

# The Modular Army

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*We deliver relevant and ready land combat power to the combatant commanders and the joint team. . . . Our Army must move toward modular capabilities-based unit designs, nested within the joint networks, and enabled by a joint expeditionary mindset.*

—CSA General Peter J. Schoomaker<sup>1</sup>

**C**HIEF OF STAFF of the Army General Peter J. Schoomaker's vision for the Army's Current and Future Forces provides the joint force commander a campaign-quality Army that will dominate this century's highly complex, uncertain, and dynamic security environments. To do so the Army will reorganize its combat and institutional organizations to best meet the needs and requirements operating today *and* tomorrow.

The Army seeks to solve the organizational design dilemma by retaining the advantages of relatively fixed structures as the basis for tailoring the force while furthering a commander's ability to creatively reorganize it to meet specific tasks. To achieve strategic responsiveness, deployability, modularity, and tailorability, the Army needs self-contained combined arms units smaller than current divisions. Now might be the time for the Army to break free of old concepts and refocus on its previous traditional tactical echelon—the brigade

—to restructure the Army for the 21st century.

Employing modular, capabilities-based units for rapid packaging into lethal forces for sustained employment by combatant commanders requires the Army to create modular brigade units of action (UA). As the basic combined arms building block for force projection, the UA is smaller and more agile than divisions.

The Army's organizational design for ground combat has historically swung back and forth from totally fixed structures to totally ad hoc organizations. (See figure 1.) The challenge of organizational design is to maintain the advantages of relatively fixed organizations (strategic deployment, sustainment, and

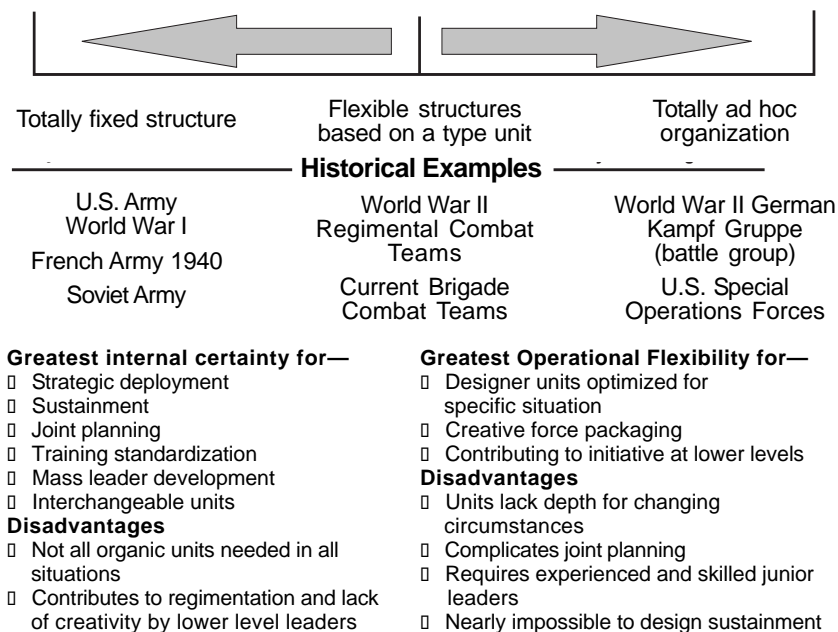


Figure 1. Organizational design.



National Guard troops of the 42d Division assemble in France, 1918.

***Separate brigades, such as Colonel Joseph Wilder's Lightning Brigade, equipped with Spencer repeating rifles, performed magnificently as Army-level fire brigades. However, brigades, divisions, corps, and armies formed only as needed in wartime and were promptly disbanded during peacetime. . . . Not until World War I did the Army establish permanent tactical units larger than a regiment.***

joint planning) while providing creative opportunities for adaptive, flexible task organization.

