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NUCLEAR WEAPONS AND LIMITED WAR:
THE US ARMY IN THE 1950s

Ingo Truschweizer

EUROPEAN UNIVERSITY INSTITUTE, FLORENCE
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Abstract

This essay discusses how the U.S. Army proved its utility for the nuclear age in the wake of the Korean War. It specifically addresses the rationale behind the reorganization of U.S. Army formations into pentomic divisions between 1955 and 1959. It argues that the pentomic division was the cornerstone of a transformation. Its architect, General Maxwell Taylor, intended to transform the Army to a dual-capable conventional and atomic fighting force. He believed that this offered him the opportunity to alter national strategy from perceived over-reliance on nuclear deterrence to flexible and proportional response. The paper concludes that while Taylor's pentomic transformation must be seen as a failure on the operational and tactical levels, it did indeed contribute significantly to the subsequent shift from Massive Retaliation to Flexible Response.

Keywords

United States, army, Cold War, defense policy, strategy, limited war, deterrence

Introduction

This essay considers the attempted transformation of the U.S. Army at the height of the Cold War.¹ It will argue that the experience of the 1950s offers insight into the difficulty of adjusting force structure, weaponry and equipment, tactics, doctrine, and strategy in an environment of global threat. In the early 1950s, President Eisenhower installed a strategy of nuclear deterrence that raised questions about the future of land forces. Soon thereafter the army staff introduced new combat divisions that were to operate on conventional and nuclear battlefields alike. The common assessment of these divisions is that they were hastily designed, prematurely adopted, and operationally impracticable. Most scholars have taken the view that the reorganization constituted the army's attempt to adjust its combat organization and tactics to nuclear war.² Others have pointed out that the reorganization was driven by budgetary as well as technological considerations.³ But General Maxwell Taylor, the army chief of staff, had a more radical objective. He intended to transform the army into a modern, dual-capable force, equipped with conventional and atomic weapons, with the purpose of preventing war between the superpowers. Taylor believed that the Army could prove its utility for the nuclear age only if it created a combat force that would deter the Soviets from conventional and nuclear aggression. Between 1955 and 1961, Taylor initiated a debate of limited war and helped shift the emphasis of national strategy from reliance on nuclear deterrence to flexible response.⁴

At the end of the Korean War, army leaders were forced to adjust to a world in which both superpowers possessed nuclear weapons and in which the US was faced with the requirement to be prepared for war from the outset. Nuclear weapons served as a protective umbrella and a deterrent, but they also altered America's geo-strategic position and took away the option of mobilizing the nation's military potential only after war had already broken out, as had happened in previous wars of the United States. Now, Americans were told that they would have to be at a constant state of readiness. Finding the right strategy for protracted conflict occupied political and military leaders for the next decade. Strategy is defined as the appropriate relationship of means to ends in order to achieve a political objective. That objective was to prevent war between the superpowers and to contain the expansion of Soviet and Chinese influence, but how to achieve both was controversial. In the 1950s, the assumption that deterrence should rest upon nuclear weapons placed the army on the brink of irrelevance.

The army survived largely because its leaders found ways to change the nature of the debate over US strategy for the Cold War. They came close to violating the principle of civilian control of the military. They clashed with the commanders of air force and navy over questions ranging from the defense budget to what kinds of war to expect. They opposed the decision of the Eisenhower administration to stress fiscal responsibility and nuclear deterrence over conventional rearmament and land forces. They rejected the strategy Eisenhower and his Secretary of State, John Foster Dulles, had announced: Massive Retaliation, i.e., the threat of striking with nuclear weapons at targets inside the

¹Some of the material presented here has been excerpted from *The Cold War U.S. Army: Building Deterrence for Limited War*, by Ingo Trauschweizer, © 2008 by the University Press of Kansas. Used by permission of the publisher.

²See, e.g., Russell F. Weigley, *History of the United States Army*. New York: Macmillan, 1967, pp. 537-40. For a more recent example see Adrian Lewis, *The American Culture of War: The History of U.S. Military Force from World War II to Operation Iraqi Freedom*. New York: Routledge, 2007, pp. 158-63.

³A.J. Bacevich, *The Pentomic Era: The US Army between Korea and Vietnam*. Washington: National Defense University Press, 1986, John R. Midgley, jr., *Deadly Illusions: Army Policy for the Nuclear Battlefield*. Boulder, CO: Westview Press, 1986, pp. 57-79, and John B. Wilson, *Maneuver and Firepower: The Evolution of Divisions and Separate Brigades*. Washington, D.C.: Center of Military History, 1998, pp. 270-82.

⁴Donald Carter, a historian at the U.S. Army Center for Military History, believes that President Eisenhower defeated the military's challenge. He concludes that the debate over nuclear strategy and deterrence led to alienation between the president and the Joint Chiefs of Staff and that this divide only grew more distinct under Eisenhower's successor, John F. Kennedy. Donald Alan Carter, "Eisenhower Versus the Generals," *The Journal of Military History*, Vol. 71, No. 4 (October 2007), pp. 1169-1199.

Soviet Union in response to any aggressive act of the Soviets or their allies. But in order to persuade legislators and the general public that the army could still be useful, its generals needed to propose an alternative to nuclear deterrence.

From World War to Cold War

After the Second World War, the general public regarded ground forces as unfashionable. Although the army had fought valiantly, the advent of atomic weapons made land forces appear to be of limited utility. Moreover, the United States had demobilized its armed forces after each of its major wars in the past. Consequently, after 1945 the army was dramatically reduced in size, from the wartime high of eight million officers and men in eighty-nine divisions to a mere ten combat divisions and 591,000 officers and men on the eve of the Korean War.⁵ Even the army's own first postwar operational doctrinal manual was self-effacing. Its mission statement emphasized training and proper equipment of combat units for the defense of the United States, but it also pointed at the provision "of Army units for attachment to the Air Force for performance of prescribed functions; to provide common type support for Navy and Air Force as directed."⁶ For land-warfare tactics, it prescribed offensive spirit and emphasized firepower. Both infantry and armor would be best employed offensively. Defensive operations were to be employed only where dictated by the circumstances. Divisions on the defensive were advised to choose strong points and attempt to defend in place.⁷ In general, the manual left little doubt that army planners strongly favored the offensive as the best way to preserve freedom of action and dictate the course of a battle.⁸

The defensive was primarily for the purpose of gaining time "pending the development of more favorable conditions for undertaking the offensive, or to economize forces on one front for the purpose of concentrating superior forces for a decisive action elsewhere." Based on hard-fought defensive battles of the Second World War, such as in the Battle of the Bulge, the army recognized only positional defense as a legitimate form of the defensive. There was awareness, of course, of successful German employment of mobile defense in depth on the Eastern Front, but that did not yet have a significant place in official doctrine. For the time being,

defensive doctrine contemplates the selection and organization of a battle position which is to be held at all costs. Forward of that position maximum use is made of covering forces to delay and disorganize the advance of the enemy and deceive him as to the true location of the battle position. Strong reserves are held out to destroy the enemy by counterattack if he penetrates the battle position and after the momentum of the attack has been spent.⁹

The main line of resistance was considered the last resort, while forward units added depth to otherwise linear defense.¹⁰ Atomic weapons did not yet enter into operational doctrine beyond a few veiled remarks about technological advances. As the manual was published, in August of 1949, the U.S. still believed that it possessed a monopoly on the weapon. Pentagon officials had only just begun to contemplate tactical use of atomic weapons.

The Korean War shifted army attitudes that had prevailed in the immediate post-war period. After the Second World War, its main task became the occupation of Germany and Japan. By the end of the 1940s, increasing tension between the U.S. and the Soviet Union had polarized international relations and war was again considered possible. But there seemed little use for large fighting formations of men armed with conventional weapons. The Korean War revealed the fallacy of such

⁵Richard W. Stewart, ed., *American Military History, Volume II: The United States Army in a Global Era, 1917-2003*. Washington, DC: Center of Military History, 2005, p. 211.

⁶Department of the Army, *Field Manual, FM 100-5: Field Service Regulations – Operations*. Washington, DC: Department of the Army, 1949, p.2.

⁷*Ibid.*, pp. 6-13.

⁸See, for instance, *ibid.*, p. 20.

⁹*Ibid.*, p.120.

¹⁰*Ibid.*, p. 141.

thinking. It showed that war could be limited, even in the atomic age. It also demonstrated that the army had been reduced to a point where it was difficult to function as an effective fighting force. At the beginning of the war, North Korean troops held the advantage in manpower, equipment, and readiness. The army had four infantry divisions in Japan, but all of them were severely under strength and lacked even basic weaponry and equipment.¹¹ The first American soldiers that encountered the enemy were barely able to delay the North Korean advance so that other elements of Eighth Army could take up suitable defensive positions.¹²

The defense of the Pusan Perimeter in the summer of 1950 offers several interesting examples of tactics that did not correspond with the official doctrine promulgated in 1949. Of course, the divisions, regiments, and battalions defending the southeastern tip of the Korean Peninsula also bore little resemblance to the tables of organization and equipment prescribed by the army. In practice, while relying on linear defense, General Walton Walker, the commander of Eighth Army, installed a system in which mobile, centrally located reserves could stop any infiltration. Walker's ad-hoc defense resembled German battle group actions in the Second World War.¹³ As Eighth Army gathered strength and found its footing, its tactical behavior changed accordingly.

In September and October 1950, army units recovered the initiative and conducted offensive operations that were more in accordance with current doctrine. With the entry of China into the war, however, this offensive face ended and army forces were once again forced on the defensive. This was a response to the numerical superiority of Chinese troops, but it was also a consequence of the quality of available personnel. Reservists, who had not received much training before being sent to Korea as individual replacements, could more easily learn basic skills for the defense of strong points than those required for attack. Once American forces had established superiority in firepower on the ground and in the air, the course of the Korean War reinforced the army's tendency to rely on heavy firepower rather than maneuver.¹⁴ This attitude appears to have originated in the American Expeditionary Force of the First World War.¹⁵ After the war, technological and operational innovation was hampered by the prevalent sense of security in the United States and by the onset of the Great Depression that made military spending vastly unpopular.¹⁶

It is generally assumed that the quick defeat of French arms in 1940, coupled with the stunning operational success of German war of movement, prompted a shift in American thinking, but the events of the Second World War as well as the Korean War do not support such a conclusion.

¹¹In the wake of the Korean War, it was argued that individual soldiers, rather than entire divisions had been unprepared for the war because occupation duty and life in Japan had softened them. See T. R. Fehrenbach, *This Kind of War: A Study in Unpreparedness*. New York: Macmillan, 1963. The recent work of Thomas E. Hanson, "The Eighth Army's Combat Readiness Before Korea: A Reappraisal," *Armed Forces & Society*, vol. 29, no.2 (Winter 2003), pp. 167-184 clearly demonstrates that individual soldiers were quite capable but lacked necessary guns, tanks, and vehicles. Lack of tanks and anti-tank guns is also discussed in Bruce I. Gudmundsson, *On Armor*, Westport, CT: Praeger, 2004, p. 162.

¹²Roy K. Flint, "Task Force Smith and the 24th Division: Delay and Withdrawal, 5-19 July 1950," in: *America's First Battles: 1776-1965*, eds. Charles E. Heller and William A. Stofft. Lawrence: University Press of Kansas, 1986, pp. 266-299.

