

USAWC STRATEGY RESEARCH PROJECT

THE EVER-CHANGING CONTEXT OF WAR AND POWER: TOWARD THE RUBICON

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ABSTRACT

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Despite having the most powerful military in the world, the United States continues a kinetic fight with terrorists and insurgents in Iraq, Afghanistan and other ungoverned spaces. The global war on terrorism is beginning to exhaust both allies and the American public. The perilous risk of weapons of mass destruction/effects (WMD/E) remains a real threat. Technological transformation continues to be thought of as a panacea for smaller force structures to carry out network-centric wars. There is a desire to remove physical risk from the equation. The shifting sands of the world demographic composition along with a rise of sovereignty-free transnational actors, increasingly pressure nation-states and Westphalian principles. Ever since the Soviet Union's iron curtain melted under America's intense economic furnace, the United States has tested multiple national strategies but still struggles with the idea and definition of a grand strategy. The human dimensions of war grow more distant as the United States moves further toward a point of no return in the modality of war. The United States must move forward with a full debate (to include ethicality, need, risks, return and efficacy), on the primary, secondary and tertiary effects of our future technology decisions.

THE EVER-CHANGING CONTEXT OF WAR AND POWER: ADVANCING TOWARD THE RUBICON

We have a choice. There is an instrumentalist vision in the way many Americans look at war, one which has a long history – the “technicization” of the life world (including war) through instrumental reason. There is another vision we associated with the suicide bomber and postmodern terrorist: the sacralization of war, the privileging of the spirit and the attendant triumph of the will over the body. Both are extremes and we should fear a world in which either has won out...to surrender responsibility to computers with artificial intelligence who would feel no guilt, no remorse for their actions, or to autonomous weapons systems with no concept of loss, would be to compromise the human dimension of war.

—Christopher Coker¹
The Future of War (2004)

Throughout the course of human history, one thing has remained constant ever since the dawn of man: the human component of war. The Biblical account of when Cain slew Abel demonstrates the enmity between men; the irreconcilable factiousness of the human condition. Modes and methods of warfare have progressed to a point of inflection. We are now standing on a precipice that may revolutionize our future and move warfare into new domains of war. Victory in the race to remove the human dimension of war may have unalterable consequences.

Despite having the most powerful military in the world, the United States continues a kinetic fight with terrorists and insurgents in Iraq, Afghanistan and other ungoverned spaces. The global war on terrorism is beginning to exhaust both allies and the American public. The perilous risk of weapons of mass destruction/effects (WMD/E) remains a real threat. Technological transformation continues to be thought of as a panacea for smaller force structures to carry out network-centric wars. There is a desire to remove physical risk from the equation. The shifting sands of the world demographic composition along with a rise of sovereignty-free transnational actors, increasingly pressure nation-states and Westphalian principles. Ever since the Soviet Union’s iron curtain melted under America’s intense economic furnace, the United States has tested multiple national strategies but still struggles with the idea and definition of a grand strategy. The human dimensions of war grow more distant as the United States moves further toward a point of no return in the modality of war. To understand the future operational environment, a critical discussion of what will impact that environment, including the critical elements of national power, fundamental nature of war, definition of victory, future warfare capabilities and core strategic implications must be examined.

Shape of the World

According to Thomas L. Friedman, the world is flat or at least heading in that direction.² Friedman contends that the convergence of technology metaphorically shrinks the world.³ Specifically Friedman explains:

The net result of this convergence was the creation of a global, Web-enabled playing field that allows for multiple forms of collaboration – the sharing of knowledge and work – in real time, without regard to geography, distance, or in the near future, even language...That is what I mean when I say the world has been flattened.⁴

Friedman is energized about his discovery of a flat world and subsequently identifies ten forces that create a global convergence including: the collapse of the Berlin wall, the creation of the Netscape browser, workflow software, open-sourcing, outsourcing, off-shoring, supply-chaining, in-sourcing, in-forming along with tools he terms “the steroids”, meaning digital, mobile, personal and virtual devices.⁵ The main thread of Friedman’s flat world is technology. His examples are relevant; unwavering optimism abounds. A pervasive, technology driven utopia, with a panoply of options is just around the corner.

However, a recent poll by Park Associates determined that 29% of American households (31million) have no access to the internet.⁶ The main cause of this lack of interest is not economic, but a low perceived value of the Internet.⁷ Branko Milanovic in his book, "Worlds Apart" determined that of the 22 nations identified during the 1960s as "contenders,"⁸ more than 90 percent ended up regressing deeper into poverty.⁹ Additionally, measures of the American middle class show a shrinkage and greater disparity between the wealthiest and poorest in the nation.¹⁰ Even Friedman makes a confession that “...there are hundreds of millions of people on this planet who have been left behind by the flattening process or feel overwhelmed by it, some of them have enough access to flattening tools to use them [the tools] against the system.”¹¹ This creates a scenario whereby non-state actors have access to the same technology as superpower nations. The flat earth becomes a world where modern society could indeed sail over the edge. It is debatable whether the world will metamorphize into the flatness Friedman describes. What is apparent is that the fuel driving the flattening forces comes from one main source: economic power.

The main engine that underpins the United States global power has been economic. Economic power has allowed a proliferation of power in other areas, such as informational, diplomatic, and military. The function of the economy is so critical to national power that, without it, the United States would in all likelihood cease to be classified as the world’s only superpower.

