The Size of Operational Staffs: Less May Be More

A Monograph
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Is there a better way to organize staffs in operational headquarters based on their roles?

Following 9/11 in the ensuing Global War on Terror, the sizes of divisions and corps serving as operational headquarters have doubled and tripled, respectively. The shift to a brigade-centric army under modularity should have alleviated the burden on division and corps staffs but has instead blurred the lines of responsibility. Many senior military leaders have questioned the efficacy of such large staffs, suggesting that the resulting bureaucracy hinders decision-making and subordinate initiative. In the wake of budget cuts and impending downsizing of Department of Defense and Army personnel, the issue of restructuring for future conflicts is important. Ingrained in the American tradition of liberty and citizen-soldiers, ramping up forces and required staff to meet the challenge of new threats and then downsizing represents an American way of warfare. The modernist perspective of organization theory seeks to enhance performance through reorganizing structure and process. A study of the French and Prussian staff systems underscores the relationship between form and function. A study of the American Civil War and World War I reveals that the perception of large staffs and cyclic nature of increasing and decreasing staffs are not new. Understanding the outgrowth of this trend based on an American tradition of fearing standing armies provides a context for making changes for the future. This monograph concludes that operational staffs have indeed become too big and authorized strengths should be somewhere between 9/11 and current levels. Staff reductions should be accompanied by a clear delineation of roles and responsibilities between brigade, division, and corps staffs and reorganizing the staffs to reflect a matrix structure based on project design.

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Abstract

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Is there a better way to organize staffs in operational headquarters based on their roles?

Following 9/11 in the ensuing Global War on Terror, the sizes of divisions and corps serving as operational headquarters have doubled and tripled, respectively. The shift to a brigade-centric army under modularity should have alleviated the burden on division and corps staffs but has instead blurred the lines of responsibility. Many senior military leaders have questioned the efficacy of such large staffs, suggesting that the resulting bureaucracy hinders decision-making and subordinate initiative. In the wake of budget cuts and impending downsizing of Department of Defense and Army personnel, the issue of restructuring for future conflicts is important. Ingrained in the American tradition of liberty and citizen-soldiers, ramping up forces and required staff to meet the challenge of new threats and then downsizing represents an American way of warfare.

The modernist perspective of organization theory seeks to enhance performance through reorganizing structure and process. Contingency theory and related studies address the relationship between size and efficiency and effectiveness. Organizational design shows the advantages and disadvantages of structures (functional, project, and matrix) related to process.

A study of the French and Prussian staff systems underscores the relationship between form and function. The unique roles of their staff catered to the commander and environment resulted in decidedly different staff structures but functional in nature. The additional roles of operational headquarters staffs in the U.S. Army have resulted in a matrix structure based on function.

A study of the American Civil War and World War I reveals that the perception of large staffs and cyclic nature of increasing and decreasing staffs are not new. Understanding the outgrowth of this trend based on an American tradition of fearing standing armies provides a context for making changes for the future.

This monograph concludes that operational staffs have indeed become too big and authorized strengths should be somewhere between 9/11 and current levels. Staff reductions should be accompanied by a clear delineation of roles and responsibilities between brigade, division, and corps staffs and reorganizing the staffs to reflect a matrix structure based on project.

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Introduction

Since the beginning of the Global War on Terror in the aftermath of 9/11, the headquarters of U.S. Army corps and divisions have more than doubled and tripled in size, respectively. Theoretically, the transformation from a division-centric army to a brigade-centric one should have alleviated the burden on both division and corps staffs. In reality, staff sizes at the brigade, division, and corps levels have all increased and blurred the lines of roles and responsibilities among them. This trend has caused many senior Army leaders to question the necessity of such large staffs, the largest in modern military history. In light of impending Department of Defense budget cuts and downsizing of Army personnel, consistent with the American military tradition following conflicts, addressing the force structure of the U.S. Army to meet the challenges of tomorrow is important. This monograph explores a small part of that future force structure by asking the following question: Is there a better way to organize staffs in operational headquarters based on their roles?

The headquarters strength of U.S. Army corps and divisions in 2011 is somewhere in the 700 to 800 personnel range. The Headquarters and Headquarters Battalion (HHBN) of I Corps has the authorization for 235 officers, 51 warrant officers, and 475 enlisted for a total of 761 personnel. The HHBNs of III Corps, V Corps, and XVIII Airborne Corps all have exactly the same Modified Table of Organization and Equipment (MTOE) numbers for personnel with 761 each. The divisions have slightly varying strengths depending on the type. The HHBN for the 101st Airborne Division (Air Assault) has 188 officers, 45 warrant officers, and 499 enlisted for a total of 732 personnel. Despite having a different heritage, the HHBN of the 1st Armored Division has the same requirements and authorizations for

personnel with 732 personnel. The 4th Infantry Division and 1st Cavalry Division headquarters have slightly more enlisted personnel which bring their aggregate personnel strength to 744 each.[1]

The authorized MTOE personnel numbers above do not accurately reflect the actual sizes of these headquarters during deployment in the Global War on Terror in Iraq and Afghanistan. The recent deployment of I Corps to Afghanistan attests to this fact. The America's Corps deployed this past summer to serve as the headquarters for the International Security Assistance Force (ISAF) Joint Command (IJC), which serves as the operational headquarters for ISAF. The personnel assigned to I Corps made up approximately seventy percent of the 1,000 positions available in the IJC, with the rest being filled by other U.S. services and agencies as well as North Atlantic Treaty Organization (NATO) service members.[2] While headquarters such as I Corps increase in size due to augmentations in theater, many units deploy overstrength. To relieve the 101st Airborne Division (Air Assault) as the Combined Joint Task Force (CJTF) Headquarters in Regional Command – East (RC-E) in May 2011, the 1st Cavalry Division deployed with approximately 850 personnel from Fort Hood, Texas.[3] That is approximately 100 more than the MTOE authorization of 744 personnel mentioned previously.

The sizes of these headquarters in the beginning of the Global War on Terror were significantly smaller than what they are today. I Corps' MTOE personnel authorization with an effective date of 16 January 2002 was 119 officers, one warrant officer, and 207 enlisted, for total headquarters strength of 327 personnel. The headquarters authorizations for III Corps, V Corps, and XVIII Airborne Corps during this time were almost identical, varying by only two to three people. The authorizations for divisions, on the other hand, varied considerably in October 2001. Headquarters for the 101st Airborne Division (Air Assault) had 75 officers, four warrant officers, and 159 enlisted for a total of 238 personnel; the 1st

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[1] FMSWeb, https://webtaads.belvoir.army.mil, (accessed August 30, 2011).

[2] Don Kramer, "I Corps Begins Preparations For Afghanistan Deployment," *Northwest Guardian*, January 6, 2011.

[3] Kim Browne, "1st Cav takes over in Afghanistan," *www.army.mil*, May 20, 2011.

cavalry Division had 104 officers, eight warrant officers, and 246 enlisted for a total of 358 personnel; and the 4th Infantry Division had one of the largest authorizations with 119 officers, eight warrant officers, and 271 enlisted for a total of 398 personnel. These numbers remained relatively stagnant until fiscal year 2006 MTOE when the headquarters authorizations for corps and divisions began gradually to increase.

Many senior Army leaders visiting the Command and General Staff College and the School of Advanced Military Studies have asserted that staffs have become too big in describing the state of affairs in today's United States Army and the ongoing wars in Iraq and Afghanistan. The numbers shown previously reflect that staffs have indeed become larger at the corps and division headquarters; however, the notion that they have become too big remains unclear. More interesting are the implications that overstaffing of major command headquarters has caused less efficiency (and possibly less effectiveness) and that there exists a right size for these staffs.

In the opening summary of his budget request to the Senate Appropriations Committee for Defense on June 15, 2011, former Secretary of Defense (SECDEF) Robert Gates acknowledged that there are "planned future reductions in the size of ground forces."[4] The reduction of the Army permanent end strength, currently set at 547,000, may begin as early as fiscal year 2015 with 27,000 personnel. He cautions, however, that this must be done with prudence:

> If we are to avoid a hollowing effect, this process must address force structure – with the overarching goal to preserve a U.S. military capable of meeting crucial national security priorities even if fiscal pressure requires reductions in that force's size. I've said repeatedly that I'd rather have a smaller, superbly capable military than a larger, hollow, less capable one. However, we need to be honest with the president, with you, with the American people, indeed with ourselves, about what those consequences are: That a smaller military, no matter how superb, will be able to go fewer places and be able to do fewer things.[5]

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[4] Robert Gates, "Budget Request" (Speech, Dirksen Senate Office Building, Washington, D.C., June 15, 2011), http://www.defense.gov/speeches/speech.aspx?speechid=1585 (accessed September 13, 2011).

[5] Ibid.

In many ways, the former SECDEF's concerns about the size of our military forces have parallels with senior Army leaders' concerns about the size of our staffs. All would ideally prefer a smaller, more capable staff over a larger, less capable one. In reality, though, quantity has a quality all its own, and there may be certain benefits to having larger staffs. Just as Mr. Gates ties the size of the U.S. military to what it can and cannot do, the size of the staffs must correlate to their roles and functions.

The practice of increasing the size of headquarters during conflicts for the U.S. Army is not new. That trend closely follows the pattern of peacetime reductions and wartime expansions of the army since the Revolutionary War.[6] Distrust of large standing armies by the authors of the U.S. Constitution caused greater reliance on the militia to provide national security.[7] Despite the National Defense Act of 1916 which laid the foundation for the establishment of a standing army, its size has historically fluctuated based on the strategic context.[8] The costs of major, protracted conflicts have inevitably led to fiscal concerns which made it politically unviable to maintain those strengths during interwar periods. Accordingly, headquarters sizes have increased during major conflicts and then decreased during peacetime to coincide with military personnel reductions. This recurrent practice stems from an American military tradition and represents an American way of warfare.

This monograph posits that staffs have indeed become too big and that there is a better way to organize operational headquarters so that they are both efficient and effective. This requires alleviating the tension between the tradition of downsizing in the past and the need to meet the demands of complex military challenges in the future. Delineating the roles and responsibilities between echelons of staff and

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[6] Department of the Army, *FM 1 The Army* (Washington, D.C.: Department of the Army, 2005), 1-5.

[7] Charles E. Heller, *Twenty-First Century Force: A Federal Army and A Militia* (Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College), 10.

[8] Ibid., 16.

restructuring the staffs to reflect newfound roles may facilitate the ability of the U.S. Army and its operational headquarters to do more with less in the years ahead.

Section I examines organization theory to help provide understanding of how and why organizations organize the way they do. Specifically, it studies contingency theory to provide an understanding of the role of size in organizational performance. Organizational design provides an awareness of varying types of structures with varying advantages and disadvantages.

Section II looks at the evolution of the staff in modern history. Specifically, it analyzes the roles of Napoleon's staff and the Prussian General Staff during the nineteenth century to determine the impact on their organizational structures. Then the section reviews the relationship between the role and structure of division and corps headquarters staff in light of modularity.

Section III looks at the perceptions and fluctuations of staff sizes during the Civil War and World War I. Ingrained in the American tradition of liberty and fear of standing armies, the United States Army has relied on its ability to ramp up capabilities to meet the demands of emerging threats and reduced those capabilities following the conclusion of those conflicts.

