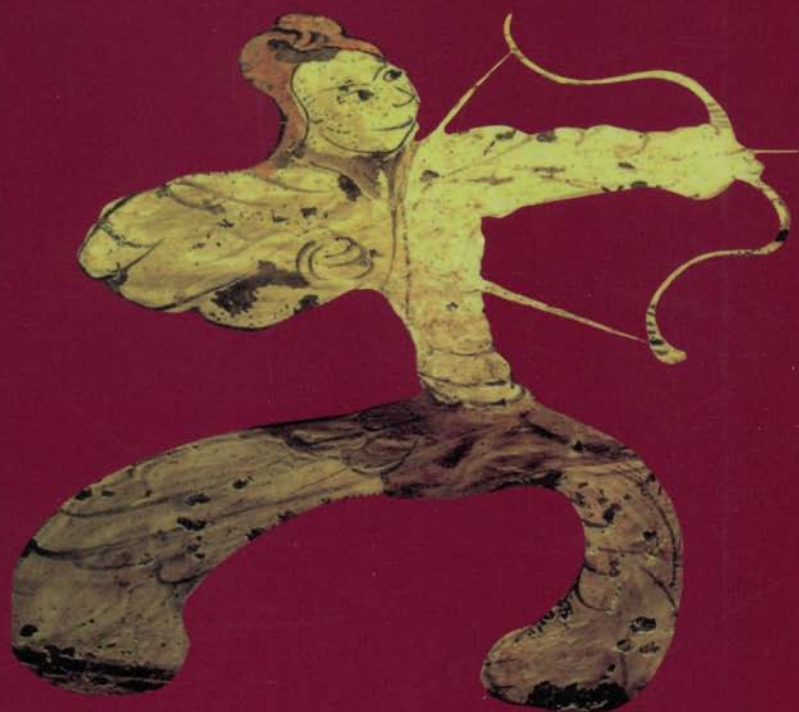


CHINESE ARCHERY

Stephen Selby

射書十四卷



CHINESE ARCHERY

紀念
陸智夫
師傅

In memory of
Luk Chi Fu
(1908-1995)

CHINESE ARCHERY

STEPHEN SELBY

香港大學出版社



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The original figure of the archer featured in the cover design is reproduced from an anonymous painting on an unglazed gray earthenware vase dating from the Western Han Dynasty (206 BC – 25 AD).

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Chinese Pronunciation Guide

I have used the Pinyin alphabet, adopted in the People's Republic of China and the United Nations as a standard for romanizing Chinese, for transcribing Chinese words in this book. The guide below takes Chinese syllable-by-syllable, and then divides each syllable into the initial sounds (consonants and semi-vowels) and final groups (vowels and nasal consonants.) Don't worry: it's not as complicated as it sounds. Chinese syllables also have distinctive tones; but they are not necessary for the purposes of this book and I have omitted them.

Initial sounds		Final groups	
b	b	-a	'father'
p	p	-ai	'buy'
m	m	-ao	'cow'
f	f	-an	'pen'
d	d	-ang	'lung'
t	t	-o	'saw'
n	n	-ou	'so'
l	l	-ong	'Mao Tse Tung'
g	g	-e	Fr Monsieu
k	k	-ei	'pay'
h	kh (Scottish 'loch')	-er	'err'
j	jy ('jeep')	-en	Zhou Enlai
q	chy ('cheap')	-eng	Deng Xiaoping
x	shy ('Asia')	-i	'see' (See note)
zh	jr ('drain')	-ia	'yard'
ch	chr ('train')	-ie	'yeah'
sh	shr ('shrink')	-iao	'miaow'
r	r ('pleasure')	-iu	'you'
z	dz ('adze')	-in	'seen'
c	ts ('Tsetse fly')	-ing	'Ming'
s	s	-ian	'yen'
y	y	-iang	'Chi ^{ang} Kai Shek'
w	w	-iong	'Foo ^{yo} ong'
		-u	'blue'
		-ua	'one-to-one'
		-uo	'war'
		-uai	'why'
		-ui	'way'
		-uan	'one'
		-un	'soon'
		-uang	'Wang'
		-ü	Fr 'Tu'
		-üe	Fr 'Tué'
		-üan	Yuan
		-ün	Vietnamese: 'Nguyen'

Note: The final syllable [-i] prolongs the sound of the letters before it. So after z-, c-, s-, it is '-zzz' (like a bee), and after zh-, ch-, sh- and r-, it sounds like 'err', and after j-, q-, x- and all the others it is '-ee'.

Traditional Chinese Dynastic Time Chart

(dates for pre-Zhou times are speculative)

Xia			~2200 – ~1700 BC
Shang			~1700 – ~1100 BC
Zhou	Western Zhou		~ 1100 – 771 BC
	Eastern Zhou		770 – 256 BC
	Spring and Autumn		722 – 481 BC
	Warring States		403 – 221 BC
Qin			221 – 206 BC
Han	Western Han		206 BC – 9 AD
	Xin		9 – 25
	Eastern Han		25 – 220
Three Kingdoms	Wei		220 – 265
	Shu		221 – 263
	Wu		222 – 280
Western Jin			265 – 316
Eastern Jin			317 – 420
Sixteen Kingdoms			304 – 439
Northern and Southern Dynasties	Southern Dynasties	Song	420 – 479
		Qi	479 – 502
		Liang	502 – 557
		Chen	557 – 589
	Northern Dynasties	Northern Wei	386 – 534
		Eastern Wei	534 – 550
		Northern Qi	550 – 577
		Western Wei	535 – 557
		Northern Zhou	557 – 581
Sui			581 – 618
Tang			618 – 907
Five Dynasties & Ten Kingdoms	Later Liang		907 – 923
	Later Tang		923 – 936
	Later Jin		936 – 946
	Later Han		947 – 950
	Later Zhou		951 – 960
	Ten Kingdoms		902 – 979
Liao-Jin	Liao (Khitan)		907 – 1125
	Jin (Ruzhen)		1115 – 1234
	Xixia		1032 – 1227
Song	Northern Song		960 – 1127
	Southern Song		1127 – 1279
Yuan (Mongol)			1279 – 1368
Ming			1368 – 1644
Qing (Manchu)			1644 – 1911
Republic of China (Nationalist Period)			1912 – 1949
People's Republic of China			1949 – present



Acknowledgements

I have received so much support and help in gathering material for this book and evaluating what I have written that it is difficult to know where to start thanking people. I should like in particular to mention the archery practitioners, craftsman bowyers and fletchers in different parts of the world who have contributed invaluable practical advice. Whether it was a question of the varieties of inscriptions on Zhou bronzes, the average width of a single thread exuded by a silkworm in the Han Dynasty, or the correct length of time to boil fish air-bladders to make glue, there was always someone ready and willing to give advice. Much help and advice came to me over the Internet. I think that the research time needed for this book was halved by using Internet resources — for example, library catalogues, email, booksellers' lists and newsgroups.

The following names are in alphabetical order. I beg forgiveness from anyone who has been left off the list.

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Author's Note

Bibliographical references in the footnotes are in Chinese when they are quoted directly from their respective sources.

In order to help navigation throughout the book, all the quotations in the text are numbered. For instance, 8A1 refers to paragraph A1 in Chapter 8.



Preface

Harlech, North Wales, 1995

It was the summer holiday and we took the children to Harlech Castle. After paying the entrance fee and extracting the children from the souvenir shop, we found ourselves in the keep, the grass lawn mowed to bowling-green neatness and a tidily-kept pebble path running under the walls. The children wanted to go up the dark, winding stone steps onto the ramparts.

And so, half way up the narrow staircase, I came to the archer's window. About two metres high, it gave a view onto a segment of the town below and a sliver of sea beyond it through a narrow slot no more than twenty centimetres wide.

The children ran on ahead, and I stayed behind to sit by the window.

The castle wall at that point was nearly three metres thick, made of roughly hewn stone mixed with rounded boulders from some nearby beach or stream-course and held together with cement. The opening on the outside was narrow, but on the inside there was over one and a half metres — enough for two bowmen to stand and watch the world pass below. A sharp draught of salt-laden air blew through the opening and into the stairway behind me.

I sat on the ledge of the window. From behind me came the voices of excited children as they clambered over the iron cannon standing in the keep below. From above came the scream of gulls and the occasional

cawing of a raven. Through the opening of the window, however, sounds were distorted and strange: a mixture of traffic, the waves on the beach, and the odd, incomprehensible human sound.

But the window was strategically placed and the view was clear. The gloom inside the walls made the view outside unnaturally bright by contrast. From where I sat, I watched the cars pass on the road below, the train arriving from Dyffryn Ardudwy, people flying kites on the beach. I started to think about how different my restricted view from this archer's window was from the view my wife and children would be enjoying from high on the ramparts above me.

For them, of course, there was plenty to see; but how to decide what to look at? So many things to grab the attention. There was the courtyard below with the ruined castle chapel on one side, and the town of Harlech and the hills on the other. As soon as their attention in one direction began to flag, something would grab it from another. Above, below, three hundred and sixty degrees around: an embarrassment of choice.

And yet my restricted view had its own interest. True, I could not see above and below; and making the best of the narrow field of view by sticking my head near the opening, I might steal thirty degrees at the most. But there was a satisfying sort of focus. I was forced to wring more out of what I could see. How many people were taking the train? Were there more people on the train than I could see driving along the road? Why did they choose to take the train, anyway?

That railway line, which passed before the archer's window of Harlech castle, had been there for a hundred and fifty years or more. A mere shadow of its former self, along that line, before the days of Doctor Beeching, the Cambrian Coast Express had run. In the 1950s and 1960s, it had been the lifeline for the Butlins Holiday Camp at Pwllheli and given city-dwellers in Liverpool and the industrial Midlands their first taste of a holiday away from home (as well as bringing me each year to visit my grandparents in Chwilog). Before that, it had brought thousands of Edwardian visitors to the fashionable resorts at Barmouth and Aberystwyth. Lloyd George, the Prime Minister, would have taken it to travel from the Houses of Parliament in London to take his holidays at the family home in Llan Ystymdwy. Once, my mother told me, the train had jumped the rails at the cliff outside Barmouth and dozens of people had died.

Before the railway, a road had run along the coast, bringing the Methodist ministers to set up their ministries in Criccieth. Catholic pilgrims would once have passed on their way to the holy island of Bardsey along the coast — rich, poor, holy men and sinners. All that and more could have been witnessed from that drafty archer's window, deep in the walls of Harlech castle, had someone wished to keep a record.

So when I am asked, 'Why such a narrow subject as the history of archery in China?', I know the answer. I just see in my mind that narrow, little window and all that had passed in front of it.

The Great Wall of China has windows like that, too.

Shanghai, China, 1997

It was November 1997, and I sat in the study of Professor Li Pu, one of China's leading experts on paleography. Before us were piles of brown envelopes containing manuscripts ready to be entered into his computerized database of the 'oracle bones' Chinese script of the Shang period, three thousand five hundred years before our times.

'How long is this archery book of yours going to be, then?' he asked.

'I was thinking of about twelve chapters,' I answered. The Professor laughed dryly. Professor Zang, his associate, grinned as well.

'Professor Li could write twelve chapters on the ancient history of the bow and arrow without drawing on any material other than the Shang oracle bones.'

His boast was completely true. This 'narrow' subject has left tracks throughout Chinese history, art and literature. The task of picking up the numerous pieces and putting them into a rational order is the challenge — not searching for scarce materials. China has had its own Robin Hoods and William Tells. More than that, archery has underlain superstition and mystic rituals from the dawn of recorded history — the period of Professor Li's oracle bones.

Archers and archery have at times determined the course of Chinese history, just like the longbow at Crécy did for the English. The bow, the crossbow and the horse have formed the major ingredients of Chinese military thinking over centuries — long after gunpowder was in common use. For ancient Chinese civilization, the arrow in the hand of the mystic archer played an elemental role in folk belief like that of the thunderbolt in the hand of Zeus. Knowledge of archery was so well ingrained among literate Chinese in ancient times that the great philosophers such as Confucius and Lie Zi readily drew on archery technique to illustrate their arguments.

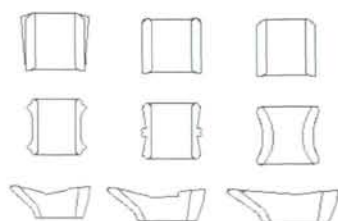
The Chinese and the English share a long romantic history of archery. Yet in the English-speaking world, traditional archery is alive and well while in China it is dead. In 1800, traditional archery held a much stronger place as a gentlemanly sport in China than it did in England. Yet now, traditional forms of archery and bow-making are a popular hobby and sport

in the English-speaking world while in China, no one remembers how to pull a traditional Chinese bow, let alone make one. Why?

This book is a history of China from the earliest times until 1950. It is nearly all there. Most of the great figures of Chinese history, literature, philosophy and art have walked past the archer's window. Through the narrow slot, we can eavesdrop on their conversations and read their writings. We can gain a view of the long epic of the history of the Chinese people — a history as the guards cradling their crossbows in the towers along the Great Wall might have seen it as they huddled against the cold, wormwood-laden draft blowing from the mountains and steppes into the stairway behind them.



Chinese Thumbings



Outlines of the rings in the photograph above

Thumbings were made out of all sorts of precious and semiprecious stones, and in a wide variety of profiles. The form you can see in the bottom row was favoured from the Zhou period through to the Han Dynasty. Those in the middle row, with a feature in the outside of the cylinder were favoured in the Ming Dynasty, while cylindrical rings with smooth outsides to the cylinders were in vogue in the Qing Dynasty. Of all the rings produced, the great majority were for decorative purposes only. Serious archers preferred rings made of leather, horn or bone, few of which have survived.



Arrowheads

The craftsmen of China and the adjoining steppe-lands created a large variety of arrowhead designs. Those on the bottom right, made from bone, flint or obsidian, are Neolithic. The remaining arrowheads below the second row are of bronze, spanning the period from Shang through to the end of the Han Dynasty. Some are for crossbow practice, some for hunting or warfare and some designed to be dipped in poison. Those in the top two rows are made of iron. Two are whistling arrows used for conveying signals on the battlefield. Two were intended to carry a burning ball of pitch for starting fires. The large, broad heads were favoured for killing game. Because of the long time-span and the wide geographical distribution of arrowheads for weapons, booty and trade, it is rarely possible to be certain of the geographical origins of each type.



Han Dynasty Archer

This pottery figure dates back to the early part of the Han Dynasty. Following the fashion which grew up around the time of the first Qin Emperor's Terracotta Army, this figure would have been just one of a small army placed in a grave to show the importance of the person interred in it. He is dressed in an infantryman's leather body-armour, and there is a slot in both hands where a wooden model bow and string would have fitted. (He also has a small, box-like quiver strapped to his back.) Note that the position of his feet are at right-angles to each other. The length of his bow-arm is an artistic effect to give the impression of stretching the forearm forward 'as if propping up Mount Tai'.



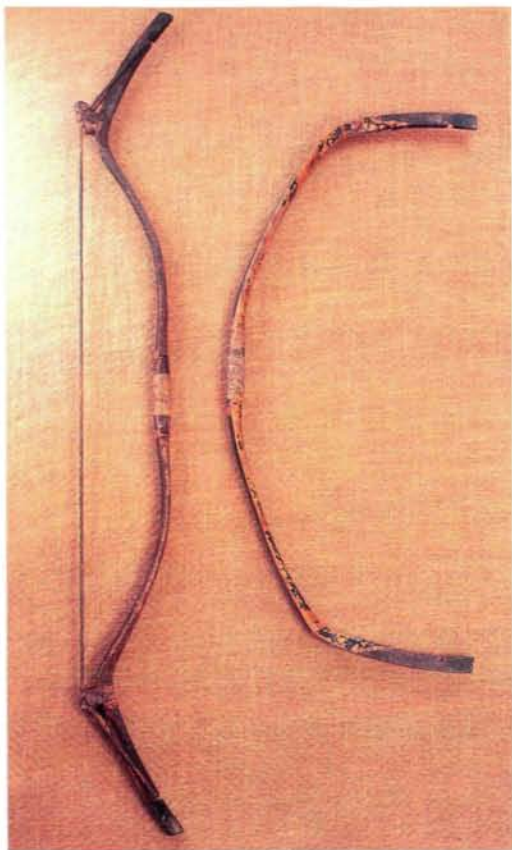
Tang Dynasty Archer

This figure represents a mythical tomb guardian posing with a bow and arrow. There is a slot in both hands where a wooden model bow and string would have fitted. Figurines such as this, glazed in white, ochre and green, were popular funerary items during the Tang Dynasty. Although the pose is stylized, the hand and arm positions and the armour are faithfully reproduced. It was fashionable to put the features of fierce foreign tribes on these figurines rather than those of the Han Chinese.



Ming Dynasty Huntsman on Horseback

This glazed tomb-figure is of a Ming noble in a warm jacket seated on a patient steppe pony. His bow is drawn ready to shoot. His leather bow-case is across his left thigh and he has a quiver of arrows strapped to his waist on the right. The artist has paid attention to the detail of his technique, with the arms straight and the head erect.



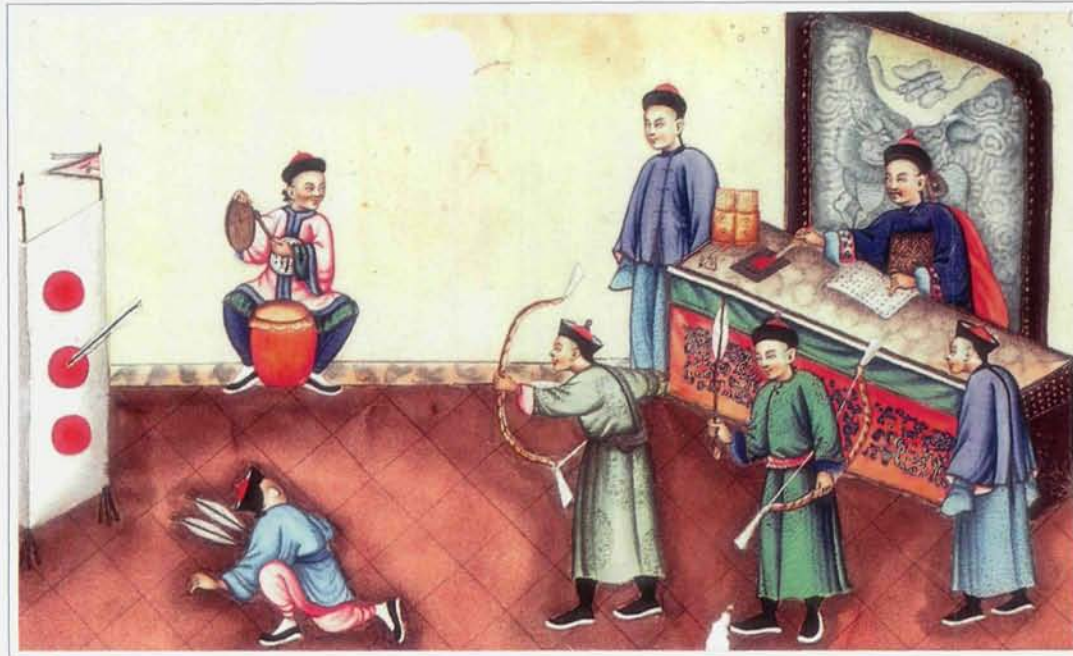
Qing Heavy Bows for Testing Strength in the Examinations

These two bows, one strung and one unstrung, were made in about the middle of the nineteenth century. They would have been used for physical training and for testing candidates in the examinations, and were never intended to shoot an arrow. The string is made from cow intestine, cut into lengths, twisted together and dried. This material could easily withstand the strain of up to 100 kg at full draw.



Traditional Chinese Pellet Bow

The Chinese pellet bow was intended to knock down birds without killing them. Proficient archers could knock down a bird in full flight. The bow is not heavy to draw and no horn is used in its construction. The outer parts of the string are made from single lengths of split bamboo, while the inner part is made from two parallel whipped silk cords with a bamboo pocket tied at the centre and decorated with shark skin. The pellets are of baked clay. This bow was made in 1998 by Ju Yuan Hao of Beijing.



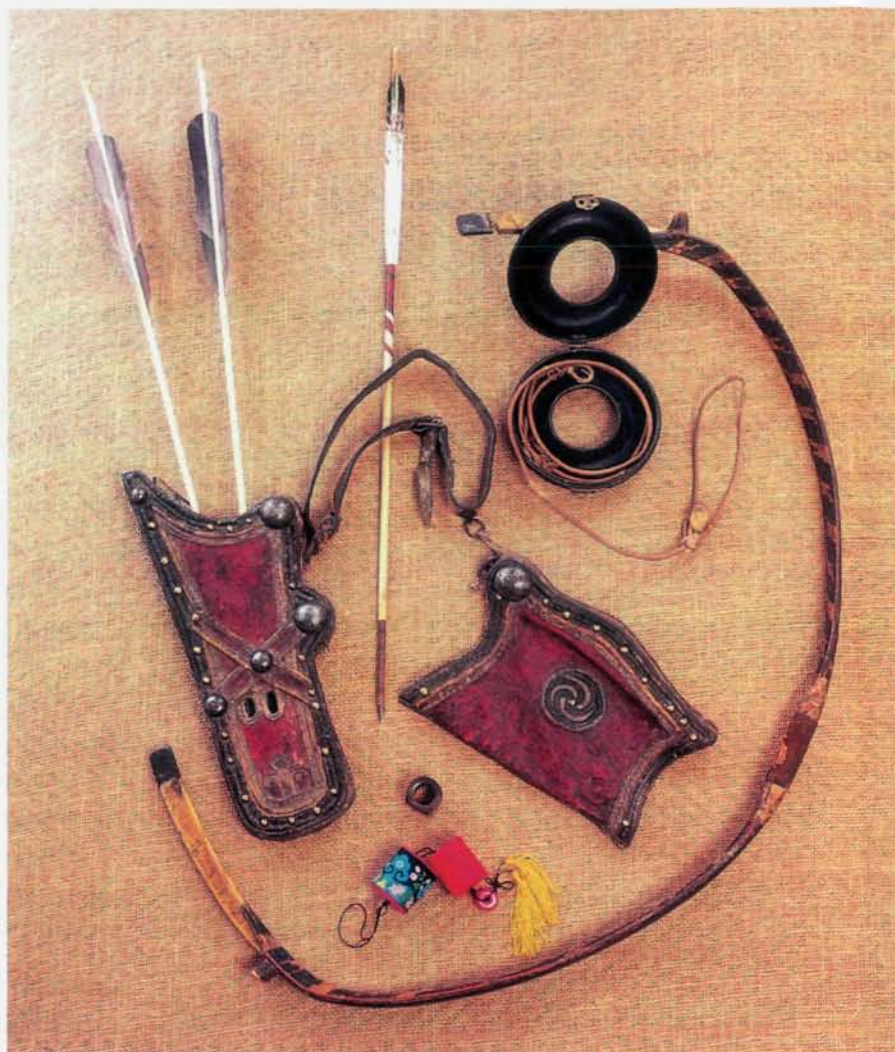
The Archery Examination

This gouache painting on rice-paper was made for the export trade. The artist has captured the essentials of the military examination in infantry archery held within the walls of the military yamen, although he did not understand how the bows were strung! On the right is the presiding officer marking the candidates by putting red marks against their names. He is assisted by two marshals. Two candidates are taking the examination, and to the left, a target judge drums out a signal to indicate if the shot hit or missed, while an assistant collects the spent arrows. The target is of the regulation type, with small pennants to show the effect of the breeze.