During the 1990s, strategists viewed units smaller than a division as the basis for information age or third-wave warfare. In *War and Antiwar*, futurists Alvin and Heidi Toffler describe their organizational concept for future warfare: "Until recently the 10,000-18,000-man division was thought to be the smallest combat unit capable of operating on its own for a sustained period. . . . But the day is approaching when a capital-intensive Third Wave brigade of 4,000-5,000 troops may be able to do what it took a full-size division to do in the past."<sup>2</sup>

In 1997, U.S. Army Colonel Douglas Macgregor advocated a new organizational approach in his controversial book *Breaking the Phalanx: A New Design for Landpower in the 21st Century*.<sup>3</sup> He suggested "reorganizing the Army into mobile combat groups [4,000-5,000 personnel]" because units "smaller than the contemporary Army division will have to operate independently for long periods of time."<sup>4</sup>

Schoemaker, Macgregor, and the Tofflers believe that the brigade, not the division, might be the primary unit of ground combat in future warfare. Sepa-

rate brigades have officially existed since the implementation of the Reorganization Objectives Army Division in the early 1960s, but independent combined arms brigades capable of decisive action existed much earlier in the form of combined arms tactical units smaller than a division but larger than a regiment or battalion.

### **Early Brigades**

Since 1776, the Army has often exercised the operational doctrine of employing elements smaller than a division on independent missions. During the Revolutionary War, General George Washington (who had been a colonial militia brigade commander in the French and Indian War) made the brigade the basic maneuver element of the Continental Army.

After taking command of the rebel army at Boston in 1775, Washington imposed greater organizational flexibility and control by introducing divisions and brigades as administrative echelons between his headquarters and the regiments.<sup>5</sup> In December 1776, during his successful attack on Trenton and Princeton, New Jersey, Washington's emphasis shifted from the regiment to the brigade as the tac-

Soldiers of the Stryker Brigade Combat Team, under the operational control of the 4th Infantry Division, conduct operations in Samarra, Iraq, 21 December 2003.

US Army



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tical element and provided an artillery company in direct support of each brigade.<sup>6</sup> After destroying a German brigade at Trenton and severely mauling a detached British brigade at Princeton, Washington concluded that the campaign demonstrated the value of a brigade composed of several infantry regiments and an artillery company.

In 1777, Washington created permanently numbered brigades of four or five regiments as building blocks for the Main, or Continental, Army as well as for detached commands.<sup>7</sup> He also insisted that Congress provide brigadier generals to command brigades. The British used senior regimental commanders to command their brigades as a temporary duty.<sup>8</sup>

In keeping with the concept of the brigade as a building block, Washington added permanent brigade staff and logistical support sections. In contrast to Washington's brigades, Continental Army divisions remained tailored to each situation and were less permanent.

The regiment remained the largest permanent peacetime organization in the U.S. Army until World War I. The Army created brigades and divisions during the Civil War, but as Russell F. Weigley of

Temple University says, "All of them were task forces, composed of varying constituent elements as circumstances and accident decreed."<sup>9</sup> As higher level organizations and designations stabilized during the Civil War, many brigades became proud instruments of battlefield tactics and received their now-famous names—Iron, Stonewall, Orphan, Irish, Texas, and Regular.

Separate brigades, such as Colonel Joseph Wilder's Lightning Brigade, equipped with Spencer repeating rifles, performed magnificently as Army-level fire brigades. However, brigades, divisions, corps, and armies formed only as needed in wartime and were promptly disbanded during peacetime.<sup>10</sup>

**Early 20th century.** In 1900, the Army formed the 2,500-man China Relief Expedition, with Major General Adna R. Chaffee commanding, to participate in the international efforts to free the Peking legations from the "Boxers." Civil War veteran Major General James H. Wilson, second-in-command, was the direct commander of the "Ninth and Fourteenth Infantry, the marine battalion, six troops of the Sixth Cavalry, and Riley's Battery of six rifled guns, all in excellent condition and constituting as compact and

Infantry and artillerymen reorganize after seizing Trenton, New Jersey, 26 December 1776.

US Army

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complete a brigade of fighting men as ever made its appearance in the Far East . . . ."<sup>11</sup>

Chaffee later used separate brigades successfully as his largest units in stability and support operations during the Philippine Insurrection.<sup>12</sup> Not until World War I did the Army establish permanent tactical units larger than a regiment (for the American Expeditionary Force). Although the Army activated eight corps for the Spanish-American War, most deployments consisted of brigades as they became ready. During the short campaign for Puerto Rico, an independent regular brigade made the most spectacular advance.<sup>13</sup>

**Mid-20th to early 21st century.** During World War II and the wars of the last half of the 20th century, separate brigade-size units performed valuable service. Units such as Task Force (TF) Butler in Southern France and separate brigades like the 173d Airborne in Vietnam performed superbly in direct support to army and corps commanders. Units of this size proved useful in independent missions to "show the flag," demonstrate American support, or fight alongside allies such as in TF Mars in Burma during World War II, TF 201 from the 24th Infantry Division (ID) in Lebanon in 1958, and more recently, TF Rakkasans with the 101st Airborne Divi-