Section IV analyzes the operational staffs of the U.S. Army today based on organization theory and lessons from history. The contexts of modularity and budget cuts coupled with the historical role and organization of the staff provide a framework for making changes for the future.

Relevance to Operational Art

FM 3-0 defines operational art as "the application of creative imagination by commanders and staffs—supported by their skill, knowledge, and experience—to design strategies, campaigns, and major operations and organize and employ military forces."[9] Unified Land Operations refines the definition of operational art by calling it "the pursuit of strategic objectives, in whole or in part, through the

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[9] FM 3-0 *Operations, Change 1*, (Washington, DC: Department of the Army, 2011), 7-1.

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arrangement of tactical actions in time, space, and purpose."[10] The new *ADP 3-0 Unified Land Operations* further describes operational art:

> Operational art is how commanders balance risk and opportunity to create and maintain the conditions necessary to seize, retain, and exploit the initiative and gain a position of relative advantage while linking tactical actions to reach a strategic objective. It requires commanders who have a deep understanding of their operational environment, the strategic objectives, and the capabilities of all elements of their force. These commanders continually seek to expand and refine their understanding and are not bound by preconceived notions of solutions.[11]

The operational level staffs constitute the means in planning the ways to achieve the ends that is operational art. The scope and complexity of campaigns and operations today prevent commanders from exercising operational art independently. Therefore, a "competent staff team is essential to staff at the operational level of war."[12] According to General Glenn Otis, former Commanding General of the U.S. Army Training and Doctrine Command (TRADOC) and Commander of U.S. Army Europe (USAREUR), the commander lacks the ability to significantly influence current operations at the operational level. Whereas a battalion commander at the tactical level may split his time eighty-twenty between current operations and future operations and a division commander fifty-fifty, an operational level commander spends most of his time on planning for the future.[13] Accordingly, an operational level staff focuses on future operations to shape the tactical fight. General Otis's successor as the Commander of USAREUR, General Crosbie Saint, stresses the importance of staffs in that they determine mobility, or how fast units move. He concludes that "if mobility is an element of combat power, then… the staff is an element of

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[10] *ADP 3-0 Unified land Operations* (Washington, D.C.: Department of the Army, 2011), 9.

[11] Ibid., 10.

[12] William Stofft, "Leadership at the Operational Level of War," in Clayton R. Newell and Michael D. Krause, *On Operational Art*, (Washington, D.C.: Center of Military History, 1994), 192.

[13] Glenn K. Otis, "The Ground Commander's View – I," in Clayton R. Newell and Michael D. Krause, *On Operational Art*, (Washington, D.C.: Center of Military History, 1994), 45-46.

combat power."[14] To pursue strategic objectives through the arrangement of tactical actions, commanders rely on staffs to help plan and execute campaigns and operations.

Definitions

For the purpose of this monograph, unless otherwise specified, the term "staff" includes the coordinating staff, special staff, and personal staff. Regardless of the categorization, all three staff groups serve to assist the commander in some capacity. From a holistic perspective, they all contribute to the operations process and in turn to the overall size of the staff organization. Additionally, this monograph treats "staffs" and "headquarters" as synonyms in discussing their size. Although there is one commander (several if including headquarters battalion commanders and headquarters company commanders) at each headquarters, subtracting one (or several) from total number of headquarters personnel is insignificant.

Organization Theory

An organization is "an administrative and functional structure."[15] By that definition, the U.S. Army is a type of organization, a structure designed to fight and win our nation's wars. Accordingly, the various strategic, operational, and tactical level units represent sub-organizations. Another reference emphasizes the personnel of such a structure, defining organization as "a body of persons organized for some end or work."[16] This accurately describes Army staffs responsible for assisting the commander plan orders and facilitating subordinate execution. In this regard, the staff of an Army unit also represents the essence of an organization.

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[14] Crosbie Saint, "The Ground Commander's View – II," in Clayton R. Newell and Michael D. Krause, *On Operational Art*, (Washington, D.C.: Center of Military History, 1994), 62.

[15] Merriam Webster's Collegiate Dictionary, 10th ed., s.v. "Organization."

[16] *The Random House College Dictionary*, Revised Edition, s.v. "Organization."

As an organization, the U.S. Army staff is subject to the suppositions of organization theory. The term *organization theory* can be misleading because it suggests a singular theory dealing with organization when, in fact, there are many kinds of organization theories. A helpful approach may be looking at organization theory as the "*study* (emphasis added) of organizational designs and organizational structures, relationship of organizations with their external environment, and the behavior of managers and technocrats within organizations."[17]

There are three basic perspectives of organization theory: modern, symbolic-interpretive, and postmodern. The modernist perspective views organization as an independent objective entity and believes in discovering truth through testing of conceptual knowledge. Modernist organization theorists concentrate on increasing performance in terms of efficiency, effectiveness, and other indicators by applying through theories related to structure and control. The symbolic-interpretive perspective takes a subjective view on organization by emphasizing human relationships in which truth depends on relative knowledge and interpretations of those involved. Symbolic-interpretivists focus on deriving meaning from various realities created and appreciated within communities. The postmodernist perspective believes that language and discourse dictate organizations and organization theory, and therefore, one cannot decipher truth based on temporary, changing knowledge. Meaning and knowledge are relative, allowing power plays within organizations.[18]

This monograph adopts the modernist perspective of organization theory. Modernist organization theorists believe that it is possible to design and manage organizations that are "systems of decision and action driven by norms of rationality, efficiency and effectiveness for stated purposes."[19]

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[17] BusinessDictionary.com, "Organization Theory," BusinessDictionary.com, http://www.businessdictionary.com/definition/organization-theory.html (accessed July 5, 2011).

[18] Mary Jo Hatch with Ann L. Cunliffe, *Organization Theory: Modern, Symbolic, and Postmodern Perspectives*, 2nd ed., (New York: Oxford University Press, 2006), 20-21.

[19] Ibid., 14.

The focus of organizational theory lies in "finding universal laws, methods, and techniques of organization and control" and "rational structures, rules, standardized procedures, and routine practices."[20] For the purpose of identifying the relationship between size and performance of staffs and ultimately determining the efficacy of that relationship, the modernist approach fits the bill.

Early modernist organization theorists during the 1950s and 1960s falsely believed that they could discover certain basic laws of organization which would lead to the design of the perfect organization. They merely had to look at statistical relationships between structure and performance to identify certain principles. Empirical research proved otherwise. Formulas for success for one organization did not necessarily equate to success in another. This led to the development of two theories: contingency theory and organizational design.[21]

Contingency Theory

Contingency theory postulates that a successful organizational structure depends on both the environment and the right combination of organizational factors.[22] Australian organization theorist Lex Donaldson explains:

> There are several contingency factors: strategy, size, task uncertainty and technology. These are characteristics of the organization. However, these organizational characteristics in turn reflect the influence of the environment in which the organization is located. Thus, in order to be effective, the organization needs to fit its structure to the contingency factors of the organization and thus to the environment. Hence the organization is seen as adapting to its environment.[23]

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[20] Ibid.

[21] Ibid., 109.

[22] Ibid.

[23] Lex Donaldson, "The Normal Science of Structural Contingency Theory," in Handbook of Organization Studies, ed. S.R. Clegg, C. Hardy and W.R. Nord (London: Sage, 1996), 57, quoted in Mary Jo Hatch with Ann L. Cunliffe, *Organization Theory: Modern, Symbolic, and Postmodern Perspectives*, 2nd ed., (New York: Oxford University Press, 2006), 110.

Applied to the military, planners seek to design force packages and capabilities in relation to the operational environment. For example, the contingency factor of size, meaning the number and echelon of units, certainly varied between Operation Just Cause in Panama and Operation Desert Shield/Storm in Kuwait and Iraq. Accordingly, the adjustment of operational level staffs by either augmenting or reducing number of personnel seems rather appropriate under contingency theory.

Three major contributing works shed greater light on the development of contingency theory and its relevance to Army staff structure. In 1961, British organization theorists Tom Burns and George Stalker proposed the existence of two polar management systems/organizations called mechanistic and organic in their book *The Management of Innovation* after studying companies in the electronics and research/development industries. Mechanistic organizations perform like machines with a high degree of predictability and accountability. Specialization, high horizontal and vertical differentiation, high formalization, centralization, and vertical communication characterize mechanistic structures. On the other hand, organic organizations perform more like living organisms with a high degree of flexibility, adaptability, and innovation. Generalization, high horizontal and vertical integration, low formalization, decentralization, and lateral communication describe organic structures. Based on this typology, Burns and Stalker observed that mechanistic organizations outperformed organic organizations in stable environments and vice versa. They identified innovation as the key contingency factor, and traits like formalization and centralization hampered the ability of mechanistic organizations to adapt and survive in unstable, changing environments.[24]

Paul Lawrence and Jay Lorsch followed up this study in 1967 with the publication of *Organization and Environment: Managing Differentiation and Integration*. Also believing in the correlation of organizational structure and environment to organizational performance, they conducted

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[24] Hatch and Cunliffe, 110-111.

their study in two phases. The first phase focused on six organizations in the plastics industry trying to find the relationship between uncertainty and differentiation. They studied the degrees of uncertainty to four dimensions of differentiation: formality, task vs. relationship, time orientation, and goal orientation. Lawrence and Lorschusing, like Burns and Stalker, found that departments such as production operating in stable environments tended to be more formalized and hierarchical than departments like research and development working in uncertain environments. Departments like sales facing task uncertainty emphasized relationships whereas departments like production facing relative task certainty emphasized task-orientation. Time orientation tended to be short for the sales and production departments and long for research and development. And not surprisingly, the various departments differed in goal orientation, with sales concerned with customer satisfaction and production with costs.[25]

The second phase examined two packaged food industry organizations, considered to operate in an unstable environment, and two container industry organizations, assumed to work in a stable environment, to compare against the plastic industry organizations. They concluded that a high degree of differentiation was necessary to be successful in unstable environments, but a high degree of integration was necessary for success in both stable and unstable environments. The means of integration differed, however. Centralized and hierarchical structures tended to be more appropriate in stable environments while decentralized and flatter structures performed better in unstable environments.[26]

Around the same time as Lawrence and Lorsch's publication, Aston University researchers in the United Kingdom conducted their own empirical study. They collected data from fifty-two organizations and quantified six dimensions of organizational structure to include centralization, flexibility, configuration, formalization, specialization, and standardization. Testing centralization in particular, the Aston researchers determined at what level in these organizations thirty-seven common decisions were

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[25] Ibid., 112.

[26] Ibid., 113.

made. They concluded based on this data that size plays a role in shaping structure. Increase in the size of an organization increased the degree of centralization. This meant that larger organizations made final decisions at much higher levels than smaller organizations. It also meant less involvement from lower level personnel in large organizations.[27]

The Aston University study draws a positive relationship between size and centralization, but numerous conflicting studies exist concerning the relationship between size and flexibility. As Burns and Stalker noted, centralization characterizes mechanistic organizations and flexibility characterizes organic organizations. These two concepts appear diametrically opposed, meaning more centralized organizations tend to be less flexible. Therefore, larger size organizations exhibit more centralization and less flexibility. James Quinn, a business school professor at Dartmouth, agrees that smaller businesses are more flexible because they are less constrained by bureaucracy.

