



**The Changing
Nature of Warfare,
the Factors Mediating
Future Conflict,
and Implications
for SOF**

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Foreword

USSOCOM is synchronizing the Global War on Terrorism for the Department of Defense. This global initiative expands the boundaries of traditional war fighting in order to coordinate an attack against dispersed, flexible, and innovative enemies. Incapable of confronting US military power on the battlefield, today's enemies use asymmetrical techniques to strike our homeland as well as our troops in the field. In turn, we strike back using innovative approaches to combat them, such as countering extremist ideologies with strategic communications initiatives, dismantling terrorist networks, and isolating terrorist organizations from sources of support. But these kinds of activities are artful variations on traditional combat and give little insight into the "Changing Nature of Warfare" as suggested by Dr. John Alexander in his visionary paper.

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Dr. Alexander suggests that the nature of war has changed—profoundly. It is now possible to achieve war time policy objectives without resorting to physical violence. While we will need to maintain capable combat units well into the future, he suggests that major conflicts in the future are not going to be resolved mainly by use of arms.

The coming changes in the nature of warfare are already apparent. The use of information operations to influence the military and the polity of one's enemies come to mind. Economic warfare can lead to the ascendant position of one nation over another, and Dr. Alexander identifies China as a future problem for the US in this regard. The demise of the Soviet Union reminds us of the impact of economics upon the national security of a country. Currently, China is facilitating an economic environment whereby Americans are cheerfully spending their way into submission to a Chinese future of global hegemony. And all this can be achieved without firing a canon, Dr. Alexander's paper suggests.

If Dr. Alexander is right, Special Operations Forces will need to expand SOF capabilities in addition to the current capacities for sur-

gical strike missions, strategic reconnaissance and civil military operations. The use of non-lethal weapons will likely become increasingly important. Dr. Alexander suggests that future wars can be at once “decisive but nonviolent,” and that SOF will need to hone its capabilities for conducting information warfare and influencing people in countries around the world. In the Alexander vision of future conflict there will be a central role for SOF.

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The Changing Nature of Warfare, the Factors Mediating Future Conflict, and Implications for SOF

John B. Alexander, Ph.D.

Introduction

This paper challenges the prevailing sentiment regarding the nature of war. Designed to generate discussion on topics where little or none has been acceptable, it pushes the envelope of traditional political and military science thinking. It argues that the nature of war has changed at a fundamental level—that of definition. Further, information technology is so pervasive and interpenetrating that its impact cannot be relegated to mere alteration in the techniques by which war is prosecuted. Rather, information technology facilitates new social structures, exacerbates competing hierarchical beliefs, and, combined with other factors, enhances the ability of powerful nations, or other philosophical organizations, to impose their will on adversaries. It is this ability for imposition of will, not the level of violence inflicted, that will determine whether or not a conflict has been won or lost.

Other sacred cows are gored in this monograph by stating:

- The nation-state is a failing concept with limited utility and great liability
- Boundaries, once thought to be absolute, are in reality arbitrary
- Ideology, not materialism, motivates many people and therefore sources of conflict and terrorism cannot be eliminated solely by reducing poverty
- Personal allegiance(s) will no longer be assured
- Violence, while it will remain prominent, will be optional in future conflicts

Issues of Definition

Much debate has gone into the question of whether or not the nature of war has changed. Traditionalists cling tenaciously to the Clausewitzian view that the nature of war remains constant, but how it is

prosecuted does vary over time. This conclusion flies in the face of common sense, the basis of the debate, and reality.

This classic view, espoused by Gray, Peters, Echevarria, and others, accepts that war has a binary nature; one objective, the other subjective—but the nature of war does not change.^{1,2,3} Discussing Clausewitz, Echevarria addresses the objective nature as including elements “such as violence, friction, chance, and uncertainty—that all wars have in common.” He further notes that the “subjective nature of war encompasses those elements such as military forces, their doctrines, weapons, as well as environments (land, sea, air, and danger) in which they fight—that makes each war unique.”⁴ Gray argues, with circularity, “If war’s nature were to alter, it would become something else.” He denotes the four elements of the climate of war that are permanent are “danger, exertion, uncertainty, and chance.” Further, he states that, “Above all else, Clausewitz insists that war is an instrument of policy.” If so, how does he define policy, and what attributes are necessary to make policy?⁵

Army Chief of Staff, General Peter J. Schoomaker, when addressing the US Congress, has also stated that the “fundamental nature of war is constant,” while methods and techniques frequently change. He further notes that we are currently engaged in a “war of ideas,” which at face value seems to be in conflict with the notion that violence is an element of war.⁶ As a result of such high level pronouncements, the constant nature of war phrase is now found embedded in many briefings. While the nature of war may appear to be constant for some military officials, that sentiment does not carry over into the general public domain.

As stated, I argue that the nature of war has changed at the most fundamental level, that of definition. Definition of war has been attempted many times. At best the task is abstruse, and at worst, unachievable. There is no binding definition of war.⁷ Most definitions address conflict between opposing states or groups with violence prosecuted by military organizations. The question that now arises is whether or not those tenets remain necessary to engage in war.

In addition to military interest in defining war, there are economic incentives as well. For instance, insurance companies normally have disclaimer clauses that exclude payment of benefits if losses are caused by acts of God or war. Therefore, they have a vested interest in holding that the incident occurred during a war, thus releasing them of a financial obligation.

In reality, most members of Western society no longer understand the premise of war as it once stood. Wars were often all-out conflict engaged in for subjugation by a dominant society over one or more other groups. For many people willingly, or unwillingly, brought into these conflicts, it was a fight for physical survival. The outcome determined their destiny as individuals and as a society. While limited wars were acknowledged, it is the great battles that are remembered as they altered the course of history. Of course other events also have changed social evolution. Some of those, including geophysical events, have been violent, yet not war related. Other nonviolent factors have involved technological advances such as information, transportation, energy, and health. Complex juxtaposition of large-scale societal interactions and restructuring, infused with technological advancement, have permutated the basic constructs of war.

Through gross overuse and misapplication of the word, the concept of war, for most people in the technically developed world, has been relegated to something more akin to a concerted effort in a specific field of endeavor. As examples, in the United States we formally have pronounced war on drugs, war on cancer, war on terror, and even war on poverty. Less formally there are references to war on fat, war on journalism, war on spam, war on academic freedom, and even war on rational discourse.⁸ There are articles that attempt to dismiss these examples as figures of speech.⁹ That explanation is too simple, and the application too pervasive, to be acceptable except to a small cadre of academics and military purists.

None of these so-called wars concern a struggle for institutional survival. Even now the chronically proclaimed war on terror, at best, has marginal repercussion on the lives of most Americans. At that, the impact is generally a matter of inconvenience. Some examples include, higher gas prices, airport security takes longer, and we have had to expand our knowledge of geography in order to follow the news. Unfortunately, for a select few, personal survival is at stake, but the outcome of their fate rarely radiates beyond family and friends.

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Even our dictionaries have ameliorated the concept of war. Take, for example, the definition found in the American Heritage Dictionary. "War: 1 A state of open, armed, often prolonged conflict carried on between nations, states, or parties. 2. Any condition of ac-

tive antagonism or contention.”¹⁰ It is the second definition that has become widely accepted by people in modern societies with “active antagonism or contention” being defined most broadly. In addition, even the notion that conflict between nations would be prolonged has changed. Examples include the Six Day War, between Israel and Egypt, and Desert Storm during which ground combat last less than four days. This differs from the tensions in the aftermath that have lasted for decades.

Of great importance is that the perceptions of individual citizens pertaining to war are radically different from the past. This change has happened relatively rapidly over the last fifty years. As a personal example I refer to my experience as a young boy growing up in a small Midwestern town, La Crosse, Wisconsin. During World War II everyone was actively engaged in the war effort. Meat and gasoline were rationed. We engaged in blackout drills, even though no air threat could possibly reach our location. Metal was collected from the public to be melted down for war materiel. Husbands and brothers went off to the military, and many did not return. War was something tangible, visceral, and well understood. Everyone contributed to the effort and it dominated our lives.

The conflicts with US involvement since then have been very different. For legal reasons the fighting in Korea was called a conflict, not a war. While fighting in Vietnam was widely known through television, it had little impact on the daily lives of families who did not have members directly involved. Politically sensitive, great care was taken to avoid calling reserve forces to active duty. In fact, it was that avoidance of engagement by the Reserve Components that signaled our national lack of resolve to the North Vietnamese. In a telling interview for the Wall Street Journal, General Bui Tin stated that when the US did not activate reserve forces in response to General Westmoreland’s call for more troops, they knew they could win the war.¹¹

With the possible exception of periodic spikes in oil prices, our recent conflicts have rarely registered more than a minor inconvenience on the American public. Military forays into Panama, Grenada, Haiti, and Bosnia were barely blips on the screen of US history. Desert Storm brought more attention due to the number of troops involved and the dramatic demonstration of technological superiority that had been acquired by our military.

Operation Enduring Freedom in Afghanistan dropped quickly from public attention, even though casualties continue to climb three years after the invasion. In an attempt to assuage the mounting negative public perception of the situation in Iraq, on 1 May 2003, just 44 days after launching Operation Iraqi Freedom, President Bush announced an end to major conflict. He had just landed on the deck of the USS Lincoln, and displayed behind him was a huge sign stating, "Mission Accomplished."¹² Despite his very premature pronouncement, casualties have soared and senior leaders finally, albeit reluctantly, later acknowledged that a full-blown insurgency was underway.

Of course, one of the factors influencing public opinion was the post hoc change in the justification of the invasion. The preemptive strike against Iraq initially was authorized to remove the imminent threat of weapons of mass destruction. When none were found, other issues were raised supporting regime change including threats to regional stability, Saddam's support for terrorists, and the need to establish a democracy in the Middle East.

Based on personal experiences accrued during these various armed interventions, the public has come to draw their own conclusions about the meaning or significance of the conflicts. For most civilians, these relatively remote, impersonal encounters have congealed their concepts of war into something dramatically less than it was during World War II and earlier.

