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To Change an Army: Understanding Defense Transformation

**Leonard L. Lira
Academy Instructor
Department of Social Sciences
United States Military Academy
West Point, NY 10996**

Leoanard.Lira@usma.edu

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Introduction: An ambiguous understanding of transformation

The U.S. military is going through a change process that its leadership characterizes as a “Transformation.” A multitude of ideas on what that transformation is and how the military should accomplish it are widely published.¹ Nevertheless, the question always arises, “What is transformation?” In addition, it is common to hear defense leaders state that transformation is ongoing and that it will never be complete.² This lack of consensus in the literature and inability to identify an end state to the change in the military leads me to believe that the U.S. Defense establishment may still be groping in the dark for an understanding of the basic problem. This further leads me to believe that a successful accomplishment of military transformation is in jeopardy because there is no way to properly evaluate that change. How can a military effectively change if it does not understand why or how it is supposed to change and what the end state of that change should look like? So my basic thesis is that we do not properly understand this type of change process, “transformation;” and therefore, we cannot effectively evaluate the success or failure of such a program until we do.

There is little doubt that change is occurring to the U.S. military, but is it transformational change? Are much of the changes the military has made over the last decade and a half, and is continuing to make today, little more than a simple reformation of technology, organization, or administrative strategies? Are these changes in fact not a transformation, but simply a reformation? Reformations are changes organizations undergo to bring it back line with accepted performance standards in order to accomplish its same mission.³ Transformation, this paper will argue are changes that allow an organization to completely change its whole structure and purpose.

To date, changes to the U.S. military have either been organizational changes to make it

lighter and more deployable, or technological in an attempt to give it an asymmetrical information advantage, through leveraging information technology in the strategic, operational, and tactical spheres of military knowledge on the battlefield against probable peer competitors. The first change is reshaping the way the military looks and staffs itself, and the second is adjusting its firepower and intelligence acquisition and processing capabilities, but neither really changes the true reason the United States Army exists today in the 21st century. As such, some would argue that these changes are not transformational, and that in fact, “force transformation- for all the media attention it has received and all the packaging and marketing surrounding it – is still little more than ‘power point’ deep.”⁴ This brings us back to the basic question, what is transformation and how would one know if changes occurring are simple reformation or are indeed transformation? The difference is important and public managers of the U.S. military will better facilitate change in the entire defense organization by understanding that distinction. Not understanding the basic reason for implementing such a dramatic change process might lead to, at best, a bastardization and fragmentation of the force, and at worst a force incapable of providing for a real defense of this country against its most prevalent threats. An illustrative symptom of this failure in understanding transformation could be the apparent asymmetrical besting of the U.S. military’s dominance in Iraq by insurgent forces.

This paper analyzes the U.S. military’s attempt at transformation through a multi-disciplinary lens (Revolution of Military Affairs (RMA), Civil-Military Relations, and Public Organizational Theory) to establish an understanding of military transformation as a large-scale organizational change process and proposes a method of analysis for transformation that will lead to a way to evaluate process effectively.

Well, how do you study defense transformation? Various Schools of thought...

One way to try to study transformation is to look at how others have attempted to research the issue. A quick meta-analysis of the literature on defense transformation confirms my assertion of a lack of consensus of what transformation is. Don M. Snider and Gayle L. Watkins point out that since militaries reflect the societies they come from and those societies' "state of technology," and that since each military has a unique relationship with that society that it defends it is not surprising that consensus may be lacking.⁵ Snider and Watkins cite at least three schools of thought that encompass military transformation: the revolution in military affairs school (RMA); the public organizational theories school; and the civil-military relation theory school. In all of these schools, the two constants are that the discussion is about transformation as a change process and that that process is extraordinary and new.

The RMA school of thought on military transformations tends view "military institutions in relations to the changing conduct of warfare and how militaries fight-particularly due to the influence of technology."⁶ Many of the researchers from this field – historians, defense and policy analysts, technologist, and futurist- that Snider and Watkins cull their summary of the RMA from support their foundations on Thomas Kuhn's eminent work, The Structure of Scientific Revolutions. Kuhn's work on the structure of scientific revolutions was the first to inform the theoretical framework for the concept of the RMA. This theory states that when anomalies occur that "subvert" the practice of a traditional science, the shifts in "professional commitments" to new scientific practices that result are known as "scientific revolutions." Moreover, when these anomalies occur, they necessitate the particular scientific "community's rejection of one time-honored scientific theory in favor of another incompatible with it."⁷ Recently, the anomaly that has risen in challenge of the old paradigms of military science is the emergence of information technology on the battlefield. As such, much of the literature that

covers the evolution of RMA centers on the influence of information technology in changing the nature of war.⁸ The RMA school of thought informs the discussion of transformation by highlighting reasons for change via how technology can change a military's methodologies. An often used example of an RMA is the German Army's employment of Armor and radio technology to overwhelm its adversaries. Since much of the discussion in this literature revolves around the changes in level of technology (numbers and types of equipment) versus manpower (numbers and types of troops) to accomplish the military goals and objectives, the discussion takes on a rather quantitative character.

The second school of thought about military transformation that Snider and Watkins point to is from the Public Administration and Organizational theory perspective on transformation. They explain how this school of thought emphasizes "the culture of the military institution, the relationship between culture and strategic doctrines, and the influence such organizational culture has in interpreting the external environments in which the Army" operates.⁹ An example of this is Bryon E. Greenwald's discussion on the military's attempt to change.¹⁰ Greenwald points out both internal and external factors in the Army's environment that inhibit or cause change.¹¹ The external factors include the popular and political support for the employment of the Army that the nation demonstrates through a willingness to pay for the services of a national defense. These factors are shaped by a "complex set of interrelated strategic determinants" such as "geography, threat perception, history, ideology, culture and economics."¹² The field of public administration and organizational management is useful to the discussion of change in the military because it provides methods to manage change in organizations not driven by extrinsic motives but rather by intrinsic variables. This scholarly field is replete with studies on how to manage public organizations. While it is true that the military is unlike any other public

organization because of its purpose to fight and win its nation's wars, the same theories of public organizations should apply because it is after all a human organization. As Morris Janowitz accurately pointed out, a market solution simply will not provide the answers as to how to incentive buy-in from the members of the military's organization to support transformation. Any discussion on how to transform the military that leaves out this school's contribution is in jeopardy of missing policy relevant options to achieve success.¹³ The character of the discussion that this school provides is a qualitative one because it discusses the changes in the quality of probable military missions, and how to manage those changes.

