

The Battle Between Scipio and Hannibal at Zama
Cornelis Cort, after Giulio Romano, engraving
ca. 1550–1578, Elisha Whittelsey Collection
(Courtesy Metropolitan Museum of Art)



Scipio Africanus and the Second Punic War

Joint Lessons for Center of Gravity Analysis

By Kenneth T. Klima, Peter Mazzella, and Patrick B. McLaughlin

Bellum parate, quoniam pacem pati non potuistis.

[Prepare for war, since you have been unable to endure the peace.]

—SCIPIO AFRICANUS TO HANNIBAL, PRIOR TO THE BATTLE OF ZAMA, IN 202 BCE

Publius Cornelius Scipio (236–183 BCE), known more widely by the nom de guerre Scipio Africanus, was a Roman statesman and general whose actions during the Second Punic War (218–201 BCE) demonstrate the eternal qualities embodied by modern concepts of joint warfare. Scipio employed said concepts at all levels of war and showed an atypical ability to integrate military and political objectives into a single system. Although the period of antiquity was a time when the concepts of strategy were only nascent, the study of Scipio highlights practically every aspect of modern joint planning and operations. In analyzing Scipio, Basil H. Liddell Hart proposed that his “[m]ilitary work has a greater value to modern students of war than that of any other great captain of the past.”¹ In fact, despite warfare’s advancements in technology and industry, Hart’s observation of Scipio is as applicable to today’s joint planner as it was nearly a century ago.

Scipio Africanus’s European and African campaigns during the Second Punic War serve as timeless lessons for joint force planners on how to conduct center of gravity (COG) analysis in support of theater and national military planning. The campaigns are a superb vehicle with which to examine five key lessons associated with today’s concept of COG analysis:

- achieving the desired endstate
- COGs as part of a system
- the indirect approach to attacking COGs
- how to move between direct and indirect approaches
- the result of poor COG analysis.

Despite the use of 2,200-year-old evidence, all five lessons demonstrate how the basic dictums of modern doctrine proved pivotal in determining whether Rome or Carthage would rule

the Mediterranean for nearly 6 centuries. However, before we can use Scipio’s campaign history to support our claims of COG analysis, we must first understand the history and operational conditions present during the Second Punic War.

The Operational Environment

As the name suggests, the Second Punic War was not the first skirmish between Rome and Carthage. The First Punic War (264–241 BCE) was a conflict over the control of Sicily that ended inconclusively. In the interregnum between the first and second conflict, an unsteady peace existed as each side maneuvered for advantage.

Circa 218 BCE, Carthaginian general Hannibal Barca prepared for, and then renewed, Carthage’s efforts to subjugate its rival. Reportedly, he inherited his father’s hatred of Rome and, through a cult of personality, led his army from the deserts of Africa, across the Mediterranean, over the Alps, and into the Italian peninsula, embarking on a bloody campaign to defeat Rome.² In victory after victory, using the “mental and material means for a stroke at the heart of the Roman power,” Hannibal’s tactical and operational genius crushed Rome’s armies and established him as one of history’s greatest commanders.³ Following Hannibal’s decisive defeat of the Roman forces at Cannae (216 BCE), Carthage gained control of the Italian coast of *Magna Graecia*, which resulted in multiple Roman allies and economic vassals switching allegiances to Hannibal.⁴ Post-Cannae, Hannibal was unable to lay siege to Rome to force its surrender. Instead, he launched a decades-long campaign throughout Italy during which, despite unending tactical success, he remained unable to achieve his military or political endstates: the subjugation of Rome.

Hannibal’s tactical success did result in a shortage of qualified Roman generals willing to march out and meet him. In

desperation, the Roman Senate eventually turned to an unproven 24-year-old Scipio—son of Publius Scipio, the general defeated and slain by Carthaginian forces in 211 BCE—to remove the threat of Hannibal’s forces from Rome’s doorstep. However, Scipio did not move to directly challenge Hannibal in battle, as was expected by most Roman leaders, but instead chose to take an indirect approach, deploying forces to Spain to conduct a multiyear campaign against Carthaginian forces and allies.⁵ In Spain, Scipio isolated and defeated four armies (including two led by Hannibal’s brothers, Hasdrubal and Mago), destroyed lines of communication supporting Hannibal in Italy, and rebalanced Carthaginian allies back to Rome. Furthermore, Scipio showed a unique ability to conduct joint warfare, leveraging the unique attributes associated with the different units of the Roman army, navy, and marine forces. Scipio’s demonstrated ability to leverage strategic, operational, and tactical flexibility yielded extraordinary success.

Consequently, the victory in Spain solidified the efficacy of Scipio’s unorthodox approach, the Senate expanded his commission, and he moved his armies toward Africa to threaten the city of Carthage directly. The confluence of these events compelled Hannibal to abandon Italy and return to Africa, where his army was met and routed by Scipio’s forces at the Battle of Zama (202 BCE). Hannibal’s defeat finalized Carthage’s defeat, securing for Rome a Mediterranean empire that would last nearly 600 years.

