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Winning the War but Losing the Peace:

A Systems Theory Approach to Intervention Warfare

By /par ...

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## Abstract

This paper attempts to address the vexing issues gripping the post-combat phase of intervention warfare through the use of systems theory. It argues that current joint doctrine, which emphasizes the combat phase and warfighting, does not adequately represent the full complexity of modern conflicts. Although jointness is recognized as essential in modern operations, a more inclusive approach would more accurately address the present recurring reality. The paper examines the apparent narrow focus and linear nature of current doctrine and reviews its application in Afghanistan and Iraq with a view to identifying a broader framework for consideration. The paper subsequently develops a systems theory model, which includes military and civilian actors, and concludes with demonstrations of the model based on a generic example. It finds that a holistic, systems approach to campaign planning is more germane in settings where a prolonged occupation or a substantial nation-building exercise is foreseen.

## Winning the War but Losing the Peace:

### A Systems Theory Approach to Intervention Warfare

**“We must work in the world;  
And the world is thus.”**

Señor Hontar addressing the Pope’s  
emissary in *The Mission*.

#### Introduction

The apparent surprise expressed by United States (U.S.) commanders with the prolonged resistance experienced by Coalition forces in both Afghanistan and Iraq have resulted in many pundits questioning whether they have it right.<sup>1</sup> The crux of the problem seems to be an underestimation of the rationale and will of the belligerents to acquiesce to the Coalition presence.<sup>2</sup> Western soldiers on the streets of Kabul and Baghdad have also had a controversial effect on the level of security experienced by the host nations’ populations.<sup>3</sup> While recent polls indicate that, in Iraq at least, there is hope for a brighter future in time,<sup>4</sup> the threat of seemingly random acts of violence shows no sign of abatement. In essence, these Coalitions have won the war but appear to be losing the peace.

Has there been a fundamental failure by leading Western nations to grasp the true nature of the interventions upon which they have embarked? Maybe William Lind’s Fourth Generation Warfare has truly taken hold and the initiative lies with an enemy who negates the West’s technical advantage because he is not “willing to play the same

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<sup>1</sup> Simon Jenkins, “I predict the pundits will carry on getting it wrong,” *Times of London*, 2 April 2003.

<sup>2</sup> Robert A. Pape, “Dying to kill: The strategic logic of suicide bombers,” *International Herald Tribune*, 23 September 2003.

<sup>3</sup> Naval Institute Forum 2003, *Address by General Anthony Zinni, U.S. Marine Corps (Retired)*, (Arlington VA, 4 September 2003), 3.

<sup>4</sup> Zogby International, *The First Scientific Poll Of Current Iraqi Public Opinion*, Commissioned by *The American Enterprise* magazine, 3 – 19 August 2003, 5 of 55.

game”<sup>5</sup> Perhaps, as suggested by Ralph Peters, “the notion that stability is the fundamental strategic virtue” should be discarded and the U.S. should cease being the world’s policeman in favour of a role as global referee (intervening in only the direst circumstances).<sup>6</sup> It could be, as has been opined by Lieutenant-Colonel (Retired) Robert Leonhard, that enemy forces operating from dark places have withered away the relevance of Operational Art resulting in campaign planning that has already “become so intermixed with political, economic, informational, societal and cultural factors as to quickly exceed the grasp and authority of regional combatant commanders and their staffs.”<sup>7</sup> Regardless of which view fits one’s personal template, the approach to intervention warfare stability operations in the post 9/11 security environment is undoubtedly worthy of study.

This paper will endeavour to address the vexing issues gripping the post-combat phase of intervention warfare by arguing that current joint doctrine, which emphasizes the combat phase and warfighting, does not adequately represent the full complexity of modern conflicts. Although jointness is recognized as essential in modern operations, a more inclusive approach would more accurately address the present recurring reality. This paper will examine the apparent narrow focus and linear nature of current doctrine and review its application in Afghanistan and Iraq with a view to identifying a broader framework for consideration. The paper will subsequently develop a systems model, which includes military and civilian actors and conclude with demonstrations of the model based loosely on recent international examples. It will suggest that a holistic,

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<sup>5</sup> William S. Lind, Maj John F. Schmitt, and Col Gary I. Wilson, “Fourth Generation Warfare: Another Look,” *Marine Corps Gazette* vol. 85, no.11 (Nov 2001): 69.

<sup>6</sup> Ralph Peters, “Stability, America’s Enemy,” *Parameters* vol. 31, no. 4 (Winter 2001/2002): 20.

systems approach to campaign planning is more germane in settings where a prolonged occupation or a substantial nation-building exercise is foreseen.

### Current Doctrinal Construct

The current construct of the Joint and Combined Theatre of Operations is best described by directly reviewing the U.S. Armed Forces keystone publication, JP 3-0 *Doctrine for Joint Operations*, and the U.S. Army capstone operations doctrine manual, FM 3-0 *Operations*. JP 3-0 states that phasing a joint campaign plan allows the commander and staff to visualize the entire operation from beginning to end. It suggests that there are four phases in most campaigns (deter/engage; seize initiative; decisive operations; and transition), which depict the “potential actions to be accomplished during each phase enabling holistic, end-to-end planning.”<sup>8</sup> In describing termination as one of the fundamental elements of Operational Art, current U.S. Joint Doctrine explains that:

The underlying causes of a particular war – such as cultural, religious, territorial, or hegemonic – must influence the understanding of the conditions necessary for the termination of hostilities and resolution of conflict. Ideally, national and allied or coalition decision makers will seek the advice of senior military leaders concerning how and when to end combat operations. Passing the lead from the military to other agencies to achieve final strategic goals following conflict usually requires the participation of JFCs [Joint Force Commanders].<sup>9</sup>

Furthermore, much U.S. doctrinal effort has been devoted to the subject of interagency coordination. This is defined as the coordination that occurs between the military forces (including multinational forces) and government, non-government, private voluntary, regional and international organizations for the “purpose of accomplishing an

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<sup>7</sup> Lt. Col. (Retired) Robert R Leonhard, “Factors of Conflict in the Early 21<sup>st</sup> Century,” *Army* Vol. 53, no. 1 (Jan 2003): 34.

<sup>8</sup> Joint Chiefs of Staff, JP 3-0 *Doctrine for Joint Operations*, (United States, 10 September 2001), III-18 to III-21.

<sup>9</sup> *Ibid*, III-24.

objective.”<sup>10</sup> The U.S. Army recognizes that support must be actively sought within the interagency environment and states that: “Theater strategies routinely employ the capabilities of the entire U.S. interagency network.”<sup>11</sup>

With such a thorough doctrinal foundation in stability operations, one could be convinced that the campaign plans in Afghanistan and Iraq should have taken adequate account of the post combat operations challenges. Is it possible that planners have failed to follow their own doctrine? Some non-military organizations see such a failure as a result of an overemphasis in U.S. doctrine on warfighting.