The third school of thought that Snider and Watkins use to address the views of transformation in the Army is from the civil-military relations point of view, which focuses on the observable relationships between military institutions and their governments. They rely on Samuel Huntington and others like him,¹⁴ to demonstrate that the major variable requiring changes within the military institution is its relationship between the military's function and its legitimacy within the society it serves. For example, Deborah Avant in James H. Lebovic demonstrate that new tasks the U.S. Army receives from its society cut against the grain of protecting against that large peer competitor and compete with "the predominant biases within military culture for large-scale, capital intensive, high technology operations."¹⁵ This has led others within the school to conclude that changes to the geopolitical security environment and within American society itself are forcing changes within the military in directions unknown and have left the military possibly prepared to fight the wrong war.¹⁶

The important contribution that the civil-military school, and Snider and Watkins book, provides to this discussion is the context under which transformation should be viewed, both qualitative and quantitative. The military must accept the qualitatively different roles assigned to

by its society, and it must adapt to accomplish the resulting missions with the quantitative resources allocated to it by that society. Additionally, this school of thought shows that failing to adapt properly will not force the military to wither and die. It is a public organization created by law; it can not do that unless the U.S. ceased to exist. Nevertheless, it can become stagnant and bureaucratize, thereby falling into a state of dysfunction and jeopardizing the security, and therefore the existence, of the very society it springs from. Snider and Watkins work in this field indicate that Army as a profession can adapt to this societal priorities much better to than the Army as a bureaucracy, and this points to a possible step in the strategy of transformation; increasing the professionalization of the military.¹⁷

By reviewing this small meta-analysis of recent literature on the topic of defense transformation it is easy to see how consensus is lacking, and therefore establishing a starting point from which to study transformation is elusive. Additionally, by themselves each of three schools are insufficient, or policy irrelevant, to the discussion of military transformation. To discount any of these schools of thought from the discussion on transformation would make that discussion incomplete. Therefore, it is necessary for any researcher on this subject to draw on all three schools to provide a better understanding of the change that the U.S. military as an organization is undergoing.

Having stated the assumptions of the three basic schools of thought concerning changes in military organizations, the rest of this paper will continue to address the issue of transformation from the second school's perspective while remaining reliant on the descriptive values of the other two schools of thought. By not departing far from the description of change according to the schools of RMA and civilian-military relations, the Public Administrative approach that this paper will assume, will attempt to meld an understanding from theory and set

the conditions for a recommended practice and an evaluation of that practice.

So You Say You Want Transformation? Well...

Transformation is nothing more than a change process. Additionally, I would argue that it is only one type of change process that an organization can undertake. Organizational change implies an adjustment in one of the following dimensions of an organization: technology; administration; products or services provided by an organization; human resources; politics; or culture. This is not an exhaustive list, but change can occur wholesale or segmented in one or a couple of these dimensions and that alone would constitute a change in the organization. According to Amir Levy and Uri Merry in their book, Organizational Transformation: Approaches, Strategies, Theories, as long as that change does not alter the organization's mission, purpose, or reason for existence, then this is known as a "first-order change." First-order change is change in which the organization looks different, but remains the same since there is no change to the organization's core.¹⁸ On the other hand, more in-depth changes to the majority of the organization's dimensions, if not all of them, constitute what Levy and Merry call "second-order change."¹⁹ Based on this analysis, I conclude that second-order changes are what properly constitute transformation, and I argue that if it is transformation that is required the military as an organization then changes in accordance with the description of second-order change from Levy and Merry are what should be observable.

Other researchers seem to agree. According to Hal G. Rainey, transformation, unlike simple organizational change, requires not a segmented approach to change but a more holistic, or strategic approach that incorporates the coordination of change in at least three or four, if not all, of the dimensions listed above.²⁰ In addition, unlike first-order, or simple reformation, transformation goes beyond changes made to the administrative policies, personnel rosters,

equipment, technology, or structure of an organization. In addition, the theory of transformation specifies that a condition exists in the organization’s environment in which the organization can no longer properly perform its functions, unless “a drastic reshuffling in every dimension of its existence” occurs.²¹ According to Beverly Fletcher, transformation is a changing of an organization’s core components and functions in order for that organization to be viable enough to accomplish its mission and to continue to exist properly in its environment.²² Therefore, one could argue that unlike simple reformational change, or first-order change, which may be optional, transformation, or second-order change, is necessary in order for an organization to continue to exist and function properly.²³

Levy and Merry cite several researchers in different disciplinary fields such as management theory changed, change theory, organizational theory, systems theory, learning and evolution theory, to support their contention that these two types of different change processes occur.²⁴ See Table 1 below.

Table 1
Definitions and Description s of First- and Second-Order Change

<i>Author</i>	<i>First-Order Change (reformation)</i>	<i>Second-Order Change (Transformation)</i>
Lindbloom (1959, p. 79) Management theory	Branch change: ". . . successive limited comparisons that continually build out of the current situation, step-by-step and by small degrees"	Root change: "A rational comprehensive approach starting from fundamentals anew each time, building on the past only as experience is embodied in a theory and always prepared to start from the ground up"
Vickers (1965, p. 27) Management theory	Executive change: gives effect to policies by maintaining the course of affairs in line with governing relations, norms, and standards"	Policy-making change: "Forming the governing relations which assume, express, and create a whole new system of values"