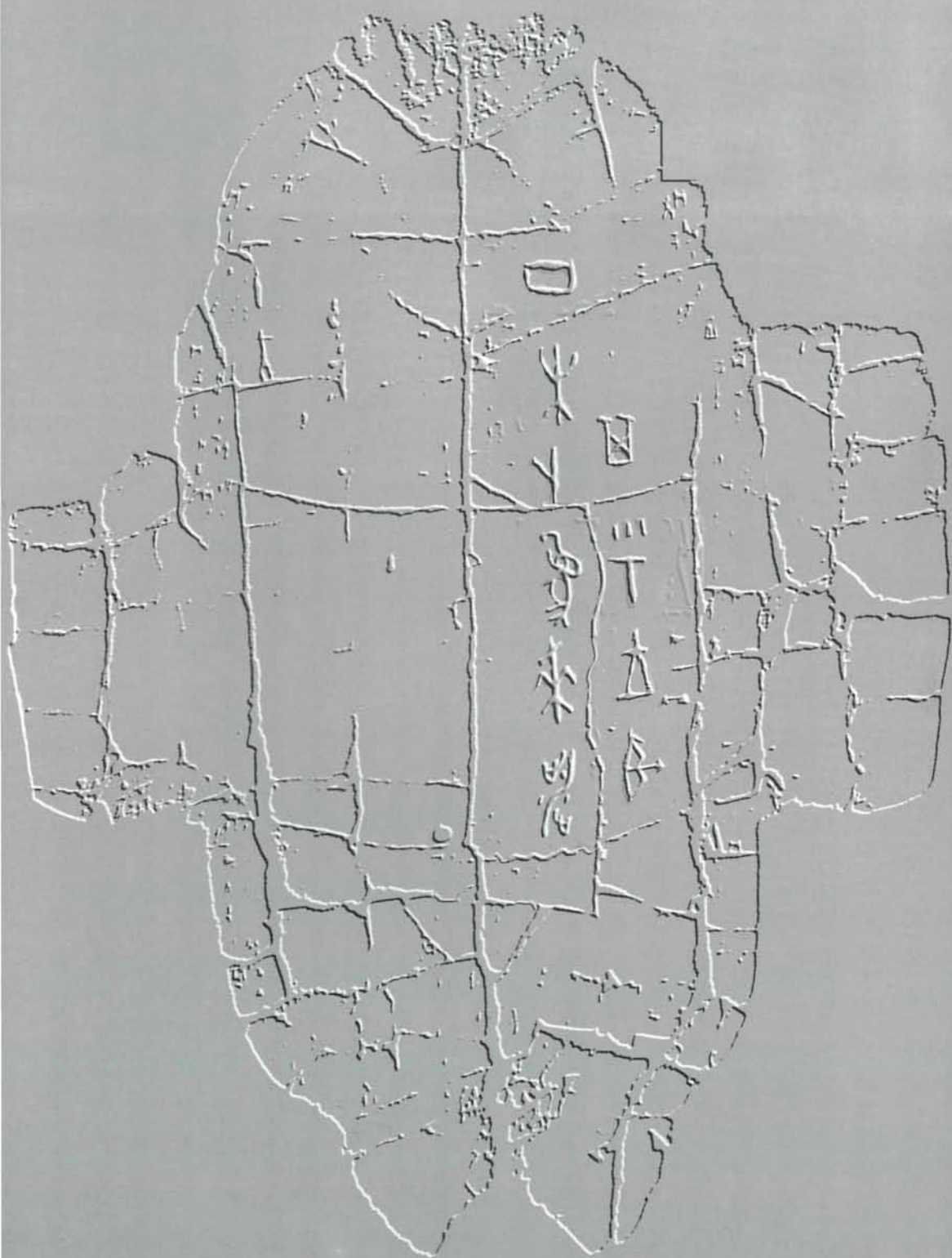
Soldiers Practising Archery in the Street in Peking

This illustration was printed in *The Graphic Magazine* in 1878. The artist has gone to great lengths to capture the details of the bows and arrows as well as the technique of the archers. The colouring was added recently and may not be authentic.



Traditional Chinese Equipment for Horseback Archery or Hunting

This equipment is what would have been used by horseback archers in the mid-nineteenth century. The bow is a horse-bow (smaller and lighter than an infantry bow) with a bow-case and quiver. Towards the bottom is a jade thumbing with its box. The small, doughnut-shaped leather box was used to store spare strings for the bow. The arrows, fletched in the traditional Chinese style, are modern.



*On the day dingmei, we asked the Oracle about an elephant
which came to the place where we crossed the river.
The Oracle said that it should be shot by the King.*

丁未卜：象來涉：其乎王射

Simulated oracle bone inscription based on original oracle bone
calligraphy from the Shang Dynasty (1300–700 BC).



Introduction

From Sticks and Stones to an Idea

The archaeological records of almost any civilization will show how early man was able to control the latent power of a bent stick. This latent power itself is no mystery: a short walk through any woodland, dodging to avoid a slap in the face from a pushed-back branch gives a good pointer to the principles involved.

The arrow is a projectile weapon, and the bow a projector. The arrow shares strategic features in common with projectile weapons such as javelins or thrown rocks; but distinct from hand-held weapons such as spears, swords or bludgeons.

Trying to use a projectile weapon quickly brings the user face-to-face with a few strategic questions:

1. once the weapon has left the user's hand, it is no longer under his or her control (at least until the time of radio-controlled rocketry);
2. the weapon's ability to do damage is a function of its weight, speed and sharpness and it is constrained by not being able to inflict multiple blows;
3. its power falls off with distance; and
4. projectile weapons are more easily lost or broken than hand-held ones.

When you consider these four questions, it is easy to see where the bow and arrow excel. The bow can develop a uniquely strong projective

force when used in conjunction with a light projectile like an arrow or small stone. No other 'primitive' projective weapon — for instance the projectile thrown by hand, the sling or atlatl which relies on release of centrifugal force, or the blow-pipe which relies on air pressure — can come anywhere near the projective force of an arrow fired from even a relatively simple bow. Only the gun (essentially a chemically-assisted blowpipe) can exceed this projective force (and the gun has only been available since about the 14th century and only became accurate and reliable in the past one hundred years).

Given the advantage of high projective force, the arrow is more likely than any other weapon to overcome the first disadvantage because it can provide a relatively flat trajectory in many situations, and is thus best suited to translate the aiming skill of the user into a direct hit on the target. The fact that you can release a shot from an almost motionless posture adds to this ability to aim accurately, as well as allowing the archer to ambush his quarry silently.

The arrow in conjunction with the bow provides the best balance of weight, speed and sharpness of all pre-modern (i.e. before the advent of modern firearms) weapons, outdoing them in terms both of accuracy and penetration. Being light, the arrow can also benefit from feathers used to provide extra stability during its flight. So defensively, the arrow provides the greatest 'get-him-before-he-gets-you' value, while offensively, it provides the greatest 'get-him-before-he-gets-away' value.

The arrow certainly cannot inflict multiple blows; but the bow and arrow have got one of the fastest arming recycle times of any pre-modern projectile weapon. This means that the bow and arrow can do better than other weapons in simulating multiple blows. While mass arrow production has always presented difficulties — especially in the era of massive warfare — it is certainly easier for the hunter to set out with thirty arrows than with thirty spears.

The significance of this ability to hunt down prey without moving in close for the kill can be seen strikingly if you look at Neanderthal Man who flourished over a period from about 200 000 BP to 30 000 BP, when archaeological remains show no evidence of the development of bows. Studies of Neanderthals who lived about 50 000 years BP showed that they suffered numerous debilitating injuries which were presumably sustained during hunting activities.¹ Whoever first gained the technology to overcome the risks of serious hunting injuries by immobilizing prey or

1. See Gore, Rick, 'Neandertals'. In *National Geographic*, Vol. 189 No. 1, January 1997, pp. 25 and 27.

predators with multiple arrow hits (perhaps with arrows coated in powerful sedatives or poisons) might have been in a position to enjoy a longer life, and perhaps a more relaxed lifestyle with more time to indulge in invention and creative thought.

To say that the bow had a critical role to play in human development is probably to overstate the case. Writers on primitive archery have pointed out² that primitive people have very successfully hunted deer-sized animals with no bows; and when Europeans arrived in Australia, Tasmanians were hunting by throwing spears. But in China we know that much bigger prey — elephants and rhinoceros — formed part of the hunter's catch into early historical times.³ Since even in early times there was population pressure on the very limited areas of habitable productive land in the central parts of China, it is reasonable to suppose that a culture with effective bows would have enjoyed a competitive advantage.

Although we have little pictorial evidence from the dawn of civilization in China, it is reasonable to speculate that early Chinese man used multiple arrow wounds to slow down large animals, so that they could be finally killed off with short weapons. The bow and arrow presented one of the best solutions to the disadvantage that other projectiles have in not being able to inflict multiple blows. And if arrows were used in hunting during the early historical period when elephants and rhinoceros were the prey, then it seems reasonable to assume that poisons or sedatives were an important element in the success of the hunt, rather like the sedative dart is used by game wardens today.

The fall-off of power over distance has always been the foremost challenge of the Chinese bowyer, and the solution found in Asia (although no one knows where it originated) and refined by Chinese bowyers over thousands of years is the composite recurve bow.

'Composite' means that the body of the bow is made from a fusion of different materials. In ancient Chinese civilization, these materials were mainly wood, horn and sinew. In modern times, such materials have been replaced with wood, glass fibre and carbon fibre.

'Recurve' indicates that at rest, the bow has a curvature opposite to the curve when the bow is strung. This means that greater latent power can be stored in the bow than can be stored by bending a straight stick. The earliest pictures forming part of the most primitive stage of Chinese writing, about 3500 years before the present, show bows which are clearly recurved. (See Chapter 6 page 88.)

2. Comstock, Paul, 'Ancient European Bows'. In *The Traditional Bowyer's Bible*, Vol. 2, Bois d'Arc Press, 1993, p. 83.

3. For Oracle bone inscriptions, see 郭沫若:《甲骨文字合集》No. 37375, 10222.

From Idea to Technology

Remains of composite bows have been discovered in frozen graves in Siberia which can be dated back to the late stone age.⁴ It is worth thinking about the technological input needed in the making of these sorts of bows.

First, as anyone who has tried to develop skill in archery will tell you, success lies in being able to replicate the performance of the materials in a consistent fashion shot after shot. As I remarked earlier, the archer loses control of the medium after he or she has loosed off the shot; so the best assurance of translating the archer's skill in aiming into a successful hit is to provide the archer with some confidence that his or her arrows and bow will perform in a consistent manner each and every time.

Modern materials and manufacturing techniques can ensure this up to the minutest tolerances. Clearly, improvements in the ability to manufacture arrows which shared similar characteristics would have had a great impact on the development of the bow and arrow for more distant and more accurate shooting. So whether we are talking of China or anywhere else, the evolution of the bow and arrow from a merely marginally advantageous projectile weapon into a weapon with the range and accuracy to allow the user to gain substantial mastery over his or her environment required the development of sophisticated construction techniques providing consistency in the product.

Another important thing is the combination of materials.

At the simplest level, an arrow can be no more than a stick sharpened at one end. But separate civilizations all over the world have independently come up with a product which has a harder, sharper, slightly heavier element at one end, and some sort of stabilization at the other.

The former has to be found in the sharpest workable materials available at the time. In very ancient times, that meant stones and bones. The latter has in nearly all cases come down to feathers — whether through the idea of the 'what does for a bird will do for an arrow', or from the more scientific realization that the best stabilizer needs to be light, and to lay down well as the arrow passes the bow-stave (and the archer's hand), while popping back up again afterwards to provide the stabilizing effect.

We should not underestimate the challenge and technological sophistication needed to put these elements together into a durable product which can withstand the violent forces involved in firing an arrow from a

4. 'The Genius of China', Catalogue of an exhibition of archaeological finds of the People's Republic of China at the Royal Academy, London, *Times Newspapers*, 1973. Catalogue Text by Professor William Watson. Page 65, description of exhibits 61 and 62. 'Neolithic' is defined in the text as '7000–1600 BC'.

moderately powerful bow — not to mention holding together when the arrow pierces the target. At the least, it requires the ability to create consistently sized and weighted arrowheads out of stone or bone, the ability to make a fine cord to bind the head onto the bow shaft, and the ability to make an effective glue to seal the binding and stick the materials together, as well as to fletch the arrow. (In primitive Asian archery, glue has largely been unable to meet the challenge of fletching arrows: in most cases the arrows are set into splits in the cane of the arrow shaft or bound on with thread.)

Of course, an arrow falling far short of this sort of specification can be used to some extent, but the development of technological ability to produce largish numbers of well-made, consistent, durable arrows is a must before the bow and arrow can fulfil its real potential as an offensive and defensive weapon. The Siberian grave discoveries and the earliest Chinese characters suggest that this technology had become well-developed even 3500 years ago.

Archaeological Evidence

Unlike the frozen wastes of Siberia, China's climate makes it difficult for bows and arrow shafts to be preserved. The earliest evidence of the use of the bow, therefore, has to be inferred from arrowheads.

Arrowheads are a common feature of early archaeological sites, and in some places, they can be easily found on the ground.⁵ However, at the very early stages of human development — particularly the old stone age, many stone implements were too rough to allow archaeologists to be sure whether they were arrowheads, or some other type of sharp tool. Thus in the earliest sites inhabited by humans in China, the Beijing Man site at Zhoukoudian (周口店) and the Lunggubo (龍骨坡) site in Sichuan (possibly the earliest site at about two million years),⁶ there is little in the stone implements discovered to indicate what special use they might have been put to.

5. If you should be so lucky to come across an arrowhead or other archaeological remains, please do not pick them up and take them away. You should report them to your local museum or library with a precise report of where you found them. Some countries have laws requiring that such finds be handed over for preservation and study. Even if there is no such law, it is good to make sure that archaeologists have a chance to study your find to see whether it contributes to scientific knowledge.

6. 《中國古代兵器》編纂委員會：《中國古代兵器》（陝西：人民出版社，1995），頁2。

By the middle of China's stone age period, at around 20 000–10 000 years BP, archaeologists in China have found stone implements which show some of the distinctive features of arrowheads: lightness, sharpness, narrowness and signs of attachment to a shaft.⁷ Sites with arrowheads from this period are not so common in China, but some have been excavated, for example, at Shayuan (沙苑) near Dali (大理) in Shaanxi Province.

It is from the Neolithic period, spanning 20 000 to 10 000 years BP, that we see unequivocal evidence from a multitude of sites of the development of sophisticated arrowheads. And it is to the very end of this period that the Siberian composite bows also belong.

Somewhere in the last 10 000 years was the period from which the earliest memories of Chinese history are recalled in folklore. And it is in this folklore that we take up our story.

7. However, such features are also often found in fishing spears.

辭車既工辭馬既馳君子臬韁臬旂韁辭
辭馬既馳君子臬韁臬旂韁辭
謀君子止柔韁自亨韁乙韁辭
毆其捍韁其來韁毆其韁毆其韁
肅韁其來韁肅韁其來韁肅韁其來韁
來韁其來韁來韁其來韁來韁其來韁

There go our chariots, built so strong;
 Well-paired our horses fly along.
 Here come our chariots, looking fine;
 And see our horses sleek in line.
 Hey! Our young Lord hunting goes,
 Hunting, roving!
 The bucks, the does, how swift they run!
 How yearns our Lord to fell him one!
 Our horn-faced bows curve back so strong,
 We'll put them to good use ere long!
 Our chariots drive the males around,
 Their hooves resounding on the ground.
 Headlong, raising clouds of dust,
 We'll pace them 'till the time is just.
 The bucks and does, how wild they rush,
 In their stampede across the brush.
 Our chariots cut an old male off,
 See how he thunders through the rough!
 Now I have him singled out:
 See how he falls to my arrow!

Poem of the Stone Drum of Qin (《秦石鼓詩十首之一》)

The 'Stone Drum of Qin', excavated in the Tang Dynasty, bore ten anonymous poems carved in exquisite calligraphy dating from the state of Qin in the Spring and Autumn Period (about 760 BC). The present sample is based on a rubbing done in the Northern Song Dynasty. The translation is based on an interpretation by Guo Moruo.



The Legendary Archer Heroes

Archers are romantics. That has been no less the case in China than in the West. From China's earliest folklore, there are tales of the feats of the great archers. Like the Greek Legends, the tales from the Bible and the oral traditions of Africa and America, it is likely that Chinese folklore recalls some of the beliefs and folk culture of prehistoric times.¹

The Inventors

It is a tradition in Chinese culture to assign an 'inventor' to objects and activities which are culturally significant. Chinese society shows its respect for certain things by ascribing their invention to some character venerated in Chinese history (or respect for the person by ascribing to him an important invention). Bows and arrows have been ascribed a very distinguished pedigree.

First, though, let's have a look at how Chinese history has traditionally been set out.

The first attempt to create an organized chronology of Chinese history comes with the Great Historian Sima Qian (司馬遷) in his *Annals of History*

1. 袁珂：《中國神話通論》（成都：巴蜀書社，1993），頁6頁。

(史記) at the beginning of the first century BC. Sima Qian's *History* records a period of the 'Five Emperors', followed by a dynasty named Xia (夏), followed by a Shang (商) Dynasty. Over the past one hundred years or so, historians have tried to approximate the following western dates with these dynasties:

Period name	Approximate years BC
Five Emperors (五帝)	2800–2400
Xia (夏)	2400–1900
Shang (商)	1900–1100

You should not give too much credence to these dates: just note that they seek to place the period covered by Sima Qian's account into the period following the end of the late Neolithic. Although the Great Historian has passed us the names of the Five Emperors as well as a chronology of the Xia and Shang reigns, it is not until the Shang period that we have clear archaeological evidence to support the oral traditions and the records of Sima Qian.

Nevertheless, the oral traditions as well as the ancient Chinese characters which record ideas and names from the earliest historical periods, deserve our close attention as they give away clues on attitudes, cults, customs and theology that are important to our understanding of the place that the bow and archers held in Chinese culture and history.

The period of the 'Five Emperors' and the Xia have never yielded literary records:² it is over those periods in which the Chinese writing system must have developed, because by the Shang period, we have archaeological evidence³ of a mature Chinese writing system which refers directly to the Shang Kingdom.

The Chinese 'Five Emperors' are regarded by some as semi-mythical figures.⁴ Stories about them are early, possibly allegorical literary works on the creation of the world, the invention of everyday things, and the taming of evil by good. The stories contain clues that could relate them to some cultic practices, and such practices are also suggested in certain

2. Some pre-Shang forms of writing have been preserved, but they are not consistent and have never been deciphered or linked conclusively to later forms of Chinese writing.

3. 李圃：《甲骨文文字學》（上海：學林出版社，1995），頁3。

4. See for example, 袁珂：《中國神話通論》（成都：巴蜀書社出版社，1993），頁14。

names which have been preserved in historical records. But these traces are very indistinct.

The *Yi Xi Ci* (易繫辭)⁵ says that the Yellow Emperor, Yao and Shun invented the wooden bow and arrow. These three were among the 'Five Emperors' whose names were:

黃帝	<i>Huang Di</i>
顓頊	<i>Zhuanxu</i>
帝嚳	<i>Diku</i>
堯	<i>Yao</i>
舜	<i>Shun</i>

You will come across Chinese history books (mostly published in the West) which put detailed dates against these five; but in fact as with the more general historical setting mentioned above, there is no way to know when exactly they lived, or whether in fact they were anything more than mythical characters, perhaps based on famous tribal leaders from the mists of China's Neolithic past.⁶ It is just as impossible to say whether or not any one of these ever 'invented' the bow and arrow. The Sumerian script which predates the Chinese writing system contained words for 'bow' (*pana*, *pan*, *ban*: bow (*pa*, 'branch', + *na*, 'pebble, stone') and 'arrow' *ti . . . ra*: to shoot an arrow ('arrow' + 'to stab'). ^{nis}*ti-zú*: barbed arrow ('arrow' + 'teeth; flint').⁷ So maybe the earlier use of the bow and arrow was in the Sumerian culture. But having written the terms down earlier proves nothing.

However, the story I am telling in this book is about what Chinese people traditionally *believed* about the bow and arrow: not about what was scientifically true. So we should not mind whether such accounts are true or not. They are accounts which add to our understanding of Chinese archery and its place in Chinese culture and the Chinese mind, and that is enough.

The *Yi Xi Ci* goes further than saying that these three were the inventor of the bow and arrow. It claims that they subjugated their empire with

5. A commentary on the *Yi Jing* said to be by King Wen of the Zhou (周文王), and believed to have incorporated a later commentary by Confucius. See Shaughnessy, Edward L., *I Ching: The Classic of Changes*, New York: Ballantine Books, 1997, pp. 204–205.

