SUMO IN A NINJA FIGHT: A CRITICAL STUDY OF ARMY FORCE STRUCTURE IN THE 21st CENTURY ENVIRONMENT

A Monograph
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ABSTRACT

Sumo in a Ninja Fight: A Critical Study of Army Force Structure in the 21st Century Environment. by MAJ J. Stan Stewart, Infantry, USA
58 pages.

The purpose of this paper is to answer the question: does the Army's force structure allow for a sufficient amount of infantry forces for the security challenges of the first decade of the 21st Century? This monograph examines the late 1990's Army force structure in light of the changed security environment since the collapse of the Soviet Union and the increase of America's active role in world security. At central issue is the changes in the security environment, verses the lack of change in the Army's structure and strategy for waging war and the resultant force structure which leaves Army force structure critically short of infantry.

This monograph first examines the historical role of infantry forces within Germany, the Soviet Union, and the United States to provide insight to the evolution of infantry on the 20th Century maneuver battlefield. A connection is made between the nature of infantry evolution and the nature of the basic military strategies of annihilation and attrition warfare. Chapter 2 describes the changes in the global security environment, from the collapse of the Warsaw Pact and projected to the first decade of the 21st Century. Highlighted are various conflicts in the 1990's which negated maneuver warfare, placed heavy demands for large numbers of regular "dismount" infantry forces, and gave rise to concerns of Military Operations in Urban Terrain (MOUT). Of particular concern is the propensity of MOUT for U.S. Army divisions in the near future and their ability to operate on the attrition battlefield. Chapter 3 examines the post-Vietnam development of the light and heavy divisions and the significance of the annihilation-based strategy of the Cold War era. The Cold-War strategy, emphasizing mechanized strengths and minimizing the infantry role, is identified as an important reason for the light/heavy delineation of forces; unresponsive and out of balance in the new threat environment. Chapter 4 compares heavy and light divisions against evaluation criteria that are sensitive to the emerging security environment: ability to operate in MOUT; command, control and logistics; ability to close with and destroy in MOUT; manpower and firepower.

Conclusions from this study indicate that Army force structure is critically short of ground infantry manpower for the emerging global environment. Threat forces will use asymmetrical, attrition-based warfare to avoid U.S. mechanized maneuver strengths and will avoid pitched battle. This threat can only be responsive to the close infantry fight. The mechanized division, as posited by Force XXI, is essentially an upgraded version of its Cold War version but will be nearly impotent in the emerging attrition warfare due to its lack of organic infantry. The light division's advantages in the new environment is its infantry strength and deployability but is in need of effective, survivable air and ground transport. The Army's lingering heavy/light delineation between the divisions continues to hamstring serious preparation for MOUT and other operations against infantry-based threats in restricted terrain.

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Contents

Chapter 1. Introduction.

> Plainly the importance of infantry has not always been recognized, particularly in an age of machines, but one of the supreme ironies of history is that the lowly fighting man on foot has remained an absolute indispensable factor in war.[1]
>
> John A. English, *Marching Through Chaos, The Decent of Armies in Theory and Practice*

Throughout the Cold War the U.S. Army relied predominantly upon mechanized heavy forces to oppose the Soviet land threat of an army with the largest modern mechanized force in the world. That threat disappeared when the Soviet Union collapsed and subsequently military forces throughout the world significantly reduced their armed forces. The U.S. Army from 1989 to 1999 underwent its most dramatic downsizing since the end of World War II. Since 1989 the nature of conflict changed, but U.S. Army force structure, although smaller, remained fundamentally a mechanized heavy force, with essentially the same heavy/light force ratio.

Sun-tzu in *The Art of War*, stated that an army must know themselves and the enemy, to ensure success in conflict.[2] Likewise, U.S. Army doctrine stresses that in periods of rapid and fundamental change it is important to closely scrutinize previous assumptions made about the threat and factors impacting on the mission.[3] During the Cold War the Army based its force structure on some key assumptions about the future threat and the global security environment. Those assumptions drove U.S. Army force development and technological adaptations in accordance with the Concept Based Requirements System (CBRS).[4] They allowed Army decision-makers to accept force design risks in some areas in order to seize on threat vulnerabilities in others.[5] Though prudent at the time, many of those assumptions may no longer have relevance in an

environment that no longer contains a Soviet Union or imminent conflict with a peer competitor.

This monograph begins with a review of force developments in the Twentieth Century and the theories behind force structure in industrial nations. It explores the basic assumptions that underscored the decisions to equip the majority of U.S. Army maneuver forces with the infantry fighting vehicle (IFV) and the tank. It analyzes the current and future security environments. The monograph compares the Army's light and mechanized divisions in the context of the global environment and concludes by answering the question "does the Army's force structure allow for a sufficient amount of infantry forces for the security challenges of the first decade of the 21st Century?"

Light and Mechanized Infantry – Definition and History.

Carl Von Clausewitz found it necessary in all eight books of *On War* to begin many of his topics with precise definitions for the terms and concepts he chose to discuss. Statements like: "...we shall try to clarify the common usage of these terms..." and "They are merely meant to serve as an approach to greater clarity and precision of language..." demonstrate the importance he placed on arriving at a precise understanding of a commonly used term before embarking on any serious analysis of a topic[6].

The term "light" in U.S. military lexicon, has historically been used to describe a force that is not equipped with heavy instruments of war such as heavy field artillery or mechanized vehicles. Most importantly, they are generally considered to be predominantly infantry and foot mobile once deployed in combat. In post-world War II and Cold War lexicon it normally referred to army units that are specifically designed for rapid transport, with organic supporting arms equipped within air-transport limitations.[7]

The light force was predominantly foot-mobile when in direct combat but they could be more quickly transported to, and within the theater. For the U.S. light unit the advantage of being lightly equipped has been the primary criteria since World War II due to global deployment considerations. In Europe however it went beyond simple organization and equipment. To British military professionals it meant an inherent ability and willingness to conduct operations with little or no logistical tail.[8] Light forces were composed of specially selected soldiers who wanted to belong to the unit because of their espirit and camaraderie. European light infantry units fostered a sense of fierce self-reliance, physical endurance and an expectation for hardship often beyond that expected of conventional army units. Whatever the guiding principals, in both the U.S. and in Europe, light forces were predominantly composed of foot mobile infantry.[9]

Prior to and throughout World War I, infantry was the primary doctrinal means of massing effects on the battlefield. In World War I rapid fire artillery, the trench, barbed wire and the machine gun nullified the infantry's ability to mass and maneuver against an opponent.[10] The horse cavalry, was negated by the lethality of the other two combat arms, artillery and infantry.[11] By the latter part of the war, however, the tank and mechanized vehicles revived the once useful role of armored horse cavalry for shock effect.[12] The new force was given the name armor or "tank" and quickly became a crucial partner with the foot-bound infantry in massing effects on the battlefield. It could survive the enemy's massed infantry fires but it could not occupy and hold ground. An inseparable partnership began and remained effective wherever the battlefield consisted of symmetrically designed opponents with massed forces.[13]

Toward the end of the war armor assumed a greater role and became an equal

partner on the battlefield with infantry. Because of the unique qualities of both armor and infantry, when used together they proved to be an extremely effective combination. Each had qualities that the other needed in battle but could not provide when operating independently.

In the years between World War I and World War II only the Soviet Union and Germany pursued significant advancements in mechanized warfare. Both nations experimented with mobilizing infantry forces using trucks, motorcycles, and even bicycles to provide the infantry with increased mobility while retaining the speed and range of tanks. Toward this pursuit, the USSR and Germany entered into a period of military cooperation between 1926 to 1933. During this period, both armies discussed and exchanged ideas on the problems of keeping the tank and the infantry in cooperation with one another on the future battlefield. Experimenting with various infantry concepts at Kazan proving ground in Russia, both the Germans and Russians agreed that mechanized vehicles were to be the most significant battlefield systems in the next war.[14] This would relegate infantry to a secondary role of follow-on unless it could keep up with the tank forces.

By 1935, confounded by the mobility problems of infantry, the German Army identified different operations for both the armor and infantry roles. The answer was to either motorize or mechanize nearly all German infantry units.[15] By the close of World War II the German mechanized infantry force concept had been proven the most effective tank and infantry combination.

Mechanized infantry forces were little improved upon from the end of World War II until after the Korean War. After the Korean War the U.S. and Soviet Army's fielded

numerous Armored Personnel Carriers and Infantry Fighting Vehicles in response to NATO and Warsaw Pact advancements. The culmination of these advancements became the Bradley Fighting Vehicle (BFV) for the U.S. Army and the BMP3 for the USSR.