<i>Author</i>	<i>First-Order Change (reformation)</i>	<i>Second-Order Change (Transformation)</i>
de Bono (1971, pp. 4 , 9 - 10) Creative thinking	Vertical change: ". . . seeks to establish continuity, one thing must follow directly from another"	Lateral change: "Works with the hope that a better pattern can be arrived at by restructuring; it seeks to introduce discontinuity"
Greiner (1972, p. 40) Planned change	Evolutionary change: "The modest adjustments necessary for maintaining growth under the same overall pattern of management"	Revolutionary change: "The serious upheavals and abandonment of past management practices involving finding a new set of organizational practices that will become the basis for managing the next period of evolutionary growth"
Putney (1972, p. 32) Organization theory	Linear quantitative changes: ". . . occur within a steady state; they tend to be gradual and readily predictable"	Nonlinear qualitative changes: ". . . disrupt a steady state; they tend to be abrupt and difficult to predict"
Grabow & Heskin (1973, p. 476) Planned change	Rational change: ". . . does not change its internal structure at all because it does not question the fundamental assumptions upon which it is based"	Radical change: ". . . is a paradigm shift and system change"
Gerlach & Hines (1973, p. 8) Change theory	Developmental change: "... is a change within an ongoing social system adding to it or improving it rather than replacing some of its key elements"	Revolutionary change: "... is a change that replaces existing goals with an entirely different set of goals steering the system in a very different direction"
Skibbins (1974, pp. 4 - 7) Organization theory	Horneostasis: "... internal and external forces are nearly in equilibrium. The managers operate with limited short-range goals and tend to run such systems pretty much as they are"	Radical change: "... high spread, large-scale processes that occur within a single organization like caterpillars turn into butterflies, the organization retains its identity yet is transformed into something new"
Watzlawick, Weakland & Fisch (1974, pp. 10 - 11) Problem solving	First-order change: involves a variation that occurs within a given system which itself remains unchanged"	Second-order change: involves a variation whose occurrence changes the system itself. . . . it is change of change . . . it is always in the nature

<i>Author</i>	<i>First-Order Change (reformation)</i>	<i>Second-Order Change (Transformation)</i>
		of a discontinuity or logical jump"
Golembievsky, Billingsley, & Yaeger (1976, p. 135) Planned change	Alpha change: "... involves a variation in the level of some existential state"	Gamma change: ". . . involves a redefinition or reconceptualization. . . a major change in the perspective or frame of reference within which phenomena are perceived"
Hernes (1976) Systems theory	Transition: is a change in two dimensions: output and values	Transformation: is a change in three dimensions: output, process, and values
Argyris & Schon (1978,pp. 2 - 3) Learning theory	Single-loop learning: "... permits the organization to carry its present policies or achieve its present objectives"	Double-loop learning: "... involves the modification of an organization's underlying norms, policies, and objectives"
Kindler (1979, p.478) Planned change	Incremental change: "... step by step movement or variations in degree along an established conceptual continuum or system framework . . . it is intended to do more of the same but better"	Transformational change: "... is a variation in kind that involves reconceptualization and discontinuity from the initial system"
Miller & Friesen (1980a, p.592) Organization theory	Momentum change: "... momentum is expected to be a dominant factor in organizational evolution . . . reversals in the direction of change in strategy and structure are expected to be rare"	Revolution change: "Organizational adaptation is also likely to be characterized by periods of dramatic revolution in which there are reversals in the direction of change across significantly larger numbers of variables of strategy and structure"
Sheldon (1980, p. 64) Management	Normal change: "The fit between the organization and its environment and among its components is so rarely perfect, so . . . organizations are constantly tinkering with one dimension or another	Paradigm change: ". . . involves several or all dimensions at once. . . radical change in the world and world view"
Carneiro (1981, p. 179) Neo-evolution theory	Growth: ". . . is usually manifested by growth of structures already present and is essentially quantitative. . . Growth tends to be continuous"	Development: is characterized by the emergence of new structural forms and is essentially qualitative. . . Development is generally

<i>Author</i>	<i>First-Order Change (reformation)</i>	<i>Second-Order Change (Transformation)</i>
		discontinuous and proceeds by a series of jumps"
Ramaprasad (1982, pp. 387-88) Management theory	Minor change: "... merely improving the efficiency of current operations"	Revolutionary change: "... redefines the system. The re-definition may be entirely conceptual, structural, or processual, or a combination of the three"
Davis (1982, p. 65) Management	Change: "... a shift in the content of anything referred to herein as change"	Transformation: "... a shift of the context will be referred to as transformation"

Levy and Merry claim that while the above researchers use different terms, take different perspectives, and focus their attention on different change dimensions their definitions are complementary rather than contradictory and make good evidence that the two types of change phenomena are observable. A summary of Levy's and Merry's differences between first-order change and second-order change are listed in the Table 2 below.

Table 2
Characteristics of First-(aka reformation) and Second-Order Change (aka Transformation)²⁵

<i>First-Order Change</i>	<i>Second-Order Change</i>
A change in one or a few dimensions, components, or aspects	Multidimensional, multi-component, and Multi-aspectual
A change in one or a few levels (individual and group levels)	Multilevel change (individuals, groups, the Whole organization)
Change in one or two behavioral aspects (attitudes, values)	Changes in all the behavioral aspects (attitudes, norms, values, perceptions, beliefs, world view, behaviors)
A quantitative change	A qualitative change
A change in content	A change in context
Continuity, improvements, and development in the same direction	Discontinuity, taking a new direction
Incremental changes	Revolutionary jumps
Logical and rational	Seemingly irrational, based on different logic
Does not change the world view, the Paradigm	Results in new world view, new paradigm

<i>First-Order Change</i>	<i>Second-Order Change</i>
Within the old state of being (thinking And acting)	Results in a new state of being (thinking and acting)
<i>Optional for continued organizational existence, or proper functionality</i>	<i>Required for continued organizational existence, or proper functionality</i> ²⁶

The definitions of the two types of changes and the different characteristics of both, leads Levy and Merry to posit a definition of organizational transformation as second-order change that ““is a multidimensional, multi-level, qualitative, discontinuous, radical organizational change involving a [required] paradigmatic shift.”²⁷

As stated earlier, the difference between these two types of change are important and public managers of the U.S. military will better facilitate change in the entire defense organization by understanding that distinction. Innovations can occur either by choice or requirement, but if it is by requirement that an organization must change, then transformation is the right change process. Future more I contend, based on the preponderance of research discussed by Levy and Merry, that when analyzing organizational change such as defense transformation the definitions used in Table 1 and the characteristic differences listed in Table 2 of first-order change and transformation serve as useful guides to understand the type of change being implemented, and point to a possible tool to evaluate if in fact the change process being taken is the correct process.

