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The Evolution of Army Style in the Modern West,

800-2000

A T THE BATTLE of Rossbach in 1757, a Prussian army commanded by Frederick the Great decimated a French and German force led by Marshal Charles de Rohan, prince de Soubise. The Prussians regarded victory as proof of superiority, and the French saw their defeat as proof of inferiority and as a call for major reform. To both sides, the battle revealed the differences between victor and vanquished, yet the opposing armies were more similar than dissimilar. Only minor variations distinguished their uniforms, their weapons were almost identical, and their tactics differed little. Troops stood in regiments of similar pattern and size, commanded by officers who bore the same ranks, filled the same functions, and were drawn from the privileged aristocracy, whereas the rank and file hailed from the lower levels of the peasantry and the working classes. In fact, exultant Prussians and despondent French represented variations on a single eighteenth-century army style.

This essay traces the evolution of army style in the West[1] through seven distinct stages that locate the forces that fought against each other at Rossbach – or for that matter at Agincourt, Borodino, or Verdun – on a continuum of change stretching back over a millennium. It proposes both an analysis and a taxonomy. The analysis attempts to explain the nature of variation and the dynamics of change, while the taxonomy defines and categorizes army style over time. This study centres on armies, as opposed to armed forces, because armies reflect a society more completely and have the potential to influence it more profoundly. Consider that navies and air forces make poor tools for internal control, *coup d'état*, or revolution, whereas armies are expert at all three. These pages focus on Europe and its projections, most notably the United States, because the characteristics

1 As used here, the term 'West' includes Europe at least to the Urals by the nineteenth century. The cold war habit of defining the Soviet Union and Europe behind the Iron Curtain as the 'East' is not employed in this essay.

and mechanisms to be discussed here assume a cultural and geographical pattern unique to the West.

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Here, brevity precludes a full discussion of the body of literature concerning military change, but two current controversies provide important context. Historians have been debating the definition, character, and impact of the 'Military Revolution' in early modern Europe since Michael Roberts suggested, forty years ago, that innovations in tactics and training between 1560 and 1660 transformed both the style of warfare and the form of the state. Geoffrey Parker later extended the period to cover three centuries (1500-1800) and shifted the focus more to technological change: the development of artillery, the invention of fortifications designed to thwart artillery (the *trace italienne* pattern), and the appearance of the broadside sailing ship.[1]

The defence community is debating the existence, nature, and implications of a 'Revolution in Military Affairs', or RMA.[2] Its proponents claim that technological advances in computerization and communications, aided by innovations in weaponry, have now altered the nature and practice of warfare by sharply reducing Clausewitzian friction born of uncertainty. Information gathering, processing, and distribution promise nearly perfect knowledge of the battlefield while other technologies deny the same degree of knowledge to the enemy, thus ensuring 'battlespace dominance'.[3] One approach to the examination of an RMA looks to history

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[1] For the earliest elaborations of the theory of the Military Revolution, see Michael Roberts, *The Military Revolution, 1560-1660* (Belfast, 1956) and George Clark, *War and Society in the Seventeenth Century* (Cambridge, 1958). Geoffrey Parker's discussion of the theory include his 'The "Military Revolution" 1560-1660 – a Myth?', *Journal of Modern History*, xlviii (1976), 195-214 and *The Military Revolution: Military Innovation and the Rise of the West, 1500-1800* (Cambridge, 1988). The most recent discussion of the theory is Jeremy Black, *European Warfare, 1660-1815* (New Haven, 1994) which builds upon his earlier critical essay *A Military Revolution? Military Change and European Society, 1550-1800* (Atlantic Highlands, 1991). A selection of key articles on the subject is supplied by *The Military Revolution: The Debate*, ed. Clifford Rogers (Boulder, 1995). This volume contains critiques of the theory by John A. Lynn, Simon Adams, and Jeremy Black. In his contribution, Rogers tries to take the concept of a Military Revolution back into the Middle Ages, as does *The Military Medieval Revolution*, ed. Andrew Ayton and J. L. Price (London, 1995). Despite the recent flurry of new work, the discussion of the Military Revolution may have lost its intellectual vitality.

[2] See, e.g., the following monographs published by the US Army War College in 1994 and 1995: David Jablonsky, 'The Owl of Minerva Flies at Twilight: Doctrinal Change and Continuity and the Revolution in Military Affairs'; Michael Mazarr, 'The Revolution in Military Affairs: A Framework for Defense Planning'; Jeffrey R. Cooper, 'Another View of the Revolution in Military Affairs'; Paul Brachen and Raoul Henri Alcalá, 'Whither the RMA: Two Perspectives on Tomorrow's Army'; Steven Metz and James Kievit, 'The Revolution in Military Affairs and Conflict Short of War'; and Earl H. Tilford, Jr., 'The Revolution in Military Affairs: Prospects and Cautions'.

[3] Admiral William A. Owens argues consistently for a technological revolution that will give the United States 'battlespace dominance'. See William A. Owens and Joseph S. Nye, 'America's Information Edge', *Foreign Affairs*, lxxv (1996), 20-36.

for examples of similar transformations; radical change in the past lending substance to claims of revolution in the present.[1] Although the short half-life of fashionable issues within the defence community almost certainly dooms discussion of the RMA to a briefer run than that enjoyed by controversy over the Military Revolution, decisions taken as a result of it could have long-lasting, ultimately life-and-death, significance.

The taxonomy presented here applies different principles from those employed by adherents of the Military Revolution or the RMA and reaches conclusions at odds with both. First, and most important, institutional characteristics – recruitment, social composition, motivation, command, administration – take precedence over technology and tactics, because for the broader questions of history, institutional development is simply more important than technical innovation. When methods of combat are examined here, it is not so much for their own sake as for their influence on military institutions. Second, change in army style is presented as an *evolutionary process* marked by transitions that include both survivals from the past and seeds of the future. Third, this essay proposes a theoretical analysis that is applicable across more than a millennium, rather than being limited to a single revolutionary watershed. The analysis identifies factors that led to convergence and divergence in army styles and that account for different paces of change. As a result of its institutional and evolutionary assumptions, this approach eschews the traditional signposts of military history, so neither technology nor the courses of major wars nor the careers of great commanders dictate the character and chronology of the stages set out here.

The definably Western focus of this essay is not meant to endorse current definitions of a 'Western Way of War', as exemplified in the works of Victor Hanson and John Keegan, who seem more concerned with combat than with institutions.[2] In its most ambitious statement, this theory is based on fairly simplistic notions of non-Western, or Oriental, warfare. Geoffrey Parker offers a more nuanced variant on this theme when he explains European overseas expansion during the early modern era as a consequence of Western military advantages over indigenous opponents; again he stresses technology but goes beyond this to include war finance and other factors.[3]

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1 For example, the Marine Corps University hosted a conference, 'Historical Revolutions in Military Affairs', at Quantico on 11-12 April 1996, to discuss periods of rapid military change from the Middle Ages to the Second World War. See also Andrew F. Krepinevich, 'Cavalry to Computer: The Pattern of Military Revolutions', *National Interest*, xxxvii (1994), 30-49.

2 Victor Hanson, *The Western Way of Warfare* (New York, 1989); John Keegan, *A History of Warfare* (New York, 1993).

3 See the introduction to *The Cambridge Illustrated History of Warfare*, ed. Geoffrey Parker (Cambridge, 1995), pp. 2-9. He includes five factors in his catalogue of advantages in the Western Way: technology, discipline, aggressive military tradition, military innovation, and war finance.

Still, there *were* distinctly Western ways of constructing an army. Western armed forces were not, for example, composed of migratory horse peoples, as were invaders from Central Asia, nor did they make use of slave soldiers to any great degree, as did Islamic societies.[1] The emphasis on discipline, drill, and ability to suffer losses without losing cohesion would also appear to be a Western trait, although not as exclusive as some believe.[2] Because the Western military style rested upon certain political, social, economic, and cultural foundations – what will be called 'state infrastructure' here – Western states produced particular kinds of military institutions. As other, non-Western, states tried to adopt Western army styles, they found it necessary to import certain aspects of that infrastructure as well, such as mass education or technological élites, so military institutions became something of a Trojan Horse for modernization around the world in the nineteenth and twentieth centuries.[3]

Western military development between AD 800 and 2000 divides into seven stages defined by army style. While the armies of Western states were similar at each stage, important variations occurred, and a core-periphery model best accounts for the facts. Here, as in other core-periphery models, the core is not primarily defined by a geographical position but by a set of common, shared characteristics, and the periphery by variations from the core. None the less, until the mid-twentieth century, core military development tended to typify the heartland of Europe, and peripheral divergence to typify the geographical fringe. The logical progression of this essay first examines the dynamics of evolution within this core-periphery approach, then describes the core characteristics of the seven evolutionary stages, and finally presents several historical cases exemplifying peripheral variation.

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The core-periphery model presented here must account for basic similarity and significant difference within each of the seven distinct styles that constitute Western military evolution since AD 800. Even though they displayed common core characteristics, Western armies did not all march in lock-step along the evolutionary path. Certain centripetal influences drew contemporary armies towards core characteristics, while other centrifugal influences drove them to diverge.

Military styles are closely related to state infrastructure; therefore, to the extent that Western states share common political, social, economic, and cultural characteristics, these encourage armies to converge around a core

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1 Perhaps the most notable exception to this rule would be the 'ministeriales', the unfree serf-knights employed in Germany during the Middle Ages. These were not slaves, nor were they legally free.
2 Keegan, *History of Warfare*, is quite extreme here.
3 See David Ralston, *Importing the European Army* (Chicago, 1990).

style. Of course, differences in state infrastructure also can cause armies to diverge from the core. Few historians have to be convinced that military forces are shaped by state infrastructure, but it is worth noting that the converse is also true. Military developments can shape the state. For example, the expansion of armies in the seventeenth century encouraged the growth of absolutism.

Another obvious influence promoting congruity is technology, because failure to accept improved weaponry has fatal consequences in war. Technological innovation can also alter institutions. Weapons such as the flintlock musket/bayonet combination changed the composition and structure of infantry battalions at the end of the seventeenth century, while contemporary weapons systems demand better-educated soldiers, and therefore influence recruitment and training. Advances in transport some-times affected armies even more profoundly; the railroad made the deployment and maintenance of mass armies feasible in the nineteenth century and went a long way towards compelling armies to adopt general staffs after the model pioneered by the Prussians in the early 1800s. Improvements in communications exerted a similarly significant impact in the late nineteenth and twentieth centuries. Technology rarely dictates to the military, however. It presents a menu of possibilities from which an army may choose, and the same technology can be used to serve different ends. Before the Second World War, both Germany and France built tanks, but of different kinds, because even though the two armies shared technology, they differed in doctrine. The Germans built light, fast-moving tanks to match their concept of mobile warfare; the French constructed more heavily armoured but slower models to support their infantry at a deliberate pace. Thus, military institutions screen and shape military technology to meet their purposes.

