Firearms

A Global History to 1700

KENNETH CHASE

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Introduction

Why was it the Europeans who perfected firearms when it was the Chinese who invented them?

Boiled down to a single sentence, that is the question this book tries to answer. There was once a great deal of confusion and controversy surrounding the invention of firearms, but it is now generally accepted that firearms originated in China. Although there is no solid evidence for firearms in Europe before the 1300s, archeologists have discovered a gun in Manchuria dating from the 1200s, and an historian has identified a sculpture in Sichuan dating from the 1100s that appears to represent a figure with a firearm. Since all the other evidence also points to Chinese origins, it is safe to conclude that this was in fact the case.[1]

The earliest known formula for gunpowder can be found in a Chinese work dating probably from the 800s. The Chinese wasted little time in applying it to warfare, and they produced a variety of gunpowder weapons, including flamethrowers, rockets, bombs, and mines, before inventing firearms. "Firearms" (or "guns") for purposes of this book means gunpowder weapons that use the explosive force of the gunpowder to propel a projectile from a tube: cannons, muskets, and pistols are typical examples. Although there were many kinds of gunpowder weapons other than firearms, none ever rivaled firearms in importance.

Firearms remained in use in China throughout the following centuries. Meanwhile, gunpowder and firearms spread elsewhere very quickly. Gunpowder seems to have been widely known by the 1200s. The Europeans certainly had firearms by the first half of the 1300s. The Arabs obtained firearms in the 1300s too, and the Turks, Iranians, and Indians all got them no later than the 1400s, in each case directly or indirectly from the Europeans. The Koreans adopted firearms from the Chinese in the 1300s, but the Japanese did not acquire them until the 1500s, and then from the

Portuguese rather than from the Chinese. Firearms were known to other peoples, but few others manufactured them until fairly recent times.

Although firearms spread very far very quickly, three areas stand out for their success at producing and deploying firearms. Europe, of course, was one. The Ottoman empire was the second, although it might also be counted as a European power, geographically if not culturally. Japan was the third. The Japanese eagerly adopted firearms in the 1500s, even though they found no further use for them after Japan's unification in the 1600s.

When the Chinese came into contact with foreign firearms in the 1500s, they found those firearms to be far superior to their own – not only European firearms, in fact, but also Ottoman ones, and eventually even Japanese ones. One Chinese military manual, published in 1644, compared Chinese firearms to European and Ottoman muskets in the following terms:

> Firearms have been in use since the beginning of the dynasty, and field armies in battle formation have found them convenient and useful to carry along. . . . Since muskets have been transmitted to China, these weapons have lost their effectiveness. . . . In battle formation, aside from various cannon such as the three "generals," the breech-loading swivel gun, and the "hundred-league thunder," nothing has more range or power than the Ottoman musket. The next best is the European one.[2]

If the Europeans had been the only people to use firearms effectively, one might suspect that some unique aspect of European culture was responsible, but the Ottoman and Japanese experience complicates any speculation along these lines. It is not enough to identify some trait that was unique to Europe. There also has to be something that set Turkey apart from closely related societies in Egypt and Iran. There also has to be something that set Japan apart from closely related societies in Korea and China. Finally, these distinctions have to be linked to firearms in a way that could plausibly account for their use or neglect.

Once the question is posed, it becomes impossible to confine the answer to Europe and China alone. Europe was not the only latecomer, nor was it the only region where firearms were used effectively. Any answer to the question has to account not just for Europe and China but for the rest of the world as well.

So why was it the Europeans who perfected firearms when it was the Chinese who invented them?

As a preliminary matter, it should be clear that one prerequisite for firearms development was a certain level of technological sophistication, particularly in chemistry and metallurgy. It is no simple matter to make gunpowder pure enough to ignite and explode or gun barrels strong enough

to withstand and direct that force. There were four regions of the world during these centuries that possessed the necessary technology for these purposes: Europe, the Middle East, India, and East Asia. Although not every area within these four regions boasted an equally high level of technology, each region did contain areas that did.[3]

