify their beliefs and accept the global Salafi jihad ideology, forging a common identity. They are formally accepted into the jihad when they encounter a link to an organization (it is very difficult to join an organization such as al Qaeda without first knowing someone in it).[135] Sageman identifies internal group factors, such as bonding around a common identity, more important in explaining behavior than outside factors such as hatred for an outside group. He comments: "It may be more accurate to blame global Salafi terrorist activity on in-group love than out-group hate."[136]

[133] Sageman, 173.
[134] Ibid., 96. Sageman's subject is what he terms the global Salafi jihad, of which al Qaeda is the vanguard.
[135] Ibid., 135.
[136] Ibid., 135.

# Chapter 4: Is al Qaeda a Global Insurgency?

Robert D. Kaplan has described al Qaeda as a global insurgent movement, to be confronted with a global counterinsurgency strategy. This is an intriguing proposition. If al Qaeda was to be categorized this way, the group would be the first global insurgency, although there have been regional insurgencies in the past, for example the case of Christianity under Roman rule. If there was such a thing as a global insurgency, information age technologies would certainly be a key enabler of the phenomenon, as would the rise of passionate motivations based on ethno-religious identity. Global insurgency would necessarily become an aspect of Fourth Generation Warfare theory, with implications for the security of states and groups opposed to the insurgents.

Thomas Donnelly and Vance Serchuk see a series of conflicts amounting to a global insurgency that is not limited to al Qaeda, but rather a pattern of insurgent challenges to U.S. interests:

> Indeed, Iraq is not a strategic anomaly in the present geopolitical order. From southern Afghanistan to the Horn of Africa and east to the Philippine archipelago, American troops are engaged in similarly open-ended, low-level counterinsurgency operations against Islamist guerrillas. In each of these places, there is no clash of armies on barren plains; no clearly definable enemy force that can be decisively or swiftly annihilated; and few statues of dictators left to tear down. Instead, U.S. forces are scattered in relatively small and fluid formations, with an operational emphasis on protracted "hunt-and-peck" patrolling: a half-dozen infantrymen walking the beat in Mosul, a Special Forces officer trudging across the jungle on Basilan with a Filipino platoon, an unmanned aerial vehicle scouring the Yemeni desert for al Qaeda operatives.[137]

The authors advocate a U.S. led global counterinsurgency strategy, the military component of which should be supported by what Eliot Cohen calls an “imperial army,” meaning a force with an expeditionary culture and a willingness to accept “ambiguous objectives, interminable

[137] Thomas Donnelly and Vance Serchuk, “Fighting a Global Counterinsurgency,” National Security Outlook, American Enterprise Institute Online (Washington), December 1, 2003. Accessed May 7, 2005. Available from http://www.aei.org/publications/pubID.19546/pub_detail.asp.

commitments and chronic skirmishes as a fact of life," as opposed to the definable missions and decisive battles sought by traditional militaries.[138]

Writing as Anonymous, Michael Scheuer states, "the threat America faces from bin Laden is not the episodic terrorist campaign typical of those perpetrated by traditional terrorist groups. It is rather a worldwide, religiously inspired, and professionally guided Islamist insurgency..."[139] This statement is based on the straightforward logic that, per Osama bin Laden's fatwas of 1996 and 1998, al Qaeda seeks to overthrow existing political orders and return to the glory of the Caliphate.

In a Naval Postgraduate School thesis, Peter Canonico advocates bypassing the debate over whether or not al Qaeda constitutes a global insurgency, but proceeding to adopt the global insurgency model as a strategic framework in order to develop the most effective response.[140] Canonico finds that the utility of the global insurgency model is that using it leads to choosing a global counterinsurgency strategy as a response, which could be expected to have the following characteristics.

First, using the model would shift the emphasis for the conduct of the war from the al Qaeda network itself to the population, resulting in a focus on the group's support base and resources. Second, such a campaign would likely involve using all aspects of national power in a synchronized manner, rather than overemphasizing the military component. Third, applying the insurgency/counterinsurgency model would diminish the distinction between the twofold enemy discussed in the 9/11 Commission Report: al Qaeda and the radical ideological movement. Using

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[138] Ibid.
[139] Anonymous, *Through Our Enemies' Eyes*, (Washington, DC: Brassey's, Inc., 2002), xvii.
[140] Peter J. Canonico, An Alternate Military Strategy for the War on Terrorism, Naval Postgraduate School Thesis, December 2004. Accessed May 8, 2005. Available from http://www.ccc.nps.navy.mil/research/theses/canonico04.pdf#search='peter%20j%20canonico'.

the global insurgency perspective, the two combine to form a common opponent, prompting a unified counter-effort.

Michael Vlahos of Johns Hopkins University argues that what the U.S. calls "terrorism" is actually an insurgency that emerged from a struggle within Islam. He writes that al Qaeda, affiliated movements, and active and passive supporters clearly constitute an insurgency, pointing to the extensive passive support across the Muslim world that jihadists are able to draw upon.[141] He argues that the West is guilty of mirror imaging when looking at Muslim perceptions of the jihadist movement, resulting in our seeing only a network of terrorist groups, devoid of context. This network is the tip of the iceberg, Vlahos contends, because "Muslim radicals move to uniquely Islamic rhythms of History."[142] Rather than a network of fighter, according to Vlahos the enemy is a broader insurgency within Islam. He goes on to state:

> The terrorist network is a ring of military subcultures that represents a much larger political movement within Islam, one that is nothing less than a civilization-wide insurgency against the established regimes of Sunni Islam. The "terrorists" are merely the fighters in this jihad. Millions of sympathizers and supporters play active, even critical roles in the movement. While most perhaps are passive, they are nonetheless loyal adherents.[143]

Referring to these passive supporters, he argues that "the millions of people animated to overthrow the Muslim World's status quo are not just a band of outlaws. They represent an authentic rebel movement for change—thus, an insurgency."[144] He asks, "Can we defeat an enemy we are afraid to name?"[145]

Vlahos contends that the "war on terrorism" is too narrowly focused on targeting a network of criminal gangs, which he thinks should be properly identified as military subcultures, and

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[141] Michael Vlahos, *Terror's Mask: Insurgency Within Islam*, Johns Hopkins University Applied Physics Laboratory, Published May 2002, with commentary added November 2003. Accessed May 7, 2005. Available from http://www.jhuapl.edu/POW/library/terrormask.htm.
[142] Ibid., November 2003 commentary.
[143] Ibid., 1.
[144] Ibid., November 2003 commentary.
[145] Ibid., 1.

punishing the states that harbor them. These groups are not only interconnected but also interwoven into a much larger movement constituting an insurgency within Islam. He writes that it is an oversimplification to call this insurgency simply a "radical" Islamist movement. While it relies on Saudi Wahhabist support, many other Islamist groups share its greater cause, which engenders wide, if passive, support among ordinary Muslims.

According to Vlahos, the insurgency's greater goals are the defense of Islam under attack, and renewal of the faith in the wake of generations of corruption. Thus, support is essential to the struggle, and the insurgency receives broad support because it has full authority under Islamic law and tradition. Within the mystical, all-encompassing Islamic cultural context, groups such as al Qaeda are perceived as fighters and not future leaders, so their severe agenda is not necessarily expected to be a practical outcome of the conflict.

Vlahos criticizes the U.S. war on terrorism for refusing to confront the historical implications of the insurgency, which first represents a period of renewal, and then leads to an Islamic political-religious revolution, especially in Arabic-speaking societies. He contends that U.S. strategy should address the vital matter of an insurgency within Islamic civilization, rather than groups of "terrorists" that are culturally marginal to that civilization.