Infantry capabilities had evolved from the foot-mobile infantrymen of 1918, to the high-tech IFV crews of the 1990s. Of all participants in mechanized infantry development since World War I only three, Germany, Russia and the United States, have made significant contributions towards a change in infantry developments.

The Mechanization of Infantry – Germany.

The German Army was the first to mechanize infantry forces on a significant scale with a doctrine in World War II that stipulated a ratio of six infantry soldiers to one tank.[16] The objective appears to have been a desire to accompany each tank with a complete infantry squad (eight to nine men) but technology and industrial limitations may have restricted the original desires of German force designers. The Panzer Grenadiers were equipped with either a half-track or small armored personnel carrier (APC) but none of the various models could carry more than six soldiers very well. The Grenadier squad size was reduced to six - a compromise that was further reduced to four men before war's end.[17] Throughout the war their primary purpose was to support the tank forces. The panzer grenadiers were organized and trained to fight primarily as infantryman. Their leadership, up to the battalion commander was often on foot during major engagements "...doctrine called for high mobility and speedy deployment but not, be it noted, protection or firepower when mounted."[18]

The Armored Personnel Carrier (APC) provided both mobility and protection to the foot soldiers whose primary function was to protect and facilitate the advance of the

tank. Though often equipped with crew-served weapons or small canon, the APC was not to be used as a duplicate effort for the tank[19]. The 1944 Wermacht Field Service Regulation placed special emphasis on the armor units; they were not designed to fight without dismounted infantry support.

> ....the tank fights the enemy tank and destroys other weapons. The panzer grenadier looks for hidden antitank guns and fires on them. He prevents close quarter attack on the tanks. Covered by tanks, he clears the enemy position. In good country, the armor moves from cover to cover, giving fire protection to the panzer grenadiers following. In wooded areas, the panzer grenadiers precede the tanks [and]... destroys the enemy with the weapons they carry on their vehicle.[20]

Soviet Mechanized Infantry.

The post-WWI Soviet Army, under the direction of Marshall Mikhail Tukhachevskii, saw the motorized/mechanized infantry role as being somewhat similar to the German model. His concept was to create primarily a mechanized army centered on the tank as the main arm of attack. Similar to the Wermacht concept, infantry forces were no longer the primary combat arm, they were integrated with the tank to enhance its offensive capability. Soviet infantry was combined with the armor so closely that the primary cover on the battlefield for the infantry was their tanks.[21] The infantry provided protection to the tank from enemy infantry and anti-tank fires.

Throughout the war the large majority of Soviet infantry went without mechanized vehicles. Though the Soviets lost tremendous numbers of tanks in comparison to the German army, their combined arms doctrine did not change sufficiently to prompt the production and fielding of mechanized infantry transports. The prevailing thought was to allow the tank forces as much freedom as possible to

exploit the enemy's rear. The two arms worked independently of one another once the enemy's forward defenses were penetrated. While the infantry reduced the enemy's defenses, the tank forces attacked softer targets in the enemy's rear and along his lines of communication (LOCs).[22]

Though General Georgi Zhukov successfully tested Tukhachevskii's doctrine during the Japanese 1939 Manchurian campaign, the overall outcome against the German Army in WWII proved too costly.[23] Tanks alone could not operate successfully against determined and well-armed infantry. With the collapse of German forces in 1945 the lesson was nearly lost on Soviet force developers. It was not until the mid 1950s, with the introduction of the BTR50P, that Soviet infantrymen saw dedicated armored transport in sufficient numbers. Fully enclosed and tracked, it was the first material indication that Red Army developers had adopted the mechanized infantry concept. The basic functional role of the mechanized infantry, however, had not changed from that of the regular infantry World War II. They were to fight with and protect the tanks while dismounted. The exception now was that the infantry had the ability to stay with the armor formations throughout the depth of the advance, not just up to the enemy's initial defenses.[24]

Like WWII German panzer grenadiers, however, Soviet infantry had to dismount once in the fight. It was not for another 20 years that the infantry had an ability to fight from their vehicles. Soviet infantry force developers were prompted to change in response to developments in the North Atlantic Treaty Organization's (NATO) nuclear strategy and to German Army innovations. Upon the initial development of the West German Marder in the late 1960's, the Soviets preempted the fielding with the BMP1.[25]

A true armored fighting vehicle capable of rapid offensive combined arms operations in actual or threatened nuclear warfare. For the first time in the history of infantry, the small unit leader (squad, platoon & company) was not only traveling to the fight mounted with armor protection, but he and select members of his squad could conduct the fight while mounted. Even when dismounted the BMP was used as an integral part of the fight by providing covering and crew-served supporting fires that were unparalleled by former infantry formations. To some analyst it represents a significant departure from the historical infantry role.[26] To others it was more of a natural progression for infantry forces in conventional warfare.[27] No matter what its importance to infantry developments, infantry attempting to fight from armored vehicles was to leave an indelible and somewhat dubious mark upon the conduct of Soviet and Russian Army operations from Afghanistan in the 1980's, to Chechnya in the 1990's.

The Soviet Army from the late 1960s until the break up of the Soviet Union in 1991 relied largely on mechanized infantry. Due in part to the atomic threat posed during the cold war but also in order to conduct a successful conventional war in Europe. Soviet mechanized infantry forces by the late 1970s were equipped with an array of highly capable infantry fighting vehicles, which provided a strong catalyst for the U.S. Army to develop their own infantry fighting vehicle.[28]

U.S. Mechanized Infantry.

The U.S. did not begin a serious program for mechanizing infantry forces until after the stunning German battle successes in Poland and France in 1939-1940.[29] Two armored divisions were activated in 1940, each with two battalions of "armored infantry". Unlike the German and Soviet concepts, the armored infantry were mounted

on any motorized or mechanized vehicle and attempted to stay with the advancing armor for both self-protection and to protect the tanks. For one arm to freely move without the other was out of the question. The right maneuver "balance" was the most important concern.[30]

At the height of American involvement in Europe in World War II, infantry units were well equipped with numerous modes of wheeled transport but few could actually be called mechanized. Like the Germans, only a handful of the designated "Armored Infantry" battalions were equipped appropriately with armored transport. The performance of their mission did not change. Infantrymen moved with the tanks on foot if the terrain and enemy situation would not allow them to ride motorized transport.

Infantry developments remained unchanged in the U.S. army from 1945 to the end of the Korean War. After the Korean War in 1953 the U.S. Army was the first to equip mechanized infantry with a fully enclosed tracked APC, the M52. The Soviets responded in 1954 with the fully tracked BTR50, and in 1962 the U.S. Army fielded the M113 which proved to be a significant improvement in the search for a mechanized infantry combat vehicle (MICV). This was the first infantry transport that allowed infantry to advance with the tank, completely enclosed in armor, and capable of employing a heavy machine gun or 20mm canon.[31]

During the 1970's as the Soviet troop strength in Eastern Europe grew to an alarming size, U.S. Army tactical organizations changed to adopt a tactic of being able to fight an outnumbering conventional force and win. As a result, the U.S. fielded several exceptionally advanced systems to bolster the combined arms team. The M2 infantry fighting vehicle (IFV), the M1 main battle tank, and the AH-64 attack helicopter were all

fielded in the early to mid-1980s. The majority of U.S. divisions were equipped with these new systems while less than one-third of the active army force structure remained as light infantry.[32] Though never required to fight the Soviet Army, these systems demonstrated their effectiveness in Operation Desert Storm in 1991. In the mid-1990s U.S. mechanized forces, by their numbers and quality, were considered to be the most lethal and effective of any conventional mechanized army in the world.

After the collapse of the Soviet Union a significant change in the nature of conflict took place as a once bipolar world became less stable. The U.S. Army found itself without peer on the conventional battlefield, but was forced to assume a greater role as the world's policeman. With rapid urbanization, terrorism, and the proliferation of weapons of mass destruction, failed nation states, narco-terrorism, non-state terrorism, and ethnic violence, the U.S. Army is forced to face a new, but still very lethal, non-conventional enemy. However, Army force structure remains essentially a structure designed for the Cold War and less for the existing and future environment – an environment in which the Army may need a substantial amount of infantry in nearly every conflict.[33]

This paper seeks to demonstrate that the Army has a growing need for infantry and infantry-based forces in the world environment of the new century, but it is unable to provide these forces due to adherence to Cold War era force structure and strategy.