So does the military even need to change?

Based on the discussion of the differences between first-order change and transformation, the first logical question that arises about defense transformation is if this type of change is required? The second question that logically rises is are the changes being implemented to date matching that requirement? If the changes and the logic behind the change are not aligned, or if there is no clear end state identified to that change, then the military will not function properly.

This section and the next will attempt to address both questions.

There are several reasons for the military to implement second-order. I will discuss at least three reasons: the rise in need for U.S. military to conduct peace operations, the rise of asymmetrical non-state actor threats, and political ideology of America that informs the military of its function. All three reasons draw on the various fields of study in defense transformation surveyed earlier and inform the discussion from both the quantitative and qualitative points of view.

The U.S. Army provides a good example of the first reason for change. Conditions exist in the Army's geo-strategic environment such as problems of failed states, civil wars, and ethnic conflicts that require it to conduct operations other than war at the low-intensity level of the conflict spectrum in an attempt to prevent local conflicts from escalating into multi-regional conflicts requiring massive international interventions on order of World War II. This shift in the geopolitical security arena from a bi-polar peer competitive environment to the multi-polar and multi-level conflict environment exposed a major flaw in the organizational design of the Army. The Army organizational design during the cold war was designed to deter nuclear attack and defeat an assault from a massed land Soviet armored armada in Europe. As the cold war ended, America's utilization of her Army increased as it used the Army extensively through the 1990s for peace operations, otherwise known as operations other than war. In fact, the Army's deployment after the end of the cold war rose by 300%, mostly to humanitarian and peace operations.²⁸ Operating in this environment, however, exposed a strategic shortcoming in the Army's dual configuration of light and heavy forces. The Army's heavy forces were well-equipped for high intensity war but more difficult to deploy strategically; meanwhile, its light forces could respond rapidly to peace operations but lacked force protection staying power if the

low-intensity environment quickly escalated and the light forces needed rapid back up from the heavy forces. Long before the al Qaeda attacks of September 11, 2001, the Army, under the direction of its then Chief of Staff, General Eric K. Shinseki, coined the term transformation and it has been trying all along to adapt to its new operating environment, which it viewed as a secondary and functional prerogative versus functional imperative. Indeed, the Army could not discount the threat of a yet-to-emerge military superpower that employs the rapid advances of “off-the-shelf” information technologies and who would seek to capitalize on the advantages easily accessible information technology exposed in the U.S.’s defenses.²⁹ Therefore, it is incumbent upon the Army, and the military to be able to dominate at every level of the conflict spectrum in order to diffuse the motivations of such enemies.

This first reason for change highlights that the type of change is quantitative in nature, because the context of operations that the military was becoming increasingly involved with in the post-cold war era were causing it to look at the numbers and types of troops and equipment needed to fulfill the new missions the military is picking up. The evidence of the 300% increase in peace operation deployments, as a containment strategy, highlighted that it was simply a fact of life that the military had to get accustomed to, and the rise in new technologies based on information technologies reinforces the fact that peer-competitors have an ability to quickly leverage technology in a bid to match U.S. military power. Notice that military did not have to change its functional imperative in order to meet the requirements of its new missions. In fact, the military felt quite comfortable in maintaining its cold war configuration and only making last minute changes to meet train up for the easy tasks of peace keeping.

The second factor causing a need for second-changes became apparent when attacks such as the those on the Khobar towers, the U.S.S Cole, and on the New York City and the Pentagon

during September 11th confirmed that the military's configuration was not any longer adequate to properly function in a manner that fully protected the U.S. homeland and interests abroad. The new environment of unknown and asymmetrical threats emanating from non-state actors caused the military to conduct operations at a greater pace along a spectrum of conflict from high-intensity conflicts, i.e. regional and global warfare in Afghanistan and Iraq to low-intensity conflicts i.e. humanitarian and reconstruction operations that quickly followed the heavy fighting in both regions. This demonstrated the need for the military to be capable of building and maintaining momentum in switching between both spectrums of conflict, and as a point of fact, demonstrated that legitimately winning major wars in the 21st century demanded it.³⁰ For evidence in support of this assertion I point to the 1st Armored and the 4th Infantry Divisions which both arrived in the Iraqi theater during Operation Iraqi Freedom, prepared to fight in high-intensity combat, but found their first missions to be both stability and support operations meant to reconstruct Iraq and simultaneous counterinsurgency operations. Another way to view this need is that the core mission of the U.S. military for the previous fifty-plus years was to focus solely on the threat of another world power that rivaled the U.S. Now it had to shift its focus by making itself adaptive to the unknown environment where adversaries are no longer defined by their level of threat but by the capabilities that they possess, or may possess, and that they will be willing to use anywhere along the spectrum of conflict in order to lower the conventional military ascendancy of the U.S. This reason highlights a purely qualitative requirement to change; the need for the military to accept a new-non tradition missions at the lower end of the spectrum of conflict as well as the upper end of the spectrum; in short the military's new functional imperative became to wage total conflict operations.