Vlahos asks, "How should we prosecute the current "war against terrorism" if what we are really dealing with is an insurgency?[146] Contending that the U.S. is facing a "civilizational insurgency" based on religion, he answers that conceiving the problem in terms of fighting insurgency as opposed to terrorism encourages consideration of the problem in the broadest

[146] Ibid., 4.

terms.[147] He notes that by its very existence, an insurgency possesses some degree of legitimacy and poses a challenge to political authority, otherwise it could be dealt with as criminal activity.

The next sections of Vlahos' paper deals with how the military subculture of the insurgency, his term for groups such as al Qaeda and the Taliban, aligns with Sunni Muslim mythology, historical narratives, and heroic figure archetypes. The alignment between how jihadists portray themselves and how Vlahos says regular Muslims see them is very close, and raises warnings against Western mirror imaging when assessing the degree of popular support extended to the jihadists. Supporting his arguments with polling that indicates chilling levels of support for the jihadists (for example, figures suggesting that 60% British Muslim men and 95% of Saudi Muslim men support the insurgency), Vlahos concludes that Islam is to a large extent the problem. He offers an uninspiring prognosis:

> Islamic law and tradition legitimate the insurgency. The jihad is properly defensive: the renewal of the Dar al'Islam and the casting out of an infidel invader. Moreover, the insurgency operates within its own symbolic framework of reality and cannot be persuaded or reached by us—even in defeat.[148]

Vlahos list the assumptions underlying his argument as 1) the insurgency is an authentic Islamic renewal movement and central to change (change is seen as overdue restoration and restitution, and thus craved in the Islamic world); 2) the war's dimensions are much larger than the U.S. wishes to accept; and 3) the situation is a "world-historical" dynamic as yet unfulfilled.[149] To respond to the crisis, Vlahos declines to make detailed recommendations, but points to a middle-

[147] Ibid., 4-6. Vlahos also asserts that here have been several other examples of global, or civilizational, insurgencies somewhat similar to the Islamist insurgency occurring today. Some examples, for example Christianity under Roman rule and the Protestant Reformation under Catholic rule.
[148] Ibid., 27.
[149] Ibid., 28.

course strategy of "civilizational counterinsurgency" that seeks to control the pace of change from the status quo through shows of strength.[150]

## Insurgency and Terrorism Definitions

Having heard from several commentators, the question of whether al Qaeda is a global insurgency rather than a transnational terrorist group will now be explored using several writers' definitions and key characteristics of insurgency and terrorism. Al Qaeda and its activities will then be evaluated using these definitions as a framework.

### Shultz, Farah, and Lochard

Shultz, Farah, and Lochard discuss both the distinguishing characteristics and the commonalities of terrorism and insurgency in their *Armed Groups* article. The authors propose the following definition of insurgency:

> Insurgency is a protracted political and military set of activities directed toward partially or completely gaining control over the territory of a country through the use of irregular military forces and illegal political organizations. The insurgents engage in actions ranging from guerrilla operations, terrorism, and sabotage to political mobilization, political action, intelligence/counterintelligence activities, and propaganda/psychological warfare. All of these instruments are designed to weaken and/or destroy the power and legitimacy of a ruling government, while at the same time increasing the power and legitimacy of the armed insurgent group.[151]

Within this definition, insurgent groups take on a number of organizational models, political objectives, and strategies. The authors note that "Where armed insurgent groups operate, the objectives they pursue, and the organizational approach they adopt will shape the strategy employed."[152] In the classic insurgent model, that strategy goes through four stages: pre-insurgency, organizational/infrastructure development, guerrilla warfare, and mobile conventional

[150] Ibid., 28.
[151] Shultz, Farah, and Lochard, 17-18.
[152] Shultz, Farah, and Lochard, 18.

warfare, often extending over a protracted period.[153] The authors highlight a distinction between the classic insurgent model, in which supporters are mobilized to establish an alternative political authority to the existing government, and a more narrow conspiratorial model, focused more exclusively on "using violence to undermine the will of a government to sustain losses and stay in the fight, and not on controlling a particular territory and building a parallel political apparatus in it."[154]

The authors note the importance of terrain as a variable affecting both the insurgents' approach to each armed group characteristic: organization, ideology, motivation, leadership, and membership background. The terrain of an insurgency can be rural, urban, transnational, or a combination of the above. The authors write that insurgents can pursue a wide variety of objectives, and that the nature of insurgent objectives began to shift in the 1980's, along with the composition of insurgent movements. Whereas left wing revolutionary movements had pursued insurgency strategies in the Cold War era, the 1980's saw the emergence of new groups formed on the basis of ethnic and religious identity. These groups are more motivated to achieve self-determination than radical social and political change.

Shultz, Farah, and Lochard turn their attention to terrorism, their second category of armed group. Noting the complexity of defining terrorism, they propose the following operationally focused, or value neutral, definition:

> Terrorism is the deliberate creation and exploitation of fear by an armed group through the threat and/or use of the most proscribed kind of violence for political purposes, whether for or in opposition to an established government. The act is designed to have a far-reaching psychological effect beyond the immediate target of the attack and to instill fear in and intimidate a wider audience. The targets of terrorist groups increasingly are non-combatants, and large numbers of them, who under international norms have the status of protected individuals and groups.[155]

[153] Shultz, Farah, and Lochard, 18-19.
[154] Shultz, Farah, and Lochard, 18.
[155] Shultz, Farah, and Lochard, 21.

Shultz, Farah, and Lochard write that terrorists differ from insurgents in several ways, notably in tactics and targeting. While insurgents rely on a range of political and paramilitary tactics, one of which is terrorism, terrorist groups, on the other hand, "have a more narrow operational approach that increasingly focuses on targeting non-combatants."[156] During the 1990's, this approach increasingly emphasized mass casualties and indiscriminate targeting, frequently of protected persons and groups. The authors write that both insurgents and terrorist groups were increasingly motivated by ethnicity and religion in the 1990s, noting both the religious focus of approximately half of all known terrorist groups, and the fact that the vast majority of such groups are located in the Islamic world.[157]

Shultz, Farah, and Lochard note that a distinction between terrorist and insurgent armed groups is the extent to which terrorist groups establish linkages and cooperative arrangements. The authors highlight, the extensive linkages that al Qaeda forged with likeminded terrorist groups in as many as 60 countries during the 1990s, as well as a transnational financial infrastructure. It is through this multinational alliance of armed groups that al Qaeda is able to operate in both its originating states as well as transnationally.

**The Central Intelligence Agency**

The Central Intelligence Agency's *Guide to the Analysis of Insurgency* contains the following definition of insurgency:

> Insurgency is a protracted political-military activity directed toward completely or partially controlling the resources of a country through the use of irregular military forces and illegal political organizations. Insurgent activity – including guerrilla warfare, terrorism, and political mobilization, for example, propaganda, recruitment, front and covert party organization, and international activity – is designed to weaken government control and legitimacy while strengthening insurgent control and legitimacy. The

[156] Shultz, Farah, and Lochard, 21.
[157] Shultz, Farah, and Lochard, 21-22.

> common denominator of most insurgent groups is their desire to control a particular area. This objective differentiates insurgent groups from purely terrorist organizations, whose objectives do not include the creation of an alternative government capable of controlling a given area or country.[158]

The framework sets out four broad categories of insurgency – politically organized, militarily organized, traditionally organized, and urban – each primarily defined by organizational strategy. The first category, politically organized, is marked by having an extensive political structure in place before undertaking military operations, and by the objective of establishing a shadow government. Protracted warfare is the strategy, political consolidation precedes military consolidation, and such movements are often characterized by excessive revolutionary zeal.

In a militarily organized insurgency, military consolidation precedes political consolidation in contested areas, and insurgents hope that military action serves as a catalyst in mobilizing opposition to the government. The strategy seeks to avoid the burden of protracted warfare and extensive political organization, and instead achieve results with a small, decentralized structure of armed insurgents (as reflected by the Cuban *foco* strategy).