The idea of globalization is that countries will be led by commerce and corporations, essentially creating an economic kingdom.¹² The force of globalism, through trade, deregulation and privatization would weaken the ability for nation-states to act independently, resulting in transnational corporations filling the void.¹³ Even Jagdish Bhagwati, a defender of globalism, is concerned with "...the possibility that multinationals have, through their interest driven lobbying, helped set the rules in world trading, intellectual property, aid, and other regimes that are occasionally harmful to the interests of the poor countries."¹⁴

In the globalist's world, markets drive policy and technological breakthroughs increases wealth and security. Consumerism metaphorically takes the place of the military with consumers being the foot soldiers of a new economic army. The economy is so important, that it was highlighted on September 21, 2001 when President Bush's address to a joint session of Congress included a plea for "...continued participation and confidence in the American economy. Terrorists attacked a symbol of American prosperity; they did not touch its source."¹⁵ There were no calls to ration, collect scrap metal or create "I want you" posters. It seems incongruous that the most effective way American citizens could support the United States and defeat the terrorists was to "buy something". However, the president recognized a major source of American power is economic. The United States has an abundance of goods, services and capital flowing from other nations due to globalization, international trade and a robust economy. An interruption or breakdown of the global economy continues to be a threat to the nation as well as stability in the world. Economic warfare can be as deadly to the enemy as kinetic operations. For example, siege warfare could conceivably force surrender without casualties and today's siege warfare can be considered economic sanctions.

Leaders must keep in mind the economic foundation of society and how important this is to all levers of national power. The rise of economic globalization that underpins modern civilization moves the idea of warfare beyond the bloody conflicts of the past into a new way of classifying power and control.

Nature of War

War: Control and Power

War is about control. In order to execute control, power must be present. Power comes in many forms that can be generally categorized as soft or hard. Hard power is classified as military and economic with political power an extension of the hard power.¹⁶ Soft power can be described as attractiveness of culture, the strength of an ideology, and willingness to adopt those ideals or to follow them because of moral authority.¹⁷ T. Lindsay Moore describes political

power as resources, instruments and purposes. Resources are energy, matter and information; instruments are force, bribery and fraud; and purposes are creative or reproductive.¹⁸ While the definition of power can be broken into different categories, the source of power is tied directly to the amount and quality of resources, instruments or purposes available. Finally, power can only control that which can be moved or changed, whether that movement is physical, psychological or ideological.¹⁹

Clausewitz defines war as "...an act of force to compel our enemy to do our will", specifically defining force as physical force.²⁰ The Merriam-Webster dictionary defines two distinct definitions of war. The first aligns with a traditional definition of war; "A state of usually open and declared armed hostile conflict between states or nations." The second definition is broader and could be used to define the competitive nature inherent with companies in a capitalist society; "A struggle or competition between opposing forces or for a particular end."²¹ All the above definitions can be used to describe war, but may not fundamentally be a completed description. Since war is about control, and power is necessary to wage war, these factors must be included in a comprehensive description of war. Therefore, a new proposed comprehensive definition of war follows:

War is a deliberate use of power meant to reduce or eliminate an enemy's source of power in order to produce a favorable change in the opposition's control structure (governance and policy).

War must have an attack, but the attack may not necessarily be kinetic. The attack could include economic sanctions and blockades, psychological manipulation or cyber-warfare. Clausewitz's assumption of forcing an enemy "to do our will" may be lacking in this era given the nature of warfare and its uncertain outcome.²² There are many outcomes that could cause a favorable change in an enemy's control structure that may not align with a pre-war articulated outcome. In reality, war forces the enemy to change; almost always in ways that are not foreseeable prior to the start of war operations. Clausewitz even describes war as a game of chance, specifically referring to it as a game of cards.²³ Therefore, the dichotomy that Clausewitz's presents is this: If war is a game of chance, how can one force an enemy to do our will with any precision?

New Ways, Means and Ends to Power and Control

Clausewitz contends that war is merely a continuation of policy by other means.²⁴ If you consider that policy is the method of control, then his statement is partially correct. However, political aims, and the actual process of carrying out policies, are a way to govern and therefore control. Martin Van Creveld logically points out that the trinitarian war model is deficient by

classifying a number of nonpolitical motives for war including: justice, religion, and existence.²⁵ Each of these motives has one underlying root motive: control. As described, power is necessary for control and political power (or policy) stems from hard or soft power. Without power, control is not possible. Therefore, war becomes a way to control and eventually implement a particular policy or impose a specific objective. While this might seem to be in alignment with Clausewitz's theory, the rise of sovereignty-free actors²⁶ that are part of an ideological entity has called the entire theory of trinitarian warfare into question.²⁷

There are other factors at work that can undermine the premise of the trinitarian nature of nation states. Multi-national corporations control a significant portion of the economy. Special interest control much of the input to governmental institutions and mass media moves, shakes and pervades society in ways to shape public perception. There is tremendous power inherent in the corporate world, lobbying groups and media. These factors have fundamentally changed the gravitational center of the trinitarian construct for nation-states and state centric warfare understood during Clausewitz's age.

The idea of governmental policy leading to war must also be reviewed based on the current alignment of the world's power bases. Non-state actors may or may not have a stated policy, but control or methods leading to their desire to eliminate the enemy's power, to create a vacuum that the non-state actor will fill, are almost always present. In the past ten years, the great majority of wars have involved non-state actors.²⁸ The trinitarian construct of warfare did not exist during the vast majority of these wars or it existed on only one side.²⁹ So not only do we have a power concentration that moves nations beyond the classic trinity to a multifaceted concentration of power, but we also have non-state actors that are beyond the bounds of being checked and wholly non-trinitarian in nature.