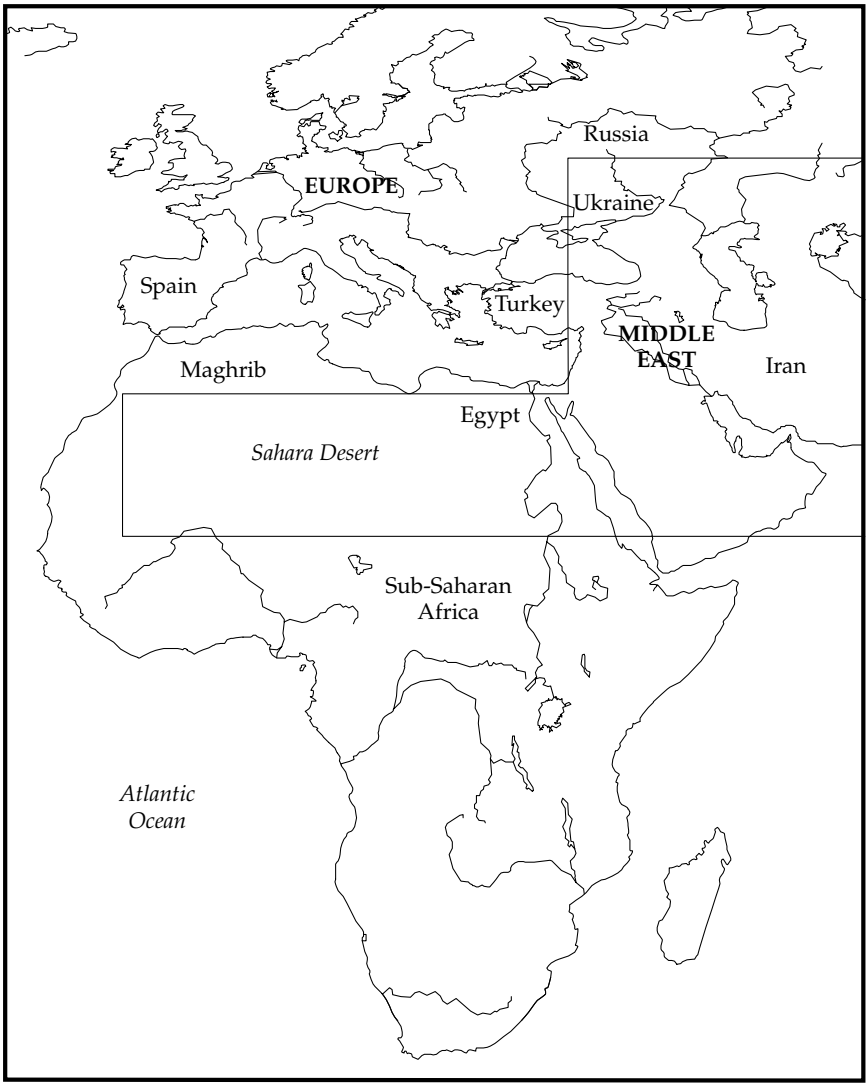
It is often assumed that European technology was generally superior to that of the rest of the world. Although true enough for recent centuries, this assumption does not hold for the centuries when Europeans were actually gaining their superiority in firearms technology. The further back the assumption is pushed, the harder it is to reconcile with what we now know about the origins of firearms. If the Europeans had such a clear-cut technological superiority, why was it the Chinese who invented firearms in the first place? Technology may explain why the Europeans kept their lead, but not how they gained it.

Among those who recognize that Europe started behind and had to catch up, the most popular explanation seems to be political fragmentation. European powers were engaged in a continuous life-or-death struggle with each other, and this struggle impelled them to seek the best possible military technology. Unfortunately for this explanation, all the other areas that possessed similar levels of technology were also involved in more or less constant warfare, the principal exception being Japan after 1615. Although this does explain why the Japanese neglected firearms after 1615, it says nothing about other areas.[4]

The argument in this book picks up where the political fragmentation argument leaves off. Although nearly all the areas with the requisite technology experienced almost continual warfare during this period, that does not mean they all would have found firearms equally useful in those struggles. In particular, those areas that were most concerned with defending themselves against steppe and desert nomads had the least use for firearms. Early firearms were ineffective against steppe and desert nomads.

