

Guns and Government: A Comparative Study of Europe and Japan*

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WHAT role does technological innovation play in shaping historical change in the premodern world? In general terms, this is the problem I address in this article. Specifically, I analyze the “military evolution” that emerged from Europe in the sixteenth century and the similar military changes that characterized sixteenth-century Japan.

Did the introduction of gunpowder weapons cause these military revolutions? This turns out to be a problem for which we may run a virtual historical experiment: a side-by-side comparison of two cases with the critical variable, the introduction of gunpowder, controlled for. Gunpowder weapons developed slowly in Europe over the course of several hundred years, but arquebuses and cannon of a developed type were introduced in Japan at a precisely identifiable time: the year 1543. The Japanese case suggests that stronger government, not the introduction of guns, was the key force behind the revolutions. The act of comparison, though subject to interesting methodological problems, also raises questions about some general processes of historical development and suggests some broader conclusions about the place of technology in traditional civilizations.

THE “MILITARY REVOLUTION”: CONFLICTING EXPLANATIONS

In European history, the term *military revolution* denotes the developments in warfare from about 1450 to 1800 that steadily created a mili-

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tary advantage for western European powers compared to much of the rest of the world.¹ The revolution itself is one of the symptoms of the divergence of European civilization from traditional patterns of civilization.² The key developments the term describes can be quickly summarized. A tactical revolution returned massed infantry formations to a battlefield dominance they had not held since the age of Rome, at the expense of heavily armored cavalry. This battlefield phenomenon was accompanied by rapid changes in fortification and siege tactics that further emphasized infantry over cavalry. These stimulated the next change: steady growth in the size of armies. Larger armies meant larger, more spread-out campaigns and thus greater strategic challenges, including the expansion of European conflict to other areas of the world via related changes in European naval capabilities. Inevitably, the greater scale and intensity of warfare led to greater effects of war on society. This, in short, was the military revolution.

A complete description would take account of many more nuances and qualifications than a sketch can show. The term covers such a broad range of developments, in fact, that its boundaries are sometimes fuzzy. But historians generally agree on the core set of changes, especially as they occurred within Europe. Description of what happened is not the central problem—the real challenge is to explain why these changes took place. Two major lines of explanation dominate the debate. On the one hand, there are what may be characterized as technological determinist arguments. In this view the introduction of gunpowder weaponry is seen as the primary causal engine of change. On the other hand, critics of technological determinism have advanced several specific objections to the technological explanation, attempting to achieve a more complicated, multicausal account of events. If the technological argument has tended to have the best of the debate in popular perception, this must be in part because of the simplicity and clarity of the determinist position compared to the messiness and contingency of alternate explanations. In addition, no

¹ The term was coined by Michael Roberts in *The Military Revolution, 1560–1660* (Belfast, 1956); the most recent and comprehensive study of the military revolution in the terms presented here is Geoffrey Parker, *The Military Revolution: Military Innovation and the Rise of the West, 1500–1800* (Cambridge, 1988).

² I use the term *traditional* as a rough equivalent to “pre-industrial” in the typology of civilizations, and therefore as opposed to “modern” (or industrial) civilizations. See, for example, Patricia Crone, *Pre-industrial Civilisations* (London, 1989), for a useful thumbnail sketch of such a typology. I dislike the term *early modern* for western Europe between 1500 and 1800, as it is inherently ambiguous. It does not, commonly, mean “early industrial,” but by the above definitions it should. Furthermore, it confuses type of civilization with period in a sometimes very Eurocentric way. In what sense is India or Africa, for example, “early modern” between 1500 and 1800? I prefer to call Europe during this period a “transitional” civilization and use such terms explicitly to refer to types, not periods.

clear consensus of explanation has emerged out of the objections to technological determinism. In order to understand the debate, it is necessary to examine each position in more detail.

In his book *The Military Revolution: Military Innovation and the Rise of the West, 1500–1800*, Geoffrey Parker makes a very clear and comprehensive case for the technological argument. In his account the introduction of gunpowder small arms led to the tactical transformation of the battlefield. Musket-bearing infantrymen could destroy the slow change of heavy cavalry and so rendered the latter obsolete. At the same time, cannon made medieval fortification equally obsolete, thereby strengthening central governments in relation to independent-minded nobles, who furthermore could not afford the expensive new technology.

But the development in Italy of the *trace italienne*, the low-lying geometric style of fortification that could resist cannonades, recreated on a larger scale the need for lengthy sieges. Such sieges demanded larger armies, and competition combined with increasingly elaborate fortification techniques ensured that armies kept on getting bigger. Larger armies based on secure fortifications spread the size and complexity of campaigns and vastly increased the effect of war on society.³ Most important, by being forced to raise and supply bigger armies, governments were forced to become more efficient, setting in motion the rise of the “modern state.”

According to this view, the expansion of European conflict around the globe likewise depended on gunpowder: specifically, on the cannon carried by European ships (themselves part of the European technological advantage stressed by this explanation). In Parker’s view, the technology Europeans developed and the organizational and institutional changes the technology called into being increasingly gave Europeans decisive military dominance in the period from 1500 to 1800.

Many specific criticisms of this account are possible.⁴ Attributing the renewed dominance of infantry to musketry ignores the central role of pikemen in infantry formations, for example. (It was only with the invention of the bayonet that musketeers could face down a cavalry charge without the support of pikes.) It also fails to explain the critical importance of mobility to the rise of infantry. Many medieval

³ Parker, *Military Revolution*, pp. 6–44.

⁴ See Bert Hall and Kelly DeVries, “Essay Review—The ‘Military Revolution’ Revisited,” *Technology and Culture* 31 (1990): 500–507, for a critique of Parker’s book that raises many of the issues discussed here. See John Lynn, ed., *Tools of War: Instruments, Ideas, and Institutions of Warfare, 1445–1871* (Urbana, 1990), for essays that “challenge the concept of technological determinism in military history” (p. vii) from several angles.

infantries, armed with battle axe, spear, lance, or longbow, had been able to resist cavalry. Only infantry that could take the offensive against cavalry formations—that is, only infantry that could march without losing formation—could truly rule the field. The Swiss pikemen were the first infantry to do so.

Again with reference to the medieval background of the revolution, it is not clear why the siege warfare created by the *trace italienne* should necessarily have demanded larger armies than the siege warfare that had dominated medieval campaigns. For size and difficulty of investment, the concentric masterpieces of Edward I's castle building in Wales were a match for many sixteenth-century forts, yet did not call into being armies as large as the later period saw. And John Lynn points out that the increase in army size over the centuries in question actually took place in three stages, separated by periods of stability. Army growth in each period had much to do with changes in policy, administrative technique, and economic conditions, and little to do with mechanistic responses to changed technology.⁵

Finally, the place of the military revolution in world history offers further problems for the technological argument. William H. McNeill's account of the age of gunpowder, though it still focuses on technology as an important factor, shows that the effect of the introduction of such technology varied greatly according to the social and institutional context into which it was introduced.⁶ But more important, a world perspective calls into question the central thesis of Parker's study: that "the key to the Westerners' success in creating the first truly global empires between 1500 and 1750 depended upon precisely those improvements in the ability to wage war which have been termed 'the military revolution'."⁷ McNeill is only one of many to show that disease played a huge role in the establishment of European dominance in the Americas,⁸ while recent scholarship on the Indian Ocean civilizations shows that "the long drift to European hegemony in Asian waters seems less overdetermined, less a foregone conclusion, much more multi-causal and contingent" than it used to seem.⁹ Even

⁵ John Lynn, "The Pattern of Army Growth, 1445–1945," in *Tools of War*, ed. Lynn, pp. 1–27.

⁶ William H. McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago, 1982); the relevant sections are summarized in McNeill, *The Age of Gunpowder Empires, 1450–1800* (Washington, D.C., 1989).

⁷ Parker, *Military Revolution*, p. 4.

⁸ William H. McNeill, *Plagues and Peoples* (New York, 1977), pp. 199–234; the literature on European disease impact in the Americas is voluminous.

⁹ John E. Wills, Jr., "Maritime Asia, 1500–1800: The Interactive Emergence of European Domination," *American Historical Review* 98 (1993): 84; and the works cited in that article.

the central military point has been questioned, as “innovations sometimes spread rapidly to non-European societies, nullifying Europe’s relative military advantage.”¹⁰ European dominance in the world, especially in a military sense, is really a product of industrialization and thus appears in the nineteenth century and not before.

Yet the phenomenon of a military revolution remains, at least as a European development. No consensus has emerged for a clear explanation of military change in nontechnological terms, though the major elements of such an explanation are fairly clear. In this article I shall sketch my own version of such an explanation, using the experience of Japan in the Sengoku (Warring States) period to test the hypotheses raised by my theory.

I start with what should be an obvious assumption: that armies and military practices are shaped by the societies and institutions that produce them.¹¹ But in what ways? Understanding the links crucial to this argument requires first a brief discussion of the bases of tactical effectiveness—that is, effectiveness *on the battlefield*—in infantry and cavalry.