Chapter 2. The Environment and Strategy.

> In unlimited war, after the first shock of mutual devastation had been survived, victory would go...to the tougher, more resourceful infantryman. The easier and more gadget-filled our daily life becomes, the harder it will be to produce him. It took us some time in Burma. It can be done in peace; in war there will no longer be so much time.[34]
>
> -Field Marshall Viscount Slim, *Defeat Into Victory*

The United States Army force structure is designed to counter a threat capability and to maintain certain forces which may be needed to prosecute "prompt and sustained" land combat operations. In the early 1970s, the U.S. Army identified a need to match the Soviet Union's increasingly mechanized forces. To fulfill its part of the nation's strategic goal of Soviet containment, the Army modernized and structured itself with heavy emphasis on fighting a large industrialized and mechanized enemy. With the foresight of the Concept Based Requirements System (CBRS), Army divisions were restructured with increased armor and mechanized capabilities.[35] Towed artillery was replaced by highly mobile and armored indirect fire systems. Missiles and radar-guided anti-aircraft weapons systems replaced World War II direct fire guns. The M1 tank and Infantry Fighting Vehicle (IFV) replaced large formations of infantry as the primary maneuver arm for close battle with the enemy. By the mid-1980's the Army's division force structure in Europe, composed of 100% armored systems, was clearly transformed to meet the large, mechanized Soviet menace.[36] However, the menace was never exercised before the threat environment changed.

The collapse of the Soviet Union in 1991 brought the first and most significant change. The object of the US Army's modernization focus crumbled under the weight of

unsustainable economic, government and diplomatic policies. East/west dividing barriers were dismantled when many of the former Warsaw Pact members began to establish closer relations with the North Atlantic Treaty Organization (NATO). After German reunification and establishment of a democratic government in Russia, the large Warsaw Pact armies became an undesirable burden to the new governments and were rapidly dismantled.

The environmental changes during the early 1990's affected relations with the Eastern Hemisphere nations. U.S. relations with China have been normalized. China has taken considerable steps toward downsizing their armed forces and restructuring their political goals enough to convince U.S. policy makers to establish economic, diplomatic and military ties that were unimaginable ten or fifteen years ago.[37] In the Pacific Theater only North Korea remains as an uncertain and volatile military threat to its neighboring nations.

For the first time in U.S. history, most nations generally recognize that the United States is the undisputed leader in military power. With Operation Desert Storm as a definitive litmus test to the international community, American military forces find themselves in the enviable position of gross overmatch against most military threats and globally dominant. According to the Institute for National Security Studies (INSS) only a few nations can afford the expense of a large standing force, but the U.S. is the only nation, out to the year 2010, which can maintain a large and technologically competitive military.[38] They contend that the U.S. is also the only nation able to project and sustain a force anywhere in the world for extended periods. More importantly, it can do this and still continue research, development, and production of even more sophisticated and

superior capabilities.[39]

According to the 1998 *National Security Strategy*, The 1997 *Strategic Assessment* from the National Defense University and the Joint Vision 2010 statement, the threat environment will continue to be very different from that of the Cold War.[40] Threats to U.S. national interests are extremely varied but do not include containment or open conflict with a peer competitor for the foreseeable future. The INSS states that the primary threats against which the Army is operating, and expects to continue as potential threats, consist of international narco-trafficing, the proliferation of weapons of mass destruction (WMD) from rogue nation-states, terrorism from non-state players, and peace operations in numerous environments.[41] Many analyst recognize varying degrees of Joint Service approaches to these threats but a common thread in almost every one is the requirement for ground forces – well trained and well resourced ground infantry in particular. This requirement is greater now than any time since the American involvement in Vietnam.[42]

The 1998 National Security Strategy lists five threats to U.S. national interests, only one of which could possibly require a conventional ground maneuver fight against a symmetrically shaped enemy, trained, supported and employed by an established national entity. The other threats call for the potential use of conventional ground forces in roles to counter-terrorism, drug trafficking, uncontrolled refugee migrations, proliferation of dangerous technologies and weapons of mass destruction (WMD), foreign intelligence collection, and assistance to failed nation states. The Institute for National Strategic Studies (INSS) supported this assessment in their 1997 Strategic Assessment report. They assert that it is no longer possible for the U.S. military to base force structure on a

single canonical threat concept.[43] The strategic environment for the next decade and beyond requires ground forces who are predominantly equipped and trained for a broad range of peace operations, counter-WMD and counter terrorism operations, while retaining the capability to defeat rogue regimes in regional conflicts.

According to INSS analysts, there is no military threat that can seriously compete on the conventional, World-War II or Desert Storm-style battlefield against U.S. military forces in the next decade. Dr. Robert L. O'Connell at the National Ground Intelligence Center (NGIC) agrees. He posits that the nation who pits their military in open maneuver warfare against the "truly advanced force" will experience suicidal results by even stepping onto that battlefield.[44] But he asserts that the real challenge for U.S. ground forces, in the next decade and beyond, is not the conventional open battlefield fight, but it is waiting in the bowels of densely populated urban areas and city streets – not unlike Mogadishu and Grozniy.

Cities will soon become the principle venue for combat according to O'Connell. Threat forces on the small end of the techno-economic equation will see the immediate advantage of operating against a technologically superior, mechanized force from within the city labyrinth of three-dimensional lines of communication, cover, concealment, and support channels.[45] The conventional wisdom from past wars that urban warfare is "just too hard" and should be avoided at every opportunity may no longer be applicable. U.S. forces may no longer have a choice. The "peace" to enforce, the failed nation-state to assist, and the non-state terrorist to thwart will emanate squarely from the urban setting.[46] In the last 30 years the world's populations have moved to the cities and the trend continues. The forecasts are that at the present rate of urbanization 75% of the world

will live in cities by 2010. This is in contrast to only 25% in 1950.[47] It is difficult to imagine that U.S. ground forces will not be forced into greater involvement in urban combat.

Russell W. Glen posits in a 1998 RAND Report, *Denying the Widowmaker*, that urban warfare centers of gravity often escape the best intelligence and information dominance schemes of conventional U.S. military planners – schemes designed to detect, identify and track enemy forces on the maneuver battlefield.[48] Contributing authors to the same report assert that as long as the urban warrior faces a force untrained for MOUT, equipped and organized for conventional force-on-force maneuver warfare, he will take advantage of his environment and seize every opportunity to exploit the intelligence efforts of his maneuver oriented foe. The freedom fighter in Grozniy, for example, knew that his movements were safe from prying satellite imagery; that his critical lines of communication were hidden in the surrounding civilian infrastructure. City inhabitants in Grozniy provided the rebel warrior an unwitting but powerful layer of protection and a level of camouflage that negated the Russian military's ability to detect and target him. The Russians discovered that their heavy maneuver force was trained and designed to quickly master the natural environment's camouflage techniques, but that the urban environment caused that force to stand out, exposed and out of place visibly, audibly and culturally as well.[49]

The Russians also learned that the Chechen freedom fighter had little reason to operate militarily beyond the city's confines. The rebel forces' lines of communication, base of operations, logistics, and manpower were all in the city. The Chechen freedom fighter, for instance, knew intuitively that he could operate more freely and undetected in

the city and wait patiently for the conventional, mechanized-laden Russian Army to come to him. The urban environment provided strength, protection and camouflage inside a sea of humanity in which the freedom fighter could easily blend.[50]

Russian military commanders discovered in Grozniy that mechanized vehicles, with their leadership tethered to command vehicles and tanks, without sufficient ground infantry escort, were "death traps".[51] Unless their efforts were met by infantry in the buildings, in subterranean structures, and house-to-house, the freedom fighters had distinct advantage. Hidden in city corridors, rooftops and basements the Chechen fighter was not afraid of tanks or infantry fighting vehicles. From protected enclaves he fired hand-held rocket volleys at mechanized vehicles – destroyed the lead and trail vehicles then picked off the rest one by one. In the first three days of fighting in Grozniy, Chechen street fighters destroyed 20 of 26 tanks, 102 of 120 BMP infantry vehicles, and all six ZSU-23 anti-aircraft guns of the Russian mechanized task force. This damage, reminiscent of the Afghani conflict, was inflicted by a guerrilla force with little or no combined arms assets: no attack helicopters, no artillery, no tanks, no armored personnel carriers. Like the Afghani freedom fighters, the Chechens defeated the better-equipped Russian force with only hand-held weapons, man-portable communication systems, and no national-level intelligence systems.[52]