State infrastructure and technology are both outside influences on the military, but of particular interest to this essay are those distinctly military factors that shape the evolution of armies. Imitation of success is the most obvious practice leading to convergence between militaries. Technology, tactics, and institutional structures that prove their worth in one army are quickly imported into others. More than any other institution, militaries tend to copy one another across state borders, and with good reason. War is a matter of Darwinian dominance or survival for states, and of life or death for individuals. When an army confronts new or different weaponry or practices on the battlefield, it must adapt to them, and often adaptation takes the form of imitation. Thus, the great seventeenth-century military engineer Sébastien le Prestre de Vauban taught Europe his technique of siege warfare through the success of his methods as applied by the French. Therefore, armies that fight each other tend to resemble one another, but

armies learn from their allies as well, particularly when fighting alongside
one another, when they exchange officers, or when one ally is recognized
as being clearly superior in ability to its comrades-in-arms. During eras of
less interplay between militaries across Europe, greater variety can be
expected, especially during the Middle Ages before national monarchies
arose to challenge each other in war.

From time to time, a particular army became a model for its age; it
provided the paradigm for other armies and, thus, defined the core charac-
teristics for a stage of military evolution. Until the mid-twentieth century,
an army won the role of paradigm on the battlefield; in other words,
victory chose the paradigm. Memory of past triumphs might allow an army
to keep the role despite its decline; for example, the French army still
basked in Napoleonic glory through the 1860s, after it had been overtaken
by the Prussians. Following the Second World War, an army gained
paradigm position for more complex reasons, including such disparate
factors as ideology and arms sales.

Paradigm armies acted as magnets that pulled the West towards a
common pattern of military development. They even helped to shape the
institutions of armies that fought neither against them nor alongside them
in the field. So great was the influence of the Prussian/German example
that it affected the United States and even Japan at a time when German
dominance was far removed from the Americas and East Asia. Imitation of
paradigm armies extended from borrowing tactics and institutional
structures to the trivial mimicking of military dress. Thus, not only did
Western armies adopt the general staff model after the Prussian/German
victories of 1864-71, but spiked helmets became the rage.

Not every period has a paradigm army, nor need there be only one para-
digm for an era. It would be hard to identify a paradigm for most of the
Middle Ages, when diversity was at its peak. Although one army usually
provides the model at any given moment, during a single stage of evolu-
tionary development, leadership can pass from one force to another, as
when the Prussians replaced the French as paradigms in the mid-
eighteenth century. In addition, during the cold war, the Soviet Union and
the United States concurrently set military standards for their satellites and
allies. This unique bipolarity of military paradigms resulted from the
political bipolarity that followed the Second World War.

Common sense suggests that armies that are paradigms at the end of one
stage do not initiate the transition to the next, because such paradigms
would be recognized as already successful and thus unlikely to introduce
fundamental innovations. Paradigms thus run the risk of becoming dino-
saurs – dominant in one age but on the wrong evolutionary track for the
next. While this has most commonly been true, the logic breaks down

when discussing US forces in the 1970s, which, while still a paradigm in one military style, pioneered the transition to another by changing from a conscript to a volunteer force. True enough, that change was precipitated as much by political as by military necessity. In any case, simple imitation of the paradigm of an existing army style cannot precipitate transition into the next one, although imitation of the paradigm of a new army style has repeatedly been a method by which armies that are lagging behind cross the threshold into the next evolutionary stage.

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Pulling against the centripetal force exerted by technology, military contact, and paradigm armies, centrifugal forces promote variation. Differences between social, economic, and political systems limit a state's ability to copy another's military institutions. The social change brought by the French Revolution allowed France to transform its military system in a way that could not be wholly replicated elsewhere. When Prussia, for example, tried to imitate France after its defeat at Jena-Auerstadt in 1806, it was held back by the need to preserve a privileged nobility and a serf population. Owing to parliamentary fears of potential political upheaval and royal power, the British tied army command to wealth through the purchase of commissions until 1871, long after the purchase system had been abandoned on the Continent.

Lack of money could prevent a state from imitating a paradigm army in an attempt to remain close to the core. The Habsburgs may have wished after 1866 to model the Austro-Hungarian army on Prussia's, but the desire for universal conscription and a large reserve ran afoul of the state's inability to pay for them. Although paradigm armies, almost by definition, excelled at tapping the money, men, and *matériel* necessary for a particular army style, the results could in the long run hamstring the state. Consider the financial expedients employed by Louis XIV to finance his wars. Borrowing money at exorbitant rates while failing to reform the taxation system may have given him ready money and social peace in the short run, but they later doomed France to bankruptcy.

Lack of money often went hand-in-hand with lack of size and population. Small states frequently did not command the resources to adopt military innovations instituted by larger states. Another factor driving small states to diverge from the core was the fact that they might not compete with the great military powers, but contend against one another in regional rivalries, such as that in Renaissance Italy. A highly specialized local military environment could generate its own standards and regional paradigms, such as the condottieri army, a variant of the medieval-stipendiary force that incorporated important elements of the aggregate-contract army.

At the extreme, the unique political circumstances and the defensible
terrain of Switzerland allowed it to evolve a *sui generis* militia system that
still relies on a tiny full-time cadre and a large national reserve. Still, lesser
states have made surprisingly strenuous efforts to mimic the major players;
Hesse-Kassel and Saxony, for example, grafted on tactics, organization,
and administration in imitation of their larger neighbours.

Geography also encouraged diversity, particularly for those states that
were virtually islands. The sea provided a moat to protect England, after
1707 Great Britain, and the United States from the full force of Continental
wars, at least until the twentieth century. Insular states, able to choose
when and how far to join in land wars and relying on navies as their first
line of defence, can afford smaller armies. Both Britain and the United
States maintained modest standing armies into the twentieth century, while
armies mushroomed on the Continent. Isolation allowed these insular
armies to retain other idiosyncrasies besides their meagre regular forces.
None the less, even at the height of their insularity, Britain and the United
States still borrowed important aspects of paradigm military institutions,
and during the world wars both took on Continental forms whole. While
the United States remained geographically remote after 1945, it assumed
Continental responsibilities and therefore adopted a peacetime draft and
maintained large forces. The term 'insular' relates more to the exemption
from obligatory involvement in Continental land wars than to the geo-
graphical fact of being surrounded by water. In a sense, Switzerland
operated as an insular state in the nineteenth and twentieth centuries
despite its central location on the Continent.

Forces along the frontiers of the Western world also evolved along lines
that differed from the core. Both Habsburg Austria and Romanov Russia
developed unique military institutions and practices to deal with the
Ottomans. Similarly, the British could not recruit, equip, and train their
forces in India exactly as they would in Europe. Frontier practices did not
usually translate well into conflicts with other Western powers. Tactics
and organization employed to fight Amerindians, for example, did not
serve British colonials and the United States well when they faced Western
foes. The fact that armies learn from the forces they interact with either as
enemies or as allies helps to explain the diversity in armies that fought in
unique circumstances against non-Western foes.

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As in any evolutionary process, the most common characteristic of the
development of Western armies has been continuity. Yet evolution is
simply another word for change, and this essay argues that military change
was always in progress; only its pace varied. Transitions in Western army

style have proceeded at three basic rates in the West. First, gradual evolu-
tionary change progresses by imitation and limited innovation. Second,
more rapid change occurs when the inability to imitate demands sub-
stantial innovation to reform the military system. Third, radical structural
change results when the transformation of state infrastructure demands the
reconstruction of the military system.

Although imitation has been the most common instrument of change –
thus the role of paradigm armies – elements borrowed from other states
can rarely be imported as mirror images of the originals: they must be
adjusted to fit the infrastructure of the borrower. The closer that a military
institution or practice relates to state infrastructure, the more it will vary
from state to state. Recruitment, for example, is more tightly bound up
with a state's basic values and institutions than is unit organization; thus,
while armies might share a regimental structure, they may recruit their
regiments in different ways. To the degree that states have similar infra-
structures, borrowing is facilitated.

A degree of indigenous innovation will be expected at all times, though
normally it will be modest. Should such innovations – including changes
in military practice and institutions in response to technological advances
– prove effective, they may be imitated. Despite their usefulness, however,
they will not be imitated if they are designed to solve unique problems. For
example, the Western core did not incorporate the *Grenzers*, the military
colonies Habsburg Austria created to defend its military frontier in the
Balkans, although the Russians, faced with a similar threat, created military
settlements of their own.

At a gradual evolutionary rate of change, the basic military system of the
state, the imitations it imports, and the innovations it creates are all con-
sistent with its infrastructure. Modest change upon fundamental continuity
moves along at a steady pace, and over time individual changes can accu-
mulate to such a degree that they cross the threshold to a new army style,
as would seem to have been the case when increasing reliance on hired
professionals eventually transformed the feudal style of medieval forces.

There are times, often after a serious defeat, when a state recognizes the
need for military improvement, but it cannot imitate its victorious enemy
because that foe's military system is not consistent with the defeated state's
own infrastructure and military system. As a result, reform proceeds not by
borrowing but by major innovation, which leads to a more rapid pace of
change. Although the French sought after Rossbach to improve their
military system by borrowing from the Prussians, they found that Prussian
methods were inconsistent with the French character. French soldiers
were outraged by Prussian-style discipline and refused to accept degrading
punishments, such as beatings with the flat of the sword. Eventually, the

reform movement embraced innovations it saw as particularly French, including the adoption of light infantry units and more mobile tactics. Similarly, because there were limits to what Prussia could borrow from France after 1806, General Gerhard Scharnhorst, the Prussian reformer, turned to military education and organization as routes to improvement. By adopting such major changes, a reformed and now more effective army may replace another as the paradigm within the same stage of military evolution. Thus, the Swedes replaced the Dutch as paradigms in the 1630s and the Prussians replaced the French during the Seven Years War. Cumulative evolutionary change accelerated by major innovation can bring the transition to a new army style, as in the case of the mass-reserve army.