The effectiveness of an infantry formation depends on its size, its cohesion, and its mobility. Size is easiest to achieve, mobility hardest, and the factors tend to complicate each other. A larger formation may be harder to keep together and will certainly be harder to move; moving a formation makes cohesion more difficult to maintain. These factors are important because a large body of infantry can stand on the defensive and create a base of maneuver for supporting cavalry; adding cohesion tremendously increases the unit’s defensive capabilities, and adding mobility allows infantry formations to go on the offensive and actively win battles.

If we consider in particular a conflict between infantry and cavalry, cohesion is crucial. In hand-to-hand shock combat, horsemen have the potential advantages of height and mobility. But against a solid formation of foot soldiers, horsemen can only bring about hand-to-hand fighting by creating gaps and breaks in the formation. Creating such gaps is in fact the function of the classic cavalry charge, and the charge achieves this end psychologically. The potentially terrifying sight of a charging line of horses is designed to cause some members of

¹⁰ Merle Ricklefs, “Balance and Military Innovation in Seventeenth-century Java,” *History Today* 40 (1990); 58. The Japanese response to gunpowder, examined below, is another obvious example.

¹¹ This is not to deny that armies and warfare also have an effect on those societies and institutions. See Charles Tilly, *Coercion, Capital and European States, A.D. 990–1990* (Oxford, 1990), for a stimulating discussion of the role of coercion in state formation.

the infantry formation to break ranks and run, opening the gaps necessary for the cavalry to break in and use their advantages. If the formation maintains its cohesion, the horses will “refuse” in the face of an object they can neither jump over nor go around, and an indecisive standoff will probably result.¹²

What, then, can give masses of infantry cohesion? The answer is deceptively simple: trust. Each man in the formation must trust his neighbor not to run away. How is trust achieved? It may be a result of the social origins of the formation: neighbors from the same polis, canton, or other small polity may know and trust each other from long association on and off the battlefield. But practice and experience are crucial even for such naturally cohesive groups, and even more so for formations drawn from heterogeneous backgrounds. Normally, an infantry unit gains cohesion through drill and through experience.

We may now come back to the social and institutional setting of good infantry. Drill can only be instituted where there is a central authority strong enough to gather sufficient numbers of men to make an infantry formation and rich enough to maintain them while they are trained. In effect, strong infantry depends on strong government.

The same is not true of cavalry, because the bases of cavalry effectiveness are not quite the same as for infantry. Mobility is cavalry’s great advantage, and mobility makes cavalry the natural arm of attack, pursuit, and flight. Cavalry can be effective in smaller numbers than infantry, and so may require less training in large groups. On the other hand, making a horseman requires much more individual training from an earlier age than making a foot soldier,¹³ and an individual horseman is much more expensive to maintain than an individual foot soldier.

As a result, cavalry in the traditional world was very often the product—the natural arm—of social elites. Rural warrior elites were in fact a common feature of many traditional civilizations. Sons of such classes were raised to the military lifestyle, trained in small groups built from the social connections within the class, and taught to exercise

¹² In fact the superior range of infantry weapons and the greater density of infantry formations can give the advantage to the infantry at that point. The fundamental discussion of the mechanics of infantry and cavalry combat in the age of relatively short-range weapons (including the musket) is John Keegan, *The Face of Battle* (London, 1976), especially the chapters on Agincourt and Waterloo, pp. 79–203.

¹³ “He who has stayed at school till the age of twelve and never ridden a horse, is fit only to be a priest,” claims the old Carolingian proverb (cited in Marc Bloch, *Feudal Society*, trans. L.A. Manyon, 2 vols. [Chicago, 1961], 2:293–94). Compare the injunction to practice riding in Hojo Souin’s Articles: Carl Steenstrup, “Hojo Souin’s Twenty-One Articles: The Code of Conduct of the Odawara Hojo,” *Monumenta Nipponica* 29 (1974): 297.

military force in the interest of maintaining their own position in the hierarchy of power. Although a central authority could often harness the skills and energies of such an elite to its own military and policy ends, it could just as easily find itself at odds with such an elite, especially over the form and distribution of power. The elite (and thus effective cavalry) could therefore easily exist outside the context of a strong central authority.

Based on these observations we may offer an alternative explanation for the military revolution. In this view, the rise of stronger governments in late medieval Europe caused the appearance of effective infantry formations, such as had not been seen since the decline of the imperial Roman government and its legions.¹⁴ Stronger governments built infantry initially on the use of weapons like the pike that had always been available. As gunpowder technology spread, it could be taken up by armies already developing along organizational lines compatible with its use—that is, armies composed of masses of infantry raised under the stimulus of a central authority and decreasingly dominated by a mounted warrior elite. From this perspective, the military revolution forms part of a longer continuum that includes the English armies of longbowmen and dismounted knights who fought the Hundred Years' War,¹⁵ the urban pikemen of Italy and Flanders, and the other rare instances of effective medieval infantry arising out of socio-institutional settings favorable to producing cohesive masses of foot soldiers. Strong government was the cause, not one of the results, of the military revolution.

The problem, of course, is that separating out cause and effect is difficult when Europe is viewed in isolation. Stronger government and effective gunpowder weapons both took time to develop and grew up together. Undoubtedly, the two developments stimulated each other. But at root, did better government make effective use of gunpowder possible, or did the introduction of gunpowder stimulate improvements in administration? The argument is difficult to resolve, based on the European evidence.

This is where some comparative history can help shed light on the problem. For reasons I will come back to shortly, Japan in the Sengoku

¹⁴ J. R. Strayer, *On the Medieval Origins of the Modern State* (Princeton, 1970), is a classic account of this process, emphasizing developments in justice and finance in the context of warfare that was present throughout the medieval period.

¹⁵ And those armies trace their organizational and tactical features into Anglo-Norman times; see S. R. Morillo, *Warfare under the Anglo-Norman Kings, 1066–1135* (Woodbridge, Suffolk, 1994); and J. O. Prestwich, "The Military Household of the Norman Kings," *English Historical Review* 96 (1981): 1–35.

age (roughly 1477–1600) can be used as a comparative “control” case. It is similar enough in important respects to Europe to make comparison useful, yet differing in one crucial way: the date of the introduction of gunpowder weapons to Japan is known precisely—1543. The development of Japanese armed forces over the next hundred years was similar enough to the European experience that it seems safe to assume similar stimuli were at work.

The two explanations for the military revolution in Europe, when applied to Japan in 1543, create two different predictions (postdictions, technically) about what we should expect to find in the Japanese historical record. If the technological argument is correct, then the changes that characterize Sengoku Japanese warfare, changes comparable to those that went on in Europe, should all postdate 1543—and by a long time, since guns did not play much role in warfare for several decades after their introduction. In other words, guns should precede stronger government. If the socio-institutional explanation is correct, then significant movement in the direction of “military revolution” changes should have taken place before 1543. Stronger government, then, should precede guns. Which prediction holds true? A careful examination of the Japanese evidence leads to an answer decisively on the side of the socio-institutional explanation.

THE JAPANESE CASE

Background: The Sengoku Age

The period of Japanese history in question extends roughly from 1477 (the end of the Onin War) to 1600 (the beginning of the Tokugawa era). It was a period of division, competition, and constant, intense warfare. The developments of the Sengoku (Warring States) age stimulated by this warfare laid the foundations of the unified Japan that followed.

The Onin War effectively brought to an end the system of rule that had characterized the Ashikaga shogunate in the fifteenth century. The Ashikaga polity before the Onin War was based on a delicate balance among the *shugo*, or military governors, who resided for the most part in Kyoto where the shoguns exercised their influence in maintaining the balance and thus their own position.¹⁶ During the Onin War the *shugo* self-destructed, the shogunate retreated into political

¹⁶ John W. Hall, “The Muromachi Power Structure,” in *Japan in the Muromachi Age*, ed. John W. Hall and Toyoda Takeshi (Berkeley, 1977), pp. 39–44.

insignificance, and power devolved upon the military families based in the provinces. Their close connection to the lands, villages, and rural warrior class—the effective bases of power—gave the leaders of the provincial warriors, the daimyo, a firm foundation from which to build their power. With the decentralization of the polity, the temptation to use their local bases for a move to the capital ceased to exist, as did “national” politics.

The daimyo therefore set about building small but secure regional domains, carved out and ruled in innovative and effective ways. I will examine this process of state building in more detail below, as it is crucial to understanding the military changes that ensued in the sixteenth century. But a few remarks concerning general characteristics of the Sengoku age and the Sengoku daimyo who dominated it are in order first, as they bear on the methodological problems of comparing Sengoku Japan with Europe.