Lesson One: COG Analysis Enables Desired Endstates

The failure to understand the desired political endstate—*what comes after* the transition to civil authorities—invariably leads to challenges in war termination and the establishment of legitimate governments, institutions, and authorities in postconflict states.⁶ This challenge of overcoming the split between military and political planning is not a phenomenon of the present age. Even a cursory study of Scipio expresses how the soldier-statesman must conduct a range of military operations within a spectrum

Commander Kenneth T. “Max” Klima, USN, is Deputy Director for Intelligence, Joint Staff J2. Lieutenant Colonel Peter Mazzella, USA, is the Joint Training System and Lessons Learned Branch Chief for North American Aerospace Defense Command (NORAD) and U.S. Northern Command (USNORTHCOM) J7. Major Patrick B. McLaughlin, USAF, is the Lead Joint Planner for the Aerospace and Homeland Defense Plans Branch, NORAD and USNORTHCOM J5.



Scipio Africanus Storming New Carthage, ca. 1470, tempera on fabric, mounted on cassone panel, gift of Mr. and Mrs. Theodore W. Bennett (Courtesy Minneapolis Institute of Art)

that simultaneously integrates all three levels of war while still supporting the desired political endstate (often referred to as “national strategic endstate” in joint doctrine). For example, during the Second Punic War, the political endstate was not solely the destruction of the adversary’s military, but rather the military means to achieve the political aim of securing unrivaled control of the Mediterranean world.⁷ Throughout the war, Scipio’s military actions and operational approach demonstrated an ability to directly link singular and multiple military actions toward the achievement of both the desired military conditions as well as the desired political endstate. Scipio’s every action, both on and off the battlefield, focused on achieving a lasting postwar peace in which Rome directed the course of a subdued but integrated Carthage. This emphasis ignored the traditional military focus on destruction of armies, industry, and economic means and instead used military

successes to set the political conditions for Carthage to comply with Roman will in its affairs.

Another example of Scipio’s political foresight in the use of military means was demonstrated after his successful seizure of the Carthaginian Spanish colony of Cartagena (209 BCE). Rather than destroy Spain’s Celtic-Iberian tribes who supported Carthage—the very same tribes whose revolt from Rome led to the death of Scipio’s father—Scipio broke with tradition and built close ties with former enemies. The day after his triumph in Cartagena, Scipio showed clemency and even mercy toward the indigenous tribes both publicly and through policy. The Roman historian Livy claims these acts actually endeared Scipio to the people throughout Spain and were major causes toward undercutting Carthage’s political control in the region. Scipio’s actions may have gone against the common military practice of the age, but his mercy shifted Spain’s

loyalty from Carthage to Rome—irrevocably destroying Carthage’s supply of personnel and financial support for Hannibal’s Italian operations.

By remaining focused on the desired political endstate, Scipio adroitly avoided expected military practices that were counter to the postwar peace. Spain, a hotbed of insurgents and untrustworthy allies, was also the source of Carthaginian troop levies, food supplies, and war economics essential to Hannibal’s Italian campaign. In addition to his military victories, Scipio’s benevolent treatment of former foes had a compounding effect in that other tribes and nations loyal to Carthage surrendered to Roman forces rather than battle Scipio or remain Carthaginian vassals.⁸ Consequently, in a few masterful strokes, Scipio won a regular war, ended an irregular war, destroyed Hannibal’s supply chain, and integrated the Spanish tribes into the greater Roman political and economic system in the Mediterranean. Scipio remarked to the



Roman Senate that in Spain he had faced down four enemy commanders and four armies, with the outcome being not a single Punic soldier remaining in Spain.⁹ Focusing on both military and political endstates, Scipio's actions effectively neutralized the troublesome tribes of Spain from supporting Carthage for the remainder of the Punic Wars.¹⁰

Scipio followed the same formula after his initial victories following the invasion of Africa (206–204 BCE). Hannibal remained in Italy, but Carthaginian political elites, fearing Scipio's invasion force, felt defenseless and sued for peace. The resulting peace terms were lenient for the age and indicate Scipio's preference to integrate Carthage and its colonies into the Roman system as contributing partners. The peace lasted until Hannibal returned to Africa to challenge Scipio directly. Nevertheless, after Hannibal's defeat at Zama and in spite of the Carthaginian Senate's deceit, Scipio's demands for a final peace remained principally the same

as those agreed upon prior to Hannibal's return. Livy's record shows this move was not popular in Rome, as some leaders wanted Carthage to suffer in defeat—much like Germany would be made to suffer by the victors after World War I. Scipio's leniency toward his defeated enemy indicates he believed a weakened Carthage with a destroyed army and fragile institutions would have created a peace no different from that following the First Punic War—sowing the seeds for yet another war between the two empires.¹¹

Scipio's ability to identify the desired political endstate allowed each tactical and operational movement to advance toward achieving “a more perfect peace.” The result was that every action, small or large, was integrated into the overall operational objective of removing Hannibal from Italy and subjugating Carthage. In doing so, Scipio successfully subjugated the enemy while sustaining the smallest possible cost of life and resources.¹² Joint Publication (JP) 5-0, *Joint Operation*