On rare occasions, the infrastructure of the state is reconstituted before its military institutions and forces them into a new pattern. The change can be relatively minor: the need for late twentieth-century armies to incorporate women more thoroughly as the women's movement gains political influence. However, at times of political and social revolution the change can be fundamental. During the French Revolution, when the upheaval of government and society demanded a new kind of army to defend them, the transformation ushered in a new stage of military evolution, the popular-conscript army.

Individuals can exert an influence on these varying processes, especially the second, typified by major innovation: the first and third are more constrained or driven by state infrastructure. Gustavus Adolphus, Frederick the Great, and Helmuth von Moltke legitimated their innovations through battlefield victory, and victory, as always, stimulated imitation.

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The processes of change, convergence, and divergence described above drove the evolution of Western army style through a sequence of seven stages: feudal, medieval-stipendiary, aggregate-contract, state-commission, popular-conscript, mass-reserve, and volunteer-technical.[1] A set of shared core characteristics typified each stage, and paradigm armies usually represented and shaped each style.

Core characteristics and the paradigm armies that exemplified them have most commonly been found near the geographical centre of Europe, on either side of the Rhine. France and Prussia/Germany usually provided the paradigm armies from the late Middle Ages until the cold war. Even when Spanish forces acted as the paradigm during the late sixteenth and early seventeenth centuries, they campaigned in northern Italy, France, western Germany, and the southern Netherlands more than they did in the

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[1] The closest comparison with the terms used here is Michael Howard, *War in European History* (Oxford, 1976).

Iberian Peninsula. There is good reason for the concordance between core army style and geographical centrality, because the centripetal forces of common infrastructure and common enemies have been strongest near the centre, while the centrifugal forces of differing infrastructure, insularity, and frontier variation have been weakest there. The fact that paradigm armies since 1945 have been at the geographical fringes of the West testifies to the more global nature of power and the capacity of technology to shrink distances after the Second World War.

The first style, the feudal army, can be dated roughly from the late eighth through the twelfth centuries. The most important, though not necessarily the most numerous, elements of the feudal army were the land-holders and their retainers who served out of feudal obligation; these feudal contingents were supplemented by levies of commoners. Some levies had tribal origins and amounted to gatherings of all able-bodied men of a given region; as such, they were holdovers from a previous age. As towns became more important, urban militia served sovereigns and local magnates as required by their municipal charters. Because medieval political organization and social structure varied from place to place, the feudal army style showed the greatest diversity. The Middle Ages, particularly before the crusades, broke down into so many local arenas of combat that one cannot speak of a paradigm feudal army. In addition, some areas, such as England, were feudalized late, and others, such as much of Switzerland, hardly experienced feudalism at all.

The feudal army style was typified by the provision of military service in exchange for something other than money payment, most commonly represented by the granting of a landed fief. The army was a product of a primitive economy, a decentralized weak government, and a military technology that gave special advantages to heavy cavalry. As fighting men did not receive pay and had to look elsewhere for the necessities of life, feudal armies were composed of part-time warriors, who served for limited periods or in special circumstances according to tradition and personal contract – the most obvious case is the knight's annual forty days of service. Loyalties within such feudal forces were personal; oaths and contracts bound men to the lords they served. The lack of standing forces beyond a monarch's or feudal overlord's own retainers permitted the system to function with only a rudimentary military administration. As time went on, traditional forces were supplemented by paid professionals who were to become the mainstay of military forces during the second stage.

The rise of a money economy and the development of more effective government associated with the national monarchies of late medieval Europe brought with them the medieval-stipendiary army, which predominated from approximately the twelfth through the mid-fifteenth

centuries. Rulers and grandees paid soldiers wages, or stipends, to serve
beyond the limits of feudal or militia obligation. These stipendiary troops
were more reliable in the sense that they would keep the field as long as
they were paid; accordingly, longer and better-regulated campaigns could
be undertaken. Feudal and militia forces survived to be called out at crucial
moments, however, particularly when a ruler fought on his own lands, so
that feudal levies might outnumber salaried troops at times of crisis. Paid
professionals often were the same subjects who could be summoned by
traditional means – perhaps aristocratic knights with a taste for war or with
empty pockets who served their own king for pay. The French king hired
Gascon crossbowmen; the English king hired longbowmen from his
yeoman peasantry. Foreign mercenaries might also sign on, but they
generally were not in the majority, although the definition of 'foreign' was a
tricky business in the Middle Ages.

Although military administration became somewhat more sophisticated,
armies in the field were likely to supply themselves by plunder. Often this
practice was elevated to an operational device, as in the English
chevauchées, or pillaging raids, of the Hundred Years War, which were
designed not only to sustain the English force, but to weaken the enemy
and perhaps draw him out to battle. Loyalties remained strong and
personal to the extent that soldiers served their own rulers. Eventually,
certain regions of Europe became breeding grounds for mercenary forces
renowned for their combat effectiveness, for example the Swiss, who
signed on as stipendiary infantry outside their borders. Such professionals
became the harbingers of the third style of army.

The medieval-stipendiary army evolved into the aggregate-contract
army, whose heyday ran from the fifteenth through the mid-seventeenth
centuries. In some ways, it looked modern. It was composed of hired
troops organized in regular units, such as French *compagnies d'ordonnance*
and Spanish *tercios*, while field forces combined infantry, cavalry, and
artillery, with infantry playing the major role. However, in other ways an
aggregate-contract army shared little with its successors. Field forces were
assemblages of diverse hired, often foreign, units temporarily combined.
Even though feudal vestiges remained and rulers might summon feudal
arrays in emergencies, they were in sharp decline during this era. Rulers
generally signed on entire bands of soldiers through their captains,
through a kind of business contract. The most notable mercenary units,
the Swiss pikemen and German Landsknechts, provided a ready supply on
demand.

Hired sometimes at the last moment, these units would quickly arrive
armed, trained, organized, and ready to fight. When François I faced inva-
sion from Henry VIII to the north and Charles V to the east in 1544, he

contracted in July for 16,000 Swiss, who reached France in time to form
the heart of his main army at the camp de Jalons in late August.[1] Such
mercenary bands could be purchased 'off the shelf' for a particular cam-
paign and then dismissed as soon as they were no longer needed, so there
was little reason to maintain armies from year to year, or even over the
winter, when weather prohibited campaigning.

Armies could also be assembled from forces raised privately by great
nobles in the names of their rulers. In a sense, the age of the aggregate-
contract army provided a magnificent theatre for the private army, both in
the service of and in opposition to the monarch. During the wars of
religion, the dukes of Guise alternately aided and challenged the king of
France, and in 1625, Albrecht von Wallenstein raised the greatest private
army in Europe to fight for Emperor Ferdinand II, only to become such a
threat that the Emperor ordered his assassination. Because the aggregate-
contract army was composed in the main of mercenary bands and the
private forces of local grandees, troops felt little allegiance to the ruler they
fought for beyond the obligation to give service for pay. Given the right
circumstances, captains and grandees turned on their employer; troops
were as ready to mutiny as to fight, and unpaid soldiers pillaged the
subjects of the rulers for whom they fought.

The model armies of the sixteenth century were the French at the
beginning, followed by the Spanish. The French closely followed the
pattern of the aggregate-contract army, whereas the Spanish, particularly
in their long struggle in the Netherlands, were more regularly organized
and administered. However, the Spanish, too, employed mercenaries: in
the army of Flanders in 1601, for example, Germans alone outnumbered
Spaniards, without counting large numbers of Italians, Burgundians, and
Walloons.[2] In many ways, the Spanish served as the paradigm army by the
mid-sixteenth century, to be replaced in the early seventeenth century by
the Dutch and later the Swedish armies. Although these armies introduced
important changes that typified the state-commission army – regimental
organization, drill, and improved military administration – wholesale
transition would only occur in the middle decades of the seventeenth
century.

Aggregate-contract armies occupied a particular niche in not only
military but also economic evolution. In order to employ expensive mer-
cenaries, monarchs had to be able to rely on the commercial sector to loan
them large sums at short notice. This implied increased trade and

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[1] See Ferdinand Lot, *Recherches sur les effectifs des armées françaises des Guerres d'Italie aux Guerres
de Religion, 1494-1562* (Paris, 1962), pp. 87-114.
[2] See Geoffrey Parker, *The Army of Flanders and the Spanish Road* (Cambridge, 1972), p. 276.

production, and accumulation of capital. As resources were still limited, the ability of aggregate-contract armies to assemble and disband quickly proved essential because it reduced costs. In addition, rulers found it financially advantageous, though politically dangerous, to rely on forces raised by leading nobles. The state-commission armies that replaced aggregate-contract armies in stage four were more stable because they were financed more completely and regularly by an improved system of international credit created by growing trade within Europe and with overseas colonies. If it is true that burgeoning European military power made possible greater colonial expansion, then European militaries helped to fuel their own development.

Although the state-commission army of the mid-seventeenth through the late eighteenth centuries at first bore the same weapons and fought in the same way as the aggregate-contract army, it was quite different. Foreign mercenary bands did still sometimes supplement a ruler's own forces, but the army was usually raised from among his or her subjects. Officers received commissions to recruit units that they then raised, equipped, and trained according to rules set by a more effective and intrusive military administration. As a rule, the rank and file enlisted voluntarily as individuals, although Russia, and to some extent Prussia, provided exceptions to this rule. As armies grew larger, European states also turned to forms of conscription to top off their forces. Conscription, which would become the primary method of recruitment during the next stage of military evolution, appeared in its first form at the close of the seventeenth century just as the feudal levies of nobles, a survival of times past, died out. Under the direction of the marquis de Louvois, the French conscripted special provincial militia units. They first served with the army in 1688 and, thereafter, this *milice* acted as a recruiting pool and reserve.

A state-commission army took longer to raise than did its predecessor, but had advantages to compensate: it was better disciplined, more loyal to the ruler, and cheaper man for man, as well as being more uniform, with a standardized, permanent regiment as its basic building block. These factors allowed armies to grow to a much larger size. Although the Spanish army had expanded in the sixteenth century, the French army, the paradigm from 1660 until at least 1740, multiplied sevenfold between 1635 and 1696 to a wartime paper strength of more than 400,000.[1] Significantly, French peacetime forces grew at twice that rate, turning into the first real standing army, with about 150,000 troops by the 1680s.[2] Created in the

[1] John A. Lynn, 'Recalculating French Army Growth during the *Grand siècle*, 1610-1715', *French Historical Studies*, xviii (1994), 881-906.
[2] There is some reason to date the standing army back to the early aggregate-contract army, but French forces maintained in peacetime then rarely exceeded 10,000 men.

first instance for defence, this standing army also served as an instrument
of state coercion against the civilian population.