A traditionally organized insurgency is based on existing tribal or religious structures and has no unique strategy, but will adopt one of the three other insurgency types' strategies. This type of insurgency recruits on the basis of ethnic exclusivity, and its leaders often lack discipline and military experience.

An urban insurgency seeks to threaten a regime's legitimacy through urban disruption, and is organized in a cellular structure in an urban environment. An urban insurgency is often a supporting component of a wider insurgency in rural areas (as is the case with the New Peoples' Army in the Philippines). Urban insurgents are restricted to small areas and must hide amongst the populations.

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[158] Central Intelligence Agency, *Guide to the Analysis of Insurgency*, 2.

**Bard O'Neill**

In his book *Insurgency & Terrorism*, Bard O'Neill notes that insurgency dates back to Roman times and has probably been the most common type of armed conflict since the development of organized political communities.[159] O'Neill sets out a comprehensive framework for analyzing insurgencies, illustrated with material from case studies. He defines insurgency as:

> [A] struggle between a nonruling group and the ruling authorities in which the nonruling group consciously uses political resources (e.g. organizational expertise, propaganda, and demonstrations) and violence to destroy, reformulate, or sustain the basis of legitimacy of one or more aspects of politics.[160]

O'Neill identifies seven types of insurgent movements: anarchist, egalitarian, traditionalist, pluralist, secessionist, reformist, and preservationist.[161] The first four seek to completely change an existing political system and are thus revolutionary. The two of O'Neill's types that may have commonality with al Qaeda are the traditionalist and secessionist.

Traditionalist insurgents seek to replace the existing political system with one based on primordial, sacred values rooted in ancestral ties and religion. The systems these insurgents seek to impose are marked by low autonomy, with political power concentrated in the hands of an autocratic leader, often in the pattern of a system that existed in the recent or distant past. Moderate Islamic groups in Afghanistan would fall into this category.

A zealous subset of traditionalist insurgents that O'Neill calls *reactionary-traditionalists* seek to reestablish what they idealize as a golden age in the form of an ancient political system. The Muslim Brotherhood, EIJ, Hezbollah, and Gulbuddin Hekmatyar's party in Afghanistan are examples of the reactionary-traditionalist subtype because they seek to institute "Islamic political

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[159] Bard E. O'Neill, *Insurgency & Terrorism: Inside Modern Revolutionary Warfare*, (Washington, DC: Brassey's, 1990), 1.
[160] O'Neill, 13. (emphasis in original)
[161] O'Neill, 17-21.

and social arrangements in accordance with either Sunni or Shiite visions (frequently distorted) of what the ideal past was really like.[162]

Secessionist insurgents reject the political community to which they belong and seek to withdraw from it and establish a new and independent order. Examples include the Eritrean movement in Ethiopia, the LTTE, the Polisario in the Western Sahara, and the Baluchistan National Liberation Front in the triborder region of Pakistan, Iran, and Afghanistan. The classic secessionist movement was the Confederacy in the U.S. Civil War. While the groups seek to impose different types of systems, secession is their unifying goal.

O'Neill highlights four problems that make it difficult to identify insurgent types. *Goal transformation* occurs when leaders replace each other or recalculate their goals in light of their situations. *Goal conflicts* occur when insurgent factions have different or mutually exclusive goals, often leading to internecine fighting. *Misleading rhetoric* is the result of a leader masking his true objectives with democratic rhetoric. *Goal ambiguity* occurs when insurgent groups have competing aims, but one does not clearly predominate.

Addressing the means of warfare, O'Neill highlights the wide range of political activities insurgent movements engage in – such as propaganda, soliciting outside support, and creating front groups – and stresses the importance of effective organization. He differentiates between selective organizations and mobilizational organizations. In the former, small groups of elites carry out violent acts, as in the case of the Red Brigades in Italy or the Muslim Brotherhood in Syria. In a mobilizational organization, for example the Vietnamese and Chinese movements, insurgent elites try to involve large segments of the population in support of their cause. This type of insurgency is the most organizationally demanding.

[162] O'Neill, 18-19.

O'Neill writes that the violent aspects of an insurgency are made up of different forms of warfare, which he defines as "one variety of organized violence emphasizing particular armed forces, weapons, tactics, and targets."[163] The three forms of warfare associated with insurgencies have been terrorism, guerrilla warfare, and conventional warfare. In the next chapter, O'Neill describes the four main insurgent strategic approaches: the conspiratorial strategy, the strategy of protracted popular war, the military-focus strategy, and the urban-warfare strategy.

**Which Definition Fits Al Qaeda Best?**

Al Qaeda is an extremely broad, diverse ideological and religious movement that encompasses insurgency, terrorism, organized criminal activity, and mobilization based on political communication and persuasion. The group has an extensive network of affiliates, collaborates with warlords and militias, and relies on resources made available by weak and failing states. What armed group category, then, does al Qaeda most closely resemble?

Referring back to the key elements of the Shultz, Farah, and Lochard, CIA Framework, and O'Neill definitions may help answer the category question. Shultz, Farah, and Lochard emphasize the *political* nature of insurgency as a struggle for control and legitimacy, utilizing a range of political and military activities including political mobilization, political action, propaganda, and psychological warfare, all aimed at weakening the state's political power while strengthening that of the group.

The definitions of insurgency place more emphasis on the *ends* aspect (overthrowing an established order), while terrorism definitions focus on terrorism as a *means* (deliberate targeting of protected persons in order to generate terror for political purposes). Terrorism is of course a political activity as well, but Shultz, Farah, and Lochard note that:

[163] O'Neill, 24.

> Terrorists differ from insurgents in several ways. Important distinctions can be seen in tactics and targeting. Insurgents use a number of political and paramilitary tactics, of which terrorism frequently is only one. Terrorist groups, on the other hand, have a more narrow operational approach that increasingly focuses on targeting non-combatants."[164]

Al Qaeda has conducted history's most spectacular terrorist attacks, and manifests its intent to cause mass casualties among protected groups as a matter of policy, but the group represents more than terrorism. Al Qaeda's political ends include overthrowing governments, aiding secessionist movements in states such as the Philippines, and eliminating the United States presence from the Persian Gulf. In addition to terrorist tactics, the group has used a military-focused insurgency strategy in Iraq, guerrilla warfare in Bosnia, and both guerrilla and conventional warfare in the case of the 55th Battalion that fought alongside the Taliban in Afghanistan.

Both the CIA Framework and O'Neill's book were written before the rise of al Qaeda, but aspects of both of these sources' definitions align closely with some of the group's means and ends. The CIA Framework definition aligns closely with that of Shultz, Farah, and Lochard, emphasizing the territorial aspect of the struggle. More than anything else, al Qaeda seeks to gain control of diverse territories through a variety of means and impose its own vision of a social and political system on their populations. Al Qaeda's territorial ambitions make a strong case for classifying the group as an insurgency that relies heavily on terrorism as a strategy. Al Qaeda fits perfectly into O'Neill's reactionary-traditionalist insurgency subtype definition because the group seeks a return to an idealized religious system of the past. Aligning with the definition of another of O'Neill's insurgency types, al Qaeda supports secessionist insurgent movements in Kashmir and the Philippines.

[164] Shultz, Farah, and Lochard, 21.

While the CIA publication predates the formation of al Qaeda and many developments related to globalization and the information revolution, its four types of insurgencies each describe al Qaeda's activities to some extent. Al Qaeda represents a politically organized insurgency in that the group works extensively with religious institutions, charities, and the media in contest for legitimacy and a battle for the "hearts and souls" of the Muslim world. Al Qaeda participates in a militarily organized insurgent strategy in Iraq, where it has decided not to expend resources on political groundwork, but rather to capture imaginations and instill fear through spectacular violence. As Steven Metz writes, "The Iraqi insurgency is explicitly about what it stands *against*, but not what it stands *for*."[165]

It is highly interesting to consider al Qaeda a transnational traditionally organized insurgency because of the range of ethnicities that the group counts as its constituents. While unified by a religious vision, the group and its supporters consist of Sunni Muslims from areas as diverse as Indonesia, Kashmir, North Africa, and the Arabian Peninsula. Al Qaeda's operations reflect the concept of urban insurgency. Networked cells took years to establish themselves in cities from Nairobi to Aden to Frankfurt, effectively remaining clandestine and building up the resources to launch devastating attacks. The Madrid, Istanbul, and Casablanca attacks more closely resemble the urban terrorism model.