Planning, echoes Scipio's approach, identifying the need for “a clear understanding of the end state and the conditions that must exist to end military operations. Knowing when to terminate military operations and how to preserve achieved advantages is key to achieving the national strategic end state.”¹³

Scipio's success teaches joint planners that a critical component of COG analysis involves a greater understanding of the desired political endstate. A clearer understanding of the political conditions informs the COG discussion and furthers identification of the means for destroying or disabling adversary COGs. Current doctrine focuses on military termination and phase-transition criteria and directs political endstates to be the province of political decisionmakers. JP 5-0 describes the process and products that the National Command Authority uses to develop national strategy, but does not discuss how the government develops desired political endstates for

specific conflicts. Political entities and institutions do not necessarily have clear (in Department of Defense terms) mechanisms to create identifiable endstates to serve military planning objectives. JP 5-0 does identify the commander's need to work with interagency mechanisms, but these efforts are varied and reliant on the individuals in command and do not lead to clear integration of government institutions and the military.

In contrast to Scipio, Hannibal exemplifies the pitfalls of not integrating desired military and political endstates. According to the Roman record, Hannibal's cavalry leader Maharbal remarked to his commander that Hannibal "knew how to gain a victory" but did "not know how to use it."¹⁴ Hannibal's approach is akin to Mark Cancian's 1998 discourse on the fallacy of COG analysis, as they both incorrectly identify the goal of all military operations as attaining a battlefield advantage.¹⁵ Hannibal's emphasis on battlefield advantage resulted in a series of tactical and operational successes that never led to strategic victory. Scipio's approach stands in stark contrast and serves as a reminder to military planners that the transition to a better peace does not occur simply because one has achieved the desired military endstate.

Other conflicts more recent than the Second Punic War have demonstrated both the difficulty today's joint planners face in outlining war termination criteria and the effective transition from military to civil authorities and the importance in doing so. This is more likely a result of military planners focusing principally on military approaches to the transition from peace to war rather than integrating whole-of-government efforts focused on achieving the smooth transition from war back to peace. Carl von Clausewitz identified the ties between national politics and the aims of conflict, but it was General William T. Sherman who clarified that "[w]ar's legitimate object is a more perfect peace." Historical examples provide evidence that responsibility falls to the rare soldier-statesman to have the greatest understanding of the national strategic ends: the transition between politics-to-war-to-peace and then again to

politics. This lesson may be the most profound for modern military planners who train to create a specific military endstate and then speak of transition.

Current doctrine teaches today's planners that military planning cannot be effective without a clear understanding of the military endstate and that the termination of military operations is key to achieving the "national strategic end state."¹⁶ No single government institution is responsible for defining an individual strategic endstate, particularly for major theater contingency plans, whereas the military receives guidance directly from the National Command Authority through a byzantine process of strategic guidance and the labyrinthine Joint Strategic Planning System. Unfortunately, the joint planner does not have a role in developing responsibilities in the international system of states, and the crafters of national strategy are not members of joint planning groups, resulting in a natural fissure between military and political ends. Modern planners therefore must learn from Scipio's example and create a working understanding of the political endstate rather than remain preoccupied solely on the defeat or destruction of the opposing militaries. Only with this understanding can military success effectively translate to lasting stability and peace after hostilities have ceased.

Lesson Two: COG and Its Elements Are Part of an Interconnected System

Scipio's second lesson is to view COGs as part of an interconnected system in order to find which pressure points yield the maximum effect. There remain deep, integral relationships between the COGs at the varying levels of war that create an interconnected system identified through COG analysis. Therefore, the ability exists to use analytical results to focus military operations to create system-wide impacts. Understanding COGs as a system means that even tactical actions can support strategic ends. Applying the modern rubrics of COG analysis to the Second Punic War, it becomes clear that the integrated COG analysis of Scipio indicated Hannibal's

forces in Italy were not the strategic COG—the level most interconnected with the desired political endstate—but more likely an operational COG.¹⁷ Moreover, this analysis indicates the defeat of Hannibal at the operational level of war would not have led to a strategic defeat of Carthage. Conversely, improper or incorrect analysis limits the ability to target or influence the whole, and effects are isolated rather than systemic—hence Scipio's decision to ignore the Senate's orders to confront Hannibal directly and instead seek an indirect way of threatening the true strategic COG of Carthage itself.