¹³Kevin Soutor, "To Stem the Red Tide: The German Report Series and Its Effects on American Defense Doctrine, 1948-1954," *The Journal of Military History*, vol. 57, no. 4 (October 1993), pp. 653-688 shows that the studies of German army officers conducted for the U.S. Army since the end of the Second World War had begun to resonate with their American counterparts. But Ronald Smelser and Edward J. Davies II, *The Myth of the Eastern Front: The Nazi-Soviet War in American Popular Culture*. Cambridge: Cambridge University Press, 2008 point out that German tactical and operational thought, based on the distorted accounts of Franz Halder, Heinz Guderian, and others, was not critical to U.S. Army thinking in the 1950s, even though it would become so after the Vietnam War.

¹⁴For the use of artillery in the Korean War see Bruce I. Gudmundsson, *On Artillery*, Westport, CT: Praeger, 1993, pp. 144-147.

¹⁵For American combat philosophy see especially Mark E. Grotelueschen, *The AEF Way of War: The American Army and Combat in World War I*. Cambridge: Cambridge University Press, 2007. See also the classic account by Weigley, *History of the United States Army*, pp. 355-394.

¹⁶David E. Johnson, *Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917-1945*. Ithaca, NY: Cornell University Press, 2003.

Instead, the influence of tactical ideology of the French army, which stressed a battle of extensive artillery preparation and methodical advance of infantry and which was widely admired by American officers before the Second World War, persisted. U.S. Army doctrine continued to emphasize a methodical offensive in which firepower was seen as the means to reduce enemy strong points and collapse the enemy's front line. Armored and mechanized units were supposed to support infantry, although it was acknowledged that they could become the main instrument of offensive action if the enemy was disorganized or could not hold its fortifications. Conversely, on the defensive, the enemy was to be forced to expend vast amounts of manpower in assaults on fortified positions covered by concentrations of artillery and machine guns. The Korean War did not challenge this line of thinking because American artillery was superior to that of the enemy and terrain and weather conditions favored the use of infantry.¹⁷

Following the introduction of the 280-mm atomic cannon in 1953, new army operational doctrine was published that attempted to integrate the recent experience of the Korean War and the availability of atomic weapons for tactical purposes. The manual left no doubt that only land forces could win wars. For that purpose they had to be supported by the other services, while "Army combat forces do not support the operations of any other component." There was also a stern warning not to neglect ground forces in peacetime: "[Army, air force, and navy] maintenance in proper balance is essential if the objectives of national policy are to be attained." Limited wars against Soviet satellite states were possible, as demonstrated by the Korean War. Strategic mobility and the ability to fight on a conventional or atomic battlefield, therefore, were essential. Unlike the more enthusiastic advocates of atomic weapons, the authors of the manual argued that the final objective of war had to be political and that "victory alone as an aim of war cannot be justified, since in itself victory does not always assure the realization of national objectives. If the policy objectives are to be realized, policy and not interim expediency must govern the application of military power." Still, the manual insisted on decisive victory on the battlefield through offensive action.¹⁸

The offensive depended on the massing of superior force at the point of decision and the effective application of firepower. To achieve numerical superiority in one sector of the battlefield, strength had to be conserved in other sectors and it might be necessary to accept a defensive position temporarily.¹⁹ Once the assault force had been assembled, heavy artillery was expected to subdue the defenders and enable the ground attack to proceed at a deliberate pace. But the manual failed to prescribe proper employment of tactical atomic weapons. Instead, division commanders were left with the options to "consider atomic fires as additional firepower of large magnitude to complement other available fire support...[or] fit his maneuver plans to the use of atomic fires."²⁰ It was stated that atomic weapons were more suitable for attacks with deep objectives, but there was no mention of the potential negative effects of their use on the movement of friendly forces.²¹ Commanders were reminded that it was critical to maintain a sufficient reserve to exploit a breakthrough and to commit that reserve decisively rather than piecemeal. Otherwise, the defenders might recover and force the attacker into a battle of attrition.²²

The primary role of infantry was to reduce enemy strong points or to defend favorable ground or critical positions. Commanding officers had to keep in mind, however, that defense or conquest of terrain features were not ends in themselves.²³ The objective was to destroy the enemy force. Natural

¹⁷Bacevich, *Pentomic Era*, pp. 108-110 and Department of the Army, *Field Manual 100-5: Field Service Regulations – Operations*. Washington, DC: Department of the Army, 1954.

¹⁸FM 100-5 (1954), pp. 4-8. The quotations are, in order, on pages 4, 5, and 7.

¹⁹*Ibid.*, p. 26.

²⁰*Ibid.*, p. 40.

²¹*Ibid.*, p. 96.

²²*Ibid.*, p. 74-75.

²³*Ibid.*, p. 77.

and man-made obstacles could help to achieve that by rendering the enemy more vulnerable to the application of heavy conventional or atomic firepower. Commanders had to prepare methodically for offensive action, albeit not quite as deliberately as had been the case prior to the Korean War.²⁴ They were asked to concentrate their main effort on a narrow front, with as much support as could be spared. In order to draw enemy forces away from the point of decision, they were also encouraged to develop diversionary attacks on wider fronts. Once the attack was underway, the commander was to influence the course of action mainly by committing his reserves and directing artillery fire.²⁵ There was little doubt that the army considered fire support to be decisive.²⁶

The defensive was still treated as the stepchild of tactical and operational thought.²⁷ For the first time, the authors of operational doctrine recognized the mobile defense as a separate form of the defensive, particularly in situations and terrain that would allow the defender to maneuver and defend in depth, but they still regarded positional defense as more universally applicable.²⁸ Within the operations branch of U.S. Army, Europe (USAREUR), there was a great degree of skepticism about the applicability of static defensive tactics. Major Melbourne C. Chandler expected the tactical situation in Europe to be reminiscent of the initial phase of the Korean War, during which American forces tried to maintain cohesive defensive positions but were repeatedly attacked from the flanks and forced to abandon their positions. He concluded that Seventh Army, the field force of USAREUR, needed to emphasize mobile defense and maneuver in depth.²⁹

Mobile defense in current doctrine featured a small forward-deployed combat force with the bulk of the defenders in reserve for local counterattacks. Defense was conducted either to gain time while conditions more favorable to offensive actions would develop, or as an economy of force while offensive operations were under way in other parts of the combat zone.³⁰ As in the offensive, the proper utilization of terrain was critical. To improve on natural obstacles, field fortifications and barriers might have to be built. In the balance, however, the enemy could only be contained on the defensive. Counterattack was necessary to destroy him.³¹

In preparing for the threat of atomic weapons, commanders had to “intensify appropriate individual and unit training,” disperse their forces in order to avoid offering a “lucrative target,” seek shelter, intercept enemy reconnaissance, and conduct counterintelligence operations. During mobile defensive operations, it was crucial to disperse the reserve to the greatest degree possible without impeding its ability to strike at the appropriate moment. FM 100-5 described enemy atomic attacks “as a warning signal for mobile reserves to prepare for employment in counterattacks or in blocking roles,” since the enemy would surely use atomic weapons in preparation for ground attacks. For higher command echelons, the “threat of enemy use of atomic requires that plans be prepared for replacement of complete tactical units.”³² The army was wary of the degree of destruction that enemy atomic fire could bring on its units, but army leaders were optimistic that properly concealed defensive positions, mobility, and initiative would be sufficient means to avoid offering concentrated and exposed targets.

It is instructive to consider the differences between U.S. Army conceptions of war and those that prevailed in NATO’s military command. Field Marshal Bernard Law Montgomery, the deputy

²⁴Ibid., pp. 78-87.

²⁵Ibid., pp. 87-89.

²⁶Ibid., p. 94.

²⁷A mere page count of the 1954 edition of FM 100-5 shows thirty-nine pages devoted to the offensive and only twenty-four to defensive operations. Ibid., pp. 74-112 and 113-136.

²⁸Ibid., pp. 117-121.

²⁹Melbourne C. Chandler, “Notes on Defense,” *Military Review*, vol. 34, no. 11 (February 1955), pp. 38-49. Major Chandler served in the G-3 branch (Operations) of USAREUR headquarters.

³⁰FM 100-5, 1954, p. 113.

³¹Ibid., pp. 114-115.

³²Ibid., pp.120-121.

commander of NATO forces, lamented that western armies were still designed for set-piece attacks of artillery and infantry supported by tanks, with a pace of 2.5 miles per hour. In this he saw very little evolution since the First World War.³³ In contrast, U.S. Army general Alfred Gruenther, serving both as commander of NATO military forces and of U.S. forces in Europe, advised his field commanders to conduct defensive operations from behind a natural or artificial obstacle. In order to traverse the obstacle, the enemy would have to concentrate forces and would thus offer a suitable target for atomic weapons. It was not stated how the necessary dispersion of the defending forces at the time of atomic strikes could be assured without risk of losing control or ability to mass for counterattacks. The key operative terms were dispersion and mobility, somehow to be achieved by smaller formations, better control, rapid command decisions, and a small park of vehicles. Should the enemy still advance, mobile striking forces had to counterattack in order to prevent a breakout from the established bridgehead.³⁴

Defense in depth was envisioned to begin with a covering force of one infantry battalion, which was to be supported by a battery of light artillery or mortars, one squadron of light armor, possibly a troop of combat engineers, and a small signal element. This task force would be deployed right at the obstacle. The reinforced battalion of less than 1,000 officers and men would have to defend a front of 12,000 to 15,000 yards. The strike force for the counterattack was to consist of two armored divisions, possibly organized in two groups. This task force would have two infantry battalions, two armored battalions or regiments, two artillery battalions or regiments, one engineer battalion or two companies, and one special signal unit. In addition, the corps was to hold one infantry division in reserve, whose regiments or battalions had to be capable of independent operations. Moreover, there was to be a central reserve, wherever possible, of one armored and two infantry divisions to repel infiltration that exceeded the strength of the striking force. Reserve formations were to defend vital installations in the rear area against deep penetration or airborne attacks.³⁵ In general, forces were to be prepared to operate as battalions or brigades, respectively regiments. Divisional actions were to be conducted only in desperate situations.

U.S. Army doctrine was more conventional and ill suited to the tactics proposed by Allied Command Europe. Even though atomic weapons were to be employed under the guidelines of FM 100-5, the tactical deployment of forces had changed very little and the offensive remained the focal point of command thinking. NATO planners emphasized active defense, somewhat comparable to the mobile defense portions of U.S. Army doctrine. But there was no suggestion of linear positional defense in NATO plans. This is surprising, given that political pressure from West Germany forced military planners to consider forward defense to begin further east than militarily prudent, and in less suitable terrain.³⁶ Like U.S. Army doctrine, NATO plans also featured counterattacks, but in General Gruenther's thinking it was atomic firepower that would kill the enemy where he was on the attack and had been forced to mass troops to overcome defensive obstacles.

The difference in tactical and operational thinking between NATO and the army rested to a large degree on the political objectives of the respective manuals and plans. The army needed to prove that ground forces could still make a valuable, even decisive contribution to war. NATO on the other hand was a defensive alliance. It was thus only natural to outline how defensive operations would lead

³³Personal Note for the Supreme Commander by Field Marshal Montgomery, 4 January 1954. Lauris Norstad Papers, Personal Name Series, Box 74, "Montgomery, Field Marshal (2)," Dwight D. Eisenhower Presidential Library.

³⁴SGM-1-55, North Atlantic Military Committee, Standing Group, 10 January 1955, *Memorandum for the Supreme Allied Commander Europe, the Supreme Allied Commander Atlantic, the Channel Committee, the Canada-United States Regional Planning Group*. Annex A to Appendix B of Enclosure J. International Military Staff, NATO Archive.

³⁵Ibid., pp. 40-41.