First, I believe it is absolutely necessary to see “Japan” during this period as politically divided into independent states. While the members of this state system shared a common cultural background and existed nominally under the presence of a single hereditary emperor, in every functional way that matters Japan was a politically divided island and not a single country at war with itself.¹⁷

Second, this was an age of life-and-death competition among the daimyo. The number of independent domains steadily decreased from 1477 to 1577, and in the end Japan was unified by the successive efforts of Oda Nobunaga, Hideyoshi Toyotomi, and Tokugawa Ieyasu. But in important ways final unification was the result as much of federation as of conquest: the major daimyo were powerful enough by the 1570s that elimination of all rivals by conquest had become a remote possibility for any individual daimyo. The daimyo domains survived into the Tokugawa settlement, and the potential independence of outlying domains was demonstrated in the nineteenth century when the daimyo of such areas played a key role in the end of Tokugawa rule and the Meiji restoration.

¹⁷ Western Europe, after all, shared a fairly common culture and—until the Reformation at least—a spiritual head (the pope) who was comparable in function to the Japanese emperor, though in the end more politicized. Compare Carl Steenstrup’s characterization of Hojo Soun, an early Sengoku daimyo, as “parallel to the princes of the Renaissance and Age of Absolutism in Europe” (Steenstrup, “Hojo Soun,” p. 303). Michael P. Birt (“Samu-rai in Passage: The Transformation of the Sixteenth-Century Kanto,” *Journal of Japanese Studies* 11 [1985]: 369) discusses the “displacement of politico-legal coercion upwards towards a centralized, militarized summit,” which in the case of sixteenth-century Japan was the domain rather than the Absolutist State as in Europe” (citing Perry Anderson, *Lineages of the Absolutist State* [Thetford and Norfolk, 1974], p. 19).

Problems in Comparative History

These characteristics of Sengoku Japan are important because they are part of the case for Japan as a "control" for testing the experience of Europe. Europe too was divided politically, and European wars at least from about 1450 were becoming increasingly serious in terms of the survival of smaller states. The general political and military environment was, therefore, functionally very similar. In addition, both areas in the sixteenth century were undergoing economic expansion, which contributed new material and manpower resources to the arsenals of prospective state builders. And both areas were ruled by elites who were essentially military in background, outlook, and training. In spite of differences in detail, some of them important, the similarities between Japan and Europe in the sixteenth century are striking. I believe they provide a reasonable basis for comparing the effect of a common factor upon the two areas.

I have stressed the functional nature of these similarities while shying away from more abstract or terminological comparisons. The similarities between medieval and Tokugawa Japan and medieval Europe have been noted many times by others, but comparisons have tended to be based on analyses of "feudalism" in each area. My emphasis on functional comparisons arises from the belief that the debate about feudalism in Japan has tended to seriously distort perceptions of developments in Japan by shoehorning those developments into a European mold. This distortion applies particularly to the Sengoku period, which is often characterized as the epitome of the feudal age in Japan. The division of Japan, in this light, is seen as "feudal anarchy" and breakdown because the unit of comparison is taken to be the country as a whole. This is the case, for example, in Archibald Lewis's *Knights and Samurai*, in which Japan and France are systematically compared through various "feudal" stages.¹⁸ By emphasizing the division of the larger political unit, this view obscures the important forces of unity and political cohesion developing within the daimyo domains. It seems at least as valid to take the daimyo domains as the basic unit of

¹⁸ Archibald Lewis, *Knights and Samurai: Feudalism in Northern France and Japan* (London, 1974). See also J.R. Strayer, "The Tokugawa Period and Japanese Feudalism," and John W. Hall, "Feudalism in Japan—A Reassessment," both in *Studies in the Institutional History of Early Modern Japan*, ed. John W. Hall and Marius Jansen (Princeton, 1968), pp. 3-14, 15-51; and Peter Duus, *Feudalism in Japan*, 2d ed. (New York, 1993). On the question of "feudalism" generally, I tend to follow Elizabeth A.R. Brown, "The Tyranny of a Construct: Feudalism and Historians of Medieval Europe," *American Historical Review* 75 (1974): 1063-88. See below for further discussion of the question of feudalism in Sengoku history.

analysis, equating “Japan” not with “France” (or any other kingdom) but with “Europe.”

In fact, the process of equating terms is often not very helpful. One may say, for instance, that Kamakura shugo were like Carolingian counts, but unless the explanation of why they were alike offers some insight into how the two offices functioned, and how their context was similar or different in significant ways, such an equation does not get us very far.¹⁹ The danger is even greater when two terms are apparently similar enough to invite comparison, yet in fact the apparent similarity hides fundamental differences in function, “Japan” and “France” offer one example of this problem. Another example would be “emperor.” Both Japan and the Holy Roman empire had officers who are commonly identified in English as emperors. But functionally the two officers played very different roles, and it might be more useful to compare the Japanese emperor’s role with that of the pope in Europe as a symbol of cultural and religious unity, a source of legitimacy, and a political actor in some conflict with military authorities.

In the analysis of the Sengoku age that follows, I have tried to base whatever comparisons I draw with Europe on analysis of function rather than on form. This sort of analysis—especially the discarding of misleading labels based on comparisons of “feudalism” in the two areas—will, I hope, make possible a clearer explication of political and military change.

The Evidence

The evidence from the Sengoku age for political and military change of the sort predicted by the theory I have proposed falls into three major areas. The first consists of evidence of the establishment of effective local and regional mechanisms of government by the Sengoku daimyo—in effect, top-down forces for change. The second is evidence of changing social structures and the struggles among villages and warriors that these changes produced—in effect, forces for change arising from the bottom up, but in the end harnessed to the benefit of the daimyo. The third area includes evidence of the actual military transformations of the Sengoku age.

Daimyo Domains and Effective Regional Government. The theory of military change that I am suggesting predicts that significant govern-

¹⁹ Both Jeffrey P. Mass (*Warrior Government in Early Medieval Japan: A Study of the Kamakura Bakufu, Shugo, and Jito* [New Haven, 1974], pp. 228–29) and Peter Duus (*Feudal-ism in Japan*, p. 52) make such a comparison, and do suggest ways in which the comparison is useful.

mental change should be visible in Japan before 1543, in the direction of more effective systems of administration and control. Since “national” government had virtually ceased to exist by 1477, the rulership of the Sengoku daimyo needs to be compared not just (or even primarily) to the Kamakura and Ashikaga shogunates, but also to the governing capacities of the regional leaders in each of those systems. Such a comparison shows that the Sengoku daimyo indeed established more effective regional governance than Japan had seen before in its history. The changes are visible long before 1543, dating from just after the Onin War.

Earlier regional leaders worked under various restrictions on their effective local power, restrictions that in turn prevented either the Kamakura or Ashikaga shogunates from establishing a lasting national administrative system.

In the Kamakura *bakufu* or military government (literally “tent government”), Kyoto-based civil authorities and Kamakura-based military authorities worked together (in theory) in governing the country. The civil government and the emperor remained an effective source of legitimacy upon which the bakufu depended.²⁰ This meant that local and regional officials, whether civil or military, lacked a monopoly on the mechanisms of rule. Divided rule was insecure for both sides. Kamakura regional military leaders were also hampered by the mostly effective control the bakufu exercised over regional appointments. Shugo could be transferred from province to province, and this hindered the shugo from creating firm local power bases.²¹ Finally, effective bonds between military leaders and their followers had not fully developed in Kamakura times. Most bushi groupings in this period were based on family ties, whose force was moral and tended to decline over time, rather than on a close equivalent of vassalage or contract.²² Kamakura regional leaders, then, were insecure in their holds both over their own followers and over their provinces.

The Ashikaga shugo were as ineffective at establishing firm local power bases as the Kamakura leaders had been. In part, the entire polity suffered from a weak sense of legitimacy, exacerbated by the divided emperorship of the period 1336–92, which made exercise of local power somewhat problematic. But the biggest problem for Ashikaga shugo was that the shoguns required them to reside in the capital

²⁰ Mass, *Warrior Government*, p. 54 and n. 56; see also Karl Friday, *Hired Swords: The Rise of Private Warrior Power in Early Japan* (Stanford, 1992).

²¹ Mass, *Warrior Government*, p. 228.

²² *Ibid.*, p. 82 and n. 58; John W. Hall, *Government and Local Power in Japan, 500 to 1700* (Princeton, 1966), pp. 9, 99–128, 136.

at Kyoto. This separated them both from their land bases in the provinces and from the local bands of warriors who could exercise power in the provinces on the shugo's behalf. In addition, the shoguns tried with some success to appoint shugo to provinces in which they had few landholdings of their own, in order to prevent the creation of regional power bases that might pose a threat to the shogunate. Thus, the presence of a central, "national" government with some real power again hindered rather than promoted effective local governance. It served as an alternate focus for local leaders' interests, and it actively worked to prevent the creation of regional power, though lacking the resources to create effective local administration of its own.