Hannibal's reliance on Spain as a critical force enabler supporting his operational COG—Carthage's fielded forces in Italy—made it the logical target for Scipio's indirect strategy. In sacking the Spanish city of Cartagena, Scipio cut off Hannibal's lifeline and crippled his operational capability without ever having faced the dreaded general on the battlefield. Livy records Scipio instructing his forces, "You will in actuality attack the walls of a single city, but in that single city you will have made yourselves masters of Spain."¹⁸ Liddell Hart further identified that the Spanish campaign was not merely about Spain, as military actions at the operational level had systemic effects influencing the strategic:

Scipio, in whom the idea of strategic exploitation was as inborn as the tactical, was not content to rest on his laurels. Already he was looking to the future, directing his view to Africa. As he had seen that Cartagena was the key to Spain, that Spain was the key to the situation in Italy, so he saw that Africa was the key to the whole struggle. Strike at Africa, and he would not only relieve Italy of Hannibal's ever menacing presence—a menace which he had already reduced by paralyzing Hannibal's source of reinforcement—but would undermine the foundations of Carthaginian power, until the edifice itself collapsed in ruin.¹⁹

Scipio's indirect approach into Spain provides planners a lesson in the effectiveness of thorough COG analysis. The military planner must not only

understand the fact that COGs exist at multiple levels but also endeavor to understand how the connection between those COGs and their elements (critical capabilities [CCs], critical requirements [CRs], and critical vulnerabilities [CVs]) interact with one another.²⁰ While attacking a single vulnerability, one may create a cascading effect that paralyzes or destroys the enemy's system from within—setting conditions for the desired endstate.

Several examples from Scipio's Spanish campaign emphasize the importance of understanding systemic relationships of COGs. The lenient treatment of the Spanish tribes—an operational CR for Hannibal's manpower needs, and those of Carthage at the strategic level—eventually led Spain to switch sides and support Rome's future operations in Africa. Then there is Scipio's leniency following his victory at Cartagena, which led to the defection of the Numidian leader and cavalry commander Masinissa from Hannibal to Scipio. Specifically, after learning one of the prisoners was the nephew of Masinissa, Scipio provided care for the youth and ensured his safe return home. This single act attacked Carthage's system by affecting multiple CRs and CVs of Carthage and Hannibal, resulting in a systemic ripple effect that shaped the execution and outcome of the Second Punic War. Through sparing the life of a small boy, an oddity of restraint in that age, a key Carthaginian ally in Africa became sympathetic to Rome, helping nullify Carthage's powerbase.²¹

As a final example from the campaign in Spain, following Scipio's victory at Cartagena, the Carthaginians split into three armies-in-being, with two commanded by Hannibal's brothers. Rather than staying on the defensive and enabling the Carthaginian armies to mass, Scipio moved from the siege warfare of Cartagena to operational maneuver and eliminated each of the Carthaginian armies in succession without allowing them to combine. Adept at using his new allies as intelligence networks, Scipio was able to maneuver his smaller force to bring larger enemies to battle where and when he chose.²² The results of his

approach were three sequential battles, each characterized by innovative tactics and massive battlefield successes that remain instructive for modern tactical planners and commanders. More important, Scipio's true mastery of warfare is evident in how each individual action was part of a grand strategy to defeat Hannibal (operational COG) and Carthage (strategic COG). While Hannibal's tactical successes never placed pressure on Rome's COGs, Scipio's actions attacked all levels of the Carthaginian system. Scipio's example demonstrates the value of understanding the systemic nature of COG, CCs, CRs, and CVs and approaching each step with calculated forethought, considering the systemic impacts associated with the interconnected nature of war.²³

Lesson Three: Using the Indirect Approach

Scipio's indirect strategy of defeating Hannibal and Carthage offers joint planners a third lesson—how to use an indirect approach to attack COGs. Regardless of the interpretation of Clausewitz, the application of COG analysis theory often devolves into planning to attack an enemy where it is the strongest and falsely believing that when the identified strength is defeated, the enemy's will to resist will crumble. The direct approach maintains that meeting enemy strength with friendly strength is the best use of force and leads to the greatest possible massing of armies. The interpretation continues that COG is therefore the recipe for rapid and decisive victory. Those who decry COG analysis often lean on this misunderstanding as the major point of their assertions of the uselessness of the concept. The review of Scipio not only counters the fallacy of misunderstanding COG analysis but also emphasizes how the application of proper analysis can avoid resource-intensive, force-on-force battles that exhaust militaries and national will but do not result in the culmination of strategic aims.

Although Scipio's senatorial commission specifically directed him to attack Hannibal in Italy, his initial force

was too small and inexperienced to have any hope of victory. These orders ignored the years of defeat suffered by Roman generals who could do little more than check Hannibal's advance through small skirmishes and delaying tactics. With Hannibal's army being larger, more experienced, better armed, better resourced, and better prepared, Scipio had no prospect of victory using a direct approach. It was clear to him that Spain was the fundamental source of Hannibal's power to organize for war—a conversion point for levies and material and economic support.²⁴ Liddell Hart comments, "By swiftness of movement, superior tactics, and skillful diplomacy he converted this defensive object into an offensive, if indirect, thrust at Carthage and at Hannibal."²⁵ Victory validated this approach; Scipio won Spain for Rome without facing Hannibal's main force, and by taking Spain he struck at the COG—Hannibal's army.