6. 袁珂：《中國神話通論》（成都：巴蜀書社出版社，1993），頁14。

7. Lexicon of Sumerian Logograms Version 2.1 by John A. Halloran. INTERNET publication (1998) at <http://www.primenet.com/~seagoat/sumerian/sumerlex.htm>

them. Such a claim would only be made by people who thought that the bow and arrow was a particularly powerful weapon in comparison with others in the ancient Chinese arsenal. It is in fact a recognition — at least among the Zhou Dynasty generation which produced the authors of the *Yi Xi Ci* — that the bow and arrow was a powerful agent of social change. Indeed, the whole section of the *Yi Xi Ci* in which this mention of the bow and arrow occurs relates the major innovations — agriculture, hunting, harnessing of draught animals and building — which distinguished ‘contemporary’ society as understood in ancient China from ‘primitive’ society which preceded it.

Another claimed inventor of the bow is Fu Xi (伏羲). According to the Tang Dynasty *Hidden Classic of Tai Bo* (太極陰經),⁸ Fu Xi is said to have made a bent stick into a bow. Fu Xi is not just reputed for inventing bows and arrows. It was he who was said, according to the *Yi Xi Ci*, to have invented nets and traps for catching animals and fish.

Fu Xi’s powers of scientific observation led him to invent the graphical signs which form the basis for the *Yi Jing* (易經) (sometimes known as the *I Ching* or *Book of Changes*). The *Yi Xi Ci* is a commentary on the *Yi Jing*. It says that Fu Xi drew on his observations from afar of the heavens and the earth, and how the markings of birds and animals blended in with the environment, and observed his own body close-up, then drew inferences from his observations about the latent tendencies in all things. These he distilled into the ‘Eight Tri-grams’ (八卦) which ultimately became the basis for divining the future, adopted alike by Taoists and Confucians, and still practised among superstitious people (not just in China) today.

The inventions of implements and techniques traditionally attributed to Fu Xi, including the bow and arrow, form a different category from the metal weapons of war, whose invention is traditionally attributed to an arch-villain, Chi You (蚩尤). While Chinese tradition tends to treat Chi You as an agent of disorder and destruction (although the tradition is not very consistent), Fu Xi is always regarded as a sage, and his inventions are associated with the pursuits of the literati — hunting, fishing, ritual archery and divination — rather than the warrior class.

This is a tentative clue indicating that in early Chinese society, the bow and arrow held a distinctive place among weaponry, perhaps belonging to a category of agents for more positive social change.

Other works have ascribed the invention of the bow and arrow to other characters in Chinese history.⁹

8. 唐·李筌：《四庫全書》。It was written somewhere between 713–779 AD.

9. See Werner, E. T. C., *Chinese Weapons*. Reprinted by Graham Brash, Singapore, 1989.

Work	Invention ascribed to
<i>Shan Hai Jing</i> (山海經)	Shao Hao (少昊)
<i>Gu Jin Xing Zuan</i> (古今姓纂)	Zheng Guan Hu (正觀弧) Qing Yang (青陽)
<i>Sun Qing Zi</i> (孫卿子)	Chui (捶)
<i>Mo Zi</i> (墨子)	Yi (羿)

The Exponents

The folk-tale involving archery which comes to the mind of most Chinese people is the story of Yi (羿). In fact, the story is two stories rolled into one, rather as if Robin Hood and William Tell had both had the nickname 'Hood', and people had come to regard them as a single historical character. The Chinese folk tale, even from quite early times, contains elements of confusion between, firstly, the character Yi, who shot down nine rogue suns with a bow and arrows, and a second character who usurped the throne during the Xia Dynasty, only to be assassinated himself by a scheming minister.

Most Chinese scholars have, however, realized for a long time that the story of 'Yi Shooting the Sun' and 'Yi Usurping the Throne of Xia' refer to two separate personalities and events. The first story seems to belong entirely to the realm of mythology, while the second is at least clothed in the clothes of history.

An important Chinese literary work in which Chinese folklore has been distilled and set out in an organized way, the *Shan Hai Jing* (山海經), may represent fragments of records built up by officials in the Western Zhou Dynasty (1027–771 BC), because it is arranged like a geographical gazetteer covering an area which was roughly similar to the area ruled over by the Zhou kings. It contains many accounts of magic and shamanism, and describes some rites similar to those named in the 'Rites of Zhou'. The book also brings together traditions from the remnants of the Shang/Yin Dynasty, and important folk-tales of Chu (楚), which is consistent with what we would expect to find in the records of the Western Zhou kings.¹⁰ Here are three references from the *Shan Hai Jing*.

10. 李豐楙：《〈山海經〉導讀》（臺北：金楓出版社，1986），頁3–4。

2A1

From *Shan Hai Jing*: Within the Oceans**《山海經·海內經》**

帝俊賜羿彤弓素矰，以扶下國，羿是始去恤下地之百艱。

The Emperor Jun presented Yi with a red bow and reed fowling arrows with which to support the mortal world.¹¹ Thereupon Yi for the first time concerned himself with the troubles afflicting the mortal domain.

2B1

From *Shan Hai Jing*: South of the Outer Oceans**《山海經·海外南經》**

羿與鑿齒戰於壽華之野，羿射殺之。在昆侖虛東，羿持弓矢，鑿齒持盾，一日持戈。

Yi battled with Zuochi on the plains of Shou Hua, and Yi shot and killed him. East of the settlement of Kun Lun, Yi took up his bow and arrows, and Zuochi took up a shield and they did battle for a day.

2C1

From *Shan Hai Jing*: South of the Great Wasteland**《山海經·大荒南經》**

大荒之中，有山名融天，海水南入焉。有人名曰鑿齒，羿殺之。

In the centre of the Great Wasteland, there is a mountain called Rong Tian; the sea's waters approach it from the south. There was a man named Zuochi, and Yi killed him.

These accounts from the *Shan Hai Jing* deal with Yi's battle with Zuochi. Zuochi was a semi-human being with three-foot front teeth like chisels, and he was only one of the foes defeated by Yi. Another book which contains many Chinese folk-tales is the *Book of the King of Huai Nan* (淮南子), compiled at the beginning of the Han Dynasty. Here is an extract concerning the feats of Yi, the Archer, together with an annotation by the late Han Dynasty annotator Gao Yu:

11. In early historical times, a bow and red arrows were presented like a medal as a token of appreciation for services rendered to a king or duke.

2D1

Book of the King of Huai Nan

《淮南子·汜論篇》

“羿除天下之害，死而為宗布”。漢·高誘注《淮南子·俶真篇》：“是堯時羿，善射，能一日落九鳥，繳大風，殺窳窳，斬九嬰，射河伯之智巧也；非有窮后羿也。”

‘Yi, cleared the world of all its evils: he died and became a hero.’ Gao Yu’s note on the *Chu Zhen* section of *Huai Nan Zi*: ‘This is the Yi in the Emperor Yao’s time. He was an outstanding shot, able to kill the nine birds [leaving a single sun in the sky.] He was the sage extraordinary who bound up the Great Wind, killed Yayu (a spirit with a man’s face and snake’s body), severed the head of Jiuying (a water and fire devil) and shot the Great Water Sprite. This is not [the historical character] Duke Yi of Youqiong.’

The record in the *Book of the King of Huai Nan* is probably the most well-known one about Yi, the legend of Yi shooting the suns.

2E1

堯時十日並出，草木焦枯，堯命羿射十日，中其九日，日中九鳥，死墮其羽翼。

In the days of the Emperor Yao, ten suns rose together in the sky so that the plants of the earth were parched and shrivelled. Yao ordered Yi to shoot at the ten suns. Yi hit nine of the suns, so that the nine ravens in the suns died and their feathers and their wings fell to earth.

Elsewhere, *Huai Nan Zi* just relates that Yi shot down nine of the suns, leaving one to shine in the sky.¹²

Another famous work of Chinese literature which is rich in ancient folklore is the poetry of Qu Yuan (屈原). Qu Yuan lived between 340 and 278 BC. A minister of the State of Chu (楚) under King Huai (楚懷王), Qu Yuan was renowned for his upright behaviour and outspoken opposition to self-seeking courtiers who toadied to the Chu court. He ended up being ignored by King Huai, who presumably preferred being told what he wanted to hear, and Qu Yuan went into exile in the deep south of the country, on the border with the Yue (越) tribes. There he wrote a famous cycle of poems

12. 《淮南書·說日》：“又言，燭十日。堯時十日並出，萬物焦枯，堯上射十日，以故不並一日見也。”

which strung together folklore, shamanistic beliefs and historical allusions to sing of the tragedy of his own plight, and condemn false patriots.

In the end, legend has it that he committed suicide by drowning himself in a river. This event is still remembered every year in Chinese folk culture at the Dragon Boat Festival.

Qu Yuan's poetry is intense and complex in the way it weaves together the themes of nature, shamanism and folklore. Here are some extracts dealing with Yi the Archer:

2F1

屈原·《天問》

帝降夷羿，革孽夏民，
胡射夫河伯，而妻彼雒嬪？
馮珧利決，
封豨是射，
何獻蒸肉之膏，
而后帝不若？
浞娶純狐，
眩妻爰謀，
何羿之射革，
而交吞揆之？

Yi of the Yi Tribe descended from among the heavenly emperors, and
Usurped the throne of the people of China.
What right did Yi have to shoot the Great Water Sprite, and
Take his wife Luopin as his own?
Armed with his great bow with carved tips, and his powerful thumbing,
This is how he shot and killed the Giant Boar.
To what avail did Yi cook it and offer its meat to Heaven?
For the Emperor of heaven did not heed his valour.
Indeed, Zhuo took Yi's wife Chunhu (Chang E),
And this greedy woman, [also] called Xuan Qi, plotted with Zhuo.
To what avail Yi's power to shoot an arrow through armour?
For those two plotters destroyed him in the end!

This passage is a good demonstration of the way that even in the time of Qu Yuan, the legend of Yi the Archer had rolled together more than one personality. (In the opinion of the commentator Jiang Liangfu, four personalities were being combined into one in this passage.)¹³

13. 姜亮夫：《屈原賦校註》（香港：商務印書館，1964），頁314-315。

The fragment just quoted, in common with the other passages in the poems of Qu Yuan, and those of the *King of Huai Nan* and the *Shan Hai Jing*, offers jigsaw pieces of the legend of Yi the Archer. To put the whole story into a more coherent whole, I shall try to synthesize the Legend¹⁴ into a narrative which brings together the different strands, together with other pieces of the background of ancient Chinese mythology. The sources of the strands range from the Zhou to the Han dynasties; but the event of which they tell are those of the dawn of Chinese civilization, before formally-recorded history.

In my narrative, however, I will exclude the tale of Duke Yi of Youqiong. He is a separate character who deserves a study of his own later on in this chapter.

The Legend of Yi the Archer

At the dawn of time, in the days of the Heavenly Emperor *Yao*, the mortal world was visited by marauding monsters who wrought destruction and brought misery to the people of China.

The first of these disasters affected Ten Suns. Ten Suns was none other than the son of the Heavenly Emperor Jun (帝俊) and his consort, Xi He (羲和). Ten Suns resided in the great Fusang (扶桑) tree, in a valley of hot springs in the farthest east. The Fusang tree had nine side branches and one branch at the top; one head of Ten Suns lived in each branch.¹⁵ Each day, his mother, Xi He, rode out in a chariot drawn by six dragons across the heavens, carrying one of the heads of Ten Suns to bring light to the world.¹⁶

But one day, the suns became infected with nine ravens who nested in each of them. Thereupon, the ten heads of Ten Suns all came out and shone side by side at the same time. Such was their heat that plants withered and died, and the world was afflicted by drought.

The second disaster was Zuochi (鑿齒). He was a man-monster armed with enormous, chisel teeth,¹⁷ and he could fight with weapons like a man.

The third was Jiuying (九嬰). Jiuying was a spirit of fire and water with nine mouths who was a scourge to mankind.

14. Based on the information in 袁珂:《中國神話通論》,頁218-236。

15. 《山海經·海外東經》。

16. 《淮南子·天文篇》。

17. 高誘註:《淮南子·本經訓》。

The fourth was the Great Wind Sprite (風伯) who destroyed people's homes.

The fifth was Yayu (猼訑 also 窳窳). Yayu was a monster with a dragon's head and snake's body.¹⁸

The sixth was Xiushe (修蛇), the giant python who could eat an elephant and would regurgitate its bones after three years.¹⁹

The seventh was Feng Xi (封豨), the Giant Boar. This great brute was a glutton which devoured all in its path.

The Heavenly Emperor had pity on mankind, and so he gave his servant, the Archer Yi, a cinnabar-red bow and wooden fowling arrows with the power to defeat monsters. So it was that Yi concerned himself for the first time with mortal affairs.

He descended to earth and did battle with the monsters, defeating Zuochi, cutting off the head of Xiushe, binding up the Great Wind with a tethered arrow, and killing Jiuying in combat, slaying Yayu and the Great Boar.

Then he put on his strongest thumbing, and pointed his great bow with carved jade tips to the heavens and shot at nine of the heads of Ten Suns, the son of the Emperor of Heaven, so that the ravens shed their wings and their black feathers fell to the ground. After that, nine of the sun-heads never appeared again, and a single sun remained to light the heavens.

Now Yi's wife was Chang E (嫦娥). While on his adventures, Yi met the Empress Mother of the West, and persuaded her to give him some of the herb of eternal life. But Chang E was greedy and on discovering this, she stole the herb and made off with it to the moon, where she took on the form of a toad and lived there forever, deserting Yi.

Further on his travels, Yi ventured into the land of the Water Sprite. Usually, the Water Sprite lived as a spirit at the bottom of the Great Yellow River. From time to time, however, he would rise from there, take on the form of a white dragon and menace the people of China with great floods. It so happened that at the time Yi was nearby, the Water Sprite had transformed himself into a white dragon and was ravaging the countryside. Yi immediately took up his great bow and fired, hitting the Water Sprite in the left eye.

The Water Sprite was mortally wounded, and he called to the Heavenly Emperor, 'Yi has wronged me! Kill him for me!' The Heavenly Emperor asked, 'How did you come to get shot?' The Water Sprite replied, 'I happened to be swimming in the guise of a white dragon.' The Heavenly Emperor said, 'I commanded you to patrol the depths of the spirit world. Had you done so, how would Yi have harmed you?

18. 《山海經·海內南經》。

19. 《山海經·海內南經》。

But instead you transformed yourself into a wild beast. As such, mortals would be bound to shoot at you — what could be more natural? Can I really hold Yi to blame?' Thereupon, Yi sought out the Water Sprite's wife, the spirit of the Luo River, and took her as his own wife.²⁰

That is the legend of Yi the Archer. Before leaving the legend, I should like to draw some thematic threads from it.

The first is that the archer, with a cinnabar red bow, had the power to fight supernatural monsters. This cinnabar-red bow (彤弓) and reed fowling arrows come up in other tales and early songs, and seem to be potent magical implements.

The second thread is the linkage between the archer Yi and the controlling of natural calamities. The first is a drought caused by the ten suns in the sky at the same time. The second is floods caused by the Great Water Sprite. The marauding white dragon might indeed be an allusion to the frothing billows of a raging flood torrent. The Chinese word for unstringing a bow is *mi* (弭); it is based on the symbol for a bow. Even in modern times, the word for warding off drought is *mi han* (弭旱).

The third thread is that the ultimate authority, the Heavenly Emperor, regards getting shot by an arrow is a befitting fate for someone such as the Water Sprite, who changes his colours and fails to perform his assigned duties. The Emperor refuses to punish Yi for shooting the Water Sprite in such circumstances. Shooting uncompliant officials with a bow is another cultural thread that we shall be able to pick up later.

The fourth thread is that Yi the Archer is not an easily-controlled entity. His activities sail very close to the wind. He shoots at the errant son of one of the heavenly emperors whose own command he is fulfilling. He goes off on an escapade of his own to obtain the herb of eternal life, and loses his scheming wife in the process. He goes on another escapade hunting down the Water Sprite, and then ends up going off with the Water Sprite's wife, having lost his own. If this is heroic behaviour, it is certainly ambiguous in parts.

This last thread might seem at first sight like a modern attempt to moralize. But I would not be alone in throwing doubt on Yi's heroic character. The main content of Qu Yuan's famous poetic cycle of songs is allegories from tales of those who appear to be one thing but in fact are quite another. This was his oblique way of chiding his patron, King Huai, for favouring toadying courtiers while distancing himself from honest but outspoken ministers. Qu Yuan asks:

20. 王逸註：《楚辭》。

《楚辭·天問》：“羿焉彈日？烏焉解羽？”

What was achieved by Yi's shots at the suns? What was gained by making the ravens shed their feathers?

Qu Yuan poses this rhetorical question at the end of a section of his poem 'Some Questions for Heaven' (天問), underscoring the strangeness of these events. In the following section, he answers his own questions (in the passage I previously quoted) drawing out the negative aspects of Yi's behaviour (consciously or unconsciously combining two separate stories for the purpose of pushing home the point). Qu Yuan's literary strategy here is to play up the ambiguous nature of Yi's character: an apparently trustworthy servant who is, nevertheless, not under sufficient control to carry out his tasks reliably. Ultimately, Yi himself falls prey to actions just like his own: failing to control those around him properly and falling victim to a false minister he had wrongly trusted, who finally makes off with his wife.

These themes will recur.

Duke Yi of Youqiong (有窮后羿)

The second of the stories of Yi is put within the framework of historical fact. No evidence has come to light that the events in the story are true: but unlike the legend we have just looked at, the tale of Duke Yi of Youqiong contains no elements of the supernatural. It therefore has the potential to belong to historical fact.

The tale is set in the Xia Dynasty. This is an enigmatic period: Chinese writers have from the earliest times treated the Xia as a true historical period, yet clearly it predated the invention of a consistent writing system. There are therefore no contemporary records of it, and scientific evidence of the period is indirect. Chinese archaeologists are not able to say for certain that sites that have been excavated belonging to the *Erlitou* (二里頭) and *Yueshi* (岳石) cultures, which span the same historical period as the Xia Dynasty, directly relate to it.²¹ The final link to the traditional historical record remains to be made.

21. 劉茂功編：《中國古代兵器》（西安：陝西人民出版社，1995），頁18–19。

The earliest literary work to give details of Duke Yi of Youqiong is the *Zuo Zhuan* (左傳), a commentary on a very terse history of the state of Lu.

2H1

The *Zuo Zhuan*: Fourth Year of Duke Xiang

《左傳·襄公四年》

“夏訓有之，曰有窮后羿。”公曰：“后羿何如？”對曰：“昔有夏之方衰也，后羿自鉏，遷於窮石，因夏民以代夏政。恃其射也，不修民事，而淫於原獸。棄武羅、伯因、熊髡、彪圍而用寒浞。寒浞，伯明氏之讎子弟，伯明后寒棄之。夷羿收之，信而使之以為己相。浞行媚於內，而施賂於外，愚弄其民，而虞羿於田。樹之詐慝，以取其國家，外內咸服。羿猶不悛，將歸自田，家眾殺而亨（烹）之以食其子。其子不忍食諸，死於窮門。靡奔而鬲氏，浞因羿室，生豷及豷，恃其讎慝詐偽而不德于民……”

‘In the annals of Xia it is recorded that there was one Duke Yi of Youqiong . . .’

‘What about Duke Yi?’ asked the Duke (Zhuo of Jin).

[‘At that time,’ (Wei Feng) replied,] ‘the Xia Dynasty was in recession. Duke Yi left Chu and moved to Qiong Shi. He usurped dominion over the people of Xia, and took up sovereignty over Xia. But he relied completely on his mastery of archery, and never steeped himself in civil affairs. He lost himself in the joys of the hunt. Thus he disregarded the virtuous officials such as Wuluo, Boyin, Xiongkun and Mangyu, and instead took into service Han Zhuo. Han Zhuo was a minor functionary of the house of Boming, and Lord Boming had demoted and then dismissed him. Yi of the Yi tribe took him in, trusted him and then made him into his personal minister. Zhuo ingratiated himself with the ladies of the Court, and was liberal with rewarding people outside it. He gained the confidence of the people, while continuing to encourage Yi to devote himself to hunting. In time, his confidence tricks bore fruit, for he had the whole state under his sway: all were taken in by him both domestically and internationally. Yi remained oblivious to all this, and returning from a hunting trip one day, his family retainers assassinated him and cooked his flesh, intending to force his sons to eat it. But they could not bring themselves to do so, and were put to death at the gate of Qiong. Thus the reigning line of Xia lost control and the remainder escaped to shelter with the house of Ge. Zhuo took up with Yi’s wife and fathered Ao and Yi. He relied on trickery and deception and was not virtuous towards the people . . .’

Here is an archer of a much less heroic character than the Yi of the previous legend. It is easy to see which parts of this account Qu Yuan

adopted for his poetic allegory. The 'hero' of this tale has no more to commend him than his mastery of archery. He has no civil administrative skill, was easily hoodwinked by an evil minister and lacked any self-discipline.

It is worthwhile to notice one feature of this tale which arises in other contexts later: Yi, the great hunter, becomes the hunted. He is ambushed and killed by his own retainers just as he himself would hunt down a wild animal. And just as a hunter of his time would cook his prey and sacrifice it as an offering to Heaven, Yi's own killers, in a horrible parody of the hunter's meat sacrifice, cook him to serve to his sons. Such a fate, which cut off ancestral protection for his successors, appears from time to time in ancient Chinese literature. It signifies in this case that the Great archer came to one of the most repugnant ends that traditional Chinese society could then devise.²²

Added to this misery is that his own sons were murdered for refusing to eat his meat, thus cutting off the lineage. It is this tragic tale which Qu Yuan combined with the heroic deeds of the mythical archer Yi, to create a parallel to his own plight.