Variations exist in case studies depending on the industry and the definition of organizational effectiveness. For instance, organizational effectiveness for many businesses means financial viability or profitability. Organizational effectiveness may vary further depending on the sub-organizations, or departments, of such businesses. Sales departments may define effectiveness as number or amount of sales whereas production may define effectiveness as efficiency or reduction in costs per units produced.

These studies and contingency theory as a whole challenge the mantra that "an Army must train as it fights."[28] Inherently, the training environment is much more stable and thus the centralized, hierarchical staff system works. In a more unstable, uncertain environment characteristic of the battlefield, the staff organization may require modification to be more flexible to adapt to changing situations and requirements. This suggests that the modified table of equipment, which is a wartime

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[27] Ibid., 114.

[28] General Robert H. Scales, *Certain Victory: The U.S. Army in the Gulf War* (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 1994), 12.

authorization of personnel, should reflect the structure of an organization designed for success in a fluid, changing, complex, uncertain environment. That may mean less centralization, less formalization, and less structure period. Size magnifies this problem. The larger the organization, the larger the centralization, and the less is its flexibility.

Organizational Design

Organizational design theories prescribe addressing the structures and processes of organizations in order to enhance performance. A good organizational design, from a modernist perspective, attempts to optimize organizational performance by using criteria such as efficiency and effectiveness. An organizational design is efficient if it reduces the amount of time, energy, and resources to accomplish organizational goals; it is effective if it facilitates the members' awareness of differentiated activities and promotes integration of those activities.[29] While there are many variations, prominent organizational designs, or organizational structures, are functional, project, and matrix.

The functional design groups activities according to their functions, or the nature of the work performed. This design helps deal with increased demands placed on the organization from differentiation. It also maximizes economies of scale as a result of specialization because the structure tends to eliminate duplications in effort. Furthermore, the transparent nature of the line charts allows members to easily recognize their roles as well as others within the organization as a whole. The drawback of this structure, however, is that members of a particular function may place greater loyalty to the function rather than the organization. Worse yet, the hierarchical nature of the functional design which gives the person atop the structure tight control over operations can become overburdened with decision making.[30] Napoleon's staff serves as a classic example of this type of organizational design.

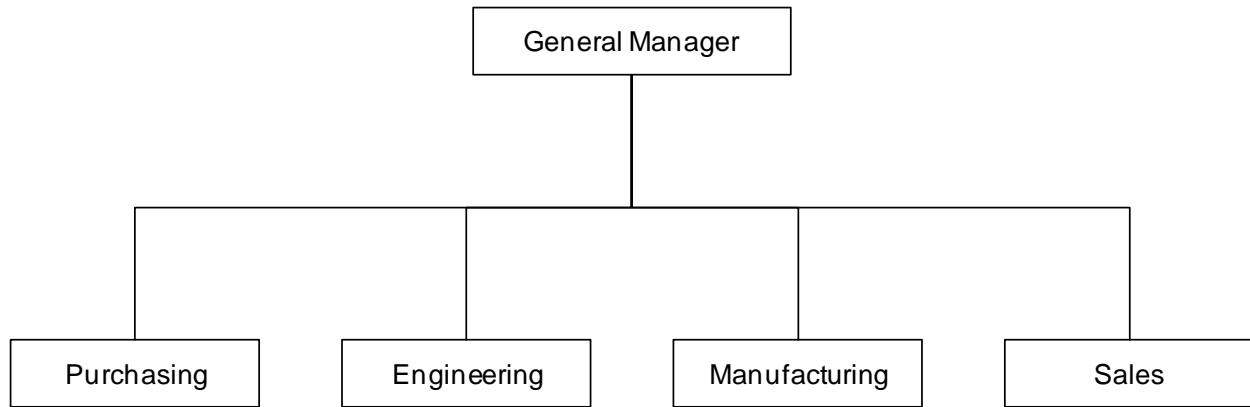[29] Ibid., 296.

[30] Ibid., 297-299.

Figure 1. Sample Functional Design/Structure[31]

The project design or project structure uses horizontal and diagonal relationships to organize groups of people. As the name implies, organizations use them to focus resources on a particular project for a given period. They are useful when the task requires coordination, research, and planning beyond routine functions.[32] Project structures tend to be much more flexible and responsive, partly due to their size. The project manager works across functional, vertical lines to accomplish project goals. Elements of the hierarchical line functions still exist; however, the authority and responsibility of the project manager may at times supersede those of the functional managers.[33] The way the Prussian General Staff organized throughout the chain of command by departments corresponding to theaters of war reflects this design.

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[31] Ibid., 298. The example in the book shows an additional functional component of accounting.

[32] Fred Luthans, Organizational Behavior (New York: McGraw-Hill, 1977), 163.
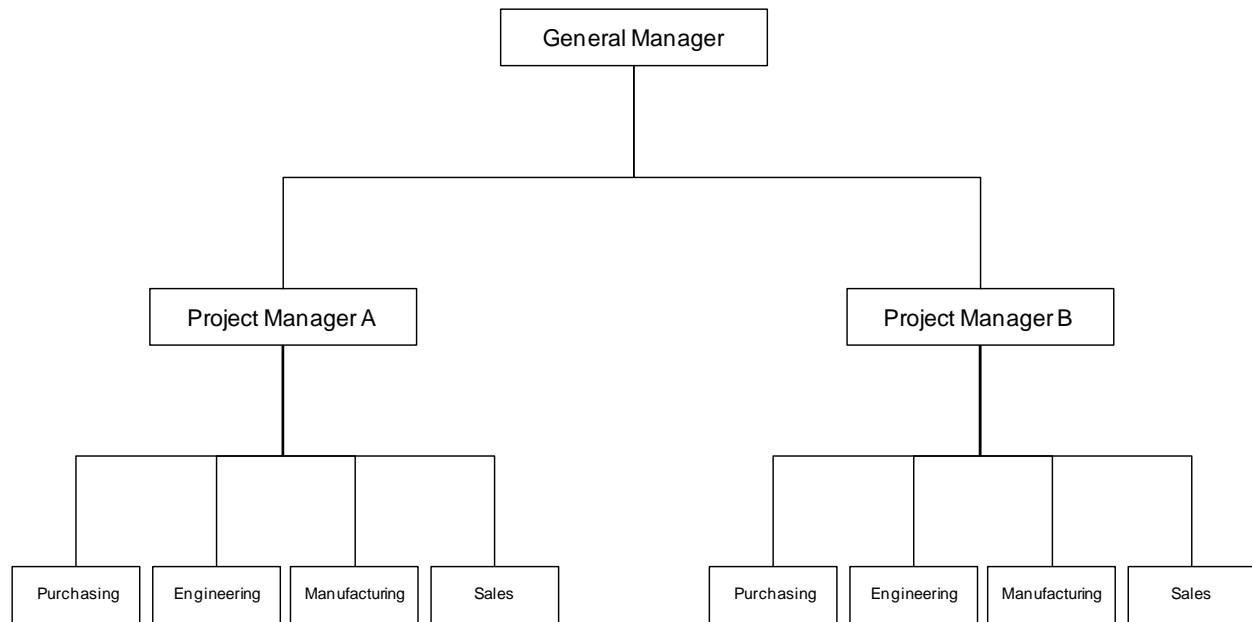
[33] Ibid., 169.

Figure 2. Sample Project Design/Structure[34]

The matrix design is a combination of the functional and project structures. It takes advantage of

both designs: the efficiency of functional designs and flexibility of project designs. Managers on the

functional side provide the expertise of the functional specialists. Managers on the project side oversee

specific projects, coordinating efforts, allocating resources, and supervising the performance of project

members. The biggest disadvantage of the matrix design is the dual lines of authority created. Both the

members and managers tend to experience conflict in prioritizing work and assignment, respectively.

Despite this inherent difficulty, the advocates of the matrix design believe the advantages of flexibility

and maximizing the use of specialists outweigh the disadvantage of having two bosses.[35] Figure 3 shows a

matrix design in which solid lines connecting the specialists to the functional managers represent a

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[34] Ibid., 164-167. This modified example uses the components from the previous functional design.

[35] Hatch and Cunliffe, 302-302.

permanent relationship whereas the dotted lines connecting the specialists to the project managers are only temporary. The U.S. Army corps and division staffs use this organizational design.
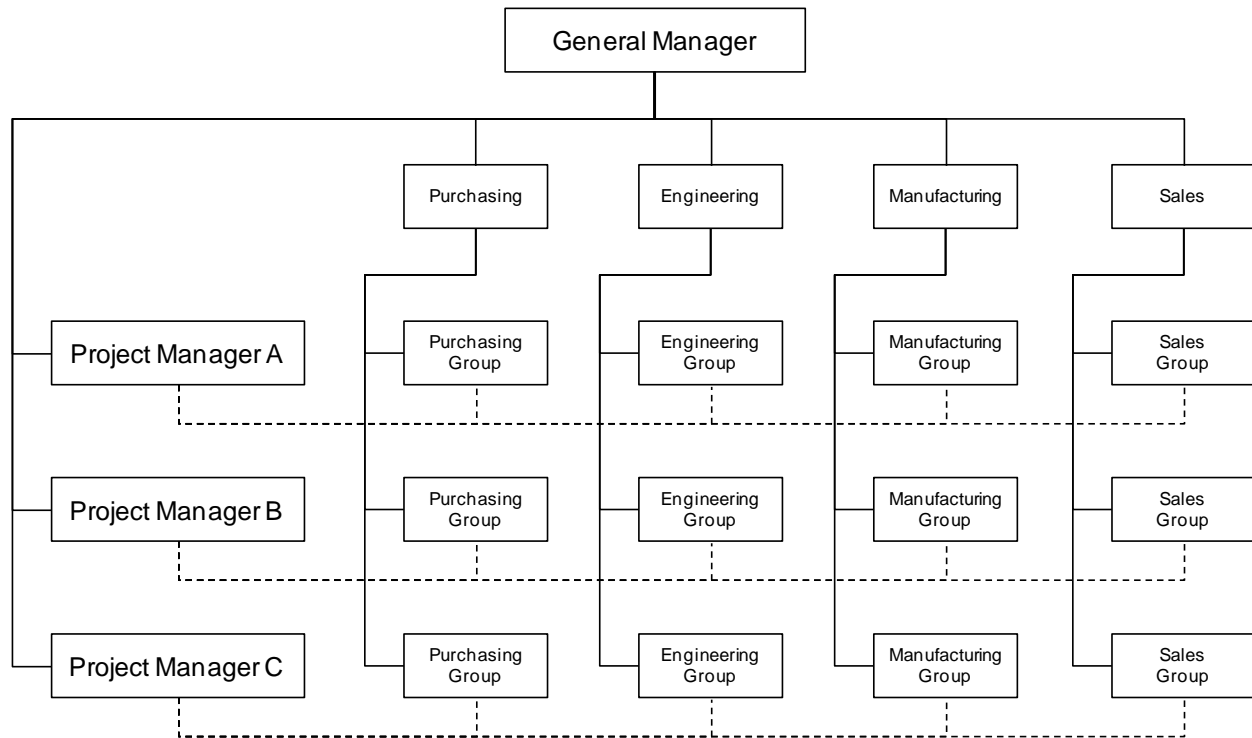

Figure 3. Sample Matrix Design/Structure (Functional Base)[36]

Size vs Efficiency, Effectiveness, and Efficacy

For the U.S. Army, organizational effectiveness is the accomplishment of its mission statement. According to FM-1 *The Army*, the mission of the U.S. Army reflects the Title 10, Section 3062(a) of the United States Code.