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Definition of war is not just an academic debate, although it is often treated as such in military research papers. Rather, having a commonly accepted definition is critical in gaining and main-

taining public support. It should be remembered that it was a widespread lack of public support that led to Congress cutting the funding that stopped American participation in Vietnam.

Definition and concepts of the meaning of words change over time based on common usage. That is unequivocally demonstrated by the dramatic change in the meaning of gay. A century ago, describing a man as gay addressed his general attitude toward life or his demeanor at a specific moment. Calling a man gay today, especially in the military, has an entirely different meaning. The word

straight has undergone similar perturbation. While it may be grammatically correct to describe an individual as gay or straight based on the dictionary's first definition (gay = merry, straight = free from curves or direct) in the most commonly used vernacular today, one is describing the person's sexual orientation.¹³ The English language is replete with other words that have undergone major colloquial redefinition. The common understanding about war is one of those concepts.

Many of the definitions of war address violence as a necessary component. A United Kingdom MOD document states that, "War and armed conflict are often treated as synonymous." They go on to note that, "War can be defined as an extreme form of armed conflict and usually takes place between states."¹⁴ The US Marine Doctrine states, "War is a violent clash of interests between or among organized groups characterized by use of military force." While usually these involve nation-states, this doctrine acknowledges other non-state groups may engage in the conflict.¹⁵

A fundamental question that arises is whether or not physical violence remains as a necessary component of war. In recent years Information Warfare has gained momentum both within our military and throughout the rest of the world. Attacks against the US information infrastructure have occurred with alarming frequency. The insidious nature of these attacks makes it extremely difficult to discriminate between an independent hacker and an organized effort directed against American interests.

A fundamental question that arises is whether or not physical violence remains as a necessary component of war.

In traditional conflict, information warfare is a critical component to both the offensive and defensive military operations. Thus IW can be said to support a violent effort against an adversary. However, the intrusions and degradations of our government, business, industrial, and communications information systems, that occur very frequently, rarely have a direct relationship to physical violence. Still they can be extremely damaging to the computer systems attacked, many of which are not associated with the Department of Defense.

Proponents of information warfare tend to cast a broad net when defining their realm of responsibilities and capabilities. Protecting the country's critical infrastructure is high on the list of requirements. It might be possible theoretically for an adversary to make such a

devastating IW attack as to precipitate an armed counterstrike, but that seems unlikely. In general, these battles are conducted in cyberspace with few, if any direct physical casualties.

Given current realities, it might be better to develop a definition of war based on outcomes. Such outcomes might include physical destruction of an enemy, but it is more likely to describe an end-state favorable to the victor. To this point Gray addresses Clausewitz' notion of war being an instrument of policy. Gray states, "What that means is that war should not be waged for the goal of victory, necessary as it usually is, but rather for the securing of an advantageous peace."¹⁶

In writing about non-lethal weapons I have noted that, "war is not about killing, rather about imposition of will."¹⁷ Imposition of will means that the terms of the outcome are compulsory, obtrusive, or forced upon others. It infers that the vanquished does not have a choice in accepting these terms of settlement. Armed conflict is but one option in imposing will, and we have traditionally called this war. Only recently has technology created the ability to achieve the same results by alternative means.

Economics and Philosophy

Two emerging concerns eclipse all others as either demonstrated or potential threats to US national interests. One is philosophical—fundamentalist Islamic application of terror characterizes it, though the problem is far broader than acknowledged. The other is economic—an inchoate struggle for world economic preeminence.

The most important factor in competitive situations is the ability to determine the outcome of interactions with other parties. Normally such transactions are accomplished through mutual understanding and negotiations. However, as globalization of economic interests has increased, the need to maintain freedom of movement in monetary markets has assumed greater importance. Economic power has long been accepted as a pillar of national strength and security. Therefore it is of paramount importance that American businesses remain engaged and competitive in world market. Failure to do so will endanger our national security, just as surely as would armed conflict.

It is in the economic arena that our national interests are more likely to be challenged seriously than on the battlefield. The US has demonstrated the ability to defeat any conventional adversary in direct armed conflict. Therefore asymmetric means, including terror-

ism, have dominated our potential adversaries' attention. Strategically, the biggest threat to the US influence over global finance is the rapid emergence of China's economy and the outrageous balance of trade deficit that we have established. While this growth limits the likelihood of armed conflict between giants, there should be reason for concern that dominance by China might be an undesirable outcome for US interests. This will be addressed in more detail later.

Tom Barnett, in *The Pentagon's New Map*, argues that the primary cleavage in the world today is between those countries and peoples who have been integrated into the developed world, and those who have been left out.¹⁸ He calls this schism "the gap," and urges that we take the steps necessary to reduce this gap thus decreasing the probability of the need for armed intervention by US forces. Barnett's economic-based model of the world fails the test of reality, as it does not adequately account for people, and social organizations, not motivated by acquisition of material wealth. Still, this thesis is willingly accepted by those who are driven by these Western-oriented values and epitomize the slogan, "Who dies with the most toys wins." They simply do not understand the new social structures that are emerging or their underlying beliefs and values. Reducing the enormous economic disparity that exists between the haves and have-nots may assuage some level of civil discontent and even diminish the probability of US armed interventions to some degree.

Barnett's economic-based model of the world fails the test of reality ...

However, this approach fails to account for ideologically motivated individuals and groups who actively reject our commonly held Western value system. Attempting to promote economic homeostasis may lessen, but will not eliminate, the probability of future conflict. The nascent macro-economic struggle to which I referred, while elevating the titans, will do little to ameliorate the lives the massive number of people living in poverty.

In proffering the view of economic domination of conflict it must be noted that I am not suggesting violence will be totally excluded. Quite the opposite, there will be many armed clashes, mostly in response to asymmetric attacks. However, the strategic issues will be resolved by means other than violence. Therefore, the nature of war has changed and we should redefine the context accordingly.

The Problem of Defining the Adversary

Who are THEY? To successfully engage the general public in the concept of an ongoing war, there is a need to firmly identify the adversary. In several recent conflicts this has been difficult. Those military analysts grappling with the concept of low intensity conflict long have debated this problem. A fundamental question is what level of criminal activity crosses the threshold to constitute insurgency or low intensity conflict. In the incipient stages of an insurgency, the guerilla forces often engage in limited murders/assassinations to remove key opposition members and robberies to finance their objectives. However, common street crime occurs, to one degree or another, in all societies. Recognizing the transition from random crime to an organized effort with a political objective can be quite difficult.

The events following our intervention in Iraq offer an example of the difficulty in identifying these transitions. For months after the officially declared end to major combat US military commanders refused to describe the armed interactions in which our forces routinely engaged as an insurgency. Finally, General Sanchez used that word in a formal briefing.

There are political and legal consequences attendant to vocabulary. Despite three decades separation, the specter of Vietnam still haunts America. To accept the term insurgency drew parallels that many military leaders did not want. The press was describing the actions as insurgency long before the official recognition that we were fighting an organized resistance force. Contemporaneously the word quagmire was being used to infer that US forces would become engaged in an endless conflict with little chance of a clear outcome. Like insurgency, quagmire too has its philosophical roots in our experience in Vietnam and is associated with negative consequences of that endeavor.

The military always wants a clearly defined objective. To that end, the adversary needs to be identified or identifiable. Insurgencies and terrorism blur these lines as combatants fluidly transition between roles and their support mechanisms are often nearly invisible. Worse, the constituencies they represent are usually in a constant state of attitudinal flux and can concurrently embrace competing ideological positions.

Similar issues exist in order to gain and maintain public support for the conflict. These are of enormous concern as ultimately it is our citizens, through their elected representatives, who will appropriate

the resources to sustain the conflict. On a macro-psychological basis it is necessary that the public be able to identify the adversary and firmly understand the threat they impose.

War on Things and Behaviors

Obviously there is great difficulty in conducting war when the enemy cannot be clearly articulated. War on inanimate nouns, such as drugs, poverty, or terror, flies against all accepted definitions, as there are not two parties or groups engaged in mutual conflict. Rather, these endeavors are organized efforts to alter behavior that is being conducted by disparate groups of people who may, or may not, be engaged in a common goal. Worse, those administering the conflict tend to do so quite selectively. As an example, terrorism has been commonly practiced by the Maoist guerillas in Nepal, yet very little attention has been paid to that area of the world.

Although President Bush announced the war on terror following the attacks of 11 September 2001, it quickly became apparent that defining the enemy was problematic. The Al Qaeda bases in Afghanistan were obvious targets and easily identifiable. Carefully selected individuals were named as targets, but establishing the parameters of the conflict remains elusive.

Terrorism is a tactic that has been employed for as long as conflict has existed. To be successful, suppression of terror sometimes becomes exceedingly brutal. In recent years, addressing terrorism frequently has come into opposition with human rights issues. Because of the emotionally laden atmosphere following major terrorist incidents the public will tolerate, and frequently demand, tighter restrictions on individual freedoms. In reality, this is a sliding scale mediated by the severity of the attack plus geographic and temporal proximity. That is, at the time of the incident there are few objections to greater restrictions. As the memories of the effects of the incident fade, the same restrictions become less tolerable. Similarly, those located closest to the site of the incident are usually most tolerant of continuation of those restrictions.¹⁹

Not all terrorist acts need be violent. Once a capability to strike has been demonstrated effectively, mere threats may be sufficient cause disproportionate reactions in target audiences. In recent years our communications and economic infrastructures have become increasingly vulnerable. This fact is generally well known. Therefore, threats against these systems can affect large scale responses.

Therefore, small, nonviolent actions can translate into imposition of the enemy's will. These nonviolent threats are another indication of change in nature of war.

Anachronistic Delineations

Boundaries are a key issue. It is notable that many definitions of war include the caveat that it takes place between states. Take for example, the verbose definition from the British Defense Doctrine that defines war as, "When differences between states reach a point at which both parties resort to force, or one of them does acts of violence, which the other chooses to look on as a breach of the peace, the relation of war is set up in which the combatants may use regulated violence against each other until one of the two has been brought to such terms as the enemy is willing to grant."²⁰

The status of the nation-state as primary building block of geopolitical relations is questionable and will be discussed in more detail later. While it has been a useful construct for the past two centuries or more, new relationships have arisen that suggest that the concept of primacy of nation-state is failing. Advances in information and communications technology are accelerating this process.

