Strategy Research Project

STRATEGIC ANALYSIS OF IRREGULAR WARFARE

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USAWC STRATEGY RESEARCH PROJECT

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ABSTRACT

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The 2006 Quadrennial Defense Review (QDR) states: "Irregular warfare has emerged as the dominant form of warfare confronting the United States." Terrorism and insurgency, and counterterrorism and counterinsurgency, are all subsets of irregular warfare. Conventional warfare models are often used at the strategic level to inform programmatic decisions. The modeling and dynamics of irregular warfare are not well established. An attempt to model an irregular warfare scenario took place in 2007 to 2009 within the Office of the Secretary of Defense. This process, however, failed to produce insights that could inform program decisions. As a result, the Secretary of Defense is making programmatic decisions without a cogent modeling paradigm for terrorism and insurgency. As the focus of warfare changes from conventional to irregular so must the warfare models and the resulting strategic analysis. This paper reviews the theory and doctrine, and proposes a new computational model to replicate the dynamics of irregular warfare.

STRATEGIC ANALYSIS OF IRREGULAR WARFARE

The United States has deep history of irregular warfare. The American
Revolution was an insurgency. In 1780, Francis Marion, the Swamp Fox, led militia
raids against the British occupation forces in South Carolina. He completely eluded
British forces using the terrain and hiding within the population.[1] The American
Revolution began as guerrilla warfare outside Boston and ended in a large scale
conventional attack at Yorktown. It was a long duration, irregular warfare, campaign.

The latest irregular conflict, however, caught the American military off guard. The
terrorist attacks in 2001 and the Iraqi insurgency in 2003 surprised a military designed
for conventional warfare.[2] Some claim the Department of Defense (DOD) analytical
community was also caught off guard by the events of the past decade. DOD analytical
organizations have failed to provide the necessary results to connect an irregular
warfare strategy with force structure.[3] If the United States is to shape and size its future
military forces to fight irregular warfare, then it must establish reliable, repeatable,
analytical methods based on irregular warfare theory. This paper proposes a new
analytical model for irregular warfare that can improve force design and policy making. It
will examine the theories of warfare and demonstrate how the current irregular warfare
modeling approach is inadequate.

The military force structure in 2001 was based upon a strategy designed to fight
two major overlapping conventional wars.[4] The 2006 Quadrennial Defense Review
(QDR) states, "Irregular warfare has emerged as the dominant form of warfare
confronting the United States."[5] This was a clear departure from the previous strategy.
The force sizing construct now includes irregular warfare. QDR 2006 called for the

ability to wage one conventional campaign and one large-scale, long-duration irregular campaign.[6] The 2010 QDR clearly states in the first priority, prevail in today's wars, the objective of locating and dismantling terrorist networks. The second priority of QDR 2010, prevent and deter conflict, specifies that the U.S. must prevent the "reemergence of transnational terrorist threats."[7]

The priorities of QDR 2010 "shape not only considerations on the capabilities our Armed Forces need but also the aggregate capacity required to accomplish their missions now and in the future."[8] The problem is that the defense analytical community does not have viable warfare models with which to analyze irregular warfare as it has for analyzing conventional warfare. Warfare models inform decision makers about the size and type of forces needed to achieve success in theater. Thus, functional models are essential in connecting strategy to programs.

Conventional warfare models took years to develop. These models owe their genesis to Fredrick Lanchester's work on attrition warfare in World War I.[9] Even the current warfare model of choice, RAND's Joint Integrated Contingency Model (JICM), uses this force on force methodology. JICM is very sophisticated but essentially works off the same mathematical equations used by Lanchester.[10] It is time to develop new analytical methods and models designed to connect irregular warfare to force structure.

Irregular Warfare Theory and Doctrine

Quantitative analysis often begins with theory or first principles. Therefore, a discussion of the theory of irregular warfare is a useful initial step. Three warfare theorists are especially helpful: Carl Von Clausewitz, Mao Zedong and Abd Al-Aziz Al-Muqrin. Clausewitz's *On War* developed a force on force construct. Mao's writings provide a population centric construct. Abd Al-Aziz Al-Muqrin provides the current Al

Qaeda theories and doctrine. Examination of U.S doctrine on irregular warfare reveals the relevance of these theories in the current war.

In his 1832 book, *On War*, Clausewitz describes war as "nothing but a duel on a larger scale."[11] He describes war as "force to counter opposing force" with an aim of disarming one's opponent.[12] The warfare he describes is primarily army against army. His thoughts and theories come from personal experience with early nineteenth century, Napoleonic, warfare. Clausewitz describes the natural sequence of warfare in that time period: destroy the enemy army, subdue the country and then bring them to the peace table. Destruction of the opponent's army takes priority as he states "the fighting forces must be destroyed."[13] The Clausewitzian theory of warfare is a force on force model. This idea is depicted in Figure 1.
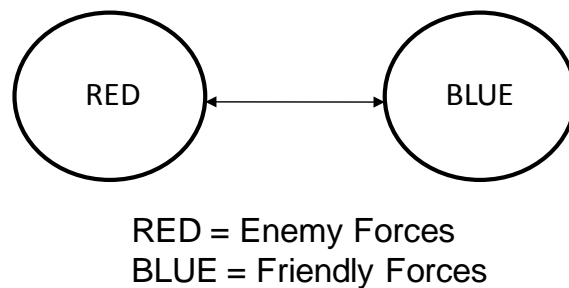
RED = Enemy Forces
BLUE = Friendly Forces

Figure 1. Clausewitz: Force on Force

At the strategic level, Clausewitz explains warfare as a trinity: the people, the army and the government.[14] The populace does play a role in Clausewitzian strategy but more in an effort supporting force on force operations. Clausewitz states "civilized nations do not put prisoners to death or devastate cities and countries."[15] This reflects the customs of European warfare during the Napoleonic era when most battles occurred between armies that avoided targeting civilian populations. Clausewitz addressed

guerrilla warfare in his writings but his belief was that guerrilla forces were just another resource within the framework of war conducted by the regular army.[16]