As mentioned, al Qaeda has used all three of O'Neill's forms of insurgent warfare: terrorism, guerrilla warfare, and conventional warfare. The group has also used or supported three of O'Neill's four main insurgent strategies: protracted popular war (Kashmir and the Philippines), military-focus (Iraq), and urban-warfare (Istanbul, Madrid). Al Qaeda may be attempting to use the conspiratorial strategy in Saudi Arabia.

[165] Steven Metz, "Insurgency and Counterinsurgency in Iraq," *The Washington Quarterly*, (Winter 2003-2004), 31.

## Global Linkages

While al Qaeda most closely resembles an insurgency that heavily relies on terrorist strategies and tactics, the group often collaborates with the two other types of armed groups described by Shultz, Farah, and Lochard, namely Militias and Armed Criminal Groups. Zachary Abuza writes of the crossover and cooperation between NSAG's and criminal networks in Southeast Asia:

> Terrorism differs from transnational crime in that it has no profit motive; but the underlying conditions that benefit one, benefit the other. Thus effective counter-terrorism must be based on rigorous law enforcement that targets gun-running, people smuggling, anti-corruption, money-laundering, and document forging. All of these are endemic in Southeast Asia; indeed that is a reason Al Qaeda was first attracted to the region. The will of states to crack down on these activities- especially in concert with one another is sorely lacking. The states of the region have not addressed the issue of terrorist-transnational crime convergence.[166]

Like all of these armed group types, al Qaeda also intimately relies upon services and support from weak and failing states. These linkages do not determine whether al Qaeda is an insurgency or a terrorist group, but rather illustrate the range of resources available to the group, all of which enhance its effectiveness.

## Other Factors

It is still difficult to conceive of al Qaeda and the global Salafi jihadist movement as an insurgency because only a few al Qaeda activities resemble the model of insurgency most commonly thought of: rural peoples' war, developed by Mao in China and adapted in Africa, Southeast Asia, and Latin America. Additionally, only a few of the global Salafi jihadist insurgency's activities resemble the forms of urban guerrilla warfare pioneered in Latin American

[166] Zachary Abuza, "Tentacles of Terror: Al Qaeda's Southeast Asian Network," Contemporary Southeast Asia 24:3 (December 2002). Available from Expanded Academic.

cities in the early 1970's and also seen practiced in the Philippines by urban cells of the New Peoples Army, and by the "pistol gangs" of the LTTE in Sri Lanka.

Observations of other insurgencies in the Muslim world can illuminate aspects of al Qaeda as a global insurgency rather than a terrorist movement. Writing about the insurgents in Iraq – who share overlapping membership with the global Salafi jihadists – Steven Metz argues that when there is a great disparity in military strength, the insurgency will not control a piece of territory and set up an alternative government. Nor will the insurgents reach a fourth stage of strategic parity followed by a conventional offensive to overthrow the government.

Rather, Metz writes, the Iraqi insurgency resembles the Palestinian model of insurgency, in which the insurgents have no hope of matching the military might of the occupiers, but seek to erode the their political will to sustain casualties and remain resolute in the pace of domestic and international public pressure. The insurgents rely on internal and international psychological operations fueled by terrorism, riots, guerrilla raids, sabotage, civilian casualties, and uprisings," with an intermediate goal of increasing tension between the population and the occupiers, hopefully provoking the occupiers' use of force against civilians, leading to further alienation and outside pressure.[167] The war thus becomes "a contest of wills, with battles fought in the psychological, perceptual, and political realms."[168] As Sageman illustrates, the global Salafi jihadists see secular and Islamic regimes in Egypt and Saudi Arabia as illegitimate occupation governments to be overthrown by a mass movement led by a vanguard, in this case al Qaeda.

Al Qaeda's expansive territorial ambitions, ranging from Kashmir to Andalusia, give it a global quality, as does its stated mission and actions to date targeting its perceived enemies by striking in a wide range of countries. The group's methodology is to both conduct its own

[167] Steven Metz, "Insurgency and Counterinsurgency in Iraq," *The Washington Quarterly*, (Winter 2003-2004), 31.
[168] Ibid., 31.

operations and adopt ongoing insurgent causes as its own. Al Qaeda developed the remarkable quality of being composed of people from country A, living in country B and targeting country C.

Both Zachary Abuza and Rohan Gunaratna write of al Qaeda's extensive efforts to build capacity and conduct terrorist operations in Southeast Asia in conjunction with groups such as JI and the MILF, which seek to overthrow existing political systems. Abuza identifies al Qaeda's modus operandi in extending its reach into Southeast Asia as follows. First, al Qaeda grafted onto, co-opted, and influenced the orientation of existing militant Islamic groups. Second, al Qaeda linked the groups together and coordinated their activities in support of an overall plan, providing training, strategic guidance, and material support as needed. Third, al Qaeda established its own stand-alone presence in Southeast Asia, capable of acting independently of the network of groups it had established.[169]

Evaluating al Qaeda from a standpoint of effectiveness, the group has been successful at communicating and winning support for its message, while hostility Muslim hostility towards the U.S. continues to increase. Polling indicates vast tacit support for bin Laden across Muslim communities worldwide, the extent that many French Muslims see bin Laden as a just and heroic defender of Islam. Al Qaeda has shaped a battle for the "hearts and souls," rather than the "hearts and minds," of the Muslim world, severely limiting the ability of the U.S. to respond directly with messages that resonant with these communities. The U.S. not only lacks credibility and standing in Muslim eyes, but also has proven ineffective at marshalling moderate Muslim voices to counter al Qaeda's message. Al Qaeda's effectiveness in political warfare supports the global insurgency case.

[169] Zachary Abuza, *Militant Islam in Southeast Asia: Crucible of Terror*, (Boulder, CO: Lynne Rienner Publishers, 2003), 121.

**Conclusion: Implications**

Whether al Qaeda is categorized as a global insurgency or a terrorist group has important implications for the approaches adopted to counter the group. The term "terrorist" is inherently pejorative and de-legitimizing, and designating an opponent as a terrorist group could potentially lead to strategies emphasizing law enforcement, homeland defense, and military force in the absence of political direction. By contrast, calling an opponent an insurgent movement could conjure up images of a multidimensional political challenge to existing orders, requiring a multidimensional approach in response. A counterinsurgency approach connotes an integrated strategy for war, with politics at its core. Such a strategy would be rightly seen as a contest for legitimacy, with the implication that the political battles of the war are as important as the military ones.

# Chapter 5: Has al Qaeda Conducted Fourth Generation Warfare?

Is Fourth Generation Warfare new, and do al Qaeda's actions represent a new form of warfare? Or are existing models adequate in explaining al Qaeda's impact? Answering these questions is the next step in determining whether al Qaeda's actions constitute an RMA. An examination of al Qaeda's actions using the previously proposed 4GW framework leads to the conclusion that the organization has conducted a new form of warfare, not fitting into any existing models, and best described as Fourth Generation Warfare.

**Application of 4GW framework to al Qaeda**

1. Irregular, decentralized warfare. Irregular and unconventional warfare have been practiced for centuries and are not new. The same applies to insurgency. Al Qaeda, however, took decentralized warfare to a new level by structuring itself in ways only made possible by

information-age technologies. The organization, in applying Arquilla and Ronfeldt's concept of netwar, proved itself to be more effective, more resilient if the face of crackdown efforts, and to have a wider presence than a traditional insurgency or terrorist group. Al Qaeda produced the first modern global insurgency, spanning an array of battlefields, languages, and cultures, and employing forms of warfare ranging from terrorism to guerrilla tactics.