Of all the technologically advanced areas of the world, only western Europe and Japan did not face any threat from steppe or desert nomads, and it was those two areas where firearms developed most rapidly. Russia and the Ottoman empire faced this kind of threat on their eastern borders, though not on their western borders, and their development of firearms was slower. The Middle East, India, and China were preoccupied with the threat from the steppe or desert and tended to neglect firearms.[5]

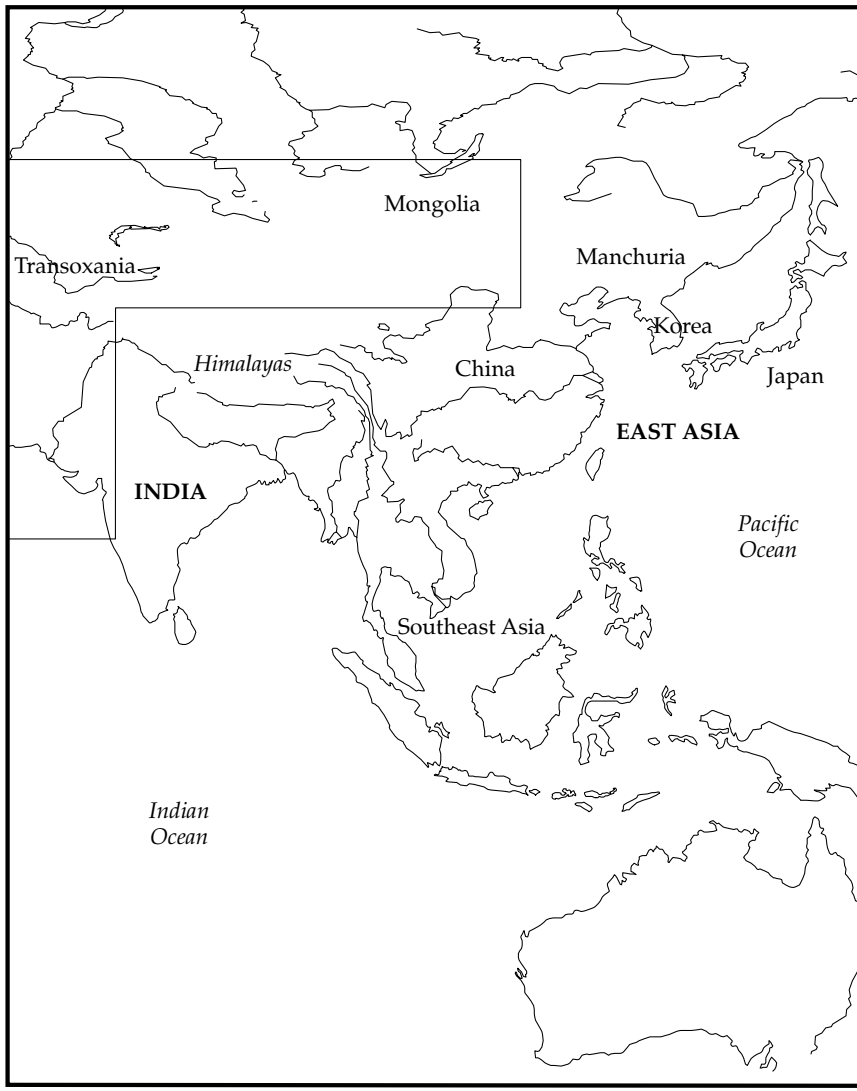
It is easy to speak of Europe "starting behind" and "taking the lead," as if there were a worldwide race to develop firearms. However, there was no arms race either between the Europeans and the Chinese, or between the Indians and the Japanese. Neighbors like the Habsburgs and the Ottomans or the



Map 1. "The Oikoumene" consists of the four regions marked in bold type – Europe, the Middle East, India, and East Asia – which possessed advanced technology at the time when firearms were invented. "The Arid Zone" is the outlined area – from Mongolia in the northeast to the Sahara Desert in the southwest – where there was generally too little rainfall to support agriculture.

Chinese and the Mongols each had their own separate rivalry, but the latter was not a race to get more and better firearms. Most places in the world had lost the firearms race long before they ever knew there was one.

Of course, no simple answer can account for all the complexity and variety in the historical record. Nor does there have to be one answer that will



Map 1. (*continued*)

account for everything, because similar effects can have different causes.[6] However, the ineffectiveness of firearms against steppe and desert nomads goes a long way toward explaining why some areas of the world had more success than others in applying firearms technology. This book shows just how far this one argument brings us and what else is necessary to get us the rest of the way there.

The next section (The Oikoumene) deals with the issue of technology. The rest of this chapter discusses the interaction between nomads and their

neighbors: how nomads lived on the steppe (The Steppe) and in the desert (The Desert); why the nomads of the steppe and the desert were not conquered by their richer and more populous neighbors (Logistics); and why people chose to fight nomads by some means (Cavalry) rather than by others (Firearms).