Warfare changed dramatically in the years following Clausewitz's death. Enemy populations became a strategic target. In 1864, Sherman targeted the population of the South in the American Civil War. Strategic bombing in World War II targeted the populations of England, Germany and Japan. In these instances total war was waged. The population became an integral part of strategic thinking. Some theorists, such as air power theorist Giulio Douhet, viewed the population as the most important military target.[17] Mao Zedong also focused on the importance of the population in warfare. He saw the population as something to nurture and as the critical dimension to successful revolutionary guerrilla warfare. For Mao, social considerations took priority over purely military ones.[18]

Mao's first law of guerrilla warfare was "to preserve oneself and destroy the enemy."[19] To accomplish this Mao leveraged the rural population of China:

> Many people think it impossible for guerrillas to exist for long in the enemy's rear. Such a belief reveals lack of comprehension of the relationship that should exist between the people and the troops. The former may be likened to water and the latter to the fish who inhabit it…It is only undisciplined troops who make the people their enemies and who, like the fish out of its native element, cannot live.[20]

The population was critical because his "People's War" philosophy espoused that the guerrilla forces arose from the masses and that an army arose from guerrilla forces. Mao established a strict code of conduct that relied on courteous and honest behavior for all his troops toward the populace to achieve unity of effort.[21]

To achieve final success in war, Mao proposed force on force action. Mao's strategic approach was outlined in his 1938 work, *On Protracted War*. His strategy

4

included both guerrilla warfare and conventional warfare in three sequential phases: strategic defensive, strategic stalemate and strategic offensive. The first phase is survival. The second phase, the longest, is primarily guerrilla warfare. The third phase is a large-scale conventional attack to win the war.[22] Mao called for guerrilla forces to operate over a fluid front, over large geographical distances, for long periods of time.[23] Figure 2 details Mao's population centric approach with force on force operations.

POPULATION

RED

BLUE

RED = Enemy Forces
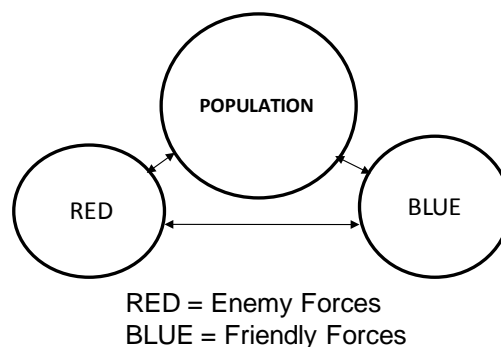BLUE = Friendly Forces

Figure 2. Mao: Population Centric with Force on Force

The leaders of radical Islam use many of Mao's ideas. The book, *The Quranic Concept of War*, states that the primary purpose of Islamic warfare is population centric: "the deliverance of the weak, the ill-treated, and the persecuted from the forces of tyranny and oppression."[24] The leader of Al Qaeda, Usama Bin Laden, views his organization as the "vanguard of a broader global Islamic movement and their desire [is] to inspire political upheaval and change across the Islamic world."[25] Al Qaeda's approach to warfare is outlined in Abd Al-Aziz Al-Muqrin's, *A Practical Course for Guerrilla Warfare.* [26] Al-Muqrin was a Saudi, like Bin Laden, and trained extensively in Afghanistan in the 1990's. Al-Muqrin was a formidable commander with fighting experience in a variety of theaters, including Algeria, Bosnia, Somalia and Yemen. In

2002, Bin Laden ordered him back to Saudi Arabia where he eventually led Al Qaeda in Arabia, one of the most critical fronts in the war. In 2003, Al-Muqrin finished his capstone document and distributed it worldwide via compact discs and the Internet. Al-Muqrin was killed by Saudi police in a 2004 shootout.[27]

Muqrin's, *A Practical Course for Guerrilla War*, states that warfare has three phases: Attrition (Strategic Defense), Relative Strategic Balance (Policy of a Thousand Cuts) and Military Decision (Final Attack).[28] This is almost identical to Mao's three strategic phases. The document formally states Al Qaeda's goal is "liberating the oppressed Muslim peoples from the yoke and the tyranny of oppressive and despotic infidel regimes."[29] Norman Cigar, a senior military analyst, argued that Al-Muqrin's *Guerrilla War* reflects a consensus on doctrine for Al Qaeda in Arabia. He also states that "Mao may be the single greatest outside theoretical impact overall on Al-Muqrin's doctrine."[30] The table below provides a comparison of the warfare theories of Mao and Al-Muqrin.

PHASE	MAO 1938	AL-MUQRIN 2003
I	Strategic Defensive (Survival)	Attrition (Strategic Defense)
II	Strategic Stalemate (Guerrilla Warfare)	Strategic balance (Policy of a Thousand Cuts)
III	Strategic Offensive (Conventional Attack)	Military Decision (Final Attack)

Table 1. Comparison of Warfare Theories of Mao vs. Al-Muqrin

Within the three phases, as professed by Al-Muqrin, terror and terrorism plays a crucial role in the overall strategy. In radical Islamic warfare inflicting terror is an integral part of the military strategy. The following passage is from *The Quranic Concept of War*.

In this strategy, guarding ourselves against terror is the 'Base'; preparation for war to the utmost is the 'Cause'; while the striking terror into the hearts of the enemies is the 'Effect'. The whole philosophy revolves round the human heart, his soul, spirit and Faith...Only a strategy that aims at striking terror into the hearts of the enemies from the preparation stage can produce direct results.[31]

The author of the passage, Brigadier S.K. Malik, bases this approach of psychological terror in warfare on the Koran and the victorious battles of Mohammed in the 7th Century. It is a faith based approach to warfare and it is clear that Al Qaeda and Associated Movements (AQAM) have adopted this strategy of terror. In fact, Al Qaeda means "the Base" in Arabic.[32]

Abu Musab Al-Zarqawi, the leader of Al Qaeda in Iraq, did not follow Mao's teachings. Al-Zarqawi implemented a campaign of terror. Instead of nurturing the population of Iraq, Al-Zarqawi terrorized them with beheadings and other forms of extreme violence. In 2006, Al-Zarqawi forces bombed the sacred mosque in Samarra, a Shia Islam holy site, and triggered widespread sectarian killings.[33] In the end, the people of Iraq did not accept Al Qaeda's ideology and their actions in Iraq led directly to the Anbar Awakening.[34] General David Petraeus exploited this misstep by Al Qaeda. The War in Iraq took a dramatic turn in 2007 with the Surge, a campaign designed to defeat the Iraqi insurgency.