Like the Russians in Chechnya, U.S. Army forces discovered in the 1990's that the world did not become a less dangerous place since the collapse of the Communist block. It is not a place where the existing Cold War force structure and 1990's technology provides a distinct advantage in all situations. In a Parameters article, contributor Ralph Peters presents in *Our Soldiers, Their Cities* that the future of war lies

in the world's cities and urban sprawl.[53] Peters warns that U.S. forces will have to conduct more operations in a myriad of urban environments for essentially two reasons; first, the world's population has become, for the first time in history, more urban than agrarian. Secondly, threat forces understand that it is increasingly difficult to fight U.S. forces with conventional battle formations; that most threats will rarely resemble a structured military force with battle formations and a combined arms modus operandi – at least not when pitted against U.S. forces. They are apt to avoid fighting all together until they can reduce American high-tech firepower advantages by drawing U.S. forces into urban environments.[54]

According to Peters, U.S. forces are ill prepared to conduct MOUT. They are, the Army in particular, still training and equipping for the symmetrical force-on-force conflict with woefully inadequate attention toward urban combat. His warning is terse:

> We declare that only fools fight in cities and shut our eyes against the future. But in the next century, in an uncontrollably urbanizing world, we will not be able to avoid urban deployments short of war and even full-scale urban combat. Cities have always been centers of gravity, but they are now more magnetic than ever before... A military unprepared for urban operations across a broad spectrum is unprepared for tomorrow.[55]

Peters contends that "the U.S. Army, as presently structured, would find it difficult to muster the dismount strength necessary to control even a single center as simultaneously dense and sprawling as Mexico City."[56] This environment is predominantly an infantry fight. In the coming decades U.S. mechanized and armor forces alone are not adequate for urban combat.

Without at least an equalizing number of infantry forces the enemy can seize on the opportunity of high-casualty producing ambushes, raids and sniper engagements

against American helicopters, street-bound mechanized forces, and wheeled convoys. As the British learned in Northern Ireland, enemy MOUT fighters will take advantage of the special protected status of civilian inhabited urban structures and can be counted on to exploit the conventional forces' rules of engagement (ROE). In most instances of urban combat, this tactic can only be thwarted by sufficient numbers of well-trained infantry who can operate in and amongst the urban population for extended periods.[57]

Enemy command and control, like that in Chechnya, may tend to be decentralized, mobile, and rarely reliant on communication means that can be electronically intercepted and exploited. The Somali street fighter in Mogadishu, for instance, demonstrated commitment, endurance and unstructured operating methods that negated U.S. technological advantages. Somali warlords used pencils, paper and couriers as a basis of communication to mobilize their gunmen. They needed no radios or telephones to orchestrate opportunities to produce American casualties or to arrange negative press for the U.S.[58]

Military objectives, as the dominant maneuver force knows them, were immaterial to the Somali warlord. The objective for him was to simply exploit targets of opportunity to embarrass the U.N./U.S. effort and manipulate their rich resources to his best interest. If he could remain elusive to the occupying forces and outlast the impatient and sensitive American public, there was nothing to lose.[59]

Many military analyst recognize that mechanized organizations, when properly trained and equipped, are of great utility in urban combat when working closely with infantry, but in every instance "the weapon of choice in these conditions remains a large number of well-trained infantrymen."[60] This observation causes a dissonance to appear

between the emerging ground force structure and the prognosis for the future threat environment.[61] Force XXI and Army After Next (AAN) planners have laid the ground work for a force that is primarily designed to fight high-tempo, high-technology land and air operations that can quickly overwhelm a competing military force while sustaining few casualties.[62] Information dominance is crucial, allowing efficient and precision application of expensive resources. The design of Force XXI places a premium on precision guided munitions, high-tech command and control systems and rapid intelligence collection and dissemination processes.[63] The new design is essentially a modernized heavy force, designed to fight on a significantly less probable conventional battlefield. The INSS Strategic Assessment states under an ominous sounding paragraph titled "Specters Haunting Future Ground Force Evolution" that "The Army's planning for 2007 posits a force very similar in size and structure to that of 1996".[64]

For Force XXI structure, the Army maintains the same percentage of heavy verses light divisions as it did in the height of the Cold War. In the late 1980's the Army consisted of eleven heavy, one motorized, and six light divisions, with three armored cavalry regiments (ACR).[65] After the defense downsizing in the 1990's, the active Army force consisted of six heavy and four light divisions, one light cavalry regiment and one heavy ACR. With the losses incurred in the division headquarters, the heavy force was reduced only marginally more than the light divisions: 45% reduction in heavy divisions verses 33% from the light.[66] The reduction percentages are approximately equal, however, when the loss of the 9th Infantry Division is taken into account. The 9th Division was based on a light division design but it was used as a test bed for various experimental assault vehicle concepts in the 1980s. In short, the Army essentially cut

one-third of each type of division across the board.[67] It seems that with the fall of the Soviet Union and disintegration of the Warsaw Pact, U.S. Army force structure designers planned away one third of the total Cold War threat. The Force XXI structure suggests the expectation of a threat environment that is primarily the same as in the 1980's, only smaller; a mechanized heavy threat, capable of combined arms warfare with emphasis on armor formations.[68]

The 1997 Army Warfighting Experiments (AWE) at Forts Hood and Irwin have indicated that U.S. Army forces possess the capability to fight effectively against any mechanized opponent.[69] The force posited by the AWE is not built for attrition warfare. Long campaigns of guerrilla-style combat or intensive infantry fighting in built up areas are difficult to envision on the force design agenda. A quick, decisive campaign using U.S. technology is the focus. Proponents of the strategy argue that it will allow the Army to conduct peace operations while maintaining the ability to fight high-intensity combat.[70] The mechanized infantry, will have greater "capability" but require fewer infantrymen. The Bradley equipped infantry battalion, for example, has been reduced from four maneuver companies to three. This stripping away of even more dismount infantry from an already small number has even further reduced its ability to operate in restricted terrain such as MOUT. U.S. Army force design appears to be focused on the same Cold War-era capabilities: greater mechanized lethality against a peer competitor.[71]

The AAN strategy may be applicable in a future Desert Storm but the global environment is not cooperating. Many analyst urge caution that the most likely operations for the near future for Army ground forces are less like Desert Storm and more like Bosnia, Haiti, Somalia and Chechnya.[72] Operations where high-tech

mechanized machinery is important, but only when employed with well-trained ground infantry, and lots of them. Otherwise, combat vehicles are at the mercy of the uncooperative, asymmetrically shaped and determined belligerent with an RPG.

Unlike the Army, U.S. Marine Corps (USMC) planners project that peace support operations, operations to combat non-state threats, and other asymmetrical forms of warfare are the predominant conflict form for years to come.[73] The USMC has recognized the alarming urbanization of the underdeveloped nations of the littoral regions and the recent lessons from Somalia and Chechnya. Newly published Marine Corps doctrine focuses on the high probability of extended urban combat in both peace operations and as deliberate military operations to achieve strategic national objectives.[74] Marine Corps Commandant General Krulak summed up the Marine Corps Strategy with this remark in 1998 "Future war is most likely not the son of Desert Storm; rather, it will be the stepchild of Somalia and Chechnya."[75]

U.S. Marine Corps doctrine and force planners recognize that more threats to U.S. interest come from those nations and non-state entities who have learned to cultivate asymmetrical abilities to attack while remaining formless to a conventionally based foe. The Marines posit that this enemy's biggest fear is the consistent and non-stop employment of well-trained infantry against his enclaves, sniper positions, and base of operations. By the employment of infantry to close with him, in his environment, he is ultimately robbed of freedom to move, and freedom to conduct the fight on his terms. The Corps recognizes that in such an environment regular dismounted infantry forces will be in great demand.[76]

The world's cities may take center stage for Army efforts for years to come while

other likely conflict environments may take U.S. forces to jungles, mountains, heavy forest or other restricted terrain where massed maneuver of mechanized forces are difficult or impossible.[77] No matter what the environment, and no matter what the mission, whether peace enforcement, counter-guerrilla, counter-insurgency, operations to thwart rogue-nation aggression or terrorist sponsorship from non-state players, the U.S. Army will be required to conduct these operations and to be well prepared to do so.[78] But, in order to well prepare for the operating environment, it is important to identify the basic strategy for accomplishing the missions. For the U.S. Army, by simply looking at the force structure, the strategy appears to be little different from that of the European Cold War and Desert Storm - annihilation.[79]

If the environment for future conflict tends to lead the U.S. Army into urban, counter-guerrilla, counter-insurgency, or other operations against asymmetric threats, the strategy will tend to be one of attrition instead of annihilation. For reasons previously discussed, the threat will attempt to counter U.S. forces, not head-to-head on a maneuver battlefield, but with methods that negate American military strengths. Whether deliberately chosen or not, attrition warfare tends to center on an extended ground conflict and leaves few options other than "search and destroy," "cordon and search," or a volatile form of a "stability and support" operation. In any case, the attrition strategy demands a high number of ground "dismount" infantry forces – normally much higher in proportion to the other combat arms.[80] The unprepared ground force, structured, equipped and trained for the annihilation battlefield tends to experience frustration on the attrition battlefield. The U.S. Army in Vietnam, the Soviet Army in Afghanistan, and the Russian Army in Chechnya are recent examples.