Into this story, another great archer is injected. The Song Dynasty classical scholar Zhu Xi (朱熹) (1130–1200) claimed that the ambush in which Yi was murdered was led by his star pupil, Pangmeng (逢蒙).²³ Mencius (孟子) records Pangmeng as follows:²⁴

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逢蒙學射于羿，盡羿之道。思天下惟羿為愈己，於是殺羿。孟子曰：“是亦羿有罪焉”。

Pangmeng studied archery under Yi, and absorbed everything that Yi could teach him. But he became consumed with the idea that only Yi in the whole world could shoot better than him, and so he killed Yi. Mencius said, 'Yi must also share some blame in this.'²⁵

22. For more on this theme, see Lewis, Mark Edward, *Sanctioned Violence in Early China*, Albany NY: University of New York Press, 1990, pp. 207–209. But another interpretation is that the cannibalistic consumption of part of the corpse of a dead father in order to absorb his potency and establish a son's right to succeed him was a normal social custom. See Granet, Marcel, *Chinese Civilization*. English translation. London: Routledge, Kegan and Paul, 1930/1950, p. 217.

23. Also written from the Song Dynasty on as '逢蒙'.

24. 《孟子·離婁下》。

25. Presumably because Yi had taught Pangmeng archery technique but not humility and non-competitive spirit as demanded by Confucius.

Little more is recorded about Pangmeng; but despite the fact that his name went down in Chinese cultural history as a man who murdered his own teacher, books on archery bearing his name in the title continued to be published into the Han Dynasty. A famous classic work, the *Lu Shi Chun Qiu* (呂氏春秋) quotes Yi and Pangmeng as examples of consummate archery skills, to exemplify that it is useless to possess great skill in the wrong circumstances:²⁶

2J1

今有羿、蠡蒙，繁弱於此，而無弦，則必不能中也。

Supposing a pair like Yi and Pangmeng stood before us with the great bow named *Fanruo*, and they had no bow-string, then they couldn't hit a thing!

Archery and Folklore

The folklore fragments I have quoted above all come down to us through literary works either dating from, or heavily revised during the Han Dynasty (207 BC – 220 AD). So they are records of folk memories originating perhaps as many as 1500 years before the time they were recorded in the form (more or less) that I have quoted. Seen like that, we can say that they represented to the Han Dynasty authors what the Greek legends represent to Western culture.

But then, there is no reason why they should not have been as potent a cultural force among the Chinese of the first century BC as the Greek legends are to authors of our own time.

The legend of Yi is very close in content to a folk legend of Mongolia: the Tale of Erkhii Mergen, the Archer.²⁷ Similar stories also exist among the national minorities of Guizhou in south-west China. In all these folktales, a bird is present (infecting the sun in the Chinese legends and blocking one of the archer's arrows in the Mongolian one.) The connection of a bird with the sun is also reflected in the 'sun-bird' (陽燧鳥) which brought the fire of the sun to earth, and could be attracted by the use of a concave bronze mirror. A three-legged sun-crow (三足鳥) was also

26. 《呂氏春秋·具備》(臺北：三民書局，1995)，頁1101。

27. See Metternich, Hilary Roe, *Mongolian Folktales*. Boulder CO: Avery Press, 1996, p. 51.

believed to be the familiar of the Queen Mother of the West (西王母) and is often depicted in Han Dynasty funereal art.

A possible explanation for this crow/bird-sun relationship may be sunspots. There has been speculation (mainly among non-scientists) of a link between sunspot activity and warm climate. In September 1997, the 'Columbia University News' reported: 'Satellite measurements of solar brightness analysed by a Columbia University researcher show an increase from one cycle of sunspot activity to the next, indicating the Earth is absorbing more energy from the sun over the long term. The finding could well mean the sun is contributing to global warming.' [Sic]

It is possible to speculate that maculae on the sun's surface, which might have coincided (randomly or otherwise) with severe droughts, were thought at some early time to have been caused by a bird getting between the sun and the earth. The only way to get rid of a flying bird was to shoot at it; and so the imagination would quickly connect to a mighty archer armed by the Sage King Yao with fowling arrows.

Another thread linking the archers in the Yi legend was unpredictability and irresponsibility. Both in the legendary Yi story and the story of Duke Yi, the archer is represented as a person without restraint. Later, we shall see that archery became connected with a process of developing self-discipline and restraint. Furthermore, there was a tradition linking archery 'black magic' and lack of restraint.

The overall image, then, left in the mind of the archer at the start of the first millennium was heroism tinged with danger. Of course, we must beware of the trap that Confucian writers have left for us: precisely that undisciplined heroism is tinged with danger. That is one of the very messages that the Confucian philosophy would like to impart.

My view is that the versions of the legends which have come down to us other than through the Confucian filter — for example the south-west Chinese minority folk-tales and the Mongolian version which features the bragging Erkhii — suggest that the legend already inherently contained the component of lack of restraint and irresponsibility. This in turn formed fertile ground for sowing the seeds of Confucian philosophy to the effect that great power in the hands of one man is a dangerous phenomenon that needs strict control.

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*The reeds grow dense there,
Yet with one shot,
He can take five boars!
Behold our leader, Zou Yu!
The artemisia grows dense there,
Yet with one shot,
He can take five hogs!
Behold our leader, Zou Yu!*

'Zou Yu' from the *Book of Songs* (《詩經·騶虞》)
Anon. Zhou Period



The Archer's Magic

White Magic and the Rain Dance

At the time the legends reviewed in the second chapter were first written down, people already believed they were describing events over a thousand years before their own time. From the period of creative literary activity starting towards the end of the Zhou Dynasty (771 BC), and carrying on through the Spring and Autumn period (770–475 BC, the time of Confucius) and the Warring States (475–221 BC, the time of Qu Yuan), the legends of Yi the Archer and Duke Yi of Youqiong were probably already disjointed fragments. Alternatively, some coherent written accounts might have survived, but have been lost during periods of turmoil of the Warring States period or the repression of intellectuals which took place in the Qin Dynasty (sometimes known as the 'burning of the books' by Qin Shi Huang (秦始皇)).

But these legend fragments and the ancient characters in which the Chinese language was written still carry clues to what was possibly a cult based around archery, archers and the bow and arrow. In this chapter, we shall look at what clues about this ancient magic are lurking in ancient Chinese literature. To do that, we shall need to look into the way Chinese characters are written as well.

In the last chapter, we saw that at least two personalities had the name 'Yi'. One Chinese scholar, as we saw, identified four appearances of 'Yi', in various guises, although we would have to admit that there is no way,

at such a distance in time, that we can really be sure which legendary characters merge into which.

There is a strong possibility that Yi (羿), regarded in the legends we have been looking at as a single personality or a pair of personalities, might have been a whole category of people. One of the variant ways of writing Yi (𨔵) is listed in Xu Shen's (許慎) dictionary, the *Shuo Wen Jie Zi* (說文解字) as being 'an archery official of Emperor Diku whose line was wiped out by Shaokang of the Xia' (帝嚳射官也，夏少康滅之。). Mencius (孟子), a pupil of Confucius, mentions Yi in the context of teaching archery.¹ The Eastern Han Dynasty (24–220 AD) commentator, Jia Kui (賈逵), wrote:

3A1

羿之先族也，為先王射官。帝嚳時有羿，堯時亦有羿，羿是善射之號
.....

Yi's lineage were archery officials under the early kings. There was an Yi in the reign of Di Ku, and another one in the reign of Yao: Yi was an epithet for 'marksman'.

A number of writers have, therefore, concluded that in the earliest times, all outstanding archers were called 'Yi'.²

A strong possibility exists then that the legends of Yi form a commentary on the activities of a class of people connected with heroic archery: perhaps a guild of shaman practitioners in prehistoric times who, by the time of the first historical dynasty, the Xia, had already been absorbed into the court hierarchy as an official class.

If this was the case, then what type of activity might these shaman-officials have been involved in?

The legendary Yi, you will recall, was sent by Heaven to rid the mortal world of scourges and monsters which were making life miserable for the people of China. Let us just look at the list again, this time adding a bit more background on the associations of each of the seven scourges together with the Water Sprite.

1. 《孟子·告子上》：“羿之教人射，必志于殳。”

2. 臧克和：《說文解字的文化說解》，武漢，頁 302 注。In Mongolian history, great archers bore the title 'mergen'.

Name	Description	Association ³
Shiri (十日)	ten suns in the sky	drought, parched crops
Zuochi (鑿齒)	a semi-human with teeth like chisels	a marauding border tribe
Jiuying (九嬰)	a spirit of fire and water with nine mouths	a marauding border tribe
Dafeng (大風)	the great wind	destroyer of homes
Yayu (魃)	a monster with a dragon's head and snake's body	a cloud god who commands drought
Xiushe (修蛇)	a giant python	a wild animal which can devour livestock
Fengxi (封豨)	a ravenous giant boar	a rain god who commands floods
Hebo (河伯)	the Water Sprite	inundation by the river

On this basis, you can clearly see that Yi's targets, personified by monstrous characters, were natural disasters as well as human and animal predators who afflicted the people of China in ancient times. Affording heavenly protection against them would have been a natural area of activity for tribal shamans. Add to this — from the legend quoted in Chapter 2 — the fact that the Heavenly Emperor gave Yi a cinnabar-red bow and reed fowling arrows to fight these scourges, and this establishes the shaman's credentials for heavenly authority. In later Chinese literature, fabulous bows appear, disappear and reappear, suggesting that there might have been a continued recollection of the powerful ceremonial bows of the shamans.

Mark Edward Lewis, in *Sanctioned Violence in Ancient China* describes a reference in an annotation to the *Rites of Zhou* (周禮) that 'on the day the army was to set out, the general received a bow and arrow from the king. The general drew the bow, and the army gave a great shout. The Grand Musician listened with the pitch-pipes and divined the results of the battle.'⁴ Here again, a bow is an instrument in shamanistic activity.

So far, we have the clue that the Legend of Yi revolves around a theme of an archer-superhero with heavenly authority and a heavenly weapon

3. 臧克和, *ibidem*, pp. 305–307.

4. Lewis, Mark Edward, *Sanctioned Violence in Early China*. Albany, NY: University of New York Press, 1990, p. 229.

fighting off the natural disasters of ancient China, and the clue that Yi was not an individual but a category of archer-officials in the ancient royal courts of China. Can we find further clues to the activities of these possible archer-shamans? Yes! But to find them, we have to take a minor digression to look into the Chinese writing system itself and its history.

How Chinese Is Written

From the examples of Chinese dotted in Chapters 2 and 3, you can see that Chinese is written in characters which each fit into an equally-sized rectangular box like this:

射 以 觀 盛 德

In modern Chinese, each one of these characters carries some meaning, has its own pronunciation and is always just one syllable. In ancient Chinese, most characters represented one whole word (although many words had to be written with more than one character). In very ancient Chinese, some characters may have been pronounced as more than one syllable (but nobody is quite sure about that).

Although Chinese characters look like a tangle of straight lines with the occasional curve, when you get used to looking at a few of them, you will see that many of the characters are made up of groups of smaller elements which may be separate characters in their own right. Have a careful look at these examples:

言 身 寸 射 謝

When Chinese people read characters, they recognize the character as a whole. Although they realize that some of them are made of groups of other characters, they do not have to look *inside* each character as they read: they just recognize the *whole* character as a word or part of a word. The only time a Chinese reader is concerned with the internal elements making up an individual character is when he or she needs to look one up in a dictionary, because the internal elements of a character are used in most dictionaries to create a listing order.

When we try to look at Chinese characters to find clues about what the shaman archers were up to, we will only be looking at ancient Chinese. So for our purposes, we can say that each character is just one word

(although that will not be strictly true all the time – especially with names of people, animals and places).

Earlier in this chapter, I mentioned the dictionary of Xu Shen. His dictionary, the *Shuo Wen Jie Zi* (說文解字) — literally ‘An Explanation of Writing and Analysis of Characters’ — was written in the Han Dynasty in around 100 AD. It is the earliest surviving attempt to look at the internal components of Chinese characters and to explain their history and their cultural environment. It is a very important resource for modern scholars because it analyses sound groups which have long since disappeared, and it records many details of the cultural environment of Xu Shen’s time which are no longer available to us. His explanations of sound groups also throw light on a system of puns relating certain characters to myths and legends.⁵

Today, however, we have a number of advantages that were not available to Xu Shen. Xu Shen’s research into the history of Chinese characters was mainly based on an archaic form of Chinese script called ‘seal characters’. Here are examples of the character *she*, to shoot, in its modern form, in the Han Dynasty form that Xu Shen usually saw, and in the ‘seal script’.

Modern	Han ⁶	Seal ⁷
射		

We now know that a thousand years before Xu Shen’s time, there was already a highly developed form of Chinese writing used to record the results of fortune-telling based on reading heat-induced cracks in bones and tortoise shells — the ‘oracle bone script’. Dating from this early period, there were also inscriptions on bronze vessels: Xu Shen would certainly have been aware of the latter, but he would not have been able to lay his hands on a large enough sample of such bronze inscriptions to base his encyclopaedic work on. Nowadays, however, as a result of a hundred years of archaeological and palaeographic study, we have over 60 000 examples of the ancient oracle bone characters to help us.

So the characters that Xu Shen thought were ‘ancient’ had in fact already developed over a thousand or more years into a very stylized form which had obscured a number of significant elements in the even older characters.

5. For example, 《說文：壺部》：“壺，昆吾圜器也。”

6. 李圃：《甲骨文字學》（上海：學林出版社，1995），頁326。

7. 《康熙字典》（上海：中華圖書館仿殿本，1919），寅集上頁15。

Xu Shen explained, on the basis of the seal script, that the character for 'to shoot an arrow' was made up of an element showing a body, and an element showing an inch. He interpreted 'inch' as meaning 'a measure of distance' and 'body' as meaning 'close to one's self', and so he explained the origin of the character as:

弓弩發於身而中於遠。

A bow or crossbow is fired from your own body and strikes the target at a distance.

But if he had had access to the thousands of oracle bone (OB) characters and inscriptions from bronze sacrificial vessels that we have available to us today, he would have seen a character over one thousand years older than the seal script he examined, which gave a different, but very clear picture:

Modern	Seal	Han	Bronze	OB
射	射	射	射	射

Now if we look at the sequence from the right to the left, which is approximately the order in which these character for 'shoot' evolved, then the earliest form is clearly just an arrow ready to shoot from a bow. In the bronze inscription character, there is also a hand holding the string (this form also appeared in the OB script). But somewhere in the process of the development of the very stylized seal script, the left-hand component has become confused with a component which signified 'a body', and the right-hand component — the hand — has become confused with a very similar character which indicated 'an inch' (the length of one thumb).

With our 20/20 hindsight, we might have pointed to the Han Dynasty character for 'shoot' and said it looked just like a hand with a bow and arrow. Xu Shen would have disagreed. He would have pointed out quite reasonably that in his time, a bow was written as 弓 and body as 身. Clearly, the 'ancient' seal script 射 shows a body on the left, not a bow. And that is not a hand to the right, he would have added, but an outstretched thumb, indicating 'an inch'.

You will have guessed from this example that some time in their early development, many Chinese characters must have been derived from simple pictures of objects. That was true to a large extent, but the OB characters are in no sense an 'embryonic' form of Chinese picture writing. Used over

a period from about 1700 to 1000 BC, they were already highly developed and systematic. The very earliest forms of Chinese writing (of which no one has yet discovered an example) might indeed have been simple pictures; but by the time of the earliest OB characters, the following ways were already being used to represent the words of the spoken language:

- a simple picture denoting the meaning of the word
- one or more simple pictures used to express an abstract word⁸
- a simple picture borrowed to represent a completely different word, but with the same or a similar sound
- one character indicating meaning combined with another to give an indication of the sound of a word.

How Early Chinese Characters Were Formed

	a simple picture (OB)	Bow, arrow: 弓, 矢
	two simple pictures used to express an abstract word (OB)	To shoot: 射
	a simple picture borrowed to represent a word meaning something completely different but with the same or a similar sound (OB)	the word for an arrow, which had an ancient dialect pronunciation like <i>tjien</i> was borrowed to indicate a lunar calendar sequence (寅) with a similar sound, <i>jien</i> .
	one character indicating meaning combined with another to give an indication of the sound. (Seal script)	'言' meaning 'speech' combined with '射' pronounced <i>she</i> makes '謝' pronounced <i>xie</i> , meaning 'to take one's leave'. (The ancient sounds were more similar to each other.)

8. A reader of the manuscript of this book has encouraged me to abandon this analysis as outdated, preferring instead the analysis by William G. Boltz in *The Origin and Early Development of the Chinese Writing System*, New Haven, CT: American Oriental Series Vol. 78, American Oriental Society, 1994. Part of Boltz's thesis is that the principle of 'one or more simple pictures used to express an abstract word' cannot, and did not ever,

The Character of the Archer

羿 ‘Yi’ is written in Chinese with a character which contains no images of bows or arrows. You can see the character at the beginning of these lines. You know enough now about reading Chinese to see that the upper left and right positions contain two identical elements while the bottom element looks like table legs. Interestingly, this character has no meaning other than to denote the great archer or the archer class to which he belonged.

羽 The upper elements are actually a single character meaning ‘long feathers’. The bottom element is a simplified version of the character *jian* (干). In the *Shuo Wen*, Xu Shen explains that the ‘long feathers’ points to the meaning while *jian* indicates the sound. The differences in the modern sound can be traced back to a sound mutation in ancient Chinese.⁹

𠂔 There are at least two alternative Chinese spellings of ‘Yi’ — that is to say, alternative characters used for writing the word, which later somehow became obsolete. In the one on the left, you will recognize the character for *bow* underneath, while on the top is the same phonetic element, *jian*.

𠂔 The other form (on the left) you will now be able to work out for yourself. So in ancient China, before the forms of characters had become standardized, it was possible to write ‘Yi’ in one of at least three ways. But different scribes had managed to reach a consensus that ‘Yi’ was related to long feathers, the bow, and something which used to sound like *yi* (but now sounds like *jian*). None of this should bewilder us. All written languages have passed through phases of variants in spelling (just as different spellings of English have become established on either side of the Atlantic).

The Chinese scholar Professor Zang Kehe has analysed what underlies these elements.¹⁰ We have already seen feathers in the legend of Yi related

operate. Instead, he argues that all compound characters contain at least some degree of phonetic value. While I accept that there are many more examples of semantic–phonetic pair characters than Xu Shen or subsequent scholars have found (because the phonetic significance of some elements became obscured over time), Boltz’s arguments do not persuade me that the idea of semantic¹ + semantic² → semantic³ *never* operated and could not operate. In my view, if semantic elements had achieved a sufficient level of abstraction to act as semantic signifiers for *phonetic* elements, that would suggest that they could act just as well as semantic modifiers for other *semantic* elements.

9. 徐灝《說文箋》：“开聲古音在元部，轉入脂部。”

10. 臧克和：《說文解字的文化說解》，頁 299 ff.

by the King of Huai Nan: “日中九烏，死墮其羽翼。”(the ravens in the suns perished and their black feathers fell to the ground). Somehow, it seems quite natural for a hunter to adorn himself with the feathers of the birds he shot out of the sun. Logical also for later shamans recounting the legend to elaborate the tale with symbolic feathers.

雩 Every summer, according to Xu Shen, there was a ritual of music and dance for the purpose of praying for rain, dedicated to the ‘Red Emperor’ — a symbol of drought.¹¹ The character for this rain dance is on the left. The top part of this character is an element which represents rain (雨) while the bottom part represents the sound. This character also has an old variant form which Xu Shen records, written as 雩. You can see the feathers at the top of the variant character. As we did with the variants of the character for ‘Yi’, we can conclude that in ancient times, the essential element in the idea of the rain dance was either rain or feathers. This is logical, given that Yi shot the birds in the sun, and their feathers fell to earth and the drought caused by the ten suns ceased.

In fact, another old dictionary of Chinese sounds from the Song Dynasty, the *Ji Yun* (集韻) explicitly states,¹² ‘Yu (雩), long feathers bound together: what people doing the rain dance ritual used to hold.’ Another piece of evidence appears in a much older source, the *Rites of Zhou*:¹³

381

(舞師)教羽舞，帥而舞四方之祭祀；教翬舞，帥而舞旱暵之事。¹⁴

The Master of the dance teaches the feather dance: he leads and they dance in prayer to the north, south, east and west. He teaches the dance of the short feathers: he leads and they dance in the sacrifice to ward off drought and parched crops.

Professor Zang Kehe has shown that the sound element (干) in the character ‘Yi’ in some other ancient characters with meanings related to drought or rain dances.¹⁵ (As I mentioned earlier, there is a category of Chinese characters with two elements, one indicating the category of

11. 許慎《說文解字》：“雩：夏祭樂于赤帝以祈甘雨也。”


12. 《集韻·禺韻》：“雩：緝羽也。雩祭所執。”





13. 周禮《春官·女巫》：“旱暵則舞雩。”(The female shaman: when there's a drought, she dances the rain dance.)

14. 周禮《地官·舞師》。

15. 臧克和：《說文解字的文化說解》，頁 302–303。

meaning and the other the category of the sound. The latter — the sound category — nevertheless tended in ancient times to point to sound groups with related meanings. This means that by studying the structures of ancient characters, we can sometimes find two levels of related meanings.)

Professor Zang also discusses an old character, now written as *jin* (晉), which meant both 'approach' (進) and 'arrow' (箭).¹⁶ The old oracle bone character is , which clearly depicts a pair of arrows pointing something looking much like a sun (日). As long as the bottom part of the oracle bone character is the sun, then this character is a nice illustration of the association in the minds of scribes 3500 years ago of arrows with the sun. (It is not so easy, however, to understand why this association would have led to the meaning 'approach'.) On the other hand, if the element at the bottom of the character was in fact some sort of container (some versions of the OB character omitted the line or dot in the middle of the 'sun', making it 'a container'), then there is another explanation for this character: it is simply the word *jin* (晉), also written '摺', which just means 'to insert an arrow into a quiver'.¹⁷

 If looking at the association of arrows with the sun in Chinese writing  is productive, it would be interesting to see if there is an association of birds or 'long feathers' with the sun. At first, this does not look too promising. The character on the left, *xi*, has the feathers on the top, but the element on the bottom is *bai* (白), 'white'. Xu Shen's *Shuo Wen* says this character is derived from 'feathers' and 'white', and means 'birds fluttering at daybreak'. Once again, however, the oracle bones tell a different tale: the character *xi* is written as  or , the feathers with a sun, and with an alternative form without the dot in the middle if the lower element, which usually — but not always — served to distinguish the 'sun' element. Furthermore, the character, when used in oracle bone texts, meant 'to reduplicate'.¹⁸ Recall that in the legend, the combination of the ravens with the sun caused the suns to multiply; so it seems possible that this pair of characters supports the idea that feathers were associated with the sun in the sense of 'multiple' or 'reduplicated', and arrows were associated with the sun, perhaps in the sense of the solution to the multiple sun problem.