General Petraeus had just completed his groundbreaking field manual on counterinsurgency (COIN, FM 3-24, December 2006). This manual covers Mao's insurgency theories and clearly emphasizes the importance of the population. The field manual also emphasizes the interaction with the population and the long duration of such an effort.[35] The field manual calls for designing and executing a military campaign to secure the populace and then gain its support.[36] Petraeus implemented his

population centric strategy in Iraq in 2007 and by February 2009 violent acts had

dropped to the lowest level since the beginning of the insurgency in August 2003.[37] In

December 2009 there were no U.S. combat deaths in Iraq.[38]

In summary, Mao's theories are connected to Clausewitz's theories with the

addition of a third variable: population. Both Al Qaeda and U.S doctrine now reference

Mao's population centric approach to warfare. Mao's theory of warfare is also evident in

the current military definition of irregular warfare (IW) as acknowledged in the 2007 IW

Joint Operating Concept (JOC).

> A violent struggle among state and non-state actors for legitimacy and
> influence over the relevant populations. IW favors indirect and asymmetric
> approaches, though it may employ the full range of military and other
> capabilities, in order to erode an adversary's power, influence, and will.[39]

Clausewitz's theory of a trinity is also used in the Irregular Warfare (IW) Joint Operating

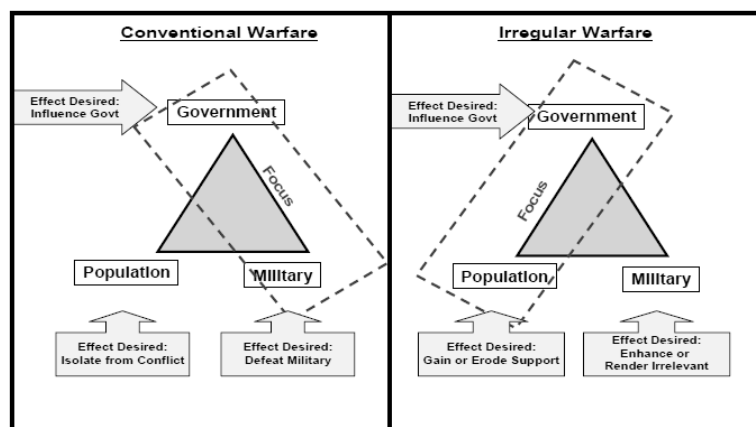Concept (JOC) as revealed in Figure 3 below.

Figure 3. Clausewitz in the IW JOC Contrasting Conventional and Irregular Warfare[40]

The United States has, therefore, updated its doctrine to reflect the theories of irregular

war. The goal, however, is to turn this theory and doctrine into useful analytical models.

<u>Strategic Analysis in the Department of Defense</u>

Prior to developing models of irregular warfare, some knowledge of strategic analysis in the Pentagon is necessary. Simple questions often require complex analysis, for example: What adjustments are needed in the Department of Defense to effectively fight irregular warfare? What sort of force is necessary and how much of those forces are needed for success in an irregular warfare campaign? These are the type of questions that defense analysts must address. The answers result from strategic analysis.[41] The quantitative strategic analysis process used in the Pentagon is called the Analytic Agenda. The Analytic Agenda is a multiple-perspective approach used to inform programmatic decision making in the Department of Defense.[42] The goal of this process is to connect strategy with programs using analytical precepts.

Program decisions in the Department of Defense (DOD) often affect billions of U.S. dollars. These decisions determine a variety of issues that include the purchase of high-end weapon systems as well as the number of personnel on the DOD payroll. This then influences the military effectiveness of our armed forces. It also affects local economies that rely on military bases and weapons manufacturing, hence it has an external impact. Due to the importance and character of these decisions, a systematic and rational approach was developed to analyze defense programs. This approach, the Analytic Agenda, relies on multiple perspectives from the White House, the Office of the Secretary of Defense (OSD), the Joint Staff (JS), the Theater Combatant Commands (COCOM), and the military services (Army, Navy, Air Force and Marines). This Agenda is incremental in nature, and it starts with the three key national strategy documents: National Security Strategy, National Defense Strategy and National Military Strategy. OSD Policy develops scenarios that support the strategy. The Joint Staff develops a

multi-service force list to deploy and execute the military objective of each scenario. All

of the DOD actors then participate in warfight analyses of all these scenarios. The

analyses are often complex. They are integrated to produce overlapping contingencies

that replicate the varied complexities anticipated in execution. OSD Cost Analysis and

Program Evaluation (CAPE) manage the final output of the Analytic Agenda process:

called the Analytical Baseline (AB).[43]

The Analytic Agenda process is supposed to inform the decision making of the

Secretary of Defense. Specifically, it is geared towards supporting the Quadrennial

Defense Review (QDR) and typically takes about two years to complete. The process is

delineated in a DOD Instruction and is graphically represented by Figure 4.[44]

