

UNCLASSIFIED

Security Classification This Page

1. Report Security Classification:			
2. Security Classification Authority:			
3. Declassification/Downgrading Schedule:			
4. Distribution/Availability of Report: DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.			
5. Name of Performing Organization: Office of the Provost			
6. Office Symbol: 1		7. Address: NAVAL WAR COLLEGE 686 CUSHING ROAD NEWPORT, RI 02841-1207	
8. Title (Include Security Classification): SHOCK AND AWE: AMERICA'S 21 ST CENTURY MAGINOT LINE (<u>UNCLASSIFIED</u>)			
9. Personal Authors: LtCol Michael G. Dana, USMC			
10. Type of Report: FINAL		11. Date of Report: 16 May 2003	
12. Page Count: 17 (21 w/endnotes and bibliography)			
13. Supplementary Notation: A paper submitted to the Provost, Naval War College, for the <u>Admiral Richard G. Colbert Memorial Prize</u> essay competition. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.			
14. Ten key words that relate to your paper: (1) Shock and Awe (2) Unrestricted Warfare (3) Asymmetric Warfare (4) Information Dominance (5) Maneuver Warfare (6) MOOTW (7) Joint Operations (8) Joint Interagency Task Force (JIATF) (9) Battle of Crete (10) Norway 1940			
15. Abstract: This paper evaluates Shock and Awe through a futuristic lens. In 2011, China conducts asymmetric attacks against the United States and conventional war against Taiwan. Shortly after China occupies Taiwan, the President of the United States commissions a working group to evaluate the concept of shock and awe. The working group out-brief report provides an orientation, examination, and evaluation of <i>shock and awe</i> . The report begins with a review of the 1996 National Defense University book, <u>Shock and Awe</u> . Next, the report examines and evaluates the historical examples used in the 1996 publication and identifies alternative historical lessons for <i>shock and awe</i> . Lastly, the working group conducts a selective comparison between <u>Shock and Awe</u> and China's seminal [and controversial] treatise <u>Unrestricted Warfare</u> . Thesis: Based on their analysis, the working group determined that Shock and Awe maximized conventional warfare capabilities, but failed to address the asymmetric and unconventional threats posed by China. Recommendations: (1) Shock and awe needs to cast a wider conceptual net (2) The U.S. approach to operational art needs to be expanded and refined. (3) More integration and jointness between military and non-military centers of power is required for future war. (4) Warfighting needs to be treated as both an art and a science. (5) Ends, ways, and means need to be mutually supporting; balancing the human, organizational, and technical aspects of conflict are essential for success in future war.			
16. Distribution / Availability of Abstract:	Unclassified	Same As Rpt	DTIC Users
17. Abstract Security Classification: <u>UNCLASSIFIED</u>			
18. Name of Responsible Individual: Office of the Provost, Naval War College			
19. Telephone: 841-3589		20. Office Symbol: 01A	

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 16 MAY 2003		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE Shock And Awe: Americas 21st Century Maginot Line				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Office of the Provost Naval War College 686 Cushing Road Newport, RI 02841-1207				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 24	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

REPORT DOCUMENTATION PAGE

Security Classification of This Page: UNCLASSIFIED

Encl (2)

UNCLASSIFIED PAPER

Naval War College

Newport, Rhode Island

SHOCK AND AWE: AMERICA'S 21ST CENTURY MAGINOT LINE

by

Michael G. Dana

Lieutenant Colonel, USMC

A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements for Joint Military Operations

The contents of this paper reflect my personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: _____
16 May 2003

Advisor: Colonel Mark Brilakis, USMC

**Office of the Secretary of Defense
Washington, D.C.**

18 January 2012

Memorandum for Secretary Ballard and Admiral Richardson

On 10 October 2011 China unleashed a coordinated military, economic, and cyber-space assault against Taiwan and U.S. forces in the Pacific region. The U.S. *shock and awe* response failed to reverse Chinese territorial gains and she continues to occupy Taiwan. Worse yet, Chinese attacks against space based communications and surveillance platforms have paralyzed American techno-centric warfighting systems. Insidious biological attacks have triggered SARS-like epidemics throughout major west coast cities and the Rapiet computer virus has paralyzed U.S. financial markets. Based on these events, the President formed the OSD "Dragon Slayer" working group on 21 November, 2011. Composed of distinguished scholars, government officials, and military flag officers; this working group conducted a comprehensive analysis of *shock and awe*.¹ The working group's examination of the overarching concept that shaped our current military doctrine, structure, and organization is critical to understanding why we've lost Taiwan. The result of their work is provided in the following report.