The *Rites of Zhou* lists the duties of officials in a utopian state. It lists the activities of a number of craftsmen whose work was related to archery,

16. 臧克和：《說文解字的文化說解》，頁 298–299。

17. 《周禮·鄉射禮》，passim.

18. 許進雄：《古文諧聲字根》（臺北：臺灣商務印書館，1995），頁 794。

and I shall cover it in some detail in Chapter 6. It also describes a curious official post whose main duties were frightening off 'scary birds'.

3C1

《周禮·司寇第五》：庭氏

庭氏掌射國中之夭鳥。若不見其鳥獸，則以求日之弓與求月之矢夜射之。若神也，則以大陰之弓與枉矢射之。

The *Ting* clan: responsible for shooting any scary-sounding birds which enter the State. If the bird or beast cannot be seen, he shoots it with the bow for ending the solar eclipse and the arrow for ending the lunar eclipse. If it is in ghostly form, then he shoots it with the bow called 'Great Yin' for ending the lunar eclipse and the crooked arrow for ending the lunar eclipse.

This indicates that at the end of the Warring States period, there was still a belief in spirit birds who could harm the state. What is more, bows and arrows were used to remove infections of the sun or moon which, if we infer from the juxtaposition of uses in this quotation, were thought to be caused by ghostly birds. (The Han commentator, Zheng Xuan (鄭玄), explains that 'scary birds' are birds which make scary sounds in the night and which people take to be evil omens.)

It is far from safe to say, at this great distance in time, how all these elements fitted together. But the elements seem to be there. Few other themes in Chinese folklore, literature or history are so intertwined in the ancient Chinese writing system. This alone suggests that while writing was developing in China between about 1700 BC and 300 BC (that is, up to the time when the first Emperor of the Qin Dynasty tried to standardize it), the idea of feathers, arrows and the sun seem to have been associated together in the minds of the early scribes in the royal household. The legend of Yi the Archer may therefore have been one of the influential cultural themes among the aristocracy of that period. This is consistent with the idea that the legend formed the background to a regularly-performed ritual involving a shaman with feathers, recalling the feats of Yi, in a prayer to the Emperor of Heaven to prevent drought.

All that said, there can be a strong argument *against* this theory of legend intertwined with the writing system. Scientific students of the evolution of writing systems observe quite rightly that writing systems develop to impart information. Attempts to represent fairy tales in pictorial form in the internal workings of Chinese characters would be highly inefficient, open to speculative readings and would not survive the rigorous needs of

a proper writing system — particularly the highly efficient and developed system that the Shang oracle bones represent.

This is a fair comment. But what if the writing system has, as one of its primary objectives, the performance of magic and ritual? Supposing the system had developed as much as a way to impart information to heaven and the ancestors as from writer to (mortal) reader?

The writing system of the Shang period as we know it now existed within an environment almost entirely connected with mystical purposes. Oracle bone laundry lists may have existed, but we have never found them: the script we know is connected with oracle bones and ritual bronze vessels. These vessels themselves were rich in visual puns and allusions. Is it not likely that the writing connected with these early periods (and frequently inscribed on the vessels) was also able to incorporate puns and allusions? Note how the element 'evil' (凶) remains stubbornly absent from the phonetic formulation of Shang period characters while its opposite, 'propitious' (吉) is widespread as a phonetic element. Would we expect such an avoidance of inauspicious elements in a culture if it had ceased regarding the internal make-up of graphic/semantic combination of elements within characters as significant?

The Black Magic of Psychopaths

During the Xia (夏) Dynasty, and into the Shang (商) Dynasty, elaborate superstitious rituals abounded. It was during the Shang-Yin period that the oracle bone script developed, and oracles were sought at every juncture to predict the outcome of people's actions. Arguably, the oracle bone inscriptions were not inscribed to *seek* the response of the oracle: they were often intended to *report* the outcome of divination.

If there was 'white magic' associated with archery, there was also 'black magic'. 'Shooting at Heaven' (射天), was particularly associated with psychopaths and despotic rulers who wished to express their disregard for the discipline of Heaven. I call the practice 'black magic' because in the stories which tell of it, the main characters describe themselves as 'masters of the spirit world'. They are psychopaths who disregard their advisers with their conventional admonitions to heed the rituals and practices of Heaven and good government, and instead align themselves with 'the devil'.

The first account is by the Great Historian, Sima Qian (司馬遷), and is about the Shang King Wu Yi (武乙). (Wu Yi's name is found repeatedly in oracle Shang bone inscriptions and he was beyond doubt a historical personality.)

3D1

司馬遷：《史記》·殷本記·帝武乙：

帝武乙無道，為偶人，謂之天神。與之博，令人為行。天神不勝，乃僂辱之。為革囊，盛血，叩而射之，命曰“射天”。武乙獵於河渭之間，暴雷，武乙震死。

Wu Yi was a despot. He had a puppet figure made and called it 'Heavenly Spirit'. He used to compete with it and made people make it move around. The 'Heavenly Spirit' would lose and Wu Yi would berate it. He made a leather bag, filled it with blood, raised it high up and shot at it, ordering everybody to 'shoot at Heaven'. One day, Wu Yi was out hunting between the Yellow and Wei Rivers when a violent thunderstorm blew up, and Wu Yi was struck by lightning and killed.

In the above account, Wu Yi seems to be making a puppet to satirize the impotence of heaven. Spirits were represented by votive statues or totems. By making a likeness of a 'Heavenly Spirit' which cannot compete with him, Wu Yi is showing off his own superiority over Heaven.

The next tale is also from Sima Qian, and concerns the antics of another psychopath, Song Wei Zi (宋微子).

3E1

司馬遷：《史記》·宋微子世家·君偃：

君偃十一年，自立為王。東敗齊，取五城，南敗楚，取地三百里；西敗魏軍，乃與齊、魏為敵國。盛血以韋囊，縣而射之，命曰：“射天”。淫於酒婦人。群臣諫者輒射之。於是諸侯皆曰“桀宋”。“宋其復為紂所為，不可不誅”。告齊伐宋。

In the eleventh year of Duke Yan, [Song Wei Zi] declared himself king. He defeated Qi to the east taking five walled cities; he defeated Chu to the south taking three hundred miles of territory; in the west, he captured the army of Wei, and so he ended up with both Qi and Wei as enemy states. He filled a tanned leather bag with blood, hung it up and shot at it, commanding all to 'shoot at Heaven'. He indulged himself in sex and alcohol; if any of his courtiers tried to make him see reason, he shot them on the spot. The feudal lords all nicknamed him 'Tyrant Song' and said 'Song is trying to do the same thing the despot Zhou did. We can't let this carry on.' They therefore asked Qi to make a surprise attack on Song.

Song Wei Zi, as is normal in Chinese historical accounts of the final years of a dynasty, is accused of debauchery and ignoring affairs of state. But the account also makes clear his despotic and irrational side. The feudal lords compared him to the tyrant Jie, the last emperor of the Xia Dynasty and his attempt to defy Heaven through shooting at a bag of blood is compared to a similar act by another end-of-dynasty despot, Zhou. (This Zhou (紂) was the last emperor of the Shang Dynasty — not the same Zhou as the Zhou (周) Dynasty which followed the Shang.)

Another passage in *The Records of the Great Historian* throws more light on this episode. The text is a part from the work which is thought not to be by Sima Qian, but was probably written in the same period. Most of the account, which is part of a discussion between a king and a sage adviser on the use of violence in government, is in the form of a rhyme which might indicate that the account is quoting from an old oral history. In quoting the text below, I have taken a mild liberty with the layout, and bracketed some of the wording, to restore the original verse and metre.

3F1

《史記·龜策列傳》

王不自稱湯武，而自比桀紂。桀紂為暴彊也，固以為常。

桀為瓦室

紂為象郎

微絲灼之

務以費氓

賦斂無度

殺戮無方

殺人六畜

以韋為囊

囊盛其血【與人縣而射之】

與天【帝】爭彊

逆亂四時

先百鬼嘗

諫者輒死

諛者在傍……

Your Highness, don't make yourself out to be King Tang Wu (Wu Yi), or try to emulate Jie and Zhou. Those two turned violence into a national institution and treated it as commonplace.

Jie made a tiled hut [to shelter the spirits],

While Zhou made a puppet companion;

Zheng kindled silk to burn it.
 He gave himself over to wastage and debauchery.
 His levies and taxes were disproportionate,
 His slaughter and savagery were irrational,
 He slaughtered men and beasts alike,
 And tanned a leather bag to hold their blood [using both as targets].
 He vied with Heaven in governing through violence.
 Running counter to the rites of the four seasons,
 He preferred to consort with evil spirits,
 Those who gave wise counsel were put to death,
 While whispering cronies were kept close at hand . . .

Just one more literary extract about this piece of black magic, which gives more flavour of those anarchic times and their superstitious practices. This time, the author is Liu Xiang (劉向), who wrote a famous quasi-historical account in his *Warring States Papers*¹⁹ (戰國策).

3GI

漢·劉向·《戰國策》·宋康王

宋康王之時，有雀生鸞於城之隙，使史占之曰：“小而生巨，必霸天下”。康王大喜，于是滅滕國，伐薛取淮北之地。乃愈自信，欲霸之亟成，故射天笞地，斬社稷而焚滅之，曰：“威服天下之鬼神”。罵國老諫，曰：“為無顏之冠以示勇”。剖軀之背，鏹朝涉之脛；而國人大駭。齊聞而伐之，民散，城不守，王乃逃倪侯之館，遂得而死。見祥而不為，祥反而禍。

In the time of King Kang of Song, a sparrow hatched a great eagle in a nook in the city wall. The oracle who was called in to interpret it said, 'Something small has given birth to something huge: this means that you can dominate the world.' Kang was greatly pleased, and went ahead and annihilated the state of Teng, made an attack on Xue and took the lands to the north of the River Huai. The more he did, the more he believed in his own power: he wanted to complete his domination of everything. He whipped the earth and shot at heaven, and he cut down the votive images of the gods of the earth and crops, and burned them to ashes saying, 'This is how I shall dominate the spirits of the whole world!' He abused any elders who remonstrated with him saying 'I have made a special crown without a visor as a sign of my courage!' Once, he split the back of a hunchback, and cut the feet off a man who was crossing the river one morning. His citizens were appalled. The state of Qi heard

19. Not exactly 'papers' but the contemporary equivalent bamboo strips bound with hemp to form pages for writing on.

what was happening and launched an attack. The people scattered and the city walls were left unmanned. The king fled to the citadel of Duke Ni, but the invaders caught up with him and killed him. [Moral:] He looked good fortune in the face and didn't act appropriately, so luck turned to misfortune.

Kang in this story goes far beyond conventional bad statecraft: he splits the spine of a hunchback, and cuts off the feet of another man (apparently to investigate whether his bone marrow had frozen in the cold water!). This story is interesting because it describes the actions of a true psychopath: not just the sort of immoral actions of which histories are prone to accuse kings at the ends of dynasties.

So this is a form of black archery magic tied in Chinese culture to psychopathic despots. They share a common determination to put themselves above the conventional pantheon of spirits, perhaps by consorting with darker spirits. An analogy with those who 'hear spirit voices speaking in their heads' suggests itself.

Once again, the Chinese archer appears in an uncertain light, a personality split between heroism and darkness.

The Book of Changes

Whether or not it is possible to believe that the structure of ancient Chinese characters gives clues about the practices of the society in which they developed, clear clues exist in the literary sources to suggest that archery formed a part of a form of magic representing or celebrating not only the domination of men over the physical world, but also harmony with the supernatural world which created the elements governing wind, drought and flood.

In Chapter 2, we saw that the *Yi Xi Ci* (易繫辭) attributed the first use of the bow and arrow to the legendary Sage Kings. The *Yi Xi Ci* is an appendix to the *Book of Changes* (易經), an ancient manual of divination using yarrow stalks. The *Yi Xi Ci*'s conclusion is that the use of the bow and arrow to dominate the world was characterized by the quality of the hexagram *guai* or '乖 (睽)'. The quality of *guai* is 'out of proper adjustment': something which can be put to right by a small adjustment and which does not involve a major upset (for example, the loss of a horse, which in due course will come home by itself; or the chance meeting of a senior person in the street without the proper ritual; or a woman seeing her male relative by her sister's marriage, which is only a minor infraction of chastity).

The hexagrams are formed from upper and lower segments, and those for *guai* are *li* (離) above and *dui* (兌) below. *Li* and *dui* in turn symbolize fire and water, or drought and rainfall. The implication is that the firing of the bow is the 'small adjustment' which can make the difference between drought and rainfall.

The bow (弧), as referred to in the *Yi Xi Ci*, is part of a rhyme group linked to the words for 'gourd' (葫蘆) and 'vase' (壺). The gourd/vase is linked through Xu Shen's dictionary with the magic property of being the mixing flask for good and evil (壹壹), and is an analogy for the crucible for all the opposing elements which made up the Chinese creation myth, including heaven and earth, light and heavy and all the opposing elements. In fact, the words used in this section of the *Book of Changes*, '弧矢' can be a pun on another pair of words, '壺矢', which means 'a vase and arrows' — that is a ritual game in which players compete to toss an arrow into the narrow neck of a vase (投壺禮) which may have also been used for divination.²⁰ I believe that this series of puns in the *Book of Changes* is another indication that the bow and arrow symbolized the agent for 'tipping the balance' of nature to bring about good or evil, drought or rainfall. Likewise, tossing an arrow into a vase symbolized a human enquiry into the mix of good and evil in the crucible of creation, represented by the gourd or vase.

Practitioners of this magic or divination could express the desire for harmony between humans and the elements, for example by shooting arrows in four directions and overhead, as was done by youths reaching puberty. On the other hand, the archery could be directed at a bag of blood, and express disharmony with the elements: indeed, a determination to dominate Heaven. Thus, the bow and arrow were imbued with qualities straddling two extremes and the character of the archer represented a character balanced between the two.

20. See how the game is portrayed with the flavour of divination in *Zuo Zhuan*. (《左傳》“昭公十二年”。)

發奠立正脩
則而義心身
必後改改改
中發為為為
與之時夫弓

*Perfect your body and let it be your bow;
Straighten your thoughts
and let them become your arrows;
Decide what is right and let that be your target.
Now set up your form, aim and release!
How can you miss?*

From the *Legalist Teachings* (《楊子法言·修身篇》)
of Yang Xiong (楊雄) (53 BC – 18 AD)



The Archers' Rituals

The first two chapters have looked at dynasties of Chinese history which have left no written historical records of their own. I have not made any particular attempt to establish an objective truth about historical events in those times. Instead, I have drawn on folklore, later historical narrative and some suggestive relationships between Chinese words and divination symbols to draw conclusions about magical themes and early attitudes to archers.

The next period on the historical time-line of China is the Zhou (周) period. The orthodox view of the Zhou period (c. 1100 BC – 771 BC) is that its founders restored China to the pristine glory of the 'sacred ones' (聖王) — the earliest kings I described in Chapter 2. One important element recorded about courtly life in the Zhou period was the practice of extensive rituals. These included a number of archery rituals.

The difficulty in studying the Zhou archery rituals is not that they are not recorded: indeed, there are profuse and detailed records, as we shall soon see. The problem is in ascertaining to which period the recorded rituals really belonged. Documentary evidence for the early period of Chinese history is in fact very thin. It was alleged that enormous quantities of historical records were suppressed during the reign of the first Emperor of all China, Qin Shi Huang (秦始皇). The great Historian, Sima Qian, admitted that the only historical records he himself had to work from were some seigniorial annals of the state of Qin itself. All the rest depended on oral traditions and other indirect sources.

Sima Qian wrote in the Han (漢) Dynasty, and most historical works from Sima Qian onward have been mainly concerned with establishing a coherent narrative which conformed in full to the preconceptions of the time that the historians lived in. Unorthodox history was considered worthless, and historical research and textual analysis was mainly devoted to presenting and reinterpreting history in terms of contemporary expectations.

So if we have details of the Zhou archery rituals today, it is important to understand that:

- they are later reconstructions, and
- they have been idealized towards later standards.

That's the bad news. The good news is that the first emperors of the Han Dynasty (when these rituals were being researched and restored) were overwhelmingly concerned with re-establishing the ancient rituals of the first Zhou kings so as to legitimize their reign as far as possible in the eyes of Heaven and the people they ruled over. So it is arguable that every effort was made to get the contents of the rituals right. That was no easy task: different schools vied with each other to gain imperial favour by reconstructing different 'authentic' versions.

Confucius claimed to know about the rituals of the Xia and Shang:

4A1

《論語·八佾》孔子曰：“夏禮，吾能言之，杞不足徵也。殷禮，吾能言之，宋不足徵也。文獻不足故也。足，則吾能徵之矣。”

From the *Analects*, Confucius said, 'I can quote you from the rites of the Xia, but there is insufficient from the Ji nation (which followed it) to lend credence to it. I can quote you from the rites of Yin, but there is insufficient from the Song nation (which followed it) to lend credence to it. There are neither written records nor historical scholarship sufficient to confirm them. If there had been, I would have given credence to it.'

Chinese scholars now accept that the texts of the rituals that have passed down to us do not represent original texts from the Zhou. Nevertheless, they accept that fragmentary written records of Zhou rituals did exist in the early Han Dynasty, and the Han reconstructions were probably based upon them.¹

1. For example, see 楊天宇：《儀禮譯注》（上海：上海古籍出版社，1994），頁4-5。

What Were 'Rituals'?

In Ancient China (up to about 1000 BC), society was sharply divided into an aristocracy who participated in the government, headed by a king or other leader, and a peasantry who tilled the fields and served the aristocracy. This statement is a great simplification of a society of which we have only the very slightest knowledge; however, in the earliest days of agricultural society in China, before the development of commerce and a business class, it is well accepted that Chinese peasants were under a degree of control by the ruling class that seems unimaginable today.

However, a degree of mutual consent is evident. While the peasant class provided labour and military manpower to the rulers, they benefited from management, infrastructure development and defence organization that the ruling class provided. Huge tracts of China were uninhabited wastelands, home to many species of unfriendly wild animals (tigers, wolves, rhinoceros, elephant, wild boar and possibly other large animals long since extinct). The peasant class no doubt gained from the organization and protection of the ruling class, considering their alternative of eking out a living in a wilderness surrounded by unfriendly fauna and rival tribes looking for land to settle or pillage. The ruling class, for example, had the expertise to flush out low-lying areas with controlled flood water and then replace the weeds, which would not grow on sodden soil, with rice which flourished in it. The peasantry provided the labour for such efforts and benefited from the improved livelihood that increased tillable land thus made available.

In this social system, rituals were partly a form of religious observance among the aristocracy and partly a social rite of submission. They form a system of social practice which Chinese people regard as a unique attribute of Chinese culture.² The peasantry would also have had their forms of religious observance, but they are scarcely recorded.

The Chinese philosopher Xun Kuang (荀況), born around 335 BC, gave the following explanation of the basis of 'ritual':

4B1

禮起于何也？曰：人生而有欲。欲而不得，則不能無求。求而無度量分界，則不能不爭。爭則亂，亂則窮。先王惡其亂也，故制禮義以分之，以養人之欲，給人之求；使欲必不窮，物必不屈于欲，兩者相持而長。是禮之所起也。

2. 陳剩勇：《中國第一王朝的崛起》（長沙：湖南出版社，1995），頁409。

What is the origin of Ritual? It is said humankind innately has desires. When a man cannot obtain what he desires, then he is bound to seek it. If in seeking what they desire men are unrestricted and unregulated, then they are sure to fight to get it. Fighting results in chaos, and chaos results in all resources becoming used up. The Early Kings abhorred chaos, so they developed Ritual to bring order out of chaos, to discipline mankind's desires and to provide what they sought. Thus they brought into being a system in which desire did not lead inexorably to an exhaustion of supply, and where supply would not fail to keep up with demand: instead the two developed hand-in-hand. That is the origin of Ritual.

This encapsulates (with the hindsight of the fourth century BC) the aims of the ancient Chinese social system. In a society such as the one I have just described, living on the edges of a wilderness, trying to eke out an existence from next to nothing, ritual was the very fabric binding Chinese society together. According to tradition, ritual was, at the time of the Zhou, a practice confined to the aristocracy. For the peasantry, we know only of months of hard drudgery or semi-hibernation in locked hamlets, interspersed with brief annual festivals of unbounded indulgence.

The Archery Rituals

Four main types of archery rituals were practised. The first was the Major Archery Ritual (大射) presided over by the king or other ruler. The second was the Hospitality Archery Ritual (賓射) held in honour of visiting dignitaries; the third was the Yan Archery Ritual (燕射) held at official banquets and finally the Archery Ritual of the Shires (鄉射) held in the feudal fiefs to select archers to be supplied for the service of the royal household.

The archery rituals certainly had a military element. Starting from the Western Zhou (1100–771 BC), armies were raised from the peasantry in the areas surrounding the centres established by the Zhou kings and the fiefs. Land was administered in units based on ninths in the shape of the Chinese character *jing* (a well) which looks like a tic-tac-toe game: ‘井’. Depending on whose ideology you believe,³ either the peasants were divided into groups of eight households to till nine fields in the shape of the tic-tac-toe board with the produce of the centre field being offered in tribute to the feudal lord and the remainder retained by the peasants; or

3. 陳群：《中國兵制簡史》（北京：北京軍事科學出版社，1989），頁7。

else the nine fields were the basis for administering the whole system of tributes with the peasants getting next to nothing. Either way, this system also formed the basis for raising a peasant army in the Zhou period.

If the state was not under threat, then the Zhou court divided the year up for practice of civil, quasi-military and military skills. 'Quasi-military' was the hunt, which served to hone military skills during peacetime when they were not directly needed to defend or expand the realm. The fruits of the hunt, rather than being immediately consumed, were used for sacrifices to the ancestors who, from ancient times, were the entities underlying Chinese religious beliefs. Whether in the battlefield or in the chase, the bow and arrow represented the greatest empowerment of the individual over his environment.