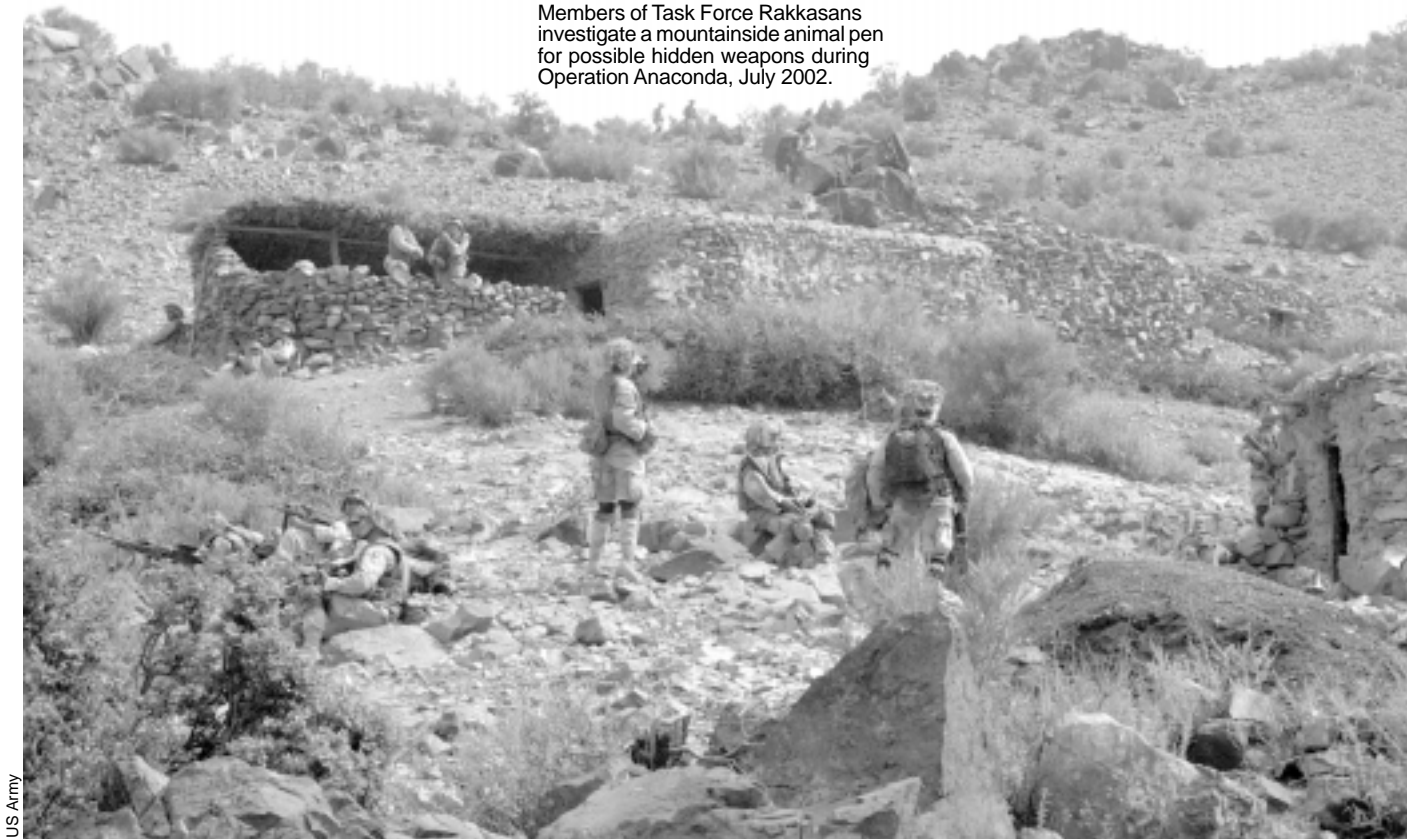
sion in Afghanistan. Separate heavy brigades provided additional armor support to the U.S. Marine Corps, as demonstrated by the 1st Brigade, 5th ID (Mechanized [M]) in Vietnam, and the Tiger Brigade of the 2d Armored Division (AD) in Operation Desert Storm.<sup>14</sup>

Separate brigade-size units also served as auxiliaries to the main tactical element, the division. Entire divisions have been formed in deployed theaters of operation by compositing separate regiments or brigades, as with the Americal Division during World War II and Vietnam.