Many aspects of military life underwent profound change with the state-
commission army. Tactics depended upon disciplined, almost mechanical,
drill and obedience, and the Prussian army's superiority in these would
make it the paradigm from the mid-eighteenth century. The common
soldier evolved from an easily discarded hireling into a state servant
provided with better medical care and the promise of a decent retirement
in institutions such as the Invalides in Paris, opened in 1674, and the Royal
Hospital at Chelsea, opened in 1690. Obedience required by combat
spread into other aspects of military life. The new hierarchy of the officer
corps helped to curb the independence and insubordination shown by
commanders in earlier ages.

Not only command but also administration became more regular, which
helped to sustain the larger forces. Permanent magazines, regular supply of
food, provision of uniforms, and other important administrative innova-
tions typified this period. The growth of that administration, the need for
states to mobilize and disperse the resources their armies needed, and the
existence of standing military forces influenced the development of more
powerful, centralized, and bureaucratic governments, headed by absolute
and enlightened princes. More powerful states demanded higher levels of
taxation and greater political and commercial control, and they enforced
these demands with armed force when necessary. State formation and the
state-commission army marched side by side in early modern Europe.

The popular-conscript army of stage five arose with the French
Revolution and lasted until the Prussian victories of 1864-71. Obviously,
conscription was fundamental to this style, but other traits also defined it.
Conscription of a sort had supplemented voluntary enlistments in western
Europe prior to 1789; it supplied a limited number of men in ways
designed to minimize army interference with the productive segments of
society. However, the *levée en masse* mobilized all of French society for war
in August 1793 and produced a wartime army over twice as large as any
France had ever seen. While the *levée* established the principle that univer-
sal conscription should provide the basis for recruitment – and relegated
the voluntary principle to the periphery, most notably Britain and the
United States – the *levée* was not a system but a revolutionary spasm. The
French regularized the process in the Jourdan Law of 1798, which set the
example for Europe during the better part of a century. The census
established the number of the male population, and a percentage of young
men of a given age would be conscripted as needed each year. Although
conscription remained universal in principle, certain groups were exempt
and substitutions were allowed; thus, in practice, it became selective.

After 1789, French conscripts were expected to feel a new national loyalty or patriotism, and while an equivalent sentiment would take time to spread across Europe, spread it did, although its application in multi-national states such as the Habsburg domains was more problematic. The popular-conscript army was supposed to be a people's, or popular, force, composed only of the nationals of a given state. Foreign mercenary units, a holdover from the aggregate-contract army and still employed by state-commission forces, disappeared from Europe, although imperial powers such as the French and British created units of colonials overseas.

The popular-conscript army as created by France grew out of political and social revolution. The battalions that sang the Marseillaise and later campaigned for Napoleon were inconceivable without the events that followed July 1789. However, the revolutionary origins of the popular-conscript army made it difficult for some powers to adopt this style whole. It proved to be the form of army that was most likely to be imitated only in part, as the cases of Prussia and Russia will demonstrate. Still, this style entailed elements that were or became the European core standard – more general conscription, patriotic motivation, and technical elements such as organization into army corps.

Although most military historians see 1815 as the beginning of a new era, the army style maintained after the return of peace was a natural outgrowth of the Revolutionary and Napoleonic periods. The real, although perhaps surprising, product of popular-conscription was the large, long-service, professional standing army of the nineteenth century. Peacetime forces multiplied in comparison to earlier totals. In the French case, a standing army that had numbered about 150,000 in the eighteenth century approached 400,000 in the mid-nineteenth century.[1] Both military and political developments explain this phenomenon.

As Napoleon demonstrated his genius in a series of conquests, Europe learned the need to assemble forces quickly. Napoleon's impressive victories in the campaigns 1805 and 1806, for example, depended not only upon speed of movement but also upon speed of assembly, upon the readiness of the entire campaign army to move at the first news of war, something the slow-mobilizing state-commission army could not do. After 1815, not only did European states adopt conscription in the fashion of the Jourdan Law, but they worked out solutions to putting the greatest number of forces on line at short notice. The French opted for a large standing army of long-service professionals conscripted for a term of six years. Such a long enlistment released only limited numbers into the

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[1] See John A. Lynn, 'The Pattern of Army Growth, 1445-1945', in *Tools of War*, ed. John A. Lynn (Urbana, 1990), pp. 6-8.

reserve. The Austrians and Russians did much the same, whereas the Prussians, who paid more attention to their reserves, pointed the way to the future. In all cases, lack of money capped the size of the army and prevented the state from exploiting the full potential of universal conscription to harvest manpower.

Political fears also fostered large, long-service, peacetime armies in most European states. The Jacobin impulse that gave birth to patriotism in France and made conscription the basis for recruitment, created a revolutionary tradition that threatened *status quo* governments and made them prefer politically reliable, long-service troops. With its army-centred value system – its barracks mentality – this type of force would prove its political, if not its military, worth in 1830, 1848, and 1871. A desire to bolster political stability reinforced the Napoleonic discovery that a state must field substantial forces at the very outbreak of war and, thus, justified large standing armies.

This period also witnessed the beginning of a sustained effort, extending to this day, by non-Western states to adopt and adapt Western military institutions. European armies, having demonstrated their value in imperial conquests, served as models for other states wishing to maintain their own independence or become colonial masters themselves. Egypt and Japan copied Western military examples at this time, and the process would go further in the epoch of the mass-reserve army.

The mass-reserve army of stage six evolved out of innovations made by the Prussians and was shown to be effective by their victories between 1864 and 1871. It may seem that the Prussians entered stage six as early as the final years of the Napoleonic Wars; however, the Prussian army, though pioneering important elements of the style then, did not complete its evolution into a mass-reserve army until the 1860s. In any case, the mass-reserve army was very different from the style that proceeded it. Whereas the peacetime standing army was seen during stage five as the state's primary fighting force, during stage six it was seen as a device to train a large reserve that could be mobilized in time of war. Conscription, which still produced the rank and file, now netted a far larger number of troops for the major armies of France, Germany, Russia, and Austria. By 1900, the Russians called up 335,000 recruits annually, the Germans 280,000, and the French 250,000.[1] Troops served full-time for shorter periods, usually only two or three years, and then passed into the reserves. By turning from expensive full-time professionals to far cheaper part-time reserves, the mass-reserve army eased the budgetary restrictions imposed upon governments. The acceptance of mass-reserve armies also was linked

[1] James Joll, *The Origins of the First World War* (London, 1984), p. 58.

to a belief that the great majority of the people were politically reliable. With the mass-reserve style, the size of mobilized armies rose dramatically, yielding the armed hordes of the First and Second World Wars.

The growth in European armies at the end of the nineteenth century resulted not only from military evolution but also from the consequences of industrialization which, combined with improvements in agriculture, supported far larger populations. France, with 20 million people in 1700 and 27 million in 1801, had 38 million in 1901, while Germany increased more dramatically, from 22 million in 1816 to more than 56 million in 1900.[1] Although the greater population of Europe would have led to larger armies regardless of changes in army style, the practice of conscripting recruits and then releasing them to reserves magnified the impact of population growth.

The key to realizing the full potential of these much enlarged armies was rapid mobilization, and it in turn required another product of industrialization – steam power. Before industrial-age weapons multiplied the killing power of armies, the extent of war was transformed by the carrying capacity of railroads and steamships. If railroads were to make possible the Napoleonic ideal of speed of assembly, extensive planning and skilful co-ordination were required, so the adoption of a Prussian-style general staff became an absolute necessity in the second half of the nineteenth century. The rough war plans previously drafted by European commanders would not bear comparison with the detailed plans carried out by German forces in the Franco-Prussian War.

The stage of the mass-reserve army, which in states such as Germany continues to this day, has witnessed a series of paradigm shifts. Between 1871 and 1918, the Germans provided the paradigm, until restrictions placed on them by the treaty of Versailles in 1919 gave back the role to the French – unless one prefers to argue that the inter-war period provided the West with no clear paradigm.

After 1945, both the Soviet Union and the United States became models concurrently, although to very different constituencies. The Soviet army served as paradigm for the military forces of Eastern Europe, while the United States abandoned its insular condition to become a European Continental power and assumed the leadership of NATO forces. The superpowers in this unique bipolar competition owed their positions to a set of common factors: great military power born of population and wealth; ideological leadership in the cold war; ability to supply arms to allies and clients; and capacity to train and advise other armies. Ideological barriers

[1] *International Historical Statistics: Europe 1750-1988*, ed. B. R. Mitchell, 3rd ed. (New York, 1992), p. 4.

compelled, or at least encouraged, lesser military powers to look only to one or the other of the two superpowers. It could be argued that during the cold war, the European states that followed the Soviet lead had no choice; the Soviet army simply enforced its standards on Warsaw Pact forces. Be this as it may, the Soviets directed one path of military evolution, while the United States guided another. Both of these paradigms stood on the periphery of the West, not at its geographical centre, but it would be unrealistic to expect the centre to produce the paradigm when that fragmented heartland lacked the resources to compete with the superpowers on its flanks. The post-colonial and ideological contexts of the cold war also turned both superpowers into examples for emerging nations, and thus they carried Western military institutions into the developing world.

During the early twentieth century, the internal combustion engine reshaped logistics and combat on land and in the air. One of the major institutional changes wrought by motorization was the emergence, from army roots, of air forces which would eventually become the bearers not only of conventional, but also of nuclear, weapons. Despite transforming warfare and diplomacy, nuclear weapons had surprisingly little impact on army style, so their introduction did not constitute the threshold of a new evolutionary stage.

The mass-reserve army is probably the style most liable to be transformed by a long war. Based upon short service and large reserves – that is, made up primarily of amateurs – mass-reserve armies were forged into professional forces through the harsh agency of the world wars. During the years of conflict, citizens became soldiers, administration became more competent, and tactics became more sophisticated. However, it also is in the nature of things that mass-reserve armies showed a tendency to return to the limited competence of an amateur force with the return of the routines of peacetime short service.