Introduction. This report provides an orientation, examination, and evaluation of *shock and awe*. The orientation discusses conceptual themes distilled from the 1996 National Defense University book, Shock and Awe. Next, the report examines and evaluates the historical examples used in the 1996 publication. Did these past campaigns provide valuable operational lessons or did they mislead us; were there more suitable historical lessons? Lastly, the working group compared Shock and Awe and China's

seminal [and controversial] treatise Unrestricted Warfare. *Based on their analysis, the working group determined that shock and awe maximized U.S. conventional warfare capabilities, but failed to address the asymmetric and unconventional threats posed by China.* Recommendations for correcting these deficiencies are provided at the end of this report.

The National Defense University published Shock and Awe in 1996. Though written under the auspices of a senior working group, the principal authors were Harlan L. Ullman and James P. Wade. Both men possessed impressive academic and professional credentials. Mr. Ullman was a senior associate with the Center for Strategic International Studies and a combat veteran (Vietnam and Desert Storm), who held a PhD in international affairs, finance, and economics.² Mr. Wade was a 1953 graduate of West Point, a fifteen-year Army veteran and former Assistant Secretary of Defense for Acquisition and Logistics, who held a Masters and Doctoral degree in Physics from the University of Virginia.³ These men were advised by retired senior officers from the Army (General Fred Franks), Navy (Admiral Bud Edney/Admiral J.T. Howe), and Air Force (General Chuck Horner).

Given the career trajectory and service experiences of the book's authors, it's no surprise that Shock and Awe reflected an unbridled enthusiasm for platforms, systems, and technology. Also, the traumatic experience of one of the senior advisory members in Somalia may have narrowed the conceptual focus.⁴ The authors sidestepped counter-insurgency and operations other than war, failing to craft a conceptual template that addressed the entire spectrum of war. The authors admitted Shock and Awe "may prove inapplicable...where enemy forces [have] relatively few lines to be penetrated or

selectively savaged by this type of warfare." ⁵ Shock and Awe avoided the slippery slope of asymmetric warfare, and set its conceptual pillars on a conventional warfare foundation.

The author's education and experiences shaped the intellectual terrain of Shock and Awe. Though this landscape bore ripe operational fruit in Iraq in 2003 and Syria in 2005, it failed against China in 2011. In retrospect, the conceptual landscape of Shock and Awe contained the seeds of future misfortune. The concept was founded on the assumption that...."there is no external adversary in the world that can successfully challenge the extraordinary power of the American military....in regional or conventional war."⁶ This was certainly the case in wars we initiated and against enemies who played by U.S. rules. *Shock and awe* maximized the already impressive operational and technological superiority of American military forces. The authors recognized that "potential adversaries may try to change the terms of future conflict and make as irrelevant as possible....current U.S. advantages."⁷ Nevertheless, the concept winked at this [and other] asymmetric threats and consistently returned to its central theme: the absolute mastery of the battle space through advanced technological means.

Why shock and awe? Based on the combat results achieved prior to Taiwan, Shock and Awe's techno-centric focus wasn't entirely misplaced. Under the right political-military conditions, *shock and awe* has yielded tremendous operational dividends. By leveraging the instruments of national power against the right enemy nodes, success was achieved faster, with less manpower and fewer casualties. *Shock and awe* seemed to blend cutting edge technology, precision lethality and maneuver warfare principles. These combined characteristics enabled U.S. forces to own the "dimension of

time--moving more rapidly than an opponent, operating within his decision cycle, and resolving conflict in a short period of time."⁸

Shock and awe also envisioned total control of the operational environment, accomplished by: (1) Maximizing knowledge of the environment, of the adversary, and our own forces (2) Achieving rapidity with respect to timelines (3) Achieving total control of the environment (4) Achieving new levels of operational competence or institutional brilliance.⁹ By 2011 it seemed these *shock and awe* concepts had become operational realities. The shock of 9/11 and military victories against Afghanistan, Iraq and Syria energized much needed reform of the defense acquisition and military promotion systems. More importantly, Congress increased funding for U.S. military training and education in the first decade of the 21st century. What went wrong? The answer to that question begins with an examination of the conceptual stress fractures in *shock and awe*'s theoretical foundation.