³⁶For the eastward shift of the main line of defense between 1949, when it was placed at the Rhine and Ijssel rivers, to 1957, when it was advanced to the Weser and Lech rivers in Germany, and 1963, when it reached the intra-German border, see Sean M. Maloney, *War Without Battles: Canada's NATO Brigade in Germany, 1951-1993*. Toronto: McGraw-Hill Ryerson, 1997, pp. 34-38, 126-178, and 186-244.

to the defeat of the Soviet offensive. For the army to do the same would have played into the hands of proponents of nuclear strategy, who saw air power as the future of war. Furthermore, army doctrine was tailored toward an existing force while Allied Command Europe attempted to initiate a transformation of NATO armies. It has to be added, of course, that most of the thinking that went into army doctrine was shaped during the Korean War and before the formal adoption of the New Look and Massive Retaliation.

Following the Korean War, a new administration adjusted U.S. strategy for the Cold War. President Eisenhower, formerly the commanding general of Allied forces in Europe in World War II and NATO's first military commander, had come to the conclusion that the Cold War would continue for several decades and he feared that excessive emphasis on military mobilization would undermine the robust economy of the United States and its fundamental political freedoms. His administration proposed Massive Retaliation, i.e., the threat of striking targets inside the Soviet Union with nuclear weapons if either the Soviets or any of their clients acted aggressively against western territories, as a cost-effective alternative to conventional military forces.³⁷ Consequently, the army's budget and its share in overall defense appropriations declined sharply. The army bore the entire \$5.5 billion reduction of the 1955 defense budget, receiving \$7.6 billion or one quarter of overall defense appropriations. By 1957 the fiscal situation had worsened. The army received \$7.5 billion, less than half of the \$16.5 billion granted to the air force. Within three years, the army's share of the budget had declined from thirty-eight to less than twenty-two percent.³⁸

General Matthew B. Ridgway, the army chief of staff, had serious reservations about the new strategy and consequent force reduction. He considered it a grave mistake to cut the size of the army prior to the achievement of the rearmament of West Germany and Japan. Moreover, he questioned whether new weapon systems would reduce the need for manpower. Tactical atomic weapons offered greater firepower but there was little evidence to suggest that a combat unit so equipped would need fewer men. Ridgway argued that balanced conventional and atomic military forces were required to prevent war and he strongly advised against placing great expectations in the immediate combat readiness of the reserve. Proponents of force reduction argued that West German troops would fill the gap, but rearmament there did not begin until 1955 and it subsequently proceeded at a slow pace.³⁹ Both fiscal concerns and the need to offer a stronger force for the defense of Western Europe came to propel army reform.

³⁷The best recent discussions of the New Look and Massive Retaliation are Saki Dockrill, *Eisenhower's New Look National Security Policy, 1953-1961*. Houndmills: Macmillan Press, 1996 and Richard M. Leighton, *History of the Office of the Secretary of Defense: Strategy, Money, and the New Look, 1953-1956*. Washington, D.C.: Office of the Secretary of Defense, Historical Office, 2001. Marc Trachtenberg's essays "A 'Wasting Asset': American Strategy and the Shifting Nuclear Balance, 1949-1954" and "The Nuclearization of NATO and U.S.-West European Relations" in his *History and Strategy*. Princeton: Princeton University Press, 1991, pp. 100-68 also remain useful.

³⁸The Eisenhower budgets from 1954 to 1957 are shown in Leighton, *Strategy, Money, and the New Look*. Washington, DC: Historical Office, Office of the Secretary of Defense, 2001, pp. 65-113, 231-276, 307-333, 359-378, 471-488, and 605-630.

³⁹For the decisions leading to West German rearmament see Robert McGeehan, *The German Rearmament Question: American Diplomacy and European Defense after World War II*. Chicago: University of Illinois Press, 1971; Roland G. Foerster et al., *Anfänge westdeutscher Sicherheitspolitik*, vol. 1: *Von der Kapitulation bis zum Plevan Plan*. Munich: R. Oldenbourg Verlag, 1982; Lutz Köllner et al., *Anfänge westdeutscher Sicherheitspolitik*, vol. 2: *Die EVG Phase*. Munich: R. Oldenbourg Verlag, 1989; Saki Dockrill, *Britain's Policy for West German Rearmament, 1950-1955*. Cambridge: Cambridge University Press, 1991; Hans Ehlert et al., *Anfänge westdeutscher Sicherheitspolitik*, vol. 3: *Die NATO Option*. Munich: R. Oldenbourg Verlag, 1993; David Clay Large, *Germans to the Front: West German Rearmament in the Adenauer Era*. Chapel Hill: The University of North Carolina Press, 1996; and Marc Trachtenberg, *A Constructed Peace: The Making of the European Settlement, 1945-1963*. Princeton, NJ: Princeton University Press, 1999, pp. 103-125. The progress of West German rearmament is discussed in Helmut Hammerich, *Das Heer 1950 bis 1970: Konzeption, Organisation, Aufstellung*. Munich: R. Oldenbourg Verlag, 2006 and Bruno Thoß, *NATO-Strategie und nationale Verteidigungsplanung: Planung und Aufbau der Bundeswehr unter den Bedingungen einer massiven atomaren Vergeltungsstrategie 1952-1960*. Munich: R. Oldenbourg Verlag, 2006.

Initial Army Reforms

The first practical steps toward redesigned ground forces for the atomic age were taken overseas. General Maxwell Taylor, in command of Eighth U.S. Army in Korea after the armistice agreement, advised the South Korean ground forces to experiment with a division that had five instead of three major combat elements.⁴⁰ This facilitated greater dispersion and flexibility on the battlefield. General James Gavin, who, like Taylor, had commanded airborne forces in the Second World War, also considered a new force structure. He had been an innovator in the field of airborne operations during the Second World War and after the war had become interested in rocket and missile technology as well as tactical applications of atomic weapons.⁴¹ In 1951 and 1952, Gavin took part in the joint-service VISTA project, a study of future atomic ground and air warfare in Europe.⁴² In December 1952 he took command of U.S. VII Corps in Germany. There, he presided over map exercises and maneuvers and concluded that existing infantry and airborne divisions could not function in atomic war.⁴³ The armored division, on the other hand, seemed adaptable due to its pre-existing task-force structure, the combat commands.⁴⁴

Gavin and his staff proposed combat units of greater mobility. Cavalry, especially when forward deployed at the intra-German border, needed to possess tactical air mobility. Gavin argued that helicopters offered a proven method of providing mobility for ground forces. Missiles could replace conventional artillery, thus increasing range and adding tactical atomic capability to the division where necessary. As the depth of the battlefield increased, communications would become even more important. Gavin suggested that battalions and regiments now needed the kind of equipment that regiments and divisions had in their inventories during World War II. Moreover, he argued that linear defense, with its fixed lines of communication, was no longer appropriate. The atomic battlefield would be much deeper, wider, and less structured than the one of the Second World War; it would be “amorphous.” Infantry divisions for such an environment would have to be built around battle groups that were smaller than the existing regimental combat teams. These battle groups were to be dispersed widely in order to present less lucrative targets for atomic attacks.⁴⁵ Despite the emphasis on small battle groups, Gavin concluded that the new divisions had to be larger than the current ones.⁴⁶

At the Pentagon, General Ridgway agreed that combat divisions should be built around semi-independent combined-arms battle groups that could move by air. To NATO commanders he expressed concern about

our readiness to air move intra-theater and inter-theater forces. Specifically, I envision our being confronted with problems of considerable magnitude in the event that a major portion of the European Peninsula falls to the enemy. The ability to move across large bodies of water and

⁴⁰Glen R. Hawkins, *United States Army Force Structure and Force Design Initiatives, 1939-1989*. Washington, D.C.: U.S. Army Center of Military History, 1991, pp. 27-28 and Wilson, *Maneuver and Firepower*, p. 271. The Koreans “politely declined to engage in a program of division mobilization.” Maxwell D. Taylor, *Swords and Plowshares*. New York: W. W. Norton & Company, 1972, p. 153.

⁴¹For Gavin’s career and innovative ideas during and after the Second World War see T. Michael Booth and Duncan Spencer, *Paratrooper: The Life of Gen. James Gavin*. New York: Simon & Schuster, 1994.

⁴²David C. Elliot, “Project Vista and Nuclear Weapons in Europe,” *International Security*, vol.11, no. 1 (Summer 1986), pp. 163-83 and *Project Vista: An Early Study of Nuclear Weapons in Europe*. Santa Monica: California Seminar on International Security and Foreign Policy, 1987.

⁴³For the structure of divisions, brigades, regiments, and battalions in the U.S. Army see Wilson, *Firepower and Maneuver* and John J. McGrath, *The Brigade: A History*. Ft. Leavenworth, KS: Combat Studies Institute Press, 2004.

⁴⁴James M. Gavin, *War and Peace in the Space Age*. New York: Harper & Brothers, 1958, pp. 132-37.

⁴⁵Colonels Reinhardt and Kintner of the Command and General Staff College arrived at the same conclusion: dispersion of small battle groups offered the best available protection against destruction by atomic weapons. G.C. Reinhardt and W.R. Kintner, *Atomic Weapons in Land Combat*. Harrisburg: The Military Service Publishing Company, 1953, pp. 201-11.

⁴⁶Gavin, *War and Peace in the Space Age*, pp. 137-39. For the battle-group principle see also James Gavin, “New Divisional Organization,” *Army-Navy-Air Force Register*, vol. 76, no. 3923 (February 12, 1955), pp. 1-2. For Gavin’s thoughts on air cavalry see his “Cavalry, and I Don’t Mean Horses,” *Harper’s Magazine*, vol. 208, no. 1247 (April 1954), pp. 54-60.

reestablish a lodgment in Europe through the combined use of special weapons and airborne assault forces may well be decisive.⁴⁷

Ridgway endorsed the battle-group concept because he recognized that atomic weapons made essential the ability to disperse rapidly, but he insisted that it was also necessary to be able to concentrate forces quickly to strike at enemy formations. Firepower would be decisive in future battles, but maneuver remained crucial in order to concentrate all available forces at the point of decision.

In the mid-1950s, the army's role in national strategy remained poorly defined. Despite his personal rejection of Massive Retaliation as "repugnant to the ideals of a Christian nation [and] incompatible with the basic aim of the free world in war, which is to win a just and enduring peace," Ridgway set about reforming the army within the confines of nuclear strategy.⁴⁸ He thought it should be "an Army trained, equipped, and organized to fight and win in an atomic war," and he initiated studies on how to organize the combat elements of the army for the 1960s.⁴⁹ Pressure from the Defense Department directed such studies toward smaller combat units even though all available evidence pointed at the need to increase the size of the division. Ridgway nevertheless believed that increased mobility, greater flexibility, and a decline in vulnerability to atomic attacks could be achieved if several basic tenets were adhered to in future reorganizations of the division. Personnel cuts necessitated a better ratio of combat to support personnel. Combat units needed to gain mobility and flexibility. Technological improvements were to be the backbone of reorganization. Overall, the army had to improve its capability for protracted war. Tactical doctrine would have to be reconsidered accordingly. Ridgway thought that reorganization should not be delayed beyond 1956.⁵⁰

By fall 1954, Army Field Forces command, supported by the Command and General Staff College, presented plans for an Atomic Field Army (ATFA-1). Infantry divisions were to resemble existing armored divisions in that they would gain task force headquarters. ATFA-1 suggested a building-block structure, based on three combat command headquarters with assigned battalions and support units. Every infantry division should have seven infantry battalions as well as tank, signal, and engineer battalions, and a support command, which included medical, maintenance, supply, transportation, and service companies. Division artillery would consist of one 4.2-inch mortar battalion, capable of firing both conventional and atomic ammunition, and two towed 105-mm howitzer battalions. Proposed personnel strength was 13,500 officers and men, a reduction of almost 4,000 over the current infantry division. Little change was deemed necessary for the armored division, but it would still be possible to eliminate over 2,500 personnel slots and present a lean division of 12,000 officers and men. Command of atomic weapons rested with the field army commander rather than the commanding generals of the divisions.⁵¹

3rd Infantry Division and 1st Armored Division tested the proposal in exercises FOLLOW ME and BLUE BOLT in February 1955. The results were discouraging. The ATFA-1 infantry division was not suitable for sustained combat. The likely conditions of nuclear war required more manpower and an increase particularly in reconnaissance functions, because frontages would be extended and the battlefield would be deep. The division lacked antitank and artillery weapons. The personnel reduction left staffs at division, combat command, and battalion levels too small. BLUE BOLT proved inconclusive as to whether armored divisions would be less vulnerable to atomic attacks. Following renewed testing in November and December 1955, Army Field Forces recommended an infantry division of 17,027 officers and men, only slightly less than the pre-ATFA-1 division. The personnel

⁴⁷Ridgway to Gruenther, 22 April 1954. Alfred M. Gruenther Papers, NATO Series, Box 4, "RIDGWAY, Matthew B., General, U.S.A., Chief of Staff [1954-56]," Dwight D. Eisenhower Presidential Library. The use of the term "special weapons" is unexplained in this context, but it usually referred to atomic weapons.