2. Asymmetrical operations aimed at societal nodes. This second element of the 4GW framework is not new. Standard terrorist practice has been to demoralize governments and populaces of target states. What is new is the extent to which al Qaeda perpetrated destruction on its target, the United States. The combination of unlimited ends with highly destructive means introduced an unprecedented level of lethality in a terrorist operation.
3. At the tactical level, a reliance on materials available in the target society. The September 11 attacks reflected an ingenious use of U.S. society's resources and openness to conduct a devastating attack. Al Qaeda hijackers used U.S. banking, telecommunications, and postal services as support infrastructure; spent years in flight schools across the country without provoking sufficient suspicion to curtail the operation; and acquired the use of guidable weapons more powerful than any conventionally armed cruise missile.
4. Use of denial, deception, and intelligence tradecraft. Non-state armed groups have traditionally been clandestine in nature and have used intelligence tradecraft. Al Qaeda has been more systematic, sophisticated, and effective in learning and adopting this tradecraft, as evidenced by the group's use of communications encryption, disinformation, and denial and deception; and by adopting the detailed counterintelligence prescriptions contained in the group's Encyclopedia of Jihad.[170] Al Qaeda showed sophistication in acquiring and disseminating this knowledge. Richard Shultz writes that al Qaeda "has developed into the non-state equivalent of the counterintelligence (CI) state, using CI principles and practices in its strategy."[171]
5. Use of information-age technologies. In this area, al Qaeda broke new ground. The group's adoption of networked organizational structures – whereas terrorist groups were traditionally run by centralized command and control – enhanced the group's reach, lethality, and

[170] Professor Richard H. Shultz, Jr., Class lecture to students at the Fletcher School of Law and Diplomacy, 2003-2004. Excerpts from the 7,000-page, 11-volume *Encyclopedia of Jihad* are available from http://www.justice.gov/ag/manualpart1_1.pdf.

[171] Richard H. Shultz, Jr. and Ruth Margolies Beitler, "Tactical Deception and Strategic Surprise in Al-Qai'da's Operations," *Middle East Review of International Affairs*, Vol. 8, No. 2 (June 2004): 56. Accessed April 28, 2005. Available from http://fletcher.tufts.edu/faculty/shultz/.

resilience, translating into a marked leap in effectiveness compared to other armed groups. Al Qaeda's structure and agility was enabled by terrestrial and satellite wireless communications, internet-based communication, and encryption technologies. The organization served and expanded its support base by skillfully promulgating its messages and exhortations via the Internet and electronically enabled social networks. Al Qaeda could not have concurrently challenged so many states with terrorism and insurgency without leveraging these technologies.

6. Unconstrained by norms, possibly to include WMD use. Violation of norms is as old as conventional warfare, terrorism, and insurgency. Successful large-scale WMD use by an armed group would be new. Al Qaeda has positioned itself as the armed group with the highest likelihood of acquiring WMD, and, as discussed below, would show little hesitation in using such weapons. The explosive yields of fully fueled Boeing 767's may qualify them as WMD under some definitions.[172]
7. Unlimited violence, frequently in the name of religiously based ideologies. Al Qaeda's use of unlimited violence has also been called "catastrophic terrorism[173]" and "unconditional terrorism.[174]" In the 1970's, Brian Jenkins captured the essence of terrorism as violence calibrated to limited ends in a statement paraphrased as "terrorists want a lot of people watching, not dying."[175] The Tamil Tigers' use of terrorism in support of gaining an ethnonational homeland exemplifies this 1970's-era model of sensational attacks and killings designed to instill fear. Al Qaeda represents a departure from this model in that the group's ends are for all practical purposes unconditional[176], and the corresponding level of violence employed is unlimited. The emergence of "unconditional terrorism" is a development that Gwyn Prins traces not to September 11, but to the Lockerbie bombing of 1988.[177] According to Prins, this event was a milestone in the introduction of three main features of contemporary

[172] The September 11 attacks used aircraft traveling at 500 miles per hour carrying 14,000 gallons of jet fuel.
[173] This concept was discussed in Ashton B. Carter, John Deutch, and Philip Zelikow, "Catastrophic Terrorism: Tackling the New Danger," *Foreign Affairs* 77, no. 6 (November/December 1998): 80-94.
[174] Prof. Gwyn Prins, London School of Economics and Political Science, remarks at 2004 EPIIC symposium "Dilemmas of Empire and Nationbuilding: The U.S. Role in the World," Tufts University, Medford, MA, February 28, 2004. See also Prins, *In the Heart of War*, 73-4, 77, 270-1.
[175] Bruce Hoffman, "Defining Terrorism," in *Terrorism and Counterterrorism: Understanding the New Security Environment*, eds. Russell D. Howard and Reid L. Sawyer, (Guilford, CT: McGraw-Hill, 2004), 19.
[176] Al Qaeda's goals are generally believed to be restoration of the *umma* to a political dignity lost at the time of the Ottoman Empire's breakup and the end of the Caliphate in 1923. This includes both the overthrow of current regimes in states such as Egypt and Saudi Arabia, and the recapture of formerly Muslim-ruled territories such as Kashmir, the Philippines, and Andalusia.
[177] Prins, *In the Heart of War*, 73-75.

terrorism. The first is unconditionality, or not being directed towards limited objectives as in the past. The second is that terrorism is increasingly driven by "pastiche ideologies," an amalgam of religious hatreds, racial intolerance, anti-Semitism, and conspiracy theories.[178] The third characteristic is terrorism's "proselytising mission," where groups seek converts as well as political results.[179] Ralph Peters uses the terms practical terrorism versus apocalyptic terrorism to make a similar point to that made by Prins.[180] David Rapoport describes a "fourth wave" of religious terrorism that began in the last twenty-five years.[181] The above scholars' work points to the conclusion that a new level of religiously motivated terrorism has been reached. Al Qaeda injected this passion from the outside into numerous internal insurgencies.

8. Protracted timeframes. Members of the global Salafi jihadist movement have a much different conception of time and history than do Westerners. By their own pronouncements, they seek to restore the glory of an Islamic caliphate not seen for more than 700 years. On a less grand scale, the al Qaeda jihadists have shown formidable patience. Eight years separated the two World Trade Center attacks. The tactics used on September 11 date back to 1995's unsuccessful Bojinka plot and to plans formed by Abdul Hakim Murad in the late 1980's.[182] The East Africa attacks were similarly planned over a period of years. Al Qaeda takes what Westerners would see as a long-term approach to achieving the organization's goals. In line with Mao's dicta on protracted peoples' war, al Qaeda has taken a characteristic long term approach in its support of insurgent movements in territories such as the Mindanao and Kashmir.
9. Difficult to target with conventional means. Terrorist and other armed groups have always been clandestine. However, al Qaeda's leverage of information age technologies and the currents of globalization – for example porous borders and a transportation revolution – translated into a higher degree of self-reliance and less dependence on state sponsorship than has been the norm for armed groups in the past. Al Qaeda's ability to move and reconstitute on its own has made it more difficult to target than would have been the case with a terrorist

[178] Ibid., 77.
[179] Ibid.,, 79.
[180] D. Robert Worley, "Waging Ancient War: Limits on Preemptive Force," Strategic Studies Institute, U.S. Army War College, February 2003, 5. Accessed February 8, 2005. Available from http://carlisle-www.army.mil/ssi/pubs/display.cfm?pubID=276&CFID=68947&CFTOKEN=64863086.
[181] Rapoport.
[182] Sageman, 164.

group in decades past. Where al Qaeda operates in support of insurgencies, the group's members effectively conceal themselves amongst the local populations.