Shock and awe and the nature of war. Proponents of *shock and awe* believed absolute and perfect knowledge of the battlefield was an achievable goal, an objective contradicting the more conventional theories regarding war. As Carl Von Clausewitz said, "knowing is something different from doing."¹⁰ War is a clash of wills, conducted in a medium of chaos, death, and destruction. Though technology provided relative order and precise lethality to America's battlefields since Desert Storm, the very nature of war did not change. As the Marine Corps stated in their timeless doctrinal publication, Warfighting, war remained a place where "all actions take place in an atmosphere of uncertainty, or the fog of war. Uncertainty pervades battle in the form of unknowns about the enemy, about the environment, and even about the friendly situation....we must

realize that we cannot eliminate them or even come close. The very nature of war makes certainty impossible."¹¹

Achieving certainty in the battle space required technological, procedural, and human advancements. Robotics, space based platforms, unmanned vehicles, nanotechnology, enhanced human performance drugs, and cutting edge information management methods brought American forces to the brink of operational omnipresence. However, the human mind remained the long pole in the warfare certainty tent. As one author predicted in 2002, "the military systems (including weapons) now on the horizon will be too fast, too small, too numerous, and will create an environment too complex for humans to direct".¹² Ironically, technology made the warfighter the weak link in the warfighting chain, weakened further by the quest for battle space certainty. Technology flooded the battle space with data and information, not actionable knowledge. The military was caught on the horns of an information dilemma. In the past too little information caused operational pauses and missteps, but now too much information created a Gordian knot of data fusion, processing, dissemination, and understanding. Once systems and training emerged to process this information, leaders became accustomed to technology-fed situational awareness.

In World War II, the Germans used maneuver warfare to gain situational awareness and operational advantage over their enemies. In the absence of complete information, the use of commander's intent and mission-type orders empowered subordinates with decision making authority and tactical freedom of action. Uncertainty and confusion were mitigated by boldness, daring, and speed. A leader's intuition, experience, and training provided the mental tools to craft situational awareness, while

technology provided the mechanical means to exploit operational opportunities. Shock and Awe embraced these themes, but the *shock and awe* construct was weakened by an over-reliance on technology. In the recent conflict with China, the loss of critical communication and intelligence systems blinded U.S. forces. Operational tempo and precision lethality suffered as U.S. forces fought to manually regain situational awareness; much like the young Marine or soldier fumbling with a magnetic compass after years of using GPS. At the operational level, commanders hesitated to make decisions and shunned risk without the crutch of information dominance.

U.S. victories in the Middle East led Americans to believe technology had paved the way to the Holy Grail of information assurance. In retrospect, those beliefs were misplaced. What was perceived as the triumph of technology was simply the logical outcome of a lopsided military contest. The brave and heroic acts of American servicemen notwithstanding, the poor performance of Iraqi military forces proved to be a poor barometer for gauging the complexity of future war. More accurate lessons from those conflicts would have been drawn if the Iraqi defenders had fought with German proficiency or Japanese tenacity. Was the U.S. that good, or was the enemy just that bad, a combination of both? In World War II, 5,800 British soldiers and Allied airpower crushed five Iraqi divisions in thirty days. The British then defeated the Syrians and occupied Lebanon after a six-week campaign.¹³ A review of the British performance in 1941 casts a subdued light on the lessons of 1991 and 2003.

In this same vein, a senior officer at the Naval War College remarked after the second Gulf War: "Never before had so much lethality been present on the battlefield."¹⁴ History begs to differ. During the Battle of Okinawa American forces fired 7.5 million

37mm to 8-inch howitzer rounds, 60,018 5-6 inch naval shells, 392,304 hand grenades, 20,359 rockets, and nearly thirty million machine gun, rifle and pistol rounds.¹⁵ In the presence of overwhelming naval and air power, the outgunned and outnumbered Japanese killed 3,561 Marines and wounded an additional 20,020.¹⁶ The effectiveness of lethality resides in its ability to deter, destroy, or defeat the enemy. In the final equation, the willpower of the enemy truly reinforces Napoleons observation that the "moral is to the physical as three is to one."¹⁷ Iraqi actions under withering American fire proved to be a poor forecast for the Chinese tempest.