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[36] Luthans, 170. This modified example uses the components from the original functional design.

It is the intent of Congress to provide an Army that is capable, in conjunction with the

other armed forces, of

> (1) preserving the peace and security, and providing for the defense, of the United States,
> the Territories, Commonwealths, and possessions, and any areas occupied by the United
> States;
> (2) supporting the national policies;
> (3) implementing the national objectives; and
> (4) overcoming any nations responsible for aggressive acts that imperil the peace and
> security of the United States.[37]

More specifically, however, "the Army mission is to provide to combatant commanders the

forces and capabilities necessary to execute the National Security, National Defense, and National

Military Strategies."[38] The geographic combatant commands, corps, divisions, and so on all have their

focused mission statements nested under higher echelons. For these units, mission success equals

organizational effectiveness. However, one division's mission accomplishment does not necessarily

translate into corps' mission accomplishment, and another division's failure does not necessarily translate

into corps' failure. That is to say, winning a war does not necessarily mean subordinate commands proved

organizationally effective and vice versa.

The same notion holds true in evaluating staffs. Despite an organizationally ineffective staff, a

unit may overcome difficulties through the talents of the commander and subordinate units. Or a highly

effective staff may ensure unit victory by augmenting the shortcomings of a mediocre commander. The

barometer for effectiveness, then, differs for the staff than the unit. While a commander and his unit seek

mission accomplishment, the staff assists the commander to do just that. The ability of the staff to fulfill

its duties and responsibilities to the commander as well as the unit determines the effectiveness of the

staff organization. FM 3-0 lays out three staff tasks under mission command. While the commander

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[37] *FM-1 The Army*, (Washington, DC: Department of the Army, 2005), 2-7 thru 2-8.

[38] Ibid., 2-8.

exercises the art of command with his responsibilities, the staff provides "detailed systems and procedures to improve commander's understanding and support execution of missions."[39] Specifically, staffs conduct the operations process (plan, prepare, execute, and assess), knowledge and information management, and inform/influence and cyber/electromagnetic activities.[40] Hence, organizational effectiveness of U.S. Army staffs, for the purpose of this monograph, means the successful accomplishment of the above stated tasks to the satisfaction of the commanders.

To explain the proclivity of militaries to seek offensive doctrines, Barry Posen suggests these organizations do so to help increase their size and wealth. In turn, increases in size and wealth help organizations increase rewards for distribution to reduce internal uncertainty and buffer against unexpected events to reduce external uncertainty.[41] This concept may also help explain the tendency of staffs to expand in times of war. Unlike training exercises where some level of certainty and predictability exist, the uncertain environments of the battlefield cause commanders to seek as much certainty, predictability, and control as possible. As part of mission command, if the staff functions to provide the "science of control," then logic dictates the increase of the means that helps provide control: staff personnel. While the notion of wealth to the military services equals funding, wealth to the staff organization has little to do with money. It is knowledge and experience. A staff can accumulate this type of wealth at a low cost (in terms of lives) during interwar periods (training) or at a high cost during times of war. As Secretary of Defense Donald Rumsfeld famously stated, "You go to war with the Army you

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[39] FM 3-0 *Operations*, (Washington, DC: Department of the Army, 2011), 4-5.

[40] Ibid., 4-6.

[41] Barry R. Posen, *Sources of Military Doctrine: France, Britain and Germany Between the World Wars* (Ithaca: Cornell University Press, 1984), 49.

have."[42] Likewise, units go to war with the staffs they have. At that point, the only way to increase knowledge and experience in the staff organization is by augmenting with additional personnel.

Ori Brafman and Rod Beckstrom use interesting metaphors of a spider and a starfish to describe centralization and decentralization, respectively.[43] Unlike the creatures, however, the concepts of centralization and decentralization are not mutually exclusive. Rather they advocate the existence of a "sweet spot… along the centralized-decentralized continuum that yields the best competitive position."[44] In much the same manner, the quest for an effective staff is not a large staff or small staff proposition. Along the size continuum for staffs, from one to infinity, a "sweet spot" theoretically exists. This sweet spot remains dynamic depending on many factors such as operational environment, threat, mission, and echelon.

A concept in economics reinforces the possibility of optimum staff size for a given situation. The law of diminishing returns states that "as the quantity of a variable input increases, with the quantities of all other factors being held constant, resulting *increases* in output eventually diminish."[45] Due to the infallible nature of this concept, proved to be true in *all* existing production systems, economists have labeled the principle a law and not a theory. It is not a stretch to think of a staff organization as a production system. The staff produces plans, orders, briefings, estimates, and other things critical to running operations. Applying the law of diminishing returns to the staff organization, as the number of staff personnel increases, with all other factors remaining constant, resulting increases in products eventually diminish. At some point marginal productivity decreases, meaning products per individual;

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[42] In response to a question regarding the lack of armor for HMMWVs at a town hall meeting in Camp Buehring, Kuwait, on December 8, 2004.

[43] Ori Brafman and Rod A. Beckstrom, *The Starfish and the Spider: The Unstoppable Power of Leaderless Organizations* (New York: Portfolio Trade, 2008), 34-35.

[44] Ibid., 189.

[45] James L. Pappas, Eugene F. Brigham and Mark Hirschey, *Managerial Economics*, 4th ed. (Chicago: Thomson Learning, 1983), 211.

however, total productivity continues to increase. Alternatively stated, the efficiency of the system decreases at a certain point even though the effectiveness, in terms of production, continues to increase.

This is where the principles of business and economic models diverge from that of the military. The ultimate goal for businesses is making profit, and that causes them to regard efficiency more highly. The ultimate goal for the military is winning wars, so rather than focusing on marginal productivity or efficiency, it favors total productivity or effectiveness. The trend of increasing the size of staffs seems justified under this notion as long as the staffs and the units get the job done.

What the military must realize is that continuing to increase staff size eventually causes even total productivity to decrease. Under the law of diminishing returns, "a point may be reached where the quantity of the variable input factor is so large that total output actually begins to decline with additional employment of that factor."[46] In a staff organization, this may mean that there are so many personnel that they actually interfere with each other's work. The military may do well to recognize the role of size in determining both efficiency and effectiveness of staffs.

Major General (Retired) William Stofft, a former commandant of the U.S. Army War College, agrees that "unnecessary layers of staffs impede the process of control at the operational level of war." He uses a locomotive and airplane metaphor to compare to staffs and plans.

> The locomotive has few controls, perhaps a throttle and a brake; it does not provide many options for the engineer, but it is reliable and strong. The airplane, on the other hand, has a myriad of controls and many options, but it is harder to insure reliability. Once the locomotive is in motion there is a good chance it will reach its destination, but there are few options on the way. The airplane has an almost infinite number of options, but is subject to a wide variety of problems. A railroad needs a smaller staff to operate effectively, while an aviation system demands a relatively larger one. This is another way of saying that simple plans and a minimum layering of staffs are more apt to gain success at the operational level than complex plans which will require large staffs to execute and monitor.[47]

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[46] Ibid., 212.
[47] William Stofft, "Leadership at the Operational Level of War," in Clayton R. Newell and Michael D. Krause, *On Operational Art*, (Washington, D.C.: Center of Military History, 1994), 194.

General Stofft also points out that there is a correlation between control and reliability with the size of staffs. A larger staff allows greater control of the requirements and details but reduces reliability in the implementation of the commander's intent due to greater potential for human error and greater amount of time required. He recommends that "the first casualty of war at the operational level should be the size of the staffs."[48] The commander simply does not have time to interact with everyone on a large staff. Ultimately, the commander relies on a small core group who understands and implements his vision.

Similar insight can be found in the *Laozi*, the main scripture for Daoists. In regards to behavior conducive to efficacy, the Chinese philosophy cautions against excess because it is counterproductive. A relevant *Laozi* adage states, "Whoever stands on tiptoe is not steady, and whoever takes huge strides cannot walk properly."[49] François Jullien explains the implications of this excessive behavior:

> As the saying goes, if you over do it, not only are your efforts in vain, but you undermine even the possibility of an effect. Too much turns into too little, for excess not only threatens to reverse or exhaust the effect, but furthermore impedes what might have happened – one might even say what was just waiting to happen. The effect is quite simply prevented from *resulting*. A double price is then paid: internally, that surplus effectiveness undermines the effect, creating an obstruction; meanwhile, externally it causes the effect to be "detested." For, instead of passing unnoticed, the excessiveness of the effect draws attention to it, provokes resentment, and attracts resistance, causing it to be rejected.[50]

Jullien's explanation raises some additional concerns when applied to U.S. Army staffs. As stated earlier, the internal impact of excessive numbers of staff personnel on the organization is simply reduced performance in terms of proper mission planning and orders production. Additionally, a subordinate unit, such a Brigade Combat Team (BCT), may indeed detest or resent seemingly "extra" manpower resident in the division staff.

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[48] Ibid.

[49] François Jullien, *A Treatise On Efficacy: Between Western and Chinese Thinking* (Honolulu: University of Hawaii Press, 2004), 107.
[50] Ibid.

Form Follows Function

Louis Sullivan, an American architect in the late 19th century, wrote "form ever follows function" in his 1896 article "The Tall Office Building Artistically Considered" in Lippincott's Magazine.[51] Now a commonly accepted principle in the architecture industry, the phrase "form follows function" stresses the importance of designing structures consistent with the purpose. Likewise, today's architectural design teams employ a planning technique called charette to develop concepts. Charettes are collaborative sessions that foster brain-storming and dialogue to help create ideas for project designs. What is interesting is the "form" that charettes take in following their function of developing concepts. In its tips for charette procedure, Iowa State University recommends dividing participants into small groups of five to seven people.[52] Obviously, a charette composition of one individual fails to meet the purpose of a charette. Practice may have revealed two to four to be insufficient in generating ideas and greater than seven to be too distracting. Whatever the reason, this suggests that five to seven people represent the ideal form for charettes.

This notion of ideal team size goes beyond that of charettes and the architecture industry. Professional Communications, Inc. collected data on 2,267 teams along a vast range of professions in the United States, and the results showed that five to eight people teams were the most common.[53] Based on

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[51] Wikipedia, "Form Follows Function", accessed on July 25, 2011, http://en.wikipedia.org/wiki/Form_follows_function

[52] Iowa State University Extension, "Tips For Charette Procedure", accessed on July 27, 2011, http://www.extension.iastate.edu/communities/tools/decisions/charette.html

[53] Beatrice J. Kalisch and Susanne Begeny, "Improving Patient Care in Hospitals: Creating Team Behavior," *Journal of Organizational Engineering* 6, no. 1 (October 2005): 4, quoted in Michael L. Hammerstrom, *Size Matters: How Big Should a Military Design Team Be?* (Fort Leavenworth, KS: School of Advanced Military Studies, 2010), 20-21.

that information and other data, U.S. Army Major Michael Hammerstrom recommended that the optimal size for a military design team should be five to six people.[54]

The point here is not to derive an ideal staff size based on the above or any other information. The point is to show that if form does indeed follow function, then there exists some ideal form based on the nature of the function. Now, less ideal forms or imperfect forms may still carry out part of the function or the whole function, albeit less efficiently or effectively. Recognizing the existence of a correlation between size and effectiveness, or form and function, is the first step towards implementing necessary organizational changes.