The United States has fundamentally reshaped its doctrine of military engagement without similarly reforming its commitment and capacity to stabilize and transform postconflict environments. In this dissonance between an overdeveloped ability to wage and win war and an anemic facility for winning peace is the potential for the reversal of war gains, a subverting of the country’s long-term security goals, and a deflating of ambitions to reform the norms of international order and recast the U.S. role in the world.<sup>12</sup>

Others would suggest that the U.S. Army is not necessarily failing to recognize the problem but, rather, that the other elements of National Power are not responsive enough.

If the others, those wearing suits, can’t come in and solve the problem – can’t bring the resources, the expertise, and the organization – and we’re going to continue to get stuck with it, you have one or two choices. Either they get the capability and it’s demanded of them, and we learn how to partner to get it done, or the military finally decides to change into something else beyond the breaking and the killing.<sup>13</sup>

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<sup>10</sup> Joint Chiefs of Staff, JP 3-08 *Interagency Coordination During Joint Operations*, Vol. 1 (United States, 9 October 1996), GL-8.

<sup>11</sup> Department of the Army, FM 3-0 *Operations*. (Washington, DC: HQ Dept of the Army, 14 June 2001), 2-19.

<sup>12</sup> Ray Salvatore Jennings, *The Road Ahead: Lessons in Nation Building from Japan, Germany, and Afghanistan for Postwar Iraq*, Report for the United States Institute of Peace (Washington: United States Institute of Peace, April 2003), 5.

<sup>13</sup> Naval Institute Forum 2003, *Address by General Anthony Zinni...*, 3.

In summary, U.S. doctrine seems to be sufficiently inclusive in theory. The shortfall appears to rest with the execution in the field.

### Current Situation

Campaigns in both Afghanistan and Iraq have resulted in rapid military victory with the complete dominance of ‘enemy’ conventional forces. In Afghanistan the campaign ostensibly started on 12 September 2001 and, although still underway, U.S. Defense Secretary Rumsfeld declared that major combat operations were complete as of 1 May 2003.<sup>14</sup> In Iraq, the Coalition assault commenced on 20 March 2003<sup>15</sup> with combat operations being declared complete by 1 May 2003.<sup>16</sup> In both instances the swiftness of these military victories was impressive, particularly when one considers the effort required to project overwhelming power over such long distances.

Nevertheless, the results of these two campaigns, while decisive militarily, have not brought about increased stability in either case. The continued engagement of large numbers of Coalition troops appears to indicate a failure to grapple with the complexities of post-war stability operations.

### Afghanistan

The Coalition action in Afghanistan has been hailed as “highly successful, accomplishing most of the stated U.S. strategic objectives.”<sup>17</sup> In the months immediately following Operation Enduring Freedom’s transition to stability operations, a relative calm seemed to infuse Afghanistan. But, with the passage of the so-called honeymoon period,

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<sup>14</sup> Vernon Loeb, “Rumsfeld Announces End of Afghan Combat,” *Washington Post*, May 2, 2003, A16.

<sup>15</sup> Associated Press, “Major events in Iraq since beginning of war,” *The Times Herald-Record*, 23 July 2003, 1.

<sup>16</sup> United States, Executive Office of the President of the United States Office of the Press Secretary, *Remarks By The President From The USS Abraham Lincoln* (San Diego, 1 May 2003), 2.

<sup>17</sup> Milan Vego, “What Can We Learn from Enduring Freedom?” *Proceedings of the United States Naval Institute* vol. 128 no. 7 (Jul 2002): 28.



the security situation deteriorated to the point where “despite these successes political and security problems remain in Afghanistan.”<sup>18</sup> The severity of security problems are such that United Nations personnel engaged in the reconstruction of the country withdrew from a number of provinces.<sup>19</sup> In essence, without security, development could not occur.

Nearly two years after American and allied forces entered Afghanistan to shut down terrorist training camps and remove the Taliban regime, that nation remains unstable; in the past two weeks, about 100 people have died, including an American soldier, in skirmishes between regrouping elements of the Taliban, local militias and security forces.<sup>20</sup>

To make matters worse, the engagement of warlords in the initial campaign has meant that their involvement in post-conflict governance is assured. Yet they do not act in a manner that serves the nation’s purposes and “often stand accused of facilitating smuggling, participating in the poppy trade, practicing extortion, and taking part in destructive ‘green on green’ fighting between rival militias and criminal gangs.”<sup>21</sup> In Afghanistan “the importance of fundamental reforms with respect to military and police forces was recognized in [the] Bonn [Agreement] as critical to the success of the transition.”<sup>22</sup>

The ideal solution is the reconstitution of the central army. But fashioning the seventy-thousand-strong institution from among recruits currently available and at the pace at which training now proceeds will take a decade... The task of training police has proved similarly difficult and slow.<sup>23</sup>

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<sup>18</sup> Milan Vego, “What Can We Learn from Enduring Freedom...” 28.

<sup>19</sup> United Nations Secretary General, *The Situation in Afghanistan and its Implications for International Peace and Security*, Report of the Secretary-General No. A/57/850-S/2003/754, (New York: UN, 23 July 2003), 9.

<sup>20</sup> Michael Elliot, “Lessons from the Rubble” *Time Magazine*, New York: Sep 1, 2003. Vol. 162, Iss. 9: 25.

<sup>21</sup> Ray Salvatore Jennings, *The Road Ahead...* 22.

<sup>22</sup> The Conflict, Security and Development Group, *A Review of Peace Operations...* 345.

<sup>23</sup> Ray Salvatore Jennings, *The Road Ahead...* 23.

Progress has been made in most of the reform areas but the impact on areas outside of Kabul has been small, resulting in the U.S. proposal to extend the Afghan Transitional Authority's influence through the creation of Provincial Reconstruction Teams (PRTs). PRTs are intended to extend the reach of the Afghan Transitional Authority through teams of mixed Coalition military and development personnel working in concert with local Afghan authorities. Non-Government Organizations (NGOs) and United Nations agencies have been invited to participate as implementing partners.<sup>24</sup> Nevertheless, the introduction of the PRT concept a full year after the campaign commenced seems to suggest that the integration of other agencies (including U.S., International Organizations and NGOs) was an after thought. The concept was slow to gain acceptance and may be threatened by the deteriorating security situation.<sup>25</sup>

### Iraq

Likewise, Operation Iraqi Freedom has enjoyed unprecedented military success where "a dictatorial regime ruling a population of 25 million was defeated in only 21 days of fighting instead of the planned campaign of 125 days."<sup>26</sup> The complete defeat of the Iraqi armed forces by the Coalition is unprecedented and a clear indicator that U.S. planning methodologies were entirely adequate to defeat the conventional foe. Immediately following the conclusion of major offensive activities and once it was apparent that the Ba'athist Regime had been ousted from power, civil disorder was commonplace. In particular, U.S. troops did not appear prepared to intervene in the wide spread looting that occurred in Baghdad. Post-conflict "planning reportedly was based

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<sup>24</sup> The Conflict, Security and Development Group, *A Review of Peace Operations: A Case for Change* (London: King's College, March 2003), 353.