Separate brigades have augmented divisions for combat, as for example, the 24th ID with the 197th Infantry Brigade (M), and the 1st ID with the 2d AD (Forward [F]) in the Persian Gulf. Using separate brigades for appropriate missions provided flexibility and agility and avoided dismembering divisions for smaller missions.

The Army currently manages several programs at the brigade level. Because of costs, brigades will continue to be the largest echelon to rotate and conduct "live" training at the combat training centers. The brigade is the primary echelon for prepositioned equipment in Europe, Korea, the Middle East, and afloat.

Members of Task Force Rakkasans investigate a mountainside animal pen for possible hidden weapons during Operation Anaconda, July 2002.



US Army

***Brigade combat teams recently deployed in the Global War on Terrorism, sometimes with the parent division headquarters (as with TF Falcon during Operation Iraqi Freedom) and sometimes without (such as TF Rakkasans . . . during Operation Anaconda). Tailored brigade combat teams have conducted military operations in Panama, the Persian Gulf, Somalia, Haiti, the Balkans, Afghanistan, and Operation Iraqi Freedom.***

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### **Tailoring the Modular Army**

To meet the demands of the contemporary operational environment with a lethal, deployable force, the Army must transform the way it organizes and deploys forces. Force tailoring, the process of arraying a force through task organization of units to meet specific mission requirements or constraints, allows the Army to fully support the needs of the combatant commander with a discreet set of mission capabilities.<sup>15</sup>

Force tailoring—

- Is central to the organization and employment of modular brigade UAs, the building blocks of the Army's new Units of Employment (UEs).

- Allows planners to draw from available Army and joint forces to create UE formations designed

to meet the specific requirements of the contingency to which that UE has been committed.<sup>16</sup>

- Allows a deploying force with modular units to be closely scaled to meet a regional combatant commander's (RCC's) needs.

The force's modular building blocks are drawn from a pool of available Army forces, such as units assigned to a joint force provider (most likely Joint Forces Command), which has not been allocated to an RCC but that might be force tailored to it for a particular mission. The joint force provider's Army component staff would control the tailored force in a role similar to that of the current U.S. Army Forces Command.

Force tailoring applies to the Current and Future Force. A UE does not have a fixed subordinate structure or large, permanent, standing formations. Brigade-size UAs are flexibly allocated to UEs based on the RCC's contingency planning requirements. Army forces stationed or deployed outside the United States are assigned or attached to that RCC and might also be suballocated to his assigned or attached UEs.

Force tailoring depends on the creation of modular, standing organizations that include maneuver and nonmaneuver units. At least three major factors influence the stationing of those units: the training

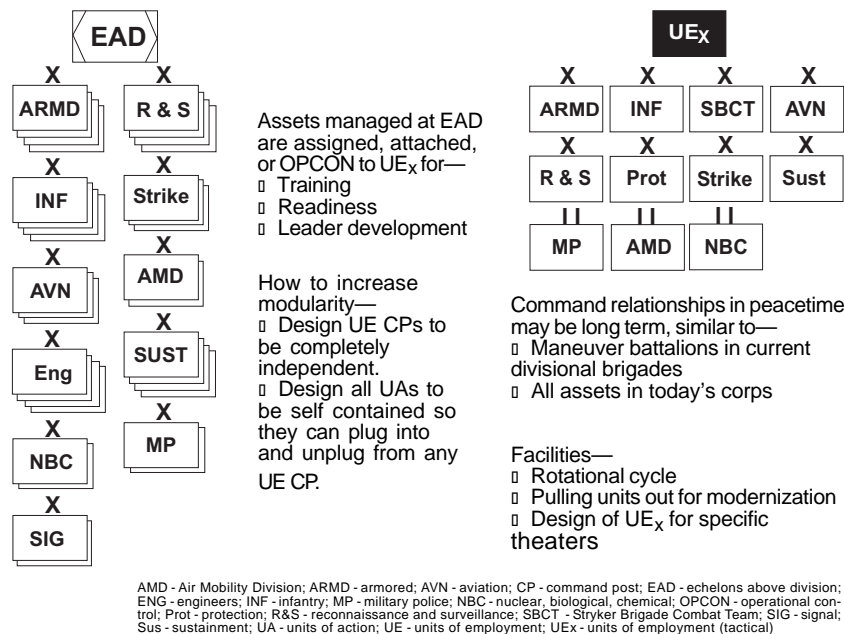


Figure 1. A scalable, modular force.

cycle, deployment considerations, and implementation of force stabilization plans.