The seventh and final stage in the evolution of Western armies, the volunteer-technical army, began in the early 1970s, when the United States shelved its peacetime draft after the trial of Vietnam. To some extent, US policy-makers saw the elimination of the draft as one way to heal the self-inflicted wounds of the Vietnam War, but there was much more to the decision than that. If the mass-reserve army was shaped by industrialization, the volunteer-technical army is decidedly post-modern. It developed in response to technological advances that accelerated ever more rapidly after 1945. Quantity, sheer numbers of men and weapons that had seemed the prerequisite of victory in the world wars, gave way to quality. Conventional weapons became more lethal and complex; but their use demanded greater expertise and co-ordination which, in turn, demanded improved education, doctrine, and training. Fewer but more able troops

could accomplish more on the battlefield than could the mass armies of earlier decades. The smaller army could be maintained through selective voluntary enlistment, although the state reserved the right to return to conscription. Voluntary enlistment also promised higher levels of education and motivation among the rank and file. As officers and enlisted personnel needed to master a more sophisticated form of warfare, longer terms of service returned. Since 1973, United States reserve contingents have been substantial, but not overwhelming, in size.

As the volunteer-technical army is a consequence of technological progress rather than of political factors unique to the American situation, the United States's decision to adopt this army style began a trend among armies throughout the developed world. Britain had turned away from conscription as early as 1957, but it was hardly a paradigm and abandoned conscription out of a realization that it could not play a dominant role with its land forces. Continental Europe is now following the US lead: Belgium ended conscription in 1995; the Netherlands will end it in 1996; and France recently announced that it will be phased out over the next six years. A Royal United Services Institute paper characterized the new French policy as 'a declaration that mass armies belong to the past, that the age of Europe's military history that opened with the French Revolution closed with the end of the cold war'.[1] For certain states, however, universal military service seems likely to remain; Israel, for example, needs to keep as large an army as possible until reliable peace comes to the Middle East. And, although the US army acts as the paradigm stage-seven army in the West, it is unlikely to become a paradigm for the entire world, because only the developed countries can match its level of weapons technology.

The core characteristics of the seven distinct army styles described above can be compressed into a series of matrices, four of which follow as appendices. The Core Army Style Matrix correlates transitional factors, survivals, predecessors, and paradigms with social, economic, and political change. The Core Composition Matrix describes the composition of armies in terms of officers, rank and file, and foreign troops. The Core Civil-Military Matrix correlates the relationship between military institutions, societies, and the political systems. And lastly, the Military Effectiveness Matrix lists the military developments affecting combat and makes a point only touched on in the narrative: that this analysis of army style takes account of armies as fighting instruments, not simply as institutions.[2] The

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[1] Reuters, 19 March 1996. See also the article in *Jane's Defence Weekly* (13 March 1996), pp. 19-20.
[2] See *Military Effectiveness*, ed. Allan R. Millett and Williamson Murray (Boston, 1988), for the most intelligent discussion of military effectiveness. They differentiate military effectiveness – the ability to deal with everything from mobilizing money and manpower to developing tactics – from combat effectiveness, which is usually confined to the immediate clash of arms in battle.

institutional characteristics of an army style are in constant dialogue with its combat effectiveness.

* * *

The seven core army styles outlined here do not demand conformity. To the contrary, the complexities of the real world lead to considerable peripheral variation around the core. Each Western army displayed distinct and often unique characteristics and, in very rare cases, combined elements of two styles. While a description of every Western military is beyond the limits of this brief essay, comments on several major armies, all but two of which served as paradigms, illustrate a range of variation.

France, not Prussia/Germany, exerted the greatest influence on the development of Western army style. Since 1870, the Germans have proved more effective on the battlefield, defeating the French in the Franco-Prussian War, driving them to exhaustion in the First World War, and humiliating them in 1940. However, the French virtually defined chivalry in the late Middle Ages, stood as a major power in the age of the aggregate-contract army, created the paradigm state-commission army of Europe from the mid-seventeenth century until the War of the Austrian Succession, fashioned the paradigm popular-conscript force from the French Revolution until 1870, and provided the closest thing to a paradigm mass-reserve army between the two world wars. Prussia/Germany only became the paradigm from the 1750s through the 1780s, the last phase of the state-commission army, and from the 1860s until 1918, the first phase of the mass-reserve army. German pre-eminence is more recent, but French pre-eminence much longer.

As it has so often provided the paradigm, many of the examples already cited in the discussion of core army style have concerned the French army. Thus it suffices here to point out that when no longer the paradigm themselves in the late nineteenth century, the French closely followed the lead of the paradigm German army: establishing the *École de guerre* in 1876, forming a general staff during the ministry of Charles-Louis de Saulges de Freycinet (1888-93), and introducing short-service conscription in 1889. The French turned to short service relatively late, owing to their fear that a citizen army would not be politically reliable for internal use; the ghosts of the Commune vanished slowly. With their decision to abandon conscription by the year 2002, the French are adopting the latest army style thirty years after the paradigm US army, but ahead of the Russians and Germans.

After France, Prussia/Germany proved most influential. The Prussian role in shaping European military institutions began only in the eighteenth century. During the early 1600s, the Prussian army was an aggregate-contract force of small size and limited reliability. When the Great Elector

came to the throne in 1640, he eliminated these forces and created a state-commission army. To pay for this force, he and his successors literally forged the several scattered Hohenzollern domains into a single state. The comte de Mirabeau was close to the truth when he remarked that whereas other states had armies, Prussia was an army with a state.

The most important Prussian variation on the state-commission army was the canton system of conscription, although voluntary enlistments remained important for the Prussians and foreign recruits were welcome. Prussian conscription began when quotas were demanded of each province in 1693 – following the French introduction of conscripted provincial militia in 1688 – and under Frederick William I (1713-40) developed into a more sophisticated system that linked regiments to regions and guaranteed each regiment a number of conscripts bound to serve for life. Regiments only had to muster their full complement for several weeks during the spring and summer; the rest of the year peasant conscripts spent at home working the land. Although conscripts counted as full-time soldiers, they were civilians for most of the year and, therefore, did not overburden the state. Thus, the canton system both furnished recruits and provided a form of reserve.

A second advantage enjoyed by Prussia during the stage of the state-commission army was its more professional officer corps. French officers, commonly absent from their units, functioned almost as amateurs who retained a life outside the army; in contrast, Prussian officers devoted their lives to the army and rarely left it.

After the destruction of the Prussian army in 1806, the Prussians were poised between two army styles for fifty years. Humiliation drove the army leadership to institute a series of reforms that both copied aspects of the popular-conscript style and pioneered important characteristics of the mass-reserve style. In the system solidified after Napoleon's final defeat, Prussia gathered its recruits through a form of conscription very similar to the Jourdan Law and expected them to show a patriotic attachment to the state and the army similar to that shown by French troops. Numerous exemptions and a selective process cut recruitment to about 40,000 young men annually – half of those eligible. Men in uniform full-time numbered 120,000, backed by a regular reserve of 80,000 that served with the regiments a few weeks every year.[1] Thus, the army resembled other popular-conscript forces in that it was raised by selective conscription and in that the standing army was larger than its reserves. The secondary

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[1] For figures on the nineteenth-century Prussian/German army, see: Michael Howard, *The Franco-Prussian War* (London, 1981), pp. 12, 20; William McElwee, *The Art of War: Waterloo to Mons* (Bloomington, 1974), pp. 59-61; Archer Jones, *The Art of War in the Western World* (Urbana, 1987), pp. 394-5.

reserve of the *Landwehr*, which seemed to foreshadow the mass-reserve
army, was more a militia than a regular force.

Yet the Prussians approached the mass-reserve army in other ways. As
opposed to the French long-service, peacetime, popular-conscript army,
Prussian recruits served only for three years before entering the reserves.
Moreover, within a few years of their defeat at Jena, Prussians pioneered
advanced education for officers through what would become the
Kriegsakademie and created a general staff, both defining characteristics of
the mass-reserve army. Prussia could not transform its officer corps by
introducing the principle of social equality on the French model. The most
prestigious aristocracy continued to dominate the highest echelons of
command, so the Prussians balanced birth with talent by developing an
élite of intelligence and education who could serve as planners and
advisers to privileged commanders. Here is an important case of inability
to imitate leading to original radical reform.

Not until 1861 did the Prussians fully adopt the mass-reserve style, when
they both increased the recruitment class to 63,000 and lengthened service
in the reserves from two to five years. Henceforth, the regular reserves
would outnumber the standing force, and reservists would form the
majority of the mobilized army. Although conscription remained selective
for budgetary reasons, Prussia made the change that would provide the
West with a new paradigm within a decade. The application of the
Prussian system to all of Germany after unification, multiplied by
population growth, provided the Germans in 1914 with a full-time troop
strength of 750,000 that expanded into a force of about 4,000,000 when all
types of units were mobilized.[1]

When the restrictions imposed by the treaty of Versailles reduced the
size of the German army, it ceased to be the paradigm, although German
institutions and practices imitated by other armies before 1918 continued
to have influence. The army that grew under Nazi sponsorship and control
gave the world lessons in tactics, but its subordination to the ideology and
organization of National Socialism made other Western powers unwilling
to imitate it.

After 1945, the divided Germanies followed divergent courses. West
Germany created a mass-reserve army to operate within NATO, while East
Germany followed the Soviet paradigm. The military institutions of the
recently united Germany are West German. Owing to the end of the cold
war, compulsory service has decreased in length and the number of
exemptions has increased. The Germans, however, have not yet followed
the United States by adopting the volunteer-technical style.

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[1] Émile Wanty, *L'art de la guerre* (Paris, 1967), ii. 94-5.

Russian forces before the late seventeenth century followed idiosyncratic patterns at a time when it would be incorrect to classify Russia as a Western state. Landholders were required to serve as cavalry in the sixteenth and seventeenth centuries, but this service-class cavalry should not be equated too closely with Western feudal levies. Hired Western mercenaries in the mid-seventeenth century gave a hint of things to come, but Russian forces only moved within the European orbit with the military reforms of Peter the Great (1682-1725), who generally adopted the style of the state-commission army. However, his army diverged from the core owing to Russia's less developed economic and social infrastructure and because of its frontier threats. In particular, the Romanovs introduced conscription to fill the majority of their ranks in 1705. Because the restrictions imposed on the serf population limited voluntary enlistment, Peter imposed a tax in blood: every twenty households had to supply one recruit, who would serve for life far from home and family. Later, in 1793, the term of enlistment was reduced to twenty-five years. The special needs of fighting on its southern and eastern frontiers led Russia to employ troops in military colonies where soldiers married and farmed. Frontier conflict also gave rise to special tactics, including the use of portable wooden barriers to shelter infantry from enemy horsemen.