<sup>25</sup> *Ibid*, 353.

on some overly optimistic assumptions regarding the attitude of the Iraqi population and underestimated the difficulties of restoring some basic needs in the aftermath of the collapse of the tyrannical regime in Baghdad.”<sup>27</sup> In time, these crimes by opportunists were replaced by direct attacks against the occupying Coalition forces. The impact on U.S. forces soon grew to overshadow the cost of actual combat operations. At the time of writing it does not appear that the trend in violence is subsiding. The extension of tours of duty and the augmentation of troop levels indicate that the process of creating a safe and secure environment may require more resources and time than initially envisioned.

The challenges in post-Saddam Iraq have caught the Pentagon literally off guard. Bush officials predicted that G.I.s would be welcomed as heroes in the streets of Baghdad. "Like the people of France in the 1940s, they view us as their hoped-for liberator," said Deputy Defense Secretary Paul Wolfowitz a week before the war began. As late as May, the Pentagon predicted that U.S. troop levels would fall to 30,000 by September. Today there are 140,000 U.S. troops in Iraq (plus more than 20,000 allied forces).<sup>28</sup>

In contrast, British forces appear to be enjoying a greater measure of success. The official explanation is that skills built up through operations in Northern Ireland and the Balkans has served British soldiers well in Iraq. These skills “go beyond combat training and include having to manage sometimes hostile populations at a time of great uncertainty and turmoil. In Basrah, quickly gaining the trust and co-operation of the local people was of critical importance.”<sup>29</sup> Additionally, British forces placed a high priority on encouraging Iraqi police to return to their posts so that by July 2003 there were

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<sup>26</sup> Milan Vego, “Learning from Victory,” *Proceedings of the United States Naval Institute* vol. 129, no. 8 (Aug 2003): 32.

<sup>27</sup> Milan Vego, “Learning from Victory...” 33.

<sup>28</sup> Mark Thompson and Michael Duffy, “Is the Army Stretched Too Thin?” *Time Magazine*, New York: Sep 1, 2003. Vol. 162, Iss. 9: 37.

<sup>29</sup> United Kingdom, Ministry of Defence, *Operations in Iraq: First Reflections*, (London: Director General Corporate Communication, July 2003), 28.

“around 2,000 Iraqi police back at work in the city [Basrah].”<sup>30</sup> While the relative success of British forces might be attributed to a favourable combination of their tactical acumen and the mono ethnicity of their sector, there is a common recognition that:

A political solution in Iraq-which is presumably the alternative-would require the gradual but steady transfer of authority to the Governing Council; a new constitution; the establishment of honest police, legal and bureaucratic authorities; and, in time, elections. It would mean, in short, the undramatic ability to use the good offices of outsiders-the U.N., aid agencies, nongovernmental organizations-to help Iraqis weave together a new society.<sup>31</sup>

### Deductions

There is general agreement that an army of occupation approach must be as short-lived as possible. The transition to properly established local authorities for all matters of state should be hastened. Establishing the authority of the emerging state (Afghan Transitional Authority or in Iraq, the Coalition Provisional Authority) cannot occur until security is addressed. Outside of military circles, the security sector is generally recognized as comprising core security actors (such as the police and military), oversight bodies (such as national security councils and parliamentary committees), the judiciary (to include a working court system and prisons) and non-statutory actors (such as liberation armies or warlords’ private militias).<sup>32</sup> It is viewed in a broad and inclusive manner, spanning issues of relevance to individuals through their communities and ultimately the nation’s security. Security Sector Reform (SSR) is the process by which a failed or emerging state’s security apparatus is reformed to render it effective, transparent

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<sup>30</sup> *Ibid*, 36.

<sup>31</sup> Michael Elliot, “Lessons from the Rubble...” 25.

<sup>32</sup> Ralph Hendrickson, *Understanding and Supporting Security Sector Reform*, Guidelines commissioned by the United Kingdom’s Department for International Development (London: Conflict, Security and Development Group, King’s College, 2002), 7.

and accountable.<sup>33</sup> Viewing the situation in both Afghanistan and Iraq through a community security optic seems to indicate that, in both theatres, efforts at Security Sector Reform (SSR) are inadequate.

A review of events, setting and circumstances surrounding the interventions in Afghanistan and Iraq, lead one to conclude that the application of current doctrine is not sufficiently broad-based to meet the demands of these highly complex, chaotic environments. As a framework for discussion, a more inclusive list of the actors is proposed as follows:

- The Population influenced by:
  - Personal physical security; and
  - Access to essential goods and services; and
- The contestants attempting to influence the population:
  - The Regime (including conventional forces – army and police);
  - The Guerrillas (active after intervention and tied to the Regime);
  - The Coalition (the multidisciplinary faces of the international community);
  - and
  - The Transitional Authority (the government and forces of the emerging state).

This list will serve as an initial framework to begin to make sense of the chaotic nature of intervention warfare and how one might explain it using systems theory.

### Systems Theory

Systems theory is a unifying science that “focuses on the arrangement of and relations between the parts which connect them into a whole.”<sup>34</sup> Systems theory can be

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<sup>33</sup> *Ibid*, 7.

used to describe virtually any arrangement of interacting parts spanning most fields of science including engineering, biology, ecology, organizational science, family psychotherapy, economics and social systems.<sup>35</sup> It is a science that endeavours to see the forest and not just the trees.

The specialists concentrate on detail and disregard the wider structure which gives it context. The systems scientists, on the other hand, concentrate on structure on all levels of magnitude and complexity, and fit detail into its general framework. They discern relationships and situations, not atomistic facts and events.<sup>36</sup>

As it relates to conflict (social sciences), systems theory has been touted as an emerging approach to the theory of operational art by a number of reputable military authors. Colonel Greer, the Director of the U.S. Army's School of Advanced Military Studies, has observed "today's doctrinal concepts for operational design hamstring planners' and commanders' abilities to design and conduct effective, coherent campaigns for operations across the spectrum of conflict in today's security environment."<sup>37</sup> He goes on to posit that "systems theory provides significant opportunities to assist in the design and conduct of campaigns and major operations not centered on high-intensity combat, such as peace-support operations, counterterrorism, or unconventional warfare."<sup>38</sup> Likewise, Shimon Naveh, a noted Israeli lecturer on the operational art, has

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<sup>34</sup> F. Heylighen and C. Joslyn (1992): "What is Systems Theory?", in: F. Heylighen, C. Joslyn and V. Turchin (editors): *Principia Cybernetica Web* (Principia Cybernetica, Brussels), URL: <http://pespmc1.vub.ac.be/SYSTHEOR.html>.

<sup>35</sup> Ludwig von Bertalanffy, *General System Theory*, Revised Edition (New York: George Braziller Inc., 1969), 28 – 29.

<sup>36</sup> Ervin Laszlo, *The Systems View of the World: A Holistic Vision for Our Time*, (Cresskill, NJ: Hampton Press, Inc., 1996), 9.