⁴⁸Matthew B. Ridgway, *Soldier: The Memoirs of Matthew B. Ridgway*. New York: Harper & Brothers, 1956, pp. 274-275

⁴⁹*Ibid.*, p. 296.

⁵⁰Wilson, *Maneuver and Firepower*, pp. 264-65.

⁵¹*Ibid.*, pp. 265-66.

strength of the suggested armored division stood at 13,971.⁵² Such an increase ran counter to the basic principles of defense policy and economy of the Eisenhower administration and the army staff would have invited severe criticism if it had endorsed the concept.

Ridgway was mired in political battles with his fellow service chiefs and the Secretary of Defense, Charles E. Wilson. The relationship between Ridgway and Wilson had deteriorated to the point where cooperation seemed impossible.⁵³ They disagreed on the army's budget; the size of the army, which Wilson and the proponents of nuclear deterrence and air power wanted to reduce from 1.5 million officers and men in 20 divisions in 1953 to significantly less than one million in only 14 divisions; and the army's mission.⁵⁴ Policy advisers of President Eisenhower suggested that the army should serve as a post-conflict force that could be charged with reestablishing order after a nuclear exchange and occupy conquered territory.⁵⁵ Throughout his tenure as army chief of staff, Ridgway found that his time was "spent in the unhappy task of defending the U.S. Army from actions by my superiors which, to my mind, would weaken it, physically and spiritually."⁵⁶ Ridgway was caught between two pillars of his professional ethic: military professionalism and adherence to civilian control of the military.⁵⁷

Ridgway retired in the summer of 1955. Once more, he expressed his views to the Secretary of Defense and soon a copy of his letter appeared in the *New York Times*. In it, Ridgway pointed at Soviet superiority in ground forces that would force the U.S. under its current policies to strike first with atomic weapons. He found this politically unwise and morally reprehensible. He believed that the U.S. should have the option of meeting conventional attack with conventional forces, but he judged U.S. forces to be "inadequate in strength and improperly proportioned to meet [alliance] commitments." He cautioned that the atomic superiority of the United States was temporary. Furthermore, the U.S. was lacking the "mobile-ready" force called for by defense officials in public statements, and America's allies would be defeated in detail if the Soviets waged a global war.⁵⁸ It was left to his successor to redress these shortcomings.

⁵²Ibid., pp. 267-68.

⁵³Ridgway detested Wilson for his lack of open-mindedness, his unwillingness to listen to positions he disliked, and his general criticism that the Army had done little right even in the Second World War. Ridgway interview by Maurice Matloff, 18 April 1984, Part Two, p. 1. Matthew B. Ridgway Papers, Box 34: Oral Histories, "Interview by Maurice Matloff," U.S. Army Military History Institute. Others agreed. General Gavin relates overhearing another service chief's assessment of Wilson as "the most uninformed man, and the most determined to remain so, that has ever been Secretary." Gavin, *War and Peace in the Space Age*, p. 155. But see E. Bruce Geelhoed, *Charles E. Wilson and Controversy at the Pentagon, 1953 to 1957*. Detroit: Wayne State University Press, 1979 for a more favorable account of Wilson as a loyal Secretary of Defense and capable administrators in a crucial period of strategic change.

⁵⁴Robert J. Watson, *History of the Joint Chiefs of Staff, Volume V: The Joint Chiefs of Staff and National Policy, 1953-1954*. Washington, D.C.: Historical Division, Joint Chiefs of Staff, 1986, pp. 26-31. For the gradual but nevertheless drastic reduction of Army forces see Robert W. Coakley, Karl E. Cocke, and Daniel P. Griffin, *Demobilization Following the Korean War*. Washington, D.C.: Histories Division, Office of the Chief of Military History, 1968.

⁵⁵Bacevich, *Pentomic Era*, pp. 14-16. See also *Foreign Relations of the United States, 1952-1954, Volume II: National Security Affairs, Pt. 1*. Washington, D.C.: Government Printing Office, 1984, pp. 577-97 for the text of NSC 162/2, the document that came to define the New Look and Massive Retaliation. In addition, see pp. 562-564 of the same volume for the approval of the concept of massive retaliation by the Joint Chiefs of Staff.

⁵⁶Ridgway, *Soldier*, pp. 264-73. The quotation is on page 271

⁵⁷Andrew Bacevich argues that Ridgway challenged Eisenhower and Massive Retaliation because he feared the destruction of the military profession as a result of widespread belief that nuclear weapons made war inconceivable. He concludes that Ridgway's "almost mystical ideal of the warrior professional" trumped his belief in the need for civilian control. Andrew J. Bacevich, "The Paradox of Professionalism: Eisenhower, Ridgway, and the Challenge to Civilian Control, 1953-1955," *Journal of Military History*, vol. 61, no. 2 (April 1997), pp. 303-333. The quotation is on page 311.

⁵⁸Ridgway, *Soldier*, pp. 317-21. See also pp. 323-32 for a reprint of the letter.

Maxwell Taylor and the Pentomic Division

General Maxwell Taylor was appointed army chief of staff in June 1955. The magnitude of his task has been described by historian Jonathan House: "In order to justify its existence and mission, the U.S. Army had to develop a doctrine and structure that would allow ground forces to function effectively on a nuclear battlefield."⁵⁹ Taylor intended to find "ways and means to improve the combat readiness of the Army in support of a strategy of Flexible Response and to improve its morale depressed as it was by the precedence given to the needs of the Navy and Air Force by the ex-Army man in the White House."⁶⁰ In a policy paper that he had written in Korean, Taylor argued that in order to deter general war, the army needed the capability to respond to limited attacks.⁶¹ His definition of limited war specifically included the use of tactical nuclear weapons.⁶² Taylor defended the assessment that limited nuclear war was indeed possible in spirited debates with his fellow service chiefs.⁶³ He believed that only a strong army would serve as a deterrent to Soviet aggression. It was not enough to deploy between five and six combat divisions to Germany. The army also needed sufficient reserves, transportation capacity, and an operational concept that reflected the changing nature of warfare in the nuclear age.⁶⁴

The political climate did not support great optimism. In March 1955, the Joint Chiefs of Staff had proposed a gradual reduction of the army from twenty to seventeen divisions by 1957. Thirteen divisions should be mobile, one static, and three for training purposes. In that way, the army could be cut to one million officers and men by 1957. By June 1956, the army was indeed reduced to eighteen divisions and in 1961, at the end of the Eisenhower administration, there were fourteen army divisions, and only eleven were combat-ready.⁶⁵ The JCS agreed that nuclear weapons would have to be used in the defense of Western Europe.⁶⁶ The short-term defense plan for 1956 conceded that the main line of defense at the Rhine and Ijssel rivers might fall and the allies would be hard-pressed to hold on to the Pyrenees, while the air force would attack Soviet targets with nuclear weapons. War might last for three years and the army had to be prepared to deploy eighty-five divisions. Admiral Radford, the chairman of the JCS, argued that immediate use of tactical nuclear weapons would be necessary if American forces came under attack by the Soviets. Taylor consented in principle, because he saw no alternative to defending crucial areas in Europe and the Middle East without nuclear weapons at that

⁵⁹ Jonathan House, *Combined Arms Warfare in the Twentieth Century*. Lawrence: University Press of Kansas, 2001, p. 206.

⁶⁰ Taylor, *Swords and Plowshares*, p.166.

⁶¹ *Ibid.*, pp. 165-66. The document, as amended by the Army Staff and approved by the Secretary of the Army in October 1956, is reproduced in Maxwell Taylor, *The Uncertain Trumpet*. New York: Harper Brothers, 1959, pp. 30-34.

⁶² This was expressed in official Army doctrine only in 1962, but Taylor and his staff had worked on this assumption since the mid-1950s. Department of the Army, *FM 100-5: Field Service Regulations: Operations*. Washington, D.C., Headquarters, Department of the Army, February 1962, pp. 5 and 12.

⁶³ The subject of limited nuclear war and the debates of the late 1950s has recently received significant scholarly interest. The most detailed discussions can be found in Carter, "Eisenhower Versus the Generals," particularly pp. 1179-1197, Lewis, *The American Culture of War*, pp. 152-165, and David McKinley Walker, "Eisenhower's New Look, Tactical Nuclear Weapons, and Limited War with a Case Study of the Taiwan Strait Crisis of 1958." Ph.D. dissertation, George Washington University, 2004, pp. 172-228. But see also Brian McAllister Linn, *The Echo of Battle: The Army's Way of War*. Cambridge, MA: Harvard University Press, 2007, pp. 151-192.

⁶⁴ *Address by General Maxwell Taylor to the National Strategy Seminar at the Army War College, Carlisle Barracks, Pennsylvania, 6 June 1956, "The Role of the Army in National Strategy."* Maxwell D. Taylor Papers, National Defense University, Digitized Collection (<http://www.ndu.edu/library/taylor/mdt-0114a.pdf>). Accessed 16 February 2009.

⁶⁵ Robert J. Watson, *History of the Office of the Secretary of Defense*, vol. 4: *Into the Missile Age, 1956-1960*. Washington, DC: Historical Office, Office of the Secretary of Defense, 1997, pp. 76-84.