The other chapters of the book then trace the history of firearms as they spread around the world: starting where firearms were invented in China (Chapter 2), following them west as they were introduced in Europe (Chapter 3), and then tracking European firearms east again through Turkey and Egypt (Chapter 4) and Iran and India (Chapter 5) all the way back to China (Chapter 6) and beyond to Korea and Japan (Chapter 7). The conclusion (Chapter 8) takes the story up to the present day.

The Oikoumene

Certainly up to the year 1700 and even well after that, nearly all firearms were produced by inhabitants of four regions: Europe, the Middle East, India, and East Asia. These four regions formed a roughly crescent-shaped band from England to Japan (see map 1) that is sometimes known as "the Oikoumene," from the Greek for "the inhabited quarter."[7]

The Oikoumene was characterized by cities that were supported by the agricultural and pastoral surplus of the countryside. None of these regions was industrialized before 1700, and industry was responsible for only a small part of the economic output, but that industrial output set them apart from areas outside the Oikoumene, even though most of the inhabitants lived on farms and produced food. Not yet industrial but not simply agricultural, these civilizations might be referred to as "agrarianate."[8]

Large, dense populations were able to support specialists in writing and keeping records and accounts, which led to civilization in the sense of common literary traditions. In this sense there were perhaps four major civilizations in the Oikoumene when firearms were invented: Latin, Arabic, Sanskrit, and Chinese. That is to say, there were four established literary traditions that connected large numbers of people together and allowed the literate persons among them to exchange ideas across time and distance.

It is not entirely coincidental that we also find four major religions in the Oikoumene in this period: Christianity, Islam, Hinduism, and Buddhism. Each of these religions was linked to one of the literate traditions, although each one in its own way: Latin and Chinese had classical literatures that predated Christianity and Buddhism, for example, whereas Arabic and Sanskrit literature grew from the Qur'an and the Vedas. Except perhaps in China, religion probably shaped cultural identity more than did the associated literate tradition.

Speaking still in very general terms, it is also possible to identify each civilization and religion with one region of the Oikoumene in the 1100s. Europe was home to Latin and Christianity, as India was to Sanskrit and Hinduism – these regions are easy to label. The territory covered by Arabic and Islam was the most diverse, but its historical core was the land between the Nile and the Oxus Rivers, usually known as the Middle East. The territory covered by Chinese and Buddhism, including not only China but also Korea, Japan, and northern Vietnam, is generally known as East Asia.[9]

These were the four regions of the world in the 1100s with the technology needed for the production of firearms.

Comparisons of technology between areas within the Oikoumene are more controversial. Theoretical science in the 1100s was probably more highly developed in Arabic civilization than anywhere else, as Arabic civilization drew upon and built upon both Greek and Indian science. Be that as it may, the marriage of science and technology so characteristic of the world today was a much later phenomenon. At least through the 1700s, if not later, technology advanced principally by trial and error, without much in the way of theoretical underpinnings.[10]

If Arabic civilization excelled in science, Chinese civilization excelled in mechanical technology. To the Muslims, who were in the best position to judge, the Greeks and the Indians were known for their philosophy, but the Chinese were famous for their artistry and their artisanry.[11] The Armenian monk Hetoum, writing just two decades before the first record of firearms in Europe, had the following to say about Chinese technology:

> And for very treuth, out of this realm of Cathay are brought many strange and meruelous thynges of subtyll labour and art ingenyous, wherby this peple well seme to be the moste subtell and inuentife of the world in arte and laboure of handes.[12]

To take the broadest possible view of things, it is safe to say that Europe lagged behind the other three civilizations in the Oikoumene in the year 1000 and had passed them all by the year 1800. The question of when exactly Europe did overtake each of the other three civilizations is highly contentious.[13] Without necessarily committing to a definite position on that issue, it is safe to say that the development of firearms was not determined by any general technological superiority on the part of Europe.

Very few people believe that Europeans possessed superior technology in the 1300s or 1400s, even those who believe that the roots of the Industrial Revolution can be traced back to those times. However, those two centuries are the most relevant time frame for the question at hand. European firearms already were quite clearly superior to those in any other part of the world, aside from the Ottoman empire, by the early 1500s (firearms not being

introduced to Japan until 1542). Whatever happened had already happened by then.