Transnational Power Leverages Modernity

Looking at the alignment of power, there has been a shift from wars between nation-states to wars between sovereignty-free actors and nation-states.³⁰ James Roseneau points to the duality of world politics: An autonomous multi-centric world composed of non-state (sovereignty-free) actors now coexists and struggles with the nation-state world.³¹ The paradox of the modern state is that all advances in technology and efficiencies can be used against that state.³² Friedman's "flattening tools" might be used to actually level versus metaphorically flatten the world. For example, Al Qaeda not only hijacked commercial airliners, they effectively used the United States transportation system to destroy the World Trade Center buildings, attack the pentagon and force flight 93 down in western Pennsylvania.³³ One can envision cyber attackers

hijacking computer networks and causing similar or more devastating outcomes for the modern state. The implication of this new type of war is not negligible, as the cost of cyber defense continues to rise. The total cost of servicing cyber-warfare incidents world wide exceeded \$20 billion in 1999 according to mi2g's Security Intelligence Products & Systems (SIPS) division.³⁴ The high availability of internet-based, low cost cyber-weapons that can target information systems is a threat to the economic stability of modern societies.³⁵ As the state automates more processes, it hands over control of that process to technology, and makes it easier for an individual or small group to seize control of critical processes that impact large populations.³⁶ Asymmetric warfare attempts to use aspects of a modern society that have traditionally been assumed to be sources of power.³⁷ From a Westphalian nation-state point of view, these ideological entities are criminal because they do not conform to international standards and laws.³⁸

The near real-time communications and data systems allow ideological entities to form en-masse across multiple nation-states. The non-state actor is, for the most part, an ideological entity. Ideological entities can include a wide range of organizations with some core principle that unites them. Criminal organizations, religious sects, environmental groups, non-governmental organizations and anti-globalizationists can all be considered an ideological entity. For example, Aum Shinrikyo emphasizes the imminence of the end of the world and stated that the United States will initiate Armageddon by starting World War III with Japan.³⁹ On March 20, 1995, members of the Aum Shinrikyo cult released Sarin, a deadly nerve agent, in the Tokyo subway system killing 12 people, injuring 3,800 with 1,000 actually requiring hospitalization.⁴⁰ Aum Shinrikyo's "Supreme Truth Sect" is certainly an extreme position and it is difficult to conceive negotiations with them.

Victory Defined

Is Victory Still an option?

What is victory and why has it been so hard for nation-states to declare victory since World War II? The Korean War is still unresolved and the war in Iraq could be considered a continuation of the Persian Gulf War. Even World War II could be considered a continuation of World War I. The Merriman-Webster dictionary defines victory as "the overcoming of an enemy or antagonist" or "achievement of mastery or success in a struggle or endeavor against odds or difficulties".⁴¹ Clausewitz points out that victory is not possible in every war but often victory has a culminating point.⁴² He also portends that victory results from the superiority of one side, from a greater physical and psychological strength.⁴³ Does the proposed demise of trinitarian warfare

also mean an end to true victory? In the past, true victory was relatively simple. Destroy your adversaries' military, kill their leaders, enslave their people and take their land. Victory was fairly easy to declare. The modern view of victory is much more complex. For example, victory in Iraq is defined as:⁴⁴

- Short term, Iraq is making steady progress in fighting terrorists, meeting political milestones, building democratic institutions, and standing up security forces.
- Medium term, Iraq is in the lead defeating terrorists and providing its own security, with a fully constitutional government in place, and on its way to achieving its economic potential.
- Longer term, Iraq is peaceful, united, stable, and secure, well integrated into the international community, and a full partner in the global war on terrorism.

While these goals seem laudable, they are extremely complex; almost to the point of being indeterminate. Who will declare when Iraq is peaceful, united, stable, and secure, so that at the end can the United States proclaim "We are victorious"? Or does the United States sequentially claim victory at the short, medium and longer term when the proper end state of each term is achieved?

Victory in Defeat

Non-state actors claim victory from manipulation of the information environment. Norman Emery and Rob Earl state: "Terrorists act in the physical environment, not to make tactical gains in the physical environment, but to wage strategic battle in the information environment; therefore the physical environment enables many of the activities in the information environment to occur."⁴⁵ Trinitarian states are bounded by the government, military and the will of the people, but the non-state adversary has no such bound and can claim victory by not losing. During the recent war between Hezbollah and the Israeli Defense Force, Hezbollah claimed victory. As Ralph Peters assessed, "All Hezbollah has to do to achieve victory is not to lose completely. But for Israel to emerge the acknowledged winner, it has to shatter Hezbollah."⁴⁶

The National Security Council's strategic vision for winning the war on terror includes:

To win the War on Terror, the United States will continue to lead an expansive international effort to:

- Defeat violent extremism as a threat to our way of life as a free and open society.
- Create a global environment inhospitable to violent extremists and their supporters.⁴⁷

What are the measures of effectiveness that will allow victory in the global war on terror? Given the human condition, can this war ever be won? The non-state actor depends on

coercing the nation-states will to force a change in their governance or control structure. With this in mind, the sovereignty free, transnational, asymmetric threat is at an extreme advantage when it comes to options. By using the power of terror tactics, they can force a nation into changing its governance or control structure, thereby achieving victory. The most recent example of this was the impact on the Spanish election following the bombing of Madrid commuter trains that killed 201 people and wounded more than 1600.⁴⁸ James Phillips concluded that the bombings have had a major political impact, propelling the opposition Socialist Party to an upset victory over the conservative government of Prime Minister Jose Maria Aznar, a staunch U.S. ally, in the general elections held three days later.⁴⁹ As a direct result of the bombings, Aznar's government was swept out of office by a voter backlash.⁵⁰ The non-state actor is unbounded by social norms and can attack any part of the nation-state (government, military, national will, corporations, media or infrastructure), without fear of any encumbrance. There is little or no check on the power of the asymmetric warrior.