⁶⁶ The plans of the late 1940s and early 1950s are discussed in Steven T. Ross, *American War Plans, 1945-1950: Strategies for Defeating the Soviet Union*. London: Frank Cass, 1996. Several of the plans are reproduced in David Alan Rosenberg and Steven T. Ross, eds., *America's Plans for War Against the Soviet Union, 1945-1950*, 15 vols. New York: Garland, 1989-1990.

point.⁶⁷

The debates of the Joint Chiefs about strategic objectives afforded Taylor the opportunity to impress the need for a more flexible strategy. When Admiral Radford attempted to include the immediate use of atomic weapons in medium-term as well as emergency planning, Taylor formally objected. He argued that the threat of Massive Retaliation would deter Soviet aggression in Europe only as long as the U.S. had a significant advantage in the number of nuclear warheads and long-range delivery vehicles. Taylor expected that the Soviet Union would catch up by the end of the decade. Since contingency plans were based on the principle of rapid escalation from tactical to strategic use of nuclear weapons, limited aggression would lead to nuclear world war. Instead, Taylor argued, the U.S. military needed to develop capabilities to respond to limited aggression with measured force.⁶⁸ He believed that the possession of tactical nuclear weapons served as a deterrent, prevented the enemy from massing forces, and limited aggression. Their presence offset the Soviet numerical advantage in ground forces and in war it could bring about the stalemate that would force the enemy to decide whether to escalate.⁶⁹

Taylor was helped by the publication of Matthew Ridgway's memoirs. Ridgway sharply attacked Secretary Wilson and only stopped short of openly attacking Eisenhower. The quick publication of such a critical account was in itself an unusual occurrence. The public reaction showed that the army had friends among the media. While conservative and isolationist papers, such as the *Washington Star*, the *Chicago Tribune*, and the *New York Sunday News*, predictably dismissed Ridgway's account and criticized the army's internationalism, more liberal papers, including the *New York Times*, *Washington Post*, *Atlanta Constitution*, and *St. Louis Post-Dispatch* agreed with some or all of Ridgway's criticism. Army officers also gleefully observed the outpouring of support from Democrats in Congress.⁷⁰

Maxwell Taylor publicly defended the administration against the charge of political meddling. But he privately urged retired generals to help the army maintain the momentum created by Ridgway's retirement and memoirs. Specifically, Taylor believed it was necessary to educate the public about "the proper composition and strength of our defense forces. In the discussions of new weapons there is the danger that the continued indispensability of land forces may be obscured in visions of more attractive solutions to national security."⁷¹ Taylor's efforts could not change the fact, however, that the army faced an official attitude best summarized in the words of the Secretary of Defense: "maximize air power and minimize the foot soldier."⁷²

In an unpublished article in 1956 Taylor outlined his views on deterrence based on balanced conventional and nuclear forces.⁷³ He left no doubt that he intended to alter national military strategy to a more flexible and proportional response. A new combat division was to be the first crucial step to

⁶⁷Kenneth W. Condit, *History of the Joint Chiefs of Staff*, vol. 6: *The Joint Chiefs of Staff and National Policy, 1955-1956*. Washington, DC: Historical Office, Joint Staff, 1992, pp. 25-32. For Taylor's argumentation in the debates see also Taylor, *The Uncertain Trumpet*, pp. 38-39.

⁶⁸Walker, "Eisenhower's New Look," pp. 172-228, 339-366 concludes that Maxwell Taylor intended to design an army for limited nuclear war and that the pentomic division offered a useful organization for this purpose. He asserts that the army developed coherent doctrine for tactical nuclear war, but cannot provide evidence for this claim.

⁶⁹Maxwell Taylor, "A Military Strategy for NATO," [Speech before the Council on Foreign Relations, 12 April 1961]. Taylor D. Papers, National Defense University (<http://www.ndu.edu/library/taylor/mdt-0165.pdf>). Accessed 17 February 2009.

⁷⁰Jonathan M. Soffer, *General Matthew B. Ridgway: From Progressivism to Reaganism, 1895-1993*. Westport, CT: Praeger, 1998, pp. 184-88. The memoirs first appeared from January 1956 as a serial in the *Saturday Evening Post*.

⁷¹A template of Taylor's letter, dated 28 November 1955, is in Andrew Goodpaster's personal papers. A. J. Goodpaster Papers, Box 18, Folder 12, George C. Marshall Research Library.

⁷²Wilson is quoted in Maxwell Taylor, *The Uncertain Trumpet*, p. 51. The statement was made in the presence of General Taylor at a National Security Council meeting on July 25, 1957.

⁷³The article "Security Through Deterrence" was not cleared for publication in *Foreign Affairs* by the Defense and State Departments. It is reproduced in the Appendix to Taylor's *Uncertain Trumpet*, pp. 181-97.

fulfill his vision. The argument that Taylor intended his reforms to adjust the Army to the strategy of Massive Retaliation is unpersuasive. To the contrary, his proposal was tailored to political needs and it projected the army's orientation toward the future of war. Since the army's views about future war did not match those of the rest of the defense establishment, reform had to be presented as being in compliance with current policy and strategy. Specifically, since limited war was not a fashionable concept, Taylor and his staff needed to find a structure that would appear to be well suited for general war while allowing improvement of the capacity to fight limited wars. The resulting pentomic division enhanced the army's position with respect to the other armed services, helped redefine the role of the institution in the Cold War, and contributed to a change in national military strategy.⁷⁴

Taylor quickly rejected the ATFA-1 proposal and in June 1956 his staff outlined an alternative conception. Taylor argued that the proper combination of firepower, movement, and skilled personnel would determine the success of ground forces. Rockets and guided missiles were to provide most of the heavy firepower. But the launchers had to be protected and they had to be maneuvered to critical points on the battlefield. Mobility was also significant because rapid dispersion and concentration of force would be the most important tactical principle on the atomic battlefield. Taylor stated that lightweight equipment, thin-skinned troop carriers, and Army aviation were crucial to achieve greater tactical mobility. He pleaded that the Army needed capable and intelligent personnel, attempting to reverse a trend that led most young men to consider the more glamorous options in the air force and navy. Taylor concluded that limited regional aggression would pose the greatest military threat once the Soviet Union had achieved nuclear parity with the United States.⁷⁵

For some, the immediate application of Taylor's proposal seemed unlikely. Willard G. Wyman, commanding general of Continental Army Command (CONARC), which had replaced Army Field Forces as the command that would be charged with the implementation of the reform, noted three months after Taylor had rejected ATFA-1: "the Army, of late, has been criticized for failing to organize its forces to fit existing developments of weapons." He reassured his audience that the results of recent maneuvers in which the ATFA concept had been tested were being evaluated, but also cautioned "whatever the outcome, reorganization cannot take place over night." Wyman still considered the possibility of modernizing existing units, such as platoons, companies, and battalions.⁷⁶

Taylor disagreed. He found that the Army War College's conceptual study "Doctrinal and Organizational Concepts for Atomic-Nonatomic Army During the Period 1960-1970," commonly referred to as the PENTANA study, offered a basis for immediate reorganization. It provided a broad perspective on sustained ground operations in Europe. A fully air-transportable universal combat division with five self-sufficient battle groups that contained their own artillery was to replace existing infantry, armor, and airborne divisions. The proposed new division was set at only 8,600 officers and men. Tactical atomic weapons, such as the new Honest John surface-to-surface rocket, were to be controlled at the division level. There was immediate criticism in the army to the PENTANA study, ranging from not enough armor to insufficient conventional artillery and questions about staying power.⁷⁷

⁷⁴Douglas Kinnard, "Civil-Military Relations: The President and the General," *Parameters*, vol. 15, no. 2 (Summer 1985), pp. 19-29, shows that the Army's challenge to President Eisenhower's national security policy was the most pointed of all the services. He argues that Taylor's views provided the basis for the new strategic approach of the 1960s. He concludes, however, that Taylor's challenge was repelled by the administration prior to his retirement in 1959.

⁷⁵*Summary of Remarks by General Maxwell D. Taylor, Chief of Staff, United States Army, at Quantico Conference, 23 June 1956.* Maxwell D. Taylor Papers, NDU (<http://www.ndu.edu/library/taylor/mdt-0112.pdf>). Accessed 16 February 2009.

⁷⁶Willard G. Wyman, "Let's Get Going on Our New Combinations for Combat," *Army*, vol. 6, no. 12 (July 1956), pp. 39-43, 69. The quotations are on page 69.

⁷⁷Wilson, *Maneuver and Firepower*, pp. 270-71 and Glen R. Hawkins and James Jay Carafano, *Prelude to Army XXI: U.S. Army Division Design Initiatives and Experiments, 1917-1995*. Washington, D.C.: U.S. Army Center of Military History, 1997, p. 13.

While Taylor liked the dynamic and forward-looking PENTANA concept because it could be portrayed to the civilian leadership as a lean combat division for the nuclear age, he did not find that the universal division was entirely practical.⁷⁸ More importantly, Taylor did not believe that dual capability could be achieved easily. The army staff resolved to develop separate proposals for atomic and non-atomic armies. Once completed, the differences could be adjudicated under the guidelines of the PENTANA study. Taylor feared that such a force could be created only on paper until the army's budget was significantly increased.⁷⁹ He nevertheless approved the concept as a long-term objective.⁸⁰

Even prior to approving the PENTANA study, Taylor had called for a reorganized airborne division of 10,000 to 12,000 officers and men, with five battle groups and tactical atomic weapons.⁸¹ Expanding the self-contained combat elements from three to five was perceived necessary in order to carry out a new approach to area defense. Each battle group was to have the capability to fight in all directions, thus creating islands that would cause the enemy to amass forces and present targets for atomic weapons.⁸² Questions remained, however, whether the commander of a division could effectively control five battle groups and the battle group commander five companies. Colonel James Shepherd, then teaching at the Command and General Staff College, argued that even the attachment of a tank company to a battle group would overtax the commander.⁸³ Taylor pressed ahead despite criticism because he felt that making tactical atomic weapons organic to the division would lead to more thorough consideration of their proper employment, which was still largely unexplored.⁸⁴ Contemporary critics charged that the reform was a public-relations stunt. Taylor himself invented the term pentomic, combining the pentagonal structure and atomic armaments, because the Army needed to appear more in tune with cutting-edge technology.⁸⁵

In August 1956 CONARC called for an airborne division of 11,500 officers and men, 5,600 less than in the triangular airborne division. It consisted of five battle groups with five infantry companies apiece. Each battle group also had a mortar battery and a headquarters and service company. Aviation and reconnaissance companies, along with headquarters and service companies as well as a signal battalion and combat engineers were attached to the division. Division artillery fielded 25 105-mm howitzers and four Honest John rocket launchers. But conventional firepower was limited by the desire to transport the entire division by air, which excluded 155-mm howitzers. The new

⁷⁸Office of the Deputy Chief of Staff for Military Operations, Memorandum for Record, 15 May 1956, *Briefing for Chief of Staff on Army Organization 1960-1970 (PENTANA)*, p. 4. Military History Institute Library.

⁷⁹*Ibid.*, p. 3.

⁸⁰General Donn Starry, the principal architect of the AirLand Battle Doctrine of the 1980s, believes that Taylor adopted the pentomic concept before it had been thoroughly considered. Starry to author, October 4, 2004.

⁸¹McGrath, *The Brigade*, p. 59 concludes that Taylor's experiences during World War II conditioned his belief that five combat elements were better than three. Nominally, both 82nd and 101st Airborne Division had three regiments, but in the field, two parachute regiments were added. Kalev I. Sepp, "The Pentomic Puzzle: The Influence of Personality and Nuclear Weapons on U.S. Army Organization, 1952-1958," *Army History*, no. 51 (Winter 2001), pp. 1-13 also argues that the pentomic division was a reflection of the experience of generals Gavin, Ridgway, and Taylor in World War II, rather than a response to the military and political circumstances of the 1950s.

⁸²Bacevich, *Pentomic Era*, pp. 103-6, 115-19. It is unclear how the battle group in the center of the target area would have escaped the atomic attack.

⁸³James M. Shepherd, "Type Divisions for Atomic Warfare," *Military Review*, vol. 36, no. 8 (November 1956), pp. 24-37, particularly pp. 24-27.

⁸⁴The Army Staff distributed incomplete drafts of Field Manual 101-31 *Tactical Use of Atomic Weapons* in 1951 and 1955, but it was clearly stated that the publications were to provide only temporary guidance, while internal discussion continued. In addition, there was Reinhardt and Kintner, *Atomic Weapons in Land Combat*, a semi-official monograph that originated at the Command and General Staff College.