Lieutenant Colonel Lester Grau, Dr Peter O'Connell, Ralph Peters and others, urge caution toward U.S. military doctrines of decisive force and dominant maneuver.[81] In 1990's military lexicon, those terms tend to connote the application of force with a high degree of conventional symmetry; reflecting an intent to maintain a force of overwhelming combat power to apply a strategy of annihilation on a maneuver battlefield. This is a field, now, and for the next decade, according to O'Connell, that will allow anything but dominant maneuver. According to Grau, the strategy is important to identify well ahead of the conflict window and in order to arrive at the appropriate strategy the operational environment must be considered first. From there the military can prepare the doctrine and build the force necessary to meet the threat to which the strategy is aimed. Grau, like O'Connell and Peters, reasons that the predominant environment will be MOUT and other terrain that an enemy can operate in to avoid U.S. military strengths. Grau recalls Aleksandr Schvechin's counsel to the Red Army, that because of the operational environment and recognizing key elements in the Soviet Union's favor, they should prepare to fight a war of attrition. Grau urges likewise. The U.S. Army must be prepared to conduct attrition warfare and conduct it well.

> A major problem is that the United States is planning for a war of annihilation and developing the force structure, equipment and doctrine to support it. Although the United States has traditionally planned for rapid wars of annihilation, protracted wars of attrition have been the norm.[82]

In the final analysis, an argument can be posited that the American force preparing for the annihilation battlefield must also seriously prepare, at the least, to minimize the ugly, uncontrollable nature of attrition warfare. Force designers must recognize that the conventional, mechanized Army, designed for warfare on the

European plains and Southwest Asian deserts, needs a serious re-look before it is committed against the asymmetrical enemy devoted to attrition warfare. Against well armed, determined, self-sacrificing guerrillas or "freedom fighters" as in Afghanistan, Grozniy, and Somalia, the "decisive victory" through "dominant maneuver" force can be quickly frustrated.[83]

Chapter 3. The Two Divisions.

> We are becoming so powerful at traditional modes of warfare that we will drive our enemies into environments where our efficiency plummets, our effectiveness drops, and close combat remains the order of the day.[84]
>
> -Ralph Peters, *Fighting for the Future, Will America Triumph?*

As the United States Army returned from Vietnam in 1972, the Army's leadership concluded that the United States must be prepared for two types of war. One scenario would involve a predominantly light infantry force in the littoral regions of the world. The other scenario and most dangerous threat, was a conventional war in Western Europe. Mechanized warfare against the Soviet Union, America's "strongest and most dangerous enemy," that concerned Army leadership the most.[85]

Compared to the Soviet Army, the U.S. Army was far behind in mechanized warfare developments. From 1960 to 1972, because of U.S. involvement in Vietnam, U.S. forces in Europe were ill equipped. Except for the UH-1 helicopter, there had been few new equipment, organizational, or doctrinal improvements in almost a decade.[86] Soviet forces during this period had not only increased in size, but had modernized their major combat equipment with new systems. The T-72 tank, BMP1, BTR60 and new artillery and anti-tank systems were all fielded before the last U.S. unit departed Vietnam.[87]

In the mid-1970's, under the leadership of Generals William E. Depuy and Don A. Starry, the Army adopted a new operational doctrine, training system, and equipment development strategy. By 1976 this new doctrine, driven by the Soviet threat, had established that the U.S. must be able to "fight outnumbered and win."[88] This reality set in motion a new emphasis for inter-service cooperation. By 1982, substantial gains had

been made in Joint Operations. The tactical doctrine of the 1976 version of FM 100-5 evolved into the operational "Air-Land Battle" doctrine of 1982.[89] By the late 1980's the active Army grew from thirteen to eighteen divisions.[90] The M1 Abrams replaced the M60 tank, the AH64 attack helicopter replaced the Vietnam era AH1, and the M2 Bradley replaced the twenty year old M113. Every piece of Army equipment from uniforms to major weapons systems was replaced or significantly improved.[91] By 1986, with better doctrine, better equipment, and better training, the Army believed it was well prepared to fight and win a major conventional war in Europe.

Cold War Force Structure.

In 1990 when the Warsaw Pact began to dissolve, the forces of the U.S. Army consisted of essentially two types of divisions – heavy and light. There were eleven heavy divisions (mechanized infantry and armor), and seven light infantry divisions.[92] The mechanized infantry division consisted of four tank battalions and five mechanized infantry battalions all organized under three brigade headquarters. The armor division was identically organized except that it had four mechanized and five tank battalions. The light infantry division consisted of nine identically structured infantry battalions.[93] Essentially the Army was 65% mechanized and 35% light.[94] There were two Corps consisting of four mechanized divisions deployed in Europe against a numerically superior Warsaw Pact force.

The role of the U.S. Army heavy division was to destroy enemy mechanized and armored forces. Designed to counter Soviet forces in Europe, these divisions were employed for their mobility, survivability, lethality, and shock effect. The armored and mechanized divisions could seize and secure geographical areas and key terrain. In the

offense they could "rapidly concentrate overwhelming lethal combat power to break or envelope enemy defenses or offensive formations."[95] Their protective systems allowed them to operate in a lethal environment with possible nuclear, biological or chemical warfare. These units were equipped with leading edge technology and designed to "operate in open terrain where they gain the advantage with their mobility and long-range, direct-fire weapons."[96]

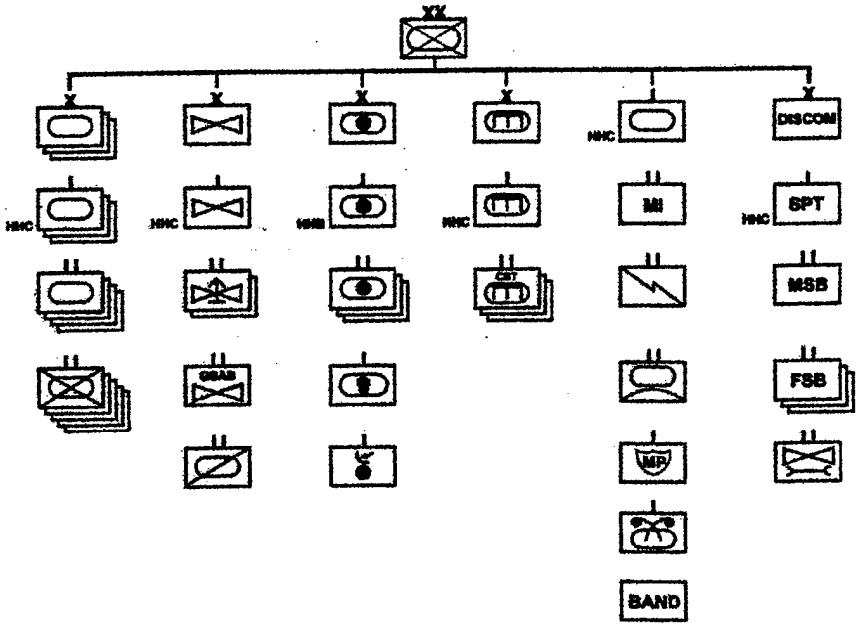
A significant limitation of the heavy division is that it requires time to deploy from home bases into an operational theater. Armored forces consume large amounts of supply in fuel and maintenance requirements. Additionally, they could "deploy relatively few dismounted infantry, and have limited use in restrictive terrain."[97] U.S. forces if not forward deployed into a theater of war would require several weeks to deploy from the U.S. to the European Theater.