Staff Role and Organization

The beginning of military staff in history remains unclear. While some may point to Frederick the Great or Napoleon, the true genesis of the military staff probably occurred during ancient times when some commander or warrior chief sought counsel from others.[55] As the scope and complexity of warfare increased from simple engagements and battles to operations and campaigns, it was no longer possible for one man, however brilliant he may be, to attend to the necessary details.

The role of the military staff, then, is to assist the commander. In *The Duties of the General Staff*, General Bronsart von Schellendorff of the German Great General Staff defined the staff as "the assistants of the commander."[56] As part of the mission command system, FM 5-0 *The Operations Process* states that "staff members assist commanders" and perform the following activities: provide relevant information and analyses, maintain running estimates and make recommendations, prepare plans and

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[54] Michael L. Hammerstrom, *Size Matters: How Big Should a Military Design Team Be?* (Fort Leavenworth, KS: School of Advanced Military Studies, 2010), 67.

[55] J. D. Hittle, *The Military Staff, Its History and Development* (Westport, Conn.: Praeger, 1975), 2.

[56] Ibid., 3.

orders, and monitor, control and assess operations.[57] FM 6-0 *Mission Command: Command and Control of Army Forces*, to which FM 5-0 defers in discussing staff duties and responsibilities, further elaborates that "staff activities focus on assisting the commander in mission accomplishment."[58] To assist the commander, FM 6-0 lays out sixteen common activities, responsibilities, and duties of staff members. These include advising and informing the commander, preparing, updating, and maintaining staff estimates, making recommendations, preparing plans and orders, assessing execution of operations, managing information within fields of interest, identifying and analyzing problems, performing staff coordination, conducting training, performing staff assistance visits, performing risk management, conducting staff inspections, performing staff writing, conducting staff research, performing staff administrative procedures, and exercising staff supervision.[59]

Understanding that the essence of the military staff is to assist the commander in accomplishing the unit's mission, regardless of the plethora of subordinate tasks, begs the question of how. The evolution of staff roles and resulting organizations in modern armies, notably the French and Prussian models from the eighteenth century, shed light on the roles and organization of operational staffs of the U.S. Army. It is important to recognize the considerable influence of European models in looking at today's U.S. Army staff organization.

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[57] *FM 5-0 The Operations Process*, (Washington, D.C.: Department of the Army, 2011), 1-2 thru 1-3.

[58] *FM 6-0 Mission Command: Command and Control of Army Forces* (Washington, D.C.: Department of the Army, 2003), D-2.

[59] Ibid., D-2 thru D-8.

French System

Prior to the Napoleonic Wars, the role of military staffs tended to be administrative in nature. They usually involved legal issues, organization of formations, supplies, and delivering messages.[60] With a dispersed system of fighting using his *corps d'armée*, even a genius like Napoleon Bonaparte required the assistance of his staff to command and control his vast forces during the nineteenth century. Systems in place during campaigns under the Old Regime facilitated the expansion of Napoleon's headquarters and proliferation of subordinate staffs, which helped in controlling large, widely dispersed forces.[61] However, because of his genius, the role of the staff was limited. Napoleon's insistence "not only on one-man rule but also on one-man command" resulted in an operational staff reduced to "assembling information" and "transmitting reports and orders" rather than helping Napoleon generate operational and strategic plans.[62] Napoleon claimed to be able to do everything related to war, and his schedule filled with activities such as reconnoitering, questioning prisoners, gathering intelligence, and writing orders underscored minimal reliance on his staff.[63] That was the very flaw of Napoleon's system. With him as the only one providing direction, the efficiency of his staff system decreased as his empire increased.[64]

The resulting organization of his staff reflected this hierarchical character. The Imperial headquarters consisted of three functional and independent components: the Maison, the Administrative Headquarters, and the General Staff. The processing of intelligence highlights the centralized nature of this staff system. The Statistical Bureau in the Cabinet of the Maison obtained strategic intelligence and

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[60] General Rupert Smith, *The Utility of Force: The Art of War in the Modern World* (New York: Alfred A. Knopf, 2007), 55.

[61] Peter Paret, "Napoleon and the Revolution in War," in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret, Gordon A. Craig, and Felix Gilbert (Princeton, NJ: Princeton University Press, 1986), 125.

[62] Ibid., 137.

[63] Martin van Creveld, *Command in War* (Cambridge: Harvard University Press, 1987), 63-64.

[64] Smith, 56.

reported directly to Napoleon. Berthier's General Staff, on the other hand, provided the operational

intelligence gathered by cavalry units. In addition, Napoleon sent adjutant generals and the *officiers*

d'ordonance on special intelligence gathering missions and also reported directly back to him.[65] Figure 4

details the organization of Napoleon's staff which exemplifies the classic functional organization.
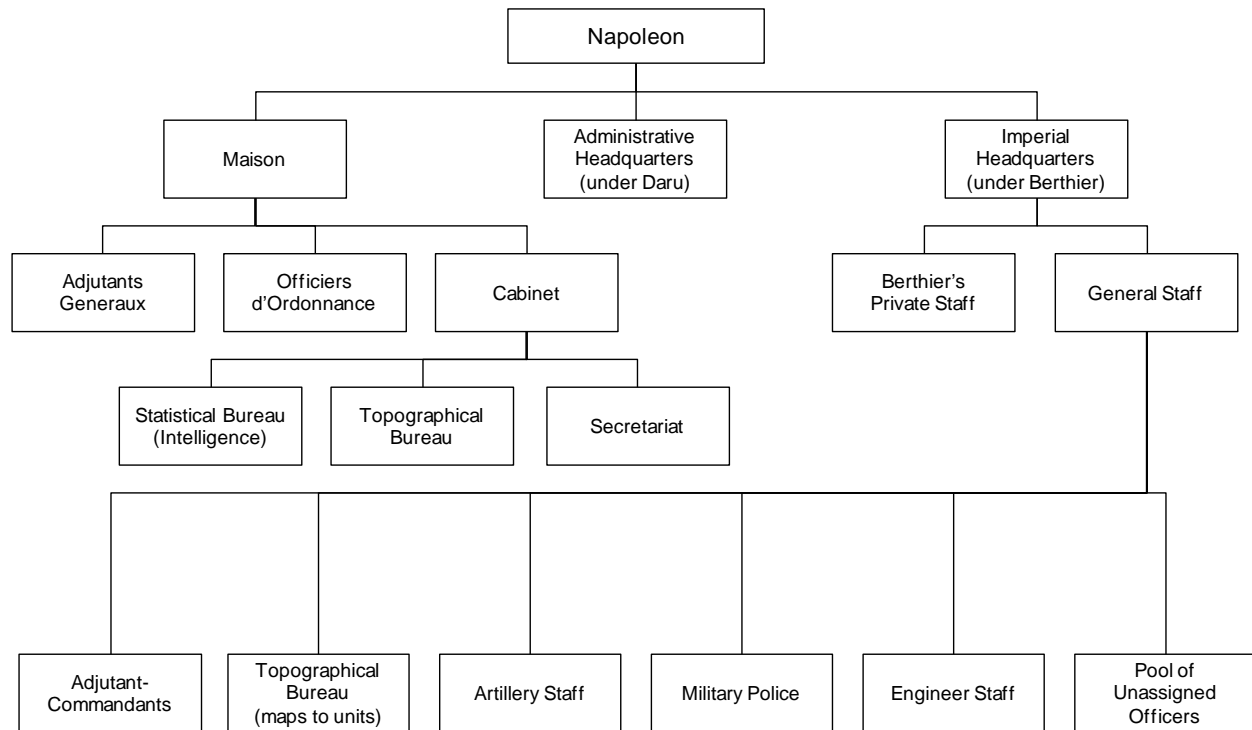

Figure 4. Organization of Napoleon's Headquarters, 1813[66]

Prussian System

In response to repeated defeats at the hands of Napoleon and French forces, Prussian military

reformers instituted a staff system shaped by *Bildung*, a systematic way of professional development.[67]

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[65] Creveld, *Command in War*, 66-67.

[66] Ibid., 72. The Administrative Headquarters component was added based on description of Napoleon's
staff on page 71.

Rather than hoping for a figure like Frederick the Great, Gerhard von Scharnhorst decided that the Prussian army must figure out a way to win without a genius at the helm. He reformed the staff system centered on specialized military education for intelligent junior and mid-level officers.[68] With this reform, the role of the staff changed and thus differed from that of Napoleon's staff system. More than merely assistants, the Prussian staff officers embodied "a sort of central nervous system for strategic planning and operational control that would harness the *collective* wisdom of the best minds the army could recruit."[69] In addition to controlling the movement of military formations, the General Staff was able to coordinate between the political and military leaderships.[70] The Prussian General Staff and subordinate staffs assumed greater responsibility overall in exercising command and control.

From the time Scharnhorst created the forerunner to the *Truppengeneralstab* (General Staff with the Troops) in 1806 with a provision of regular staff officers serving with field units, the General Staff went through several reorganizations. What did not change was the modest number serving on the General Staff, in both the Berlin General Staff and *Truppengenereralstab*. From 1853 on, approximately twenty-one officers served on the Berlin General Staff, mainly in the three departments representing the three theaters of war, and sixty-six men served on the army, corps, and division headquarters staffs. This size and structure was possible given that the Prussian General Staff officers were generalists, competent planners in various aspects of war. Figure 5 gives a breakdown of the numbers at each echelon. This organization resembles the project structure described earlier in that the breakdown focuses on a theater of war.

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[67] MacGregor Knox, "Mass Politics and Nationalism as Military Revolution: The French Revolution and After," in *The Dynamics of Military Revolution, 1300-2050*, ed. MacGregor Knox and Williamson Murray (New York: Cambridge University Press, 2001), 70.

[68] Ibid., 71.

[69] Ibid., 72.

[70] Smith, 55.