STRATEGY	→	SCENARIOS	→	CONCEPTS OF OPERATIONS	→	ANALYSIS & INTEGRATION	→	ANALYTICAL BASELINE

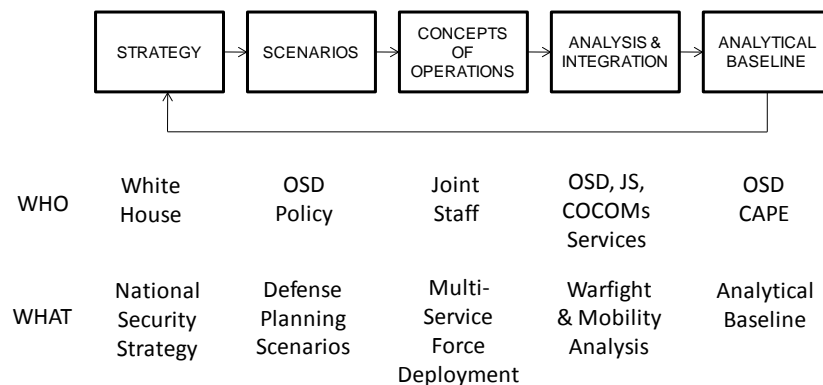|	STRATEGY	SCENARIOS	CONCEPTS OF OPERATIONS	ANALYSIS & INTEGRATION	ANALYTICAL BASELINE
WHO	White House	OSD Policy	Joint Staff	OSD, JS, COCOMs Services	OSD CAPE
WHAT	National Security Strategy	Defense Planning Scenarios	Multi-Service Force Deployment	Warfight & Mobility Analysis	Analytical Baseline

Figure 4. The Analytic Agenda Process

In 2009, the Department of Defense completed analyses on several scenarios in

support of the force planning construct in preparation for the QDR 2010.[45] The analyses

included one irregular warfare scenario. Significant time and effort went into developing

and analyzing this scenario. The irregular warfare analysis, however, failed to provide

the necessary programmatic insights.[46]

OSD Policy developed an irregular warfare scenario in 2007 based upon the guidance of QDR 2006. The exact location and timing of this scenario is classified. For this paper it is enough to state that the scenario was a large scale counter-insurgency operation (similar to Iraq 2003 to 2006) in Africa. The focus here, however, is not on the scenario per se but rather on the analysis within the Department of Defense.[47]

OSD established a human-in-the-loop wargame, supported by several analytical models, to analyze the irregular warfare scenario. The methodology was called "X-Game." The wargame consisted of three planning cells (red, blue and green) and a white cell to adjudicate each move.[48] The time step, or notional turn length, was six months. A total of four game turns (two game years) was completed with humans in the loop. These first two years helped seed the computer simulations which then analyzed the entire scenario length of ten years.[49]

The planning cells submitted their moves for each turn to the white cell and then entered events into the analytical models. The overarching model consisted of the following eight sub-models: Rule of Law, Economy, Population, Media Influence, Power Structure (PSTK), Corruption, Irregular Warfare, and Counter-Terrorism. Each model was connected using a computer simulation called the COnflict Modeling, Planning, and Outcome Experimentation (COMPOEX) program.[50]
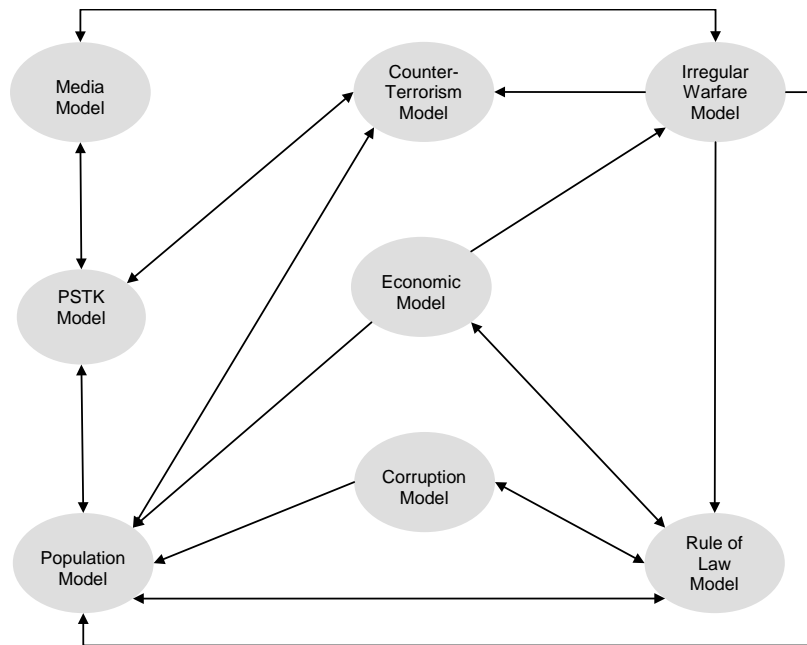
Figure 5. COMPOEX Model Interconnections[51]

The COMPOEX models used differing techniques to analyze segments of the problem. The economic model was the most complicated and is based on macro-economic theory. The PTSK model was an agent based model of political power structure. The counter-terrorism model was based on Bayesian networks. Rule of Law, Economy, Corruption, and Irregular Warfare models are system dynamics models.[52]

The problem with COMPOEX is that defense analysts have replaced warfare specific modeling with modeling the entire political, economic and social system of a region. The net outcome is that the results of the X-game are highly unreliable because of the immense size and scope of the modeling effort. Predicting future political trends or producing economic forecasts years into the future is extremely difficult. For example, macroeconomic models systematically failed to predict the financial crisis of 2008.[53] A political example is provided by *Time Magazine* in 2007 when it stated "Hillary Clinton is the clear front-runner to win the Democratic Party's nomination for President in 2008."[54]

Irregular warfare analysis is complex in itself. Tying warfare analysis to large scale

economic models and political predictions further complicates the problem and

decreases the reliability of analytical recommendations. The defense analyst should

focus on the warfare aspect of the problem and return to first principles as espoused by

Clausewitz and Mao.

Within COMPOEX was an irregular warfare model based on systems dynamics.

This specific model narrows the problem. The model was also derived from doctrine.