The role of the light division during the period 1972 until 1990 was primarily to meet the need for a rapid deployable force capable of operating in conventional, "high-intensity" operational theaters such as in Europe, and non-conventional "low-intensity" contingency operations. The light divisions were designed to be the "dominant arm in fast breaking operations because of their rapid strategic deployability."[98] They were a multi-use force, equipped to operate throughout the conventional battlefield and could be rapidly augmented for "almost any task or situation." Unlike the heavy division, the light division was especially suited for operations in restricted terrain such as in urban, mountain, and jungle environments.[99] Limitations of the light division were its anti-armor capability when operating in open terrain and its lack of organic transportation resources.

The Mechanized Infantry Division Structure.

The armored and mechanized divisions structures were essentially the same. They each had identical roles on the battlefield and nearly identical organizations. The mechanized infantry division in 1989 consisted of five M2, Bradley-equipped mechanized infantry battalions and four M1 tank battalions.[100] Of the three maneuver brigade headquarters, two were organized "mech heavy" with two mechanized and one tank battalion, and one brigade was "tank heavy" with two tank and one mechanized battalion. The armored division had one less infantry battalion than the infantry division (see figure 1).[101]

Figure 1. Mechanized Infantry Division
1989



The mechanized infantry battalion was built around the concept of combined arms. The infantry was employed with the tank and together they created a lethal force.

The infantry were mounted in a M2 Bradley Fighting Vehicle (BFV). It was designed to carry six infantrymen for dismounted tasks, but it could defeat every Soviet mechanized and armored system deployed in Eastern Europe.[102] It was equipped with the same state-of-the-art thermal vision sight as the M1 tank, and a computer stabilization system for all turret weapons systems for firing on the move. The main gun was a rapid fire 25mm canon designed specifically to defeat the Soviet BMP2, BTR60 and BRDM infantry vehicles. In addition, the Bradley had a dual TOW anti-tank missile launcher capable of defeating the Soviet T72 tank.[103] The battalion consisted of four companies, each with fourteen M2 Bradleys, and a scout platoon with six M3 Bradleys.[104] With the battalion commander's and S3's vehicles, there were a total of sixty-four Bradley's in the battalion.

Though the battalion was well equipped for the mechanized battlefield it had relatively few dismount infantrymen. Each platoon could employ up to two nine-man squads who were capable of conducting precise dismount battle drills in various situations. The platoon leader and his radio operator would dismount with the squads. These squads allowed the platoon to defeat enemy dismounted infantry within range of the BFV, clear obstacles, conduct dismounted patrols, and to provide additional security for the BFV in restricted terrain.[105] The battalion could employ a total of 216 dismounted infantrymen or twenty-four squads total. With five mechanized battalions the mechanized infantry division could employ 1080 dismount infantrymen.

The Light Infantry Division Structure.

In 1979, Army Chief of Staff General Meyer redirected the Army's mechanization efforts away from the remaining infantry divisions. He directed that force

planners review the Army's rapid deployment capability and study the concept of keeping a few divisions if not "light" then at least rapidly deployable with existing strategic air lift. General Meyer's concern was that U.S. based heavy divisions could not deploy fast enough into the European theater. Initially light divisions were designed to be mobile on the battlefield with light wheeled anti-armor assault vehicles and their primary purpose was to reinforce NATO units rapidly.[106]

In 1983 the new Chief of Staff, General John Wickham, further developed the light division concept in part due to Army budgetary constraints. The Army could not budget for the wheeled assault vehicle concept – it was too costly. Additionally, since there were no projected increases in strategic airlift capability, the light divisions had to be deployed using existing aircraft. Without the assault vehicles, and with the aviation units stripped to a minimum, these units did not possess the lethality required of the European Theater. Consequently, the strategic concept for their employment had to shift. The light division was considered too light for the high-intensity European Theater.[107] In 1984 General Wickham expressed a new strategic vision:

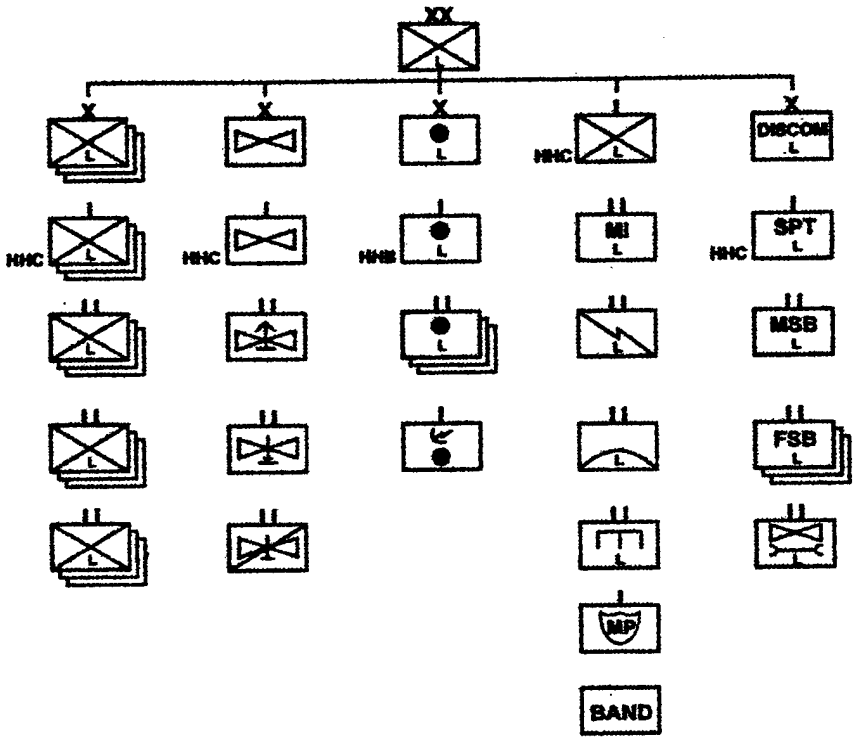
> Army leadership is convinced, based upon careful examination of studies which postulate the kind of world in which we will be living and the nature of conflict we can expect to face, that an important need exists for highly trained, rapidly deployable light forces. The British action in the Falkland Islands, Israeli operations in Lebanon, and our recent experience in Grenada confirm that credible forces do not always have to be heavy.[108]

This concept satisfied budgetary restraints and fulfilled the roles and missions requirement for deployability, force projection, and low-intensity conflict.

Only four of the light divisions had identical Tables of Organization and Equipment. The 9th Motorized, 82nd and 101st Airborne Divisions were each specially equipped with unique capabilities although all were built around the light division

base.[109] The 9th Motorized Division was a test-bed unit for various experimental wheeled assault vehicles throughout the 1980s but, it was still considered a deployable division. The 82d Airborne Division was equipped with an "air-dropable" armor battalion to enable it to conduct brigade-sized "forced-entry" airborne operations in mid, to high intensity environments. The 101st Division was equipped with additional attack and lift aviation battalions to enable the division to conduct brigade-sized air assault operations and both the 82d and 101st had one additional wheeled anti-armor company in the infantry battalions. The 6th, 7th, 10th, and 25th were officially designated "light" but without the increases in aviation and anti tank capabilities.[110] All seven divisions were similarly structured with three infantry brigades each consisting of three infantry battalions per brigade and minimal division support units (Figure 2).[111]

Figure 2. Light Infantry Division, 1986 – 1996



These light infantry divisions were built around the concept of a nine-man infantry squad, each infantryman equipped and trained for operations in jungle, forested, mountain, and urban terrain. In all light divisions the individual rifle company was completely foot mobile, having no organic vehicles or heavy weapons systems. Only the headquarters company had wheeled vehicles (with the exception of the anti-armor company in the airborne and air assault battalion). The rifle company consisted of three platoons of four squads each, or 108 designated infantrymen total. With nine battalions, in the light division it could field a total of 2,916 infantrymen (not including company or battalion mortars, or leadership personnel outside of the squad).[112]

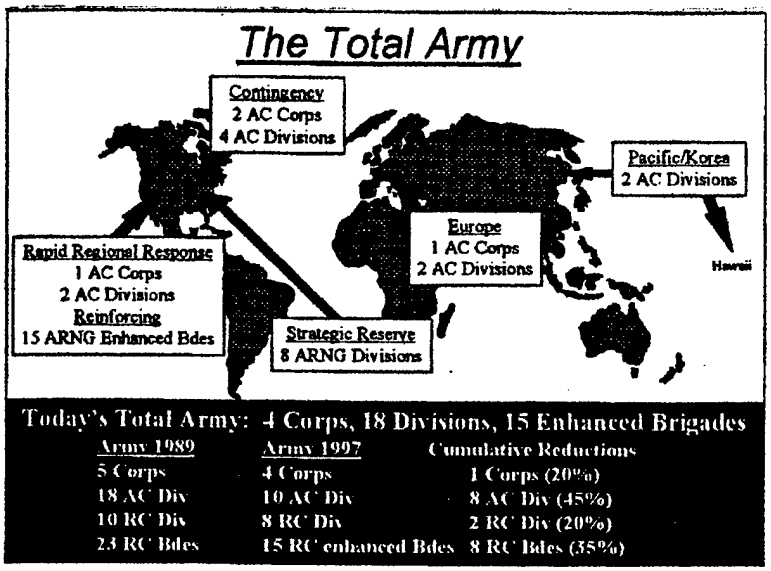
Post Cold War Draw-down.