The differentiation between categories of adversaries has been a difficult issue. Exactly when war begins is equally problematic, and quite important. Competition between persons, groups, and even nations is a natural condition of existence. However, there are tipping points at which acceptable competition transitions and becomes unacceptable behavior. Unfortunately, exactly when that transition occurs is often recognized only in retrospect. Precipitating events, such as the attack on Pearl Harbor, are frequently regarded as the defining moments in history. Contrary to the recollection of most Americans, World War II began long before 7 December 1941. In fact, America was both making preparations to enter the conflict by developing the industrial base necessary and contributing volunteers to European nations for several years prior.

Similarly, the attacks of 11 September 2001 constituted defining moments for the American people in the war on terror. However, there had been a series of terrorist incidents against US interests preceding that date. While of concern to some Americans, they had failed to galvanize the public support necessary to initiate a concerted effort against the adversaries. Conversely, Osama bin Laden

was formally at war with us since 1998, but we did not take his fatwa seriously enough to reciprocate.²¹

New Building Blocks: Demise of the Nation-State

The assumption of the continued supremacy of the nation-state as the primary building block of macro-societal groupings is flawed. While nations will remain the macro-organization of choice in the near future, social restructuring based on beliefs, ethnicity, and other interpersonal relationships will increase. Concomitantly, geographic boundaries will decline in significance as the primary contextual factor for social and business interactions.²² This notion will not be popular with politicians or academicians as several centuries of history supports and has solidified the nation-state model. Even considering new large-scale social orders will seem illogical and frightening to conventional thinkers. They have little experience outside the nation-state construct and see no viable alternative model under which to operate. Several factors will dramatically alter the global social structure tapestry. These include continued devolution of old states, globalization of economic interests, continued widespread immigration, and formation of social groups based on common ideology that is ubiquitously communicated around the world. Ascendances of powerful groups that are not geographically defined have already begun to alter large-scale social interactions. They also will impact contests of will between such groups thus leading to a change the nature of warfare. Specifically, these conflicts may be dominated by non-violent, but imposing means, such as information or economic intimidation.

The past few decades have seen considerable social reorganization throughout the world. New countries have emerged as larger agglomerations disintegrated. With the independence of India from Great Britain emerged Pakistan, which then split off Bangladesh. Southern Africa has many countries not located on maps fifty years ago. The fall of the former Soviet Union brought independence to many areas previously dominated by the USSR and the Balkan states devolved along nearly forgotten ethnic boundaries. While some of the delineations made sense under historic precedence, others did not. Geographic borders imposed on Africa a century or more ago by Europeans have contributed to brutal conflicts that still continue.

Concurrent with devolution of former geographic entities has been significant migration, usually from poorer areas to richer ones.

Initially these appeared to be symbiotic relationships as lower-paid laborers move into Europe and the United States. This provided cheaper labor for the industries in Western countries, and money sent back to poorer ones. However, as the immigration increased, it stressed the resources of the host nations and began to create or exacerbate internal tensions. Over a few decades, many of the immigrants became citizens of the host countries leading to dramatic shifts in demographics. In some regions new immigrants assimilated into the local societies. In a many areas immigrants tended to remain relatively isolated. In their homes they spoke their original languages, retained former customs and beliefs, while specialized shopping areas provided goods to which they were accustomed. In democratic countries the new residents acquired voting rights and soon were able to elect representatives from their own minority ethnic groups.

In the US, due to explosive and disproportionate population growth, political parties on a national level actively seek Hispanic and Latino voters. In some areas of the country Oriental voting blocks have become important to winning elections. Several states no longer have a defined ethnic majority population. European countries also have experienced changing demographics and now have members of the legislative bodies with ethnic ties that differ from the traditional historic roots of the area.

Realignment of large-scale social grouping will have profound impact on our concepts of war. If national interests are no longer preminent, then the need and means to defend them will change. Physical violence will never disappear entirely as it seems to be part of the human condition. While competition will remain omnipresent, the manner in which groups impose their will on other individuals or groups will change.

Philosophical war

While American leadership clings tenaciously to an anachronistic geographically based concept of war, our adversaries have adopted a philosophically based construct. In Iraq and Afghanistan, American leaders and the press continuously stress the presence of foreign fighters, and blame them for interfering with the internal situation within those countries.²³

... our adversaries have adopted a philosophically based construct.

Traditionally, Americans think as absolutists. For the majority of our citizens most issues, no matter how complex, can be clearly differentiated into black or white categories. Things are viewed as right or wrong, good or evil, and favorable or unfavorable. As an example, President Bush pronounced that, “either you are for us or you are with the terrorists,” in the war on terror.²⁴ We look upon boundaries as if they are sacrosanct edicts mandated by God when, in fact, they are often quite arbitrary. For example, laws have been enacted that mandate distinct differences between things foreign and domestic. While this may sound like a logical demarcation, one that can easily be determined, it is in reality extremely complex.

President Bush pronounced that, “either you are for us or you are with the terrorists,” in the war on terror.²⁴

Examples of boundary issues include where a country’s borders begin. Control of areas claimed at sea varies based on the limits established by each country. There is, of course, overlap where countries have common ground boundaries and extend them into the ocean. River boundaries are more evasive as the flowing water often changes the bank configuration. Immigrants reaching US shores have different status than those attempting to arrive by boat but who are interdicted at sea. Thus there are people jumping over the sides of boats when close to shore so that they can each American soil. But where that soil begins is questionable when waves are moving in and out, sometimes exposing the sand, sometimes covering it.

More problematic conceptually is what constitutes American products, including weapons systems. It is common for industrial conglomerates to have subsidiaries in several countries. To reduce costs, many components of end items are manufactured and/or assembled in countries that have lower operating expenses, especially pay of employees. Through administrative manipulation, these same end items that are created abroad may become officially designated as American products.

Use of computer microchips has proliferated into thousands of commercial products and they are broadly integrated in weapons systems. Of concern to many military analysts is the reliability all of those chips since they were often designed, and programmed abroad. Vulnerability of these subsystems to viruses, worms, and Trojan horses is worrisome despite established reliability checks.

Even the identity of our people is becoming more difficult. As Samuel Huntington notes in his book *Who Are We*, there has been dramatic shifts in demographics and self-identification in the past few decades. He claims that for many years some people identified themselves as hyphens, but that is changing to ampersands.²⁵ As examples, it was popular, and politically acceptable, to call people African-American, Irish-American, Italian-American, etc. The connotation was that they were Americans first and foremost, while the preceding descriptor identified their ancestry. Huntington suggests that this has changed. The ampersand means that the person is a member of both groups simultaneously. Many people hold dual citizenship. Some people legally hold more than two passports. This, of course, invites visceral conflict that may be difficult to rectify when faced with completing complex international issues. There is a trend, he notes, toward more people formally having divided loyalties. This situation also applies to the US military, which invites selected foreigners to join the ranks as a means achieving citizenship.

The ampersand situation naturally leads to competing hierarchical belief systems. Each individual decides which of his personal values is more important than the others. These people, consciously or unconsciously, then rank orders all of their beliefs. For those considered ampersands espousing different nationalities, they must determine which one they will act upon and support the political decisions of that nation.

It cannot be assumed that they will always choose to support the American position. Several factors, including personal and family loyalty, economic advantage, moral agreement with the cause, and convenience may enter the decision process.

Geography of Convenience

The political geography of the world, as we know it today, was largely determined over a century ago near the end of colonial exploitation of large geographic areas. Countries on several continents owe their demarcation to European cartographers who created them to support the best interests of the colonial powers. European interests in control and access to natural resources superceded questions of sociology and ethnography. Though the colonial powers eventually withdrew from direct control of these areas, the artificially imposed countries continued to exist with varying degrees of stability. Much of Africa, Asia, and the Middle East were consigned to conditions of

near perpetual turmoil because of the lack of consideration given to the importance of the ethnicity, beliefs, and values of the people who lived in the area.

As a result of these imprudent and shortsighted decisions, hostilities emerged that transcend established borders. These are too complex to be simply relegated to transnational conflicts and we have been very hypocritical in our condemnation of philosophical wars. When it was to the US advantage to foster these conflicts, we have done so.

The most notable of these might be our support of the mujahideen when they were fighting the former Soviet Union forces in Afghanistan. The mujahideen waged a jihad, or holy war, against the foreign Soviet invaders and the Afghan government that they had installed.

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Being anti-Soviet anywhere in the world was believed to be in America's interest. In the Afghanistan jihad, many fighters were trained and supplied from US-funded bases in Pakistan. The jihadists came from many countries including Saudi Arabia, Pakistan, Yemen, Sudan, and other Muslim countries of the world. Their willingness to fight the Soviets under extremely

harsh conditions was remarkable and symbolic of their dedication to the cause. Little if any thought was given to notion that the jihadists were foreign fighters who were deploying to a philosophical cause. Rather, being anti-Soviet was sufficient to garner US support.

American support for the foreign jihadists fighting in Afghanistan was substantial. The single most important technical intervention was supplying Stinger anti-aircraft missiles, which many military analysts believed turned the tide of the war. The Stingers allowed the mujahideen to hold at bay Soviet air power and allowed them to concentrate on ground battles that they could win.²⁶ This support allowed a thirty mile-long ambush along the Silk Road between Kabul and Jalalabad. Organized and led by General Rahim Wardak, that ambush inflicted such heavy casualties that it was instrumental in the Soviet decision to withdraw from the country.²⁷ In short, throughout the campaign against the Soviets, employing and supporting the mujahideen as foreign fighters was highly desirable.

It is most ironic that it is the US leadership, and members of the Afghan government, who are complaining about foreign fighters crossing the border from Pakistan. In the case of the Afghan lead-

ership, those making these complaints, including President Karzai, and Minister of Defense Wardak, themselves were operating from Pakistan for many years. Some of the older jihadists who are now conducting cross-border operations are the same people who fought against the Soviets. For them, everything is the same except for some changes in the adversary.