Both the Kamakura and Ashikaga governments therefore appear as fairly extensive but not very intensive polities, reaching far across the land but not very deep into society. This was reinforced for both regimes by a basic reliance on the *shoen* system of landholding.²³ The *shoen* system complicated the legitimacy issue by reducing much local administration to a question of private estate management, eliminating the concept of public powers from governors' arsenals. Further, the *shoen* system gave rulers income based on division of *shiki*, or rights to *shoen* income, rather than on direct control of pieces of land. Thus the *shoen* system tended to work against strong regional power bases by scattering the holdings of those in power and making warrior control over village life limited and insecure.

The shape of the Kamakura and Ashikaga bakufu polities therefore created insecurity for warriors at many levels. Neither polity was able to strike deep and lasting roots in the soil of local production and power.

The Sengoku daimyo who rose to prominence after the Onin War were able, through plan or circumstance, to deal with each of the limitations that had hindered their predecessors and to establish more effective control over their domains—in fact, to create domains. "They rose to power both as a result of certain fundamental weaknesses in the power structures over which the *shugo* presided and through their own ability to exploit new and more effective means of organizing military power and controlling territory."²⁴ More effective daimyo control can be seen in four areas in particular: the relationship

²³ See *The Cambridge History of Japan*, vol. 3: *Medieval Japan*, ed. Kozo Yamamura (Cambridge, 1990), chaps. 2 and 6, on the long history of the *shoen* system, which even in decline shaped local power relationships.

²⁴ Hall, *Government and Local Power*, p. 239. Birt, "Samurai in Passage," is a fundamental article for the entire process of state building and social transformation discussed in the following section.

between leaders and followers (of daimyo with their vassals or retainers), the territorial coherence of daimyo domains, the scope and effectiveness of administration and law, and the daimyo's powers of taxation.

The foundation of the success of Sengoku daimyo was tight control over their followers, the ability to maintain effective discipline and loyalty. Hojo Soun (1432–1519) is an early representative of this type: "He set up as a *sengoku daimyo*, ousting a member of the traditional warrior aristocracy and establishing, with the aid of disciplined and devoted followers, his own rule in a limited area. But in the expanding territories under his control, he introduced a decent administration, the beginnings of cadastral surveying, army professionalization, and various policies aiming at economic growth."²⁵

In building more tightly controlled followings, the daimyo benefited from and exploited two trends that were well advanced by 1477: the decline of kinship as the basis for group making and the disappearance of the shoen system of landholding and the rise in the use of *chigyo*, or fiefs.²⁶ The early Sengoku period thus saw the abandonment of formal ties of family and presumptive loyalty in favor of pseudo-contractual ties of man to man based on service, usually military, to the daimyo in exchange for protection by and income from the daimyo. Though actual land grants made up this income in the early stages of the Sengoku period, the pressures in favor of close control of vassals (cash payments were more revocable than land) and ease of administration (a cash system was easier to expand) soon led the daimyo to begin granting income to their followers in rice (a cash equivalent) instead of in land. As early as 1491 Hojo Soun was retaining conquered lands as "directly administered lands," whose income paid for his army and administration. This trend was accompanied by the increasing tendency of daimyo to gather their followers in castle-towns under the daimyo's eyes, whenever possible, rather than planting them on their own estates."

Was this system "feudal"? Using the word *feudal* to describe this relationship—especially as the granting of income rather than land became more widespread—is likely to obscure the true nature of the

²⁵ Steenstrup, "Hojo Soun," p. 283.

²⁶ Hall, *Government and Local Power*, p. 248; Miyagawa Mitsuru with Cornelius J. Kiley, "Shoen to Chigyo: Proprietary Lordship and the Structure of Local Power," in *Japan in the Muromachi Age*, ed. Hall and Toyoda, pp. 89–106.

²⁷ Birt, "Samurai in Passage," pp. 372–76; Steenstrup, "Hojo Soun," pp. 284, 292–93; John W. Hall, "Foundations of the Modern Japanese Daimyo," in *Studies*, ed. Hall and Jan-sen, pp. 71–74; Wakira Osamu, "The *Kokudaka* System: A Device for Unification," *Journal of Japanese Studies* 1 (1975): 300–301.

relationship. Functionally, what developed was a professional mercenary relationship dressed up in and reinforced (somewhat) by the moral language of bonds of personal dependence. Daimyo in effect created standing armies of paid professional soldiers through what continued, at least for a time, to look like feudal mechanisms. The obvious analogy here is to the development of indenture contracts in the English armies of the late thirteenth and fourteenth centuries. Such contracts were the direct descendants of (and virtually indistinguishable from) the money fiefs that English kings had been granting since at least 1101.²⁸ They were mercenary contracts that took “feudal” form because oaths of vassalage were the dominant form of contract known to society outside the marriage bond. So too in Japan the form of the relationship should not obscure for us its functional reality.²⁹

Such ties appear less morally binding than the ties of kinship and fictive kinship that characterized the earlier systems. The Sengoku period saw more open admission of treachery and abandonment of ties—even cases of vassals overthrowing their lords—than earlier periods.³⁰ But if a Sengoku daimyo maintained control over his domain against his rivals, led his men vigorously and successfully in war, provided the protection and security his followers needed, and exercised due precautions, such ties were more effective than the old ones. This is because they were based on unambiguous use of force, reward, and punishment, and not on moral obligation. Also, the compact size of daimyo domains made it easier to maintain control over followers.³¹

²⁸ Bryce Lyon, *From Fief to Indenture* (Cambridge, Mass., 1957). For a Flemish money fief of 1101, see P. Chaplais, ed., *Diplomatic Documents Preserved in the PRO, I, 1101–1272* (London, 1964), no. 1.

²⁹ Forcing such relationships into the feudal construct leads to paradoxical characterizations such as the following: “Japanese feudalism had to be more structured, more impersonal, more bureaucratic than European feudalism. At least it had to have these qualities from the middle of the sixteenth century, when we have evidence of huge armies and large numbers of retainers under the control of a single lord” (Strayer, “Japanese Feudalism,” p. 6). “Bureaucratic feudalism” hardly seems worth the conceptual effort. This is also further evidence of the problem of equating “samurai” with “knight.” See note 46 below.

³⁰ I emphasize open admission of treachery because it is not clear that the age in fact saw more treachery, at least as a function of opportunity. There was more warfare, so there were more chances for vassals to abandon a sinking ship, but such betrayals had undoubtedly always occurred, despite prevailing ideals of absolute loyalty. Further, the looser nature of the earlier ties gave more room for less than perfect loyalty short of treachery than did the more rigid (because more vital) Sengoku system.

³¹ Hall, “Foundations,” p. 73. See the advice in “The Recorded Words of Asakura Soteki,” written around 1550: “A man who keeps a considerable number of retainers . . . should first of all have the religious and habitual awareness to provide for his men well” (William S. Wilson, trans., *Ideals of the Samurai: Writings of Japanese Warriors* [Burbank, 1982], pp. 84–85). There is other, similar advice; Asakura Toshikage advised his successors about 1481 that “all men of high rank should be constantly maintained at Ichijogatani [the

A cash-based army led Sengoku daimyo to take greater interest in the development of public works and the encouragement of agricultural productivity than earlier rulers had, because such projects benefited them directly.³² This also accounts for the common practice by Sengoku daimyo of founding (or encouraging) commercial districts around their main castle, creating the castle-town typical of the age. The tax income generated by commerce and industry was gained without the danger of geographic overexpansion faced by earlier rulers, who had to expand their landholdings to expand their followings. The rapid and huge escalation in the size of Sengoku armies within compact territories would have been impossible without the prior development of the contractual-stipend system of raising armies and the growth of economic resources of daimyo domains.

Early daimyo could therefore limit their ambitions to carving out small, contiguous territories that were easily defended and governed. The collapse of "national" structures of law and legitimacy meant that each daimyo had no real opposition to control of his lands except from conquest by rival daimyo. There was no centrally appointed shugo, no shogun or civil aristocracy with any real power. For the first time, "ownership" coincided with rulership exactly.³³ The daimyo thus was unhindered in disposing of his land as he saw fit, either to grant it to loyal followers or to implement improvements and reorganizations. The collapse of the prestige of the shogunate and the decline of Kyoto as a political center after the Onin War also meant that there was little temptation for daimyo to jump prematurely from their local bases to a "national" political stage, because such a stage no longer existed.

The carving out of compact domains by daimyo and their closely supervised followers was not, however, simply a case of rule by force run amok. Real state building was going on, and it contributed to the success of daimyo governance. The key evidence for this is the development of systems of administration and law within the domains.

Two major factors contributed to daimyo interest in elaborating systems of administration within their domains. First, the territories were small enough that close supervision was both possible and profitable, since it paid dividends in terms of income and manpower support. Second, the virtual disappearance of older civil systems of law

Asakura chief castle], and only their underlings should be placed in their home areas" (ibid., p. 70; Birt, "Samurai in Passage," p. 375).

³² Birt, "Samurai in Passage," pp. 386–87.