Force tailoring from the pool of available forces presumes the association of units with one or more higher headquarters. The relationship of available forces with a higher headquarters is not necessarily linked directly to unit stationing; unit relationships in garrison might differ significantly from relationships in contingency operations.

Modularity, which is fundamental to the design of units for effective force tailoring, is a new organizational paradigm that will enable the UE to rapidly tailor the precise capabilities needed for each operating environment. Modularity requires self-contained organizations that can plug into and unplug from unit formations with minimal augmentation or reorganization.

The Army must keep modularity at the forefront of its design focus as it develops its organizations, including all command and control (C2), tactical, and support elements. A headquarters element must be self-contained and capable of receiving subordinate units or modules without augmenting its C2 capabilities. Similarly, modularity requires unit building blocks that can be plugged into a C2 module without reorganization or external support.

Organizational design should consider the types of units and at what level they are compatible for C2. Parameters for unit modules must establish for whom they can work, which types of headquarters they support, and the extent of their joint interoperability. Not all modular units will be universally compatible with all potential headquarters because the

resources required to achieve universal modularity are prohibitive.

A common doctrinal foundation for the modular force, including the full spectrum of operational doctrine from unit standing operating procedures (SOPs) to how units fight, is fundamental to success. This doctrine must be the same among all units in the same modular construct. For example, the SOP for ammunition storage in one unit must be exactly the same as that of another unit in another location. Maximizing commonality of design and systems and building multifunctional organizations with discrete sets of capabilities will contribute to a modular construct

that enables rapid force tailoring before and during deployment as well as increasing force versatility and operational flexibility.

Modularity applies to all types of units, supports strategic responsiveness, and facilitates affiliation, training, and deployment of mission-tailored UEs. Modular forces provide functional building blocks to support specific mission sets for the tailored force.

The Army has no mandated size of unit building blocks; module size will vary within each functional category. Some modules might be organized at the company level; others might be organized at platoon, section, or team levels. Forces might be managed by echelon, region, or the joint functional concepts of C2, battlefield awareness, force application, protection, and focused logistics. They will normally be assigned to a specific UE for training, support, and readiness.

The modular force embodies the spirit of a new design philosophy that allows multiple Army units to be temporarily aggregated and placed under the command and control of an established senior UE headquarters without designating permanent UAs. This approach represents a major leap forward in flexibility and affords Army commanders the opportunity to rapidly tailor the precise mix of unit capabilities. The result is smaller, more deployable force packages for any given mission. (See figure 2.)

When alerted for deployment, the UE would rapidly identify mission requirements, then be allocated specific subordinate forces through the force tailoring process. Each UE is unique and without a fixed organization of subordinate units and relies on ha-

bitual peacetime training associations to facilitate the development of cohesive, effective formations. (See figure 3.) The tailored force would consist of a combination of Joint, Current, or Future Forces organized by echelon, region, or joint function.

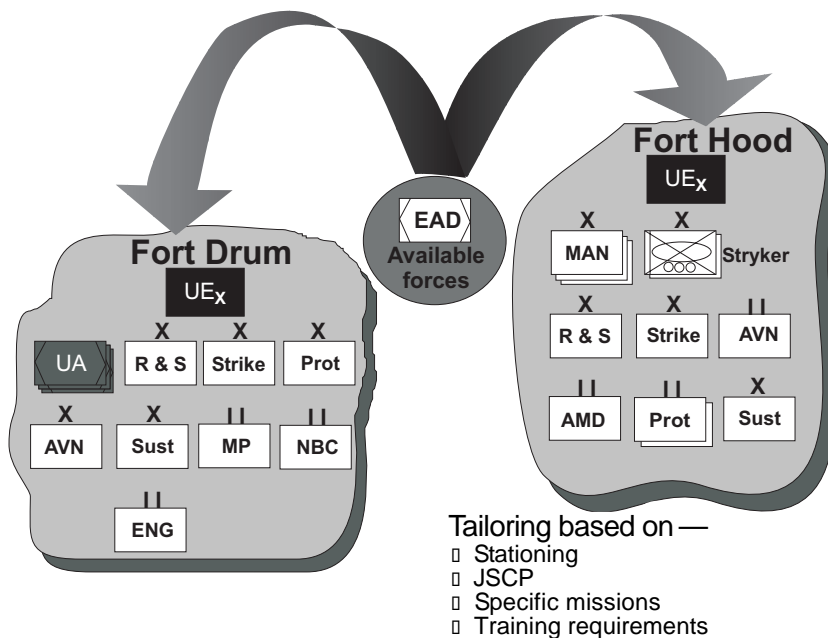
Modular forces must be designed for operational maneuver from strategic distances. Future Force units will execute immediate deployment with cascading force application into employment without waiting for a protracted buildup, thus emphasizing lethality and speed of maneuver over mass. Sustainment modules and other force enablers, including joint assets, must be incorporated as part of the deploying force to ensure it can maintain operations at an overwhelming pace that provides continuous pressure on the opponent.