Linking Ends to Ways and Means

Steven Metz pointed out prior to the September 11 terrorist attacks and subsequent wars in Iraq and Afghanistan that "current American thinking is based on the idea that if war becomes necessary, the preferred method is a quick resolution using cutting-edge, rapidly deployable forces and precision strikes against key targets."⁵¹ Metz went on to say that "Long wars are simply considered inconceivable. This is a potential problem."⁵² Metz's analysis is exceptionally prescient and further magnifies the lack of forethought in linking the ends to the ways and means. Without a logical link, America is unable to declare some measure of victory. The inability to solve the formula of ways, means and ends shifts strategic leaders into uncomfortable territory. The shift suppresses creative planning and invites reactive strategy development. A reactive strategy leads to a desire for even newer technology to combat the current threat. Technological progress ultimately becomes a catalyst to sustain the never ending search for the penultimate "silver bullet". To fight this transnational adversary, the United States continues to look toward machines and technology for a solution, rather than a human dimension.

Future of Warfare

The techno-mechanical effect

Envision a future war with fully mechanized armies, unmanned aerial vehicles (UAVs), unmanned surface vehicles (USVs), robotic warriors and unmanned tanks. Instead of a human

soldier kicking in a door, a remotely controlled robot, manned by personnel miles away from the battlefield accomplishes the mission with greater speed, more lethality, and better defenses. In this scenario, there is no chance of human casualties. Removal of the human element is already underway. For example, STAR 21, an Army study of 21st-century needs, speculated that unmanned systems will become pervasive on the land battlefield.⁵³ Semi-autonomous surface platforms are already in testing. The United States Navy began demonstrations of the Protector in late 2006. The Protector is a remote controlled USV that is equipped with a stabilized mini-Typhoon weapon system (MK 49, Mod 0), cameras, radar equipment and electro-optics.⁵⁴ In fact, the U.S. Navy and most allies already have an autonomous weapon system called Phalanx. The MK-15 Phalanx close-in weapons system (CIWS) can search, detect, track, lock-on, and engage targets such as missiles, aircraft and even small surface contacts without human intervention (if set in the “full auto” mode.)⁵⁵ Incredibly, this system was first tested and fielded over 20 years ago.⁵⁶ The autonomous mode has safeguards built in based on criteria such as closing velocity, but the system takes the human decision-making out of the loop. The newest version, SeaRAM, will combine the “fire and forget” infrared seeking rolling airframe missile (RAM) system with the Phalanx fire control system.⁵⁷ The Army is also looking at a Phalanx’s type capability for land use in their counter-rocket, artillery, mortar (C-RAM) program.⁵⁸ Although Phalanx is advertised as a self-defense weapon, making this an offensive weapon would only require a change in tactics.⁵⁹ Will these continued advancements obviate the need for nation-states to conduct warfare with one another or just remove the human dimension?

An “Event Horizon” in Warfare⁶⁰

Thomas Adams surmised in his article “Future Warfare and the Decline of Human Decisionmaking” that direct human participation in warfare will become rare, but since wars are a human phenomenon, intimate human participation is necessary.⁶¹ Without it, the whole exercise becomes pointless.⁶² Clausewitz claims that war is an act of human intercourse which is resolved through bloodshed; this is the main difference between other conflicts.⁶³ However, the nations of the world have been moving toward a cleaner, more efficient method of resolving conflicts, even when war is used as a method of last resort.

Civilized nations generally view war as barbaric and wince at the sight of war’s ugliness. If we remove the bloodshed from view and sanitize the whole nature of warfare, some ominous scenarios may arise. Who or what will decide the target list and how will new capabilities, such as autonomous weapons, permeate into society? Project Alpha, a U.S. Joint Forces Command

rapid idea analysis group, is studying unmanned systems on the battlefield.⁶⁴ Alpha's study "Unmanned Effects: Taking the Human out of the Loop," postulates that robots will be a mainstream component of the battlefield by 2025.⁶⁵ These robots, or tactical autonomous combatants (TAC), would include the ability to work in the ground, air, space, or undersea environments, and in harsh conditions such as chemical, biological, radiological and extreme heat and cold.⁶⁶ Much of this sounds like a science fiction movie, but even more astonishing is where some of the ideas germinate. Major Greg Heines, a Marine attached to the Dragon Runner military robot project, confesses: "We modeled the controller after the Play Station 2 [controller] because, that is what these 18 and 19 year-old marines have been playing with pretty much all of their lives."⁶⁷ With the video-centric interface view and sanitization of war, we can expect extremes. These extremes will be more bloody conflicts with greater more efficient means of killing combined with less human interaction at the interface of war. This means that those wielding the techno-mechanical power will be miles away from a truly bloody battle. However, for those that are caught on the battlefield, the mode, method and preciseness of killing will be almost unimaginable. Finally, will those wielding the power fully understand the consequences, or will this be just another video game?