³³ See the fundamental account of the province of Bizen during this age in Hall, *Government and Local Power*, pp. 238–70, especially p. 247. Paradoxically, this state of complete "privatization" of the domains laid the basis for a revival of concepts of "public" powers; see below.

and administration necessitated some sort of new legal arrangements, while at the same time clearing the field for new daimyo codes.

Such codes could be quite comprehensive. They evolved in some cases from manuals of governance that early Sengoku daimyo wrote for their successors, stressing discipline in the daimyo's household and among his retainers.³⁴ Daimyo administration was grounded first in the disciplined relationships binding Sengoku warriors. Given this, daimyo also encouraged literacy among their followers, so that those the daimyo trusted and depended on—his armed retainers—could be his administrators as well.³⁵

The effectiveness of this mode of administration derived in part from the unity of force and law it created. Effective force led to peace and order within daimyo domains (in contrast to the constant warfare among domains), a benefit that created its own incentives for subjects other than the daimyo's own followers to respect his law.³⁶ Peasants and merchants saw the advantages of strong daimyo rule and turned to his administration for protection. Building on this common base of advantages, daimyo rule reached more effectively into the village level than ever before. This meant that daimyo rule was grounded in close supervision not just of the warrior class but of the whole society and economy of each domain.³⁷

But the effectiveness of daimyo administration also derived from a reestablishment of the concepts of public office, public duty, and legitimacy within the domains. Basically, daimyo were able to appeal to "national security"—the good of the domain, which subjects saw in terms of order—to justify new administrative measures and taxation.³⁸

³⁴ Kohayashi Hiroshi, "Domain Laws (*Bunkoku-ho*) in the Sengoku Period with Special Emphasis on the Daté House Code, the *Jinkaishu*," *Acta Asiatica* 35 (1975): 34. Provisions for discipline are abundant in many of the writings collected by Wilson in *Ideals of the Samurai*. For example: "if a man who serves indolently and a man who serves well are treated in the same way, the man who serves well may begin to wonder why he does so" (Asakura Toshiage, "The Seventeen Articles," p. 68). "The Opinions in Ninety-nine Articles" of Takeda Nobushige, written in 1558, has much advice on warfare (pp. 100–110).

³⁵ Steenstrup, "Hojo Soun," pp. 286, 301, and nos. XII, XVII, pp. 295, 298; Hojo Soun's articles were probably used as a school text in his domain (p. 287). Even under the warrior-dominated Ashikaga shogunate, administrative offices had tended to become the hereditary possessions of families with the requisite background in civil procedure and with specialized skills in reading and writing. See Kuwayama Kōnen with John W. Hall, "The Bugyōnin System: A Closer Look," in *Japan in the Muromachi Age*, ed. Hall and Toyoda, pp. 53–63.

³⁶ Steenstrup, "Hojo Soun," p. 296.

³⁷ Daimyo made consistent efforts to insert their legal systems more fully into village life: Kobayashi, "Domain Laws," pp. 34, 40. Paradoxically, this sometimes meant greater rights for villages, at least in the short term. See below for more on the mechanisms of daimyo-village connection.

³⁸ Kobayashi, "Domain Laws," pp. 40, 44–45; Birt, "Samurai in Passage," pp. 388–95.

Daimyo were thus better able than earlier rulers to raise revenue productively. In the sixteenth century, daimyo began conducting land surveys within their domains, precursors of the great land and population surveys conducted by Hideyoshi.³⁹

In terms, then, of top-down forces for more effective government, daimyo managed to establish discipline and control among their followers, carve out compact territories, create effective "public" administrative systems, and raise revenue productively. All these developments are visible before 1543, and they made possible bigger and better military forces, forces that could make effective use of gunpowder weapons when they appeared. But the daimyo's efforts worked hand in hand with forces for change emerging from the lower levels of society.

Social Structures and Struggles. The disorders of the early Sengoku period encouraged villages in the direction of self-help in protecting themselves against the depredations of local warriors. The struggles that resulted between villages and local warriors contributed to increased daimyo control and led to social changes that significantly shaped the possibilities for military recruitment.

Japanese villages in the mid-fifteenth century were less dependent on and less influenced by armed lords than villages in Europe generally were.⁴⁰ The disappearance of a national political structure threatened village independence by removing the vestiges of central restraint on local warriors. Villages responded by moving to defend their traditional privileges and by looking to more distant powers (in this case, the emerging daimyo) for assistance against local lords.

At the same time, economic development stimulated greater stratification among the peasantry, as some farmers responded more successfully than others to a growing market, and also led to greater mobility of labor.⁴¹ Both trends contributed to the creation of a growing class armed villagers. These men were too poor to own horses, and thus were not recognizable as part of the traditional warrior class, but they were organized—or at least capable of being organized—into effective bands of foot soldiers armed with spears and bows. They also had the

³⁹ Birt ("Samurai in Passage," pp. 382, 374–75) points out that this increase in daimyo power to tax came at the expense of local samurai and as a result of closer administrative contact with villages.

⁴⁰ Mass, *Warrior Government*, p. 186 and n. 42.

⁴¹ Wakita Osamu, "The *Kokudaka* System: A Device for Unification," *Journal of Japanese Studies* 1 (1975): 299; Toyoda Takeshi and Sugiyama Hiroshi with V. Dixon Morris, "The Growth of Commerce and Trades," in *Japan in the Muromachi Age*, ed. Hall and Toyoda, pp. 129–44.

potential to become local administrators. Daimyo found the existence of these armed villagers much to their advantage, and they increasingly recruited from among this class for larger and larger bodies of troops. The daimyo's desire for troops and the villagers' desire for protection against local lords created a natural alliance that both sides made use of.⁴² The challenge of peasant resistance also acted as a further stimulus to daimyo intervention in local governance. "In responding to this challenge, the daimyo took two positive steps: they attempted to integrate the various institutional arrangements for village self-government into their own system of local administration, and they sought to strengthen their mediating role in solving inter-community disputes."⁴³

In the long run, villages may not have maximized their freedom by dependence on the daimyo. More effective central authority was bound to impinge on village rights eventually. But for most of the sixteenth century, villages may well have benefited, and we should not read back the restrictions on village freedom of the Tokugawa period as inevitable results of rising daimyo power. The rigid social stratification and hierarchy of the later age was made possible by peace and order throughout Japan. Short of unification, the villages could in fact have prospered. More important, perhaps, the connection between aggressive villages and aggressive daimyo put pressure on local warriors from above and below simultaneously, rendering them more dependent themselves on the favor and power of daimyo.⁴⁴ The ability of daimyo to pull warriors away from estates and into castle-towns as standing mercenary forces certainly must have been assisted by this development in social structure.

Returning to the question of social mobility, warfare and economic development created unprecedented opportunity for advancement, especially for village soldiers.⁴⁵ As a result, the class of samurai grew tremendously, for it included all the soldiers in a daimyo's service and not just the mounted elite warriors who counted as knights in Europe. Again, the near total lack of social mobility in Tokugawa Japan should not obscure this important feature of the Sengoku age. As Michael Birt writes, "the developing characteristic of the sixteenth-century Kanto was not a sharpening distinction between village samurai and

⁴² Birt, "Samurai in Passage," pp. 376–81; Nagahara Keiji with Kozo Yamamura, "Village Communities and Daimyo Power," in *Japan in the Muromachi Age*, ed. Hall and Toyoda, pp. 107–23.

⁴³ Nagahara, "Village Communities," p. 122.

⁴⁴ *Ibid.*, p. 123; Birt, "Samurai in Passage," pp. 381–88.

⁴⁵ Wilson, *Ideal of the Samurai*, pp. 128–29.

villager, but its opposite, the blurring of lines.”⁴⁶ Social mobility was both symptom of and contributor to the systemic flux of daimyo domains, and it provided human resources to rulers anxious to expand their military power.

Armies and Military Change. Changes in warfare accompanied and depended on developments in rulership, administration, taxation, and social structure. Like those developments, almost all the military changes had begun long before 1543 and continued in the same trajectory after that date and the new technology it brought. This is true whether we look at the size of armies, their composition, their tactical practices, or specifically the history of the introduction and effects of gunpowder.⁴⁷

The size of armies grew steadily in the period under study. Before and even during the Onin War, the size of forces could often be measured in the hundreds and rarely reached the thousands. In the centuries between 1150 and 1477, a force in the tens of thousands was rare and drawn from the military resources of all of Japan.⁴⁸

⁴⁶ Birt, “Samurai in Passage,” pp. 372, 380 (quotation). The term *samurai* was derived from the verb *saburu*, to serve, and originally meant little more than “retainer.” It never became an equivalent of *bushi*, which did have class connotations. The ideal samurai may have been a member of the bushi, but not all were, and by the middle of the Sengoku period true bushi—warrior aristocracy of old family—were in a distinct minority, though a powerful and prominent one. This points out another terminological problem common in the comparative literature. The terms *knight* and *samurai* are often used as equivalents—*Knights and Samurai* is the title of Archibald Lewis’ study, to cite the most obvious example—when they are not really even close to equivalent. The automatic association of the term *samurai* with knightlike terms of service, styles of warfare, and codes of behavior has contributed to the picture of Sengoku Japan as highly feudal. A closer look reveals the problems with this equation.