## Chapter 5: Has al Qaeda Conducted an RMA?

Al Qaeda's discontinuous increase in military effectiveness is the result of combining existing approaches and technologies, rather than inventing something new. This fits the pattern of most RMA's. Radios and tanks existed in Germany for years prior to 1940, and maneuver-driven tactics were honed in the 1918 Spring Offensive, but combining the three – and introducing the concept of speed – resulted in an effectiveness breakthrough.

Al Qaeda's approach and actions do not fit neatly into any one model such as insurgency or terrorism. No one scholar or analyst fully captures what it is about al Qaeda that constitutes an RMA. Al Qaeda partially fits into several models. In *The Transformation of War*, Martin Van Creveld describes a return to non-state conflict driven by primordial, often religious, motivations. Al Qaeda fits Van Creveld's description of religious warfare. Robert D. Kaplan describes al Qaeda as a global insurgency (to be confronted through a global counterinsurgency strategy), linking the group's strategy to the classical insurgency model.[183] It could also be argued that al Qaeda is waging a form of the Peoples' War concept pioneered by Mao. Many important distinctions exist, however, the primary one being that Mao waged intrastate conflict, while bin Laden's movement is transnational.

The question of whether al Qaeda conducted an RMA can be looked at using Knox and Murray's contention that RMAs take place in the context of military revolutions. This would

[183] Robert D. Kaplan, Remarks at 34th Annual IFPA-Fletcher Conference: "Security Planning and Military Transformation after Iraqi Freedom," Washington DC, December 2, 2003. Accessed April 30, 2005. Available from http://www.ifpafletcherconference.com/oldtranscripts/2003transcripts.htm.

hinge on whether globalization and the information revolution constituted a military revolution. If so, al Qaeda's RMA was enabled by these shifts. Knox and Murray suggest that changes in information technology appear to be the most likely candidate for a military revolution today, but highlight that changes in society and politics – not technology alone – have been the driving forces of great military revolutions of the past.[184]

**Evaluation of al Qaeda's practice of 4GW using the RMA criteria framework**

An application of the previously presented RMA framework reveals a significant alignment between al Qaeda's organizational and operational innovations and the RMA criteria. Based on the analysis below, this paper concludes that al Qaeda's execution of Fourth Generation Warfare meets the criteria of an RMA. Al Qaeda's realization of an RMA was above all an organizational achievement: how it conceived itself – as a transnational, religiously motivated movement, with a networked organizational structure – resulted in a global reach and new levels of military effectiveness.

Kenneth Pollack offers a definition of military effectiveness, which he writes "refers to the ability of soldiers and officers to perform on the battlefield, to accomplish military missions, and to execute the strategies devised by their political-military leaders. If strategy is the military means by which political ends are pursued, military effectiveness refers to the skills that are employed."[185] Military effectiveness in this situation is defined as progress in achieving al Qaeda's stated objectives to attack and damage U.S. government and society and to cause civilian casualties.

An important question is to what degree al Qaeda's growing potential effectiveness could have been observed prior to the September 11 attacks.

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[184] Knox and Murray, 177.
[185] Kenneth M. Pollack, *Arabs at War: Military Effectiveness, 1948–1991*. (Lincoln: Univ. of Nebraska Press: 2002).

1. **A sweeping change in the conduct of warfare, with societal and strategic implications. (Hundley)**

The 11 September attacks were unprecedented in their origins and scope, and a challenge to the imagination. Non-state armed groups have inflicted strategic blows before, such as Beirut in 1983, but those attacks were in Hezbollah's home area of operations. Al Qaeda, by contrast, demonstrated global presence and striking reach. The attacks met the criteria for a strategic blow in that they affected the United States' ability to exist as it had existed.

Al Qaeda took advantage of a particular development associated with globalization: the increasing multidimensionality of conflict.[186] In the past, threats and a state's responses to them were determined by geography. Now, with conflict's transnational nature, enhanced by the introduction of the cyberspace dimension, a non-state opponent can initiate threats from anywhere, and no longer has a point of origin or geographical center at which a response can be directed. In sum, al Qaeda altered the conduct of warfare, meeting this essential criterion for conducting an RMA.

Al Qaeda's September 11 attacks reached an unprecedented level of lethality for a non-state actor. Asked whether he thought that a non-state actor could conduct an RMA, Andrew Marshall declined to give a definitive answer, but noted that one important factor in making this determination would be the concept of battlefield lethality applied to civilian populations.[187] Marshall suggests imagining a graph of the maximum number of men that one combatant could kill on a battlefield in 10 minutes before succumbing himself. In the age of muscle, this would have been a handful, followed by progressively higher numbers as the gunpowder age developed. As mechanization of warfare increased in World War I and the interwar period, the numbers increase further as massive artillery systems and strategic bombing are introduced. With the advent of the nuclear weapons, one soldier could theoretically fire or deliver a tactical nuclear device on a battlefield.

A related question is how many civilians could a non-state individual, acting on his own, kill in a single incident. The 2001 anthrax incidents in the United States, the September 11 attacks, the thwarted plot to bomb millennial celebrations on New Years Eve 2000, the thwarted 1995 al Qaeda plan to simultaneously destroy as many as 12 airliners over the Pacific, and the

[186] This is a major thrust of Stephen Blank's article.
[187] Interview with Andrew W. Marshall, OSD Director of Net Assessment, The Pentagon, Washington DC, August 17, 2004.

hypothetical scenario of an individual delivering a radiological device to a population center offer glimpses into the potential lethality that could be assembled by an individual or group today.

These developments play into the hands of groups who are trying to equalize their destructive power with that of states. The net effect is a more level playing field between groups and states than has been the case in the past. Globalization and technological advancement may have combined to create a discontinuous increase in individual killing power.

The September 11 attacks caused the United States to lose an unprecedented number of lives on a single day – a number not seen since Civil War. Chris Quillen found that there have been 76 mass casualty bombings (those killing more than 25 people) since 1950. A total of 5,690 persons were killed in those attacks, equating to an average of nearly 75 people killed per attack. According to Quillen's data, at least 19 different terrorist groups have carried out mass casualty bombings. A grim testament to al Qaeda's breakthrough in military effectiveness is the fact that twentieth century terrorists took more than 50 years and more than 75 attacks to kill a comparable number as al Qaeda did in a single day.[188]

The extent of the September 11 attack, and the potential RMA this represents, can be seen in the scale, consequences, and especially the results of the action.

The results of al Qaeda's actions include the following:

- A national security paradigm shift: the US saw the action as war, causing a shift from the law enforcement paradigm that previously governed terrorism response.
- A major foreign policy shift: preemption was elevated to a prominent policy tool, where previously it was a last resort. The Bush Doctrine makes clear that al Qaeda's brand of terrorism is seen as warfare to be countered with preventive and preemptive measures across the spectrum of force levels.
- The U.S. Indicators and Warning (I&W) system was realigned to incorporate non-state threats.[189]
- The September 11 attacks precipitated elective wars to unseat two regimes, in order to deny armed groups sanctuary and support.

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[188] Chris Quillen, "A Historical Analysis of Mass Casualty Bombers," *Studies in Conflict & Terrorism* 25 (2002): 279–292.

[189] Phil Williams, "Warning Indicators, Terrorist Finances, and Terrorist Adaptation," *Strategic Insights*, Volume IV, Issue 1 (January 2005). Accessed April 30, 2005. Available from http://www.ccc.nps.navy.mil/si/2005/Jan/williamsJan05.asp.