Following the Cold War the Army personnel strength was reduced by 37%. The active Army force structure lost eight divisions. Of the eleven heavy divisions in 1989, five were cut. The light divisions were reduced by three. By 1997 the active Army stood at ten divisions, four light and six heavy. All divisions retained three full brigades and were essentially unchanged from the 1986 "Army of Excellence." The Army reduced an equal proportion of both heavy and light forces and retained a similar posture as that in the height of the Cold War (see Figure 3).[113]

At the close of the 1990's the Army did not reflect any substantial change from the operating strategy of the Cold War. It had simply downsized and modernized the future concepts of the same annihilation strategy. This carry-over of the same strategy limited the mechanized divisions to insufficient numbers of dismount infantry for the changed environment and prevented the light divisions from adopting sufficient ground and air transport systems for MOUT and other restricted terrain fighting. But in the final

analysis, only the light division has adequate infantry forces to approach the 21st Century attrition-based warfare.

Figure 3. U.S. Active Force Posture, 1998 [114]



Chapter 4. Comparisons.

> We still persist in studying a type of warfare that no longer exists and that we shall never fight again, while we pay only passing attention to the war we lost in Indochina and to the one we are about to lose...[115]
>
> Roger Trinquier, *Modern Warfare, A French View of Counterinsurgency*

In the new global environment the U.S. Army has acted as an important stabilizing force in order to support U.S. national interest. This has occurred in Somalia, Haiti, and Bosnia. Since the collapse of the Soviet Union, the world environment for the U.S. Army has become increasingly less focused on conventional, force-on-force operations. Conventional operations requiring predominantly heavy forces such as those deployed for Operation Desert Storm, according to many analyst, are the least likely operations that the U.S. Army will be expected to participate in.[116]

The U.S. cannot expect an attentive and determined adversary to repeat the Iraqi mistakes. An adaptive enemy can be expected to achieve its end state in asymmetrical ways that bypass the U.S. Army's conventional strengths.[117] Indicators of the new global environment emphasize certain physical operating parameters. The foremost parameter is urban terrain. Military Operations in Urban Terrain (MOUT) encompass the majority of U.S. military efforts whether they are operations to counter drug trafficking, assist failed nation states, counter-terrorism, peace enforcement or peacekeeping.[118]

A second parameter for U.S. military efforts continues to be Operations Other Than War (OOTW), specifically peace support operations.[119] Humanitarian operations, counter-terrorism, and counter-narcotics operations are also likely to increase, instead of decrease, the demand for U.S. Army forces. [120]

- **Mechanized and Light Infantry Strengths and Weaknesses in MOUT.**

Urban environment offers the enemy infantryman or guerrilla concealment and lines of communication (LOC) advantages over mechanized forces because of the three dimensional and concealed nature of the terrain.[121] As a result, U.S. Army doctrine has always recognized the peculiar advantage that light infantry possesses over mechanized forces in urban terrain. The 1941 Field Manual 100-5 Field Service Regulations recognized that "towns offer concealment for troops and weapons and protection from fire of weapons and mechanized attack..."[122] The manual addressed the constraints of mechanized forces in urban terrain; "mechanized troops are of little value in combat within a defended town. Their use for such combat will probably result in excessive casualties, both in personnel and vehicles."[123] U.S. Army doctrine has not changed its perspective on the value of light infantry in MOUT. The 1993 FM 100-5 clearly gives the advantage to light infantry in MOUT calling them "particularly effective in urban terrain."[124] It recognizes that technological advantages are constrained in urban operations which has an "impact on battle tempo; it [the urban environment] forces units to fight in small, decentralized elements."[125]

- **Concealment and The Ability to Close With and Destroy.**

In the restricted and concealed compartmentalization of urban terrain light infantry can move more freely than mechanized infantry, both vertically and horizontally. This was the case in Grozny, Haiti, and Somalia.[126] Dismounted infantry could remain undetected for days if necessary and use stealth and surprise to close with the enemy. U.S. Army forces in Somalia and Haiti learned that mechanized infantry, even at full strength, only had enough infantry to conduct local security of their vehicles in a MOUT

environment.[127] The dismounted infantrymen could not operate beyond mutual support range of the vehicle without exposing the vehicle to enemy Rocket Propelled Grenade (RPG) fires. As a result they could not conceal their location due to the size and noise of their vehicle and they could not participate in clearing operations.[128] In Grozny mechanized vehicles remained exposed and were vulnerable to enemy infantry fires, often from vertical approaches. The mechanized infantry forces alerted the enemy with their approaching vehicles several city blocks away, and it was difficult to hide their vehicles.[129] While mechanized forces could assist infantry operations through their mobility and firepower, their vehicles often became deliberate targets to Chechen rebels.[130]

Target acquisition from mechanized vehicles in Mogadishu and Port-au-Prince was done primarily by unassisted eyesight from the top of the turret. The integrated sight unit (ISU) of most IFVs were designed to acquire targets no closer than 200 or 300 meters away.[131] In many instances the sight was either totally useless, or was of limited value in narrow streets when scanning buildings and alleys for targets only fifty to sixty meters away. The long-range, high-resolution IFV sight was of little value when the vehicle had to move quickly through narrow streets and alleyways.[132]

- **Command, Control and Logistics.**

Light infantry units in the urban environments were able to maintain their command and control and logistics in the buildings and narrow alleyways within close proximity of the combat area.[133] Unless significant casualties were sustained, light infantry units could maintain logistics functions in urban areas for days with little degradation of combat power. Light infantry could conduct uninterrupted ground

resupply by moving completely concealed through building, alleys and sometimes sewer systems.

The Russians learned in Grozny that maintenance and refuel functions could not be conducted near the combat zone. When vehicles became immobilized, it required large numbers of infantry to secure rooftops and street-side windows while protecting the vehicles. Vehicle recovery was often not practical in the city due to the intensive infantry manpower effort required to both establish security around the vehicle and escort the recovery vehicles to and from the battle area. Because these security missions were so manpower intensive they often seriously delayed missions that required the force to maintain contact with the enemy.[134] Mechanized infantry units often had to redeploy as a whole to secured rear areas to conduct refueling and rearming because of the intensive need for security in movement.

- **Firepower.** U.S. forces in peace support and urban environments in the 1990s shared two important operating constraints. They could only apply force within excepted limits of collateral damage, and they could only employ force by measured response as stipulated by the Rules of Engagement (ROE).[135] As a result, when mechanized infantry operated in these environments, they were reliant on their dismount forces or light infantry for most responses to aggression. Because of the extreme destructive power of the M2 Bradley's 25mm main gun and the TOW anti-tank missile system, it could only be used for show of force or as a static defensive observation post on most occasions.[136] The coaxial 7.62 machinegun on the turret was used to great effect when the distances were not so close to prevent target acquisition with the Bradley ISU and the civilian population was not at risk.

As previously discussed, mechanized infantry units in Mogadishu and Port-au-Prince were augmented with light infantry forces primarily due to the manpower shortages of the mechanized force. The light infantry augmentation also assisted the mechanized forces because of the ROE restrictions on the turret weapons systems in highly populated areas.[137] To ensure that the mechanized units had enough small-arms fire to respond, the light infantry provided the ability to close with and destroy belligerent forces with minimal destructive collateral effects. The light infantry also ensured that the dismounted mechanized infantry could retain local security at the vehicle while the light infantry deployed against hostile forces. Without this light infantry augmentation the mechanized unit would have been limited to engaging a hostile force with its own limited number of infantrymen or attempting to acquire the hostile force with its IFV turret systems.[138]

By raw numbers the light infantry platoon had greater ability to respond to lightly armed forces with like firepower in MOUT and peace support operations. Assuming all units were at full strength, the mechanized platoon had only eighteen riflemen to place on the ground while the light infantry platoon had thirty-six (excluding the platoon leader and radio operator in both cases).