The initial systems dynamic model uses the connections in Field Manual 3-24.[55] This

approach was then expanded for the specific irregular warfare scenario. The final

systems dynamic model for the irregular warfare scenario in COMPEX is detailed
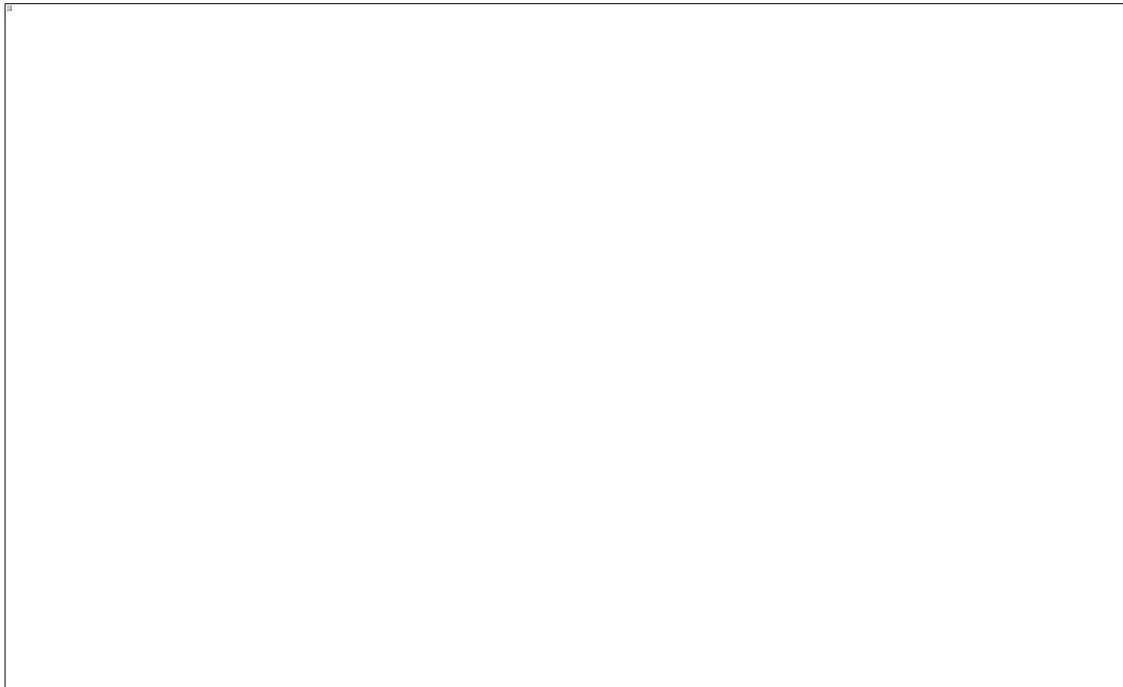
below.

Figure 6. Irregular Warfare Model Systems Dynamics Diagram used in COMPOEX[56]

Jay Forrester introduced system dynamics in the 1950's He was an electrical engineer at the Massachusetts Institute of Technology who developed the methodology for the newly formed Sloan School of Management.[57] His basic theory was to model real world phenomena like electrical circuits. He proposed that electric circuit models could replicate nonlinear responses and capture feedback loops. This is an effective approach for thinking through a system but it has significant drawbacks as an analytical warfare model. First, systems dynamic models are typically used for small industrial systems in which feedback loops are clearly understood.[58] Irregular warfare is so complex that modeling multiple feedback loops is extremely problematic. Second, if just one connection is modeled incorrectly the entire model becomes suspect. This is similar to an electric circuit where one snipped wire causes the circuit to malfunction.[59] The connections Figure 6 are modeled with approximately 1000 equations.[60] If one equation is in error, then the entire model may not be valid. Systems dynamics is not a robust approach to warfare modeling.

The irregular warfare analysis (X-Game) completed in 2009 was not useful for programmatic recommendations for the following reasons: First, its modeling of economic and political forces is far too big in scope and introduces too much error. Second, it is not repeatable due to humans-in-the-loop and due to scenario specific systems dynamic models. Third, the systems dynamics approach, simply put, is not a robust warfare modeling methodology.

Irregular Warfare Modeling based on Theories of Warfare

The primary difference between conventional warfare modeling and irregular warfare modeling is battle space. The conventional fight is largely linear, force on force, where commanders seize ground and destroy the enemy. The irregular warfight is an

area battle where commanders control the ground, attempt to influence the population, and eventually disrupt and destroy the enemy. The 1991 Gulf War is a good example of a linear warfight. The Surge in Iraq is an example of an area warfight. This idea of linear warfight versus and area warfight is described in joint operations doctrine and the figure below. [61]
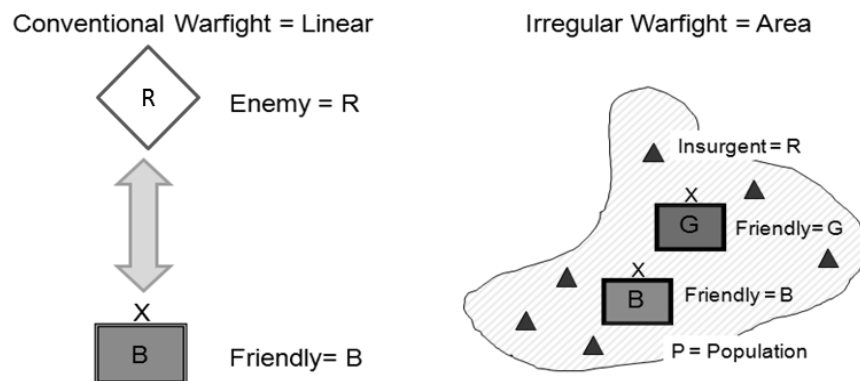

Figure 7. Linear Warfight versus Irregular Warfight

Host nation forces are a critical factor in an irregular warfare methodology. The counterinsurgency FM states a long term goal as "the host nation has to win on its own."[62] Host nation forces cannot simply be categorized as other friendly forces. They must be an integral factor in the model. The irregular warfight Figure above shows both enemy forces (triangles, R=red forces) and friendly forces. The friendly forces contain both multi-national forces (B=blue) and host nation forces (G=green). These forces are dispersed through a geographical area that contains a native population (P).