Scipio would continue an indirect approach throughout the Second Punic War. Following victory in Spain, he prepared to invade Africa with an army built on the Roman legions defeated by Hannibal at the Battle of Cannae. The Senate again ordered him to attack Hannibal in Italy. Roman Senator Quintus Fabius Maximus Verrucosus (surnamed Cunctator), who had previously conducted a campaign to delay Hannibal's army, criticized Scipio's indirect approach: "Why do you not apply yourself to this, and carry the war in a straight forward manner to the place where Hannibal is, rather than pursue that roundabout course, according to which you expect that when you have crossed into Africa Hannibal will follow you thither."²⁶

Scipio countered his political opponents and again sought to fight Hannibal indirectly by taking the war to Africa: "Provided no impediment is caused here [in the Senate], you will hear at once that I have landed and that Africa is blazing with war; that Hannibal is preparing to depart from this country. . . . I shall . . . have the opponent you assign me, Hannibal, but I shall rather draw him after me than be kept here by him."²⁷



Bronze bust of Scipio Africanus in Naples National Archaeological Museum, dated mid-1st century BCE, from Villa of Papyri in Herculaneum, modern Ercolano, Italy (Courtesy Miguel Hermoso Cuesta)

In the invasion of Africa, Scipio moves firmly from the operational to the strategic in his approach to implementing his COG analysis. His words and actions indicate an understanding of how the indirect approach provided the greatest systemic effects by threatening a strategic COG—in this case, the

will of the political elites of Carthage to continue the war. With the main body of the Carthaginian army abroad, Scipio's combined/joint amphibious assault into Africa threatened "regime change" in Carthage proper. Whereas Hannibal's army in Italy was necessary to defeat Rome, it was wholly irrelevant in the

defense of Carthage with Scipio's army in Africa. The Carthaginian Senate ordered Hannibal to end his Italian campaign and return to Carthage's defense. A masterstroke of strategic craftsmanship, Scipio's COG analysis drove Hannibal from Roman lands even though he had not lost a major battle.

The lesson from antiquity is clear to joint military planners—the adversary's *army* should not be the focus of military strategy. The use of the indirect approach provides means to neutralize or defeat an enemy or enemy force without necessarily attacking strengths or, at times, even forces. There are no unlimited resources in war, and the force that can better meet military and political ends through the efficient use of force has the advantage. The indirect approach also offers the ability to create better postwar political conditions by controlling force and thus minimizing its collateral effects. Scipio's indirect approach is an example of how the adversary's integrated political and military system can be analyzed to most effectively apply force in pursuit of statecraft. As the system becomes clearer, the means to collapse that system also become clearer. Notably, the use of COG analysis toward an indirect approach aligns with modern maneuver doctrines among the land components, the evolution of airpower doctrine, and distributed lethality concepts in the maritime domain. It stands to reason that if proper analysis could help avoid costly military overextension in conventional war, it would also assist in identifying better ways of applying military force in our current irregular wars. To plan for the future of combat, it appears the joint force must return to antiquity: Scipio's indirect approach to the use of force within adversarial COGs could and should inform the development and execution of modern doctrine.

Lesson Four: Moving Between Indirect and Direct Approaches

Scipio's use of the indirect approach to attack COGs comes with a caveat. Should direct military action offer an opportunity for a debilitating blow, so long as it supports the COG analysis and the risk to one's own force is lower,

one should take the opportunity and strike. In 205 BCE, while preparing to invade Africa, intelligence indicated the leaders of Locri favored Rome over Hannibal, their occupier. Scipio departed from his plan and launched a swift seaborne raid, the shock of which caused the rapid evacuation of all Carthaginian forces at Locri. Hannibal quickly moved to counter but found himself exposed to a trap laid by Scipio, who had combined operational deception with an expeditionary assault behind Hannibal's lines. Hannibal withdrew. The result of the movement from the indirect to direct approach was the addition of another Italian ally to Rome, the reduction of a Carthaginian ally, a moral victory for Scipio's legions, and a moral defeat for Hannibal's army.²⁸

Scipio's caveat to the indirect approach appears similar to Admiral Chester Nimitz's calculated risk order to his operational commander prior to the Battle of Midway: "In carrying out the task assigned in Operation Plan 29-42 you will be governed by the principle of calculated risk, which you shall interpret to mean the avoidance of exposure of your force to attack by superior enemy forces *without good prospect of inflicting, as a result of such exposure, greater damage to the enemy.*"²⁹ In the cases of Locri and Midway, the victory weakened a component of an identified COG. For Hannibal, it was the perception of the invincibility of the commander, whereas at Midway, it was the loss of four Japanese aircraft carriers. Scipio's and Nimitz's approaches to transition from the indirect to the direct approach show the power of measured boldness and of how the operational impact of switching to the direct approach at a time and place of their choosing was fundamentally supported by the previous use of the indirect approach. Each had at his disposal all the personnel and resources to take advantage of the situation. Nimitz had three carriers and critical intelligence, whereas Scipio had trained and experienced legions, significant sealift, and intelligence from disaffected allies.