A third reason for change is the American liberal democratic ideology in terms of foreign

affairs and government agencies, such as standing militaries. Bryon E. Greenwald's discussion on the Army's attempt to change provides a good example of this is.³¹ Greenwald points out that popular and political support for the employment of an army that protects a nation is demonstrated through a willingness to pay for the services of a national defense. This American willingness to employ force is shaped by a "complex set of interrelated strategic determinants" such as "geography, threat perception, history, ideology, culture and economics."³²

Geographically, the oceans that have protected the U.S. shores have also impeded deployment of large land forces to conflicts around the world, thus raising the economic cost of conducting any such exercises. Greenwald asserts that historically there has been a common trend that political support for the military dwindles during periods following a conflict. An example he provides is the reductions in the Army force structure following WWI when Congress and President Wilson pushed for a return to normalcy. Another example he posits is post-WWII when the government again reduced the Army made adjustments in its force structure to meet what it thought would be the future of the war, tactical nuclear warfare. Through both reductions resources such as money for land force equipment, design, and experimentation were curtailed. A final example is when the nation sought to cash in on the "peace dividend" following the end of the Cold War and the U.S. Army, as most of the U.S. military, was reduced again in forces and funds.

Given our nation's historical liberal democratic framework, these measures for a limited military are understandable and desirable. The framework's process for authorizing and appropriating funds for all government agencies in general, but the military specifically, demonstrates that any changes are open to detailed debate and discourse before approval is achieved. This includes whether those changes prescribe an expansion or contraction of a government agency. These American ideological and cultural factors cause Americans to view

their national military as the defender of liberal democracy around the world, but they also abhor and are wary of funding large standing armies. The National Security Strategy of preventing regional conflicts from fomenting over into global conflicts that inevitably drag the U.S. into protracted conflicts of global war as was demonstrated by the two world wars of the 20th century is both based on and limited by these American liberal democratic ideals. This, Greenwald points out, “has the potential to create a gap between the ends of national policy and the military means to accomplish them.”³³ And indeed, an increased demand by National Security Strategy for more peace and post-combat stability operations by the military has placed a need on the military that it has been having a hard time fulfilling. It is this gap, I argue, that is the fundamental reason the military must change into an organization that has to accomplish more with less, and it is this gap that is driving the discussion of how to change, either quantitatively or qualitatively, in reaction to the first two reasons discussed.

Clearly, the military would prefer to establish two forces to accomplish its new role in total conflict operations. If possible, it would rather have a war-fighting organization for major air, land, and sea combat that it perceives as the greatest threat and the only true reason for its existence and a constabulary organization for the low-intensity conflict operations that the nation and our global obligations required, but truly was not what the military perceived its existence for. In addition, in order for a liberal democracy to survive in today’s globalized and interdependent world, against asymmetrical non-state actors, a military built simply to destroy its enemies, as was the case for the armies of imperialistic nations throughout the 19th and 20th centuries, is insufficient. The American society’s moral and values simply will not allow for the military to use all of the high-intensity tools that it has its disposal to win its future wars. This is why nuclear weapons were proposed and discarded for the Vietnam conflict, and why the

military finds itself in a protracted conflict in Iraq today. Therefore, one is left to conclude that due to this inherent national liberal democratic ideology, it is not feasible by political or economical standards of analysis to create two simultaneous forces, a war-fighting force and a peacekeeping force.

However, for as large as the military budget is, and as great as the monetary resources of America are, those resources and the budget built from it remained finite for political reasons. The civilian leadership that forms the representative government for American citizens simply cannot afford to structure the military to accomplish missions throughout all levels of the conflict spectrum with more than one organizational design; therefore the military must have one multi-versed organization. All of these requirements for changes to the military cannot be met with first-order changes alone. A true transformation that encompasses second-order changes as described by Levy and Merry is required.

Are the changes being made the right ones?

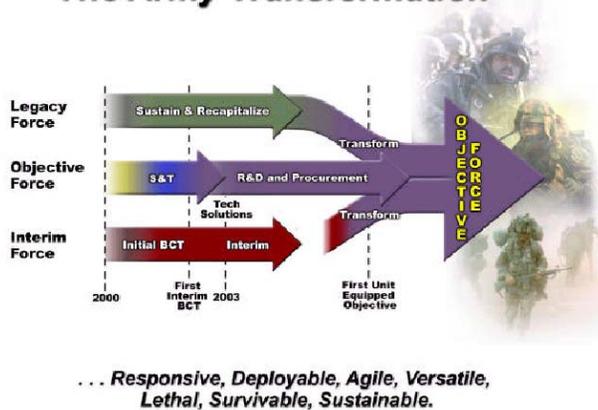
Assuming that I have established the need for a second-order change process within the military via defense transformation, the next question is are the changes being implemented by the military to date matching that requirement? I will apply the elements of Table 2's second column in order to analyze the Army's attempt to transform into the "objective force" and the Department of Defense's attempt to transform the military into a network-centric based organization. These two examples should provide good examples of the usefulness in understanding the difference between first-order and second-order, or transformational change.

In evaluating the current attempts of the Army to transform throughout the late 1990's to today via second-order change standards, one can quickly surmise, that the Army has put the cart before the wagon and attempted to transform before it knows, or even accepted what it is was

transforming to. During the 1990's, Army Chief of Staff (CSA) Gen. Shinseki's articulated a vision Army transformation resulting in a reconfigured organization that is "capable of dominating at every point on the spectrum of [military] operations [and] that is more responsive, deployable, agile, versatile, lethal, survivable and sustainable than the present force."³⁴ To achieve this result, he proposed a three-pronged strategy that capitalized on the strategic and tactical strengths of the Army's current configuration; dual combination of heavy armored and light infantry forces, and provided a bridge to an inconceivable future design, which he labeled as the "Objective Force." Figure 1 visually depicts this transformation attempt.³⁵

Figure 1

The Army Transformation



10/17/2000 - Transformation Panel



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The first prong of the strategy was entitled "Legacy Force". Legacy Force capitalized on the strategic and tactical strengths of the Army's current configuration; dual combination of heavy armored and light infantry forces. This part of the three pronged strategy called for the recapitalization of the Army's current force structure. For instance, current weapons platforms and personal equipment were refurbished with the latest information and electronic technology in order to allow the heavy armored forces, the so-called legacy force, to remain viable during the

time it was estimated to take the Army to transform. The Interim Force was the Army's attempt to bring the operational capability envisioned in the Objective Force into action sooner rather than later. This second prong called for fielding "off-the-shelf" equipment and technologies, such as the wheeled family of Light Armored Vehicles (LAV) to six light infantry brigade size elements (2,000 personnel) in order to provide the National Command Authority the strategic option envisioned in the future Objective Force. The third prong of the strategy called for the first steps toward Objective Force to begin with large investments into research and development of science and technological advances that would lead to the fielding of the Future Combat System (FCS). The FCS, which is a yet to be conceived platform, was hoped to lighten the heavy forces, make them more deployable, and add greater protection the light forces in order to make them more versatile, all without stripping away the current lethality and survivability of the current heavy force design, or the rapid deployability of the light forces design. The Army did not expect to realize the goal of this strategy until 2010, when the first Brigade size element was to be fielded with the full compliment of Objective Force troops, organization and equipment.³⁶ It was estimated that the entire Army would be transformed into the Objective Force by 2032.