What makes firearms so significant in the history of technology is not that they were symptomatic of some general European superiority, but rather that they were one of the very first items of technology in which Europeans did excel. Although Europe made tremendous progress in the 1300s and 1400s, very little of it represented anything that was unknown elsewhere. Europe was gaining ground on other regions, but it had not yet taken the lead. Optics (i.e., eyeglasses) and horology (i.e., clocks) are the two fields aside from gunnery where they were legitimately at the forefront in practical technology of universal application. This is all the more reason for giving close attention to firearms.[14]

Whatever the relative accomplishments of regions within the Oikoumene, they all enjoyed immense advantages over lands outside of it. At any given time after the rise of urban civilizations, some three fourths of the world's population resided within that arc from Europe through the Middle East and from India to East Asia. New ideas spread far more quickly within the Oikoumene than outside of it, firearms being a case in point. Isolated populations tend to be technologically backward precisely because they cannot benefit from other peoples' ideas. This disparity is highlighted in the initial contacts between peoples from inside and outside the Oikoumene – between Spaniards and Aztecs, for example.[15]

Sub-Saharan Africa lagged behind the Oikoumene in the necessary technology and perhaps in industrial organization as well. North and South America were even more isolated, and their metallurgical and chemical expertise was negligible, whatever their other accomplishments. The same goes for places like Australia and New Zealand. Even though some natives of these regions learned to use firearms effectively, they remained dependent on external sources of firearms and gunpowder.

Nevertheless, the development of firearms was a global phenomenon. It involved more than just the people of the Oikoumene. Even if the populations of Africa and the Americas did not produce firearms, they helped shape how firearms were used. This is all the more true for the nomads of the steppes and deserts bordering the Oikoumene.

The Steppe

Cutting through the middle of the Oikoumene is "the Arid Zone," stretching from the steppes of Mongolia to the deserts of North Africa.[16] The Arid Zone is shaped like a big backward Z (see map 1). From Mongolia, it extends west to the Ukraine, southeast into India, and west again all the way across North

Africa to the Atlantic Ocean. The northern half of the Arid Zone is largely steppe, an enormous expanse of rolling grassland broken up by a few large rivers and mountain ranges. The southern half is largely desert, including the largest desert of all, the Sahara. Both halves were inhabited by nomads.

When firearms were invented in the 1100s, none of the civilizations of the Oikoumene boasted stable unified empires. Latin Christendom never reunited after the fall of the Western Roman Empire. The Eastern Roman Empire had lost most of its territory, and Constantinople would be sacked by the Fourth Crusade in 1204. The Abbasid Caliphate had disintegrated into rival dynasties, with the caliph ruling little more than the city of Baghdad, if that. The Hindu kingdoms of northern India were worn down by two centuries of Turkish invaders, who would establish the Delhi sultanate in 1206. The Song dynasty lost north China to the Jurchens and was locked in a stalemate with them for the rest of the century. Japan was beginning its long slide from centralized aristocratic rule to decentralized warrior rule to all-out civil war.

By contrast, the nomads would reach the height of their power in the 1200s. The tribes of the steppe to the north of China were united in 1206 by a man named Temüjin, the son of a minor chieftain of the Mongol tribe. He took the title Chinggis Khan, popularly though inaccurately rendered as Genghis Khan. Chinggis Khan spent the remaining two decades of his life extending Mongol power in every direction, and his sons and grandsons continued his legacy. When Chinggis Khan's grandson Möngke became *khaghan* (emperor) in 1250, he inherited an empire that extended from north China and Korea across the steppe to Russia, and over the following decade he sent armies to the Middle East and south China.[17]

Although the Mongol empire itself failed to maintain centralized control past 1260, four branches of the family established successor *khanates* (kingdoms) that ruled over China, Transoxania, Iran, and Russia. Other areas within the Oikoumene like Turkey, Egypt, and northern India were ruled by Turkish dynasties of nomadic origin whose military power also rested on mounted archery. Except for western Europe (at the far western end), southern India (at the far southern end), and Japan (at the far eastern end), most of the Oikoumene came under the rule of nomads at some point over the course of the 1200s.

The Mongols were in many ways a product of their environment. The steppe was a harsh and forbidding land: "flat, empty, and desolate in every direction," according to one Chinese visitor in the early 1200s. There were few streams or rivers, and rainfall was irregular and light. The climate was frigid, the weather highly erratic; it sometimes snowed in the middle of the summer. Little grew there except the wild grass. The grass turned green in

May, grew thick in July, and withered by September. The seasonal rhythms of the grass affected the animals, which grew lean in the winters and fat in the summers.[18]

The Mongols relied on their flocks to convert the grass into food and raw materials. Without their animals they could not survive. The women looked after the oxen; the men, the horses and camels; and both sexes managed the sheep and goats. In the winter they camped down south, and in the summer they stayed up north. (Depending on the local topography, they might change altitude instead of latitude, migrating down into the plains or up into the mountains.) During the spring and autumn they traveled from one camp to the other, spending several months on the move to avoid overgrazing.