The border between Pakistan and Afghanistan has little reason to exist and offers a classic example of the problems in the region. Ethnically, the people in Eastern Afghanistan and Northwestern Pakistan are dominantly Pashtuns. They have more in common than do the Pashtuns in Afghanistan with the Tajiks and Uzbeks that make up the other large ethnic groups of that country. For at least three millennia this region has been an interciviliation buffer area. Yet today Western powers insist that these countries establish independent governments based on externally imposed border concepts.

Iraq was created similarly. Europeans drew the boundaries at the end of the Ottoman Empire, albeit to meet their own needs. The borders are long and open. There are ethnic and religious ties between groups that supercede these artificial delineations. Still, the US insists on identifying as foreigners, people whose happenstance of birth occurred in another contrived country. The intent is to brand them as external agitators who do not have a rightful place in the conflict. Conversely, these insurgents view themselves as mujahideen. Therefore, based on their philosophy (religious conviction) they are simply moving to the battle wherever it may manifest.

The philosophically based war concept is spreading and has extremely significant implications. As has been demonstrated in the war on terror, attacks are not constrained to any given geographical area. Few areas of the world have not been touched in some manner either directly or indirectly. Being tested are the legal parameters of the antiquated constructs differentiating foreign and domestic.

Conflicted Loyalty

The arrests following the bombings in London illustrate this issue. The people involved in the bombings had several common characteristics. Young Muslim males carried out all the bombings. The attacks were related to British involvement in Iraq. But the bombers were British citizens.²⁸ These bombings were examples of the competing hierarchical belief systems mentioned earlier. In these cases, the bombers placed a higher value on supporting extremist Islamic

causes by attacking the British transportation infrastructure than in supporting traditional democratic values of debating and voting for policy changes.

Americans too have been directly involved with Al Qaeda. These include John Walker Lindh who was captured fighting in Afghanistan. Another is Jose Padilla, who was trained by Al Qaeda and arrested in Chicago in 2002. Padilla was designated an enemy combatant and has been held without charges ever since. The 4th Circuit Court of Appeals has affirmed the government's position, thus igniting a huge legal controversy concerning rights of US citizens. Probably the most infamous of these is Adam Gadahn who has served as a spokesperson for them. Gadahn, a former resident of Orange County, California, has been filmed making specific threats of terrorist attacks against Los Angeles.

At least one similar case has occurred in the US military. During Operation Iraqi Freedom, a sergeant in the 101st Airborne Division stationed in Kuwait threw grenades into an operations tent killing Captain Christopher Seifer and wounding fifteen other soldiers. Sergeant Asan Akbar was a recent convert to Islam and demonstrated the problem of competing and incompatible belief systems. Of concern should be support by other Americans for his cause and glorification of him as a "war hero!"²⁹

The problem of conflicted loyalties will grow rapidly. Massive immigration has occurred in Europe and the United States and will continue as long as the severe economic imbalance exists. The belief and value systems of the immigrants are often at odds with long accepted norms. Therefore, when presented with ethical decisions, many of these people are likely to side with their established beliefs and ancestral relations. This means that the potential for philosophical based conflict remains high and authorities must be prepared to defend against internal and external threats simultaneously. The existing legal systems of the world are not adequate to handle this contingency. The issue of confused boundaries and loyalties is substantially different from recent historical precedence in war and contributes the notion that the nature of war has changed.

Legal Constraints

A fundamental issue is whether or not the existing legal systems will prove effective in addressing crimes perpetrated under the emerging patterns of conflict. It is arguable whether they have had success in

prior wars. The complexity of future conflicts will severely stress even the most diligent legal system.

As noted earlier, there are legal implications for formally describing a conflict as a war. Throughout history, there have been crimes committed during wars. For large-scale injustices, such as authorization of genocide, ethnic cleansing, and massive abuse of prisoners, including using them as laboratory experimental subjects, some leaders have been held accountable and charged with war crimes. Following World War II, several members of the German and Japanese hierarchy were eventually sentenced to death and hanged. Still other officials were convicted of crimes and received long prison sentences.

In more recent years key individuals, such as Slobodan Milosevic, Radovan Karadzic, and several others, have been charged with war crimes and crimes against humanity.^{30,31} Those who have been captured were taken to be tried by the International War Crimes Tribunal in The Hague. Compared to the severity of their crimes, sentences were quite light. None received a death sentence as European nations in general are in opposition to capital punishment.

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At best, the International War Crimes Tribunal is a cumbersome process. It often takes years to bring a suspect to trial. It may then take months to years to conduct the trial. During that process, defendants are usually provided with a forum from which they can pontificate about the egregious mistakes made by those bringing the charges against them. The rules of evidence are difficult, especially in mass murder cases in which few, if any, willing witnesses are left alive. The paradox is that this tribunal process, while failing to evoke fear in despots, may actually have a deleterious effect. The legal process makes it clear to potential transgressors that all steps necessary should be taken to insure that no evidence of their crimes remains, especially eyewitnesses.³²

Proponents of permanent war crimes tribunals argue that they would act as a deterrent as they would offer a rare chance to hold world leaders accountable for their actions. Given the results of past trials, there does not seem to be much evidence to support this theory. The amount of effort and expense that it takes to conduct these

judicial proceedings needs to be balanced against some measurable standard of result. For the most part, the main outcome has been allowing victims to retell their horrific stories in public. Unfortunately, many of the victims are voiceless because they are dead.³³

Another problem is the use of the International Tribunal as a political tool. For instance, there have been attempts to indict members of the US Executive Branch citing various armed interventions as war crimes. The positions most frequently named for indictment are the President and the Secretary of Defense.^{34,35}

Some despotic leaders have had trials in other venues. Pol Pot, the Khmer Rouge leader, was tried within Cambodia. Although he was responsible for an estimated two million deaths, he only was sentenced to house arrest. Pot succumbed to a heart attack in 1998. African war criminals often face harsher sentences when tried by local jurisdictions. International courts, empowered by the United Nations, tend to be relatively lenient in sentencing and eschew the death penalty.

Current international law is based on the nation-state as the primary building block of larger social grouping. International laws recognize the sovereignty of nations and assume that governments will be responsible for the actions of their citizens and have authority over non-citizens residing within their geographic boundaries. This concept is preeminent in the accountability and the basis of the laws currently governing conflict. However, there are many unstable areas of the world in which the central government has little control over disparate segments of their population. It is not uncommon for such areas to countenance terrorists while providing a breeding ground for the next generation of recruits.

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Often called rogue states, their inherent instability undercuts the notion that legal sanctions can be imposed, or will have any effect when adjudicated.

Theories addressing just wars abound.³⁶ While comforting to politicians who authorize war, and intellectually titillating to political scientists and jurists who study war, they usually are of little consequence to the people caught up in the conflict. The dead of all persuasions have no interest in legalistic determinations. Retribution and reconciliation are for the living. Astute theorists can always

manipulate facts surrounding any situation so as to make that conflict justified or unjustified. The winner usually appoints determination of facts. Those facts often change over time. The realization of this incongruence is becoming more apparent to those studying conflicts from a historical perspective. This realization, now spread via information technology, will alter the basic precepts under which a determination of whether or not to enter conflict is made.

There is an often repeated, yet false claim by Western countries, that states we are nations of laws. In reality, we are nations of people who happen to use laws as guidelines for living. The difference is the emotional component inherent in all human beings. While emotions will vary from one individual to the next, they are fundamental to our nature. Our institutional responses similarly have emotional components as they function as an extension of the people that comprise them. The future is pain mediated. As more pain is experienced our emotional response will increase and the likelihood of authorizing violent response rises. However, there are threats that do not induce pain directly but yield outcomes that could affect our national interests. It is the response to those threats that reflects a change in nature of war.

Is Violence a Necessary Component of War?

The single most significant issue regarding war is whether or not there is the necessity to employ violence. If it is the politically acceptable outcome of conflict that determines whether or not victory is achieved, then the use of violence to accomplish that objective becomes optional. Further, modern technology has both increased the capacity for inflicting physical violence while diminishing the need to use it. Therefore, the fundamental question is whether or not violence is a basic component of war. Certainly it was under the traditional definition of war.³⁷ Now, if we consider war in a more general manner, that is the ability of an adversary to impose will, then violence may not be required. The outcome, however, may be just as devastating as submission due to physical invasion.

It may be useful to consider violence as a function of force over time ($V=F/T$). For this purpose force is the amount of energy applied against a target. This can be thought of in terms of explosives/ordnance used against the enemy. Violence does not connote whether or not the desired effect is achieved. Instead it addresses the amount of effort expended in any specified encounter or conflict.

Factors such as target acquisition, precision, and defensive mechanisms determine whether or not the violence employed has the desired effect on the target. Physical destruction of the target is one measurement of effectiveness. Less tangible measures include the willingness of the adversary to reengage our troops, or degradation of popular support by their citizens.

Over the past few decades, great technological leaps have occurred in weapon technology and dramatically increased our ability to employ violence. Periods of direct sustained combat between US forces and the enemy have decreased from years, as in World War II, to days as demonstrated in Desert Storm and operation Iraqi Freedom. This change has been brought about primarily through better sensors, precision-guided munitions and enhanced command and control.

There is an example cited by Colonel John Warden, architect of the air campaign in Desert Storm that makes this point. During the first day of the air attacks in Desert Storm, more significant targets were destroyed in Iraq than were struck in any year of conventional bombing in WW II. This happened because of our ability to quickly establish air supremacy and to strike designated targets with accuracy.³⁸ It is notable that since Desert Storm, sensors of target acquisition and precision guidance have improved even more.

The second factor of this violence equation, time, was demonstrated in Operation Iraqi Freedom. Most military analysts all over the world, including those working for Saddam, anticipated a substantial air campaign prior to the ground invasion. However, they were wrong. Shortly after the air strikes began, land elements crossed the border from Kuwait and began racing toward Baghdad. It was the speed of the invasion that took everyone by surprise. Thus, by employing violence, a great amount of force for a short duration, the Iraqi opposition crumbled in short order.