⁸⁵General Westmoreland recalls how Eisenhower told Taylor that the Army needed a more charismatic public image. He instructed Taylor to "sex up the Army." Hawkins, *Force Design Initiatives*, p. 35.

airborne division needed only half of the airlift capacity required to move the old triangular division.⁸⁶ One army captain summed up the basic idea: “concentrate to fight - disperse to live.”⁸⁷

The proposal was not tested in a large-scale field exercise, but when elements of the 101st Airborne Division evaluated separately the capabilities of individual units, the result was sobering. While the division was deemed suitable for airborne assaults of short duration, there were questions about the artillery. The lighter field guns suffered from short range and lack of lethality. It was thus requested that 155-mm howitzers be returned to the division. Moreover, manpower, logistics capacity, and support elements had dropped to a level where garrison duty and the maintenance of combat readiness were mutually exclusive. The test director proposed a ten percent increase in personnel strength to the base division. He also noted that commanding officers of rifle companies and mortar or howitzer batteries would bear much greater responsibility and had to be capable of independent actions. CONARC and the army staff rejected the suggested changes in artillery and adopted the concept in 1958 with an increase in mortar strength but without heavy howitzers or additional manpower.⁸⁸

In the meantime, Taylor’s staff had set its sights on the reorganization of the infantry division.⁸⁹ Based on guidelines that included conventional and atomic artillery organic to the division, CONARC proposed an infantry division of 13,700 officers and men in December 1956. It had five infantry battle groups, one tank battalion, a light artillery battalion with thirty 105-mm howitzers, and a heavy and atomic artillery battalion with two Honest John rocket launchers, four 8-inch howitzers, and twelve 155-mm howitzers.⁹⁰ But although the reorganization of infantry divisions was officially concluded in 1958, not all infantry battle groups in USAREUR had received a fifth rifle company prior to June 1960.⁹¹

The armored division was left largely intact. Tables of organization and equipment for the Reorganization of the Current Armored Division also were published in December 1956. It had more conventional artillery than the infantry division, but did not have Honest John rocket launchers and relied entirely on self-propelled 8-inch howitzers for atomic fire support. CONARC had added a reconnaissance and surveillance platoon to the reconnaissance battalion, supported by additional aircraft in the aviation company. Despite the initial assumption that the number of vehicles should be reduced due to their vulnerability to nuclear attacks, the new armored division did not actually see such a reduction, mainly because the new division required greater transportation resources. It totaled 14,617 officers and men, 655 more than the ATFA-1 armored division. Its armor strength rested on fifty-four light-gun tanks, and 324 medium-gun tanks. The latter were grouped in four tank battalions, while the light-gun tanks were utilized in supporting functions.⁹² Armored divisions retained armored infantry units, but all armored personnel carriers were centralized in a transportation unit. While they could be assigned to infantry, only one battle group at a time could be mechanized, a shortage that also affected the infantry division. Moreover, only one additional battle group could be motorized if the

⁸⁶Headquarters, Continental Army Command, TOE 57T ROTAD, 10 August 1956. See also Wilson, *Maneuver and Firepower*, pp. 271-73.

⁸⁷Captain Everett Royal quoted in Bacevich, *Pentomic Era*, p. 68.

⁸⁸Headquarters, Department of the Army, TOE 57D, 31 July 1958. See also Wilson, *Maneuver and Firepower*, pp. 274-75.

⁸⁹For a comprehensive recent study of the pentomic division see also Paul C. Jussel, “Intimidating the World: The United States Atomic Army, 1956-1960.” Ph.D. dissertation, Ohio State University, 2004.

⁹⁰Headquarters, Continental Army Command, TOE 7T ROCID, 20 December 1956. The transitory nature of this proposal can be gauged from the hand-written substitution of battle groups for regiments on the organizational chart. See also Wilson, *Maneuver and Firepower*, pp. 276-77.

⁹¹Headquarters, United States Army, Europe, *Annual History United States Army, Europe, 1 January 1960-31 December 1960*. Heidelberg: Headquarters, USAREUR, 1961, pp. 11-12.

⁹²Headquarters, Continental Army Command, TOE 17T ROCAD, 1 December 1956. See also Wilson, *Maneuver and Firepower*, p. 277.

division used all of the light trucks of the transportation battalion. This left the infantry component of three battle groups without armor or trucks.⁹³

To showcase the capability of the atomic army that could show how it exploited the firepower of tactical nuclear weapons, survived Soviet nuclear strikes, and regained the initiative, the army staff considered a demonstration. Taylor supported the idea because “the advent of modern weapons of the massive retaliation variety has created a growing feeling within the government that sizeable Army forces may no longer be required.” The generals hoped to employ an entire battle group at Fort Benning, Georgia. The only problem was that the atomic army was not ready: “It will be necessary for the Army to develop fully before the demonstration date those concepts of the tactical employment of participating troops and equipment which are not yet firmly established.”⁹⁴

For public consumption, emphasis in equipment was put on tactical nuclear weapons. Taylor claimed that Defense Secretary Wilson once directed him to “request... ‘newfangled’ items with public appeal instead of the prosaic accoutrements of the foot soldier.” Taylor explained that nuclear weapons “were the going thing and, by including some in the division armament, the Army staked out its claim to a share in the nuclear arsenal.”⁹⁵ But pentomic divisions also needed new conventional weaponry and equipment. In August 1957 Taylor approved a program intended to replace light, medium, and heavy tanks with a main battle tank and an airborne assault vehicle.⁹⁶ The M113 armored personnel carrier, an air-transportable vehicle, also was to become available.⁹⁷ From the perspective of procuring improved weaponry and equipment, the pentomic division proved useful, although most of the new conventional weapons did not reach U.S. forces in Europe until after the pentomic experiment had been abandoned in 1961.⁹⁸

Operational doctrine was not part of the immediate reform and Taylor’s hope that tactical changes brought about by the reorganization of combat divisions would be elevated to the level of doctrine was never met.⁹⁹ Army doctrine still emphasized infantry attacks at deliberate pace, supported by tanks and heavy artillery. Andrew Bacevich, a retired army officer and historian, has shown that atomic weapons deepened the belief in heavy firepower: atomic artillery would blast a hole in the enemy’s line of defense, enable ground forces to achieve a breakthrough, and afford armored and motorized formations the opportunity for maneuver. More importantly, atomic fire would shake the enemy so thoroughly that advancing units would encounter little resistance in their task to disrupt

⁹³ McGrath, *The Brigade*, p. 62. For ROCID mechanization and transportation capacity see also John K. Mahon and Romana Danysh, *Infantry, Part I: Regular Army*. Washington, D.C.: Office of the Chief of Military History, U.S. Army, 1972, p. 92.

⁹⁴ Proposed letter from Gen. Taylor to CG CONARC, Tab D attachment to Chief of Information to Deputy Chief of Staff for Military Operations, 3 October 1956, *Atomic Army Demonstration*. Attachment: DCSOPS, Draft Summary Sheet, Atomic Army Demonstration. Records of the Army Staff, Records of the Office of the Chief of Information, Entry 45, Box 1, “Atomic Army 1956,” RG 319, National Archives.

⁹⁵ Taylor, *Swords and Plowshares*, p. 171.

⁹⁶ R.P. Hunnicutt, *Patton: A History of the American Main Battle Tank*. Novato, CA: Presidio Press, 1984, pp. 149-50. This eventually resulted in the *Sheridan* model of the late 1960s and the M-60 tank.

⁹⁷ Wilson, *Maneuver and Firepower*, p. 286.

⁹⁸ Headquarters, United States Army, Europe, Office of the Commander in Chief, 13 September 1961, *Priorities Governing the Issue of New Equipment to Troops in USAREUR*. Lauris Norstad Papers, Personal Name File, Box 61, “Clarke, Bruce C. (4),” Dwight D. Eisenhower Presidential Library.

⁹⁹ FM 100-5, the keystone manual for operations, did not see a new edition between 1954 and 1962. The 1956 supplement came too soon for the pentomic division, and the 1958 supplement did not address the new formation sufficiently. The Command and General Staff College submitted a draft manuscript to CONARC in 1958, but it was returned with the comment that it needed to be revised entirely. Col. Adam S. Buynoski to Commanding General, U.S. Continental Army Command, 20 December 1958, Final Manuscript of FM 100-5, FSR, Operations. Records of the United States Continental Army Command, U.S. Army Schools, Command and General Staff College. Fort Leavenworth, Kansas, Box 30, Manuals, RG 546, National Archives. The closest to atomic doctrine was thus a semi-official publication. Theodore C. Mataxis and Seymour L. Goldberg. *Nuclear Tactics, Weapons, and Firepower in the Pentomic Division, Battle Group, and Company*. Harrisburg, PA: The Military Service Publishing Company, 1958.

command, control, communications, and intelligence. But this was a theoretical conception of the effects of atomic weapons rather than tactical doctrine for their employment.¹⁰⁰

Maxwell Taylor predicted that future wars would be won by the most effective application of firepower. He acknowledged the need to be prepared for conventional war, but his emphasis was on tactical atomic weapons. He explained that strong forward-deployed ground forces in Germany assured that atomic weapons could be used on Soviet tactical formations before they had closed with the bulk of NATO forces. Taylor believed that “one of the primary purposes of ground combat will be to discover, or to develop, targets for our [atomic] weapons, so that...we can virtually destroy any target on our front, so that our movements thereafter will largely be in the nature of exploitation.”¹⁰¹

Despite contrary evidence provided in the ATFA studies, Taylor supported the notion that increased firepower with atomic weapons would lead to smaller combat units.¹⁰² He also explained the army’s push for tactical nuclear weapons as a desire to obtain greater deterrent value. He admitted that he believed that once obtained these weapons would stay in the arsenal for a long time. Taylor later claimed that the great costs associated with tactical nuclear weapons came as a surprise.¹⁰³ To complicate matters, the army needed to maintain the ability to fight large and small wars alike. Taylor stated as early as 1955 that the ideal army “would include forces that would be readily available to carry out separately any of our various missions.” This entailed a ready force to meet the commitment to NATO as well as a separate force for local contingencies outside of Europe. Taylor concluded that the ideal solution would be “exceedingly difficult to attain” and that the army would have to do its best within the available means.¹⁰⁴

Limited War and the Strategy Debate

In February 1956 Taylor outlined his strategy of flexible response to the House of Representatives. It was based on strategic and local deterrence and the ability to fight limited wars with appropriate means. When asked about the army’s acceptance of the 1957 defense budget, Taylor replied that he considered “the funds allocated marginally sufficient to maintain the Army I have described.” But if purely military considerations prevailed, he preferred a much larger force: 1.5 million men in twenty-eight divisions.¹⁰⁵ He stated that it should be capable of fighting with nuclear and conventional weapons in any environment.¹⁰⁶ Taylor told President Eisenhower that emphasis on

¹⁰⁰Bacevich, *Pentomic Era*, pp. 108-10.

¹⁰¹Maxwell D. Taylor, “Mission of the United States Army”, pp. 12-15. The quotation is on page 15. This document reflects Taylor’s remarks at the Armed Forces Staff College in March 1956. Maxwell D. Taylor Papers, National Defense University (<http://www.ndu.edu/library/taylor/mdt-0095.pdf>). Accessed 16 February 2009.

¹⁰²But he also acknowledged that the greater need for supporting units would not allow for significant overall manpower reductions. *Ibid.*, pp. 13-14.

¹⁰³Senior Officers Debriefing Program, *Conversations between General Maxwell D. Taylor (USA, ret.) and Col. Richard A. Manion, USAWC*, [1972 - 1973], Part Four, 16 February 1973, pp. 8-9. Maxwell D. Taylor Papers, Military History Institute.