⁴⁷ Stephen Turnbull has written several good military histories of medieval Japan, which are useful as background to this problem: *The Samurai: A Military History* (New York, 1977); *Samurai Armies, 1550–1615* (London, 1979); and *Battles of the Samurai* (New York, 1987).

⁴⁸ Evidence for numbers is not always reliable. *The Taiheiki: A Chronicle of Medieval Japan* (trans. Helen Craig McCullough [New York, 1959], p. 181) describes a force of more than 1 million. At the battle of Yoshino Castle, a force of 60,000 is mentioned (p. 175). Sixty thousand is the figure commonly used by Orderic Vitalis to mean “a very large number”; Orderic Vitalis, *The Ecclesiastical History*, ed. and trans. Marjorie Chibnall, 6 vols. (Oxford, 1976–80), 2:266 et passim. But see the more reasonable figures of 200 and 100 in 1156, for example, and of 600 and 200 in 1181 (Hall, *Warrior Government*, pp. 43, 68) and of 1,000–5,000 for armies during the Onin War (P. Varley, trans., *The Onin War* [New York, 1967], pp. 156–63). Figures for the number of warriors killed in a battle often seem to give a better indication of the size of forces involved. “A Tale of Mutsu” mentions a battle lasting from 1 to 9 P.M. in which nine attackers were killed and eighty wounded, and another in which thirty-two rebels were shot to death (H. McCullough, “A Tale of Mutsu,” *Harvard Journal of Asiatic Studies* 25 [1964–65] 178–211, pp. 198, 199); *Shokyuki* details a battle in 1221 in which “the dead on both sides were numerous—thirty-five horsemen on the imperial side alone” (“*Shokyuki: An Account of the Shokyu War of 1221*,” trans. William H. McCullough, *Monumenta Nipponica* 19 [1964]: 200). Mass claims that “by the

Hard evidence for the size of armies in the years just after the Onin War is scarce. It is not surprising that armies continued to be small for a period, both because the new conditions of rulership took some time to take effect and because forces were being drawn from very restricted geographical areas. Yet by the early 1500s forces were growing noticeably. This is an indication that within the still geographically restricted domains, daimyo were making more efficient use of their resources and drawing soldiers from a broader segment of the population. By the 1540s and 1550s, before gunpowder weapons were introduced or had spread widely, the forces of individual domains had reached a few tens of thousands.⁴⁹ Carried across all the domains in Japan, however unevenly, such figures represent a massive increase in the total number of men under arms for Japan as a whole. Again, the point to be stressed is that this increase, already so visible by the 1540s, predates the introduction of gunpowder. It was dependent, however, on more efficient government, a change that was already in progress before 1543.

The size of armies continued to grow after 1543, rapidly expanding to the high tens of thousands and peaking in the hundreds of thousands in the coalition forces of the early 1600s.⁵⁰ Gunpowder weaponry does not seem to have played a crucial role even in this phase of force expansion. The proportion of musketeers in armies grew steadily, especially after about 1570, thirty years after guns reached Japan. But the growth of musketeer units was slow at first and cannot account for the total rise in forces that were already huge by 1570.⁵¹

Along with the increase in the size of armies came changes in their composition. Inevitably, as army size grew, military careers opened up to increasing numbers of low-born soldiers, drawn largely from milita-

final months of 1180, the son of Yoshitomo was overlord of forces already numbering into the tens of thousands" (*Warrior Government*, p. 61). But whether this entire potential force was ever gathered in one place is another question. See also *ibid.*, p. 146 and n. 8, on the number of soldiers—"we can certainly imagine several tens of thousands"—gathered for the 1189 invasion of the north, the "greatest fighting force yet seen in Japan." It is not clear, however, on what basis we are to imagine several tens of thousands.

⁴⁹ Birt, "Samurai in Passage," p. 374, for Hojo forces of 10,000 in 1559; Hall, *Government and Local Power*, p. 72, for Ukida Naoie's armies of 10,000–15,000 by this period; Jan-sen, "Tosa in the Sixteenth Century," pp. 91–92, for the growth in Chosokabe Motochika's forces from 7,000 (out of a population of only about 300,000) in the 1560s to 36,000 by 1585. It seems difficult to believe that such growth could be caused solely by a new weapon. Birt notes that "the 1559 Register [Hojo land survey upon which military obligations were calculated] marks a samurai transformation already in motion."

⁵⁰ Turnbull, *The Samurai*, pp. 233–65.

⁵¹ As late as 1560 muskets were "still in very limited use," even in the forces of Oda Nobunaga, who led his rivals to the new technology, and they did not play a decisive role in his early victories (Mary Elizabeth Berry, *Hideyoshi* [Cambridge, Mass., 1982], p. 37).

rized village leaders attracted by the prospect of advancement and power.⁵² With this shift came changes in the tactical composition of armies. There was a move away from reliance on cavalry—the mounted samurai bearing sword and bow who forms the popular conception of the medieval Japanese warrior just as the knight in shining armor on horseback does for medieval European warfare. Instead, daimyo relied increasingly on masses of infantry wielding spear and bow (and later, musket). Sengoku forces became increasingly infantry dominated.

Why did these shifts in social status and tactical composition occur? The social status part of the question is easy to answer on one level: with growth in the size of armies, traditional sources of warriors soon proved inadequate. But the simplicity of this answer disguises the fact that broader recruiting is not an automatic response to military necessity of this sort. It presupposes the ability of a central authority to raise numbers—an ability requiring both monetary and administrative resources that may not exist—and, more important, the willingness of rulers to extend military training beyond traditional bounds, with all the possibilities such a move raises for arming a social revolution. The shift in the social composition of armies therefore reflected deeper changes in authority structures and the ruling class.

On the tactical level, the shift to more infantry-oriented armies was probably the result of several factors. One was the growing size of armies. Horses are expensive both to raise and to maintain.⁵³ The logistical difficulty of maintaining large numbers of mounted soldiers certainly accounts for part of the shift to unmounted troops who had to fight as infantry.

The shift to infantry was further encouraged by cost effectiveness. Traditional mounted samurai were expensive not only because of their horses but also because of their social prestige, which demanded suitable levels of compensation. Daimyo quickly realized this. “The Seventeen Articles of Asakura Toshiage,” compiled near the end of that daimyo’s life or shortly after his death in 1481, contains the following advice: “One should not be overly fond of famous swords and daggers. For even if one has a sword valued at 10,000 cash, he will not overcome 100 men carrying spears valued at 100 cash. Therefore, if one has 10,000 cash and buys 100 spears, having 100 men to carry them he

⁵² Ibid., pp. 8–9; also Jansen, “Tosa in the Sixteenth Century,” pp. 93–94, for farmer soldiers in Chosokabe Motochika’s armies; and Birt, “Samurai in Passage,” p. 372.

⁵³ The *Nihon Shoki*, detailing the early imperial military system, says that “one hundred households will provide one medium quality horse for official use. If a horse is of fine quality, it may suffice for 200 households” (cited in Hall, *Government and Local Power*, p. 57).

should be able to protect an entire flank.”⁵⁴ This cost effectiveness reflects the fact that daimyo could raise and train infantry well enough that the infantry could face down and defeat elite cavalry by depending on numbers, discipline, and the cohesion and mobility that training and discipline conveyed, against the individual skills of the cavalymen. In other words, the relationship between strong central authority and effective infantry became evident during this period.

Finally, the shift to unmounted troops was encouraged by the increasing importance of sieges in warfare, as control of territory became the crucial measure of a daimyo’s power. Control of territory came increasingly to depend on control of the castles that appeared in greater numbers in this period. As Alien Brown has observed about European knights, a cavalry charge could not take a castle wall.⁵⁵ Investment of a strongpoint required foot soldiers, who were then available for battles as well as for siege work. The close connection is seen in the fact that sieges often triggered battles.

Changes in army size and composition accompanied and shaped changes in campaigns and tactical practices. The increased importance of sieges in the course of campaigns is one aspect of this phenomenon. Another is the changes in how battles were fought and how warriors were expected to behave.

In the centuries when mounted samurai dominated battlefields, battles were stages for individual heroics by noble warriors. The war tales of the Kamakura age are filled with tales of brave samurai fighting to the death surrounded by enemies. And at least in literary convention, warriors would announce themselves as the battle joined, reciting their lineage before plunging into the fray. Of course, the sources undoubtedly idealize and exaggerate this characteristic of earlier battles. Still, it seems safe to assume that like many medieval European armies, Japanese armies before the sixteenth century were at the least less responsive to a commander’s will, especially once battle had been joined, and less capable of large-scale maneuver than later armies.