The irregular warfare model proposed in this paper builds on the current force on force model, adds in the Mao population centric construct and the current COIN doctrine concerning the importance of host nation forces. The final irregular model construct has

four factors: friendly forces, enemy forces (terrorists and insurgents), host nation forces

and the population. The nodes and arcs are shown in Figure 8.

RED = Enemy Forces
BLUE = Coalition Forces
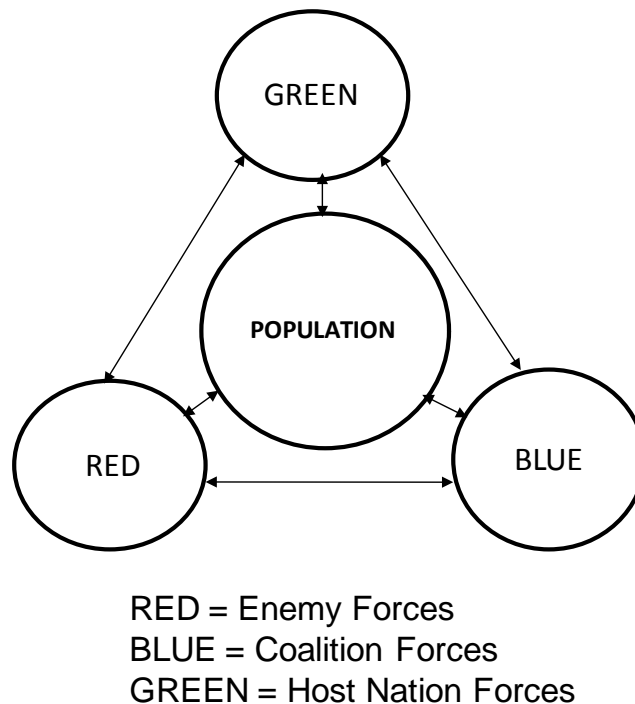GREEN = Host Nation Forces

Figure 8. Recommended Irregular Warfare Model Construct

The above construct appears simple especially when compared to COMPOEX or the

irregular warfare systems dynamic model. This is intended. The modeling process

needs simplification with a population centric focus.

The analyst must closely examine the connections between the nodes. This is

where the modeling takes place. Using data, such as the classified SIGACTS database

from Iraq, defense analysts should establish the relationship among the four nodes. [63]

The purpose of this paper is not to establish an exact relationship. The idea behind this

approach is to provide a basis on which to build, similar to what Lanchester provided

almost 100 years ago. Figure 9 portrays both Lanchester's approach and an irregular

warfare approach using systems of differential equations. This construct is not limited to one analytical technique.

Force on Force Lanchester's Equations

$$dR = f[B(t)]dt$$
$$dB = f[R(t)]dt$$

Irregular Warfare System of Equations

$$dR = f[B(t), G(t), P(t)]dt$$
$$dB = f[R(t), G(t), P(t)]dt$$
$$dG = f[R(t), B(t), P(t)]dt$$
$$dP = f[R(t), B(t), G(t)]dt$$

Figure 9. Force on Force versus Irregular Warfare Systems of Equations

Figure 10 and Figure 11 demonstrates the simulation results using the irregular warfare system of differential equations from above. Two scenarios were generated using the computer software package, MATLAB. The first scenario has the insurgent (red forces) winning due to the host nation (green forces) failing. The second scenario has the insurgent forces losing because of loss of population support and the growth of host nation forces. For these examples, blue forces were fixed at 150,000, a force size similar to Operation Iraqi Freedom.
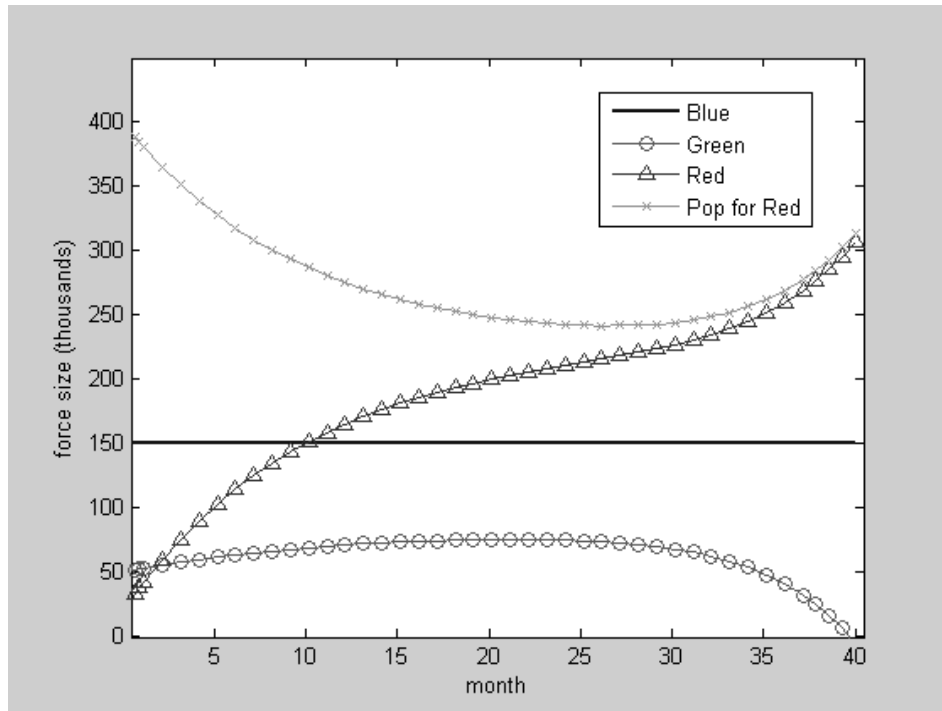
Figure 10. Example Irregular Warfare Simulation: Insurgents Win
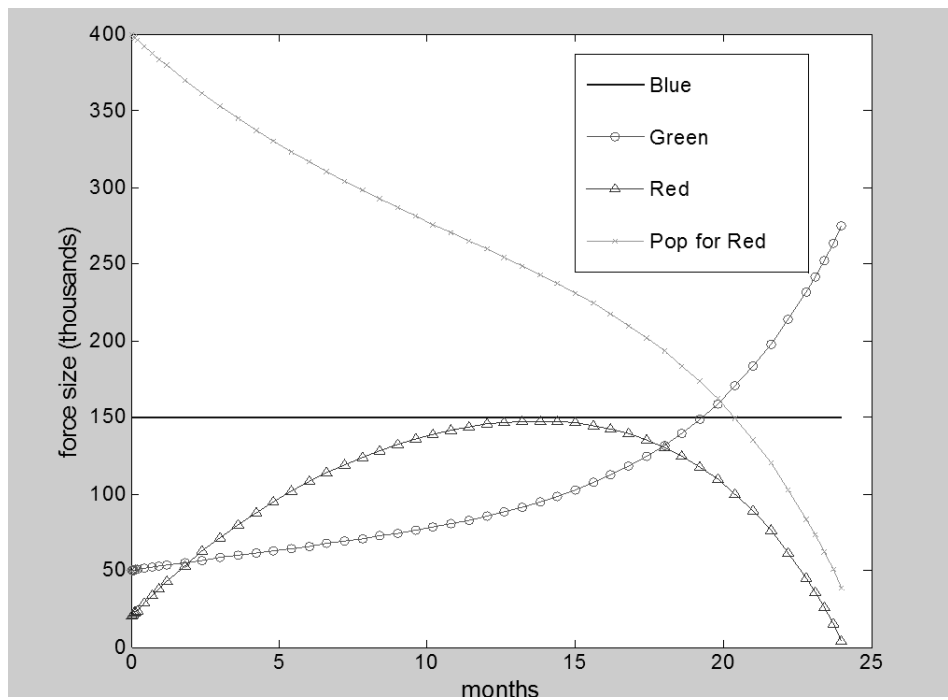