Zheng E (鄭鏐) (Song Dynasty) wrote:

射之為藝，用於朝覲賓燕之時，其事為文。用於田獵攻守之時，其事武。

Archery was a central skill: practised during attendance upon the ruler or receiving guests or holding banquets, it is counted as a civil skill; when used in the hunt of the expansion or defence of the realm, it ranked as a military service.

Xue Pingzhong (薛平仲) wrote:

射者，男子之事。弧矢之利，其為威天下也久矣。先王於大祭祀則有射；於賓客則有射；於燕飲則有射。當君臣相事於禮文之交，而不忘武事於弓矢之用。

Archery is a duty of males. The power of the bow and arrow, its potency over everything, has long been known. The early Rulers, when performing rituals and religious service, used archery; when they entertained guests, they used archery; when they held banquets, they performed archery. The purpose of employing the bow and arrow in this way was so that officials and ministers, in their ritual or civil encounters, would not forget their military duties.

Added to this was a belief (which I would surmise predated the Zhou and may have permeated both the aristocracy and the peasantry) that the bow and arrow represented the domination of men. China had, over a period since Neolithic times, transformed into a male-dominated, patriarchal society. Whether this was by a process of domination by a patriarchal tribe or by social evolution, is unknown. The ritual expressing this involved a father presenting a bow and six arrows to his son. The son

then performed a ritual in which he fired the arrows to the ground, in the four directions and then skyward and at the ground.⁴

One concept is particularly familiar to all Chinese people who have read the classics: that is that the Zhou period put weight on six basic skills (六藝): ritual, music, archery, chariot driving, writing and arithmetic (禮、樂、射、馭、書、數). These were taught at the 'lower schools' (小學), where the curriculum included the 'five forms of archery' (五射), known as:

井義: 'The *jing* ("well") character (井) form of wielding the bow'

襄尺: 'Xiangchi'

白矢: 'White arrow'

剡注: 'Yanzhu'

參聯: 'Three-in-a-row'

There will be many quotations from texts later in this book which attempt (with greater or lesser success) to explain these mysterious terms.

Archery had its ancient association with ritual magic, dominance over the enemy and control over the balance of natural forces. It was, moreover, a symbol of masculinity and perhaps even virility and fertility. It also had its association (as we saw in Chapter 2) with indiscipline. The associations that had arisen between the six basic skills was:

- ritual (禮) to establish rank in the hierarchical structure of Chinese feudal society;
- music (樂) to establish discipline in movement and mental approach;
- archery (射) to establish both power and submission of the individual's power to feudal authority;
- chariot driving (馭) which was an exercise in control and teamwork;
- writing and reading (書) which was an essential element in civil and military administration; and
- arithmetic (數) which was an essential element of both civil administration and military strategy.

In the Ming Dynasty, Zhou Kongjiao (周孔教) wrote:

4C1

射為武事之尤大，而威天下守國家之具也。古者教士，以射御為急。人之生有疾則已，苟無疾，未有去射而不學者也。有賓客之事則以射，有祭祀之事則以射，別士之行同能偶則以射。於禮樂之事未嘗不寓以射，而射亦

4. 宋·王昭禹：“古者，男子生，以桑弧蓬矢六，射天、地、四方，示其四方之志。先王之為射禮，因以習武事焉。因以繹志而觀德行焉。”

未嘗不在於禮樂祭祀之間也。居則以是習禮樂，出則以是習軍伐。士既朝夕從事於此，而能者眾。則邊疆宿衛之任，皆可擇而取也。

Archery was the superior service in military affairs, the means by which the world could be dominated and the state defended. When members of the aristocracy were educated in ancient times, they placed top priority on archery and chariot driving. If a man received an injury during his life, that would put an end to it; otherwise no one ever abandoned archery or the study of it. If there was entertaining to be done, they used archery; if there were religious rites to be performed, they used archery; and if they had to make a distinction between the abilities of two members of the aristocracy, they used archery to do that too. No-one was admitted to archery unless he had been tested in ritual and music; and no-one was admitted to religious observance involving music and ritual unless they had also been tested in archery. When resident in the administrative centres of the state, they used archery to practise music and ritual; when abroad they used it to practise military skills. As the aristocracy engaged in this pursuit incessantly, there were many who were skilled in it. Thus there was never a shortage of candidates for posting to settle and defend the borders of the realm.

This description explains the notion that the relationship between the 'six skills' was not that they were set out in descending order of importance, but more that they were developed in a bottom-up fashion, with ritual being the most fundamental.

The main description of these rites is contained in a Confucian classic, the *Book of Rites* (儀禮), which in its present form probably dates from the Han Dynasty, but largely reflects practices originating in the Zhou Dynasty and developed during the Warring States period. The archery rituals, in common with many other rituals of the *Book of Rites*, can be divided into three segments: the outer segments consisting of a ritual preparation and purification common to all categories of rituals, and finishing with a ritual sacrifice and consumption of wine and food. The main substance of the different rituals is in the centre section.

The Archery Ritual of the Shires was held either once every three years in the Shires (鄉), or twice a year in the prefectures (州). The triannual shoot marked the graduation rite from the shire schools and was presided over by the sheriffs, with the shire elders as officiating guests. The biannual shoot was presided over by the prefect and took place at banquets held in the spring and autumn.

To quote from the rituals in full would be very lengthy, and it is enough to get a feel for them if I just illustrate with part of the central section of the Archery Ritual of the Shires in which the Master of Shooting

demonstrated the requirements of the ritual competition, followed by the first phase of the competition itself — a sort of warm-up, in which the competitors shot but no score was kept.

To visualize the process, the ritual is in the form of a contest between three pairs of archers who have been seeded by age, seniority and skill. The seeding process may have taken place in another associated ritual, the Ritual of Taking Wine in the Shires (鄉飲酒禮), which was intended to rank the aristocracy by age and seniority. The ritual takes place in an imposing hall with an expansive courtyard surrounded by a wall. The hall is in fact a school known as a *xiang* (庠) or *xu* (序) (a name which changed over time). Towards the northern end is a roofed pavilion with a raised floor, giving the impression of a theatrical stage. In this pavilion sit the host and chief guests in special reserved places between the two main columns supporting the roof. Access to the pavilion is gained by two sets of stone steps on the south side of the pavilion. Towards the southern end of the courtyard a single target butt is set up. The target face is covered with a cloth. To one side of the target is a small screen sheltering the scorer.

The ritual which is described seems enormously elaborate, but in fact was probably no more so than a passing out parade at West Point Military Academy or a game of cricket at Lords.

Yi Li (儀禮): The Archery Ritual of the Shires (鄉射禮)⁵

4D1

三耦俟于堂西，南面，東上。司射適堂西，袒、決、遂，取弓于階西，兼挾乘矢，升自西階，階上北面告于賓曰：“弓矢既具，有司請射”。賓對曰：“某不能，為二三子許諾”。司射適阼階上東北面告于主人，曰：“請射于賓，賓許”。

The three pairs wait to the west of the hall facing south: their approach is on the east side. The Master of Shooting comes over to the west of the hall, bares his left arm and shoulder, puts a thumbing on his right thumb, puts on an arm-guard and then picks up a bow from the west of the steps. He holds four arrows together between his right forefinger and middle finger, with his thumb hooked around the string, the arrows at right-angles to the string, arrowheads level with the grip. He goes up into the hall by the west steps, and facing north at the top of the steps, he

5. 楊天宇：《儀禮》譯注（上海：上海古籍出版社，1994），頁158-167。

addresses the guest: 'The bows and arrows are ready. The assembled officials invite you to shoot.' The guest replies: 'I have no skill in shooting. As you request to start, please proceed.' The Master of Shooting then proceeds to the Eastern Steps, faces north-east and addresses the host: 'We have asked the guest if we may commence the shooting: he agrees.'

4D2

司射降自西階，階前西面命弟子納射器。乃納射器，皆在堂西。賓與大夫之弓倚于西序，矢在弓下，北括。眾弓倚于堂西，矢在其上。主人之弓矢在東序東。

The Master of Shooting climbs down from the hall by the west steps, and instructs the competitors to collect their archery equipment: they do so, all from the west of the hall. The Principal Guests' and the Sheriffs' bows are placed against the west of the training hall, the arrows below the bows with their nocks pointing northwards. The other bows are placed against the west of the hall, the arrows on top of the bows; the Hosts' bows and arrows bows are placed against the east side of the east training hall.

4D3

司射不釋弓矢，遂以比三耦於堂西。三耦之南，北面命上射曰：“某御於子”。命下射曰：“子與某子射”。

The Master of Shooting does not put down his bow and arrows, but takes them to divide up the competitors into pairs at the west side of the hall. Standing to the south of the pairs, he faces north and addresses the senior archer of each pair: 'You will be paired with Y as his senior' and to the junior archer: 'You will shoot with X'.

4D4

司正為司馬。司馬命長侯。弟子說束，遂繫左下綱。司馬又命獲者倚旌于侯中。倚獲者由西方坐取旌倚于侯中，乃退。

The Toastmaster doubles as Master of Ceremonies. He orders the target face to be unfurled. The competitors undo the bindings and turn up the lower left side of the target and tie it so as to conceal the face. The Master of Ceremonies instructs the Scorer to place the signalling flag against the centre of the target face. The Scorer comes from the west side, kneels to take the flag, places it against the centre of the target face, then retires to his place.

4D5

樂正適西方，命弟子贊工遷樂于下。弟子相工如初入，降自西階，阼階下之東南，棠前三筭，西面，北上，坐。樂正北面立于其南。

The Master of Music moves over to the west side, instructs the competitors to assist the [blind] musicians⁶ to move down off the podium. The competitors guide the musicians to the positions they occupied at the start, going down the west steps, passing the south-east of the east steps, and after going three arrow-lengths past the hall, they face west, go up to the north and kneel. The Master of Music faces north and stands to the south of them.

4D6

司射猶挾乘矢以命三耦：各與其耦讓取弓矢，拾。三耦皆袒、決、遂。有司左執弣，右執弦而授弓，遂授矢。三耦皆執弓，搯三而挾一个。司射先立于所設中之西南，東面。三耦皆進，由司之西，立于其西南，東面北上而俟。

The Master of Shooting still holds four arrows together [between his right forefinger and middle finger] so as to direct the three pairs: 'Each of you take up a bow and arrows, deferring to your [senior] partner, each pair in turn.' The three pairs then all bare their left arms and shoulders, put their rings on their right thumbs and put on their arm-guards. The officials then hand over the bows, grasping the grip in their left hand and the string in their right, and then handing over the arrows. The three pairs all take the bows, place three arrows in their belts, and grasp one [in the left forefinger at right-angles to the bow and string]. The Master of Shooting first stands to the south-west of the scoring tally, facing west. The three pairs then all proceed to their positions, from the west side of the Master of Shooting, standing on the south-west side of him facing east, then go up on the north side and wait there.

4D7

司射東面立于三耦之北，搯三而挾一个，揖進。當階北面揖。及階揖。升堂揖。豫則鉤楹內，堂則由楹外。當左物北面揖。及物揖。左足履物，不方足，還，視侯中，俯正足。不去旌，誘射，將乘矢。執弓，不挾，右執弦，南面揖。揖如升射，降出于其位南，適堂西，改取一个挾之，遂適階西，取扑搯之以反位。

6. Traditionally, court musicians were all blind.



Archery ritual and preparation of sacrifices (from a bronze vessel of the Warring States period). Drawing by Roy Collins.

The Master of Shooting stands to the north of the three pairs, facing east, one arrow in hand and three inserted in his belt. He salutes and comes forward, salutes to the north when he comes level with the steps, and salutes a third time level with the steps, and salutes again on going up onto the podium. If [the shooting] is in a provincial archery hall, then he makes a circuit to the inside [north] of the pillar; if it is a county level archery hall, then he passes to the outside [south] of the pillar. When he draws level with the left shooting line marker, he salutes towards the north. When he reaches his own marker, he salutes again. He places his left foot aligned with the marker: he does not stand with his feet parallel to each other; then he turns [to face south], looks at the centre of the target, and looks down to align his feet in a 'T' with the marker. The flag is not moved [away from the target face]. The Master of Shooting demonstrates the motions of firing off all four arrows. He takes up a bow without holding any arrows, hooks the string with his right hand and salutes facing south. He goes through all the motions of saluting in the same way as when going up to shoot. Coming back down he returns to a position south of his original one and proceeds to the west of the hall, takes one more arrow and holds it at right-angles to the bowstring, then proceeds to the west of the steps, takes a rod and sticks it in his belt,⁷ then returns to his place.

7. To discipline the contestants with.

司馬命獲者執旌以負侯。獲者適侯，執旌負侯而俟。司射還，當上耦西面，作上耦射，司射反位。上耦揖進，上射在左，並行。當楷北面揖，及楷揖。上射先升三等，下射從之中等。上射升堂少左，下射升。上射揖，並行。皆當其物北面揖，及物揖。皆左足履物，還，視侯中，合足而俟。司馬適堂西，不決、遂、袒，執弓，出于司射之南，升自西階，鉤楹，由上射之後，西南面立于物間。右執籥，南揚弓，命去侯。獲者執旌許諾，聲不絕，以至於乏，坐，東面，偃旌，興而俟。司馬出于下射之南，還而後，降自西階，反，由司射之南。適堂西釋弓，襲，反位，立于司射之南。司射進，與司馬正交于階前相左，由堂下西階之東北面視上射，命曰：“毋射獲，毋獵獲。”上射揖。司射退，反位。乃射。上射既發，挾弓矢，而後下射射，拾發以將乘矢。獲者坐而獲，舉旌以宮，偃旌以商。獲而未釋獲。卒射，皆執弓，不挾，南面揖，揖如升射。上射降三等，下射少右從之中等。並行，上射于左，與升射者相左，交于階前，相揖。由司馬之南適堂西，釋弓，說決、拾，襲而俟于堂西，南面，東上。三耦卒射亦如之。司射去扑，倚于西階之西，升堂，北面告于賓圓：“三耦卒射。”賓揖。

The Master of Ceremonies instructs the Scorer to take up the flag and stand with his back to the target. The Scorer approaches the target, takes up the flag and stands with his back to the target and waits. The Master of Shooting turns, walks up to the west of the senior pairs, orders the senior pairs to start shooting and returns to his place. The senior pairs move forward and salute, the senior contestants [in each pair] walk on the left, side by side [with the junior of the pair]. Level with the steps they salute towards the north; when they reach the steps they salute again, then the senior contestant goes up three steps and the junior follows him, leaving one step between him and the senior. The senior contestant goes up onto the podium and moves a little to the left so that the junior can move up. The senior contestant salutes and the contestants walk in pairs. They both walk over adjacent to their respective markers, face to the north and salute, move onto their markers and salute again. Then they both align their left feet with the markers, turn, look at the centre of the target, align their feet in a 'T' with the marker and wait. The Master of Ceremonies proceeds to the west of the hall, bares his left arm and shoulder, but does not put a ring on his right thumb, nor puts on a breast-guard. He grasps his bow, goes over to the south of the Master of Shooting, goes up by the west steps, walks around the pillar, passes behind the senior contestants and stands facing south-west between the two markers. He grasps the grip of the bow in his left hand and the tip of his bow in his right and raises the bow towards the south in order to make everyone stand clear of the target. The scorer takes the flag and responds

to the command by calling out continuously until he has got to the scorer's shelter; then he kneels, faces east, puts down the flag, then stands up and waits. The Master of Ceremonies comes out to the south of the junior contestants, turns to pass behind them, goes down by the west steps, returns by his original route, passing to the south of the Master of Shooting, proceeds to the west of the hall, and puts down his bow, then pulls his left sleeve back down, returns to his place and stands to the south of the Master of Shooting. The Master of Shooting comes forward, crosses the path of the Master of Ceremonies in front of the steps passing each other to the left, and from below the podium to the north-east of the west steps looks up at the contestants and instructs them, 'No shooting at the Scorer! No intimidating the Scorer!' The senior contestant salutes and the Master of Shooting retreats back to his place. Then the shooting starts. The senior contestant shoots first, he then takes an arrow from his belt and holds it against the bow, then the junior contestant shoots. They shoot in turns in this way until they have fired all their arrows. The scorer calls out the score from a kneeling position, calling out in a high pitched voice when he holds the flag high, and in a low tone when he holds it low. [The Scorer] sings out a hit or miss, but does not count the score. The shooting finishes and all grasp their bows without any arrows in hand, salute to the south and then salute just as they did when they went up to shoot. The senior contestant goes down three steps and the junior follows him slightly to the right, separated by one step. Then they walk side-by-side, the senior contestant to the left. In the same order as when going up to shoot, they keep to the left [of the second pair] cross in front of the steps and salute to each other. They proceed to the west of the hall, south of the Master of Ceremonies, take off their breast-guards, tabs and bracers, put their sleeves back down and wait at the west of the hall, facing the south, approaching from the east. All three pairs do this. The Master of Shooting puts down his rod, leans it against the west side of the west steps, goes up onto the podium, and facing the north addresses the guest: 'All three pairs have finished shooting.' The guest bows.

It is from this record of the ancient archery ritual that we get the first glimpse of the technique used by archers at that time. To do that, we need to look closely at the specialized vocabulary connected with archery, rather than with ritual as a whole.

Our first clues come in paragraph 4D1, with the statement, *'The Master of Shooting comes over to the west of the hall, bares his left arm and shoulder, puts a thumbing on his right thumb, puts on a breast-guard and then picks up a bow from the west of the steps.'* The Chinese words are '袒', '決' and '遂'.

袒 (*tan*) means to bare the left (bow) arm. This would have removed the loose sleeve of a robe and stopped it from catching the bow-

string (although some sources⁸ claim that the action applied to the outer clothing only, leaving inner clothing in place.) But there is more to it than that: baring the left arm had a ritual significance.⁹ It was a gesture of candour, perhaps demonstrating that the participant in the rite had nothing to conceal.

決 (*jue*) means to put on a thumbing. How do we know that in the Zhou period, they used a thumbing (i.e. a Mongolian draw) and not a finger-tab (for a Mediterranean draw)? The bamboo script character, 決, is written as 𣎵 𣎵.¹⁰ These characters date from the early part of the Han Dynasty (about the second century BC) and seem to show a thumbing. In addition, specimens of thumbings from the Zhou period and before have been discovered.

遂 (*sui*) means to put on a bracer or arm-guard. It was said by the Han Dynasty commentator Zheng Xuan (鄭玄) (127–200 AD) to be the same as another term, *gou* (鞫), which was a leather bracer. Being leather, no example has survived to provide archaeological evidence.

乘 The next point of technique is 挾乘矢: grasping four arrows. The term *cheng* (乘) means a group of four arrows. It is also the term used for a group of four chariot horses. The Qing Dynasty commentator Yi Zhenyan (易貞言) wrote:

易氏曰：凡射之儀，天子與諸侯、卿、大夫尊卑雖異，而皆發乘矢。乘、四也。

In all archery rituals, the Emperor, shooting with the feudal lords, ministers or sheriffs, fired a *cheng* (乘) of arrows. A *cheng* is 'four'.

挾 The reason for this grouping of four may have been connected with the other term *jia* (挾). Zheng Xuan (鄭玄) said, 'Holding the arrows at right-angles to the string is called *jia*.'¹¹ Another commentator, this time from the late Ming to early Qing Dynasty, Sheng Shizuo (盛世佐) elaborated, '*Jia* refers to gripping the bow grip with the left hand, hooking

8. 清·吳廷華。

9. 《儀禮·鄉射禮》唐·孔穎達 (574–648) 疏：“凡事無吉凶，皆袒左……唯有受刑袒右”。

10. 楚簡《大漢字典》。

11. “方持弦矢曰挾。”

the string with the right thumb, and pinching four arrows together between the index and middle fingers so that the arrowheads can be seen level with the grip on the outside of the bow.¹²

This procedure is partly for the display of skill, and partly relates to military archery. Speed of reloading and drawing the bow relied on the arrows being in the hand rather than in the archer's belt or in a quiver. The skill consisted of firing four arrows in quick succession, by re-nocking with arrows held in the draw-hand.

耦 One feature of the ritual apparent from the very beginning is that the archers are divided into three pairs (三耦). This underlines the competitive nature of the event: the ritual is not just a display. The competitors were paired so as to match approximately. They were also distinguished in terms of rank and seniority of age.

In paragraph 4D2, you can see that arrows not in use were placed with their nock pointed towards the north (北括). There is no explanation offered of why that should be the case; but a possible explanation lies in the layout of the shooting hall. The hall had its entrance facing south, and had a covered podium at the northern end. The host and honoured guests sat on the podium, as did the archers. The target was south of the podium, between it and the entrance.

The arrows may have been considered potent magical forces and it would therefore have been necessary to make them point south, away from the guests on the podium. The reasoning behind the covering up of the face of the target may also have been similar. In paragraph 4D4 we saw, *'He orders the target face to be unfurled. The competitors undo the bindings and turn up the lower left side of the target and tie it so as to conceal the face.'* (弟子說束，遂繫左下綱。) In Chapter 6, pp. 106–113, we shall see the details of the targets. They were made of hemp cloth or animal skins, and were painted with concentric square patterns, some with animal designs in the centre. Whatever the exact significance of these target figures were (i.e. whether they represented prey to be caught or enemies to be vanquished), they contained a magical potency which either risked evaporating if the target was left uncovered, or harming the host and honoured guests who were seated facing them.


In paragraph 4D4, you also meet the scorer (獲者) and his equipment. The scorer uses a signal flag called a *jing* (旌) with which he signals a hit or a miss. The *jing* was a banner made of yak's tail or five-coloured feathers.

12. 盛世佐：《儀禮集編》。“案挾矢之法，蓋以左手執弣，右手大指鉤絃而並夾四矢於第二、第三指間，於弓外見鏃於弣。”

獲 The ancient characters for the scorer himself, *huo* 獲 represent a hand holding up a bird. This might indicate that the scorer's original duties were more like those of a beater or ghillie who collected the game shot in the hunt. He was an important functionary and was not to be trifled with or harassed. This is why the Master of Shooting demands in paragraph 4D8, 'No shooting at the Scorer! No intimidating the Scorer!'