Non-lethal Control: The Ultimate Weapon

John Alexander in "Future War" stated: "There is a shift from bipolar confrontations where national survival was at stake to a geopolitically complex world."⁶⁸ Alexander proposes that non-lethal weapons will have an impact since "imposition of will", not physical destruction, is the appropriate measure of success.⁶⁹ The proposed definition of war includes control, and non-lethal means are indeed a method of control. Non-lethal methods arose from law enforcement tactics that needed minimum force to restrain (control) assailants.⁷⁰ The United States has already developed a non-lethal electromagnetic directed energy weapon, termed the vehicle mounted active denial system (VMADS).⁷¹ This system uses part of the electromagnetic spectrum to penetrate the skin and make the water molecules vibrate, thereby causing heat and extreme discomfort.⁷²

Think of a world with non-lethal methods taken to extreme, such as mind control devices or targeted genetic weapons. Even though the enemy would still be living, these devices might enable control over an entire population. We may even theorize that jihadist-salafism⁷³ is a rudimentary form of mind control, but it is definitely not non-lethal in execution. Jihadist-salafism is "...respect for the sacred texts in their most literal form with an absolute commitment to jihad."⁷⁴ Jihadist-salafism seeks to convert all Muslims to their view and to insure that its own

version of Islam will dominate the world.⁷⁵ What if a precision mind control weapon could be developed? Would this be used for more than just waging war?

Strategic Implications

Strategy: Self Evident but Evasive

The gulf between national interests and the National Security Strategy (NSS) of the United States appears to grow wider each year. There is no formal documented list of national interests, although many of them appear in the National Security Strategy (NSS). No discourse on war, power, control and future combat would be complete without strategy. Strategy makes static documents come to life, guides plans into motion and provides a roadmap for an otherwise directionless force.

Clausewitz states that “Strategy is the use of an engagement for the purpose of war.”⁷⁶ Clausewitz confines his definition of strategy to wars objectives, but does state that “It used to be the custom to settle strategy in the capital....” and this works “...only if the government stays close to the army.”⁷⁷ Sir Basil Henry Liddell Hart opines that Clausewitz has too narrow a definition and that it intrudes on policy.⁷⁸ Liddell Hart defines strategy as “...the art of distributing and applying military means to fulfill the ends of policy,” and that grand strategy should “...coordinate and direct all the resources of a nation, or band of nations, towards the attainment of the political object of the war – the goal defined by fundamental policy.”⁷⁹ On the other hand Richard Betts postulates that:

The notion that effective strategy must be an illusion emerges cumulatively from arguments that: strategies cannot be evaluated because there are no agreed criteria for which are good or bad; there is little demonstrable relationship between strategies and outcomes in war; good strategies can seldom be formulated because of policymakers’ biases; if good strategies are formulated, they cannot be executed because of organizations’ limitations.⁸⁰

Finally, Colin Gray adapts Clausewitz definition by stating strategy is “...the use that is made of force and the threat of force for the ends of policy.”⁸¹ Each of the definitions above deals with strategy and its relationship with war with a particular emphasis on Westphalian nation-states. Sun Tzu describes different types of strategies such as “...what is of supreme importance in war is to attack the enemy’s strategy,” and “Attack cities when there is no alternative;”⁸² but does not provide a definition of strategy. To Sun Tzu, strategy is self-evident. None of the definitions dealt with thus far account for efficiency or effectiveness. The U.S. Army War College defines strategy in two ways; “Conceptually, we define strategy as the relationship among ends, ways and means” and “the skillful formulation, coordination and application of the

ends (objectives), ways (courses of action) and means (supporting resources) to promote and defend the national interests.”⁸³

Think of strategy as the roadmap for determining how an entity gets from the present condition (as-is) to a future state (to-be). In this context, a new proposed definition becomes:

Strategy is the functional framework that enables a feasible transition from the current present state to the desired future state.

Therefore, optimal strategy is: The most efficient and effective functional framework that enables (means) a feasible transition (way) from the current state (present) to the desired future state (ends or objectives). However, strategic objectives become difficult given the number of independent variables. Uncertainty abounds and unless Asimov’s Psychohistory⁸⁴ is invented, strategic leaders will need to deal with all the variables and uncertainties. These unknowns do not obviate the need for strategic guidance and vision.

Need for Grand Strategy

Grand strategy becomes a vision for the future. John Kotter explains that “Vision refers to a picture of the future with some implicit or explicit commentary on why people should strive to create that future.”⁸⁵ If we can use vision as an archetype, then a grand strategy can link the national interests to the lower level strategies and motivate individuals to strive for that desired future state. Another aspect of a grand strategy is that it must be lasting in order to withstand political maelstroms. An excellent example of a grand strategy is found in the Declaration of Independence:

That these united Colonies are, and of Right ought to be Free and Independent States, that they are absolved from all Allegiance to the British Crown, and that all political connection between them and the State of Great Britain, is and ought to be totally dissolved; and that as Free and Independent States, they have full Power to levy War, conclude Peace contract Alliances, establish Commerce, and to do all other Acts and Things which Independent States may of right do.⁸⁶

This statement provided a vision for the future; a grand strategy. It describes the want, will and hope of the leaders and their populace who are committed to breaking free from oppression and forming the United States. Now that the vision is realized, a new grand strategy becomes necessary. One could make the argument that the president’s state of the union speech provides this vision. However, given the political climate recently, consensus with the objectives outlined is unlikely and it is certainly not enduring. So even if a “good” grand strategy is developed, would the United States be able to execute it? Could there be a general consensus, or as Betts postulates, would the policy makers’ bias and organizational limitations make strategy an illusion?⁸⁷

Even if a grand strategy is not agreed upon, the intentions, functional framework and outcomes viewed through the lenses of history identify a default American grand strategy, even without one actually existing. Creating a grand strategy and providing a vision for the future will not ensure success. However, without a grand strategy, the ship-of-state may end up straying into dangerous waters.