The first issue that comes to note is the quantitative changes the Objective Force plan made to the force structure of the Army. This is ironic, because the central theme of Shinseki's plan was to get the Army to make changes in how it understood and implemented in qualitatively different missions; combat and peace operations.

In analyzing the objective force strategy, one can surmise that the Army's attempt at transformation in the 1990's fell short because the Army's concept of the transformation via failed to span the boundaries of the Army's environment and truly ignite the required change. Objective Force basically just boxed the core Army functions into a reshaped structure that

looked like a smaller version of the old structure. This new design did not truly span the entire spectrum of conflict, or allow for innovation on the part of its membership. It was change only in the dimension of organization and equipment of combat brigades. It did not involve the whole community of the plurality of the Army community, like the combat support forces and institutional sections of the Army, like major commands such as U.S. Army Europe, Korea, Training and Doctrine, or Forces Commands, or Tank and Armament Command. It was quantitative versus qualitative; troop strength and weight of armored combat vehicles was less and lethality was increased. It was incremental versus revolutionary. The three stage process was to happen simultaneously, but changes came incrementally. For example the long drawn out process of what type of vehicle to purchase for the interim force eventually lead to the Striker Light Armored Vehicles, but this was such an exhaustive process that now the Army is left with the interim solution as the ending point of the whole endeavor. In addition, bringing the objective force on line by 2032 cannot really be construed as revolutionary given that the program started in the mid 1990's. Revolutions, by their very nature are fast processes of change. In reality, Objective Force was a first-order change and not transformational because it utilized a reformation process to address second-order change requirements.

Another current attempt to change the military that some pundits ascribe the term of transformational to is the Department of Defense's attempt to change the military from platform-centric organizations to a network-centric organization that can fully realize the benefits of the current information revolution of the 21st century. Network-Centric warfare, according to a study prepared by consultants to the Office of the Secretary of Defense, greatly increases military effectiveness by utilizing networks instead of a collection of individual platforms.³⁷ Platforms are any system that inflicts physical damage upon an enemy (e.g., tanks, aircraft,

artillery, units). In the Platform-Centric framework, the addition of another platform to a combat formation will usually have an additive, or linear effect (e.g., N+N) on combat power.

Network-Centric warfare, however, subscribes to Metcalf's law of networks which posits that the power of a network is relative to the number of users it contains.³⁸ According to the theory of Network-Centric Warfare, the inclusion of another node in the distributed network should have an exponential effect (NN) on combat power of the entire organization. See Figure 2 below.

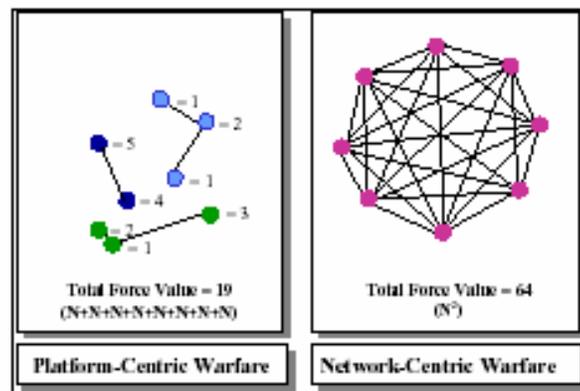


Figure 2: Platform vs. Network Centric styles

The above figure illustrates how the same number of nodes, or platforms gains a three to one (Total Force Value= 19:64) combat power advantage by utilizing the network centric theory.³⁹ This theory suggests that a development of information technology, coupled with changes in doctrine and organization, will result in a radically different and more powerful style of warfare. In short, this theory offers that an inter-woven system of sensor, information, and engagement grids will dramatically alter the way in which we conduct warfare by rapidly increasing the military production process. This program does sound transformational at first glance, but it too has critics.

Fredrick W. Kagan, points out how Defense Secretary Rumsfeld's Network-Centric Warfare

program, “has adopted a vision of transformation that relies on high-technology weapons systems rather than on soldiers.”⁴⁰ Kagan points to a defense department authored book, Network-Centric Warfare to illustrate how the DOD has been attempting to make the Pentagon more efficient through the leveraging information technology and thereby achieve a defense transformation at the lowest possible cost. Kagan ascribes this strategy to Secretary Rumsfeld’s business expertise and background in the McNamara regime. He backs this assertion with evidence that decisions for funding new weapons systems are being based on how they further the current forces ability to conduct Network-Centric Warfare and systems that bring other capabilities to the force are being less funded. Kagan forcefully argues that this type of change process is not only un-transformational, but dangerous as well because it “hinders the conduct of current operations... [and] flies in the face of historical lessons about how to transform the military.” He further asserts this dangerous approach to transformation may cause the U.S. to lose its predominance and endanger its security.