Lastly, like the Romans and French, Americans have become the victims of their own success. *Shock and awe* planners forgot the tragic lessons of Somalia (Blackhawk Down), Basra (Shia Uprising), and Kabul (WMD Catastrophe), all caused by the imbalance between the political and military dimensions of war. These failures can be traced to cultural arrogance, an under appreciation for enemy ingenuity and willpower, and failure to prepare for asymmetric threats. Shock and Awe addressed the cultural, economic, and psychological factors of warfare, but gave little treatment to the unpredictable actions of a "thinking enemy". Instead, Shock and Awe assumed "perception attacks" would force unwitting foes to see, sense, and act on information provided by all-controlling, all knowing U.S. forces.¹⁸ The shocked and awed enemy would then be dutifully coerced, deceived, dominated, or destroyed. The technological advances and organizational reforms of the past two decades made these conceptual boasts operational possibilities. Nevertheless, *shock and awe* was best used against inferior nation-state enemies employing conventional warfare methods. *Shock and awe*

was ill suited for war against trans-national enemies or versus conventional nation-states, fighting unconventionally.

Historical shock and awe. The menu of historical examples used in Shock and Awe spoke volumes on the focus and flavor of the conceptual design. The authors said the "magnitude of *shock and awe*" was "the non-nuclear equivalent of the impact that the atomic weapons dropped on Hiroshima and Nagasaki had on the Japanese."¹⁹ The fact the desired shock effect was produced by firepower foreshadowed a conceptual bias towards lethality. The U.S. has historically favored attrition-based, firepower solutions to operational dilemmas. Mass, mobility, and firepower provide the operational wherewithal and battlefield lethality to crush American enemies. To its credit, Shock and Awe energized the ongoing American evolution toward a more effective and efficient way of war. Technology, precision weapons systems, and highly skilled military personnel provided focused lethality. Shock and Awe also anticipated scientific breakthroughs foreshadowing the technological means to control, modify, or shape the operational environment. That said, the use of the atomic bomb metaphor reinforced an attrition-based mindset and failed to convey a complete *shock and awe* message. In retrospect, the authors should have used the 1940 German conquest of Norway as a Shock and Awe case study.

The Germans attack on Norway was a classic example of *shock and awe*. Cultural, psychological, political, and military instruments of power were integrated to inflict devastating operational paralysis. The Germans used social deception by initiating cultural exchanges and pan-Nordic public affairs events with Norway. Nazi naval force forays in and out of Norwegian coastal waters caused numerous false alarms

and dulled coastal defenses. Psychologically, the German foreign minister invited Norwegian government officials to dinner and played movies of the Nazi conquest of Poland, to include the bombing of Warsaw. Politically, the Germans supported the Nazi sympathizer, Quisling, who seized the main Oslo radio station during the opening days of the German attack. Militarily, the Germans executed the near-simultaneous landing of sea and airborne troops into six separate Norwegian military, economic, and urban areas. German initiative, high operational tempo, and crushing tactical victories cemented their conquest in two months time. The economy of force used against Norway was most impressive; just six German divisions seized a nation of three million people in sixty days.²⁰ The Germans shocked the Norwegians into submission by skillful integration of the various elements of national power.

Instead of Norway, the authors of Shock and Awe cited the German capture of Crete as an example of *shock and awe*. This was a surprising choice since the Germans saw Operation Mercury as a near-disaster. German intelligence mistakenly believed 5,000 British forces defended the island, when 27,500 Allied troops were actually in place.²¹ Daylight drops of airborne forces into the teeth of British defenses wrecked havoc on the assault force. Key leaders, vital command and control equipment, and operational continuity were shattered on the first day. 170 of the 600 aircraft used in the assault were either shot down or permanently put out of action. The Germans were shocked and awed by the staggering loss of nearly 2,000 of their finest soldiers in less than twenty-four hours.²² Axis airpower and tactical stamina carried the day, but the Pyrrhic victory led to Hitler's suspension of airborne drops for the duration of the war. Crete provides a superb case study of failed *shock and awe*.