Most citizens of the United States would be uncomfortable viewing their country as an imperial power. However, a majority of citizens view the United States as imperialist. According to a 2003 Zogby poll, Americans feel that their country is an imperialist power that acts on its own, regardless of world opinion.⁸⁸ Nearly three in five (59%) say this statement is somewhat or very accurate, while two in five (40%) disagree.⁸⁹ Imperialism is a form of isolationism, where the demand for absolute undefiled security at home leads one to conquer the world.⁹⁰ The United States has not conquered the world by military force, although military force is definitely an element of nation power that keeps other countries from acting. The major force of domination has been economic. Is imperialism what the leaders and people of the United States want as a desired end state or is it just grand strategy by non-decision?

Conclusions

Strategic leaders, both civilian and military, must recognize the elements of national power and be able to dispense with pre-conceived ideas regarding the endurance of power. As a nation, the United States must come to grips with the reality that the status quo of America's power may not continue. Our steps must be measured as we explore autonomous systems, non-lethal weapons or even artificial intelligence. Just because we can, does not necessarily mean we should.

Control is the root cause of war, with power being the energy for imposing control. The United States main source of power is economic and instead of well devised strategy, many leaders rely on the techno-mechanical silver bullet. Because of this, future warfare raises some ominous scenarios, almost unfathomable in scope. The nature and context of warfare is ever-changing, especially given the rise of non-state actors supporting an ideological entity. Understanding non-state actors and discovering ways to defend against, counter or eliminate motivating factors is a difficult challenge that awaits a solution. Victory has become more complex, harder to understand and more difficult to attain. Much of what victory was based on is not part of the present paradigm. The change in victory's definition is a fleeting indicator of an uneasy future. The paradox is this: wars may have fewer physical casualties, but the modes and methods used in battle will continue to get more accurate and awesome. Many conflicts may

end unresolved, planting the seeds of future confrontations. Finally, future warfare may be fought in a non-physical manner, such as with cyber, non-lethal or even economic warfare, yet still cause a devastating effect to civilization. If we encounter a catastrophic chain of events due to technological progress that significantly alters modern society will we use Cain's excuse of "I know not: Am I my brother's keeper?"⁹¹ If we continue marching toward removing the human experience from war, without recognizing the consequences, the lines of *jus in bello* will continue to blur. The United States must move forward with a full debate (to include ethicality, need, risks, return and efficacy), on the primary, secondary and tertiary effects of our future technology decisions. Technological progress must continue, but only with the direction fully understood and reconciled with a future vision. To that end, the United States should develop an enduring grand strategy to guide those decisions; to do otherwise would be irresponsible and unwise.

Endnotes

¹ Christopher Coker, *The Future of War* (Oxford, UK: Blackwell Publishing, 2004), 142.

² Thomas L. Friedman, *The World is Flat* (New York: Farrar, Straus and Giroux, 2005), 5.

³ *Ibid.*, 173-200.

⁴ *Ibid.*, 176-177.

⁵ *Ibid.*, 3-173.

⁶ Park Associates, "Offline Americans see Internet of Little Value," 22 March 2007, available from http://www.parksassociates.com/press/press_releases/2007/nat_scan1.html; Internet; accessed 23 March 2007.

⁷ *Ibid.*

⁸ Contenders mean they had a chance within a generation to join the group of rich nations. Between 1982 and 2000, un-weighted international inequality increased, i.e. countries diverged in their economic performance, with poor countries doing on average less well than the rich. One interesting way of looking at events is to classify countries in terms of wealth (i.e. GDP per capita) and compare how they fared between 1960 and 2000. Milanovic divides countries into four groups in 1960: 41 rich countries (all at least as rich as the poorest country in Western Europe), 22 contenders (no more than a third below this poorest Western European country, and so within striking distance of joining the rich), 39 in the Third World (between one-third and two-thirds as well off as this same poorest Western European country), and 25 in the Fourth World (GDP per capita less than one third of the poorest country in Western Europe).

⁹ David Rothkopf, "Pain in the Middle," *Newsweek Online*, 21 November 2005; available from <http://www.msnbc.msn.com/id/10019816/site/newsweek/>; Internet; accessed 4 March 2007.

¹⁰ Nancy Birdsall, Carol Graham, and Stefano Pettinato, "Stuck In The Tunnel: Is Globalization Muddling The Middle Class?," 5; available from <http://www.brookings.edu/ES/dynamics/papers/middleclass/midclass.pdf>; Internet; accessed 3 February 2007.

¹¹ Friedman, 375.

¹² John Ralston Saul, *The Collapse of Globalism* (Woodstock, NY: Overlook Press, 2005), 55-88.

¹³ Saul, 81.

¹⁴ Saul, 82. Saul is commenting on Jadish Bhagwati, *In Defense of Globalism* (New York: Oxford University Press, 2004), 14.

¹⁵ George W. Bush, "Address to a Joint Session of Congress and the American People" 22 September 2001; available from "<http://www.whitehouse.gov/news/releases/2001/09/20010920-8.html>"; Internet; accessed 14 January 2007.