After Locri, Scipio principally returned to the indirect approach. He maneuvered once Hannibal was in Africa,

taking no direct action until drawing Hannibal away from his lines of communication and ensuring he was located in territory advantageous to the Roman force. Only at Zama did Scipio return to the direct approach, attacking the operational COG: Hannibal's forces.

Scipio's excellence in generalship was not only in the use of the indirect approach over the direct but also in his ability to switch and know when to switch between the two. A deep understanding of the environment and the enemy must exist to have this level of battlefield cognizance, and such understanding is an element of planning developed during COG analysis. Current doctrine, such as JP 2-01.3, *Joint Intelligence Preparation of the Operational Environment*, discusses how one should conduct COG analysis but does not cover the flexible use of the theory and how COG analysis can provide a level of understanding that allows commanders to seize the initiative and convert from the indirect to the direct approach.³⁰ Expansion of our current doctrine can provide commanders a far greater level of understanding through which force may be applied.

Lesson Five: The Result of Poor COG Analysis

Lessons from the Second Punic War include the effect of negligent or non-existent COG analysis of the enemy. Polybius, the Hellenistic historian who is the closest primary source of the Punic Wars, noted, "Those who have won victories are far more numerous than those who have used them to their advantage."³¹ In the Second Punic War, the absence of the elements of COG analysis by Hannibal was at minimum a contributing factor to Carthage's ultimate defeat.

Hannibal's strategy against Rome focused on defeating armies and subjugating allies. Historical hindsight indicates this was an incorrect analysis because Rome's power came from the institutions that bound its Senate and its people. This analysis of Rome's COG is strengthened by the fact that repeated military defeats were never able to sway Rome from its strategic goals. Furthermore, the Roman

Senate appeared to understand to some extent its own COG in that it weighed each of Hannibal's military moves in relation to his ability to take Rome. This Roman view is similar to Clausewitz's instruction to consider "the dominant characteristics of both belligerents,"³² as well as Sun Tzu's duality that victory requires understanding the adversary and self.³³ Hannibal would threaten the city of Rome—the source of political will and the Roman Empire's strategic COG—only once. Following his triumphant victory at Cannae, Hannibal moved to attack the heavy defense of Rome but was unable to secure victory due to a lack of siege machines and enablers for urban combat. Hannibal's lack of COG analysis and its resulting impact on operations amplified his failure to alter or change his operational approach.³⁴ Despite years of campaigning, Hannibal never built the siege weapons or combat arms necessary to strike at the heart of his enemy—Rome itself. Consequently, despite his invincibility on the battlefield, Hannibal could not win the war.

A second example of poor COG analysis comes from Carthage's failure to check Scipio's ability to maneuver throughout the Mediterranean, particularly using sealift. In the First Punic War, Carthage held a numerical and technological edge in maritime warfare, forcing Rome to execute a massive ship-building program. Rome used innovative techniques and new technology to turn the Mediterranean into a contested maritime environment, winning six of seven major naval battles and setting the conditions for an unsteady peace. Both states maintained a sizable naval capability through the Second Punic War, with each heavily relying on sealift for the movement of forces. Scipio, for instance, used a fleet of 50 warships and 400 transports to transfer his forces to Spain. Carthage maintained a large maritime force in the war and was able to move whole armies—first the army of Hannibal's brother, Mago, from Gaul to Africa, and then Hannibal himself from Italy to Carthage—during its course. Proper COG analysis would have indicated sealift as a CR of Scipio's force, and Carthage

would have had the ability to attack it with good prospects of contesting the sea lines. In this endeavor, Carthage would not have needed to defeat Roman navies, which they appeared to lack the aptitude to do, only to challenge Rome's ability to use the sea lines and in so doing complicate or disrupt the ability of Scipio's forces to move by sea.

Yet the Carthaginian strategic failure to appreciate the nature of contesting the maritime domain is evident in one of the most referenced elements of the Second Punic War: Hannibal's overland movement of his army from Spain to Italy. The feat is often heralded as masterful, but Hannibal in fact lost half of his elephants and half of his army along the route. Alfred Thayer Mahan pondered Carthage's refusal to check Rome's navy by considering "how different things might have been could Hannibal have invaded Italy by sea, as the Romans often had Africa."³⁵ Rome, conversely, remained concerned with Carthage's ability to use sea power throughout the war. Following Scipio's Spanish victories (207 BCE), he was ordered to yield a large element of his navy to the military governor of Sicily because intelligence indicated the threat of Carthaginian maritime forces blockading the Italian coast.³⁶ Throughout the course of the war, Rome kept multiple fleets to protect its territorial waters from Punic raids, secure vital sea lines of communication, and stave off a second-front war engineered by Carthage with Macedon—all indicating that Rome continued to view Carthaginian maritime forces as a key threat. Minimal Carthaginian efforts to interdict or destroy communications, envoys, or supplies would have created detrimental systemic effects across Scipio's force, at a minimum delaying his timelines and possibly preventing his ultimate invasion of Africa. Carthage had the forces to do so, as became apparent in the final treaty of the war wherein Scipio ordered the entire navy of Carthage destroyed save for 10 ships to allow the city to defend its commerce from piracy.³⁷

Whereas COG is not necessarily the pathway to victory, its "true value . . . may be the framework the concept

provides for thinking about war. In other words, the process of determining centers of gravity may be as important as the product."³⁸ Moreover, poor analysis that reinforces biases or prejudices and fails to implement a thorough approach almost certainly leads to defeat. The example of Scipio shows how understanding the operational environment enables the commander to make sense from chaos when complex military challenges are analyzed and viewed systemically.