**Building Force Packages**

Building fully tailored force packages requires creative new approaches from current procedures for preparing and organizing for combat. Approaches must become more adaptive and responsive to the designated joint force commander’s needs. Because they would have multifunctional, combined arms capabilities organic to them, UAs would require minimum force tailoring or task organization and retain the option to task organize creatively.

The UE will become the unit that rapidly deploys and accepts the plug-in of modular mission-allocated UAs. The mix of maneuver UAs and support UAs will vary based on the joint functional areas’ capabilities to perform each mission. Multifunctional modules of combined arms, strike, aviation, reconnaissance and surveillance, protection, and sustainment will largely comprise the pool of available forces.

Tailoring force packages will also incorporate aug-



Examples are for illustration of scalable/modular concept only; no inference of future stationing considerations is intended.

Figure 3. Examples of unique UE<sub>x</sub>.

mentation by Reserve Component units and staffs. This diverse mix of forces will require innovative command and support relationships, specific designs, and a joint expeditionary mindset for how the Army manages available forces.

The full spectrum of threats in this new century requires the Army to change its organizational basis from the division. Historically, the Army has not been based on the division; in fact, for the past 100 years, the Army has successfully employed self-contained combined arms brigades during numerous operations. To continue delivering relevant and ready land combat power to combatant commanders, the Army must move toward even more modular unit designs to solve the organizational design dilemma posed by the need for relatively fixed organizational structures as the basis for tailoring while empowering commanders to creatively reorganize capabilities for specific tasks. **MR**

**NOTES**

1. GEN Peter J. Schoomaker, Chief of Staff of the Army, speech at the Eisenhower Luncheon, Association of the United States Army, Washington, D.C., 7 October 2003.  
 2. Alvin and Heidi Toffler, *War and Antwar* (Boston, MA: Little & Brown, 1993), 77.  
 3. Douglas A. Macgregor, *Breaking the Phalanx: A New Design for Landpower in the 21st Century* (Westport, CT: Praeger Publishers, 1997), 4, 227. Macgregor continues this argument in *Transformation Under Fire: Revolutionizing How America Fights* (Westport, CT: Praeger Publishers, 2003).  
 4. *Ibid.*  
 5. Robin K. Wright, Jr., *The Continental Army*, Army Lineage Series (Washington, DC: U.S. Army Center of Military History, 1983), 26-29.  
 6. *Ibid.*, 97, 98.  
 7. *Ibid.*, 112.  
 8. *Ibid.*, 151.  
 9. Russell F. Weigley, *History of the U.S. Army*, large ed. (Bloomington: Indiana University Press, 1984), 227.

10. *Ibid.*, 189, 306.  
 11. MG James H. Wilson, *Under the Old Flag*, vol. II (NY: Appleton, 1912), 519-34.  
 12. Brian M. Linn, *The U.S. Army and Counterinsurgency in the Philippine War—1899-1902* (Chapel Hill: University of North Carolina Press, 1989), 26-27.  
 13. Karl S. Herrmann, *A Recent Campaign in Puerto Rico by the Independent Regular Brigade under the Command of Brigadier General Schwan* (Boston, MA: E.H. Bacon & Co., 1907), 13-23.  
 14. For a summary of these operations, see COL John A. Borin, "Separate, But Not Equal: Separate Brigades in the United Army, 1776-2002," unpublished paper, 10 September 2002, 14-42.  
 15. Army Field Manual 3-0, *Operations* (Washington, DC: U.S. Government Printing Office, June 2001), 3-27.  
 16. This discussion of modularity is adapted from COL Telford E. Crisco, Jr., "Force Tailoring and the Modular Force," unpublished article, 17 October 2003.