Owing to their unusual form of recruitment, the Russians had adopted a key element of the popular-conscript army long before the French Revolution. They made other fundamental adjustments to their style of army only in the second half of the nineteenth century. Major innovations were not considered necessary when the French, Prussians, and Austrians instituted reforms because the Russians felt no stirrings of native revolution and the defeats between 1799 and 1807 did not threaten the state; thereafter, their military system was vindicated by victory. Although they did adopt the technology, tactics, and organization of the popular-conscript army, the social and institutional structure of the army remained fairly constant until the reign of Alexander II (1855-81).

After the Crimean War, the Russians set up schools for the training of junior officers, created a general staff in 1867-9, and in 1874 introduced universal military service, which moved them over the threshold of the mass-reserve style. The term for conscripts was reduced to five years with the colours followed by nine in the reserves.[1] By 1906, the balance had shifted to three years and fifteen years.[2] Long service before 1874 made for

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[1] Walter Pinter, 'The Burden of Defense in Imperial Russia', *Russian Review*, xliii (1984), 255, gives the service as six years, later reduced to five, with only two years for men with an elementary education. Andolenko, *Histoire de l'armée russe* (Paris, 1967), p. 304, gives it as three to five years, dependent on the branch, and thirteen to fifteen in reserves.

[2] D. Jones, 'Imperial Russia's Forces at War', in *Military Effectiveness*, ed. Millet and Murray, i. 277.

small reserves, but by 1914 the full-time army boasted 1,185,000 men, supplemented by 3,115,000 reserves.[1]

Although the Revolution of 1917 did not lead to the abandonment of the mass-reserve style, it did alter the relationship between the army and the state, to the extent that a tsar no longer had operational control of both the civil and military administrations. In addition, the link between social élite status and the officer corps was broken, as it had been during the French Revolution, and at least officially, ideology took precedence over nationalism. After the Second World War, the Soviet Union continued to maintain a mass-reserve army of short-service conscripts, who served in the 1980s for two years. And after the breakup of the Soviet Union, Russia maintained the Soviet military system until it recently began to experiment with volunteer 'contract' service, designed to bring in higher-quality men for longer periods of time. Boris Yeltsin has gone even further in the election campaign of 1996, offering to end conscription altogether, so it would seem that the Russians may soon embrace a volunteer-technical army.

In examining the evolution of Habsburg military forces, one discovers substantial peripheral divergence even without taking into consideration their role as Holy Roman Emperors until the Empire's demise in 1806. Within the Habsburgs' personal domains, they relied upon feudal service until the 1300s, when recruitment of individual paid knights, *einschildiger Ritter*, brought the medieval-stipendiary style. During the sixteenth century, the Habsburgs assembled aggregate-contract armies from the mercenary bands so prevalent in Germany – Landsknecht infantry and pistoleer cavalry. The Habsburg aggregate-contract style reached its height during the Thirty Years War (1618-48) when Wallenstein raised a private army to fight for the Emperor. The Habsburg transition to the state-commission army can best be dated from the decision of Emperor Ferdinand III in 1649 to maintain regiments raised for service during the Thirty Years War, and thus form the first Habsburg standing army under his direct control.

One factor driving Habsburg military institutions to diverge from the core state-commission style was their need to defend a turbulent border with the Ottomans. Like the Russians, the Habsburgs created military settlements along the frontier. The Habsburgs organized Croat troops into the Military Border, and until 1873 these *Grenzers* formed regiments that contributed substantially to the troop strength of the regular army.

The state-commission style underwent considerable reform after the Austrians repeatedly met with defeat in the mid-eighteenth century.

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[1] Different historians provide different numbers, but those in Jones, 'Imperial Russia's Forces at War', pp. 278-80, seem particularly solid.

Between 1771 and 1781, the Habsburgs instituted conscription, in imitation of the Prussian canton system, to supplement voluntary enlistment. The Habsburg transition to the popular-conscript army was not dramatic but incremental. In reaction to defeat at the hands of Napoleon in 1805, reformers expanded conscription to create a citizen militia, the *Landwehr*, and along with this hallmark of the style, the Austrians imitated French corps organization and tactical methods. The long-service Austrian standing army of the nineteenth century mirrored French practice, with a similar concern for political reliability. But the multinational character of their domains would always limit any appeal to nationalism as a motivation among Habsburg forces; only in 1905 did Vienna forbid foreign officers to hold commission in Habsburg forces and still maintain their native citizenship.

Defeat at the hands of the Prussians in 1866 precipitated the final wave of reform that brought Habsburg forces into line with the mass-reserve style. Although the Austro-Hungarian army imported much – including more inclusive conscription, shorter service, larger reserves, and a general staff – budgetary constraints limited its size, while conflicting national loyalties continued to hurt its effectiveness.

Turning to the two classic insular powers, Britain and the United States, reveals peripheral patterns different from those already discussed. England did not become a feudal state in the formal sense until it was conquered by William of Normandy in 1066. Until then its military system remained a product of Germanic custom and Danish domination, relying on ax-wielding infantry guards augmented by the *fyrd*. William, however, brought with him the Continental institution of a landed, aristocratic heavy cavalry – feudal knights. Owing to William's claim to important Continental holdings, the kings of England took part in Continental wars throughout the Middle Ages. Thus, England adopted the pattern of the feudal and later the medieval-stipendiary army. In fact, it could be argued that its combination of hired knights and paid longbowmen raised by commissions of array stood as the most successful medieval-stipendiary force.

Transformed into a truly insular power when driven from France, England none the less shadowed Continental patterns. Henry VIII's invasion force of 1544 included 10,000 Burgundian and German mercenaries, including Landsknechts, in the aggregate-contract style. And while most of Henry VIII's troops were English, many of them were personally recruited by nobles in the fashion that yielded private armies in France. The English copied state-commission styles of recruitment, organization, and armament in the New Model Army during their civil war, but did not expand forces to match those of their allies and foes across the Channel. When England

united with Scotland in 1707, a new title, Great Britain, sanctified the political union, but army style did not alter.

The eighteenth century and the Revolutionary and Napoleonic periods saw the British commit only relatively modest forces to the Continent, even though the British dynasty lost Hanover to a French invasion in 1803. Although staying abreast of many technical and tactical advances, the British avoided conscription because they maintained a small army. Still, they did develop the national consciousness typical of the popular-conscript army, and in the late nineteenth century, the British adopted many of the advances of the mass-reserve army, including a staff college in 1858 and a general staff in 1906. Britain's military energies were mainly devoted, however, to the maintenance of colonial possessions through the employment of British and native forces. Engaged in the imperial hinterland, the British army remained quite literally a frontier variant of both the popular-conscript and the mass-reserve styles until the First World War.

Conscription became a necessity only in the twentieth century, owing to the need to create a Continental-size army in the First World War. The British ended conscription with the return of peace, introduced it again when war seemed likely in 1939, and phased it out again between 1957 and 1963. They were not really moving to the volunteer-technical army, however. At the time the British returned to volunteerism, it was a reversion to the tradition of a small and *affordable* professional force rather than a forward-looking accommodation to high-tech warfare.

US military institutions were the most peripheral in the West, at least until the twentieth century, because North America was even more effectively insulated than the British Isles from the demands of Continental warfare. Before independence, the British colonies on the Atlantic seaboard relied on local militia forces, temporary volunteer formations, and the king's regulars. After those colonies declared independence in 1776, the new United States created a small regular army to be supplemented by local militia. The US militia tradition remained strong, and, combined with the generally low level of threat to the United States, it forestalled resort to a large standing army and a federal reserve fed by conscription. The United States turned to selective conscription only during the Revolutionary War and the Civil War. At other times, peacetime forces were minuscule; as late as 1897, on the eve of the Spanish-American War, the United States Army mustered fewer than 28,000.[1]

The United States was not immune to European influence, for it imitated European military organization, education, tactics, and weapons. But except at the height of the Civil War, US politicians saw no need to

[1] Department of Defense, 'Selected Manpower Statistics', Washington, 15 April 1973, p. 20.

mobilize large armies. Thus, although the opening years of the twentieth
century saw such imports from the mass-reserve style as a war college in
1902 and a general staff in 1903, there was no peacetime conscription or
large regular reserve.

As in Britain, the world wars brought conscription to the United States.
When the United States entered the First World War in 1917, conscription
was introduced, to be ended with the return of peace. The army numbered
only 137,000 men in 1925, small by European standards.[1] Yet with the
approach of the Second World War, conscription was reintroduced in
1940, to last for a generation. The conscript army during the war
numbered 8,293,766 troops in May 1945, the largest army ever raised by
the United States.[2]

After the Second World War, the United States assumed the duties of a
Continental power, even if broad oceans still separated it from Europe and
Asia. By 1948, Americans maintained a true mass-reserve army, with
standing forces of 640,000 soldiers and marines backed by a force of
1,153,000 reserves and National Guardsmen.[3] Although large numbers of
reserves were called out to fight in Korea, they were not summoned to fight
in Vietnam (except a few in 1968), and owing to the lack of a general war
during the cold war, the United States never undertook a mobilization
similar to the European mobilizations of 1914 or 1939. Conscription was
supplemented by volunteerism, but the volunteers, who believed that they
would be conscripted anyway, simply hoped to influence their assignment
to branch and duty. A mass-reserve army required a great bureaucracy and
monumental military budgets, but the United States accepted both bur-
dens. Meanwhile, world-wide military responsibilities fostered the growth
of what Dwight Eisenhower called 'the military-industrial complex'.

Not only did the United States adopt the mass-reserve army after 1945,
but the US army became the paradigm west of the Iron Curtain. Through
NATO leadership, and through pioneering new and higher levels of milit-
ary technology, the United States set the pattern for the West. However, as
it came to dominate, it also evolved away from the mass-reserve style.