<sup>37</sup> Colonel James K. Greer, "Operational Art for the Objective Force," *Military Review* vol. 82, no. 5 (Sep/Oct 2002): 23-24.

<sup>38</sup> *Ibid*, 25.

concluded “one can rightly claim that the operational level is the implementation of the universal system in the military sphere.”<sup>39</sup>

Of note is that both these authors appear to focus on the military systems within the theatre as opposed to viewing the theatre as the system. Colonel Greer asserts, “understanding military organizations and opponents as systems enables us to describe, predict, and counter their actions in ways that are not possible using Newtonian logic.”<sup>40</sup>

Similarly, Naveh states:

The framework for launching an operation is a violent contest between two belligerent systems, and, naturally, each of the contending systems strives to defeat its rival, and, at the same time, to frustrate the rival’s effort to bring defeat upon it.<sup>41</sup>

While the formal association of systems theory to conflict is recognized as an emerging field, it appears that the initial applications are very narrow. It is instructive to remember that:

The systems method does not restrict the scientist to one set of relationships as his object of investigation; he can switch levels, corresponding to his shifts in research interest. System science can look at a cell or an atom as a system, or it can look at the organ, the organism, the family, the community, the nation, ... A system in one perspective is a subsystem in another. But the systems method always treats systems as integrated wholes of their subsidiary components and never as a mechanistic aggregate of parts in isolable causal relations.<sup>42</sup>

With this brief background in systems theory, an effort will be made to construct a systems model of a theatre of operations for an intervention campaign, taking into consideration the aforementioned challenges of current operations in Afghanistan and Iraq.

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<sup>39</sup> Shimon Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory*, (London: Frank Cass, 1997), 9.

<sup>40</sup> Colonel James K. Greer, “Operational Art for the Objective Force...” 26.

<sup>41</sup> Shimon Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory*, (London: Frank Cass, 1997), 15.

## Model

Constructing a working systems model of a theatre of operations for an intervention campaign requires the use of commercial software. For the purposes of this paper, STELLA Version 8 produced by High Performance Systems (HPS) was utilized. In building the model, the methodology suggested by HPS was followed in order to speed the construction process. A brief description of that process follows. The initial steps in the model construction require the articulation of:

- A purpose statement in order to gain “an understanding of the relationships responsible for generating a specific dynamic behaviour.”<sup>43</sup>
- A Reference Behaviour Pattern (RBP) depicting “the pattern of behaviour you’re trying to understand.”<sup>44</sup>
- The Key Actors that are believed “to be involved in generating the RBP”<sup>45</sup> and include for each actor:
  - The *conditions* the actor monitors within the system;
  - The *actions* by the actor in response to changes in conditions; and
  - The *resources*, material or non-material, that support taking the actions.<sup>46</sup>

Applying this methodology to the problem of intervention warfare as it is described in the deduced initial framework produced the following matrix:

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<sup>42</sup> Ervin Laszlo, *The Systems View of the World...* 10.

<sup>43</sup> Barry Richmond, *An Introduction to Systems Thinking*, Revised Edition, (Lebanon, NH: High Performance Systems, Inc., May 2001), 142.

<sup>44</sup> *Ibid*, 142.

<sup>45</sup> *Ibid*, 144.

<sup>46</sup> *Ibid*, 144.



### Modeling Intervention Warfare

Purpose Statement. The model is intended to facilitate insights into a range of National Power influences on the conduct of intervention war.

Reference Behaviour Pattern (RBP). In order to gauge a campaign's level of success, follow the *loyalty* of the population (through the Human Security Trend) during the pre-intervention, combat, and post-combat phases of an intervention war.

### Key Actors

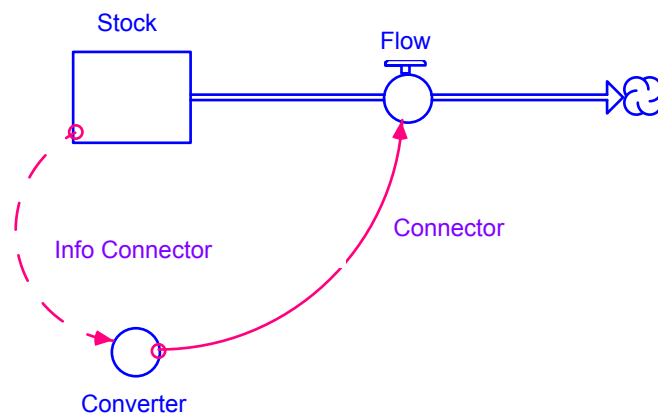
	<b>Conditions Measured</b>	<b>Actions Taken</b>	<b>Supporting Resources</b>	<b>Remarks</b>
<b>Regime</b>	Coalition Forces	Engage in Combat	Regime Forces	Conventional fight
	Terrain Controlled	Engage in Combat	Terrain	Conventional fight
<b>Guerrillas</b>	Level of Security	Create Instability	Guerrilla Forces	Attacks on population
	Essential Services	Obstruct Humanitarianism	Guerrilla Forces	Attack aid efforts
<b>Population</b>	Coalition Forces	Engage in Combat	Guerrilla Forces	Unconventional fight
	Hostility to Coalition	Change loyalty	-	Based on HST*
	Neutral	Change loyalty	-	Based on HST
	Hostility to Regime	Change loyalty	-	Based on HST
<b>International Coalition</b>	Level of Security	Improve security	Coalition Forces	Overt security
	Essential Services	Provide Humanitarian Aid	Money	Direct aid to population
	Regime Forces	Engage in Combat	Coalition Forces	Conventional fight
	Terrain Controlled	Engage in Combat	Terrain	Conventional fight
	Guerrilla Forces	Engage in Combat	Coalition Forces	Unconventional fight
	TA Forces	Train TA Forces	Money	SSR Funds
<b>Transitional Authority (TA)</b>	Level of Security	Improve security	TA Forces	Overt security
	Regime Forces	Engage in Combat	TA Forces	Conventional fight
	Guerrilla Forces	Engage in Combat	TA Forces	Counter-insurgency

\* Human Security Trend is a relative measure of the level of security and available essential goods and services.

By examining the table above, one can see that the emphasis is on the population as the central actor. By so doing, an effort has been made to focus on ‘hearts and minds’ leading to a Reference Behaviour Pattern that can be followed as the intervention campaign progresses. On either ‘side’ of the population is the pre-intervention regime followed by the post-combat phase guerrillas and the intervening coalition that is allied with the post-combat phase Transitional Authority (TA). Before reviewing the proposed model, a word about systems modelling as it is portrayed by STELLA Version 8.