¹⁶ Alvin Powell, "Paradox of American Power" *Harvard University Gazette Archives*, February 2002; available from <http://www.hno.harvard.edu/gazette/2002/02.21/11-nye.html>; Internet; accessed 15 January 2007.

¹⁷ Ibid.

¹⁸ T. Lindsey Moore, "The Structure of War: Early Fourth Epoch War Research," in *Non-State Threats and Future Wars*, ed. Robert J. Bunker (Portland, OR: Frank Cass and Company, 2003), 160.

¹⁹ Georg Simmel "Superiority and Subordination as Subject matter of Sociology I" *American Journal of Sociology* 2, no. 2 (1896), 170; available from <http://www.jstor.org/view/00029602/dm992144/99p0104q/3?>; Internet; accessed 15 March 2007. Simmel states that "The reciprocal influence is rather the same as that between a man and a lifeless external object with which the former performs an act for his own use. That is, the person acts upon the object in order that the latter may react upon himself. In this reaction of the object no spontaneity on the part of the object is to be observed, but merely the further operation of the spontaneity of the person. Such an extreme case of superiority and inferiority will scarcely occur among human beings. Rather will a certain measure of independence, a certain direction of the relation proceed also from the self-will and the character of the subordinate." This concept also relates to physics. Power involves a physical movement or energy transfer. Power (watts) is equal to energy over time. Therefore with no transfer of energy, no power is derived. Power is also equal to voltage multiplied by current, therefore with no flow of current, power goes to zero. Power is also related to force multiplied by velocity. If the force acts on an object, but it does not move, no work is done and any power exerted dissipates normally as heat through friction. The principal is that if the entity/object being controlled can not be moved or changed, the power is zero and therefore is ineffective.

²⁰ Carl Von Clausewitz, *On War* (Princeton, NJ: Princeton University Press, 1976), 75.

²¹ *Meriam-Webster Online Dictionary*; available from <http://www.meriam-webster.com/dictionary/war>; Internet: accessed 10 September 2006.

²² Clausewitz, 75.

²³ *Ibid.*, 83-84.

²⁴ *Ibid.*

²⁵ Martin Van Creveld, *The Transformation of War* (New York: The Free Press, 1991), 124-156.

²⁶ James N. Rosenau, *Turbulence in World Politics: A Theory of Change and Continuity* (Princeton, NJ: Princeton University Press, 1989), 247-253. Rosenau points out that although they are located within the jurisdiction of states, the sovereignty-free or non-state actors of the multi-centric world are able to evade the constraints of states and pursue their own goals. Any adherence to state-centric rules or laws is mostly formalistic.

²⁷ Martin Van Creveld, "The Transformation of War Revisited," in *Bunker*, 7-8.

²⁸ *Ibid.*, 2-10.

²⁹ *Ibid.*, 8.

³⁰ *Ibid.*, 7-8.

³¹ Rosenau, 247.

³² Phil Williams, "Preface: New Context, Smart Enemies," in *Bunker*, xi.

³³ *Ibid.*

³⁴ *Mi2g website*, available from www.mi2g.com/cgi/mi2g/press/260799.php; Internet; accessed 19 September 2006.

³⁵ Kenneth J. Knapp and William R. Boulton, "Cyber-warfare threatens corporations: expansion into commercial environments," www.ism-journal.com, Spring 2006 [journal online]; available from <http://www.infosectoday.com/Articles/cyberwarfare.pdf>; Internet; accessed 3 February 2007.

³⁶ *Bunker*, xi.

³⁷ *Ibid.*

³⁸ *Ibid.*, xxi.

³⁹ United States Department of State "List of Foreign Terrorist Organizations," available from <http://www.state.gov/documents/organization/45323.pdf>; Internet; accessed 21 September 2006.

⁴⁰ Kyle B. Olson, "Aum Shinrikyo: Once and Future Threat?" *Emerging Infectious Diseases* 5, (July-August 1999), 513.

⁴¹ *Meriam-Webster Online Dictionary*; available from <http://www.meriam-webster.com/dictionary/victory>; Internet; accessed 22 September 2006.

⁴² Clausewitz, 566.

⁴³ *Ibid.*

⁴⁴ National Security Council, *National Strategy for Victory in Iraq* (Washington D.C.: The White House, November 2005), 3; Internet; available from http://www.whitehouse.gov/infocus/iraq/iraq_national_strategy_20051130.pdf; Internet; accessed 23 September 2006.

⁴⁵ Rob Earl and Norman Emery, *Terrorist Approach to Information Operations* (Monterey, CA: Naval Postgraduate School, 2003), 44.

⁴⁶ Ralph Peters, "Can Israel Win?," *New York Post*, July 22, 2006; available from http://www.nypost.com/postopinion/opedcolumnists/can_israel_win__opedcolumnists_ralph_peters.htm; Internet; accessed 23 September 2006.

⁴⁷ National Security Council, *National Strategy for Combating Terrorism*. (Washington, D.C.: The White House, September 2006, 7; available from: <http://www.whitehouse.gov/nsc/nsct/2006/nsct2006.pdf>; Internet; accessed 24 September 2006.

⁴⁸ James A. Phillips, "Spain's Retreat after the Madrid Bombings Rewards Terrorism," 16 March 2004; available from <http://www.heritage.org/Research/Europe/wm448.cfm>; Internet; accessed 17 September 2006.