General Staff
(5)

Western Department (5) | Central Department (5) | Eastern Department (5) | Artillery Inspector General (1)

Berlin General Staff

1st Army HQ (7) | 2nd Army HQ (7) | 3rd Army HQ (7)

Corps (3) | Corps (3) | Corps (3) | Corps (3) | Corps (3) | Corps (3) | Corps (3) | Corps (3) | Corps (3)

Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1) | Div (1)

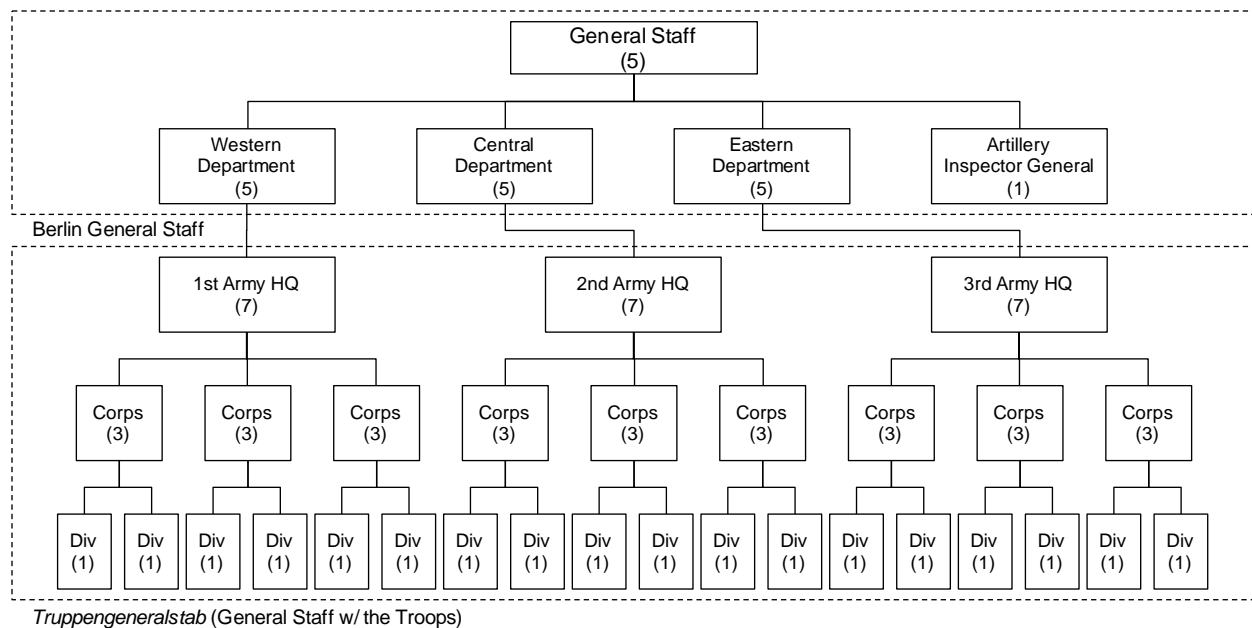*Truppengeneralstab* (General Staff w/ the Troops)

Figure 5. Organization of Prussian General Staff, 1853[71]

American Way of Warfare

Walter McDougall describes eight American traditions in *Promised Land, Crusader State* that have guided American policies throughout the history of the United States.[72] In turn, they have influenced American military traditions. Liberty, the first of McDougall's traditions, was the very reason for going to war with England, and in a way the concept ran counter to the notion of security. This would cause the founders and the American people to have a fear of standing armies and has caused an increased reliance on citizen-soldiers. American military history shows the effects of this foundation. The United States has consistently ramped up the number of forces to meet threats and downsized following the conclusion of

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[71] Creveld, *Command in War*, 110-111. This chart was created based on description of the General Staff.

[72] Walter A. McDougall, *Promised Land, Crusader State: The American Encounter with the World Since 1776* (London: Mariner Books, 1998), 10.

conflicts. The size of headquarters staff has corresponded to this trend, as evidenced by the Civil War and World War I.

Civil War

The Civil War marks a good point in American military history to look at staff organizations. Napoleon's success in Europe had influenced many American military leaders during the mid-nineteenth century, and one of the insights gleaned from the French system was the concept of *corps d'armée*.[73] So it came as little surprise that the Civil War introduced the corps organization for command and control for the first time in American history.[74] Due to the sheer size of formations numbering 15,000 to 20,000 under their commands, Confederate generals recognized the need for a better command and control structure than temporary, unofficial corps. General P.G.T. Beauregard, in a letter to the Confederate Secretary of War J.P. Benjamin, articulated this point:

> What is required is prompt action, for we may at any time be called upon to meet again the Grand Army of the North [Union Army of the Potomac] which this time will do its best to wipe out the disgrace of Manassas, and these officers ought to have a few days to organize their divisions and staffs before the battle commences… general Joseph E. Johnston has seven and I nine brigades of from three to five regiments of each of volunteers, so that our orders have to be multiplied and repeated, that a genius of napoleon would get entangled on a day of battle. What we want is a simplification of the whole system with one head and several subordinate branches.[75]

Secretary Benjamin agreed and promptly acted on the recommendation allowing the creation of subordinate command positions and restructuring of the Confederate Army.

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[73] Robert M. Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," *The Journal of Military History*, v. 55, no. 1 (January 1991), 22.

[74] Ibid.

[75] *The War of the Rebellion: A Compilation of the Official Records of the Union and Confderate Armies* (Washington: GPO, 1880-1901), ser. 1, 5: 882, D-1; 15: 15-16, cited in Robert M. Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," *The Journal of Military History*, v. 55, no. 1 (January 1991), 24.

The decision to restructure the Confederate Army to a corps-centric organization from a division-centric one really did not have a corresponding impact on the size of the staff. In January 1862, Beauregard's First Corps, despite having 22,645 infantry, 672 cavalry, and 1,434 artillerymen, for a total of 24,751, had a staff of only thirteen officers.[76] As of July 1863, the First Corps, now under the command of Lieutenant General James Longstreet, consisted of 35,386 personnel in three divisions and two artillery battalions; however, the number of staff actually decreased to eleven officers.[77] In reality, the numbers for First Corps headquarters were slightly higher. Longstreet's reports to the Army of Northern Virginia in December 1862 indicated thirteen general staff officers present for duty but another fifteen listed separately. Additionally, his reports did not account for enlisted soldiers, as well as civilians, that were part of the First Corps Headquarters.[78]

Even so, in comparison to modern armies and modern staffs, the size of corps staffs during the Civil War appears very small. The driving force behind this trend may have been a philosophical aversion to large staffs.[79] When the Congress of the Confederate States introduced and processed a staff reorganization bill, Robert E. Lee stressed the importance of keeping the army mechanism simple and recommended small authorizations for staff reasoning that it would be easier to increase rather than

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[76] *The War of the Rebellion: A Compilation of the Official Records of the Union and Confderate Armies* (Washington: GPO, 1880-1901), ser. 1, 5: 882, D-1; 15: 1040, cited in Robert M. Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," *The Journal of Military History*, v. 55, no. 1 (January 1991), 24.

[77] *The War of the Rebellion: A Compilation of the Official Records of the Union and Confderate Armies* (Washington: GPO, 1880-1901), ser. 1, vol.27, pt. 2-d Reports: 383-85, cited in Robert M. Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," *The Journal of Military History*, v. 55, no. 1 (January 1991), 26.

[78] J. Boone Bartholomees Jr, *Buff Facings and Gilt Buttons: Staff and Headquarters Operations in the Army of Northern Virginia, 1861-1865* (Columbia: University of South Carolina Press, 1998), 10.

[79] Ibid., 7.

decrease authorized strength.[80] President Jefferson Davis criticized Congress on the same bill for

authorizing too many staff officers:

> They would encourage love of ostentation and feed a fondness for vain display, which should rather be discouraged than fostered… The experience of this war has demonstrated that the most efficient commanders, those who have attracted the respect, gratitude, and admiration of their country, have avoided the large retinue of personal staff which this bill would seem to sanction as proper or desirable.[81]

Confederates, like Davis, often praised and remarked about Robert E. Lee's propensity towards

having a small staff. Major General Sterling Price's aide, Major John Tyler, regarding his experience with

the Army of Northern Virginia, reported the following to his boss:

> In Lee's army everything is reduced down to the smallest compass. Your own headquarters establishment is more numerous and bulky. He rides with only two or three members of his staff and never takes with him an extra horse or servant, although he is upon the lines usually from daybreak until dark. He is almost unapproachable, and yet no man is more simple, or less ostentatious, hating all pretensions."[82]

Although Lee's leadership style favored small staffs, the notion of the Army of Northern Virginia having

a small headquarters is far-removed from the truth. People perceived Lee's staff as small because they

saw him in various places accompanied by a small entourage. They only saw part of a larger picture. In

reality, his staff was much larger and operated from multiple locations. Although the number of personnel

who lived and operated out of the primary headquarters was small, that did not account for Brigadier

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[80] Douglas Southall Freeman, *Lee's Dispatches: Unpublished Letters of General Robert E. Lee, C.S.A., to Jefferson Davis and the War Department of the Confederate States of America, 1862-65, New ed.* (Baton Rouge: Louisiana State University Press, 1994), 81-82, cited in J. Boone Bartholomees Jr, *Buff Facings and Gilt Buttons: Staff and Headquarters Operations in the Army of Northern Virginia, 1861-1865* (Columbia: University of South Carolina Press, 1998), 8.

[81] James D. Richardson, *A Compilation of the Messages and Papers of the Presidents: Ulysses S. Grant* (World Cultural Heritage Library) (Intl Business Pubns USA, 2009), 1:464, cited in J. Boone Bartholomees Jr, *Buff Facings and Gilt Buttons: Staff and Headquarters Operations in the Army of Northern Virginia, 1861-1865* (Columbia: University of South Carolina Press, 1998), 8.

[82] *The War of the Rebellion: a Compilation of the Official Records of the Union and Confederate Armies, ser. 1, vol. 51, pt. 2,* p.994, cited in J. Boone Bartholomees Jr, *Buff Facings and Gilt Buttons: Staff and Headquarters Operations in the Army of Northern Virginia, 1861-1865* (Columbia: University of South Carolina Press, 1998), 8.

General William Pendleton's artillery headquarters, provost guard, and signal detachment. Based on using the greatest numbers throughout time from strength reports of the Army of Northern Virginia in the Official Records, the actual strength of Lee's headquarters may have been as high as 695 officers, enlisted men, and civilians.[83]

While the Confederate Army struggled with quantity, the Union Army had a different problem with the quality of staffs. Despite finally organizing the Army of the Potomac into the corps system over Major General George B. McClellan's objections, the staffs were ineffective in managing the combined arms formations of infantry, cavalry, and artillery.[84] With artillery in particular, there was a lack of competent officers in the corps staffs to manage concentrating fires and resupplying ammunition. Issues such as refusal by the War Department to expand higher grade positions within the artillery branch and greater incentives for promotion in volunteer infantry units certainly hindered efforts to improve the staff.[85] However, there was a systemic problem with the lack of education of staff officers that could not be remedied in a short period of time. General McClellan expressed his frustration regarding the nature of the staff system shortly after taking command of the Army of the Potomac:

> One of the greatest defects of our military system is the lack of a thoroughly instructed STAFF CORPS, from which should be furnished chiefs of staff for armies, army corps, and divisions, adjutants general, and aides-de-camp and recruiting officers. Perhaps the greatest difficulty that I encountered in the work of creating the Army of the Potomac arose from the scarcity of thoroughly instructed staff officers, and I must frankly state that every day I myself felt the disadvantages under which I personally labored from the want of that thorough theoretical and practical education received by the officers of the German General Staff.[86]

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[83] J. Boone Bartholomees Jr, *Buff Facings and Gilt Buttons: Staff and Headquarters Operations in the Army of Northern Virginia, 1861-1865* (Columbia: University of South Carolina Press, 1998), 10.

[84] Robert M. Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," *The Journal of Military History*, v. 55, no. 1 (January 1991), 34.

[85] Ibid., 35.

[86] J. D. Hittle, *The Military Staff, Its History and Development* (Westport, Conn.: Praeger, 1975), 189.