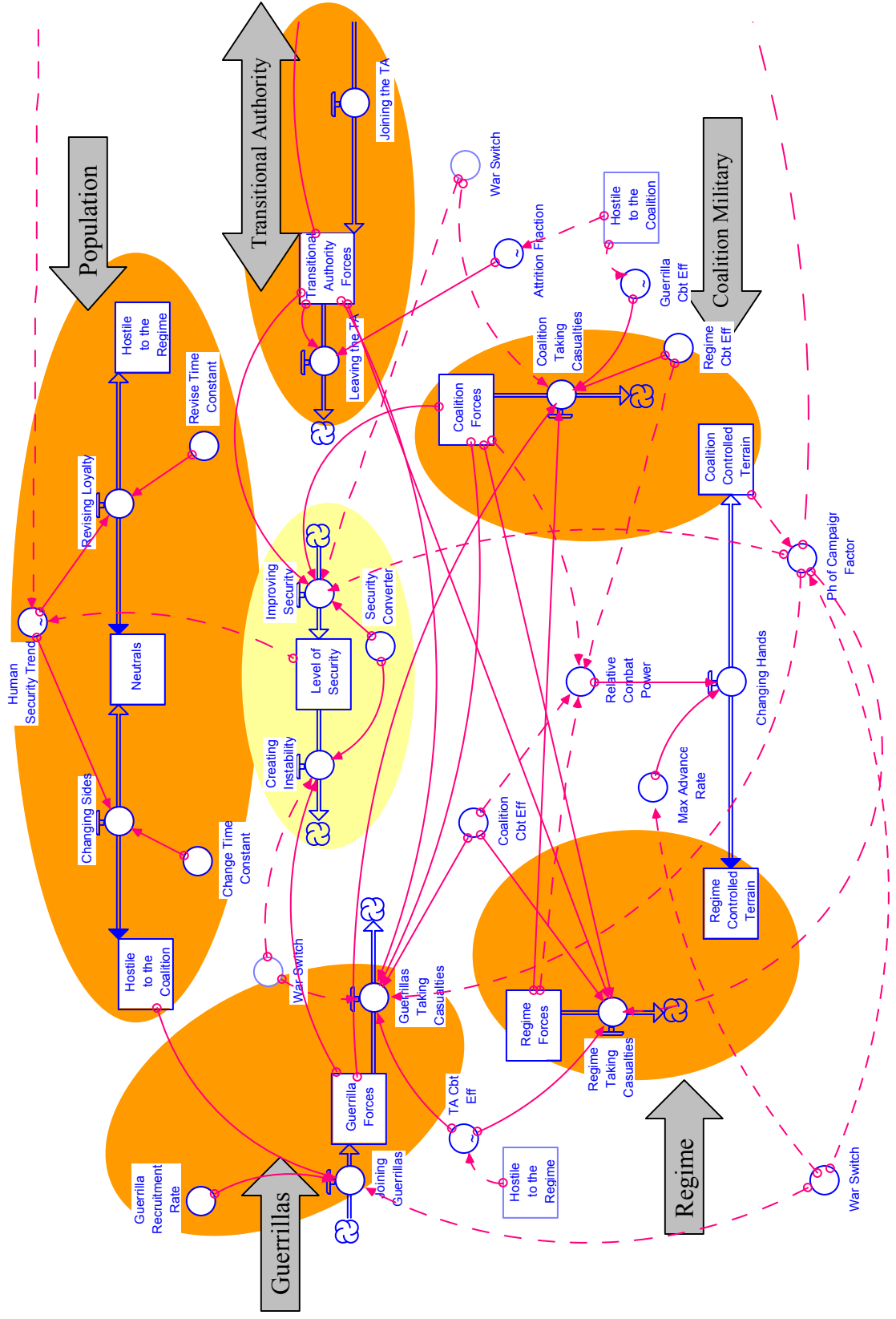
### STELLA models

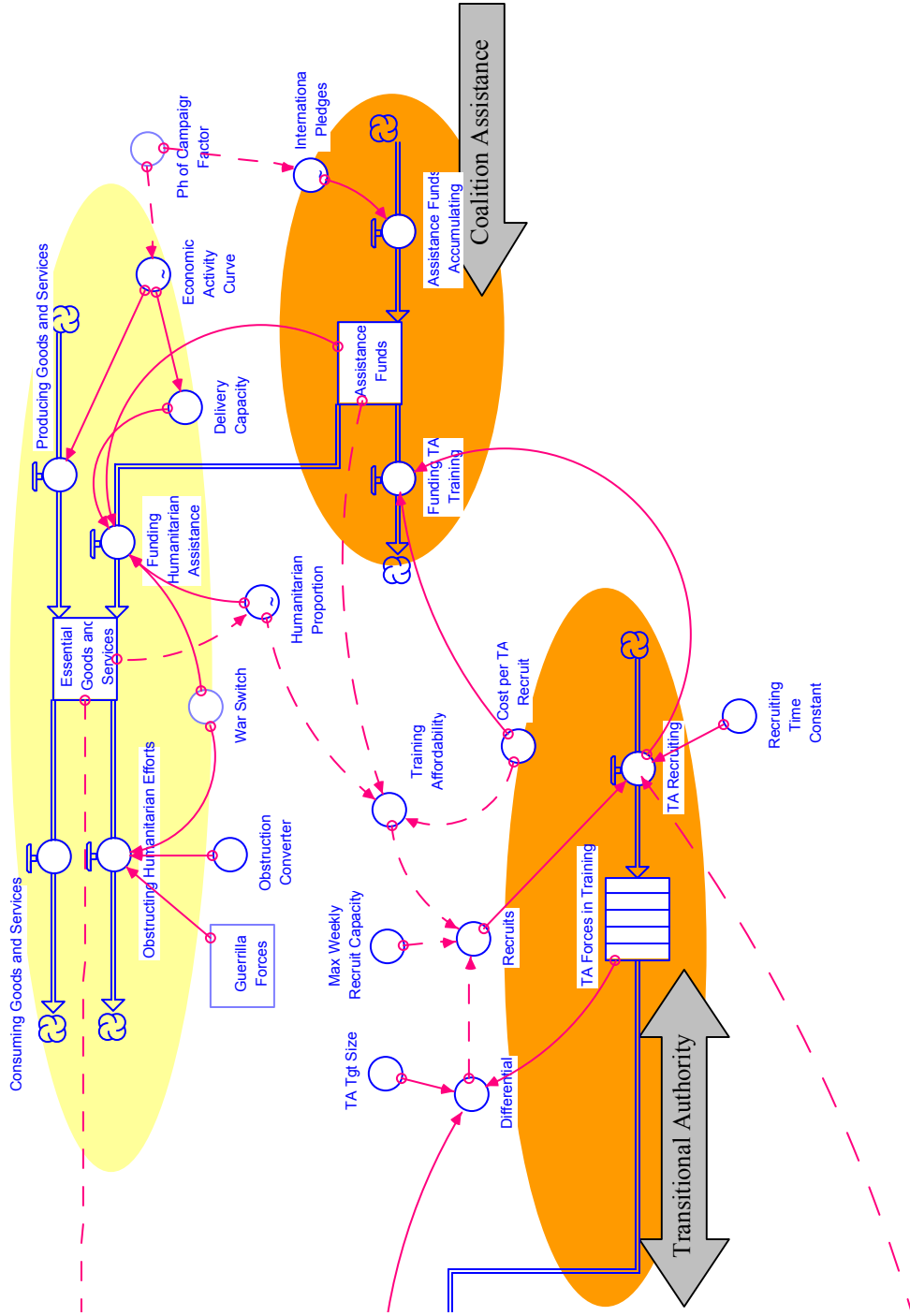
include stocks (a measure of something that is static and can accumulate or diminish), flows (the draining or adding to a stock), converters (used to convert units from static to



dynamic states – time constants, effectiveness ratios, etc.), connectors (transmitting action) and information connectors (transmitting information that might be used for a decision). By describing the individual relationships of multiple stocks and flows, one can construct a model of many inter-related pieces. Once enumerated and run some surprising results occur as the combination of many simple causal relationships result in counter-intuitive, non-linear behaviours.