Al Qaeda's attacks prompted the US to in effect declare war against a group. This included the 1998 strikes on Sudan and Afghanistan, the first known use of cruise missiles against a group.[190]

2. **Rendering obsolete a military core competency, or creating a new one. (Hundley)**

Al Qaeda created a new military core competency: the ability to threaten the vital interests of a superpower across the globe and in its homeland. A core competency has been severely challenged, or possibly rendered obsolete. A state's[191] core competency in the wielding of force against other states – in the forms of deterrence, defence, compellence, and swaggering[192] – is now obsolete as a guarantor of that state's vital national interests. In the past, if a state could keep other states at bay, it was safe. The tools that states have relied on since 1648 are not necessarily effective against armed groups employing 4GW.

Traditional uses of force such as deterrence, coercion, and compellence are undercut by both 1) armed groups' lack of observability and return addresses; and 2) willingness to die motivated by radical religious ideology. Robert Pfaltzgraff, in assessing counterproliferation issues, uses a framework of eight D's: defense, deterrence, dissuasion, denial, diplomatic pressure, defusing, disarming, and destruction of military infrastructure.[193] Many of these eight D's are similarly undercut when a state does not know where a non-state armed group is located.

The core competency criteria can be examined using the defense analytical measures of effectiveness, cost, uncertainty, and risk. In terms of effectiveness, al Qaeda's achievements were not the result of new inventions. By conceiving itself as an instrument of destruction to be brought to bear on the West, al Qaeda drew upon a diverse array of existing organizational, technological, and conceptual developments with ingenuity and resourcefulness. The result was a degree of effectiveness that exceeded its leadership's expectations, and exceeded its opponents' capacities to imagine and prepare for threats.

In terms of cost, al Qaeda has demonstrated efficiency and frugality with financial resources. It sourced weapons and equipment at the international equivalents of flea markets and

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[190] Rapoport, 63.
[191] "State" in this paper refers to strong, developed states. NSA's have delivered strategic blows to weak and failing states on numerous occasions, for example the LTTE's 1996 bombing of Colombo's financial district.
[192] Professor Richard H. Shultz, Jr., Course Syllabus, "The Role of Force in International Politics." Accessed March 31, 2005. Available from http://fletcher.tufts.edu/faculty/shultz/.
[193] Professor Robert L. Pfaltzgraff, Jr., in lectures to students at the Fletcher School of Law and Diplomacy, 2003-2004.

executed the September 11 attacks at an estimated cost of $500,000. Conversely, al Qaeda's global presence, lack of observability, and emphasis on strategic surprise has placed huge financial demands on states seeking to prevent al Qaeda attacks. With its entire society targeted, the US has embarked on cost-intensive measures such as the creation of the Department of Homeland Security and revamped precautionary measures at potential transportation and infrastructure targets. "Asymmetric" may be a widely used term in describing the juxtaposition of opposing military forces, but seems to aptly describe the cost situation. With its preparations unobservable, al Qaeda has moved threat assessments for its opponents from the domain of risk to uncertainty.

Global reach, a central component of al Qaeda's RMA, is a new and distinguishing development for a non-state armed group. Hezbollah delivered a devastating strike to the U.S. Marine barracks in Beirut in 1983, but that was on the group's home turf. Al Qaeda constituted itself across the world, and planned or executed strikes against vital U.S. interests in East Africa, Singapore, the Philippines, Yemen, Saudi Arabia, and the U.S. homeland. Al Qaeda's global reach and its implications for U.S. security formed a key part of President George W. Bush's September 20 speech outlining new directions for U.S. strategy, an indication of the gravity the United States placed on this development. In this speech, Bush singled out terrorist groups with global reach for defeat.[194]

### 3. Taking place in the context of, and closely associated with, a larger societal revolution. (Knox and Murray)

Globalization has been central to al Qaeda's motivations, support base, recruitment, organizational infrastructure, and actions and effectiveness. Journalist Peter Bergen commented that al Qaeda is "at once a product of globalization and a response to it."[195] Globalization and the information revolution contributed to many of the developments that enraged al Qaeda, specifically the advance of Western economies and societies, and the degree to which Western values and culture impinged on Muslim societies.

Al Qaeda's motivations and recruitment efforts were fueled by the immediacy of perceived assaults on Muslim dignity both near and far. James Rosenau describes a component of globalization, the phenomenon of distant proximities, as follows.

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[194] George W. Bush, President's Address to a Joint Session of Congress and the American People, September 20, 2001. Accessed April 30, 2005. Available from http://www.whitehouse.gov/news/releases/2001/09/20010920-8.html.
[195] Bruce Hoffman, "Terrorism's CEO," *Atlantic Unbound*, January 9, 2002. Accessed April 20, 2005. Available from http://www.theatlantic.com/unbound/interviews/int2002-01-09.htm/.

> Distant proximities encompass the tensions between core and periphery, between national and transnational systems, between communitarianism and cosmopolitanism, between cultures and subcultures, between states and markets, between urban and rural, between coherence and incoherence, between integration and disintegration, between decentralization and centralization…between the global and the local--to note only the more conspicuous links between opposites that presently underlie the course of events and the development or decline of institutions.[196]

Distant proximities are but one aspect of a social revolution currently brought about by globalization and the rise of an information-based society.

4. **The increase in effectiveness is largely a product of strategic behavior (and strategic factors can to a large extent explain the conflict's outcome). (Gray)**

The strategic perspective can explain both al Qaeda's tactical successes and what appears to be the group's unfolding strategic failure. As Sageman points out, bin Laden's strategic decisions on how to organize al Qaeda – a decentralized approach to leadership, and encouraging the organization to evolve spontaneously from the bottom up – likely contributed to al Qaeda's tactical successes.[197] At the same time, the September 11 attacks were probably a miscalculation, as bin Laden most likely expected a limited U.S. response on the order of the Clinton Administration's use of cruise missiles in 1998.

5. **A military force's transformation of itself, resulting in new capabilities and strategic possibilities. (Hundley) RMA's frequently do not involve weapons, or even technology. (Hundley)**

From a starting point of (1) a militarily disadvantaged position vis-à-vis powerful states and (2) a forceful vision of the nature and direction of conflict that it wanted to prosecute, al Qaeda exploited technology and transformed itself into an agile, decentralized, capable force. Al Qaeda decided to bring a new force to bear: unconditional violence, or violence not calibrated to achieving an objective that an opponent could reasonably be expected to concede. Hezbollah, by contrast, used force calibrated to limited ends in Beirut and South Lebanon. For al Qaeda,

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[196] James Rosenau, *Distant Proximities*, (Princeton: Princeton University Press: 2003).
[197] Sageman, 172-173.

destruction thus moved along the spectrum from a *means* toward an *end*. This opened up a range of means such as traditional and improvised WMD. Al Qaeda's choice in how to conceive itself opened up a range of new targets, battlespaces, and centers of gravity, namely the social and economic nodes of the states it opposes.

Al Qaeda transformed itself organizationally away from traditional centralized, hierarchical military structures. By becoming a decentralized "network of networks," al Qaeda departed from traditional military concepts of timing, sequence, and linear progression of tactical engagements. Disparate cells' initiative and operational readiness – as opposed to the high command's planning – determined the sequences of operations.

Al Qaeda conceived itself around an extremist religious point of view, as opposed to a sense of national, ethnic, or territorial identity. This conception widened the organization's potential appeal, membership base, and area of operation. It also isolated the insurgent group from the moderating influences of its "people."

To achieve its ends, al Qaeda adopted doctrine that called for fighter's deaths as integral parts of the operations. Typically fighters conceive themselves as committed risk-takers rather than martyrs. This change in the organization's conception of itself was a force multiplier, opening up a range of tactics and limiting the ability of the defense.

**6. A complex mix of tactical, organizational, doctrinal, and technological innovations. (Knox and Murray) The organizational component of the innovation is usually the most important. (Cohen and Marshall)**

Al Qaeda adopted and integrated what Richard Hundley calls "a fertile set of enabling technologies,"[198] as well as organizational and social developments from the civilian world. These include:

a. Information age technologies
b. Networked organizational structures
c. Movement of people across borders in globalized world
d. Liberal societies' push to improve information accessibility and transparency
e. Increasing alienation and hostility in Islamic societies
f. The legitimate and underground international financial systems

[198] Hundley, xx.