Because they were often on the move, the Mongols had no cities or even buildings. They lived in large tents, made of interwoven sticks covered with felt, which could reach thirty feet in diameter. When they struck camp, the tents were disassembled or else loaded on large wagons drawn by oxen or camels. The wagons and the flocks moved at no faster than a walking pace, covering just a few miles each day.

The Mongols spent much of their lives on horseback. "When I went back and forth on the steppe, I never saw a single person walking," wrote one Chinese emissary. Infants were tied with rope to a board, which was in turn tied behind the mother's saddle. At the age of three, they were tied to the saddle of their own horse. At the age of four or five they began to carry small bows and short arrows and to learn how to hunt.

Hunting was good training for warfare, not only for "the handling of the bow and the endurance of hardships," but also for the discipline and organization that characterized Mongol armies. For great hunts, the Mongols would send out scouts to locate the game, then send out more men to encircle it. They would spend one or two or even three months driving the game into a smaller and smaller area, taking care not to allow any animals to break through the ring, until it was time for the final slaughter.

The basic weapon for both hunting and warfare was the bow, and every man carried at least one, with several quivers of arrows. Some had swords, and some had lances, and the lances had hooks to drag other horsemen from their saddles. The men might be protected by armor, made from leather or iron or steel, but they generally did not use shields. Since the Mongols did not produce their own iron or steel, but acquired metal products through trade or plunder, their equipment varied in quality. Each man had a string of horses, and they all fought on horseback except under special circumstances.[19]

On campaign, the Mongols would not make a move without first sending out scouts in every direction. In battle, they used their speed and maneuverability to harass the enemy from long range with their bows. If this proved ineffective, they might feign flight to lure the enemy into an ambush. Sometimes

they would withdraw from an area completely, then suddenly reappear after the enemy let down his guard. They would not close with the enemy until they were confident of victory.

Their harsh lifestyle made the Mongols incredibly tough. While away from the flocks, the warriors could subsist on dried milk and dried meat, drinking the blood of their horses and supplementing their rations by hunting, for long stretches of time, as long as there was grass and water for the horses. "I say to you with confidence," wrote William of Rubruck to Louis IX after visiting the Mongols in 1253, "if your peasants, I will not say Kings and knights, were willing to go as do the Kings of the Tartars and to be content with the same kind of food, they could take possession of the whole world."[20]

Survival on the steppe required cooperation, and the tribe was the basic building block of Mongol society. Each tribe migrated between pastures together, pitched its tents together, and herded its animals together. Tribes were united by common traditions and myths of common ancestry and were headed by a tribal chief who was chosen from the leading family in the tribe. Each tribe followed the same routes and used the same pastures year after year, subject to the vagaries of political rivalries and natural disasters.

Even if steppe nomads were entirely self-sufficient in the necessities of life, and it is not clear how often this was really the case, they needed agricultural goods to reduce their dependence on their flocks. Disease or weather could wipe out the resources of a tribe almost overnight. Moreover, those resources could not be increased beyond a certain point because pasturage limited the size of the flocks. Nomads could only diversify their risk and accumulate wealth by acquiring agricultural or industrial products through trade or warfare.

So tribes banded together into tribal confederations to bargain for more favorable trading conditions or to seize what they wanted by force. Successful leaders gained access to sources of agricultural or industrial products that in turn allowed them to grant or withhold patronage. Tribal confederations that failed to deliver the goods could collapse in spectacular fashion, but there was an evolving political tradition on the steppe that contributed to the formation of larger and more stable confederations over time.[21]

Even a successful tribal confederation like the one founded by Chinggis Khan must have been very small in absolute numbers. There were probably no more than two million people in all of Mongolia in 1206. Although the steppe could not support a large population, every man could serve as a soldier, because every man could ride a horse and use a bow, so the Mongols compensated for their small population with a very high mobilization rate. The women and children could manage the tents and the flocks on their own, if necessary, while the men were off at war.