Model construction begins by relating the actors through the conditions measured, actions taken and supporting resources. The complete intervention warfare model appears over the next two pages.





Each of the key actors is shaded in a tan oval with a large arrow to indicate the position in the model. The associated stocks and flows for each actor are shown as well as the relationship to others through connectors (both action and information).

Combat is affected using the Lanchester attrition method, which posits that casualties occur by applying the full weight of the opposing forces through their respective combat effectiveness constant to arrive at numbers of casualties per unit time. Clearly this over-simplification could be replaced by a more accurate methodology through the use of historical data from Dupuy's comprehensive study of battle casualty forecasting.<sup>47</sup> However, the current construct is suitable for the purposes of this paper.

At the top of the first page is the Human Security Trend (HST), which ultimately impacts on the loyalty of the population. The HST is a combination of the Level of Security, shaded in yellow on the first page and the availability of Essential Goods and Services shaded in yellow on the second page.

While the Regime Forces are not able to grow in size (reflecting full mobilization), the Guerrillas' growth is dependent on the level of hostility towards the Coalition. Guerrillas not only fight the Coalition but they directly target the Level of Security and the availability of Essential Goods and Services.

The International Coalition appears as a military component directly engaging the Regime and Guerrilla forces as well as advancing to seize all the terrain in the country which, once accomplished, signals the end of the Regime and the transition to the post-combat phase of the campaign (affected through the *Ph of Campaign Factor* in the Converter at the bottom of the first page). The economic component of the model

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<sup>47</sup> See Trevor N. Dupuy, *Attrition: Forecasting Battle Casualties and Equipment Losses in Modern War*, (Fairfax: Hero Books, 1990) for a comprehensive study of attrition factors.

features the production and consumption of Essential Goods and Services shaded in yellow on the second page and the inclusion of Coalition Assistance Funds shown on the second page. The model shuts down economic activity during the combat phase of the intervention and allocates funds to humanitarian assistance and training of the TA's new security forces based on a ratio decided by the modeller.

The creation of TA's new security forces spans both pages. In essence, it is capped at a level agreed by the Coalition and grows at a rate governed by that cap, funding available and the capacity of the Coalition to train them. Interestingly, the model ascribes a higher combat effectiveness to TA's security forces when combating Guerrillas than that attributed to the Coalition forces. The TA's security forces do not suffer direct casualties as a result of their efforts. Instead their attrition occurs as a function of the hostility exhibited towards the Coalition (a reflection of desertion).

In order to 'do the math,' the model must be enumerated. The author used figures that he believed best reflected a generic situation similar to the struggles in Afghanistan and Iraq. Provided that the numbers used are of the appropriate order of magnitude, the focus of the reader should rest on general behaviours not specific values. The following data was used:

	<b>Conditions Measured</b>	<b>Initial Level</b>	<b>Units</b>
<b>Regime</b>	Regime Forces	80	1,000s of men
	Terrain Controlled	100,000	Km <sup>2</sup>
<b>Guerrillas</b>	Level of Security	60	Index 1 to 100
	Essential Services	40	Index 1 to 100
	Guerrilla Forces	5	1,000s of men
<b>Population</b>	Hostile to Coalition	25	Out of 100
	Neutral	50	
	Hostile to Regime	25	

	<b>Conditions Measured</b>	<b>Initial Level</b>	<b>Units</b>
<b>International Coalition</b>	Coalition Forces	95	1,000s of men
	Terrain Controlled	0	Km <sup>2</sup>
	International Funds	\$10 million	USD per week
	Development Assistance Ratio	35%	Remainder available for SSR
<b>Transitional Authority (TA)</b>	TA Forces	0	1,000s of men

The model was run for three cases as follows:

- A base case that seeks to represent the current reality in Afghanistan and Iraq – a swift military victory over conventional forces followed by an occupation period of gradually increasing instability and less than desirable development progress;
- A second case where Coalition troop strength is increased by 50% at the conclusion of the combat phase in response to deteriorating stability; and
- A final case where more effort is focussed on development assistance and standing up the TA’s forces while Coalition troops are reduced.

The results are best displayed using three graphs which track force strengths, population attitudes and a measure of the Human Security Trend. Each model run is for a period of 40 weeks. The three phases of the conflict (pre-combat, combat and post-combat) are readily identifiable by following the demise of Regime Forces.

In the base case, the model shows a system in equilibrium for the three week period leading up to combat operations. After the intervention, there is a pronounced loss of Regime combat forces while Guerrilla forces begin to grow in number. After a short nine week combat phase the model moves into the post-combat phase. The arrival of TA

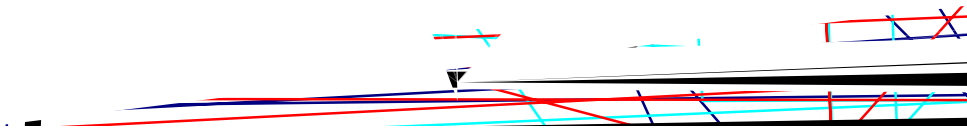
Forces through the Coalition funded training programme reflects a four week delay from the inception of training until the arrival 'on the beat' of the new forces.

The attitude of the population exhibits interesting behaviour in reaction to the drop in both security and essential goods and services. The failure of the Coalition to provide for these basic needs turns much of the neutral and Regime hostile population against the Coalition, which has a knock-on effect on the rise of Guerrilla Forces and the flat growth of the TA Forces.

The final element features the Reference Behaviour Pattern that is followed through the Human Security Trend. Here we can see that some progress was made shortly after the conclusion of the combat phase but that it never reaches positive territory. Eventually the Human Security Trend becomes decidedly negative as the Guerrillas gain the upper hand in combating the Coalition and obstructing the delivery of essential goods and services. After 40 weeks the model appears to exhibit a clear-cut case of winning the war but losing the peace.