In traditional wars violence has been a key aspect, often lasting for many years. The success of American application of high-density violence has caused potential adversaries to seek out asymmetric methods for confrontation. On occasion, such as 9/11, these actions have a component of violence. When amortized over time, the violence levels are quite low. Thus, it is reasonable to question whether or not terrorism and counterterrorism measures rise to a level that can constitute war.

There is not doubt that it is appropriate to take all actions necessary to reduce the threat and eliminate known terrorists, but that probably does not constitute war in its classical sense. Similar problems arise when attempting to determine whether or not guerrilla activities can rightfully be considered wars. Military analysts have danced around this topic with terms including, insurgencies, limited war, or small wars. While our military is prepared to engage in operations across the spectrum of conflict, only those requiring extensive use of force have been designated formally as wars. Thus, the notion of levels of violence is useful for military deliberations. However, such precise delineations have not entered into the terminology or thinking of the general public.

In the past, war in the traditional sense was often brought about by competition for resources or a desire to dominate people or territory. This has been described as “a clash between opposed wills.”³⁹ What has transpired in recent years is the ability of powerful forces to impose their will without the use of violence. One could argue that if a desired political end-state can be achieved without using violence, then war has not occurred. However, there are now means of applying power, which while not violent, are just as effective for imposing will. The issue becomes whether or not the end-state is derived through mutual consent, a political solution, or via application of power be that violent or nonviolent.⁴⁰

The Violence Paradox

The paradox that emerges pits the need for physical security in a violence-prone world, against an idyllic norm that is probably unattainable. The more physical power we attain, the less able we are to employ it due to constraints driven by political, social and target ill-siveness issues. Projecting and employing power is not a problem for the US as we have overwhelming capability. Using force within the myriad of competing parameters does give rise to consternation.

Except for the entertainment industry, in recent years there has been a concerted effort in American society to eschew physical violence. Federal and state legislators have made virtually all nonconsensual physical contact between people a crime. Contact sports aside, even minor voluntary touching may constitute criminal activity. Nowhere is this more obvious than in the uber-politically correct notion of domestic violence. In the post-OJ environment, law enforcement agencies are hypersensitive to potential suits and claims

of the slightest touching are likely to result in arrest. In general, individuals cannot use force to protect their property. In many jurisdictions no fleeing felon can be shot unless they provide a clear danger to another person. Even if a criminal breaks into your home, threatens you and your children, then flees outside the home, it is illegal for even the police to kill the intruder.⁴¹

Use of force over moral issues is totally off-limits to individuals. The age-old stalwart of movies, in which the hero cleans house because the villain affronted him or his values is taboo. While it is permissible for the US military to fight on foreign soil, it is not permissible for individuals to engage in fistcuffs when American values are disdained. It was not long ago, when it was deemed proper to openly protect the flag or other deeply held symbols of freedom.

The US legal system is doing everything possible to eviscerate emotions from society. While these actions may be high on the cognitive scale, they run counter to long-engrained genetic programming. As an outcome of such legalistic determinations, we are producing a society that is extremely violence averse. The paradox arises in that aggression and violence is part of our genetic heritage. In fact, being able to overcome all obstacles in violence-prone situations was a positive aspect in a world that was literally ruled by the code of survival of the fittest.

As an outcome of such legalistic determinations, we are producing a society that is extremely violence averse.

This paradox impacts societal decisions on whether or not to engage in armed conflict when national interests are threatened. Withdrawal from Vietnam came after public sentiment turned strongly against the war. Support for Operation Iraqi Freedom has steadily declined, especially after no weapons of mass destruction were located. The people support the troops engaged in OIF, but not the basic premise. As attrition of our soldiers continues, the less the public supports the conflict.

Violence-aversion conditioning impacts societal acceptance of physical intervention. It may also create an environment that is more susceptible to intimidation from powerful, but nonviolent, institutions. Such acquiescence will strengthen an adversary's ability to impose will without physical confrontation, thus impacting the nature of war.

Technology and the Nature of War

Advances in technology have played pivotal roles in the prosecution of war. From relatively simple inventions, such as the stirrup, and gunpowder, to the dropping of the atomic bomb on Hiroshima, these advances have changed the tactics and methods of warfare. In recent decades, strides have been made in enhancing lethality of conventional munitions. Enhanced sensors, target acquisition and precision guidance have facilitated striking the desired target while limiting collateral casualties. Force protection technologies, including body and vehicle armor, signal suppression, and threat warning systems have reduced American injuries. Even the introduction of non-lethal weapons has allowed troops to employ measures to control groups that otherwise might pose a threat to them.

None of those technologies altered the fundamental nature of conflict. Therefore, the traditional view has held that while military techniques may change, the nature of war remains constant. It is then reasonable to ask whether or not any technological advance could change the nature of war.

I believe the answer to that question is yes. There is a single common factor that runs throughout the examples listed. That is they all rely on some level of violence to achieve their objective. If we accept the supposition that the objective of war is the ability of one group to impose its will on an adversary, then it is no longer necessary to use violence to reach victory. This decisive change is brought about by the rapid advances and application of information technology and extends well beyond the bounds of what is normally called information warfare.

To be sure, information technology (IT) has played a significant role in the development of all of the weapon systems listed above. Thus IT has supported the application of violence. But it is a field that is so pervasive as to impact some aspects of the lives of nearly everyone on the planet. IT has materially altered the social structures of Western societies as evidenced by the rise of multinational conglomerates and outsourcing of routine tasks from the US to Third World countries. Consider how frequently your calls for assistance are answered in India, South Africa, or other distant land. Domestically, there is a trend to remote information processing from centralized offices to individual homes. Even indigenous peoples in remote areas of the world have been impacted. As examples, itinerant yak herders of Tibet have satellite television; cell phones are in wide use

in Kabul, and impoverished coca growers have communication networks and warning systems.⁴²

The transformative impact of IT is found in global communications, transportation, and economic systems. A paradox exists in that while half the people in the world have never made nor received a phone call, the planet is nearly totally covered by satellite communications that can link every country.⁴³

The Importance of Influence

With advances in information technology new forms of news media have proliferated. On the positive side has been the ability to acquire and disseminate information very rapidly. Using the Internet one can access dozens of newspapers and official government sites from around the world and elicit contrasting points of view. On the negative side has been the enormous amount of erroneous information that is put forth on a daily basis. Determining if sources are veridical is difficult especially for time-sensitive material. Unfortunately, rumors gain ersatz importance, are quickly re-disseminated, and are often acted upon by both individuals and institutions without authentication.

Information has always been an important component of warfare. However, new IT technologies have elevated dramatically the level of prominence ascribed to information of all sorts. Tomes have been written about the use and abuse of the power of the press. Manipulation of information, including that coming from traditional sources, has become an issue of paramount importance. While most Americans firmly believe that our First Amendment Rights are among the most sacred, our adversaries have learned how to convert that great freedom into an effective countermeasure.

The fact of the matter is that the news media have become strategic weapons. In future conflicts the ability to form and maintain international coalitions will be crucial to the prosecution and outcome. Similarly, generation of popular support of the American people plays an important role in determining whether or not any campaign can be initiated. Once operations of substantial duration are undertaken, maintenance of that support is a critical factor.

Prior attempts to manipulate power can be seen by reviewing media participation prior to Operation Iraqi Freedom (OIF). On a daily basis headlines around the world carried some aspect of the story. Influential leaders of all persuasions were quoted as to their opinions

of the impending actions. Supporters of Iraq sought to separate those countries that could assist in US efforts in the impending conflict. Even Iran, an adversary of Iraq, warned they would side with their old enemy. This turned out to be nothing but a ploy. Members of the Bush administration publicly outlined the case against Saddam and his motivation for acquiring weapons of mass destruction at the UN and on television and in press interviews. Russia, a traditional friend of Iraq, used the press to warn the US against armed intervention. The European media, from countries with various motivations, voiced concerns about the legitimacy of an attack. Even Nelson Mandela, though not directly involved, made headlines decrying impending actions. Later he was quoted as saying that it was the United States that posed the greatest danger to world peace. While the media frenzy did not stop OIF, it did greatly impact the constituency of the invading force as well as influencing world opinion.

Public opinion has always played a supporting role in decisions concerning conflict. At the core of that conviction is the trust and confidence of the people in the institutions involved, especially governmental and media sources. In recent decades both institutions have been severely tarnished by their actions. Both institutions repeatedly have been caught fabricating truths and misrepresenting the facts. These issues have been compounded by the availability of the Internet and an environment in which speed of delivery is more important than confirming authenticity. Accessible to anyone, unverified information may be instantaneously transmitted around the world. The combination of lower trust in established institutions and capability for rapid dissemination of information is unparalleled in history. These unstable situations will add complexity to the emerging battlefields of the future. In shaping this dimension of the total environment of conflict it should be acknowledged that one creating favorable or unfavorable opinions may decide the outcome.⁴⁴

In such a world, news media, both credentialed and bloggers, will play increasingly important roles as future conflicts evolve. They will manipulate, and will be manipulated, in extremely sophisticated orchestrations exquisitely designed to wield influence in determining the outcome of contentious situations.⁴⁵ Though clearly nonviolent in nature, successful information interventions, through news media and other information sources, may provide an adversary the ability to impose its will on other groups. The tactics include aggregation or division of potential forces, gathering or dispersing popular support,

and/or intimidation of the adversary or its allies. When successful, by definition, such imposition of will on an adversary constitutes war. Thus it demonstrates that the nature of the conflict is changing.

Known as the Fourth Estate, the American press espouses the notion that they serve as arbitrators between the government and the people. Regarding armed conflicts they frequently pontificate on issues that concern whether or not use of our troops is justified. They exert their influence by the frequency, timing, subject matter, and vocabulary used in these articles. Any astute reader can ascertain that the American media has gone far beyond reporting the news and is attempting to shape future actions. Though generally unstated, they too have political agendas.