When the nomads were not united, tribal rivalries must have significantly limited their mobility. One tribe could not travel through the pastures of another tribe without inviting attack. Nor could the warriors of one tribe strike deep into settled areas without leaving their own families and flocks vulnerable to raids from other tribes. Disunity made life much easier for their settled neighbors, who could play one tribe off against another.

When the nomads were united, however, their power increased exponentially. They were not tied down to the defense of any fixed positions. Only the capture or destruction of their flocks could force them to submit, and their flocks were far out on the open steppe where they were difficult to find. With the ability to choose the time and place they wished to fight, and to avoid battle under any but the most favorable circumstances, steppe nomads were very difficult to defeat.

The Desert

Desert nomads were different in important respects from their steppe cousins. Take the Bedouin of the Arabian Desert as an example.[22] Some Bedouin raised horses, sheep, cattle, and goats on the fringes of the desert, where there was some water and grass available for the flocks but where the land was unsuitable for agriculture. However, other Bedouin raised camels deep in the desert, where horses and sheep and cattle and goats cannot survive. The Tuaregs and other camel herders led a similar existence in the middle of the Sahara Desert.

Desert nomads were less self-sufficient than steppe nomads, since they relied entirely on just one animal for their livelihood. They were more likely to engage in trade for the items they could not produce themselves. They also tended to be fewer in number than steppe nomads, because the desert was even harsher than the steppe. They lived in smaller groups and had less experience in forming large stable tribal confederations. Generally speaking, they were less of a threat to their neighbors than steppe nomads were.[23]

Camels did not give desert nomads the same kind of advantage in combat as horses gave steppe nomads. It is possible to fight while mounted on a camel, but the rider is seated precariously high off the ground, and a camel will not charge like a horse. The Bedouin rode on camels, but generally speaking they fought on foot. When threatened, they would simply withdraw into the inaccessible regions of the deep desert, where it was impossible for cavalry on horses (never mind infantry) to follow.[24]

The Bedouin played little role in world history before the rise of Islam. They were responsible for one of the great feats of conquest in world history when they exploded out of the Arabian Peninsula to overrun everything

between Spain and Transoxania in the 600s and 700s. However, they receded into obscurity again after the first couple of centuries of Islam, as the centers of power moved to cities like Cairo, Damascus, and Baghdad. Meanwhile, the caliphs lost control of most of the Arabian Peninsula outside of the holy cities.

The Tuaregs of the Sahara Desert were similar in this respect too. They had their moment in the 1000s, when they came out of the desert to conquer Morocco and found the Murabit dynasty. They even crossed the Straits of Gibraltar and saved the Muslims in Spain from defeat at the hands of the Christians. This dynasty lasted less than a century before it was overthrown. The Tuaregs raided the people on the margin of the desert in later centuries, but they did not conquer.

The camel herders of the deep desert shared with the Mongols the ability, when threatened, to withdraw far out of range of armies from agrarianate states. The Mongols and the Bedouin are both examples of what might be called "excluded nomads," nomads whose pastures lay outside of the bounds of civilization. The opposite of excluded nomads would be "enclosed nomads," whose pastures lay within the bounds of civilization, where they occupied land that was unsuitable for agriculture.[25]

If the Arid Zone is shaped like a big backward Z, then the top of the Z is steppe, home to excluded nomads like the Mongols. The line separating the steppe from the farmlands of Europe and China was fairly clear. The line might shift a little one way or another, and the border area itself could be fuzzy, but on one side there was enough rainfall to support agriculture, and on the other side there was not. Within China and Europe, the population was almost exclusively sedentary, and on the steppe, it was almost entirely nomadic.

The bottom of the Z is desert, particularly such large and inhospitable ones as the Arabian and Sahara Deserts, home to excluded nomads like the Bedouin and the Tuaregs. In this sense, the bottom of the Z is the mirror image of the top. However, these desert nomads did not play the same role in the history of firearms. Not only were camel herders not as dangerous as horse breeders, but the Red Sea separated the Bedouin from the Tuaregs, while the Mediterranean Sea prevented the Tuaregs from reaching areas of the Oikoumene outside of the Maghrib and Egypt.