The quality of staff officers would eventually improve over the course of the Civil War. They learned their lessons the hard way. Even though neither the Union nor Confederate armies "reached the level of organization or efficiency" in comparison to their contemporaries in France and Prussia, the Civil War experience improved their understanding of the importance of an organized staff system.[87]

Despite a cultural proclivity towards a smaller staff, the Civil War saw an expansion of the size in staffs due to a need to better command and control large forces in widely dispersed areas. True to American military tradition, the era of Reconstruction immediately following the war brought downsizing of regular forces and a corresponding decrease in the size of staffs. This continued the problem of lack of properly trained staff officers and would reveal itself again in 1898 during the Spanish-American War.

World War I

Based on poor performance during the Spanish-American War, the Army recognized the need for permanent units prepared for war. Early twentieth century saw the replacement of army corps with infantry divisions as the basic combined arms units.[88] In 1905, the recently formed General Staff reevaluated the structure of the field army and determined that the infantry division was better suited for combining arms due to its smaller footprint on roads in the United States. Compared to an army corps requiring thirty-five miles, a division requiring only eleven miles provided an improved organizational framework for the anticipated mission and environment in North America.[89]

When World War I broke out on 28 July 1914, the headquarters of an infantry division in the United States Army numbered twelve officers, twelve enlisted, and three civilians for a total of twenty-

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[87] Robert M. Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," *The Journal of Military History*, v. 55, no. 1 (January 1991), 46.

[88] John B. Wilson, *Maneuver and Firepower: The Evolution of Divisions and Separate Brigades* (Washington, D.C.: Center of Military History, 1998), 23.

[89] Ibid., 24.

seven personnel to support total division strength of 22,665 personnel.[90] The same table of organization

authorized a cavalry division headquarters with twelve officers, sixteen enlisted, and three civilians for a

total thirty-one personnel to support a much smaller aggregate strength of 10,161 personnel.[91] Shortly

following the declaration of war on Germany by the U.S. Congress on 6 April 1917, the War Department

published new tables of organization for the infantry and cavalry divisions. Although the general structure

remained the same, the General Staff made changes to adapt the division organization and capability to

suit what was happening in Europe.[92] The lethality of the battlefield necessitated increasing organic

firepower. The divisions gained more riflemen and more field artillery units and equipment. An additional

engineer battalion, a larger signal battalion, and a new aero squadron enhanced the division's

capabilities.[93] To facilitate operating on a more complex battlefield with added capabilities and

equipment, the new tables provided a division headquarters troop and brigade headquarters detachments

responsible for providing "mess, transport, and administrative support."[94]

Increased roles and responsibilities required of the division staff caused corresponding increases

in size. The newly structured infantry division with a total strength of 28,334 mandated 153 personnel in

the headquarters, an increase of 126 personnel.[95] The new cavalry division with 18,176 troops required a

headquarters staff of 150 personnel, 119 more than before.[96]

Between 6 April 1917, when the United States declared war on Germany, and 12 June 1917,

when the first troops of the American Expeditionary Forces deployed to France, the War College Division

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[90] *Tables of Organization: United States Army* (Washington, D.C.: Government Printing Office, 1914), 19.

[91] *Tables of Organization: United States Army* (Washington, D.C.: Government Printing Office, 1914), 23.

[92] John B. Wilson, *Maneuver and Firepower: The Evolution of Divisions and Separate Brigades* (Washington, D.C.: Center of Military History, 1998), 38.

[93] Ibid.

[94] Ibid.

[95] Ibid., 39.

[96] Ibid., 41.

in the Army General Staff restructured the infantry division organization once more based on input from

visiting British and French officers.[97] Due to the nature of trench warfare requiring flexibility and

mobility, the French advised that the headquarters should have a functional divisional staff consisting of a

chief of staff, chief of artillery, and other intelligence, operations, and supply officers. They believed that

a small body with sufficient resources could provide the coordination necessary for the division to

function as a tactical unit and that subordinate infantry and artillery brigades required only adjutants. The

staff of the army corps, the next higher headquarters, would provide the planning and administration for

major combat operations.[98]

General John J. Pershing, recently appointed the commander of the American Expeditionary

Forces, along with, Secretary of War Newton D. Baker, directed an independent study, later known as the

General Organization Project, on the required expeditionary organization based on British, French, and

Belgian armies.[99] They changed the assumption guiding the organization planning for the division. Rather

than having a division with the flexibility and mobility to traverse the trenches, Pershing and Baker

believed the division needed to field sufficient manpower to fight protracted battles.[100] On 8 August 1917,

the War College Division published new tables of organization for the "square division" based on

recommendations from the General Organization Project. This included a larger divisional staff than what

the French had recommended because the planners anticipated the new division headquarters would likely

have both tactical and administrative roles. In addition to the chief of staff, chief of artillery and other

intelligence, operations, and supply officers recommended by the French, the square division staff

comprised an adjutant general, an inspector general, and a judge advocate, as well as medical and signal

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[97] Ibid., 47.

[98] Ibid., 49.

[99] Ibid., 52.

[100] Ibid., 54.

officers. Commanders of some units, such as the field artillery brigade and engineer regiments, also served as divisional staff officers as additional duties.[101]

In terms of the staff structure, General Pershing formally adopted the European functional staff model in February 1918.[102] He reported to Secretary Baker the influence of European models in shaping the staff system of field forces: "By selecting from each (British and French) the features best adapted to our basic organization, and fortified by our own early experience in the war, the development of our great general staff system was completed."[103] That system consisted of five sections: G-1 (personnel), G-2 (intelligence), G-3 (operations), G-4 (supply), and G-5 (training). Additionally, division headquarters during World War I had administrative and technical officers comparable to the modern special staff group who assisted the general staff sections.[104] The general staff then reported directly to the chief of staff, which alleviated the commander of routine matters.[105] The general staff system of the field forces reflects what worked during World War I and has served as the basis for staff organization to the present.

As the American Expeditionary Forces gained experience and refined its staff organization, the personnel requirements for the staff also changed. The authorized strength of the Headquarters and Headquarters Troop of an Infantry Division in August 1917 was 164 personnel for a division consisting of 27,120 personnel.[106] By August 1918, this authorization almost doubled. Although the aggregate

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[101] Ibid., 55.

[102] Ibid., 67.

[103] Hittle, 210.

[104] Hittle, 211.

[105] Wilson, 67.

[106] Ibid., 56.

strength of the division only increased slightly to 28,172 personnel, the division headquarters carried fifty

officers and 238 enlisted for a total authorization of 288 personnel.[107]

When the "war to end all wars" came to an end in November 1918, senior U.S. military and

political leaders sought to prevent what they perceived to be "the major mistake" following previous

wars: the loss of experienced combat soldiers as a result of downsizing.[108] General Pershing tasked

multiple boards to examine lessons learned from U.S. combat experiences in Europe and convened the

Superior Board to review their findings. Following a two-month investigation, the Superior Board

recommended the continuation of the basic square division structure with changes in support, firepower,

and command and control. It determined the need for larger staffs across all divisional echelons.[109]

Congress and the War Department examined postwar organization separately and ultimately decided post-

World War I divisions needed to be smaller than 20,000 personnel in strength to enhance mobility.[110] As

a result, the War Department published new tables of organization, as of 7 October 1920, for an infantry

division with 19,385 personnel and with only forty-five headquarters staff personnel.[111] Compared to the

division organization used during the Meuse-Argonne offensive in 1918, this was a 31% reduction in total

divisional manpower and 84% reduction in headquarters staff.

Despite breaking somewhat with the American military tradition of not having a large standing

army following World War I, the U.S. Army has continued to downsize after major conflicts as political

and economic pressures dictated. It has continued to rely on the Army Reserves and the National Guard,

the citizen-soldiers, to augment active or regular forces during times of major conflicts. Due to this ability

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[107] *Tables of Organization and Equipment: United States Army* (Washington, D.C.: Government Printing Office, 1918), Table 1 – Infantry Division (Combat), no page number.

[108] Wilson, 83.

[109] Wilson, 84.

[110] Ibid., 91.

[111] Ibid., 93.

to quickly amass combat power, policy makers have seen fit to reduce military strengths with little concern for future threats. The fluctuations in the size of staffs, as part of the cyclic nature of build-up and downsizing, underscore an American way of warfare. This is how the United States has always fought and may be the way Americans will always fight.

The U.S. Army Today

The role of the American staff has undergone considerable changes since the Revolutionary War. As discussed previously, the Civil War and World War I reflect the growth and adjustment of staffs in accordance with the strategic context, such as the political atmosphere and the enemy. Other factors such as technology have certainly played a role. Advances in command and control systems, such as computers, should have reduced the number of personnel. Counter intuitively, that trend has contributed to the growth of staffs due to requirements for specialists. Difficulty in assessing performance of these specialists has forced commanders increasingly to use staff officers in supervisory roles in addition to advisory roles.[112]

Today, modularity has changed the U.S. Army into a brigade-centric force and accordingly provided the brigade combat teams and functional brigades with the required capabilities and increased manpower to do so. However, the Army has practically ignored the role of the division.[113] The overlapping duties and responsibilities of staffs at brigade and division and corps have caused redundancies and inefficiencies. At best, duplicated efforts still contribute to effectiveness at the expense of time and resources. At worst, the mistaken belief that one echelon is taking care of some required action results in a gap of coverage resulting in ineffectiveness and inefficiency. As an expeditionary

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[112] Morris Janowitz, *The Professional Soldier* (New York: The Free Press, 1971), 67-68.

[113] Brigadier General Alan Batschelet, Lieutenant Colonel Mike Runney, and Lieutenant Colonel Gregory Meyer Jr., "Breaking Tactical Fixation: The Division's Role," *Military Review*, November-December 2009: 35-42.

headquarters, the division staff should be modular and task organized based on need across full spectrum operations.[114] The same goes for corps headquarters. The current, fixed structure of divisions and corps may not be appropriate for the varying expeditionary roles required of them.

The current staff organization in the U.S. Army has remnants of the European staffs in the past. As Figure 6 illustrates, the basic corps or division staff structure in the U.S. Army consists of the coordinating staff group, special staff group, and personal staff group.[115] The coordinating staff comprises the principal staff assistants. The traditional U.S. Army staff organization has been based on the "four-sectional" organization model based on four principal functions: personnel (G-1), intelligence (G-2), operations and training (G-3), and logistics (G-4).[116] Over the years the coordinating staff has grown to include additional principal functions such as plans (G-5) and communications (G-6). Special staff officers help the commander and the coordinating staff in carrying out their functional responsibilities through their technical expertise. Members of the personal staff group work under the immediate control of the commanders. They include personal assistants like aides-de camp and any other staff the commander wants to control directly (i.e. not through the Chief of Staff) such as the Staff Judge Advocate or Chaplain.[117]

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[114] Jennifer A. Munro, "Transforming the Army Division in an Era of Persistent Conflict" (Monograph, School of Advanced Military Studies, United States Army Command and General Staff College, 2009), 59.

[115] *FM 6-0 Mission Command: Command and Control of Army Forces* (Washington, DC: Department of the Army, 2003), C-2 thru C-4.