Closely coupled with use of information as a weapon is our inadequate educational system. One issue is the training provided those entering the news media profession.⁴⁶ Fundamentally flawed is the notion that anyone who can write or talk well can automatically become a subject matter expert in any topic. Gone are the days when reporters truly specialized in the issues that they covered. Instead, Lexus and Nexus can provide any reporter a cursory overview in a matter of minutes. Lacking is in-depth understanding of the issues that surround the situation. Unfortunately, few have learned that no bad story, no matter how thoroughly refuted, is ever killed. The same misinformation that fed the original story is omnipresent and it is a matter of how an Internet search engine prioritizes information that determines what the investigator will see and in what order. Often under intense pressure to get the story out reporters rarely read past the first seemingly articulate entry. Without their own expertise on which to rely, they frequently choose poor sources, often on name recognition. Even prestigious institutions and individuals get the facts wrong.

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The other aspect of poor education pertains to those who receive information. Unfortunately, Americans in general have little sense of history or geography. It is rare when the public can identify states in the middle of the continent let alone locate foreign countries.

Many people in the US simply do not comprehend the importance of history and consistently focus on near-term solutions based on symptoms. Rarely do citizens attempt to understand causal relationships. If the problem can't be stated in a twenty-second sound bite,

there is a general tendency to just forget about it. Simple slogans gain inordinate power whether they make sense or not. They form the basis of opinion polls. Opinion polls are followed daily on Capitol Hill. Votes frequently are cast accordingly, especially if an election is approaching. While proclaiming the wisdom of the American populace, politicians well understand the need to dumb down their messages. The unfortunate reality is that some of them are not much better educated on current topics than their constituents.

Applications of Influence

It is clear that our potential adversaries understand the importance of perception management. Public relations are no longer the sole domain of countries or large organizations with sophisticated staffs. With computers and fax machines in every corner of the world, any savvy operator can gain access to the outside world and present their case to a world that does not discriminate between credible and non-credible sources.

During the conflict in the Balkans it was not uncommon for faxes to be sent from cities under siege. The senders have access to the fax numbers for news agencies and groups likely to be sympathetic to their cause. Concurrently messages sent on the Internet proliferate at phenomenal speed. Messages from unknown sources state that they are under attack at that moment and ask for help in getting the US Government to intervene on their behalf. Frequently there is a personal appeal, or a linkage established between the sender and receiver. A common ploy is to state the sender is an American student who returned home only to become trapped in a desperate situation.

Groups such as Al Qaeda are very sophisticated in their material designed for public consumption. The recruiting tapes they send out are extremely well forged and tailored for their target audience.⁴⁷ Even the tape that graphically detailed the execution of Daniel Pearl hit its mark and was enthusiastically received in some sectors. While most people in the Western World were shocked at the notion that anyone would videotape and display the decapitation of an innocent civilian, the act was cheered in some areas of the world. The messages sent from Osama bin Laden following the 9/11 attacks were full of symbology and adroitly crafted for the disenfranchised youth of fundamentalist Islamic countries.

Economic Influence and Imposing Will

Economic factors have always been an important component of war. Historically, purchasing weapons and other military materiel, as well as personnel costs, were the primary financial issues. Several wars have been fought in order to gain control of natural resources or fatten the coffers of the aggressor. However, in recent years there have been major changes in the economic infrastructure of the world. Electronic transfer mechanisms and standardization of monetary exchange have led to globalization in which economic strife in one geographic area may have profound impact in other continents. Similarly, trade between nations has expanded greatly, especially between the developing countries and those that are technologically more advanced, primarily due to labor cost differentials. Globalization has transmuted economics from a supporting role in conflicts to that of a predominant center of gravity, one that is decisive in determination of the outcome.

While essentially nonviolent, economic confrontations have the potential to allow the regnant party to impose their will on others. Again, if the outcome-based definition proposed earlier is accepted, then macroeconomic interventions that cannot be resisted by the weaker party support the notion that the nature of war is changing.

While it is wrong to view potential for all future conflicts in purely economic terms, risk to infrastructure and trade agreements play a key role in stabilizing relationships.⁴⁸ Conversely, those adversaries that are not tied to an economic model of society tend to view those relationships, which are sometimes fragile, as our vulnerabilities. In reality, most sophisticated economies are based on public trust and confidence in established institutions, including governments. As long as confidence remains high, the global macroeconomic system functions smoothly. Once threats to stability are perceived, confidence is likely to diminish. This is precisely the strategic objective that Al Qaeda terrorists have targeted.

Therein another paradox emerges. Large countries that could pose threats to US interests, such as China, are unlikely to resort to physical violence to resolve differences. To do so would both cut off a huge amount of trade that is overwhelmingly in their favor, and result in very significant damage to their national infrastructure.⁴⁹ At the same time, these complex, trusting relationships expose our vulnerabilities to adversaries that do not participate in trade, or are philosophically at odds with our materialistic values. As has been

demonstrated by a number of terrorist attacks around the world, for most countries, including the US, it does not take a large incident to cause an emotionally disproportionate reaction. Those responses invariably have economic repercussions and usually included secondary and tertiary effects. It is essential that the US learn from the experiences of Israel wherein terrorist attacks occur frequently, but public recovery is usually very rapid with minimal impact on daily life.⁵⁰

Evolution of Command and Control

Throughout the history of conflict, command and control systems have been key to success or failure. One of the significant advantages of American military power has been the ability to create extremely efficient command and control systems. These systems are capable of integrating large diverse forces and responding to rapidly developing situations. Emphasis has been placed on “getting inside the enemy’s decision cycle,” thus allowing US elements to bring decisive force to bear more quickly than the adversary can counter.

A substantial amount of time and effort has gone into understanding the command and control systems of potential adversaries. Colonel Warden’s Five Ring Theory, which altered American concepts of air warfare, noted that it was most advantageous to strike at the leadership of the enemy and destroy their communications with fielded forces. Attempts to distance the enemy’s population from their leaders are given higher priority than fighting their soldiers. His thesis was applied with great success during Desert Storm when a prime focus of the air war was on cutting off Saddam’s communication with his troops in Kuwait.⁵¹ Unfortunately, the anticipated overthrow of his government, while attempted, was not successful.

Given traditional conflicts, defining and defeating the enemy’s command and control system provides war-winning advantages. Warden’s thesis fits well when engaged in conflict between nation-states fielding modern military forces. Other conflicts in which the enemy employs centralized command and control systems also can be effectively targeted.

While much emphasis is placed on identifying terrorist command and control this may not be as useful as thought in the past. Some terrorist groups are linked only by philosophy and utility. Their leaders are often fiercely independent but occasionally rely on limited external support. It is assumed that since we have been success-

ful in creating highly responsive centralized command, control, and communications systems, other organizations must follow suit and follow a hierarchical model. Based on advances in IT the need for a centralized command structure is no longer necessary, if it ever was.

The concept of the superorganism should be understood as an alternative model for command and control that facilitates dispersed, effective action but does not rely on centralized communication. Superorganisms facilitate synergism through agglomeration of smaller elements that could not accomplish a given task alone. This somewhat controversial notion comes from simple organisms that apparently do not have the ability to apply complex thought but, under certain conditions, those organisms act at an intelligence level above their expected capacity.

An example of a superorganism is slime mold, which is unicellular and lives in moist climates. When periodically faced by drought, slime mold cells physically come together. Many of these cells commit suicide by forming a base and allowing other slime mold cells to stack on top of them forming tubules that reach into the air. As they dry out, wind comes along and blows the top cells to new locations. When they land in a moist area the colony is reconstituted. The unanswered question is how does each cell determine the actions it should take to support the superorganism? It appears this is from a series of simple decisions that are programmed into each cell. There is no indication of external command and control that informs the cells of individual responsibilities.⁵²

It seems that slime mold cells can detect a threat, make a determination of individual versus collective threat, implement assembly orders, voluntarily commit suicide or move to a new location and then reconstitute life. Therefore, we must anticipate what human terrorists, with far more complex decision-making capability, can accomplish using similar relative simple instructions. If terrorists use a superorganism command and control paradigm it makes the task of locating them extremely difficult. Each cell must be independently identified and neutralized. The clues for findings these cells would be different from an organization with a centralized system.

There is reason to believe that many of the terrorists trained in Afghanistan under Osama bin Laden were taught similar dispersion techniques.⁵³ They know how to determine a target and probably have authorization, if any is needed, to attack independently.

Until quite recently, sophisticated weapons and tactics training were only available via on-site instruction. Thus, in the 1990s many mujahideen volunteers went to Afghanistan for training under Osama bin Laden. Other terrorist training facilities were available in Iraq, Libya, Syria and other countries. Now, however, terrorist skills may be learned from the Internet as websites post detailed training manuals covering all necessary techniques needed to initiate operations. Adaptation of distance learning techniques will facilitate dispersal of organizations that need only philosophical guidance, which is easily obtained by watching media outlets espousing commensurate views. While second or third generation terrorists may not be as proficient as their more highly trained forerunners, they still are effective as their acts rely on evoking fear and overreaction from the target audience.

The implications of superorganism-based command structure would be very significant to counterterror operations. Such a system would support a geographically dispersed organization that was the antithesis of net-centric warfare. It would assuredly alter the prosecution of conflict and arguably impact the nature of conflict.

The China Factor

China is frequently listed as one of the major emerging threats to regional stability in the Pacific, or to the United States. The flashpoint is Taiwan. While Taiwan is currently independent, and supported by the US, China declares that it is a part of their country. Even we endorse a “One China” policy while continuing to arm the breakaway island.

Of concern to some military analysts is the increase in weapons spending China has been making in recent years. Approaching \$90 billion in 2005, which is three times their official number, they are now the third largest in the world.⁵⁴ Of course that figure pales when compared to the \$420 billion dollars spent by the US. The official Chinese publications emphasize a peaceful rise to characterize their emergence as an economic power. It is now the second largest consumer in the world.