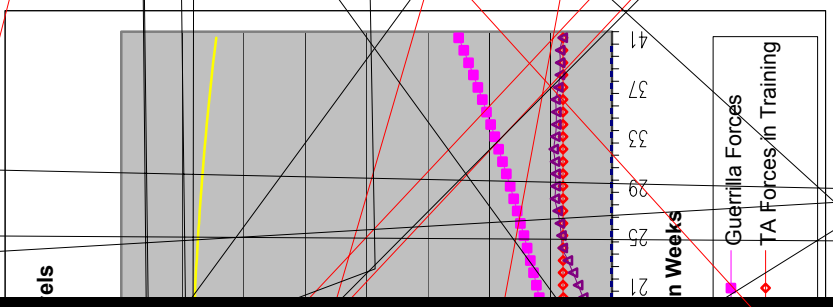
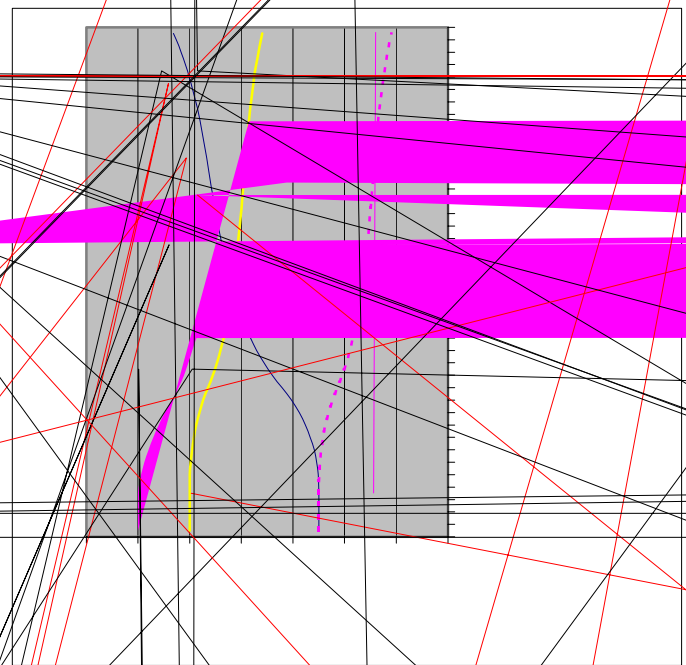


me in Weeks



In the second case, the Combat phase appears to unroll in a similar manner to the base case. After the combat phase, the arrival of a large contingent of Coalition troops does not seem to impact on the growth of Guerrilla Forces nor does it aid the TA Forces in any material way.

Where some inroads appear to be made is with respect to the delivery of essential goods and services (presumably assisted by the security presence of Coalition soldiers). Despite this apparent positive impact, it is not sufficient to turn around the Human Security Trend, which appears destined to remain negative. The graphs seem to infer that the introduction of higher numbers of occupying troops is ineffective and potentially counter-productive.

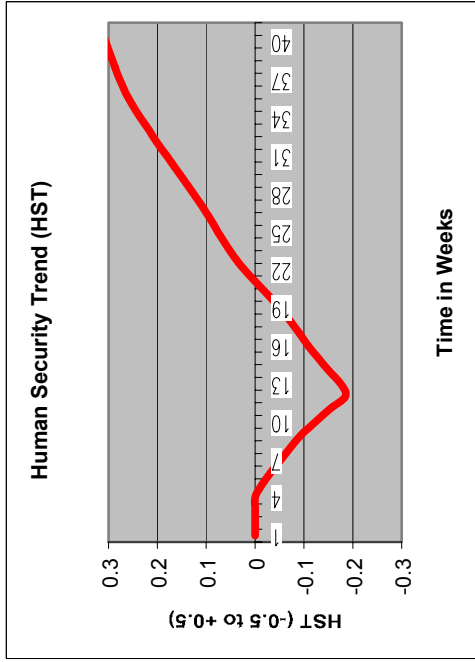
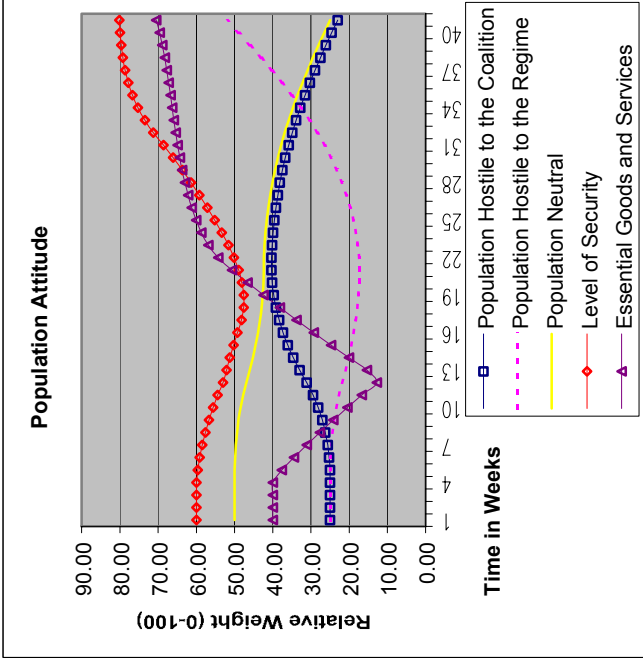
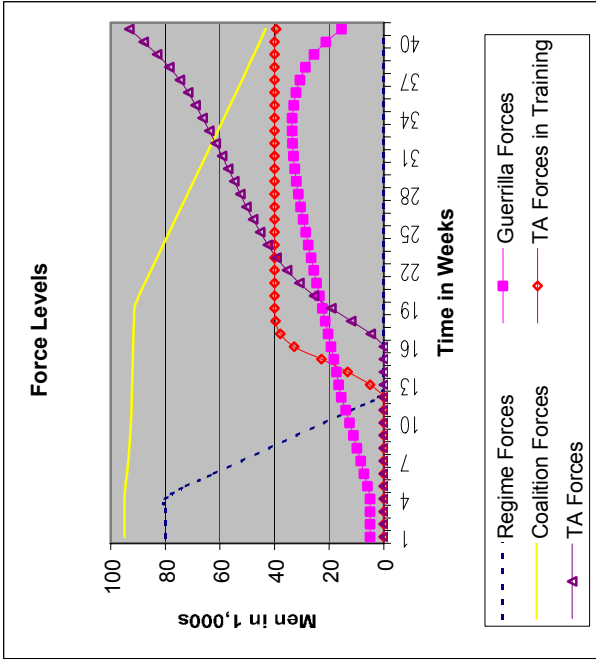


HST (-0.5 to +0.5)

e e e

The third case offers an interesting insight into post-combat influences of the indigenous TA Forces. By doubling the capacity to train and the money available, they appear to hold their own (although Guerrilla Forces still enjoy solid growth initially). Eventually, the TA gains the upper hand on the Guerrillas so that from week 34 onward the Guerrillas are in sharp decline. The departure of 2,000 Coalition soldiers per week does not seem to sway the balance whatsoever as their numbers reach approximately 40,000 by the end of the model run (40 weeks).

It is even more instructive to review the results of this action with respect to attitudes. There is a dramatic rise in goods available which has a corresponding breaking influence on the population's contempt for the Coalition. This switch in attitude is subsequently followed by a rise in the overall level of security. The sure indicator that this approach may be profitable comes from the turnaround witnessed in the HST, which remains strongly positive after the mid-point of the model run.