I concur with Kagan that changing the military with this McNamarian economic strategy is not transformational. Seeking to make the military more efficient through technology only is a first-order change that will make the military better at one thing, according to Kagan, the ability to “identify, track and destroy enemy targets from thousands of miles away.” In the end, this change only reforms the military to meet its current functional imperative given new technology. It does not contribute to the changing the core functional, or to multilevel changes I would argue are required to match the new paradigm in which the military needs to operate in; total conflict operations. In fact, this efficiency strategy of the DOD, as described by Kagan does not take the military into a new direction to match the security environment of the 21st century, but rather lays out a path toward fighting the future Soviet replacement of the 21st century. But as

illustrated by the third reason for change in the military discusses earlier, that being the political ideology of America that informs the military of its function and provides the political will to resource that function, I would not concur with his accusation of the foundation of this strategy lying solely with Rumsfeld's ideology. Indeed, there is some merit to the Network-Centric strategy given the American political ideology argument that demonstrated a reluctance of Americans to fully fund and resource the military for the new missions and roles that they hold the military accountable for accomplishing. Some sort of give and take must be exercised in matching the qualitative requirements for total conflict operations and the quantitative resources utilized to match those requirements are the most controllable variables with which to make adjustments in this new environment.

In fact, this transformational dilemma can be viewed through a new model of analysis, a transformational duality model of analysis, that intersects the qualitative changes required with the quantitative changes required. By utilizing this new model, one can better incorporate the view point of all three schools of thought on transformation and estimate a true objective, or endpoint to that change. Once this objective is identified, the strategy to achieve that objective and the process of evaluating that strategy can fall into place.

A new proposed model of analysis

To explain my proposed model, imagine if you will two axes of views on transformation. The horizontal axis is the qualitative view of transformation along the spectrum of conflict based on effectiveness. It is along this axis that the military must now be able to effectively accomplish total conflict operations. The vertical axis is the quantitative view of transformation along the spectrum of the efficient production of national security by which the military utilizes either manpower or capital (machines and technology) to accomplish its mission based on the

most efficient mix. See Figure 3.

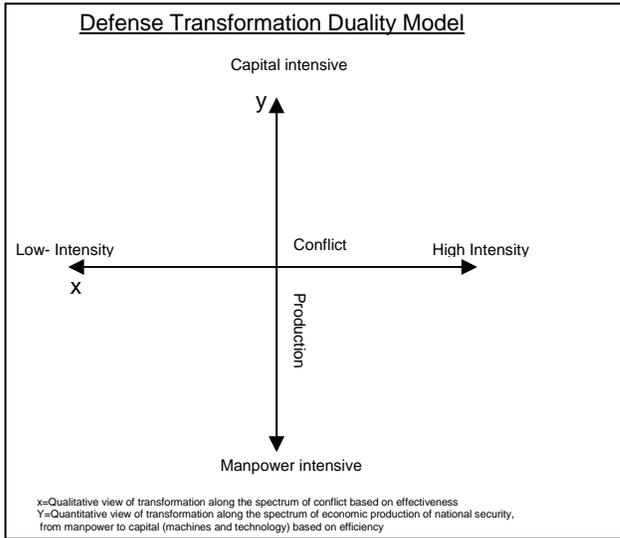


Figure 3

Somewhere along the horizontal axis is the optimal point for the military to be effective in carrying out complete conflict operation- the ability to operate effectively all along the conflict continuum. Likewise, somewhere along the horizontal line lies the optimal location for the military to efficiently balances the right match of capital (technology & machines) with manpower (infantry and military police). Where exactly that point is, is up to debate and this idea presents a good starting point for future research on the strategy and evaluation of the strategy of defense transformation.

Additionally, it is interesting to note that the correlation between the mix of troops and technology and the level of the conflict. The higher the intensity of conflict, the higher the amount of technology is needed. This was evidenced by the U.S. military's greater reliance for technological advancements such as the M1 series main battle tank to counter the Soviet threat during a high intensity combat situation. The converse relationship demonstrates a correlation between the lower degree of conflict, and the amount of manpower required. A present day

example is the need for more infantry and military police to accomplish the support and stability tasks in the post-combat environment of Iraq.

I need to make it clear, at this point, that I am not making a statement of causation, that is to say, that the level of required technology or manpower is dependant on the level of conflict. I need to do more empirical research to attempt make a statement of that nature. One of the issues I am not sure of how to estimate the impact of technology at the lower end of the conflict spectrum, given the rapid increase in non-lethal weapon technology, for example. I am, however, making the observation that the correlation between the qualitative axis of conflict spectrum and the quantitative axis of national defense production does exist and presents an interesting hypothesis for further study. I would further posit that confusion about this relationship among researchers and policymakers may be at the heart of the lack of consensus about transformation and the policy development dilemmas highlighted by this paper. Understanding that defense transformation includes both a qualitative change (peace to war) and a quantitative change (level of technology and numbers of troops) is a confusing principle to map and study empirically, let alone implement in a large-scale organization such as the military. This is especially true since so many agencies within this one organization exist and have control over various policies and procedures to implement any strategies based on these two views of transformation.

Conclusions

Through the course of this paper, I have tried to come to better understanding of the U.S. military's attempt at transformation. By conducting a scholarly review of transformation, such as research reported by Amir Levy and Uri Merry in their book, Organizational Transformation: Approaches, Strategies, Theories, I established that transformation is only one type of change

process that an organization can undertake. Changes to organizations such as the military can be first-order or second-order change. First-order change is change in which the organization looks different, but remains the same since there is no change to the organization's core. Second-order change, or transformation, on the other hand, entails a more in-depth change to the majority of the organization's dimensions and requires a major or radical change process. Based on this proposition, I concluded that second-order changes are what properly constitute transformation, and I argued further, based on evidenced put forth by other researchers, that this change is a requirement induced by conditions in the organization's environment that, without the change, put the organization in jeopardy of becoming unviable, or dysfunctional. I backed this assertion by exploring three reasons why this type of change process is necessary. I further analyzed two recent attempts at transformation within the military, which led me to conclude that a fundamental misunderstanding of transformation exists in the greater defense community as to why the military needs to change and how it should change. This observation led me to study defense transformation through a dual transformation analytical model that demonstrated a correlation between both quantitative and qualitative variables and should, I proposed, be used for future research to establish a transformation strategy and an evaluation procedure of that change process.