The debate between analysts revolves around the strategy that China will follow. Traditionalists point to missile buildups and troop deployment close to Taiwan as an impending threat. There are over 650 mobile CSS-6 and CSS-7 missiles within range now and an estimated 100 per year increase continuing. More than 700 strike air-

craft including new Russian Su-30MKK fighters are available. They have a formidable navy with 55 attack submarines. China's ground forces of 2.3 million men have about 375,000 stationed in the area across from Taiwan.⁵⁵

Many Western military analysts probably misinterpret the potential for conflict between China and Taiwan. At a conference held by the National Intelligence Council addressing this issue, one attendee, who was ethnic Chinese, described the conflict in terms of a "family squabble." The rift was not similar to Israel and the Palestinians, or others territories where there was bitter resentment of the opposition. Rather, he described Taiwan as the prodigal son. Both Taiwan and China, he asserted, wanted to reunite. However, Taiwan had become rich and did not want reunification at their expense. They had observed the cost to West Germany when it was forced to bear the burden of absorbing the debts of East Germany during that reunification process. Therefore, as The People's Republic of China increases in prosperity, the probability of peaceful reunification also increases.⁵⁶

The importance of economic growth in China cannot be underestimated as it pertains to the likelihood of armed conflict in the region. As the largest emerging market in the world, China has reported a 9.5 percent annual growth rate.⁵⁷ The bid of China National Offshore Oil Corporation (CNOOC) to buy Unocal demonstrated their international economic power and sent shock waves through many in America. Energy is a crunch point as China's demands for fuel are rapidly increasing and the US continues disproportionate consumption of the same products. However, American companies are deeply involved in acquiring cheaper Chinese goods as well as investing.

My observations, derived during travel in Tibet and Hong Kong during June 2005, tend to support the notion that economics have supplanted expansion by force. Hong Kong has continued to advance economically under the Chinese rule. The territory is run extremely efficiently as can be attested to by anyone arriving at the new airport. The city is as modern as any in Asia.

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One cannot condone the brutal invasion and suppression of Tibet. The official Chinese version of the peaceful liberation of Tibet in

1950 is simply rewriting history with a big lie.⁵⁸ However, the current development efforts on the Tibetan plateau by the Chinese are both telling and have strategic implications. Everywhere we traveled we found road construction in progress. The main highway to Nepal, which has been an unimproved dirt road, is being expanded and paved. The Qinhai to Tibet railroad is being completed at many kilometers per month and is scheduled to be in operational testing by 2006. When completed, people will be able to travel from Beijing to Lhasa in 50 hours. Subsidiary roads are being constructed throughout the valleys. There is more water in the area than I expected and the Chinese are making use of it. What was once restricted to subsistence farming due to lack of infrastructure is being converted to extensive agriculture. The roads provide the necessary means to get produce to the markets in the expanding major cities.

It must be noted that there is a concerted effort to import ethnic Chinese into this province. The high altitude, often 12,000 feet or higher, requires acclimatization that many do not find desirable. However, incentives, such as relaxation of the one-child rule and available homes, are attracting many people. This expansion requires a more robust economy than was previously available. Like it or not, China is dragging Tibet out of the Middle Ages and into the modern world.⁵⁹

In the most remote villages there are both limited electricity and satellite dishes. The central government has expended substantial effort to incorporate even the itinerant yak herders into their society. These rural areas are a unique juxtaposition of Communism and Tibetan Buddhism. Even Mickey Mouse was displayed in one home although the occupants were not aware of the significance of the item.

The point is that these efforts in such a remote area suggest the emphasis on economic expansion is real. There are, of course, concerns about increased Chinese influence in Nepal, thus putting more pressure on India. The current construction in Tibet and dire political and security conditions in Nepal bear watching. It is far more likely that they will pressure the US by increased economic output and extending their influence, not only on the Pacific Rim, but also in most other areas of the Third world.

China has been rapidly expanding power in the Western Hemisphere. Brazil's trade is now at about \$8 billion with some Brazilian manufacturers establishing factories in China. It is acknowledged

that the business agreements are specifically designed to counter Western global trade dominance.⁶⁰ The growing presence of Chinese business is commensurate with my personal observations in Brazil over the past few years.⁶¹ Other examples of incursion in this hemisphere include Argentina's expanding trade with China. This has now reached over \$3 billion annually.⁶² Also, Peru recently signed an accord to cooperate in economics, technology, investment, energy, and other areas of mutual interest.⁶³

Closer to home, in 2003 Mexico established a strategic alliance with China for bilateral cooperation in economics, trade, and investment. The Caribbean area also has been approached for more trade and cooperation with China. Trade has reached \$2 billion in the past year. This increase has been accomplished to the detriment of Taiwan, which has been losing influence in this area.

Africa is another area of interest to China. Over the past few years China has formed or increased alliances with most of the 54 nations on the continent. This was possible due to the diminished presence of the United States and other Western powers. One article noted that the, "standard US response in recent years to local conflict in Africa has been to withdraw troops and civilians..." With them have gone investors.⁶⁴ This void is being eagerly filled by China.

The US is China's largest trading partner. However, this relationship is a matter of great concern to our Country's leadership as there has been an ever-increasing trade deficit. In 1989, trade was estimated at \$17.8 billion with a US deficit of \$6 billion.⁶⁵ As of 2004 that trade total rose to \$240 billion. However, the US trade deficit had ballooned to \$162 billion. Studies have revealed that a significant number of jobs, possibly 1.5 million, had been lost to China due to their low-cost labor.⁶⁶ In addition, as was pointed out by Congressman Roger Robinson in hearings held in late July 2005, China has been strengthening ties with many of our traditional trading partners including Germany, Israel, and Australia.⁶⁷

When combined, the trends suggest that China will continue to place high emphasis on economic growth. Much of that will be in direct competition with US interests both here and abroad. Therefore, it is unlikely that they would be willing to risk damage to the country's infrastructure. Extensive damage would be inevitable in a direct military confrontation with the US or other Western powers. Military posturing probably will continue as a means of exerting influence and gaining power throughout the world. China will

have supporters, including Russia, in their move to increase power as many countries do not wish the US to continue to dominate global geopolitics.⁶⁸

The emerging economic power of China will yield direct confrontation with US national interests in many areas of the world. Traditional military threats to Taiwan cause us to spend resources that could be used elsewhere. This would appear to be only a small part of a much larger scheme that elevates China's ability to influence other countries and impose its will when desired.

SOF Implications

As both the nature and manner of prosecuting war are changing, the impact on Special Operations Forces (SOF) will be significant. The reputation of SOF for flexibility, determination and adaptability is laudable, and will increase in importance in future conflicts. For senior political and military leaders they have become the tool of choice for both surgical missions and preparing the battlefield for larger forces. That will continue. However, with rapid changes in warfare there will be a need for capabilities that currently are not in the inventory but the need for which becomes apparent over time. SOF units must be prepared to morph as they have the best capability for quickly acquiring new skills.

If, as predicted in this paper, some future conflicts prove to be decisive but nonviolent, capabilities in information warfare, psychological operations, and penetrating civil infrastructures will become paramount. It will be SOF units that should spearhead this effort. Concurrently, the highly lethal aspects of their missions must continue to evolve.

At present many SOF units are directly and indirectly involved in influencing people in countries around the world. In an information intensive conflict, SOF will play several key roles. This does not refer only to the use of technology on the digital battlefield. There they will take advantage of scientific advances like all military units. Rather, their roles will be to guide both friend and foe in manners commensurate with our national interests. How they will prosecute those tasks will vary based on the desired outcomes. The decades spent developing interpersonal relationships will be instrumental in their ability to contact influential individuals in areas of interest. Where appropriate contacts do not exist, their skills will be applied in initiating the necessary relationships.

It cannot be assumed that all relationships will remain favorable. Some may sour due to incompatible interests by either party. Such situations could lead to a training paradox.

Several SOF elements have missions to train foreign military forces. Their objective is to create a force that can provide stability in the area by supporting democratically elected governments. Part of the training process includes instilling professional military values such as respect for human life, obedience and loyalty to legitimate authority.

Great emphasis is placed on basic military skills for all soldiers. These include discipline, weapons training and marksmanship, field survival skills, basic health medical requirements, and small unit tactics. Officers and NCOs receive additional training. The most promising are sometimes selected to go to the United States to attend military courses.

There are several desired outcomes from training in the US. In addition to the course curriculum, it is hoped that they will see first-hand how our military works and the value we place on subordination to civilian authority. The attendees also get to see how civilians live in a free society. Special bonds are formed between the foreign and American students as well as with instructors and administrators. The personal connections can prove very useful in times of crisis.

While not as extensive, similar lessons and relationships can be established for the troops receiving training in their own country. As professional trainers, SOF personnel take pride in teaching the local troops military skills. The question, however, is "How good is good enough?" The known paradox is that in unstable areas, situations can change quickly. The soldiers we have trained may well become our adversaries.

In tribally dominated areas of the world, it may be expedient to train and employ local forces in support of US objectives. This approach proved to be extremely effective in fighting the Taliban and Al Qaeda in Afghanistan. Support of the Kurdish Peshmerga proved of great benefit in Northern Iraq during Operation Iraqi Freedom.

One problem that frequently emerges is that these trained guerrilla forces may have political objectives that are orthogonal to ours. Some of these forces are known to make relationships on convenience. They do not see incongruence in switching sides when a new situation appears to make it in their best interest.

Another perennial issue in training local forces is the selection process to insure loyalty to the government. Particularly during insurgencies, it is not uncommon to have the enemy to send in recruits to be trained by US SOF personnel. It is a cheap and effective method to obtain basic skills training for their own force. Desertion during and after training is a significant problem when developing a military in unstable areas. It is difficult to determine whether the recruits left for personal reasons, such as unwillingness to submit to discipline, or because they are rejoining the opposition, albeit with newly acquired skills.

... it is not uncommon to have the enemy to send in recruits to be trained by US SOF personnel.

The bottom line for SOF when training foreign forces is that they must balance between teaching them the skills necessary to accomplish their missions, while remembering that we may have to fight them at a later date.

As mentioned, SOF has the ability to acquire unique skills on relatively short order. However, in a world increasingly dependent on professional mercenary forces, acquiring these skills is only the first step.⁶⁹ Retention will continue to be a major concern for SOF units as competition for highly qualified personnel increases. In recent years private security firms have been offering expense incentives for these skilled personnel. One report stated that pay was as high as \$33,000 per month for short duration, but high-risk assignments. Of concern was a dramatic increase in SOF personnel who were departing well short of retirement eligibility. While some SOF members leave the service in any given year, that percentage has double in the past two years. Innovative retention programs will be required as demand for SOF skills increases in other sectors.