¹⁰⁴Maxwell D. Taylor, “The World-Wide Role and Capability of the Army,” *The Army Combat Forces Journal*, vol. 6, no. 2 (September 1955), pp. 24-26. The quotations are on page 25.

¹⁰⁵At that point, the U.S. Army had a personnel strength of almost one million men in 18 divisions, but in 1957 the medium-term force objective was set at 850,000 officers and men. At the end of the Eisenhower administration, there were only 14 active divisions. Byron R. Fairchild and Walter S. Poole, *The History of the Joint Chiefs of Staff, Volume VII: The Joint Chiefs of Staff and National Policy, 1957-1960*. Washington, D.C.: Office of Joint History, Office of the Chairman of the Joint Chiefs of Staff, 2000, pp. 31-42.

¹⁰⁶Leighton, *Strategy, Money, and the New Look, 1953-1956*, pp. 613-615. Rep. Mahon and Taylor are quoted on page 614. For Taylor’s prepared remarks in the House of Representatives see *Statement of General Maxwell D. Taylor, Chief of Staff, U.S. Army, before the Subcommittee on Department of Defense Appropriations, House of Representatives, Relative to the Department of the Army Budget for Fiscal Year 1957*. Maxwell D. Taylor Papers, National Defense University (<http://www.ndu.edu/library/taylor/mdt-0054.pdf>). Accessed 16 February 2009. Here, Taylor stressed deterrence through balanced forces, the need for a versatile Army, the deterrence mission of the overseas-deployed forces and the need to provide a sufficient strategic reserve to back them up, and the Army’s role in training and assisting 200 divisions in 44 nations. Taylor reiterated these points in the Senate in May 1956. *Statement of General Maxwell D. Taylor, Chief of Staff,*

nuclear deterrence should be replaced by response proportional to the threat or attack. He pointed out that the National Security Council had assessed a Soviet attack on the U.S. to be the least likely scenario. Thus, the armed forces should be prepared to deal with the more realistic threat of local and proxy Communist attacks. Taylor noted that the U.S. military needed diverse types of forces to deter both small and big wars. Too much emphasis on air power would leave the free world vulnerable to limited and local aggression. He concluded that it was unwise to pursue policies that would alienate potential allies.¹⁰⁷

Initially, Taylor could not arrest the army's decline in manpower. By June 1956, it had been reduced to one million officers and men in eighteen divisions. In July 1957, the armed services proposed new force objectives. The army hoped to limit personnel cuts to 50,000 officers and men and retain fifteen full-strength divisions. The air force, in contrast, did not think that the army needed more than eleven divisions, and both air force and navy agreed that 800,000 officers and men would be sufficient. Admiral Radford suggested reduction of the army to eleven divisions and 700,000 officers and men. Army leaders believed that preventing Radford's proposal from implementation was crucial for the army itself and for reliable deterrence. Eisenhower settled on 850,000 officers and men by 1959 but offered no decision for the longer term. The debate continued well into 1959, but in the end Maxwell Taylor and his successor, General Lyman Lemnitzer, could claim partial victory. The army stood at fourteen divisions with 873,000 officers and men in June 1960.¹⁰⁸

The defense budget remained contentious through the later parts of the 1950s. The armed services' request for 1958, more than \$48 billion, exceeded administration guidelines by \$ 10 billion. The army claimed it needed \$12 billion to increase manpower and deploy more atomic support forces to Europe. Secretary Wilson, in his final year in the Pentagon, objected and the administration requested \$38.5 billion from Congress, with a request of \$8.54 billion for the army, or about half of the air force's share. Moreover, 1957 saw a movement for greater economy in Congress and the final appropriation was even lower. On August 1, Congress approved a defense budget of roughly \$34 billion: \$7 billion for the army, almost \$16 billion for the air force.¹⁰⁹

The pressure on the army was relaxed in the aftermath of the *Sputnik* shock. Soviet advances in rocketry and missile technology alerted congressional leaders that the U.S. military did not have the technological edge that had been projected and that the relatively small size of the active armed forces was thus a much bigger problem than had been assumed.¹¹⁰ After *Sputnik* was launched, in October 1957, defense policy and strategy were reviewed, resulting in greater consideration to a force structure adaptable to either general or limited war. The public, and indeed many high-ranking military and civilian officials, assumed that a force capable of fighting general war could cope with more limited conflict. Maxwell Taylor had consistently challenged such views.¹¹¹ He argued that armed forces that

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U.S. Army, before the Subcommittee of the Committee on Appropriations, United States Senate, Relative to the Department of the Army Budget for Fiscal Year 1957. Maxwell D. Taylor Papers, National Defense University (<http://www.ndu.edu/library/taylor/mdt-0073.pdf>). Accessed 16 February 2009.

¹⁰⁷ Unattributed report, probably 17 September 1956, *Discussion of Major Issues*, Section I, pp. 1-2. Records of the Army Staff, Records of the Office of the Chief of Information, Entry 45, Box 1: Security Classified Correspondence, 1956, "Current Army Thinking on Major Issues 1956," RG 319, National Archives. The bulk of the report was submitted on May 9, 1956, but there is a hand-written date of September 17 on the cover sheet. See also Leighton, *Strategy, Money, and the New Look*, pp. 39-40.

¹⁰⁸ Byron R. Fairchild and Walter S. Poole, *The History of the Joint Chiefs of Staff*, vol. 7: *The Joint Chiefs of Staff and National Policy, 1957-1960*. Washington, DC: Office of Joint History, Office of the Chairman of the Joint Chiefs of Staff, 2000, pp. 31-42.

¹⁰⁹ Watson, *Into the Missile Age, 1956-1960*, pp. 75-101.

¹¹⁰ *Ibid.*, pp. 127-55.

¹¹¹ In the course of 1958, the army position was reinforced by a detailed study conducted for the Senate Committee on Foreign Relations. It was concluded that strategic nuclear deterrence had to be strongly supplemented by tactical-nuclear and conventional ground forces that could deter or stop any Soviet attack with limited means that need not escalate into general war. *Developments in Military Technology and Their Impact on United States Strategy and Foreign Policy*. A Study Prepared at the Request of the Committee on Foreign Relations, United States Senate, by the Washington Center of Foreign

were well prepared for limited war might be able to function in general war, but that while “there’s nothing of use in the little war not applicable to the big war, ...the reverse is not true.”¹¹²

Until late 1957 Taylor had found little support for his arguments for greater strategic flexibility from the other service chiefs. But in 1958, the navy and marine corps came to support the need for limited-war capability in meetings of the JCS and State Department representatives made similar arguments in the National Security Council. John Foster Dulles, the Secretary of State and chief proponent of Massive Retaliation, now advocated limited-war capability in Europe. The new JCS chairman, air force general Nathan Twining, reiterated that any military force built for general war would also be useful in a limited-war environment, but Taylor, Admiral Arleigh Burke and marine corps commandant General Pate contested this proposition. Part of the problem was that limited war was a poorly defined term. Twining defined it as limitations imposed by the political leadership upon military commanders. As an example he cited the Korean War, where, he believed, President Truman’s refusal to authorize the application of air power against targets in China had negatively affected the course of the war. Taylor, on the other hand, defined limited war as any war in which no strategic nuclear weapons were used.¹¹³ But Twining also disagreed with Taylor’s assumption that war in Central Europe could be limited. He argued that limited war was a “philosophy of weakness.”¹¹⁴ President Eisenhower supported Twining’s position, despite the fact that air force chief of staff General White was the only remaining supporter of Twining on the JCS.¹¹⁵

The debates of the late 1950s over the defense budget show that the administration’s insistence on a dogmatic interpretation of nuclear-deterrence strategy was weakening but they also highlight the centrality of fiscal considerations during the Eisenhower administration.¹¹⁶ Discussion of the basic defense reviews for 1958 and 1959, showed greater receptiveness among administration officials to consider limited war, but it became obvious that both strategic nuclear deterrence and sufficient military capability for limited war could only be achieved if the defense budget was increased significantly. That, however, conflicted with Eisenhower’s insistence that sound fiscal policy for economic growth and long-term security outweighed short-term improvements in the defense posture. The strongest expression of Eisenhower’s concerns remains his farewell address in which he warned of the fiscal and political consequences of the unchecked emergence of a military-industrial complex. Still, the final budgets of the Eisenhower administration raised defense spending above \$40 billion, with an army share of about \$9.5 billion.¹¹⁷

Assessing the Pentomic Army

Maxwell Taylor retired in 1959. When the administration of John F. Kennedy proclaimed a shift in national strategy from Massive Retaliation to Flexible Response, i.e., placing greater emphasis on proportional response while retaining the nuclear option, Taylor was recalled to serve first as

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Policy Research, The Johns Hopkins University. Washington, D.C.: Government Printing Office, 1959. See particularly the recommendations on pages 10-12.

¹¹²Taylor, “The Mission of the Army,” pp. 6-8. The quotation is from p. 8.

¹¹³NATO’s Military Committee strongly suggested that alliance forces had to employ atomic and nuclear weapons at the outset of general war with the Soviets, even if the enemy did not do so first, or else Europe would be overrun. The initial intensive atomic exchange may have to be followed by a subsequent period of operations to ensure victory. SM-109-57, 8 February 1957, Appendix to Enclosure “A” to JCS 2073/1353, *Over-all Strategic Concept for the Defense of the NATO Area*. Records of the Joint Chiefs of Staff, Geographic File 1957, CCS092 Western Europe (3-12-48) (2), Sec. 73, RG 218, National Archives.

¹¹⁴Nathan F. Twining, *Neither Liberty Nor Safety: A Hard Look at U.S. Military Policy and Strategy*. New York: Holt, Rinehart and Winston, 1966, p. 115. For Twining’s general argumentation against limited war see pp. 102-20.

¹¹⁵The debates of 1957 through 1959 are summarized in Fairchild and Poole, *The Joint Chiefs of Staff and National Policy, 1957-1960*, pp. 11-29.

¹¹⁶Trachtenberg, *A Constructed Peace*, pp. 147-56 perceives a gradual shift from Massive Retaliation to Flexible Response, beginning in 1957.

¹¹⁷Watson, *Into the Missile Age*, pp. 292-360.

military adviser and later as chairman of the JCS.¹¹⁸ Throughout the 1950s he had assumed that nuclear parity would force administration and military services to shift the emphasis of strategy away from strategic nuclear deterrence. Taylor had never believed that atomic and nuclear weapons would require less manpower. These weapons were too complex, they required maintenance and training and placed great strains on logistics, and their employment required speed, mobility, and flexibility.¹¹⁹ Yet for political purposes the pentomic division had been oriented on the principle of smaller combat units. Taylor warned about equating firepower and military capability. He was particularly concerned about the collateral damage that high-yield payloads of atomic weapons could cause. As he pointed out, the analysis of maneuvers in 1955 in Louisiana and eastern Texas indicated that atomic weapons would have destroyed the army forces and killed most if not all inhabitants of Louisiana, Texas, and the entire Southeast.¹²⁰ A similar exercise conducted in Germany estimated civilian casualties at 1.7 million dead and 3.5 million wounded, without consideration of the effects of radiation.¹²¹

Maxwell Taylor and the U.S. Army were not alone in identifying the linkage of mutual assured destruction and limited war. Once the Soviets obtained the capability to destroy significant parts of the United States with intercontinental ballistic missiles, the use of strategic nuclear weapons in a regional conflict would become less credible. In other words, while the weapons would be as destructive as before, the psychological impact on the Kremlin leaders would be lessened by their assumption that the United States would not risk its own destruction. Consequently, the capacity to wage limited war would become more important. That was exactly the point made by a Pentagon staffer to a colleague in the State Department in May 1960. The defense analyst claimed that it was present U.S. policy to build as large a force for limited war as possible once the deterrent had been served. In addition, he added that Great Britain, once staunchly in the massive-retaliation camp now pursued a similar approach. Moreover, the Pentagon analyst doubted that NATO war plans calling for the immediate use of nuclear weapons in case of a Soviet invasion stood any chance. The U.S. military expected to be called upon to fight a rather prolonged phase of conventional war “while the politicians talked.” In addition, prior to the employment of tactical atomic weapons, the president would likely make an unequivocal public statement that we were not prepared to use strategic nuclear weapons at this point.¹²² This acknowledged that the concept of deterrence could extend into war and that restraint might allow for limitation of tactical nuclear war.