Conscription became one of the victims of the Vietnam War, and the
United States returned to the volunteer principle in 1973, albeit in a new
form. Between that date and the cuts that followed the Gulf War, the size
of the army fell slowly from an active duty strength of 801,000 troops in
1973, to 711,000 in 1991; it then fell more quickly to 525,000 in 1995, while
Marine Corps numbers dropped from 196,000 in 1973, to 194,040 in 1991,

1 Ibid.
2 Ibid., p. 21. This figure includes the personnel of the Army Air Forces. In June 1945, the Marine
Corps numbered an additional 471,369 troops.
3 Ibid., pp. 21, 92.

to 172,000 in 1995.[1] The army is predicted to shrink to only about 400,000 in 1998.[2] Current terms of enlistment vary; in the army they run two to six years, most commonly for four years. Regulars are backed by the United States Army Reserve, the Army National Guard, and the Marine Corps Reserve, a total force of some 750,000 troops at this time. In a sense, the limited size of regular forces, the longer terms of enlistment, and the modest size of reserves makes the US volunteer-technical army resemble the peacetime popular-conscript army of the mid-nineteenth century. However, a great difference separates the two, because volunteerism demonstrates its value today not by ensuring political reliability, which is assumed, but by promoting a high level of technical competence.

* * *

This essay has rendered a large subject in a small space; the result is a sketch drawn with quick brush-strokes best suited to suggesting shape, not to defining detail. It presents a novel image of military history; however, the novelty resides not in the particular elements, which should look familiar, but in the relationships between them and in the final pattern they form.

Focusing on institutional characteristics, the study argues for an evolutionary taxonomy of seven army styles, from the feudal forces of AD 800 to the present-day volunteer-technical army. This essay defines institutional criteria broadly, including not only such statistical matters as recruitment and class composition, for example, but also the assumptions and values that underlay recruitment and that operate within an army as a product of its composition. Adopting the logic of this taxonomy substantially alters the periodization of military history, particularly in regard to the last two centuries, as breaks in continuity usually seen as occurring after the Napoleonic Wars or with the first atomic bomb dissolve, and are replaced by watersheds in the late nineteenth and the late twentieth centuries.

In order to account for both similarity and diversity within each stage, the evolutionary model constructed here employs a core-periphery approach that balances factors encouraging convergence-technology – similar state infrastructure, imitation of success, and paradigm armies – against factors encouraging divergence – dissimilar infrastructure, inadequate resources, insularity, and frontier environments. The model explains continual change and periodic transitions from one evolutionary stage to the next by describing the interplay between infrastructure,

1 Department of Defense, Directorate for Information Operations and Reports, Manpower Management Information Division. Figures rounded to nearest thousand; 1995 figures for the month of June.
2 General Hertzog, commander, US Army TRADOC, is reported to have stated this figure. Chris Ives at *American Defense Annual*, conversation, 28 June 1996.

imitation, and innovation. Imitation provides the most common mechanism for steady change, but incompatibility between imitation and infrastructure or major change in infrastructure itself demands substantial innovation in military systems.

Although the taxonomy and the model of change dovetail into one another here, the value of one is not dependent on the validity of the other. It might be possible to accept the seven evolutionary stages but reject the model in the belief that the transitions between stages can only be explained as unique and unrelated historical phenomena. It might also be possible to reject the taxonomy, or simply regard its categories about the past as uninteresting, but regard the model as useful, either completely or in part. In any case, the taxonomy is essentially descriptive, whereas the model should be prescriptive as well.

This taxonomy departs from the traditional emphases of military history on military technology, major wars, or great commanders. Such approaches are not irrelevant or wrong-headed – they make good sense for certain purposes; however, they do not easily translate into the mainstream pursuit of history and so have isolated military specialists from practitioners of other historical sub-disciplines. The institutional focus of this essay better integrates the military specialty into current historiography by examining things that are of greater interest to other historians and by taking greater advantage of contributions by other specialties and disciplines. Consequently, a study of the evolution of Western army styles has the potential to open a dialogue with the best work being produced in the historical profession as a whole.

Repeatedly over the past decades, noted military historians have challenged their colleagues to conceive of their specialty more broadly, so there is nothing new about urging that we explore the social and cultural dimensions of armies and war.[1] Military history has even adopted more fashionable labels to announce a different line of march; so it professes the 'new military history' or examines 'war and society'. But these new labels have not necessarily changed things for the better, because when the 'new military history' displays its strong tendency to pursue matters peripheral to fighting, it forgets that armies are about coercion and combat and, thus, abandons the essentials. Practitioners of social military history have tended

[1] For appeals for a reshaping of military history that go back nearly a quarter century, see the following: Peter Paret, 'The History of War', *Daedalus* (Spring 1971), pp. 376-96; Stephen Wilson, 'For a Socio-Historical Approach to the Study of Western Military Culture', *Armed Forces and Society* (Summer 1980), pp. 527-52; Walter Emile Kaegi, 'The Crisis in Military Historiography', *Armed Forces and Society* (Winter 1981), pp. 299-316; Richard Kohn, 'The Social History of the American Soldier: A Review and Prospects for Research', *American Historical Review*, lxxxvi (1981), 553-67; Peter Karsten, 'The New American Military History: A Map of the Territory, Explored and Unexplored', *American Quarterly*, xxxvi (1984), 389-418.

to nip at the edges of the field, and so have more decorated than transformed it.

The outline of army evolution proposed here is not simply one more appeal to incorporate social history into the study of war but a hypothesis that provides a picture of what military history looks like when institutional criteria are given primary emphasis. As such, this work does not dally about the margins, but goes to the heart of the subject with a new agenda. An overarching hypothesis such as the one proposed here probably performs its greatest function by sparking debate, so should this analysis of the evolution of army style provoke controversy it will have achieved all that can be expected.

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FACTOR	FEUDAL	MEDIEVAL-STIPENDIARY	AGGREGATE-CONTRACT
Period of change	8th-10th centuries	12th-13th centuries	Late 15th-early 16th centuries
Incoming rationale – factors that led to the emergence of this army style	Political disintegration; lack of a money economy; technology of heavy cavalry	Need for more reliable troops without feudal limitations on service; increased use of infantry weapons and tactics	Continued increase in political centralization; better money economy; substantial commerce; emergence of dominant foreign infantry specialists
Outgoing rationale – factors that led to the fading out of this army style	Unreliability of feudal levies	Perceived superior skills of new types of infantry	Destructive potential and political unreliability of mercenaries; growing expertise of national levies
Element(s) of previous army style(s) that survived	Peasant levies of pre-feudal origins	Use of feudal and traditional levies to flesh out the army	Some feudal levies, arrière-ban, and militias, in major crises
Element(s) of the next phase that began during this army style	Some mercenaries	Increased use of foreign mercenary specialists, particularly in infantry, e.g., the Swiss	First national regiments
Paradigm army	None	No strong paradigm: France, England, and the Swiss provide best examples	France in late 1400s and early 1500s, then Spain
Technical/tactical changes associated with this army style	Dominance of heavy cavalry technology in battle	Use of sophisticated stone fortifications; relative decline of cavalry; use of more infantry, crossbow, and long bow; first use of artillery	Real impact of a gunpowder revolution; artillery fortresses; onset of military revolution in tactics and discipline

CORE ARMY STYLE MATRIX
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STATE-COMMISSION	POPULAR-CONSCRIPT	MASS-RESERVE	VOLUNTEER-TECHNICAL
Late 16th-early 17th centuries	1789-1810	1866-1905	1970-1995
Need to ensure controllable military forces; absolutist state	Political revolution or evolution requiring a national army dedicated to the state and capable of initiative	Major population increase; industrial technology of mass production and transportation; increasingly representative political institutions	Rise of a technology in which destruction not dependent on army size; unnecessary expense of mass army; political liability of conscription
Lack of dedication and initiative and thus limited effectiveness of uncommitted rank and file	Limitations and expense imposed by long-service professional armies; administrative confusion in armies without proper staffs	Lack of need and great expense of huge armies; political costs of conscript forces	NA
Mercenary foreign regiments; purchase of commissions	Aristocratic control of some officer corps	Conscription only during wartime for some armies	Some forces continue reliance on conscription, while adopting new technology of warfare
Limited conscription	Limited reserves; first railroad mobilizations	Substantial volunteer recruitment; rising level of sophistication in weaponry	
France to the 1740s or 1757, then Prussia	France to the 1860s, then Prussia/Germany	Prussia/Germany to 1918, then France to 1939, then United States and Soviet Union from 1945	United States
Refinements of gunpowder weapons; resurgence of cavalry; continued military revolution in tactics and administration	At first no technological change, but important change in infantry tactics, rapid-moving and numerous artillery; then onset of first advances of industrial revolution, steam transport, rifled small arms, important artillery improvements	Full impact of industrial revolution, machine guns, rapid-fire and heavy artillery, internal combustion engine, trucks and airplanes, tanks; appearance of atomic weapons and missiles	Electronic revolution; continued great improvements in vehicles, planes, and weapons systems

FACTOR	FEUDAL	MEDIEVAL-STIPENDIARY	AGGREGATE-CONTRACT
Use of forces in war that helped to define an army type or brought on a shift in army style	Some expeditions at great distance, but many local conflicts; feudal armies used on offensive and defensive	Use of mercenaries for offensive operations, particularly at distance, but in defence, much use of feudal forces which comprised an important and valuable part of the army	Offensive and defensive operations relying primarily or largely on mercenary forces, with feudal and traditional levies very much circumscribed in wars that see great kingdoms clash on land; religious wars
Social/economic changes associated with the period of this army style	Development of a subsistence, land-based economy with a strictly aristocratic élite	Rise of a money economy, with military service commuted into a money payment, scutage; still a strongly aristocratic élite	Essentially money economy, with a commercial base and instruments of credit necessary to hire large numbers of soldiers; strongly aristocratic élite, with more important commercial groups, religious diversity
Political changes associated with the period of this army style	Disintegration of central authority, followed by some attempt to re-create some central authority out of highly decentralized system	Formation of first national monarchies, with more power and resources at ruler's disposal	Continued concentration of power and resources in national monarchies

CORE ARMY STYLE MATRIX
to right-hand page

STATE-COMMISSION	POPULAR-CONSCRIPT	MASS-RESERVE	VOLUNTEER-TECHNICAL
Primary reliance placed on national volunteer regiments for all phases of military operations; only minor use of feudal levies, with traditional militias used for local defence; in wars with limited goals, clashes of dynasties	Contests of nations with either revolutionary or constitutional governments; large armies striking deep into enemy territory on campaigns far from home	Mass army for total war of the 20th century	Changed threat structure putting a greater premium on skill and mobility more than on size
Continued commercial expansion; important, but not dominant, middle-class moneyed interests	Substantial transfer of élite status to the wealthy middle classes; industrial revolution; steadily diminishing power of the aristocracy	Industrial societies with industrial working class; erosion of old agrarian society; industrial wealthy élite	Relatively wide distribution of wealth; élite of education and wealth
Absolute monarchies, with much improved administrations and financial resources; first national banks	American Revolution, French Revolution, series of European revolutions and reforms	Constitutional monarchies, republics, and true, stable democracies; then authoritarian systems	Cold war; eventual victory of democratic systems in the West