The authors of Shock and Awe focused on offensive operations to prove the merits of their conceptual design (historical suitability notwithstanding). The use of defensive case studies would have strengthened and widened the analysis. For instance, the brilliant Japanese evacuation from Kiska highlights an enemy's ability to counter *shock and awe*. U.S. landings on Amchitka and Attu in early 1943 had isolated 5,000 Japanese troops on Kiska. Having gained local air and sea superiority, the Americans began shaping operations to annihilate the island bound Imperial garrison. The Japanese realized their small force was in peril and dispatched a small fleet to evacuate their comrades. The Japanese fleet commander used the cover of fog and complete radio silence to maneuver his forces into position. In less than fifty-five minutes they evacuated 5,183 men from the otherwise encircled island.²³ American forces never discovered the withdrawal and later landed 35,000 troops on the deserted atoll.²⁴ Skillful use of deception and unorthodox tactics had offset Allied sea and air advantage. The Japanese controlled the operating environment at the right time and place. Kiska showed how less equipped forces could side step superior foes bent on *shock and awe*.

Though the Japanese performance at Kiska was impressive, Imperial forces continued to fall victim to overwhelming U.S. mass and mobility in the Pacific. American forces combined strategic reach, operational mobility, and tactical firepower to decimate Japanese defenders. Two aspects of this attrition warfare against the Japanese helped shape, and then counter, *shock and awe*. First, well-defended island positions and human sacrifice didn't offset the decisive effect of superior U.S. firepower. (The Japanese suffered thirty men killed for every man wounded in the island campaigns, but these sacrifices didn't neutralize or reverse U.S. operational momentum).²⁵ Conversely, when

U.S. forces fought on Japanese tactical terms the American casualty rates were exorbitant. (In the Battle of Iwo Jima, the Marines suffered 5,928 killed and 17,272 wounded).²⁶ The Americans took these lessons and sought increased mobility, firepower, and lethality, while concurrently developing tactics to minimize casualties. The Chinese, who in Korea suffered casualties comparable to the Japanese in the Pacific, looked at other ways to wage war. In essence, the U.S. chose to refine a winning formula, while China decided to “mix a tasty and unique cocktail for the future banquet of war.”²⁷

East vs West: Shock and Awe meets Unrestricted Warfare. In 1999, two Colonels from the Chinese Air Force published Unrestricted Warfare. Their conceptual, intellectual, and thought provoking work captured the political, military, and technological trends of the time. They argued globalism, the decline of nation-states, and America's unbeatable military power created the requirement for waging unrestricted war, where the "first rule is there are no rules."²⁸ *Unrestricted war* went beyond traditional military conflict and applied violence against nations political, economic, and technological domains. The Chinese authors viewed conflict through a holistic lens and in so doing, exposed the asymmetric vulnerabilities of technologically dependent America. Shock and Awe saw technology as the means to perfect the science of war, while Unrestricted War expanded the art of war canvas. The Americans assumed technology provided the ways and means to wage war perfectly, while the Chinese foresaw *shock and awe's* asymmetric vulnerabilities.

The Chinese and American views on war reflected their different cultural perspectives. Professor Richard Nisbett captured these contrasting views in his book, *The Geography of Thought: How Asians and Westerners Think Differently*. He wrote:

"Asians approach the world with a holistic, field oriented sensibility, paying careful mind to an object or act's web of relations and context; Westerners are more object oriented, training their eye on that object or act's prominence and often slighting the surrounding field."²⁹ The professor's insights strike at the heart of the divergent intellectual pathways of Shock and Awe and Unrestricted Warfare. Each work acknowledged the operational proficiency and technological supremacy of the U.S. military. However, the Chinese and American authors drew different lessons from their shared observation. From a Western perspective, *shock and awe* provided the operational ways and technological means to completely dominate the enemy. From a Chinese perspective, this overwhelming superiority forced U.S. foes to find new ways to avoid American strengths. As a result of Shock and Awe, America continued to build, train, and equip the best conventional force on the planet, while Unrestricted Warfare advocated the employment of asymmetric methods to offset U.S. supremacy.³⁰

The concept of *unrestricted warfare* enlarged the boundaries of war and built a bigger war instrument toolbox. Technology-fueled globalism increased the interdependency and fragility of world markets, communications networks, and banking systems. The new and improved tools of war made trade embargoes, hostile capitalist takeovers, currency devaluation, and computer hackers an effective, if not lethal, force projection method. Actors in the expanded threat environment knew "the new principles of war are no longer using armed force to compel the enemy to submit to one's will, but rather using all means, including armed force or non-armed force, military and non-military, and lethal means to compel the enemy to accept one's interests."³¹ In terms of non-armed force, the anthrax contamination conducted post 9/11 proved disruptive and

inflicted severe psychological trauma. In terms of destructive potential, the World Trade Center and Pentagon attacks foreshadowed the lethal capabilities of WMD empowered terrorists. All of these foreboding threats blurred the line between combatant and non-combatant and exposed weaknesses in the nation state's shield over its citizenry. At the operational level of war, it presented challenges that transcended the conventional focus of *shock and awe*.