Such tactics were a natural result of the sociopolitical structure of that era, which produced the armies that used them. They made a certain amount of sense in that political context. Kamakura and even Ashikaga warfare was mostly factional war within a single warrior class, under the umbrella of a national political system that legitimized the winners of such struggles. Thus, winning honor for oneself, one’s

⁵⁴ Wilson, *Ideals of the Samurai*, p. 67.

⁵⁵ R. Allen Brown, *English Castles* (London, 1976), p. 174.

family, and one's faction, while killing rivals, was more important than winning control of territory. Individual heroism could accomplish these ends pretty well.

But when war became a matter of carving out and holding compact territorial domains, such tactics proved inadequate. A hundred spearmen could defeat a single noble swordsman and accomplish real military gain. Such an outcome in the earlier ages would have brought little honor to the winner, so there was little incentive to raise masses of spearmen.

Sengoku battles thus came increasingly to be dominated by mass maneuver and to respond to central control. Elaborate formations and tactical theories evolved, and the individual heroics of the samurai were ruthlessly subordinated to the needs of the army as a whole. Stephen Turnbull says: "The great generals of Momoyama times thought in terms not of samurai but of samurai armies, where individual prowess was valued in terms of its contribution to a carefully planned strategy involving massive troop movement, wise use of terrain, concentrated firepower, and supplies of food and ammunition assembled on a scale not unlike that of contemporary Europe, and with a degree of skill which contemporary Europeans might well have envied."⁵⁶ Leaving ranks to engage the enemy in hand-to-hand combat, formerly a chief means of gaining glory and praise, now became a breach of discipline punishable by death. In short, Sengoku battles came to be shaped more by science and less by art.

It should be obvious that only a central authority firmly in control of its military could impose on noble warriors unwilling to give up their traditions the sort of discipline such battles demanded. The ability of daimyo to impose effective discipline on their followers and the social changes that made warriors more dependent on strong daimyo leadership clearly laid the basis for these tactical changes. Once it was politically and militarily profitable for a leader to defeat an enemy samurai with a hundred infantry rather than with his own noble hero, and once such a leader had the capacity—administrative, financial, and political—to raise a hundred infantry instead of one elite horseman, it mattered little whether the infantry were armed with spears, bows, or muskets.¹⁷ Spears and bows in fact preceded muskets into this

⁵⁶ Stephen Turnbull, *Samurai Armies, 1550–1615* (London, 1979), p. 3.

⁵⁷ It did make some difference, however, depending on the tactical situation. A combination of spearmen, who could form the sort of defensive wall against which a cavalry charge was useless, and missile weapons, which could project their force over a distance, was ideal. But bowmen could perform the latter function perfectly adequately, since a man on foot can generally shoot an arrow farther than a man on horseback. The chief advantage of muskets over bows is that they were probably easier to learn to use, and as armies con-

milieu and continued to serve alongside them throughout the century. Again, gunpowder weapons cannot reasonably be invoked as a key stimulant to tactical change in Sengoku Japan.

In terms of effects on the battlefield, it is clear that the introduction of muskets into Japan simply reinforced trends already apparent before their arrival. Muskets, useful to foot soldiers in large numbers, undoubtedly contributed to the growth in the size of Sengoku armies and the shift away from cavalry and toward infantry. But these changes in size and composition of armies were well under way before 1543, and muskets did not appear on battlefields in a significant way until the early 1560s.⁵⁸ The cause of these trends therefore lay elsewhere, in a changing political and military environment and in changes in rulership and social structure that in part responded to the new political context.

It is revealing to examine the way muskets were introduced, for this also tells us of the dynamics of cause and effect. Muskets did not seep into Japanese armies from the bottom up. From the very beginning muskets were bought, and later manufactured, at the behest of strong daimyo who saw their utility.” The arms were then distributed to armies already in place and accustomed to obeying commands. In this case, they obeyed commands to learn how to use the new weapon and to train with it. It was not difficult for daimyo who controlled large formations of bowmen to shift some of them to using the musket. Suitable infantry formations, with their tactical practices and support structures, already existed. The introduction of muskets thus tells from another angle the story of the rise of strong daimyo states and changing social structures before 1543.

Perhaps most tellingly, the supposed key to the European developments—the cannon—had little influence on military developments in Japan. The technological explanation holds that cannon forced the redesign of castles—giving rise to the *trace italienne*—which forced the creation of bigger armies, and so on. The Japanese did adopt small field

tinued to grow, musketeers may have been an attractive alternative to bowmen in terms of training time.

⁵⁸ N. Perrin, *Giving Up the Gun: Japan's Reversion to the Sword, 1543–1879* (Boston, 1979), p. 8; this work is a clear summary of the introduction and spread of gunpowder weapons in Japan, though it fails to analyze the political context affecting their history. Turnbull, *The Samurai*, pp. 165–97.

⁵⁹ “Teppo Ki (The Chronicle of the Arquebus),” *The East* 16 (1980): 50, details the first manufacture of Japanese guns, copies of the first two weapons purchased in Japan in 1543 and completed the next year with some European advice. Perrin (*Giving Up the Gun*, pp. 9–11) outlines the Japanese metallurgical skills and manufacturing capabilities that lay behind the rapid creation of a Japanese musket industry.

pieces along with muskets, and indeed cast very fine ones.⁶⁰ But the widespread use of cannon and their effect on Japanese castle design certainly seem to postdate most of the major changes that characterize Sengoku warfare. In particular, changes in the size and composition of armies—supposedly in Europe a response to changes in siege warfare brought about by cannon—preceded changing castle design in Japan, as they preceded the introduction of gunpowder weapons.⁶¹

From this account, the introduction of gunpowder appears much less decisive as a cause of major military and political changes in Sengoku Japan than has at times been claimed.⁶² Its successful introduction seems much more dependent on changes in rulership, administration, and warfare that were already taking place by the time guns came to Japan.

The Lesson

Clearly, this view of the evidence suggests that the sort of military and political changes that characterized both the military revolution in Europe and the development of warfare in Sengoku Japan were driven in Japan by deep structural changes in rulership, administration, and social structures and conflicts, in a context of altered terms of political and military competition and supported by economic growth. Basically, the collapse of national political systems of legitimacy and the virtual elimination of higher level rulers (shugo and shogun) as political forces unleashed competition at a lower level among the daimyo. The daimyo quickly discovered that such competition was most effectively carried on through the conquest *and effective governance* of compact territorial bases, which required them to control their followers effectively. They also discovered the benefits of encouraging economic development. By so developing their administrative, financial, and human resources, and by linking up fortuitously with the conflicts between villagers and local warrior elites, daimyo were able to build more effective states. Out of these states emerged a military revolution.⁶³

⁶⁰ Perrin, *Giving Up the Gun*, pp. 29, 69. Eight-pounders were the biggest guns the Japanese made.

⁶¹ Azuchi Castle, begun by Nobunaga in 1576 and finished three years later, was the first castle designed to resist gunpowder weapons: Morton Schmorleitz, *Castles in Japan* (Tokyo, 1974), p. 65.

⁶² Delmer M. Brown ("The Impact of Firearms on Japanese Warfare, 1543–98," *Far Eastern Quarterly* 7 [1947]: 236–53) credits the introduction of firearms with almost all the changes discussed here.

⁶³ The general shape of this state building fits neatly into the schema proposed by Charles Tilly for the trajectory of European state building in the same period: *Coercion*,

Technology, in the form of gunpowder weapons, further stimulated me of these developments in the direction they were headed anyway. But technological innovation seems not to have played a primary causal role in the creation of these changes. The Japanese military revolution, as far as it went, seems not to have been technologically driven. In Japan, better government preceded guns.

The Tokugawa aftermath to the Sengoku period offers further evidence for the primacy of political and institutional causes in creating change. Unlike the case in Europe, Japan's sixteenth-century wars did result in a stable political settlement. The unification of Japan begun by Nobunaga, completed by Hideyoshi, and turned into a stable polity by Tokugawa Ieyasu and his successors removed overt military competition and constant life-and-death warfare from the political map of Japan. The closing of Japan to outsiders in 1640 simply exaggerated the new character of political Japan. What had been a system of warring states and a society in flux had become a peaceful, balanced polity set over a managed society.

Given the political environment, it should not be surprising that gunpowder technology developed no independent momentum and that the rapid development of military technology and practice that characterized the Sengoku age virtually came to a halt. Change was no longer in the interest of the rulers of Japan. Their goal was stability and the maintenance of their hard-won position. It is important to note that technological development disappeared even though daimyo domains did not. Tokugawa Japan was not so much a unified, fully integrated state as a carefully managed federation of states. No serious military competition emerged from this set of states, however, and so neither did new ways of waging war.

In fact, in many ways the Tokugawa period saw the retraditionalization of Japan. Even more than technological innovation, the social mobility that warfare and competition had made possible ceased. Social classes became legal castes. Confucian theory was revived by Tokugawa theorists to bolster the social order. Rapid political change was halted, and the forces for change were, if not eliminated, at least put into suspended animation for two and a half centuries.