[116] J. D. Hittle, *The Military Staff, Its History and Development* (Westport, Conn.: Praeger, 1975), 8-9.
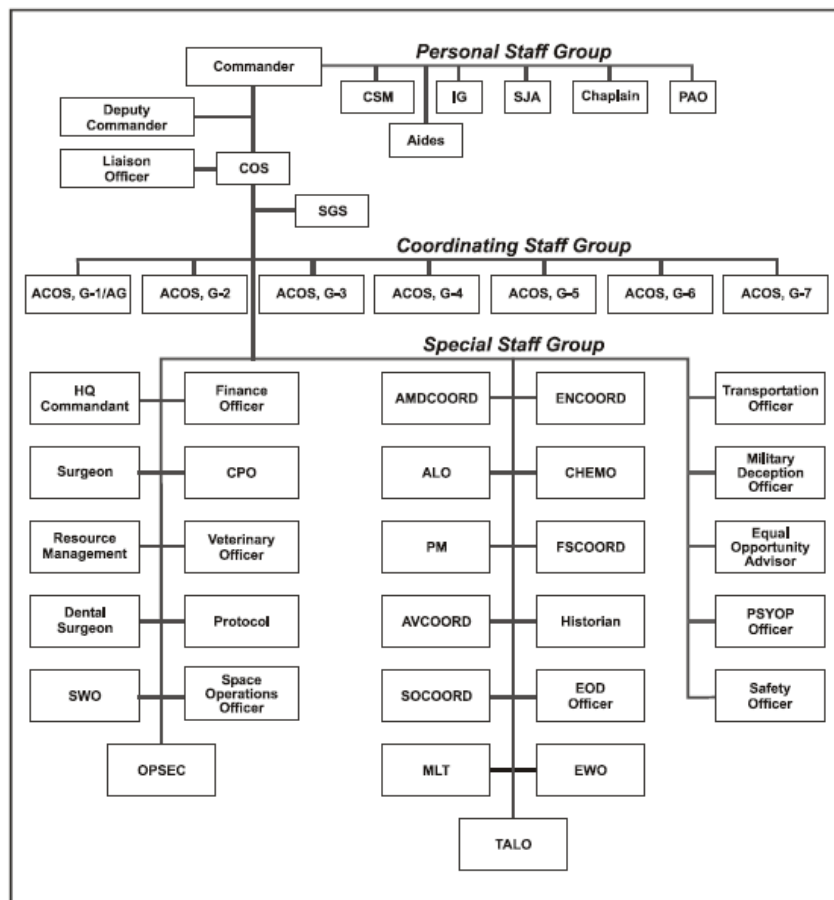
[117] *FM 6-0*, C-4.

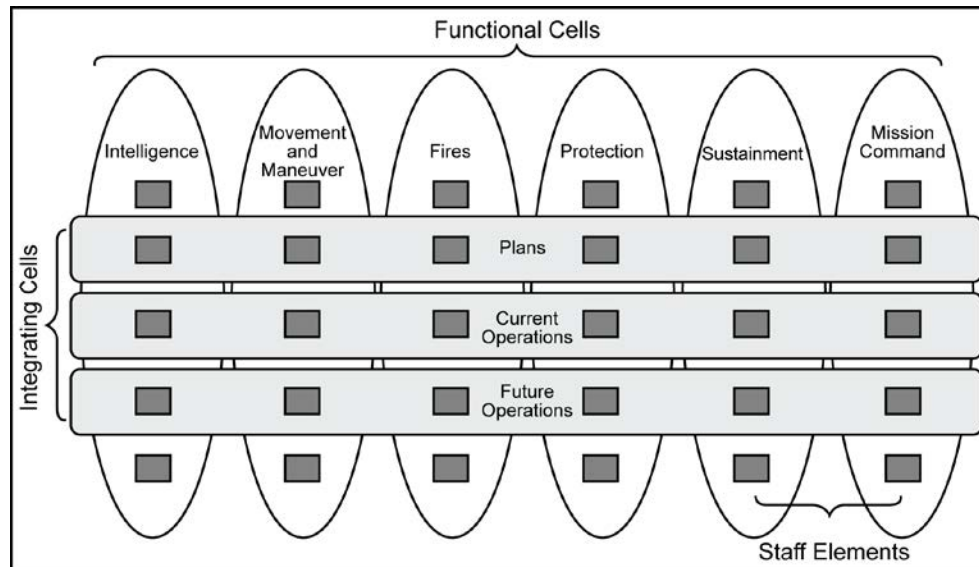Figure 6. Basic Corps or Division Staff Structure[118]

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[118] Ibid.

Figure 7. Functional and Integrating Cells[119]

In practice, as Figure 7 shows, many staffs take advantage of a command post cell concept, which is a "grouping of personnel and equipment organized by warfighting function (functional cells) or by planning horizon (integrating cells) to facilitate the exercise of mission command."[120] The gap with this structure is that the functional and integrating cells do not account for all of the staff sections. Aside from personal staff, some special staff groups "such as the operations research/systems analysis, red team, and knowledge management" remain distinct organizations.[121] This organization resembles the matrix structure and provides a glimpse of how it can conform to reflect the myriad of expeditionary roles expected of a modular division and even corps. Figure 8 shows the matrix structure using the coordinating staffs as the functional components with the integrating cells as the project components. Unlike Figure 3,

[119] *FM 5-0 The Operations Process* (Washington, DC: Department of the Army, 2011), A-3.

[120] Ibid., 93.

[121] Ibid., 96.

this matrix structure is project-based, meaning that the relationship of the members to the planning

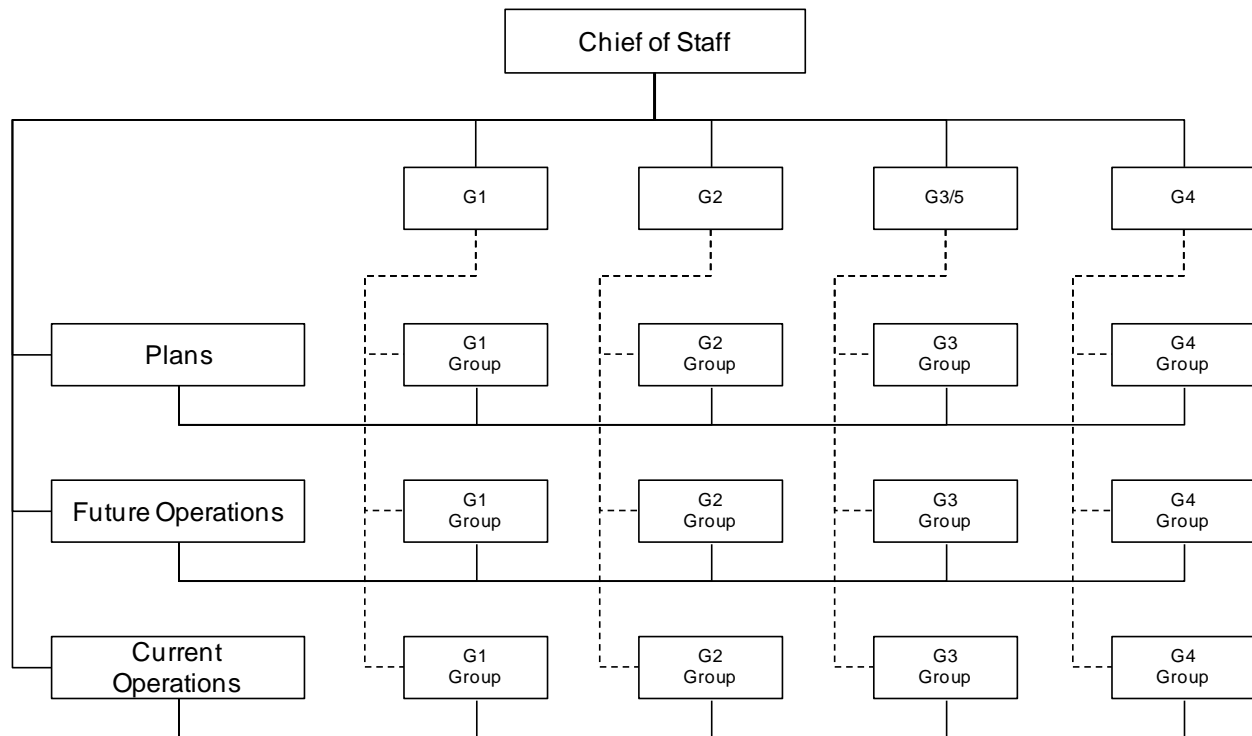horizon chiefs is permanent and the relationship to the coordinating staff leads is temporary.

Figure 8. Proposed Division/Corps Staff Matrix Structure (Project Base)[122]

Conclusion

The Army used to have all the time in the world and no money; now we've got all the money and no time.
General George C. Marshall[123]

As the wars in Iraq and Afghanistan wind down and the Army once again experiences the

downward cycle of strength and size, we again may have "all the time in the world and no money" to

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[122] This simplified example does not reflect all the coordinating staffs, such as G6 and G8, at these echelons.

[123] *FM 1*, 1-9.

prepare for future wars. Recognizing the critical role staffs have played in modern military history, there may be a better way to organize operational headquarters staffs.

Currently, the sizes of staffs have increased to the point where the advantages no longer outweigh the disadvantages. In trying to add flexibility and versatility to the system, massive staffs at corps and divisions have created increasing bureaucracies that slow down decision making and unity of effort. They burden subordinates with a myriad of specified tasks that inhibit initiative and creativity. The sizes of staff should reside somewhere between 9/11 authorized strengths and current ones. That may be the happy medium in terms of numbers.

However, numbers alone do not mean much. Arbitrarily reducing the size of staffs without thinking through the reasons and effects can be just as detrimental as maintaining large headquarters. If history serves as an indicator, in the American military tradition, staff sizes should come down regardless. And as history has shown, European and American staffs have evolved to reflect varying contexts and requirements. The roles of divisions and corps in the wake of modularity and a brigade-centric army need to be reviewed to delineate duties and responsibilities. That would in turn reduce the duties and responsibilities of their staffs; therefore, a systematic reduction can occur in staff size without jeopardizing required capabilities. The truth is you can only do less with less, as Mr. Gates alluded. Expecting the staffs to fulfill all requirements with fewer personnel without minimizing their roles would be unrealistic.

If insisting on doing more with less, a viable solution may be through reorganization as organization theory suggests. From a modernist perspective of reorganizing to enhance performance, the organizational design of the matrix structure combines the best features of both functional and project structures. It reduces centralization and bureaucracy while maintaining flexibility. Today's staff structure mirrors the matrix structure but still relies more on the functional side, meaning the coordinating staff groups. Leaning more towards the project side, represented by plans, future operations, and current operations, may reduce increased reliance on operational planning teams and commander's initiative

groups. At the same time, this temporal focus in structure lends itself to integrated planning as conceptual plans become detailed for execution. The matrix organization based on the project structure could reduce the need for specialists and experts and hence reduce the overall size of staffs yet maintain their effectiveness.

The roles of the staff are inextricably linked with their size and structure. One cannot influence a singular aspect without impacting the others. Restructuring the staff system and reprioritizing their roles should not be viewed as either or propositions. Both are necessary in properly downsizing the staffs. But the perception of large staffs throughout history is not new. Neither is downsizing following conflicts. Many have commented on the large size of staffs, but just as many staff members have wished they had more people to do what needs to get done. In fact, there may be another time in the future when quantity becomes a desired quality. What is important is that the U.S. Army take advantage of "all the time in the world" to prepare for tomorrow's conflicts.

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