Endnotes

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- ² "Transformation is foremost a continuing process. It does not have an end point." Vice Admiral (ret.) Arthur K. Cebrowski, Director, Office of Force Transformation, Department of Defense. Accessed 3 September 2004 @ http://www.oft.osd.mil/what_is_transformation.cfm.
- ³ Stephen Peter Rosen. *Winning the Next War*. (Ithica: Cornell University Press, 1991) 30.
- ⁴ Richard D. Hooker, Jr., COL, Ph.D. "The impact of transformation on the Army Profession" a paper presented at the 2004 Army as a Profession Researchers conference. United States Military Academy, Senior Conference LXI. 4 March 2004.
- ⁵ Don M. Snider and Gayle L. Watkins, *The Future of the Army Profession* (Boston: McGraw-Hill Publishing, 2002) 3-5.
- ⁶ Ibid. 4.
- ⁷ Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 3rd edition. (Chicago: University of Chicago Press, 1996) 6.
- ⁸ A thought provoking piece that led the charge in this direction for the discussion of the RMA is Andrew F. Krepinevich, "Cavalry to Computer: the Pattern of Military Revolutions" *The National Interest* 37(Fall 1994).
- ⁹ Snider and Watkins, 5.
- ¹⁰ Bryon E. Greenwald, "The Anatomy of Change: Why Armies Succeed or Fail at Transformation" *The Institute of Land Warfare* Paper number 35(September 2000).
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- ¹² Ibid. Pg. 6.
- ¹³ Morris jonawitz, *Sociology and the Military Establishment* (new york: Russel Sage Foundation, 1965 102-103.
- ¹⁴ Snider and Watkins point to the following for good examples of scholarly literature from the Civil-Military relationship perspective (endnotes, 17): Alfred Vagts, *a history of militarism* (rev. ed.; New Youk: Free Press, 1959); Samuel P. Huntington, *The Soldier and the State* (Cambridge, MA: Havard University Press, 1959); Morris Janowitz, *The Professional Soldier: A social and Political Portrait* (Glencoe, NY: The Free Press, 1960); Bengt Abrahamsson, *Military Professionalism and Political Power* (Beverly hills, CA: Sage Publishing, 1972); Samuel Sarkesian and Robert E. Connor, Jr., *The U.S. military Profession into the Twenty-First Century* (London: frank Cass Publishers, 2000); Michael C. Desh, *Civilian control of the Military* (Baltimor, MD: Johns Hopkins University Press, 1999); and Don M. Snider and Miranda Carleton-Carew, eds. *U.S. Civil military Relations: in Crisis or Transition* (Washington DC: center for strategic and International Studies, 1995).
- ¹⁵ Deborah D. Avant and James H. Lebovice "Reconciling Culture and Change: Attitudes of United States Officers Toward post-Cold War missions" *Culture and Command*. The (Great Britain: Strategic Policy Studies Group). 27.
- ¹⁶ Snider, Nagl, and Pfaff 43.
- ¹⁷ Snider and Watkins, 16.
- ¹⁸ Amir Levy and Uri Merry, *Organizational Transformation: Approaches, Strategies, Theories* (New York: Praeger Publishers, 1986) 5.
- ¹⁹ Levy and Merry, 4.
- ²⁰ Hal G. Rainey, *Understanding & Managing Public Organizations* 2nd ed. (San Francisco: Jossey-Bass, 1997) 328-329. I'm inferring that this is Rainey's definition of transformation because in his index listing for "transformation" it states to see "Change: large-scale, pg 328".
- ²¹ Levy and Merry, ix.
- ²² Beverly R. Fletcher, *Organization Transformation Theorists and Practitioners: Profiles and Themes* (New York: Praeger Publishers, 1990) 2.
- ²³ Levy and Merry, ix.
- ²⁴ Ibid, Table 1.1, 6-8.
- ²⁵ Ibid, 9.
- ²⁶ I added the last row of characteristic difference based on the information from Levy's , Rainey's, and Fletcher's research as discussed earlier.
- ²⁷ Ibid. 5.

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- ²⁸ DAVID JABLONSKY, "Army Transformation: A Tale of Two Doctrines", Parameters (Autumn 2001) 43-62. accessed 10/7/02 at < <http://www.carlisle.army.mil/usawc/parameters/01autumn/Jablonsk.htm>>.
- ²⁹ Douglas A. Macgregor, Breaking the Phalanx (Westport, Connecticut: Praeger, 1997) 24.
- ³⁰ For a dead right discourse on this issue see Nadia Schadlow, "War and the Art of Governance," Parameters 33.3 (Autumn 2003) 85-94.
- ³¹ Bryon E. Greenwald, "The Anatomy of Change: Why Armies Succeed or Fail at Transformation" The Institute of Land Warfare Paper number 35(September 2000).
- ³² Ibid. Pg. 6.
- ³³ Ibid. Pg 11.
- ³⁴ Gen Eric K. Shinseki, Chief of Staff, U.S. Army, "The Army Transformation: A Historic Opportunity" Association of the US Army, Army GREENBOOK (2001), Accessed 10/24/2002 at http://notes.tetrattech-ffx.com/army_transformation_peis/greenbook.htm.
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- ³⁶ At the time this paper was written, articles began appearing the Army Times that indicated this timeframe might be expedited to 2008. I left the target date to 2010, pending future confirmation.
- ³⁷ Booz-Allen and Hamilton, Inc. "Measuring the effects of Network Centric Warfare" prepared for A.W. Marshall, OSD/Net Assessment, (1999) available on the internet at <http://cno-n6.hq.navy.mil/n6c/ac2/NCW%20Metrics.PDF>, 1-1.
- ³⁸ David S. Alberts, John J. Garstka, and Frederick P. Stein. Network Centric Warfare (CCRP publications series, 1999) 250-253.
- ³⁹ Booz-Allen and Hamilton, Inc, 1-1.
- ⁴⁰ Frederick W. Kagan. "A Dangerous Transformation" The Opinion Journal, WSJ.com (12 November 2004) Accessed 6.18/2004 at <http://www.opinionjournal.com/forms/printThis.html?id=110004289>