The pentomic army was ostensibly built for nuclear war in Central Europe. U.S. Army divisions deployed to Europe adopted the new format in the course of 1957.¹²³ Under the new organization U.S. infantry divisions in Germany lost one 155-mm and two 105-mm howitzer battalions. They gained a nuclear-capable composite artillery battalion, consisting of one 8-inch howitzer battery, one Honest John rocket battery, and two 155-mm howitzer batteries. Infantry divisions also lost their regimental tank companies, but gained an armored cavalry battalion that replaced the former reconnaissance company. Each infantry division lost 3,400 men, but only 450 of them were cut from front-line infantry elements.¹²⁴ General Taylor, and the proponents of the

¹¹⁸ For the direct relationship of Taylor’s memoirs, *The Uncertain Trumpet*, and John F. Kennedy’s thinking on Flexible Response see Lewis, *The American Culture of War*, pp. 210-13.

¹¹⁹ See Maxwell D. Taylor, “Military Objectives of the Army, 1960-1962,” pp. 1-5, Chart I. Address to the Secretaries’ Conference, Quantico, VA, 21 June 1958. Military History Institute Library.

¹²⁰ *Ibid.*, p.6.

¹²¹ Lawrence Freedman, “The First Two Generations of Nuclear Strategists,” in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret. Princeton, NJ: Princeton University Press, pp. 735-778. See especially p. 747.

¹²² Office of European Regional Affairs, Memorandum of Conversation, 4 May 1960, *NATO Military Concept*. Records of the Department of State, Office of European Regional Affairs, Politico-Military Numerical Files 1953-1962, Box 8, “Strategic Doctrine,” RG 59, National Archives. This document is also available online at Parallel History Project on Collective Security, NATO Military Planning (<http://www.php.isn.ethz.ch/collections/colltopic.cfm?lng=en&id=18450&navinfo=14968>). Accessed 16 February 2009.

¹²³ Headquarters, USAREUR, *Annual Report, 1957-58*. Heidelberg: Headquarters, USAREUR, 1958, p. 134.

¹²⁴ *Ibid.*, p. 135.

pentomic division and tactical-nuclear warfare, assumed that atomic weapons would give the division overwhelming firepower. Army requirement studies at the time called for the employment of 151,000 tactical nuclear weapons in the defense of Western Europe.¹²⁵

American war plans for Central Europe envisioned a multi-phased course of operations. A study for field army logistics, completed in May 1959, was based on the assumption that Seventh Army would conduct a delay-withdrawal action of twenty to thirty days. The delay-and-withdrawal phase would be followed by a period of defensive action along a front that might not be stabilized. This meant local attacks and counterattacks to wear down enemy forces. This indicated that mobile, active defense was now included in operational planning. The defensive phase was estimated at three months at the minimum, but it might last ten to eighteen months. Eventually, the war was to be won in a period of offensive action characterized by rapid movement over long distances. The duration of this third phase could not be anticipated. All along, both sides would probably use atomic weapons.¹²⁶ This was indeed consistent with large-scale exercises of U.S. Army, Europe in the mid-1950s. It is nevertheless puzzling, since the publicized defense plans of Allied Command Europe and the Joint Chiefs of Staff considered only two phases: defense-delay and counteroffensive. Furthermore, the defensive alone could last one year. But over a year of atomic warfare, without stable front-lines, on German, and possibly other Western European territory, would not leave much inhabitable land and few civilians to inhabit it.

Unfortunately, the staying power of pentomic divisions for such extended operations was questionable. Most observers within the army doubted whether the battle groups amounted to much in the first place, but they were certainly not capable of sustained operations in a protracted war. Seventh Army found the new divisions wanting in some of the most critical aspects of modern warfare: fire support, mobility, and communications. The insufficient number of armored personnel carriers and trucks was particularly problematic.¹²⁷ Communication systems were insufficient for the complex coordination of five battle groups.¹²⁸ Most damagingly for an army that relied upon the application of heavy firepower, the commander of Seventh Army's artillery concluded that the pentomic infantry division had insufficient conventional and atomic firepower. He believed that the 4.2-inch mortar battery could not provide adequate direct fire support for the battle group. He concluded that the reorganization had taken away the strength of American artillery: centralized command, flexibility, and massing capability.¹²⁹

Continental Army Command evaluated the pentomic division positively: it was well suited for both conventional and atomic warfare. Consequently, the modified table of organization and equipment for infantry divisions in 1960 did not entail major changes.¹³⁰ In the field, however, the pentomic division elicited little enthusiasm. General Harold K. Johnson, just prior to becoming army chief of staff in 1964, voiced the opinion that this division "would have had a difficult time fighting its

¹²⁵Trachtenberg, *A Constructed Peace*, p. 191.

¹²⁶Headquarters, Seventh United States Army, Memorandum for Assistant Chief of Staff, G4, 3 June 1959, *Staff Study Field Army Logistics*, Military History Institute Library.

¹²⁷Senior Officer Oral History Program. General Donald V. Bennett interviewed by LtCol Smith and LtCol Hatcher, Volume I, Tape 5, 21 April 1976, pp. 10-12. Donald V. Bennett Papers, Oral History, Box 1, Military History Institute. Bennett oversaw the evaluation of the pentomic divisions in Seventh Army as Chief of Plans, Operations, Organization, and Equipment (G-3). He was particularly critical of the limited staying power and the limited mobility of the infantry division.

¹²⁸The critical failure to develop suitable communications systems, particularly radios with enough channels for all units of the pentomic division, is discussed in Jussel, "Intimidating the World," pp. 147-54.

¹²⁹Brigadier General J. K. Wilson, Artillery Commander, to Assistant Commandant, The Artillery and Missile School, Fort Sill, 1 May 1958. Records of the United States Continental Army Command, U.S. Army Schools, Artillery and Guided Missile School, Fort Sill, Box 9, Organization and Planning Files: Reorganization of the Inf Div Arty, RG 546, National Archives.

¹³⁰Headquarters, Department of the Army, TOE 7D, 1 February 1960.

way out of a wet paper bag.”¹³¹ He particularly lamented problems with communications, conventional fire support, and transportation. Other soldiers, like Anthony B. Herbert, a platoon leader of an infantry battle group in Germany, thought that the reorganization made no sense from an operational perspective and thus had to be a publicity ploy. Herbert argued that greater dispersion was of little help on a nuclear battlefield, as blast radii and subsequent radiation would destroy all life in a wide area. He also recognized a problem that had been ignored in the planning stages, namely the gap between senior commanders and junior officers once the regimental and battalion command levels were combined at battle group. Quite possibly, this could have been made to work with an as yet to be invented communications system, but not with existing technology.¹³² Moreover, it removed one command level and reduced the chances for timely promotion of junior grade officers.

Army internal studies eventually concluded that the pentomic division lacked organizational flexibility and committed the U.S. Army to a particular kind of warfare in Central Europe with great reliance on atomic weapons. Tactical mobility was restricted by its cumbersome organization and the division commander was overtaxed with the control of five battle groups, division artillery, tank battalion, and reconnaissance squadron. Finally, conventional firepower had been reduced to less than that of the division of World War II and Korea.¹³³ Taylor and his staff never succeeded in revising tactical and operational doctrine. Supplementary field manuals in 1956 and 1958 proved insufficient to address the challenges of the nuclear battlefield and the next complete revision, published in 1962, remained surprisingly conventional. Army officer and historian Robert Doughty concluded that “the resulting unpreparedness of the Army illustrates the dangers of a strategic concept dictating tactical doctrine without consideration of the technical and intellectual capability to follow the doctrine.”¹³⁴

It is not surprising, then, that the pentomic division did not last. By 1959 U.S. Army officers were considering fundamental changes and in 1961 the army staff introduced a new division that returned to a triangular structure of three brigades that resembled the conventional structure of the Second World War and the Korean War. But it also introduced new elements, such as brigades with a flexible number of combat battalions, and the building-block principle of assembling task forces as the tactical or strategic situation required.¹³⁵ The new division was modeled on the West German structure that NATO leaders had endorsed as an ideal-type formation.¹³⁶ But while renewed reorganization underlined the pentomic division’s operational failure, it is necessary to consider the context of the 1950s. Taylor had hoped to transform the army but he had needed to prove its utility in the nuclear age. In the event, representation of the army’s mission, its transformation, and its political environment were inextricably linked.

Taylor’s goal of transformation proved to be too ambitious, as he attempted to alter the army’s mission, the structure of its combat divisions, future weapons technology, and tactical and operational doctrine. But the pentomic reorganization allowed the army to redefine its mission from war-fighting to deterrence and reclaim its place as a major contributor to national and international security. In the early 1960s army reorganization was advanced further, but crucial aspects of dual capability and doctrinal emphasis on war in Central Europe remained in place. Moreover, weapons and equipment

¹³¹ Address by LT General Harold K. Johnson, Deputy Chief of Staff for Military Operations to Canadian National Defense College, 10 January 1964, *Modern Land Weaponry and Methods of Warfare*, p. 4. Harold K. Johnson Papers, Speech Reference File - Personal (4 of 4), thru 1968, Box 56, Military History Institute.

¹³² Anthony B. Herbert, *Soldier*. New York: Holt, Rinehart and Winston, 1973, pp. 77-79.

¹³³ Memorandum for Record, 19 September 1963, *Organizational Concept for a New Type Airborne Division*. Records of the Army Staff, General Staff, ODCSOPS/OACSFOR, Security Classified Correspondence 1963, 201-45 Services, Box 15, RG 319, National Archives.

¹³⁴ Robert A. Doughty, *The Evolution of U.S. Army Tactical Doctrine, 1946-1976*. Leavenworth Paper No. 1. Ft. Leavenworth, KS: Command and General Staff College, 1976, p. 19

¹³⁵ For a comprehensive of the 1961 reorganization see Wilson, *Maneuver and Firepower*, pp. 296-310 and McGrath, *The Brigade*, pp. 61-65.

¹³⁶ Ingo Wolfgang Tauschweizer, “Learning with an Ally: The U.S. Army and the *Bundeswehr* in the Cold War,” in: *The Journal of Military History*, vol. 72, no. 2 (April 2008), pp. 477-508. See especially pp. 482-491.

ordered for the pentomic division became available after 1961 and the army offered a strong deterrence force in Europe. Nuclear deterrence remained a significant part of American strategy, but military and political leaders in the 1960s paid greater attention to limited aggression. In doing so they opened a dangerous new path: just as the Cold War began to engulf the Third World, political leaders in the United States considered military interventions in remote and strategically secondary parts of the world. Following its reforms, the army had become a competent deterrent force in Europe, but it was unprepared for combat operations in Vietnam.

Ingo Tauschweizer

Max Weber Fellow, 2008-2009