The threats cited in Unrestricted Warfare created unique challenges for the U.S. military. *Shock and awe* proved ill suited for prevention or elimination of the asymmetric threat. In the face of terrorists and troublesome non-state actors, "professional armies are like gigantic dinosaurs which lack strength commensurate to their size."³² The U.S. military dinosaur neglected the asymmetric lessons of the Banana Wars, Central America, Vietnam, and Lebanon. This institutional amnesia was compounded by U.S. military reluctance to engage in consequence management, homeland security, and operations other than war. The specter of *Posse Comitatus* constrained cross-pollination between domestic law enforcement and military organizations. The messy post-conflict stabilization missions in Iraq and Syria created long standing bureaucratic feuds between the State Department, the national intelligence agencies, and the combatant commanders. Those painful and unresolved historical issues cast an ominous shadow over *shock and awe*'s script-writing mindset.

The current situation and recommendations for the future

The Chinese attacks against Taiwan and the U.S. were skillfully orchestrated to provide maximum strategic and operational effect. At the strategic level, man-made viruses, anthrax contaminants, and computer attacks overwhelmed or paralyzed the

Department of Homeland Security and Department of Defense. On the theater level, Chinese sponsored terrorists used non-lethal agents to incapacitate key members of the Pacific combatant command staff and 7th Fleet leadership. At the operational level, the regional carrier battle group was infected with the same SARS virus that struck the west coast of the U.S. Concurrently, the Chinese cut off food supplies to North Korea, instigating a massive sea borne exodus of North Korean civilians to Japan. The resultant human assistance crisis weakened Japanese resolve against China. These measures, weaved into a strategy of *unrestricted warfare*, isolated the theater of operations. The Chinese then applied conventional might to defeat their long time nemesis, Taiwan. The disruptive, but not cataclysmic attacks against the U.S. prevented immediate escalation of the conflict, and gave the Chinese time to petition the United Nations for diplomatic resolution of the crisis. Based on the Chinese performance and the working groups review of *shock and awe*, the following recommendations are submitted:

(1) *Shock and awe needs to cast a wider conceptual net.* *Shock and Awe* espoused “operational brilliance”, but since 2001 the U.S. has focused on conventional brilliance, vice brilliance across the spectrum of war. In high intensity conflict, the specter of a clear and present danger focused planning effort and provided real world impetus for joint and multi-national operations. As the perceived threat decreased (or in reality became less familiar) joint operations and planning effort suffered. It took generations of experience, education, and training to provide high fidelity to conventional joint military operations. The same fidelity, if not more, is required for the new threats of the 21st century. The mirror-imaging lens which previously guided U.S. doctrine, equipment, and training must be reshaped for *unrestricted warfare*.

(2) Expand and refine the U.S. approach to operational art. An unintended consequence of *shock and awe* was the erosion of operational art; the concept imposed a tactical template on the operational level of war by focusing on the informational, targeting, and scientific aspects of conflict. As a result, the fog of *unrestricted warfare* blinds *shock and awe's* techno-centric, tactical vision. Strengthening *shock and awe's* conceptual vision requires expansion and refinement of the U.S. conduct of operational art. Joint Pub 1-02 says "operational art translates the joint force commander's strategy into operational design, and ultimately, tactical action by integrating the key activities at all levels of war."³³ In the past, key activities at all levels of war had a force-on-force, battlefield focus. In the future, these activities will span across all elements of national power. The operational artist will be forced to choreograph military and non-military functions in a more threatening, and less forgiving environment. Fighting on tomorrow's battlefield will require real-time planning skills, organizational flexibility, and a not yet developed appreciation for the threats and benefits of the non-military tools of war.