In other words, Tokugawa Japan's ruling elite succeeded in using new administrative techniques, new styles of warfare, and new technology just enough to establish a stable power structure. They then

Capital and European States, especially chaps. 2 and 3, supporting the usefulness of comparing the two areas. Daimyo domains, particularly those with thriving castle-towns, may be thought of as moving in the direction of more highly capitalized coercion (ibid., pp. 54–61).

used the power structure they had built to contain the disruptive, anti-traditional effects of the new techniques and technologies they had developed. It was a remarkable accomplishment, revealing the control politics and power could exercise over technology.

CONCLUSIONS

This examination of the Japanese evidence, where the technological factor is “controlled for” within a set of factors that are otherwise closely comparable, suggests several conclusions and further questions. I will consider three, in increasing order of generality.

Europe and the Military Revolution

First, the Japanese case allows us to look again at the causes of the military revolution in Europe. The Japanese evidence fits the predictions of our alternate theory: that administrative changes take precedence over the introduction of gunpowder weapons. It therefore suggests that interpretations of the European military revolution should look more to changes in rulership, administration, and governmental efficiency for primary causes of the revolution. Attempts to explain changes in government would then be likely to look to deeper roots—to the “medieval origins of the modern state.” That is, evolution would take its place beside revolution. Such an account would emphasize the sociopolitical and economic origins of Italian and Flemish urban infantry during the Middle Ages and of the Swiss pike formations that truly heralded the military revolution in tactical terms (using a weapon as old as Alexander the Great). It could trace the long development of the English military system that put longbowmen in the fields of the Hundred Years’ War. And it would have to show the connections between a government’s ability to muster military force and its ability to govern effectively in other ways, especially in terms of law, justice, and finance. In short, such an account would emphasize that better government preceded and provided a context for the successful use of guns.

Such a view would, I think, tend to put the various objections to Parker’s formulation of the problem in a coherent context, with technology as a dependent variable. That is, gunpowder weapons in Europe certainly affected the course of historical change once they were introduced. But their introduction, style of use, and even their effects were made possible and shaped by the political-institutional and economic

context into which they were introduced. In effect, gunpowder weaponry may be seen more as a result of the political, economic, and military transformations Europe was experiencing in the late Middle Ages, and less as a cause. In this view, the military revolution itself is only one sign of the failure of western European elites to establish stable traditional patterns of civilization—a failure that also includes allowing the emergence of capitalism and not containing the merchant class properly, among many other developments.

This failure is highlighted by the differences between developments in Europe and Japan after 1600. Japan at least temporarily established a stable political structure along traditional lines, though it arguably retained enough hidden potential for further change—(enough similarity to Europe, perhaps—to make rapid change possible in the mid-nineteenth century. This stability was founded on unity and cessation of military competition. Europe, on the other hand, never achieved the unity Japan did. It thus continued to compete within itself and carry that competition to ever more distant parts of the globe. Clearly, military competition is crucial in these histories, and discounting technology as a primary causal factor should not be construed as similarly demoting warfare.⁶⁴

This brief comparison of post-1600 Europe and Japan necessarily glosses over a huge complex of factors in both areas. Still, I think it can safely be said that Europe continued to develop along political-institutional lines that increasingly encouraged the development of new technology, rather than hindered it as was more common in the traditional world.

The Japanese case also casts some comparative light backward in European military history, on the so-called “age of cavalry.” It suggests that the end of the dominance of the heavily armored knight on the battlefields of Europe, like the decline of the armored and mounted samurai in Japan, had little to do with the introduction of new technology. Instead, the decline of the armored knight had much to do with changes in the economic, social, and institutional structures that had made the dominance of a mounted warrior elite possible not just on the battlefield but in government and society as well.

A natural corollary to this conclusion is that the age of cavalry did not have a technological beginning any more than it had a technological end. A common explanation of the rise to dominance of the

⁶⁴ See Brian Downing, *The Military Revolution and Political Change* (Princeton, 1992), for a recent examination of the effect of military competition on political development in transitional Europe, for example. I shall return below to the question of what type of warfare creates stimuli for civilizational change.

mounted warrior in early medieval Europe is that the introduction of the stirrup made the horse and rider such an irresistible force that infantry could no longer stand up to a mounted attack.⁶⁵ Aside from misunderstanding the dynamic of infantry and cavalry combat on the battlefield, crediting the stirrup with cavalry's dominance requires, logically, another new technology to explain infantry's return to dominance centuries later. Gunpowder could be cited as this technology, but again the Japanese evidence (and a careful reading of the European evidence in comparative light) suggests that such an explanation is flawed. So the Japanese case presented here seems to be further evidence that gunpowder did not cause the decline of the knight and the mounted samurai as rulers of the battlefield and that the stirrup did not cause their rise to dominance. Rather, the Japanese case supports the principle that strong government—effective central authority—makes for strong infantry. The rise and fall of administrative capacity is the real key to the rise and fall of infantry skills and thus to the military patterns of medieval Europe and medieval Japan.

“Warring States” Periods: A Comparative Type

More broadly and tentatively, this comparison suggests some questions about war and historical change. As I noted above, deemphasizing technology as a causal factor does not similarly deemphasize warfare. Military competition was a central feature of both Sengoku Japan and transitional Europe. But warfare has been a major feature of many times and places in history. What stands out about the sort of political-military environment and warfare that dominated these two cases is that it proved conducive to widespread and significant social and institutional change. That cannot be said of most periods of warfare, and it suggests the notion of “warring states” periods as a useful comparative type.

Three major examples of warring states periods may be cited, including the two discussed in this article. A thumbnail sketch of each raises some interesting questions. The first was the Warring States era of Chinese history, from roughly 480 to 220 B.C.⁶⁶ From the warfare of

⁶⁵ See Lynn White, Jr., *Medieval Technology and Social Change* (Oxford, 1962), pp. 1–38, for the most influential formulation of this thesis. The logic of the position is neatly symmetrical: if new technology put cavalry on top, only new technology could return infantry to dominance. But see Morillo, *Warfare under the Anglo-Norman Kings*, chapter 5, for a comprehensive critique of the stirrup theory in medieval European warfare.

⁶⁶ Parker also points out the parallels between Warring States China and transitional Europe: *Military Revolution*, pp. 2–3. See also Hsu Cho-yun, *Ancient China in Transition: An Analysis of Social Mobility, 722–222 B.C.* (Stanford, 1965).

this period was forged the foundation of the Chinese imperial bureaucratic system—the scribe-dominated society that was perhaps the most successful and fully integrated traditional civilization on record, and certainly one of the longest lasting. The second occurred in Europe between 1450 and 1815; though not named the Warring States era, it certainly was one. From the warfare of this period was forged the foundation of the modern world, for this period eventually gave birth to the industrial revolution and the modern state. The third was the Sengoku or Warring States era in Japan, which arguably continued in the 1850s after a 250-year hiatus. From the warfare of this period was forged the foundation of both the Tokugawa shogunate and, in certain fundamental ways, Japan's uniquely successful response to the challenge of Western industrial imperialism in the nineteenth century.

Two key sets of questions emerge from this brief sketch. First, what conditions are necessary to turn constant warfare, such as has existed in many parts of the world in different eras, into a powerful force for institutional improvement and social transformation? What, for example, is the role of concurrent economic growth in creating such conditions? And what is the role of a semiclosed, culturally coherent state system as the context for such warfare?

Second, what factors influenced the outcome of each period? In other words, how can we account for a common type of era (if that is what these cases are) producing both the most successful model of traditional civilization in China and the most radical departure from traditional patterns in Europe, and in some ways producing both results in Japan? Such questions cannot be answered within the scope of this article, but they have provided the framework for some of this investigation.

The Social Context of Technology

The broadest conclusion I can suggest from this study is perhaps the most obvious, but it bears emphasizing: the “effects” of technology are shaped by the context into which the technology is introduced. Even the same technology will have different effects in different social, institutional, and political settings. This conclusion is especially to be emphasized for traditional civilizations. Stable traditional civilizations were built to resist change. This entailed either resisting new technology or channeling the effects of new technology into socially acceptable patterns.⁶⁷ In other words, the development of technology was

⁶⁷ Lynda Shaffer (“China, Technology, and Change,” *World History Bulletin* 4 [1986–87]: 1–6) sketches a comparison between the effects of printing, the compass, and gunpow-

usually subordinated to political arrangements. The rapid spread of new technologies, especially those with apparently revolutionary consequences, such as may be observed in transitional Europe and Sengoku Japan, is probably a symptom of a deeper breakdown in the civilization adopting the new technology.⁶⁸ It is this deeper breakdown that must be analyzed if the causes of change are to be fully understood.

der on Europe and China—where the inventions originated—that makes this point very nicely.

⁶⁸ Of course the same is not true of our modern world, whose form of civilization is designed to produce constant technological change as part of the support structure for an entirely different sort of status quo.