Figure 11. Example Irregular Warfare Simulation: Insurgents Lose

Modeling Elements of Power in Irregular Warfare

The other elements of national power: diplomatic, economic, and information must be considered. These non-military elements definitely play a role in irregular warfare as demonstrated by the U.S. experience in Iraq.[64] As stated earlier, modeling politics, diplomacy and economics is extremely complex and not recommended in the basic warfare dynamics model. This does not mean, however, that the other elements of national power should be ignored. How might diplomacy, economics and information shape the strategic analysis of irregular warfare?

To assist the analysis, classify the primacy of the elements of national power using two axes (Figure 12). The horizontal axis is governance. If the governance is low, then consider these nations as failing states. The vertical axis is the threat to the United States. A high threat may require military intervention and thus the military element of national power usually takes primacy. If a threat is low, then the other elements of power usually take priority. Irregular warfare is most likely to occur in the quadrant with low governance and a high threat. The desired end state is a nation with high governance and a low threat.

The purpose of most military interventions is to lower or eliminate threat. Thus, the military element of power moves a nation state up and down along the threat axis. The diplomatic, economic and informational elements of power typically affect the governance of a nation. These elements of power move a nation from left to right along the governance axis. Thus to move from a state of irregular warfare (upper, left quadrant) to the desired end state (lower, right quadrant) requires the successful application of all four elements of national power.
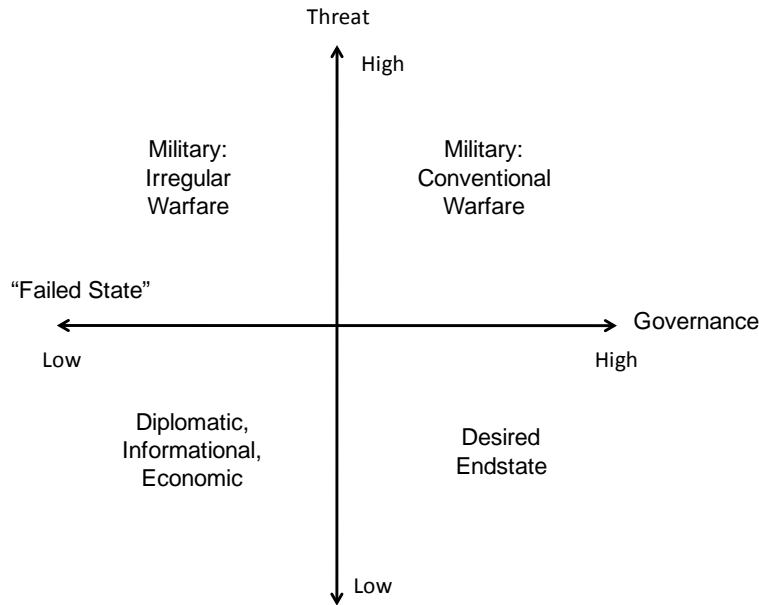
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Figure 12. Elements of Power Primacy: Governance and Threat

Therefore, to analyze irregular warfare one must consider governance. The recommended irregular warfare model (Figure 8) considers two of the three elements of Clausewitz's trinity (military and population). Incorporation of governance completes the trinity. The connection between governance and two types of irregular warfare, counterinsurgency and counterterrorism, must be considered. Governance could dictate the type of irregular warfare operation and this would determine the modeling in the irregular warfare paradigm above.