(3) More integration and jointness between military and non-military centers of power is required. *Unrestricted warfare* exploits the seams between civilian, government, and military centers of power. The Joint Interagency Task Forces (JIATFs) of the late 20th century provide many of the operational lessons and organizational templates for integration of these organizations. Placing talented senior governmental officials in key positions within combatant commands would have been one means to achieve this organizational goal. A future combatant command would benefit from a civilian deputy commander and logical insertion of non-military duty experts in the Intelligence, Operations, and Plans directorates. Senior field grade and enlisted men

should do exchange tours with private enterprise and governmental/non-governmental organizations. This cross-pollination will yield future warfighting dividends.

(4) *Treat war as both an art and a science.* The U.S. must stop viewing war as a Newtonian physics problem. Shedding this scientific predisposition for gadgets, gizmos, and gears has proved most difficult. The American way of war has always mirrored the design of our economy and society. The invention of the railroad [1830], telegraph [1844], telephone [1876], automobiles [mid-1890's], and airplane [1903] provided the movement, mobility, and connectivity for 19th and 20th century warfare.³⁴ As America shifted from an industrial to a high tech economy, so has its way of war. *Unrestricted warfare* has exposed the asymmetric vulnerabilities of this style of warfare. To make matters even more difficult, *unrestricted war* will have criminal, cultural, economic, and military dimensions. To quote Unrestricted Warfare, when the planner of tomorrow asks for the location of the battlefield, the answer will be "everywhere."³⁵ Developing a coherent strategy and effective operational plan for beating unrestricted warfare requires a balanced and comprehensive approach. The art and science of war requires equal billing in the operational arena.

(5) *Ends, ways, and means need to be mutually supporting; men fight wars, not machines.* Despite technological advancements in artificial intelligence, robotics, and precision weapons systems, man remains at the warfighting center stage. *Unrestricted warfare* has exposed the seams and weaknesses of machine dependent war. Worse yet, it has used the biological and cyber-space advancements of the 21st century to turn technology on itself, and in so doing has turned *shock and awe* on its conceptual head. The thinking, unpredictable, and ingenious enemy of *unrestricted warfare* has slipped the

technological shackles of *shock and awe*. America must coordinate, deconflict, and integrate all elements of national power under the auspices of human-centric warfare in order to defeat the Chinese threat.

Conclusion: After the defeat of France in World War II, a French officer said his nation was defeated because, “Our leaders, or those who acted for them, were incapable of thinking in terms of a new war. In other words, the German triumph was, essentially, a triumph of intellect-and it is that which makes it so peculiarly serious.”³⁶ Shock and Awe reflected great intellectual energy, but like the French Maginot Line it created the perfect response for the threats of the last war. Though *shock and awe* proved to be America’s Maginot Line, Paris has not been lost. Accepting *unrestricted warfare* for what it is, instead of what we want it to be, will be the first step towards reversing Chinese gains. Further integration of civilian, government, and military centers of power will provide the operational wherewithal to combat *unrestricted warfare*. Human-centric vice techno-centric warfare provides the required focus for meeting and defeating the asymmetric enemy of today and tomorrow.

ENDNOTES

- ¹ For the purpose of this paper, the book Shock and Awe will be depicted as Shock and Awe, while the concept will be depicted as *shock and awe*.
- ² Biographical information regarding Harlan L. Ullman drawn from www.csis.org/html/4ullman.htm
- ³ Biographical information regarding James P. Wade drawn from www.acq.osd.mil/dsb/wade.doc
- ⁴ Jonathan Stevenson, Losing Mogadishu: Testing U.S. Policy in Somalia, (Annapolis, MD: Naval Institute Press 1995), 95.
- ⁵ Harlan K. Ullman and James P. Wade, Shock and Awe: Achieving Rapid Dominance, (Washington, D.C: National Defense University, Institute of National Security Studies 1996), 4.
- ⁶ Ibid, 1.
- ⁷ Ibid, 1.
- ⁸ Ibid, 5.
- ⁹ Ibid, 6.
- ¹⁰ Carl Von Clausewitz, On War, (Middlesex, England: Penguin Books 1968), 198.
- ¹¹ Marine Corps Doctrinal Publication 1, Warfighting, (Washington, D.C.: Department of the Navy 1997), 7.
- ¹² Thomas K. Adams, "Future Warfare and the Decline of Human Decisionmaking", Parameters, (Winter 2001-2002): 58.
- ¹³ Douglas Porch, "The Other Gulf War-The British Invasion of Iraq in 1941", Strategic Insight, (December 2, 2002): 4-6.
- ¹⁴ Comments by senior flag officer from Washington, D.C. Name, date, and time of speaking engagement withheld in accordance with non-attribution policy.
- ¹⁵ George Feifer, TENOZAN, The Battle of Okinawa and the Atomic Bomb, (New York: Ticknor & Fields 1992), 533.
- ¹⁶ Robert J. Moskin, The Story of the U.S. Marine Corps, (Boston: Little, Brown, and Co. 1992), 397.