In paragraph 4D6, we see the start of the actual shooting process. The three pairs take the arrows from the Master of Shooting and 'The three pairs all take the bows, place three arrows in their belts, and grasp one [in the left forefinger at right-angles to the bow and string]' (三耦皆執弓，搯三而挾一个). So the shooting proper starts with one arrow in hand and three in the belt.

The character for putting arrows in a belt, *jin* (搯), is a technical term which has aroused an enormous amount of speculation. The left part of the character represents a hand doing an action while the right hand part of the character is another character pronounced 'jin' (晉).

晉 In oracle bone script, this character appears as  ¹³ which looks like two arrows pointing at a sun. A number of palaeographers have drawn the conclusion that this suggests an allusion to the tale of Yi shooting arrows at the sun.¹⁴ But with respect, knowing that the word was a technical term in archery meaning to stick an arrow into a quiver or belt, it is much more likely that the oracle bone character represented arrows pointing into a quiver or container.

A very ancient and important element of the old form of Chinese archery can be seen in paragraph 4D7, '[The Instructor] places his left foot aligned with the marker: he does not stand with his feet parallel to each other; then he turns [to face south], looks at the centre of the target, and looks down to align his feet in a "T" with the marker.' (左足履物，不方足，還，視侯中，俯正足。)

This is the first reference to foot position in classical Chinese archery; but the reference occurs again in later works up to the Ming Dynasty. The feet had to be placed in a 'T' alignment: they were not permitted to be placed parallel to each other (as in some modern Western target archery), nor in a 'open stance' (as used for target and field archery), nor in the 'half-and-half' (不丁不八) alignment favoured in Ming and Qing archery manuals.

The foot position rule in ritual archery was rigidly enforced. To ensure that it was, the archers arranged their feet on a cross called a 'wu' (物),

13. 《甲骨文編》，卷七，頁 1。

14. 例如，臧克和：《說文解字的文化說解》，頁 298–299。

which had a longer bar aligned towards the target and a shorter transverse bar at right angles to the target. The *wu* mark is represented by a character (物) comprising an ox (牛) on the left and a character on the right which was used as a grammatical particle meaning 'do not' (勿). As with many of the ancient oracle bone characters (e.g. *jin* in a previous paragraph), the ancient form was just the right-hand part, and the left-hand part was added later for clarity. (The two parts together later came to mean 'a spotted ox'.)



勿 Five examples of the oracle bone character of the right-hand element (勿) are illustrated above. Some palaeographers have again been curious about the origin of the bow element in the grammatical particle. Most of our five samples show an oracle bone script bow with a pair of marks. The most rational explanation, knowing the technical use of the term in archery, is that it represented the mark for the archery foot position.

The importance of the archery stance and the purpose of the marker were explained in the Ming-Qing Dynasty by Sheng Shizuo (盛世佐) who wrote in the mid-1700s:

4E1

盛世佐：《儀禮集篇·鄉射禮》

射之立法與他時異。他時並足而立可也，而射者之足則不可並，並則不可射。聖人於此恐人或有不嫻也，故先於射位畫一橫一縱之物，而使之取正焉。司射誘射之時，既視侯中，即俯而視足，以察其合法與否，皆所以教也。方足者，並足而立也，此常法也。正足者，正其足於物也。物一縱一橫，履之者亦左足縱而右足橫，如其所畫也。至今射者之立，取象於丁，猶古人畫物之遺意。

The proper stance for archery is not the same as at other times. At other times you can adopt a stance with the feet parallel to each other, but an archer's stance must not be parallel. If his feet are parallel, he is not permitted to shoot. The Sage Kings were wary of those who might not comply with this stricture, so they first drew a mark on the ground in the shape of a cross at the position the archer was to shoot, and made the archer align his feet with it. When it was the time for the Master of Shooting and the Instructor to shoot, then they looked at the centre of the target and then looked down to check their feet, to see whether they were in the approved stance, and this was done for demonstration

purposes. 'Placing the feet askew' means not having them in the properly-aligned stance: that is, leaving them in the everyday stance. 'Aligning the feet' means aligning them with the marker. The marker had two lines at right angles, and the person aligning his feet placed one foot at right angles to the other, as drawn on the ground. Even now, an archer's stance is with his feet in a 'T' in memory of the way that the Ancients intended.



正 It is interesting to note that the ancient characters from the oracle bones and Zhou bronze vessels for zheng (正), 'to align', (six of which are shown above,) all clearly show feet aligned with an object. This was certainly an important symbolic gesture if a particular graphic character was invented for it.

發 The shot itself was called *fa* (發). In the oracle bone script, it was represented by a hand releasing a bow-string, as you can see in the illustration below.¹⁵



楅 The arrows to be used in the archery ritual were kept near the archers on a special rack called a 'bi' (楅). The bi was 'one arrow-length long, three thumb-lengths wide and one and a half thumb-lengths thick, decorated with a dragon's head with intertwined snakes between, with red tanned leather along its length and the wood covered in brown lacquer.' (《義禮·鄉射禮·記》: "楅長三筭，博三寸，厚寸有半，龍首，其中蛇交，韋當，楅髹。")

The oracle bone character representing bi (楅) is not immediately apparent. But the sound of bi in archaic Chinese pronunciation was close to another character, *bei* (蓍) which was represented by the following seven sample oracle bone characters:



15. 徐中舒：《甲骨文字典》(成都：四川辭書出版社，1988)，頁139。

There can be little doubt that the oracle bone characters, which clearly depict arrow racks, are the evolutionary precursors, with an identical sound,¹⁶ of the character *bi* (楅) which is used in the *Book of Rites*.

Whatever arguments there may be about when the *Book of Rites* was reduced to its present written form, it does nevertheless appear to be built around a core of technical vocabulary so old that it can be traced back to the pictorial layer of oracle bones dating from before 1000 BC.

But what did the archery ritual as a whole represent? The Archery Ritual of the Shires was a significant event, organized twice a year by the Prefect of each county, to select the highest-qualified officials to serve the Zhou royalty. That at least was the ideal. Guan Zi pointed out that where there was an enlightened ruler, the vassals would devote themselves to offering up their best qualified candidates to him; whereas if the ruler was lawless, then the vassals would keep their best qualified candidates to themselves.¹⁷

From the preceding chapters, it should be apparent that although archery played a role in military preparedness, it was more than just a military skill. Indeed, in the Zhou period and before, it was readily admitted that archery equipment (射器) and arms (兵器) were invented by different mythical inventors.¹⁸ And in the Zhou period, they came under a different classification.¹⁹ To interpret the archery rituals as a simple test and display of military skills²⁰ seems quite inadequate.

As can be seen from the text of the Archery Ritual quoted in Chapter 5, the context of the main archery ritual (大射) was an acceptance test for officials presented to the king in the tribute. A second, very important element was the triannual selection of the same officials at the prefecture level (鄉射).

The rituals, in fact, were the culmination of an educational process spanning the youthful years of the Chinese aristocracy of the Zhou period. This process took place in a district training centre (some would say, a school) called a *xu* (序) and were conducted by the Prefect twice a year, in the spring and autumn.²¹ The *xu* was reckoned to have been a very

16. See for example the character '𠄎' in 徐中舒：《甲骨文字典》（成都：四川辭書出版社，1988），頁215。

17. 《管子·明法解》。

18. See Chapter 2, pp. 9–13.

19. 《周禮》：“閭有祭器，黨有射器，州有兵器……”。

20. As, for example, 毛禮銳、沈灌群：《中國教育通史》（濟南：山東教育出版社，1985）。

21. 《周禮·地官·州長》：“春秋以禮會民，而射於州序”。

old institution, dating back to the time of the Xia (夏), but known by different names in different periods (or dialects?).²²

The exact overall purpose of these training centres is not entirely clear, but archery was clearly an important element. The character *xu* (序) had an alternative form '榭', and in archaic Chinese both characters, together with the word for 'archery', *she* (射) were pronounced nearly the same (*djiaγ* or *rjiaγ*).²³ Mencius thought that the terms for 'training centre' and 'archery' were one and the same.²⁴



In the ancient bronze script,²⁵ there also existed a form of the character (*射),²⁶ illustrated above, which seems to represent a hall for archery practice.

This preoccupation of the written sources with archery as the central element of pre-Zhou education does not seem rational. Surely education in the ancient period must have given equal weight to other skills? Where are the formal examinations in ritual, music, charioteering, writing and arithmetic?

The answer probably is that archery was given pride of place because:

- it embodied a cultural heritage dating back some two thousand years before the Zhou period in which the archer shaman played a significant — if not leading — role in some of the dominant ancestral tribes of the Chinese people;
- archery had, for the same reason, come to represent manhood and domination over the environment, symbolized by the youth ritual of firing arrows in six directions;
- it represented a good method of differentiating between close contestants who had already been tried in other areas in which objective criteria might be difficult to develop. It represented justice being done and being seen publicly to be done.

It was, in fact, the tie-breaker in the ancient education system.

We shall, against this background, see in Chapter 5 how the archery ritual was interpreted by the Confucian schools in the Han Dynasty.

22. 《孟子》：“夏曰校，殷曰序，周曰庠。學則三代共之，皆所以明人倫也。”

23. 周法高：‘*Compendium of Phonetics in Ancient and Archaic Chinese*’《遠東博物館館刊》，1954。

24. 《孟子·滕文公上》：“序者，射也。”

25. 《號季子白》銅盤。Col. 6, first character.

26. This modern character is reconstructed, but does not appear in Chinese literature.

軒窗聊可習仙的示南登轉箭
初辭苦橫弓先視棚驚馬心一
雁海連臂兩猿膝直知王所
以誰見魏舒解一心不死對世棄朱
苦藤擇賢方玄此休庵欣得朋

Though I might study at the court of the Yellow Emperor,
 My spiritual target is set up not at the south of some range.
 As the arrow revolves, it is as if I feel the nock for the first time;
 As I level the bow, I seek my target anew.
 Let but the sound of the string
 be enough to bring down the lone goose!
 Let but the levelling of my shoulders
 Be enough to send the two apes scuttling for cover!
 May I know direct the skill of Wang Ji!
 May I share the Skill of Wei Shu!
 My consciousness is undivided;
 I am unmoving as an ancient tree.
 My mind is disconnected;
 Like tumbleweed.
 Selecting honourable associates
 Comes down to this:
 Passing round the cup
 And enjoying new-found friendship.

A Poem at the Shooting Hall of the North Park (《北園射堂射詩》)
 by Yu Xin (庾信) (513–581)

Geng Lei brought down a lone goose with just the sound of his bow-string. The goose was tired and in pain; its honking was melancholy; it had become detached from its flock. The sound of the string was like the straw breaking the camel's back: it alone was enough to break the goose's heart and the bird fell to the ground.

The King of Chu shot a pair of apes. One was hit and its companion tended its wounds. The King regretted acting against nature's will.

Wang Ji and Wei Shu were popular statesmen and renowned archers of the Jin Dynasty.

Calligraphy by Li Xinbao (李鑫寶)



The Confucian Ideal

The archer in China has always been aware of the proud tradition to which he belonged, including the folklore and romances from the earliest times — albeit sometimes in a confused form. The Confucian interpretation of the archer's ideals, however, was an explicit part of the ideology of China that every archer after Confucius' time was required to know.

Confucius (孔子) lived from c. 551–479 BC. He was a native of the state of Lu (魯), one of the states which coalesced out of the collapse of the Western Zhou Dynasty. His influence on Chinese culture was immense, and yet his ideas were not accepted as a state philosophy until long after his death.

He lived at a time when numerous states vied among themselves for overall power following the collapse of the Zhou Dynasty. Diplomatic conventions and social rules were well-established during the period in which Confucius lived; the customs of war and the rituals and sanctions of alliance were cruel. The aristocracy lived by an elaborate code of honour and engaged in highly stylized warfare with set-piece engagements in which the chief protagonists were unlikely to come to harm in the heat of battle. They might nevertheless easily become ritual sacrifices or commit honourable suicide. In the true warfare to the death (which was usually restricted to wars against non-Chinese tribes) the peasantry who made up the conscripted armies in such wars were treated as an expendable commodity.¹ But in

1. Fighting divisions for these purposes were sometimes made up of criminals who were spared the death penalty, but who knew they were unlikely to survive battle.

internecine warfare the peasant soldiers may not have fared differently from their noble overlords.

Chinese history has looked upon the periods of the 'Spring and Autumn' (春秋) and the 'Warring States' (戰國) as an illustration of the sorry plight into which Chinese people could fall if not united under a strong dynastic leadership. Yet the same period witnessed a flourishing of Chinese literature and art which overshadowed much of what had gone before it. Excavations of tombs from the period show that technology, music, plastic arts and textiles were highly developed; and the items interred with the tomb occupants suggest a refined lifestyle for an aristocracy with high aesthetic values.

This evidence does not lie well with the concept of unending warfare and deprivation. One suspects, therefore, that here again, history may have been rewritten or reinterpreted to suit later ideologies.

Confucius' role in the politics of his time was to offer his services to one ruler after another as a consultant, seeking to influence them away from the prevailing *machismo* and pursuit of hegemony over their neighbours. He sought to establish an alternative ideal from the *macho* warrior: an ideal of scholarship, peaceful coexistence and submission among clearly defined hierarchical groups, at the family level, between the citizen and the state and between the state and Heaven. Time and again, he hoped that rulers would employ him in an official position, or even grant him the right to run a district according to his own ideals so that he could prove the validity of his theories. He never succeeded.

Confucius was no revolutionary. He sought to set within his utopian political framework as much as he could of the established social system and religious beliefs of the time, while at the same time rejecting excess in the form of conspicuous consumption and cruel practices such as burial of humans as tomb offerings. So his ideals accommodated ancestor worship and the patriarchal, male-oriented beliefs of his time. As the previous chapters have shown, part of this package of beliefs was the magical power of the bow and arrow.

The bow — its magical properties aside — was an instrument in warfare and hunting. How could Confucius reconcile these two essentially competitive roles with a philosophy of pacifism and non-competitiveness? This is how he put it:

SAI

孔子曰：“君子無所爭。必也：射乎！揖讓而升，下而飲，其爭也君子。”

Confucius said, 'A refined person has no use for competitiveness. Yet if

he cannot avoid it, then let him compete through archery! For on entering the archery range he will salute and show consideration for other competitors, and on leaving the range he will share ceremonial wine with them, and thus even in competition he will be acting according to the principles of refined conduct.'

In fact, Confucian hagiography holds that Confucius himself was an able archer and a teacher of archery. His permissive attitude to archery may, therefore, have contained an element of self-interest. At the same time, it was recognized that the bow and arrow were more than a weapon, and that by his time, organized archery had become very ritualized. Nevertheless, its competitive nature was clear, otherwise why would Confucius have to excuse it?

Record of the Rites: Appropriate Behaviour in Archery 《禮記·射義》

The book or ritual with which Confucius is most closely associated is the *Record of Rites* (禮記) which contains a section entitled 'Appropriate [Behaviour in] Archery' (射義). This section of the classic has sometimes become known as the 'Archery Classic' (射經) and is the first of a number of writings known under that name. The text of it is:

5B1

古者，諸侯之射也，必先行燕禮。卿、大夫、士之射，也必先行鄉飲酒之禮。故燕禮者所以明君臣之義也。鄉飲酒之禮者，所以明長幼之序也。故射者，進退周還必中禮。內志正、外體直，然後持弓矢審固。持弓矢審固然後可以言中。此可以觀德行矣。

In ancient times, the nobles were required to perform the Ritual of Yan before they performed their Archery Ritual. The feudal lords, sheriffs and qualified officers were required to perform the Wine Drinking Ritual of the Shires before they performed their Archery Ritual. This was because the Ritual of Yan served to throw light upon an official's righteousness; and the Wine Drinking Ritual of the Shires served to throw light on seniority. Thus, archers were required to meet the requirements of the rituals on entering, leaving or making turning movements in any direction. When their minds were composed and their posture straight they grasped the bow and arrow and concentrated. Only when the archer had grasped the bow and arrow and concentrated was

it possible to talk of meeting the requirements of the rituals. This was a means of assessing their virtuous conduct.

5B2

其節，天子以《騶虞》為節。諸侯以《貍首》為節。卿、大夫以《采蘋》為節。士以《采芣》為節。《騶虞》者，樂官備也。《貍首》者，樂會時也。《采蘋》者，樂循法也。《采芣》者，樂不失職也。

As to themes, the Emperor adopted the *White Tiger* hymn as his theme; the Nobles adopted the *Raccoon's Head* hymn as their theme; the senior officials and sheriffs adopted the *Picking Apples* hymn as their theme; and the qualified officers adopted the *Picking Mulberry Leaves* hymn as their theme. The *White Tiger* hymn symbolizes that all the officials are in attendance; the *Raccoon's Head* hymn symbolizes that attendance upon the Emperor for tribute is timely; the *Picking Apples* hymn symbolizes adherence to the Doctrines; and the *Picking Mulberry Leaves* hymn symbolizes not failing in one's official duties.

5B3

是故，天子以備官為節。諸侯以時會天子為節。卿、大夫以循法為節。士以不失職為節。故明乎其節至志以不失其事，則功成而德行立。德行立則無暴亂之禍矣。功成則國安。故曰：射者，所以觀盛德也。是故，古者，天子以射選諸侯、卿、大夫、士。

Thus the Emperor took educating of his officials as his theme; the nobles took timeliness in attending on the ruler as their theme; the senior officials and sheriffs took adherence to the Doctrines as their theme; and the qualified officers took not failing in their official duties as their theme. Thus, they highlighted their respective virtues and impressed them on their minds so that they would not fail in their duties; and thereby their skills were rounded out and their virtuous conduct established. With their virtuous conduct established, there could be no question of the risk of a breakdown of law and order. So in rounding out their skills, they also assured the security of the State. Thus, it is said that archery is a means to examine the extent of a person's virtue. For this reason, in ancient times the Emperor used archery to select nobles, senior officials, sheriffs and qualified officers.

5B4

射者，男子之事，因而飾之以禮樂也。故事之盡禮樂，而可數為以立德行者，莫若射，故聖王務焉。是故，古者，天子之制諸侯歲獻貢士於天子，

天子試之於射宮。其容體比於禮，其節比於樂，而中多者得與於祭。其容體不比於禮，其節不比於樂，而中少者不得與於祭。數與於祭而君有慶。數不與於祭而君有讓。數有慶而益地，數有讓而削地。

Archery was a duty of male heirs, therefore it was accompanied by ritual hymns. Thus to carry this duty out and to perform the rituals and hymns to the fullest extent, and to do this repeatedly in order to establish their virtuous conduct, there was nothing to compare with archery. For this reason, the Sage Kings devoted their efforts to it. Therefore, in ancient times, when the Emperor commanded the nobles to supply qualified officers in the annual tribute, he tested them in the Archery Hall. Their expression and posture were compared in the rites and their movements were compared in the musical accompaniment, and those who compared favourably would be admitted to the sacrifices. Those whose expressions and postures did not compare favourably in the rites and whose movements did not compare favourably in the musical accompaniment, would not be admitted to the sacrifices. The lords of those who were repeatedly admitted to the sacrifices were commended, while the lords of those who were not repeatedly admitted to the sacrifices were censured. Those who were repeatedly commended were rewarded with more feudal land, while those who were repeatedly censured suffered a reduction in their feudal land.

5B5

故曰，射者，射為諸侯也。諸侯君臣盡志於射以習禮樂。夫君臣習禮樂而以流亡者未之有也。故詩曰：曾孫侯氏，四正具舉。大夫君子，凡以庶士，小大莫處，御於君所，以燕以射，則燕則譽。言君臣相與於射，以習禮樂，則安則譽也。是以天子之制，而諸侯務焉。此天子之所以養諸侯而兵不用，諸侯自為正之具也。

Thus it was said: 'Archery is "shooting for nobility".' The nobles and the officials put all their hearts into archery in order to learn the rites and hymns. There has never been an instance, where all the officials studied the rites and hymns, in which they were subsequently scattered in defeat. Thus the hymn runs:

'Nobles in the royal lineage, perform all the four musical movements,
Then the sheriffs and the gentry, and all the officers,
Without distinction as to rank, come before the lord,
By performing the Yan Ceremony and the Archery,
Become confirmed in the Yan Rite and gain honour.'

This describes how the lords and officials came together at the Archery Rite, and by studying the rituals and the hymns, could coexist peacefully

and gain honour. As this was by imperial command, the feudal lords pursued it diligently. This was the Emperor's method of managing his feudal lords without force of arms, and the tool whereby the feudal lords were made to behave properly of their own accord.

5B6

孔子射於矍相之圃，蓋觀者如堵牆。射至於司馬，使子路執弓矢出延射，曰：“賁軍之將，亡國之大夫，與為人後者不入，其余皆入”蓋去者半，入者半。又使公罔之裘，序點，揚觶而語。公罔之裘揚觶而語曰：“幼壯孝弟，耆耄好禮，不從流俗，修身以俟死者不？在此位也。”蓋去者半，處者半。序點又揚觶而語：“好學不倦，好禮不變，旄其程道不亂者不？在此位也。”蓋廬有存者。

Confucius performed the Archery Ritual in the garden of the minister of Jue, and a wall of onlookers formed about him. The Archery Ritual had proceeded to the point where the presiding officer commanded Zilu to take up the bow and arrow and continue the shooting when Confucius said, 'All may enter other than generals who have been defeated in battle, civil officials who have lost their state in defeat or those who are despised by their peers.' Half of the total left and half entered. Again he commanded the presiding official, Xudian, to raise the chalice and address the gathering. The presiding official raised the chalice and addressed the gathering as follows: 'Are there any here who are young or mature but pious fellows, or elderly senior citizens who love the rituals, people who do not pursue the vulgar trends but refine themselves in the rituals their whole lives long? Let such people remain here!' Half of the total left and half remained. Xudian raised the chalice and addressed the gathering again as follows: 'Are there any here who are tireless in their pursuit of knowledge, unbending in their love of the rituals, people who even in their twilight years keep to the correct path and never go astray? Let such people remain here!' By that time there was hardly anyone left.