- **Deployability.**

Most U.S. involvement in peace operations in the 1990s came from sudden policy decisions that required forces to deploy rapidly, normally by air. Light forces are especially designed for such deployment. The Army Strategic Mobility Program (ASMP) requires an airborne or light division to deploy from the United States to a theater of conflict within twelve days.[139] A complete light battalion task force can

deploy to a theater within eighteen hours if necessary, with the remainder of the light brigade task force following within seventy-two hours. Though light infantry forces were quickly deployable they could not sustain themselves generally beyond three days of operation. Without immediate follow-on support troops, the light divisions were often a liability.[140]

For the immediate requirement to have U.S. forces in the conflict area, mechanized forces could only meet the goal by deploying one or two platoons of mechanized infantry by air to the theater within eighteen hours. Beyond that, all heavy combat equipment had to deploy by sealift. The ASMP planning factors for a heavy brigade to deploy from the U.S. to a theater of conflict was 10 to 15 days if pre-positioned float equipment was available. Without the pre-positioned float it took an average of 30 days to get a heavy brigade from a U.S. home station, to a port of debarkation, and onward to the area of operation. The ASMP goal to get a mechanized division to the operational area was 30 days.[141]

The success of many operations in the 1990s often hinged simply on American soldier presence.[142] There were also many physical and political constraints applied that did not allow mechanized forces to participate in peace support operations. U.S. restrictions and Rules of Engagement (ROE) constraints tend to place a greater emphasis on the use of light infantrymen. Throughout the 1990s, many stability and support missions required at least some mechanized forces, however, the majority of missions were accomplished by predominantly light infantry forces. This was not because light infantry was the optimum force for the mission, but because, more often than not, it was the only ground force that would meet the U.S. policymakers' constraints, and deploy

rapidly to the conflict area to timely fulfill policy objectives.[143]

- **Manpower.**

MOUT, counter-guerrilla, counterinsurgency and Peace Support Operations are manpower intensive. U.S. Army experiences in Haiti in 1994, in Bosnia in 1996 and the Russian Army experiences in Chechnya have strengthened the importance of having substantially more light infantry than mechanized forces when operating in these environments. In Bosnia commanders found that when operating in MOUT that light infantry forces were most effective in house-to-house clearing operations because of their manpower.[144] The light infantry company was often augmented by a tank or IFV platoon but the primary maneuver element was the light infantry unit.[145] In Haiti light infantry companies were the unit of choice for urban area searches and building and house clearing operations.[146] As in Bosnia, small unit infantry commanders operating in Port-au-Prince (PAP) were augmented with wheeled tactical vehicles mounting crew-served weapons, or with a Bradley mechanized section.[147]

Of the U.S. Army's divisions in the late 1990's, the mechanized divisions are the most numerous – six mechanized and only four "light" divisions. Though the mechanized division could field five infantry battalions it could only place 1080 infantrymen on the ground, and even fewer than that in an armor-heavy division. In comparison, the light division provided nearly three thousand infantrymen. In 1998, however, the Bradley equipped infantry battalion was reduced from four maneuver companies to three, giving the battalion only 162 dismount infantrymen, or 810 for the entire division. This stripping away of even more dismount infantry from an already small number may seriously decrease the Army's ability to perform effectively in future

infantry-intensive environments. U.S. Army force design appears to be dangerously focused on the same Cold War-era capabilities: greater mechanized lethality against a peer competitor.[148]

The only substantive qualities that the U.S. Army light divisions have to contribute to the emerging global environment are its disciplined infantry manpower and its deployability. They are ill-equipped and untrained for sustained combat in MOUT environments but they do provide a start point for an Army structure to confidently address the training and equipment needs in an attrition warfare scenario. Though the mechanized and armor divisions will continue to be the mainstay of any potential maneuver-based conflict, they are woefully dependent on infantry for their survivability in urban warfare and are extremely dependant on robust and secure lines of communication in sustained attrition warfare.

Chapter 5. Conclusions.

> The only way to prevent ossification of the mind is to accept nothing as fixed, to realize that the circumstances of war are ever changing, and that consequently organization, administration, strategy and tactics must change also.....Adherence to dogmas has destroyed more armies and lost more battles and lives than any cause in war.[149]
>
> J.F.C. Fuller, *Armored Warfare*, 1951

The world security environment has undergone a dramatic change between 1990 and 1999 and has left the U.S. Army with a challenging strategy conundrum for the first decade of the new century. The conundrum is threefold:

1. The emerging global environment will rarely require the Army to conduct decisive maneuver – annihilation warfare. It is instead, tending to require significant numbers of infantry forces - attrition warfare.
2. The U.S. Army force structure remains designed for a Cold-War type environment.
3. The manpower, funding and general resourcing of the U.S. Army continues to shrink.

The U.S. Army's force design for at least the first decade of the 21st Century, is essentially a heavy, modernized force, designed to fight on the plains of Europe against a conventional opponent. National level strategic assessments state that "The Army's planning for 2007 posits a force very similar in size and structure to that of 1996."[150] The Army After Next and Force XXI force structures suggests the expectation of a threat environment that is primarily the same as in the 1980's, only smaller; a mechanized heavy threat, capable of combined arms warfare with emphasis on armor formations.[151]

Compounding the problem is the adherence to the essential "Division 86" design

– with even less infantry! The only substantial change was the size of the total force.[152] By all appearances the same Cold War strategy still applies as the basis for the force design – annihilation warfare on the mechanized maneuver battlefield. As such there is potential for a significant shortage of infantry when the 1990's force structure gets committed to the attrition battlefield. This structure would be ideal in a future Desert Storm campaign but the global environment is not cooperating. The most likely missions for the future Army will be to deploy ground forces into operations like Bosnia, Haiti, Somalia and Chechnya - operations where high-tech mechanized machinery is less important, but well-trained and disciplined ground infantry, in quantity, is essential. [153]

There are few arguments against the need for mechanized forces. On the contrary, conventional mechanized warfare may always be an option for some U.S. belligerents. But historical and recent experiences manifest that mechanized infantry units are not designed for the emerging infantry-intensive environment. The current heavy division apportioned to a Unified Commanders' Area Of Responsibility to fill a need for an infantry capability is severely limited in what options he chooses to employ the "infantry" forces of that division. As the Army grows smaller but continues to increase its operational tempo in peacekeeping and peace enforcement, it does a disservice to commanders and to mechanized forces, to place the burden of infantry-intensive missions on them. If mechanized forces are deployed for these types of conflicts, they must be made robust with significant light infantry.

The Army has experienced a period of rapid and fundamental change in the global environment and must closely scrutinize the previous assumptions about potential threats. During the Cold War the Army made the key assumption that the Soviet Union and the

Warsaw Pact intended to challenge the NATO alliance in Europe with an overwhelming mechanized attack. Those assumptions drove the Army to convert most of its divisions into 100% mechanized units to present the Soviet threat with a powerful, technologically superior force.[154] As the main effort, that force was weighted with the preponderance of Army resources and this shift allowed Army decision-makers to except risks in some areas in order to seize on threat vulnerabilities in others.[155] Today, however, the environment has changed again. Army force planners must again be prepared to shift the main effort accordingly.

The U.S. Army's armor and mechanized infantry divisions are undoubtedly the most lethal forces on the mechanized, maneuver battlefield. However, as they are organized today, they are a poor choice to use against competent, modern and determined infantry or guerrilla forces in the new global environment. The enemy in this environment can be expected to side-step the highly developed technology of the heavy forces by opting to remain formless to mechanized attack. The warrior class and freedom fighters will embrace U.S. forces with attrition warfare and seize every opportunity to produce high casualties among Americans – regardless of any military objective. If the U.S. attacks this type of enemy with the current heavy mechanized force; short on dismount infantry and long on conventional warfare technologies; it will only expedite the enemy's ability to negate our strengths.

The force that the warrior and freedom fighter fears most is the one that can get close and stay with him in his environment, in the urban sprawl, restricted terrain, on the fringes of peace operations amongst large populations. This emerging threat fears a

force that does not present large inviting targets in the city streets, one that comes and goes in the alleyways, jungles and mountains as easily as he can.

Clearly needed today are infantry-intensive forces that can arrive quickly in the theater of operations ready and trained to present the insurgent, the warrior, and the freedom fighter with fears beyond his expectation. A force not only exceptionally trained and equipped for MOUT and other restricted terrain environments, but an infantry force in large numbers, that can be continuously regenerated at a high quality level, to meet the infantry manpower demands of 21st Century warfare.

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