- 17 Quote accessed from http://www.napoleonguide.com/maxim_war.htm
- 18 Ulmann & Wade, 9.
- 19 Ibid, 4.
- 20 LtCol James A. Bassett, "The Invasion of Norway: An Example of Extended Strategy", Military Review, (October, 1949): 3-16.
- 21 Major Blair A. Ross, "The Battle of Crete and Its Implications for Modern Contingency Operations", Monograph, (Ft. Leavenworth, Kansas: School of Advanced Military Studies First Term Academic Year 92-93), 7.
- 22 McD G. Stewart, The Struggle for Crete: A Lost Opportunity, (New York & Toronto: Oxford University Press 1966), 476.
- 23 Masataka Chihaya, "Mysterious Withdrawal from Kiska", U.S. Naval Institute Proceedings, (February 1958), 44.
- 24 Ibid, 31.
- 25 Richard A Gabriel and Paul L Savage, Crisis in Command: Mismanagement in the Army, (New York: Hill and Wang 1978), 52.
- 26 Casualty figures drawn from www.perso.wando.fr/usmc
- 27 Qiao Liang and Wang Xiangsui, Unrestricted Warfare, (Beijing: PLA Literature and Arts Publishing House 1999), 2.
- 28 Ibid, 66.
- 29 Hua Hsu, "Orienting the East", Village Voice, (April 16-22, 2003), 66.
- 30 For the purpose of this paper, the book Unrestricted Warfare will be depicted as Unrestricted Warfare and the concept of unrestricted warfare will be depicted as *unrestricted warfare*.
- 31 Qiao Liang and Wang Xiangsui, 6.
- 32 Ibid, 41.
- 33 Joint Publication 1-02 quote drawn from power point presentation of Dr. John Ballard at Naval War College, spring semester 2003.

³⁴ Merritt Ierley, Wondrous Contrivances: Technology at the Threshold, (New York: Clarkson Potter Publishers 2002), 18,1,45, & 81

³⁵ Qiao Liang and Wang Xiangsui, 37.

³⁶ March Bloch, Strange Defeat: A Statement of Evidence Written in 1940, (New York: W.W. Norton & Company 1999), 36.

BIBLIOGRAPHY

March Bloch, Strange Defeat: A Statement of Evidence Written in 1940, New York: W.W. Norton & Company, 1999

Carl Von Clausewitz, On War, Middlesex, England: Penguin Books, 1968

L.A.Edney, L.A., F.M. Franks, C.A. Horner, J.T. Howe, H.K. Ullman & J.P. Wade, Shock and Awe: Achieving Rapid Dominance, Washington, D.C.: National Defense University, 1996

Richard A.Gabriel and Paul L. Savage, Crisis in Command: Mismanagement in the Army. New York: Hill and Wang, 1978

Qiao Liang and Wang Xiangsui, Unrestricted Warfare, Beijing: PLA Literature and Arts Publishing House, 1999

Richard D. Hooker, Maneuver Warfare: An Anthology, Novato, CA: Presidio Press, 1993

Merritt Ierley, Wondrous Contrivances: Technology at the Threshold, New York: Clarkson Potter Publishers, 2002

Jonathan Stevenson, Losing Mogadishu: Testing U.S. Policy in Somalia, Annapolis, Maryland: Naval Institute Press, 1995

Sun Tzu, The Art of War, London: Oxford University Press, 1971

Harlan K. Ullman and James P. Wade, Shock and Awe: Achieving Rapid Dominance, Washington, D.C: National Defense University, Institute of National Security Studies, 1996

James Q. Wilson, Bureaucracy: What Government Agencies Do and Why They Do It, United States: Perseus Books Group, 1989