Another paradox that will emerge is that of communications. Although the world will be more information intensive, command and control capabilities are likely to bifurcate. On one hand there will be massive efforts at sensor fusion and the ability to pass data to all levels of command. On the other hand, there will be SOF forces operating independently, or in environments in which even redundant communications channels may be blocked or inoperative. While SOF operatives have always been resourceful, future operations will require that many of them possess the skills necessary to function with minimal direct guidance.

Already emerging are complex legal issues regarding use of force. Several SOF elements have recently been caught up in charges of abuse of detainees. Concurrently other soldiers have been charged for split-second decisions that resulted in loss of life. In one, an act of euthanasia landed Captain Rogelio Maynulet in Ft. Leavenworth after a drone taped the incident. In another incident, USMC LT Ilario Pantano was charged for shooting two Iraqis whom he believed posed a threat. The charges, which were later dropped, emanated from a disgruntled junior enlisted man who lied about the incident. However, a lack of public understanding concerning the intensity of combat bred debate about the number of shots fired by LT Pantano. Media pundits discussed the physical effects the bullets had inflicted as the suspects were spun around by a weapon on fully automatic. The post hoc debate ensued almost devoid of facts or reality.

The point of these examples is not to revisit specific events, but to illustrate the necessity to firmly establish legal limits before operations commence. Public fascination with forensic sciences, ala the acclaimed television program *CSI*, has transmuted from civilian

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criminal proceedings to microscopic inspection of combat situations. Problems associated with second guessing decisions made under extremely stressful conditions will result in American lives lost. Due to the nature of many SOF missions, operators are constantly placed in hostile, yet frequently ambiguous situations. Allowing rewriting of rules after events occur has become epidemic.

A new issue has been emerging over the past few years. I have termed it The History Channel Effect. Of course, it is well established that the winner writes the history of conflicts. Currently, however, we are witnessing cathartic urges to produce revisionist versions of prior events and expose any perceived misdeed in the most egregious light. While argued that such presentations are to make a better informed public, too frequently they are really stepping-stones for over-zealous reporters. Like all critics, they come well prepared to tell others how they should have conducted their affairs. Unfortunately they rarely possess the skills or courage to perform the combat operations on which they feel perfectly qualified to comment with the clarity of 20/20 hindsight. The History Channel Effect must be eschewed if SOF is to function on the violent side of conflicts.⁷⁰

Also, there will be proliferation of interagency relationships. Historically, SOF and the Intelligence Community have engaged in unique operational interdependence. Due to the changing nature of conflict, there will be requirements to establish broader networks with other agencies. However, even some US government agencies are unlikely to fully understand the roles and missions of SOF. It will probably fall to SOF soldiers to establish and guide those new partnerships. Here again, the flexibility and ingenuity of SOF operators will play a key role in establishing and optimizing new operational capabilities.

The exact parameters of these emerging capabilities are not yet known, and only will be identified through analysis of future SOF missions. Certain vectors for required skills are probable. Some examples include advanced computer capabilities, the art of negotiation, comprehensive understanding of microeconomics and mechanisms for alternative finance systems (Hawala and high value goods and property transactions), fast, positive identification of targeted individuals, operations in environments with rapidly mutating diseases (i.e. Bird Flu), and the ability to accurately detect deception in human communications. There may also be missions assigned that are not yet within USSOCOM's charter. For instance, manned space operations, probably led by civilian enterprises, will likely expand in the near future. It is possible that SOF could be called upon to conduct highly selective missions in that harsh environment.

Extended relationships have also been initiated on foreign missions that brought nongovernmental organizations (NGOs) in contact with SOF elements. Future conflicts will produce even more, and possibly unusual, relationships between SOF and NGOs. As with the training paradox, these relationships are likely to encounter conflicts of interest that are difficult to resolve.

These relationship issues suggest that very sophisticated training and education will be required for many SOF operators. Decisions normally reserved for senior commanders are likely to be defaulted, in a time-sensitive manner, to relatively junior people who do not have the luxury of waiting for higher headquarters to respond. These highly probable situations dictate that SOF operators at every level of command will need a basic understanding of the national interests involved in their mission, and how their actions and decisions may impact the outcome of the conflict.

Finally, SOF organizations will not be immune from the consternation created by pandemic social restructuring. Specifically, SOF personnel, like everyone else, will be exposed to competing belief systems. Already discussed was the potential impact on social organizations when individuals are confronted with conflicting and irreconcilable beliefs and values. Based on a hierarchical order, which may not even reach the level of consciousness, each individual chooses which values he or she will act upon.

Currently SOF has a set of core values, Integrity, Courage, Competence, and Creativity.⁷¹ These are recognized and accepted by most members of the command. This set of values was established and published based on fundamental assumptions about the individual acknowledging the constitutionality and preeminence of the United States in matters of defense. While understanding that these soldiers have family responsibilities, and may have religious affiliations, it is the functioning premise that each member of SOF will conduct their assigned military duties to the utmost of their ability and in accordance with those core values.

Previously threats were clearly defined and values surrounding issues of defense fairly unambiguous. However, as has been discussed, that has changed. The general population now has access to a vast amount of information. Delineation of threats to national interests has become more difficult in recent years. With that, people in general are more likely to question participation in specific conflicts. It is from this pool of people that the military, including SOF, will draw recruits. Confronting an internal threat brings special problems that must be addressed.⁷²

The dichotomy is that SOF wants members who are highly knowledgeable on a wide variety of topics and can think for themselves while they are also willing to follow orders in ambiguous situations. This suggests that additional emphasis must be placed on the recruiting process. There must be screening mechanisms whereby the potential for conflicting beliefs and values will be held to a minimum. Given the proliferation of possible threats, screening for all conceivable conflicts will be difficult. In order to insure reliability of the forces, actions need be taken to explore methods for upgrading the recruiting process.

Summary

Contrary to published reports, the nature of war has changed at a most profound level, that of definition. Information technology is so powerful and pervasive that it has made this fundamental shift possible. Assuming that war is determined by the ability of one entity to impose its will on another, then it is now possible to achieve that outcome without necessarily resorting to physical violence. Physical encounters will continue to occur and we must be prepared to overmatch any potential military threat. However, the outcome of conflicts will rarely be determined primarily by military force.

The role of the nation-state is also changing, though it will remain the preeminent organizational structure of choice in the near term. However, large-scale social groupings of the future are more likely to be established by common beliefs and values, economic considerations and alliances, and ethnicity, than they are tied to geography. There are those who are motivated primarily by ideology, not materialism. Therefore, many people will encounter competing, and sometimes irreconcilable, beliefs causing them to act based on hierarchical value systems. That means the traditional notion of personal allegiance will be severely tested.

When considering national security, the implications of these supervening changes are enormous. The emergence of polymorphic threats will mandate highly flexible and innovative responses. Elements of SOF are uniquely capable of adapting to such threats. There is an immediate need to predict the additional skills that will be required and establish new training and education programs based on threat projections. Of major concern will be recruiting and retention of highly skilled SOF operators in an environment in which the nature of war is changing and their talents attractive to independent organizations.

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Dr. John Alexander has been a leading advocate for the development of non-lethal weapons since he created renewed interest in the field starting in 1989. An original thinker, he has developed other unique concepts for conflict resolution. In 2003 he served as a mentor to Afghan Ministry of Defense senior officials through the Office of Military Cooperation – Afghanistan, (Coalition Forces) Kabul.

He entered the US Army as a private in 1956 and rose through the ranks to sergeant first class, attended OCS, and was a colonel of Infantry in 1988 when he retired. During his varied career, he held many key positions in special operations, intelligence, and research and development. From 1966 through early 1969 he commanded Special Forces “A” Teams in Vietnam and Thailand. His last military assignment was as Director, Advanced System Concepts Office, US Army Laboratory Command. After retiring from the Army, Dr. Alexander joined Los Alamos National Laboratory where he was instrumental in developing the concept of Non-Lethal Defense. As a program manager, he conducted non-lethal warfare briefings at the highest levels of government including the White House Staff, National Security Council, Members of Congress, Director of Central Intelligence, and senior Defense officials. He also met with heads of industry, presented at academic institutions, including Columbia, Harvard and MIT, and recently addressed the German Bundestag.

Dr. Alexander organized and chaired six major conferences on non-lethal warfare and served as a US delegate to four NATO studies on the topic. As a member of the first Council on Foreign Relations non-lethal warfare study, he was instrumental in influencing the report that is credited with causing the Department of Defense to create a formal Non-Lethal Weapons Policy in July 1996. He was a distinguished guest lecturer at the US Air Force Air University. He has advised the CIA, US Special Operations Command, and the National Intelligence Council.

Dr. Alexander wrote the seminal material on non-lethal warfare. He published articles in Harvard International Review, Jane’s International Defense Review, The Boston Globe, The Futurist, The Washington Post, and several other journals. Articles about him and his work can be found in The Wall Street Journal, The New York Times, Newsweek, The Sunday Times (London), Panorama (Italy), Konrad

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Academically, he holds a M.A., Pepperdine University, Ph.D., Walden University, and later attended the Anderson School of Management at UCLA, the Sloan School of Management at MIT, and the Kennedy School of Government general officer program “National and International Security for Senior Executives” at Harvard University. In addition to many military awards for valor and service, Aviation Week & Space Technology selected him as a 1993 Aerospace Laureate and in 1997 inducted him into the Hall of Fame at the National Air and Space Museum in Washington. He received a Department of Energy Award of Excellence for the Nuclear Weapons Program in 1994, and is listed in Who’s Who in America, Who’s Who in Science and Engineering, American Men and Women of Science, and in 2001 was named to the OCS Hall of Fame at Ft. Benning, Georgia. During 2001 and 2002 he was a member of the National Research Council Committee for Assessment of Non-Lethal Weapons Science and Technology.

Currently he is a private consultant and Senior Fellow at the Joint Special Operations University. His books include, *The Warrior’s Edge*, Wm. Morrow, (1990) *Future War*, with foreword by Tom Clancy, St. Martin’s Press (1999), and the sequel, *Winning the War*, published August 2003.