FACTOR	FEUDAL	MEDIEVAL-STIPENDIARY	AGGREGATE-CONTRACT
Officer recruitment and quality	The idea of 'officers' not entirely relevant; main cavalry force primarily or exclusively noble	Evolving state command, involving crown officers; leaders of mercenaries most commonly nationals	Mercenary captains owning units, commonly foreign; armies commanded by princes or their prince lieutenants; some social variety, but most officers noble
Recruitment of rank and file	Feudal and militia obligations require turn out	Volunteer troops and contract hiring; some commissions of array; feudal and traditional compulsory levies still important	Recruited by captains or communities and hired out; voluntary enlistments; some militias, particularly urban militias, still important
Term of service for rank and file	Very short and sporadic	Relatively short service usually; sporadic for traditional units	Off-the-shelf units common, quickly hired and quickly discharged; duration of service usually short for any particular unit
Size of army	Small and temporary	Not greatly expanded in size, though different in nature	Growing campaign armies, but only temporarily maintained at full size
Role of foreign troops	Question of what is foreign; but main forces raised locally	Still question as to what is foreign; some foreign mercenaries	Great role for foreign mercenary bands
Role of colonial troops for imperial states	No colonial troops	No colonial troops	Colonial militias for colonial defence and control of subject populations

CORE COMPOSITION MATRIX
to right-hand page

STATE-COMMISSION	POPULAR-CONSCRIPT	MASS-RESERVE	VOLUNTEER-TECHNICAL
Officers commissioned by the prince and responsible to him; first attempts at formal officer education; almost exclusively noble officer corps, purchase common	Officers commissioned by the state, responsible to state; abolition of the purchase of commissions; greater social diversity within officer corps; formal officer cadet training; first war college	Officers commissioned by state; larger percentage of middle-class officers; officers selected by education; formal officer training in cadet academies and a system of advanced professional education through war colleges and related institutions	Officers commissioned by state; selection by education; formal officer training on several levels; continuous professional education
Main forces raised by voluntary enlistment of individuals; some mercenary contracts; early conscription also used to top off armies in war and maintain reserves in peace	Conscription supplied bulk of forces, supplemented by volunteers; conscription limited in peacetime	Universal conscription for the rank and file	Voluntary enlistment of individuals; greater educational standards for recruits
Long; duration of war; effectively for lifetime for many	Long; varying from several years to lifetime	Short active duty, but then long commitment in the reserves	Longer basic enlistment; incentives to commit to longer service
Great increase in wartime army size; even greater expansion of peacetime standing forces	Significant increase over previous period, but expansion not as extreme as in previous period	Monumental increase in army size when reserves mobilized; armies designed to fight wars with fully mobilized army	Decrease in size; designed to fight with regulars and reserves in conflicts of limited duration
Significant percentage of foreign regiments in some armies	Foreigners excluded as national loyalties are stressed	None	None; however, forces of foreign allies are integrated into military missions
Creation of regular colonial regiments for use in their own colonies, e.g., sepoys	Continued use of regular colonial troops to control colonies and to conquer new colonial possessions	Use of colonial troops to control and expand colonies and to augment national forces in major wars	No colonial troops

FACTOR	FEUDAL	MEDIEVAL-STIPENDIARY	AGGREGATE-CONTRACT
Type of payment or compensation to military forces; cost of army style	Non-monetary payment; low cost to crown; plunder as pay and incentive	More monetary payment, although feudal compensation still important; growing cost to the prince; continued role of plunder	Monetary payment; high daily cost to prince but army maintained for only a short duration; continued role of plunder
Ties to society	Heavy cavalry were members of élite; traditional levies were commoners, often part of towns	Mercenaries often nationals with ties to the crown, many with ties to élite	Varied; national levies could be tied to crown or local élites; hired foreign mercenaries felt limited, if any, ties to states they defended
Loyalty and compliance	Local loyalties strong; only loosely bound to central authority	Responsible to the prince, but also non-nationals loyal only to money	Responsible to source of money; could be prince, local lord, or general; pay-based compliance
Reliability, civil control role	Useful in local and foreign warfare; dangerous to central authority because so much local authority	Useful in foreign war; useful in suppressing peasant rebellion; still enmeshed in conflicting loyalties within the state; very small garrison forces; local forces used for local social control	Useful for whatever the paymaster wanted, but liable to mutiny when not paid or approached by another paymaster; small garrisons
Command and control	Very loose control; prince often in battlefield command	Improved control, since men paid and thus responsive to prince who pays; prince often in battlefield command	More organized, through mercenary captains and representatives of the prince; prince often in battlefield command

CORE CIVIL-MILITARY MATRIX
to right-hand page

STATE-COMMISSION	POPULAR-CONSCRIPT	MASS-RESERVE	VOLUNTEER-TECHNICAL
Monetary payment; decreased cost per man, but larger armies maintained for longer periods; some limited plunder	Compensation for recruits could be low as they became soldiers through conscription and were supposed to be fighting for reasons other than monetary; varied, as long-service soldiers had to be paid	Low for mass of short-service conscripts	Higher to foster long service among highly trained individuals
Increasing ties to society, as forces became increasingly national in origin, but still rank and file are not tied to *status quo*; army employer of last resort	Officers and rank and file nationals and represented national society or parts of it; patriotic	With advance of national education and feeling and with representative government, troops were even more dedicated	Employer of last resort for enlisted, but choice for officers; armies tend to become less representative of a cross-section of society
Responsible to the prince, or central institutions; heavy use of coercion for compliance	Loyal to central authority representative of the nation; loyalty based more on nationalism	Loyal to the nation; spread of representative government; nationalism; ideological dedication in some important cases	Loyal to the nation and its democratic government; nationalism
Very useful for civil control within the principality; large garrisons replacing urban militias; coordination of national and local forces against major uprisings	Expected to consider themselves citizens loyal to government; sometimes reluctant, but generally effective in repressing urban revolt; could be coup force	More likely to think of themselves as citizens, since short service, so less likely to be brutally repressive	To the degree that army comes to think of itself as separate from society, potential for repression, but not yet a coup potential
Departments of war for administration and control; strong princes; army very obedient to princes' authority; new hierarchies of rank and command set by government; prince less likely to be in battlefield command	Mix of monarchies, representative institutions, and elected executives at the centre; first general staff; prince sometimes in battlefield command, but usually delegated to professional military; new technologies of telegraph for communication	More elected executives, later authoritarian governments of right and left; armies to be obedient to civilian authorities; general staffs in all major armies; new communications by telephone and radio; first use of computer-based control	Elected governments; supremacy of civil authority; professional command structures; wide range of electronic control

FACTOR	FEUDAL	MEDIEVAL-STIPENDIARY	AGGREGATE-CONTRACT
Technology	Basic iron-age arms and armour, plus the stirrup and heavy cavalry furnishings	Previous weapons, plus improved plate armour; introduction of cross-bows, longbows, and pikes; improved pre-gunpowder artillery and early forms of gunpowder artillery	Gunpowder revolution, small arms, improved artillery, field artillery, artillery fortress
Mobilization	Quick, but local	More lengthy process of raising paid troops (man by man), as in commissions of array	Off-the-shelf units, raised quickly and already organized, equipped, and trained
Motivation	Social standards of the élite; local ties of traditional levies	Loyalties similar to those of previous period; some loyalty to the prince; pay and booty key for mercenaries	Pay, booty, and professionalism; some religious motivations among troops
Training of troops	Personal training with high standards for knights; less training for militias	Often high standards of skill for cavalry and infantry, but limited formal training	Unit capacity high, based on cohesion, practice, and experience
Officer recruitment and quality	Rudimentary command; main cavalry force primarily noble	Paid units led by professional officers	Mercenary captains owned units; clientage very important in selecting officers for command; most officers noble
Command and control	Very loose; feudal lord at head of army composed of independent feudal vassals	Major court officers in charge; often prince takes direct control; prince usually led an army	More organized, through mercenary captains and representatives of prince; prince usually led an army

CORE MILITARY EFFECTIVENESS MATRIX
to right-hand page

STATE-COMMISSION	POPULAR-CONSCRIPT	MASS-RESERVE	VOLUNTEER-TECHNICAL
No major technological innovations, but substantial refinements; introduction of homogenous weaponry	At first no major technological innovations, then early impact of industrial revolution, rifles, breach loading, much improved artillery; new technologies of transport and communication	Full impact of industrial revolution; motor transport in all forms; transformation of infantry and artillery weapons; introduction of airplanes	Introduction of electronic and nuclear warfare; highly sophisticated forms of previous weapons systems; technology very demanding in terms of training and education of troops
Slower; need to expand or create regiments and equip and train troops	Early on there was a need to invest time in creating and expanding units; later mobilizable reserves; smaller conflicts; long-term professionals were quick to mobilize	For substantial conflicts, complete mobilization of reserves was required, but it could be accomplished in a short time due to new transportation, organization, and co-ordination	Premium on fast mobilization and deployment; existence of full-scale units, the use of modern technology, and pre-positioning of supplies and equipment make mobilization fast
Pay, loyalties to the king, and a growing national sense	Patriotism and professionalism	Patriotism	Patriotism and professionalism
Highly trained troops; important role for discipline and drill	At first less rigidly trained, but soon equally high standards for the new conscripts	Usually less highly trained than previous troops; mobilized force less skilled than troops serving their basic term of enlistment	Very highly trained long-service soldiers
Officers commissioned by the prince; also purchase of commissions was common; almost exclusively noble officer corps; first attempts at formal officer education	Officers commissioned by the state, responsible to state; abolition of purchase; careers open to a broader range of competent young men; higher standards of officer education	Officers commissioned by state; more middle-class officers; formal officer training in academies and war colleges	Officers commissioned by state; selection primarily by education; formal and continuous officer training on several levels
Departments of war created for administration and command; decreasing direct command of field forces by princes	Representative institutions, rulers, departments of war, and first general staffs; princes rarely assumed actual field command, with the notable exception of Napoleon	Princes, elected governments, departments of war, and general staff; armies led by professional generals, rulers remain behind	Elected governments, autocrats, departments of war, and general staffs; professional standards of leadership but theoretical potential for coups