As discussed in number five above, the organizational component of al Qaeda's innovations was the most important determinant of the group's effectiveness. It is unlikely that a centralized, hierarchical organization could have conducted al Qaeda's attacks while maintaining operational security.

**7. The adoption of developments from outside the immediate military realm. (Krepinevich and Hundley) An RMA consists largely of peacetime evolutionary changes, the results of which are seen against the backdrop of a war. (Knox and Murray, Metz)**

The first part of this criterion is addressed in number six above. Al Qaeda's RMA was certainly seen against the backdrop of the September 11 attacks, but probably could have been identified earlier, based on previous actions, intelligence and open-source reports on the group's innovative structure, and bin Laden's own pronouncements on the group's motivations, strategy, and intent. These factors would have painted a picture of al Qaeda as a uniquely formidable organization, potentially capable of an effectiveness breakthrough.

**8. An RMA emerges from evolutionary problem solving directed at actual operational and tactical issues in an actual theater of war against an actual enemy, and from an environment where free expression and debate are encouraged: a learning organization. (Knox and Murray)**

Al Qaeda clearly set out to strike vital blows against a militarily far superior opponent, and adopted the ideal weapons and tactics to do so, notably the incorporation of suicide into its operations. The visceral hatred the group focused on the United States made possible this incorporation.

Al Qaeda maintained a flexible, exploratory environment where military innovations could be developed, tested and refined. Ideas such as using airliners as missiles were generated from the bottom up, and cell members were encouraged to use initiative. Failure was expected and tolerated, with operational security measures in place to prevent compromise of the greater organization. Al Qaeda maintained a global skunkworks for testing and validation of tactics and technology, for example the Afghan camps, Somalia, and Bosnia. The group meets the learning organization criterion.

9. **RMA's are frequently adopted and fully exploited by someone other than the nation that invented the new technology. (Hundley)**

Interestingly, while al Qaeda appeals to a return to the glory of classical Islamic society (characterized as it was by technological prowess), the group has adapted and utilized Western technologies and societal changes. It has adopted and attempted to destroy the products of Western societies, but has invented nothing itself.

10. **Combinations of technologies, rather than individual technologies, usually bring about technology-driven RMA's. (Hundley) All successful technology-driven RMA's appear to have three components: technology, doctrine, and organization. (Hundley)**

This does not apply fully to al Qaeda, as the group's potential RMA has a technological component but is not technology-driven. The technological aspects of al Qaeda's innovations are most certainly combinations of technologies. For example, networked organizational structures were pioneered in the business world. Advanced communications technologies such as the Internet enabled these structures to operate transnationally. The ubiquitous capital flows produced by globalization provided the means for al Qaeda's new organization to act freely. Al Qaeda's contribution was to synthesize technology, doctrine, and organization.

11. **The innovation can take advantage of advantage of a "niche" provided by asymmetries in competitors' national objectives or strategic cultures. (Krepinevich)**

The niche in al Qaeda's case was the United States' most glaring vulnerability: the openness of its society. The French, who unlike the Americans are disposed towards penetrating and monitoring elements of their own populations, would have provided a more difficult target for al Qaeda.

12. **The military utility of an RMA is frequently controversial and in doubt up until the moment it is proven in battle. (Hundley) RMA's often take a long time to come to fruition. (Hundley)**

It appears that indications that al Qaeda was in the process of conducting an RMA were not controversial or invisible, but that Western analysts were not paying attention. The group's RMA did take a long time to come to fruition, in that al Qaeda's plans for an offensive jihad

aimed at the West evolved since 1989, and that these jihadist plans have an ideological heritage tracing back much earlier.

The extent of al Qaeda's military effectiveness was not necessarily in evidence prior to the September 11. There are indications that al Qaeda's success on September 11 exceeded its own expectations of the destruction it would cause, and that this was a factor in bin Laden's miscalculation of the U.S. response. As Marc Sageman writes,

> The success of the 9/11 operation backfired on al Qaeda. There is some evidence that al Qaeda leadership anticipated a limited U.S. response to the operation, on the order of the Clinton Administration's response to the East Africa embassy bombings and its lack of response to the USS Cole bombing.[199]

For al Qaeda, the proof of concept was delivered in the execution, after a series of unsuccessful operations involving aircraft, such as the 1995 Bojinka plot.

13. **Not necessarily causing a quantum leap in the cost of maintaining military forces. (Krepinevich)**

Al Qaeda's cost efficiency is addressed in number two above.

14. **The military advantages produced are often short-lived, as competitors' responses can nullify them. This is Clausewitz's concept of war as a clash of living wills. (Krepinevich and Gray) There are as many failed RMA's as successful ones. (Hundley)**

The unfolding conflict with al Qaeda seems to be illustrating these contentions. Al Qaeda provoked an effective and sustained response that has led to the loss of sanctuary, the overthrow of two regimes providing or potentially offering sanctuary, and the group's necessary operational reorientation from an offensive posture to one of evasion and defense.

**Some Qualifications**

With the conclusion that al Qaeda has conducted an RMA, some qualifications are in order. First, as argued in Chapter 2, al Qaeda has not altered the Clausewitzian nature of war.

[199] Sageman, 51.

Clausewitz's trinity can be effectively applied war waged by non-state armed groups, war that will continue to be characterized by chance, uncertainty, friction, fog, and nonlinearity.

This conclusion rests on the premise that al Qaeda employed 4GW independent of decisive state sponsorship. A state could still presumably be compelled by another state to control or dismantle an armed group proxy. In that case, the compelling state's core competency in the use of force would be preserved, and the armed group would not have achieved a new core competency.

Discontinuous military innovations are prone to failure and must withstand the test of time if they are to achieve the status of RMA. Armed groups such as al Qaeda must prove capable of sustained, effective (vital-interest challenging) activity without the decisive support or controlling influence of state sponsors. Although difficult to foresee, a dramatic increase in defending states' abilities to undermine and combat non-state armed groups could prevent this RMA from lasting very long.

It appears, however, that for the Fourth Generation Warfare RMA to fizzle out, toothpaste would have to be put back into the tube. The developments leveraged by armed groups, namely information age technologies, ubiquitous communications, and globalization's flows of people and capital, seem to be irreversible. At the same time, the fragmentary conditions that give rise to extremist movements and enlarge the territories where they can find safe haven – state failure, ethnic conflict, demographic pressures, resource scarcity, and shifting spheres of power and authority – show no signs of abating. Thus, the strategic threat of non-state armed groups will be primarily determined by their ability to continue to take advantage of enduring conditions.

# Chapter 6: Conclusion

## Policy Implications and Areas for Future Research

Much has been written on the failure of the U.S. national security establishment to foresee and prepare for the challenge posed by al Qaeda. The 9/11 Commission famously called this shortcoming "a failure of imagination."[200] Other commentators have emphatically disagreed, asserting that some analysts had warned specifically of the threat nature that al Qaeda posed. If indeed the national security branches of the U.S. government are guilty of a failure of imagination, so to is the defense analytical community.

It has not been a daunting task to set out the preceding analysis and conclude that an RMA has taken place, resulting in a fundamental, if temporary, degradation of the United States' ability to ensure its security. This exercise could have been conducted, with the same conclusion reached, even if tentatively, in 2000, 1998, or perhaps earlier.

It is a telling commentary on the US national security community that a strategic rethink on al Qaeda was not done until after 11 September 2001. What are the implications of this for the study of future threats? An important question for future research is how analytical tools such as the RMA concept can be used to improve the national security community's ability to perceive shifts and changes accurately, and translate observations into policy adjustments.

[200] *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States*, Authorized Edition, (New York: W.W. Norton, 2004), 339.

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