**Case 3 – Double Funding,  
Coalition Troop Withdrawal**

The results of this cursory look into a systems model of modern intervention warfare could be relegated to the ‘only of academic interest’ pile. However, it does succeed in reflecting, in some small measure, some of the pearls of wisdom that emanate from the ‘field.’ First, when one reads of planning for such operations a common sentiment, from the civilian experts, is the non-linear nature of peace building (reflected in the presented model).

It is important to develop a clear understanding of the diverse dimensions of peacebuilding and how various strategies can be put together to achieve sustainable peace. Therefore, a peacebuilding design process has to be more than a checklist of a vast array of tasks...<sup>48</sup>

Second, the intervention needs to be followed up with a multidisciplinary approach by harnessing all aspects of National Power in order to win over the occupied peoples rather than increase their insecurity (as reflected in Case 1). This was known in advance of present operations and has not escaped the notice of military experts.

The military is supposed to go out there and kill people and break things. And then from that, we determine how we’re going to right the disorder or fix the conflict. Usually we look at the other elements of national power – the political, the economic, information, whatever – that are going to be brought to bear, much like George Marshall saw it at the end of the Second World War. That has not happened.<sup>49</sup>

Third, the presence of large armies of occupation (reflected in Case 2) has long been recognized as a temporary solution at best and, at worst, a long term source of friction.

The problem-one that all armies have faced when confronting guerrilla forces-is that search-and-destroy missions in urban areas run the risk of losing local hearts and minds, which is the last thing the U.S. needs in Iraq.<sup>50</sup>

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<sup>48</sup> Ho-Won Jeong, “Peacebuilding Design: A Synergetic Approach,” In *Approaches to Peacebuilding*, ed. Ho-Won Jeong, 147-170. (Basingstoke: Palgrave MacMillan, 2002), 147.

<sup>49</sup> Naval Institute Forum 2003, *Address by General Anthony Zinni...*, 2.

<sup>50</sup> Michael Elliot, “Lessons from the Rubble...” 25.

It has been avoided in Afghanistan...

“The lack of a sizable U.S. presence on the ground almost certainly avoided protracted and costly conflict with the majority of the Afghani population because the United States was not perceived as a foreign occupier.”<sup>51</sup>

...but without the substitution of a tolerable alternative in a reasonable period of time. This problem has historically been addressed (as reflected in Case 3) by engaging local authorities.

In Germany and Japan, U.S. occupation governments realized that while they could physically secure the environment more or less on their own, they needed indigenous institutions to begin the process of deeper social and political reform essential to the eventual downsizing of the occupation.<sup>52</sup>

Systems theory, when applied in a broad manner, is useful to reinforce these old lessons and provide insights into the underlying dynamics of a conflict.

#### A Word about Measures of Effectiveness

When judging the performance of any proposal, measures of effectiveness clearly have a major function. If they are poorly selected or if the data reviewed is misinterpreted, the resulting decisions are bound to be flawed. In applying systems theory to intervention warfare, measures of effectiveness are problematic since the variables of interest are largely subjective and qualitative. That is not to say it is impossible. Data can be collected through a variety of mechanisms. However, before inclusion in a model it should be subjected to scrutiny by theatre experts. Some sources are:

- Poll data – as an example both Gallup and Zogby International have conducted surveys of the Iraqi population which give the impression that the long-term

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<sup>51</sup> Milan Vego, “What Can We Learn from Enduring Freedom...” 33.

outlook of many Iraqis is positive<sup>53</sup> leading to the possible conclusion that the Coalition need only ‘stay the course.’ However, the Zogby Poll also indicates that Iraqis would like Coalition troops out within a year (65.6% of those polled)<sup>54</sup> and that they should be left to their own devices to sort out the structure of their country (59.9% of those polled).<sup>55</sup> Obviously, one must exercise caution when interpreting such results;

- Anecdotal Evidence – two late-summer 2003 visitors to the Middle East returned to the U.S. with divergent views of the state of play in Iraq. U.S. Rep. Jim Marshall (D-Ga.), a Vietnam combat veteran and a member of the House Armed Services Committee paints a positive picture of the U.S. efforts in Iraq and has related that “a colonel in the 101st Airborne put it to me quite simply: ‘Sir, this is worth doing.’ No one I spoke with said anything different. And I spoke with all ranks.”<sup>56</sup> In contrast, General (Retired) Anthony Zinni observed, after speaking to a number of Iraqis, “what I hear scares me even more than what I read in the newspaper.”<sup>57</sup> Clearly, their testimony, while valuable, must be weighed against other available information; and
- Media – When building a case (not unlike that presented in this paper), the wide range of views reported in the open source media can be interpreted to one’s advantage as well. The current conflicts are replete with examples of less

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<sup>52</sup> Ray Salvatore Jennings, *The Road Ahead...* 27.

<sup>53</sup> Zogby International, *The First Scientific Poll Of Current Iraqi Public Opinion...* 8 of 55.

<sup>54</sup> *Ibid*, 23 of 55.

<sup>55</sup> *Ibid*, 20 of 55.

<sup>56</sup> Jim Marshall, “Media's dark cloud a danger - Falsely bleak reports reduce our chances of success in Iraq,” *Atlanta Journal-Constitution*, September 22, 2003

<sup>57</sup> Naval Institute Forum 2003, *Address by General Anthony Zinni...*, 3



sellable, more numerous ‘good news stories’ being ignored in favour of more spellbinding ‘bad news stories.’

Thus, we see that no matter how comprehensive the model, there must always be an element of professional judgement (the commander in the case of campaign planning) to interpret the effectiveness of efforts in the field.

### Conclusion

The conduct of stability operations in the post combat phase of the ongoing efforts in Afghanistan and Iraq has proven a troublesome problem for U.S. and Coalition forces. While current joint doctrine addresses the issue in great detail, including complete manuals on interagency cooperation, it is not sufficiently comprehensive to permit analysis of all the inter-relationships. The complexity of the problem and its patchy application has led to unfulfilled expectations with respect to both the occupying forces and the target nations’ populations. One possible solution permitting the inclusion and study of a myriad of factors is the application of systems theory.

Present thinking with respect to systems theory and campaign planning suggests that models focus on the combatants as competing systems. It has been shown that it may be more appropriate when applying systems theory to intervention warfare that a given model should span all the phases of the conflict and treat the entire theatre as a system rather than merely modelling the belligerents as competing systems. A simple systems model has been demonstrated using STELLA software that includes elements of National Power and their influences on the resident population. The model permits broad insights into the dynamics of the entire theatre and suggests that more attention be given to Security Sector Reform and development assistance.

Nevertheless, when interpreting results one must always remain cognizant of the difficulties in obtaining valid measures of effectiveness and exercise caution when drawing conclusions. Clearly, the current model could be further refined to include more theatre specific aspects and any other factors deemed essential. Future versions could incorporate user-friendly options to permit use by any planner.

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