⁴⁹ *Ibid.*

⁵⁰ *Ibid.*

⁵¹ Steven Metz, "Armed Conflict in the 21st Century: The Information Revolution and Post Modern Warfare" (Carlisle PA: Strategic Studies Institute, U.S. Army War College), 87-88.

⁵² *Ibid.*

⁵³ U.S. Department of the Army, *STAR 21: Strategic Technologies for the Army of the 21st Century* (Washington DC: National Academy Press, 1996), Introduction.

⁵⁴ BAE Systems, "Protector unmanned surface vehicle demonstrated to U.S. Navy and coast guard for force protection press release," 16 August 2006; available from http://www.baesystems.com/Newsroom/NewsReleases/2006/press_16082006.html; Internet; accessed 22 September 2006.

⁵⁵ Jay Johnson, 1998 Program Guide to the U.S. Navy (Washington, DC: Chief of Naval Operations), 9; available from <http://www.navy.mil/navydata/policy/vision/vis98/vis-p09.html>; Internet; accessed 27 March 2007.

⁵⁶ *Ibid.*

⁵⁷ Raytheon, "SeaRAM Ship Defense Brochure," available from http://www.raytheon.com/products/stellent/groups/public/documents/content/cms01_055726.pdf; Internet; accessed 29 March 2007, 1-2.

⁵⁸ Northrop Grumman, "Northrop Grumman Integrating, Fielding Counter-Mortar Capability press release," available from http://www.irconnect.com/noc/press/pages/news_releases.mhtml?d=88354; Internet; accessed 29 March 2007.

⁵⁹ Raytheon, 1.

⁶⁰ The boundary or "point of no return" of a black hole. Nothing -- neither particles nor photons (i.e., electromagnetic radiation) -- can escape from inside the event horizon. To escape would require a speed greater than that of light, which is not allowed; available from http://observe.arc.nasa.gov/nasa/space/stellardeath/stellardeath_6.html; Internet; accessed 10 March 2007.

⁶¹ Thomas K. Adams, "Future Warfare and the Decline of Human Decisionmaking," *Parameters* 31 (Winter 2001-02): 57-71.

⁶² *Ibid.*

⁶³ Clausewitz, 149.

⁶⁴ Ron Schafer, "Robotics to Play Major Role in Future Warfighting," 29 July 2003; available from <http://www.jfcom.mil/newslink/storyarchive/2003/pa072903.htm>; Internet; accessed 28 March 2007.

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*

⁶⁷ Stephen Graham, "America's Robot Army," *New Statesman*, 12 June 2006, 15. Major Greg Heines' roll on the project was clarified by Paul Eng, A Small Rolling Spy for the Marines, *ABC News online*, 24 May 2006; available from <http://abcnews.go.com/Technology/CuttingEdge/story?id=97990&page=1>, accessed 27 March 2007.

⁶⁸ John B. Alexander, *Future War* (New York: St. Martin's Press, 1999), 11-14

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*, 13.

⁷¹ Nike Lewer, ed., *The Future of Non-Lethal Weapons* (Portland, OR: Frank Cass Publishers, 2002), 3.

⁷² *Ibid.*

⁷³ Gilles Kepel, *Jihad: The Trail of Political Islam* (Cambridge, MA: Harvard University Press, 2002), 220.

⁷⁴ *Ibid.*

⁷⁵ William Rosenau, "Waging the 'War of Ideas'," available from http://www.rand.org/pubs/reprints/2006/RAND_RP1218.pdf; Internet; accessed 22 February 2007.

⁷⁶ Clausewitz, 177.

⁷⁷ Ibid.

⁷⁸ B.H. Liddell Hart, *Strategy* (New York: Meridian, 1991), 319.

⁷⁹ Ibid., 321-322.

⁸⁰ Richard K. Betts, "Is Strategy an Illusion?" *International Security* 25 (Fall 2000): 5.

⁸¹ Colin Gray, *Modern Strategy* (New York: Oxford University Press, 1999), 17.

⁸² Samuel B. Griffith, ed. and trans., *Sun Tzu, The Art of War* (New York: Oxford University Press, 1963), 77-78.

⁸³ Gray, 28.

⁸⁴ Psychohistory is the name of a fictional science, which combined history, sociology, and mathematical statistics, in Isaac Asimov's Foundation universe, to create a (nearly) exact science of the actions of very large groups of people.

⁸⁵ John P. Kotter, *Leading Change* (Boston: Harvard Business School Press), 68.

⁸⁶ *Declaration of Independence*, available from <http://www.ushistory.org/declaration/document/index.htm>; Internet; accessed 10 March 2007.

⁸⁷ Betts, 5.

⁸⁸ Zogby International for the Foreign Policy Association "Americans and the World Around Them," available from <http://www.zogby.com/search/ReadNews.dbm?ID=742>; Internet; accessed 1 March 2007.

⁸⁹ Ibid.

⁹⁰ Robert D. Kaplan, *Imperial Grunts* (New York: Random House, 2005), 5. Kaplan is commenting on Erich S. Gruen, *The Hellenistic World and the Coming of Rome* (Berkeley: University of California Press, 1984), 7. Gruen's work referenced an essay by Paul Veyne about Roman imperialism. Kaplan also reference Jan Morris, *Farewell the Trumpets: An Imperial Retreat* (New York: Harcourt Brace, 1978), 91.

⁹¹ *The Bible, King James Version* (New York: Royal Publishers, 1971), 2. The quote is from Genesis 4:9.