Conclusion

The campaigns of Scipio Africanus provide an ancient example of the application of the modern doctrine of center of gravity. COG analysis is not a new concept, and the universality exposed in an example from 2,200 years ago underscores the vital linkages between today's modern doctrine and the wars of antiquity. While COG analysis is a doctrinal process, its value in application is directly proportional to the skill of its use. Using this analysis to entrench preconceived notions about force-on-force battle or to support an individual's views related to the dictums of strategic science, is a misapplication that is as detrimental to the desired military and political endstates as battlefield defeat. Proper COG analysis through all levels of war, including the pursuit of "a more perfect peace," assists the military planner in constructing military means of supporting an integrated approach to the culmination of the desired political endstate. COG analysis enables the planner to better think about what goal is trying to be achieved (ends) and how it is to be achieved (means).³⁹ A well-executed COG analysis allows one to anticipate which parts of one's own system the adversary may attempt to directly or indirectly target, giving the thoughtful planner greater insight into the opponent's intent.⁴⁰

To find examples of the effective application of COG analysis, joint force planners can return to antiquity. During the Second Punic War, Scipio Africanus demonstrates multiple historical models that show timeless and universal themes of war that exist whenever sanctioned

violence is employed in the pursuit of national security interests. Perhaps more than those of any other historic figure, Scipio's exploits provide the modern joint force anecdotal excellence in the application of modern military theory—particularly in the realm of COG analysis and its use in supporting combat forces. In studying the victories and defeats of history's great captains, modern joint planners should use joint doctrine as a prism to view and distill the genius and folly that resulted in victories and defeats. They should look upon the battles of antiquity as laboratories for honing doctrinal principles and crucial lessons in military acumen prior to employing them in the field. The lessons identified only scratch the surface of the practical application that exists within the study of Scipio. There still exists a wealth of intellectual treasure from generals and battles that have been "lost" due to a lack of familiarity among modern readers. Such is the case with Scipio Africanus, arguably history's greatest general, wherein many studies have focused not on his victories, but on the failures of the general he defeated. JFQ

Notes

¹ Basil Henry Liddell Hart, *Scipio Africanus: Greater Than Napoleon* (Boston: Little, Brown, 1927), vi.

² *Ibid.*, 20–21. Hart provides commentary on the emotional and moral aspects of Hannibal's Italian campaign: "During the long interval of outward peace this Carthaginian Bismarck prepared the mental and material means for a stroke at the heart of the Roman power, educating his sons and followers to conceive the conquest of Rome as their goal, and using Spain as the training ground for the Barcinse school of war, as well as the base of their forthcoming military effort. In 218 B.C., Hannibal, crossing the Alps, began his invasion of Italy to reap the harvest for which his father had sown the seeds."

³ *Ibid.*, 21.

⁴ Polybius, *The Histories of Polybius*, vol. 1, trans. Evelyn S. Shuckburgh from the text of F. Hultsch (London: Macmillan, 1889), book 3, chapter 118.

⁵ For the purposes of this article, modern geographical boundaries will be used except where doing so would complicate the narrative. *Spain* refers not to the political entity but to the Iberian Peninsula, and *Italy* to the Italian Peninsula.

⁶ Joint Publication (JP) 5-0, *Joint Operational Planning* (Washington, DC: The Joint Staff, 2011), III-44.

⁷ Basil Henry Liddell Hart, *Strategy* (New York: Meridian, 1991), 55. "The campaign of Zama (the culminating battle) made Rome the dominant power in the Mediterranean world."

⁸ Hart, *Scipio Africanus*, 83.

⁹ Robert L. O'Connell, *The Ghosts of Cannae: Hannibal and the Darkest Hour of the Roman Republic* (New York: Random House, 2010), 223.

¹⁰ Hart, *Scipio Africanus*, 84.

¹¹ Half a century later, for multiple reasons, there was a Third Punic War (149–146 BCE). It did not go well for Carthage, with the capital being destroyed, all territory annexed, and the population killed or enslaved. Such means would have likely been seen by Scipio as not supporting Rome's national security interests.

¹² "The aim of a nation in war is, therefore, to subdue the enemy's will to resist with the least possible human and economic loss to itself." Basil Henry Liddell Hart, *Thoughts on War* (London: Faber and Faber Ltd., 1944).

¹³ JP 5-0, III-18.

¹⁴ Livy, *The History of Rome*, trans. Frank Gardener Moore (Cambridge: Harvard University Press, 1949), book 22, chapter 51.