Irregular warfare in the 21st Century will likely occur in failing states. The Crisis States Research Centre defines a failed state as one that can no longer perform its basic security and development functions.[65] Throughout the world there are many nation states that lack governance similar too or worse than Afghanistan.[66] Examples of failed states include nations such as Sudan, Zimbabwe and Burma.[67] One of the most relevant examples is Somalia where there is little argument that it is a failed state.[68]

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Counterinsurgency

        One approach to irregular warfare in a failed state is a Counterinsurgency (COIN) operation. The U.S. Army COIN field manual defines an insurgency as an "organized movement aimed at the overthrow of a constituted government through use of subversion and armed conflict."[69] Counterinsurgency is actions taken by a government to defeat an insurgency. The key element in the current COIN doctrine of the United States is the use of military force to secure a populace.[70] This approach was evident in the Surge operation in Iraq. The Fund for Peace listed Iraq as a failed state in 2007.[71] The United States response to the situation in Iraq in 2007 was an all out counterinsurgency operation. The Surge, along with other factors, improved security in the country. Iraq is still listed as a failed state, however, and the future remains uncertain.[72]

        The objective of COIN is to both improve the governance of the nation state and destroy the threat (move to the right and down in Figure 12). The COIN method is security of the population through a large number of conventional forces. This approach is feasible when there is a friendly government and military support. COIN is acceptable if there is popular support at home. It is not suitable for every failed state, however. Certain tribal societies may never accept a strong central government.

        The risks of COIN are high casualties and high expenses. COIN typically takes years and can be very resource intensive. A major piece of COIN is economic development. Some failed states are so corrupt and lacking in infrastructure that it would require building their society from the ground up. COIN in some failed state would be cost prohibitive both in causalities and dollars. Maintaining domestic U.S. support for a long duration counterinsurgency may be inordinately difficult.

Counterterrorism (CT) is often part of an irregular warfare campaign. A CT campaign is typically designed to prevent, deter and respond to terrorist activities. The objective of CT is to "thwart terrorist uprisings or cells from forming."[73] Instead of attempting to affect the governance of the nation in question, this approach attempts to prevent terrorist cells from forming and to strike the terrorists directly (focus on moving down in Figure 12). It does not require a long-term presence of troops in the failed state. The U.S. military has been conducting a CT campaign near Somalia since 9-11. The primary purpose of the Combined Joint Task Force - Horn of Africa (CJTF-HOA), in Djibouti, is counterterrorism. The CJTF-HOA's publicly-stated mission to: "Defeat Al-Qaida and Associated Movements (AQAM) and to obtain coalition support in order to diminish underlying conditions that terrorists seek to exploit and to prevent the reemergence of AQAM."[74]

The objective of CT is to prevent or kill terrorists. The CT method is training and direct action missions against terrorist cells. The means are counterterrorist military forces, usually Special Forces. This approach is feasible when there are bases in adjacent countries that allow our military activities. CT activities are typically acceptable to the international community, but objections may arise from military excursions into failed nations.

A risk of the CT approach is that the core problems that create terrorist cells (e.g., poverty, corruption, extremism) may not be corrected in a failed state. Simply striking terrorists without a troop presence in the population can be quite difficult. The "Blackhawk Down" raid of 1993 in Mogadishu provides a stark lesson on what can go wrong when enemy hideouts are raided without population control.[75]

Modeling Counterinsurgency and Counterterrorism

These two irregular warfare campaigns impact a high threat, failed state, from either a strict threat approach (CT) or from both a threat and a governance approach (COIN). Figure 13 depicts these two irregular warfare techniques on the governance/threat quadrant. COIN moves towards a desired end state of high governance with a low threat, but has the highest risk due to the expense and the number of troops needed. CT does not require large number of forces to occupy a failed state. CT strikes the terrorists directly but does not change the conditions of governance and thus might not eliminate underlying problems (e.g., poverty, ideology, etc.).

The type of irregular warfare campaign will dictate the impact on governance. A CT campaign will likely have little effect on governance while a COIN campaign will likely have a large effect. Both campaigns could be modeled by the proposed irregular warfare construct (Figure 8) but the affect on the population would be vastly different. In order to analyze COIN, one should assume massive reconstruction efforts similar to those in Iraq and Afghanistan. Modeling of the reconstruction effort is captured in the proposed model via the population and blue force linkage.
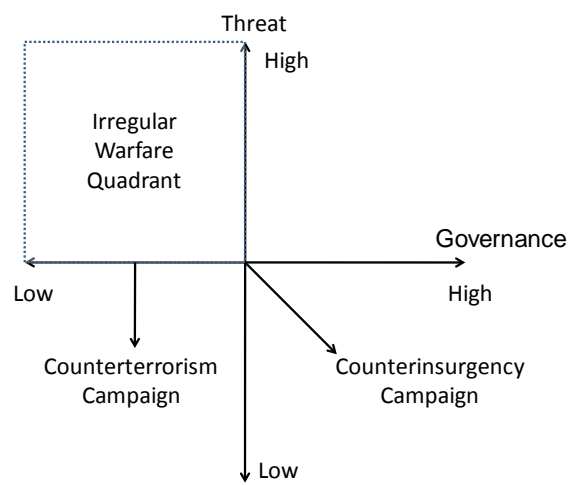

Figure 13. Irregular Warfare Campaigns and Governance

Conclusion

It took the American military several years to adjust its approach to the Iraqi insurgency. The analytical community is still trying to adapt and adjust to irregular warfare modeling. The Secretary of Defense needs information from viable models which are both reliable and capable of informing future program decisions.

Secretary of Defense Robert Gates' budget recommendation to the President for 2010 represented a significant departure from previous years in that it canceled and adjusted many important defense programs. Gates recommended ending programs that were once deemed critical to the military services, such as the Air Force's F-22 and the Army's Future Combat System (FCS). At the Army War College in April 2009, Secretary Gates said that his budget proposal would "rebalance the department's programs in order to institutionalize and enhance our capabilities to fight the wars we are in today and the scenarios we are most likely to face in the years ahead."[76] The experiences of Iraq and Afghanistan informed the Secretary's decision. Secretary Gates' budget decisions did not use the input from the irregular warfare scenario, however, due to the lack of access to a cogent analytical model.

This paper proposes a new model for analyzing irregular warfare. The model is built upon the theories of Clausewitz and Mao and the doctrines of Petraeus and Al-Muqrin. It expands Lanchester's mathematical methods based on the experiences of a new century. The proposed paradigm models the military element of power using a population centric approach. This paper explores the idea of governance to capture the other elements of national power and its impact on irregular warfare operations. The United States must employ all elements of national power to defeat terrorism.

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