The backward slash on the Z slices right through the heart of the agricultural regions of the Middle East. Except in a few small areas next to large bodies of water, like the southern coast of the Caspian Sea, there is little rainfall within this region. Most of the land, including mountains and plains and the fringes of the desert, was only suitable for pasturage, except where it could be irrigated. The nomads who inhabited this land were classic enclosed nomads.[26]

The largest cities in the Middle East were located along the major rivers, such as Cairo on the Nile and Baghdad on the Tigris, in places that had been the sites of cities and the centers of empires since ancient times. These islands of irrigated agriculture might support dense populations, but they were not very large. Even the largest cities were hardly more than a day's ride from mountains or plains or deserts. Because the land under cultivation was scattered throughout the areas devoted to pasturage, agricultural and pastoral communities lived side by side.[27]

Starting from the 900s, Turkish steppe nomads gradually migrated south and west into the Middle East – from the top of the Z to the backward slash, in other words. They settled particularly in areas like Anatolia, Azarbayjan, and Khurasan, where there was water and grass to support their flocks, sometimes displacing or assimilating the indigenous pastoralists, both sedentary and nomadic ones. They adapted to the demands of vertical migration (mountains in summer, valleys in winter) by using pack animals in place of wagons.[28]

The influx of Turks shifted the balance of power within Islamdom in favor of pastoral nomads, and specifically in favor of steppe nomads. This imbalance was confirmed by the Mongol conquests of the 1200s. From the 1000s up into the 1800s, practically every major Muslim dynasty as far west as North Africa and as far east as India was founded by Mongols or Turks. The Ayyubids in Egypt and Syria were Kurds, and the Safavids in Iran may or may not have been Iranians, but even they behaved in all relevant respects like Turks.

The Turks on the steppe could protect themselves at need by withdrawing from danger into inaccessible regions, but they gave up this option when they migrated off the steppe. This raises the question of how the Turks maintained their position in the Middle East for so long. How could they have avoided being overwhelmed by their sedentary neighbors? Three reasons in particular come to mind.

First, their control of livestock gave them the military advantages associated with the use of horses. Horses provided both speed and power on the battlefield.

Second, they could control the trade upon which the cities depended for their prosperity. The caravans that connected the cities into trading networks required beasts of burden, of which the nomads controlled the largest numbers, and they traveled far beyond the protection of the cities, where they had to rely on the protection or the forbearance of the nomadic tribes.

Third, cultivated lands were highly fragmented. Within the Middle East, there were few areas – Egypt, thanks to the Nile River, and Iraq, thanks to the Tigris and Euphrates Rivers, being the two outstanding examples – that

could support large agricultural populations. It comes as no surprise that Cairo and Baghdad were always two of the largest cities in the region. Still, any ruler who wanted to expand beyond a single one of these islands of cultivated land would need to control the seas of uncultivated land around them. Only the nomads were capable of that.[29]

Where the survival of the dynasty rested on the allegiance of nomadic tribes, rulers necessarily had a different relationship to their cities. Nomadic rulers often camped outside their cities in preference to living within them. Some even pitched tents in the courtyards of their palaces rather than sleep indoors. Rulers were not indifferent to the loss of their cities, but the tribes could survive without the cities, whereas the dynasty could not survive without the tribes.

Thus, many cities in the Middle East had a strong citadel and weak walls. Rulers could not count on the loyalty of the inhabitants of the cities, although the inhabitants had little to gain from taking sides in political struggles, so the city walls were not always strongly defended. The citadel housed a small garrison whose loyalty was to the ruler and whose job was both to guard and to police the city.[30]

Conflicting loyalties of this sort led to the following exchange when the city elders of Damascus decided to surrender to besiegers in early 1401:

> [T]he viceroy of the Damascus citadel forbade them to do so, and threatened that if they did he would burn the city against them. They disregarded his words and said, "Rule over your citadel and we will rule over our city."[31]

The political and military dominance of the Turkish nomads gave rise to a sharp division of social roles, whereby Turks served as "men of the sword" and Iranians and Arabs as "men of the pen." The withdrawal of Iranians and Arabs from active participation in political and military affairs made the position of Turks all the more secure. Military forces were drawn largely from Turkish populations, and almost exclusively as either tribal forces or military slaves.[32]

So, although camel-herding desert nomads like the Bedouin and Tuaregs may not have been as dangerous as horse-breeding steppe nomads like the Mongols and Turks, the migration of Turks into the Middle East eventually brought Egypt, northern India, and even southern India within their reach – areas that otherwise were safely distant from the steppe.

Unfortunately for the inhabitants of the Oikoumene, their relationship with the steppe nomads was very one-sided. Although most of the Oikoumene was within easy striking distance for steppe nomads, it was not so easy for the people of the Oikoumene to strike back. The reason is simple: armies have to eat.