¹⁵ Mark Cancian, "Centers of Gravity Are a Myth," U.S. Naval Institute *Proceedings* 124, no. 9 (September 1998), 5.

¹⁶ JP 5-0, III-18.

¹⁷ Joseph Strange and Richard Iron, "Understanding Centers of Gravity and Critical Vulnerabilities, Parts I and II," Air War College, available at <<http://www.au.af.mil/au/awc/awcgate/usmc/cog1.pdf>> and <www.au.af.mil/au/awc/awcgate/usmc/cog2.pdf>.

¹⁸ Livy, book 26, chapter 43.

¹⁹ Hart, *Scipio Africanus*, 63.

²⁰ Strange and Iron.

²¹ Hart, *Scipio Africanus*, 86–87.

²² Although beyond the scope of this article, Scipio's use of intelligence to support his operations and foresight is notable for antiquity as well as the modern world. His Spanish and African campaigns evidenced a use of intelligence that was unprecedented. Furthermore, it could be argued Scipio established the first J2 unit specifically for the collection and analysis of intelligence to support his military operations.

²³ Hart, *Scipio Africanus*, 98.

²⁴ Antulio J. Echevarria II, *Clausewitz's Center of Gravity: Changing Our Warfighting Doctrine—Again!* (Carlisle Barracks, PA: Strategic Studies Institute, 2002), 12.

²⁵ Hart, *Strategy*, 49.

²⁶ Livy, book 28, chapter 41.

²⁷ *Ibid.*, book 28, chapter 44.

²⁸ Hart, *Scipio Africanus*, 109.

²⁹ James M. Stelle, "Running Estimate and Summary, CINCPAC Staff at Pearl Harbor, Hawaii, Covering the Period 7 December 1941 to 31 August 1942," in *Command Summary of Fleet Admiral Chester W. Nimitz, USN*, vol. 1,

available at <www.usnwc.edu/Academics/Library/Naval-Historical-Collection.aspx#items/show/849>. Emphasis added.

³⁰ JP 2-03.1, *Joint Intelligence Preparation of the Operational Environment* (Washington, DC: The Joint Staff, June 2009), II-65–II-67.

³¹ Polybius, vol. 2, book 11, chapter 36.

³² Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 703.

³³ "If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle." Sun Tzu, *The Art of War: The New Translation*, trans. J.H. Huang (New York: Harpers, 1993).

³⁴ The First Punic War provided ample grist for analysis. Particularly Hannibal would have been aware of the depth of Roman political will in warfare as evidenced by its construction of a navy when none of note had previously existed. Using a combination of public and private financing, Rome constructed and maintained a fleet of approximately 300 vessels for 26 years. See Michael Pitassi, *The Roman Navy: Ships, Men, and Warfare 350 BC–AD 475* (South Yorkshire, UK: Seaforth Publishing, 2012).

³⁵ Alfred Thayer Mahan, *From Sail to Steam: Recollections of Naval Life* (New York: Harper & Brothers, 1906), 231.

³⁶ Livy, book 27, chapter 22.

³⁷ Scipio's focus on the military and political endstate is also shown in his keen awareness of Carthage's maritime tradition and capability in the destruction of the navy during a time when ships could have easily been seized and added to one's own force, all the more so since the Carthaginian and Roman warships were identically built. Seizure would have swelled, perhaps doubled, the size of the Roman navy, making it larger than Rome had the ability to manage. Such a large force, with its personnel spread over a larger number of hulls, would have been weaker in the naval battles of the day. Many of the largest would have likely been "decommissioned" or sold, making them available potentially to Rome's enemies. It is notable in these treaties that Scipio did not destroy the Carthaginian means for naval construction. This is likely due to the fact the shipyards of the day could be purposed for either commercial or military vessels. The lesson to Carthage's leaders was clear: they could continue their maritime commerce, but not have a navy. Lastly, building a navy from 10 small vessels would have been a resource-heavy endeavor that a weakened Carthage, subservient to Rome, would be unable to undertake.

³⁸ Milan Vego, *Joint Operational Warfare* (Newport, RI: Naval War College Press, 2009), VII-14.

³⁹ Echevarria, 20.

⁴⁰ Strong and Iron, 7.

New from NDU Press

for the Center for Complex
Operations

Like, Comment, Retweet: The State of the Military's Nonpartisan Ethic in the World of Social Media
by Heidi A. Urben



Past research contends that with the exception of voting in Presidential elections, military officers' political participation is fairly muted.

Through a survey of more than 500 military elites attending the United States Military Academy and National Defense University, this case study seeks to establish the nature and extent of political expression throughout social media and whether such expression is in keeping with the norm of nonpartisanship.

Findings suggest that while most military elites continue to identify as conservative and Republican, fewer appear to do so today than at any other time over the past 30 years. Military elites who identify as liberals and Democrats are more likely to have more politically diverse military friends on social media, but are also more likely to report feeling uncomfortable by their friends' politics. This study concludes by considering the implications these findings carry for the norms of an apolitical, non-partisan military.



Visit the NDU Press Web site for
more information on publications
at ndupress.ndu.edu