5B7

“射”者為言“繹”也，或曰“舍”也。“繹”者：各繹己志也，故心平體正，持弓矢審固。持弓矢審固，則射中矣。故曰：為人父者，以為父鵠；為人子者，以為子鵠。為人君，以為君鵠；為人臣者，以為臣鵠。故射者，各射各之鵠。故天子大射謂之射侯。射侯者，射為諸侯也。射中則得為諸侯；射不中則不為諸侯。

'Archery' has been described as 'expression', or as 'emotional release'. 'Expression' is expression of one's own inner self; thus the mind must be at peace and the posture erect, and upon taking up the bow and arrow,

one must concentrate. With the bow and arrow in hand, and fully concentrating, you will hit the target. Thus it is said, 'As a father, being a good father should be your target; as a son, being a good son should be your target. As a lord, being a good lord should be your target; as an official, being a good official should be your target.' So each archer shoots at his own target. Thus the Emperor's Great Archery Ritual is referred to as 'Shooting for Nobility'; the aim of the shooting is to become ennobled. By succeeding in the Archery Ritual, one could become ennobled; by failing, one could not do so.

5B8

天子將祭，必先習射於澤。澤者：所以擇士也。已射於澤，而後射於射宮。射中者得與於祭，不中者不得與於祭。不得與於祭者有讓，削以地。得與於祭者有慶，益以地。進爵紬地是也。故男子生桑弧蓬矢六，以射天地四方。“天地四方”者，男子之所有事也；故必先有志於其所有事，然後敢用谷（穀）也，飯食之謂也。射者仁之道也。射求正諸己。己正而後發，發而不中則不怨勝己者，反求諸己而已矣。

Before the Emperor conducted the Sacrifices, one was required to practise archery at the Ze Hall. The Ze Hall was the means of selecting qualified officials. Only when the archery in the Ze Hall had been completed could one perform the Great Archery Ritual in the Archery Hall. Those who succeeded in the Great Archery Ritual were admitted to the Sacrifice, while those who failed were not. For those who were not admitted to the sacrifices, their feudal lords' lands were diminished. For those who were admitted to the sacrifices, their feudal lords' lands were increased. This is the meaning of 'Ennoblement or Disenfranchisement'. So when a male heir was born, he was presented with a mulberry bow and six reed arrows so that he could shoot heaven, earth and the four quarters. 'Heaven and earth and the four quarters' represent the duties of the male heir. Thus, the prerequisite was to be determined to carry out all one's duties; then and only then was he permitted to break his fast, thus symbolizing his ability to earn his daily bread. Archery was a path to righteousness. An archer sought rectitude in himself. When the archer himself is correct, then if he fires and misses, there is no point in resenting those who have beaten him: there is nothing for it but to seek the fault in himself.

5B9

孔子曰：“君子無所爭。必也：射乎！揖讓而升，下而飲，其爭也君子。”
孔子曰：“射者何以射，何以聽？循聲而發，發而不失正鵠者，其唯賢者乎，若夫不肖之人，則彼將安能以中？”詩云：“發彼有的，以祈爾爵。”

《祈》：求也。求中以辭爵(酒)也。《酒》者：所以養老也，所以養病也。
“求中以辭爵”者，辭養也。

Confucius said, 'A refined person has no use for competitiveness. Yet if he cannot avoid it, then let him compete through archery! For on entering the archery range he will salute and show consideration for other competitors, and on leaving the range he will share ceremonial wine with them, and thus even in competition he will be acting according to the principles of refined conduct.' Confucius said, 'How does the archer combine his shooting with listening to the ceremonial hymns?' 'Take your cue from the music, and if you miss the centre, how can you have been a loyal officer?' 'If you are among the unworthy, how will any of them ever score a bull's-eye?' The hymn goes: *'All you who shoot have your target: it is to pray for your ennoblement.'* 'Pray' is to seek to accord with the Rite so as to avoid 'taking the wine'. 'Taking the wine' signifies being supported in old age, being supported in sickness. 'To seek to avoid taking the wine' is to avoid becoming dependent on others.

This text encapsulates the Confucian view of the spiritual and mental approach to archery in the ritual setting (the only setting which Confucius considered acceptable). To many a modern reader who has learned archery, many of the ideas are completely in accordance with the modern western approach to target archery.

Paragraph 5B1 starts out by explaining that the nobles attending on the Emperor at the Great Archery Ritual performed the Ritual of Yan. The Ritual of Yan was one of the main rituals of the imperial court, performed from time to time to symbolize fealty to the monarch. The Wine Drinking Ritual of the Shires had as part of its function to distinguish participants by age and seniority. Seniority in Chinese society is not just a function of age, but also of ranking within the family hierarchy.²

The latter part of the paragraph explains that the conduct and movements of the participants in ritual archery were as important as the final outcome in terms of the score of hits. Another well-known quotation from Confucius is as follows:

5C1

射不主皮，為力不同科。

Archery is not principally concerned with scoring hits because participants are not matched in their strength.

2. For example, the son of an elder brother is more senior than the son of a younger brother, even if the younger brother's son is older.

The term for 'scoring hits' in fact means 'a pelt', because the archery rituals of ancient times used animal pelts as targets. What was to be understood by '*... because participants are not matched in their strength*'? The fact was, archers were already seeded by age and seniority before they fired a single shot. There was no point in reckoning the score of a young blood at the height of his physical strength, who could perhaps pull thirty kilograms, against the score of an old man with failing eyesight — especially if the old man was a duke or the Emperor himself. But an older participant might outshine a youngster in terms of posture, co-ordination with music, familiarity with the ritual and grace of movement.

As the extract from the Archery Ritual in the *Shires* in Chapter 4 showed, only the seeded pairs were competing in any real sense; and Confucius' quotation at paragraph 5A1 suggests that even within the pair, the junior of the two was to defer to the senior, and that after shooting, the senior was to show appreciation of such deference by serving a drink of wine. Thus, ritual archery was clearly not a competition but a celebration of ritual submission.

Paragraph 5B2 discusses the music used in archery rituals. The ritual was divided into three events: a demonstration of correct technique (the part described in Chapter 4), an event involving shooting by the participants but without scoring, and then the major event in which the shooting actually took place *in time to the music*.

What was the place of music in the archery rituals? We saw in Chapter 4 that ritual, music and archery went together with charioteering, writing and arithmetic as the basic school curriculum for the nobility in Zhou and pre-Zhou China. Paragraph 4B1 in Chapter 4 discussed the origin and purpose of the rituals.

The traditional view of the origin and purpose of ritual music (禮樂) are discussed in the Annex to the Section on Music of the *Record of Rites* (禮記·樂記).

5D1

凡音之起，由人心生也。人心之動，物使之然也。感於物而動，故形於聲。聲相應，故生變；變成方，謂之音。此音而變之，及于戚羽旄，謂之樂。樂者，音之所有生也，其本在人心之感於物也。是故，其哀心感者，其聲噍以殺；其樂心感者，其聲嘽以緩；其喜心感者，其聲發以散；其怒心感者，其聲粗以厲；其敬心感者，其聲直以廉；其愛心感者，其聲和以柔。六者非性也，感於物而後動。是故，先王慎所以感之者。故禮以道其志，樂以和其聲，政以一其行，刑以防其姦。禮、樂、刑、政，其極一也，所以同民心而出治道。

All musical tones arise within human consciousness. Human consciousness reacts to external stimuli. Emotions are a response to external stimuli and they are perceived in terms of musical tones. Musical tones interact and this gives rise to pitch; when pitches are combined in a series, they become melody. By varying the melody and adding choreography with spears, axes, feathers and yaks' tails, you have music. Music is a phenomenon born of musical tones, which in turn have their root in human emotional response to external stimuli. Given this, when the emotional response is melancholy, the corresponding tone of voice is piercing so as to wound the listener's heart; when the emotional response is happy, the corresponding tone of voice is warm so as to relax the listener; when the emotional response is high-spirited, the corresponding tone of voice is expansive so as to carry; when the emotional response is angry, the corresponding tone of voice is strident so as to put the listener on his guard; when the emotional response is respectful, the corresponding tone of voice is strict so as to promote righteousness in the listener; when the emotional response is amorous, the corresponding tone of voice is mellifluous so as to warm the listener's heart. These six [emotional responses] are not innate: they are reactions in response to stimuli. For this reason, the Sage Kings took precautions over things which could raise emotions. Accordingly, they used ritual to condition [the peoples'] intentions, music and dance to harmonize their voices, government to unify their behaviour and sanctions to curb their licentiousness. Ritual, music, punishment and government all had a single ultimate goal: to indoctrinate the people so as to make way for [the Ancient King's] sovereignty.

This unashamed analysis of the purpose of the education to which youthful nobility were subjected lends weight to the proposition that the central role of ritual and its accompanying music was to condition and indoctrinate. In fact, Chinese culture has traditionally regarded law and punishment as a totally inadequate framework for ensuring the preservation of public order (although elaborate systems of law and punishment have always existed). It is the pursuit of self-restraint through the understanding and practice of ritual which is regarded as the best assurance of public order. This perception persists to this day and forms the underlying basis for the Western view of Chinese society as a society where respect for the individual in authority is more important than a respect for written laws.

From the annotation of the Music Ritual just quoted, we should also understand that 'music' had 'dance' as an integral element in it. The reference to 'spears, axes, feathers and yaks' tails' refers directly to the props used in the 'Lesser Dance' (小舞) which was again part of the educational programme of young nobility.³

3. 王克芬：《中國舞蹈發軔史》（臺北：南天書局，1991），頁50。

The titles of the four hymns quoted refer to ritual hymns from the *Book of Songs* (詩經), one of the most famous Chinese classics. It comprises a collection of folk songs and ritual hymns, some of which may date back to the earliest memories of Chinese tribal society. Their lyrics are enigmatic and it cannot always be said that they refer directly to the concepts that paragraph 5B2 ascribes to them.

The first hymn, the 'White Tiger' (騶虞) may in fact be the name of a chieftain or the title of an official charged with defending the borders of the country. A writer who lived a little after Confucius, Mo Zi (墨子) (c. 450 BC) believed it was written at the behest of King Cheng of Zhou (周成王) around 11–10th century BC,⁴ but it has more of the feel of an ancient hymn praying for success in the hunt.⁵

The second hymn, 'The Racoon's Head', has been lost.⁶ But in his article 'Early Chinese Target Magic', Jeffrey K. Riegel⁷ has reconstructed what is probably the most important part of the original from elements recorded in the 'Examination of Works' in the *Rites of Zhou* (《周禮·考工記·梓人》). It appears to be a magical incantation threatening members of the nobility who do not pay timely tribute to the king with being turned into archery targets themselves! The hymn was also synthesized in the Song Dynasty by Sima Guang (司馬光),⁸ mainly, as he explains, to provide something to sing at the ceremony, taking into account the fragments recalled by Han commentators.

The remaining two hymns are close to each other in terms of expression and content, and sing of the gathering of materials by women in preparation for ritual sacrifices.

Paragraph 5B3 explains the interpretations which had come to be attached to these four hymns. It is difficult to speculate how these interpretations of the ancient hymns came about. Part of the process is attributable to a desire on the part of Han Confucian scholars of the 'New Text School' to mould the little-understood contents of ancient magical hymns and tribal incantations to meet their own political ends.

In the schooling of the nobility in ancient China, music and ritual came together as a form of social indoctrination. You can see from the hymns adopted for the archery ritual that the central themes of the indoctrination were: educating the officials (備官), timeliness in attending

4. 《墨子·三辯》：“周成王因先王之樂，又自作樂，命曰‘騶虞’。”

5. 葉舒憲：《詩經的文化闡釋》（武漢：湖北人民出版社，1994），頁 68–69。

6. 《義禮·鄭玄註》。

7. *Journal of Chinese Religion* No. 10, 1982.

8. 司馬光《投壺儀節》：“狸首之班然執女手之卷然曾孫侯氏四正具舉大夫君子凡以庶士小大莫處御于召所以燕以射則燕則饗。”

on the ruler (時會), adherence to the doctrines (循法) and not failing in duties (不失職). The aim of the education process was to round out skills and establish virtuous conduct. Skills (功) (among which we must assume were included military skills) assured national security, while virtuous conduct (德行) assured peaceful coexistence. Archery permitted these intangible qualities to be observed (射者，所以觀盛德也), and so we can regard it as the quality control test of the education system.

Paragraphs 5B4 and 5B5 reinforce the importance of the archery ritual in the quality control process. As with aspects of social leadership in those times, it was an exclusively male activity. The schools themselves were all-male. In ancient Chinese society, aristocratic women were schooled at home in skills supporting silk and textile production and the preparations for sacrifices. Although these female roles were not leadership roles, neither were they crude labouring tasks without importance. In the period up to the Zhou at least, the role of women, while subordinated, was never reduced to the extent that it was to become by the end of the imperial period of Chinese history. Only male clan members could partake in the sacrifices and thus sing and dance to the hymns (which nevertheless at the superficial level were frequently about women, or had lyrics composed from the woman's point of view). The paragraph finally makes it plain that even males could only take part in the sacrifices once they had passed the quality control test of the archery ritual.

Paragraph 5B6 is a favourite archery tale relating to Confucius which probably accounts for the tradition that he was an archery instructor.

Paragraph 5B7 discusses a vital issue: why does archery demonstrate more than who is the best shot? Why is it more than just a military or hunting skill? The argument presented is that the combination of ideological indoctrination, musical expression and physical movements required to carry out the ritual of the archery shot combine to permit one's inner thinking to become manifested (繹). This is illustrated by various qualities: fatherhood, filial piety, management, service, all relating to an aim or 'target' (鵠). Finally, the paragraph explains that the kings of old sought to use archery to select the members of the feudal aristocracy.

In his article previously referred to, Jeffrey K. Riegel argued that the targets used in the archery rituals represented errant feudal lords, reduced to animal form as represented by the various animals painted on the centres of the targets. He believed that the purpose of the ritual was to discipline through a magic ritual those feudal lords who did not pay homage to the king at the appropriate time. This is not consistent with paragraph 5B7, which explains the targets in terms of positive societal values to be aimed at. Such a positive gloss, however, could have come about at a relatively late period (say, towards the end of the Zhou Dynasty) and the threat

against the target which seems to be implicit in the 'Racoon's Head' hymn (*'Be compliant, dear target, for if you are not, I shall stand you up and shoot you!'*) might have been more meaningful to feudal chieftains in more ancient times.

A particular feature of this part of the text is its use of puns. The most striking — and the pun which has attracted most speculation⁹ — is on the word 'target' (侯) and the words for 'feudal lords' (諸侯). There can be little doubt, looking at the oracle bone script,¹⁰ that the character concerned '侯' originally represented an arrow sticking into some sort of target. Two other words were closely linked in sound and meaning: a 'duke' (后) and a border security guard ([斥] 候).

There is no ready solution to the vexed question of why a target and a feudal lord should have come to be written with the same character. In fact, there need be no solution: when the Chinese writing system evolved, pictorial characters were frequently borrowed to write other words which could not be rendered so easily with a picture. The earliest commentaries tell us that the words for 'feudal lord' (侯) and 'border security guard' ([斥] 候) — now differing by a single stroke — were originally one and the same. Borrowings were generally made from within groups of homophones with related meanings. Both 'target' and 'border security guard' belong to a military category; thus borrowing was quite natural. Confucian scholars later evolved elaborate 'explanations' for different words which had been written with the same character, and no doubt felt that the relationship between 'feudal lord' and 'target' needed a better explanation than simple expedience on the part of some ancient scribe.

The same paragraph also draws our attention to three words, 'shoot' (射) (pronounced **zdjiag* in ancient Chinese) and 'release' (舍) (pronounced **st'jiag* in ancient Chinese). These two words, given their ancient pronunciation, could have been puns or rhymes.

The text then draws our attention in a very deliberate way to another set of puns. The first (in paragraph 5B7) is 'manifest' (繹) (pronounced **d'iak* in ancient Chinese). Then in the following paragraph, we have '天子將祭，必先習射於澤。澤者所以擇士也。' (*Before the Emperor conducted the Sacrifices, one was required to practise archery at the Ze Hall. The Ze Hall (澤) was the means of selecting (擇) qualified officials.*) This brings together three characters with the ancient Chinese pronunciation **d'iak* (繹), **d'ak* (擇) and **d'ak* (澤).

9. 陳槃：〈“侯”與“射侯”〉；勞榘：〈“侯”與“射侯”後記〉，《中央研究所歷史語言所年報》，1950年第22刊，頁121-128。

10. 許進雄：《古文諧聲字根》（臺北：臺灣商務印書館，1995），頁421，頁421。

The three sets of puns that these two paragraphs set out to draw our attention to are:

<i>Character</i>	<i>Ancient sound</i> ¹¹	<i>Association</i>
侯	*gew	target
(諸) 侯	*gew	feudal lords

<i>Character</i>	<i>Ancient sound</i>	<i>Association</i>
射	*zɔ'jiag	shoot
舍	*st'jiag	release of emotion

<i>Character</i>	<i>Ancient sound</i>	<i>Association</i>
繹	*d'iak	manifest
擇	*d'ak	select
澤	*d'ak	irrigation

In drawing our attention to these puns, the text brings out the essence of the ritual and seeks to explain the relationship between:

- the ranking system in ancient feudal society and the setting of societal goals;
- archery and the release of the subconscious for outside inspection; and
- manifestation of inner qualities and selection of candidates for promotion.

We should not be surprised to find a pun relating to irrigation. The Ze Hall, where archery was practised before the main event, was for praying for the fertility of the fields. We have previously seen the relationship between ritual archery and praying for rain.

Paragraph 5B9 quotes the famous dictum of Confucius: archery is an acceptable form of competition because it is shorn of all elements of violence. The target is something remote from all competitors: it is an abstract ideal. And the ritual is accompanied (as we saw in Chapter 4) with elaborate, formalized expressions of deference. The end of the paragraph refers to an important element of ritual archery, i.e. the winner has to serve wine to the losers. This acceptance of wine, the classic explains, signifies that if you cannot compete successfully, you are therefore reliant on others for your living. This is perhaps an element which harks back to when the ritual arose within a tribal society in which hunting was the

11. 周法高：《漢字古今音彙》（香港：中文大學出版社，1974）。

only way to gain a subsistence. He who could no longer compete in the hunt had to rely on those more skilful than himself for his daily food.

What Was It Really Like?

If the *theory* of the ritual progression through the Rite of Yan, the Archery Ritual, and the ritual sacrifices and prayers to the ancestors was as the text we have just studied sets out, then what about the *practice*? One satirical poem from the famous *Book of Songs* (詩經) suggests that the practice might have been very different.

賓之初筵

賓之初筵，左右秩秩。
簋豆有楚，棗核維旅。
酒既和旨，飲酒孔偕。
鐘鼓既設，舉觴逸逸。
大侯既抗，弓矢斯張。
射夫既同，獻爾發功。
發彼有的，以祈爾爵。
簫舞笙鼓，樂既和奏。
烝飭烈祖，以洽百禮。
百禮既至，有壬有林。
錫爾純嘏，子孫其湛。
其湛曰樂，各奏爾能。
賓載手仇，室人入又。
酌彼康爵，以奏爾時。
賓之初筵，溫溫其恭。
其未醉止，威儀反反。
曰既醉止，威儀幡幡。

The Guests Have Taken Their Seats

The guests have taken their seats;
bowing to left and right as Ritual demands.
The place settings are laid out regularly;
pickles and nuts neatly arranged.
The wines are stirred, the right mix of flavours;
each sip taken in perfect unison.
Now see the bells and drums set in position;
cups are raised and toasts resound around the hall.
See the great target stand put up;
bows and arrows placed in their positions!
Now the archers have been seeded;
'I compliment you on your shooting skills!', they say.
'All you who shoot have your target;
it is to pray for your ennoblement!'
After shooting comes the flute dance with reed-pipe and
drums; hear the harmonious performance of the music!
'Let the notes waft up so our illustrious ancestors can enjoy them;
this is how we adhere to all the rituals!'
Now see all the rituals reach their climax;
in all their pomp, not a detail omitted!
'We pray for your unalloyed happiness;
may our future generations enjoy their share also!
May their good fortune be expressed through the music;
let every note sing of your power!'
Now the guest of honour raises his hands in a libation to
the ancestors; and the attendant comes in to repeat the
libation to the 'representative of the dead'.¹²
'Now we all take the final draft;
to pray for your timely attendance at our ceremony!'
The guests have taken their seats;
reverent in every civility.
While they are still sober;
the deportment of each is the mirror of the other's.
But now they're starting to get tipsy;
the deportment of each displays some light-heartedness.

12. The dead ancestors were represented at the ritual prayers by a young member of the clan. Libations to the ancestors were repeated to him.

- 舍其坐遷，屢舞僂僂。 They start leaving their places, moving around;
their gait is tipsy, they lurch uncertainly.
- 其未醉止，威儀抑抑。 Just then when they were still sober;
their deportment was circumspect and grave;
- 曰既醉止，威儀忸怩。 But now they have got tipsy;
their deportment is far from polite.
- 是曰既醉，不知其秩。 That's what happens when you get drunk;
you lose your sense of decorum!
- 賓之醉止，載號載呶。 The guests have taken their seats;
all voices are raised in a hubbub.
- 亂我籩豆，履舞傲傲。 Whoops! There go our nice tidy place settings!
Some blunderer's knocked them for six!
- 是曰既醉，不知其郵。 That's what happens when you get drunk;
you lose control over your bad behaviour.
- 側弁之俄，履舞傴僂。 Here comes one fellow with his cap of office tipped over
one ear; such blundering about carries on non-stop.
- 既醉而出，並受其福。 If you've had too much to drink and you make a timely exit;
then your good sense will be rewarded twofold.
- 醉而不出，是謂伐德。 But as to he who gets drunk and stays around;
that is an attack on his own virtue.
- 飲酒孔嘉，維其令儀。 Drinking wine is a noble pursuit;
only when carried out with some decorum.
- 凡此飲酒，或醉或否。 Among those who drink;
some can take it, and some can't.
- 既立之監，或佐之史。 You could make up rules and regulations;
you could even appoint officers to enforce them.
- 彼醉不臧，不醉反恥。 But all drunkards are buffoons;
an embarrassment those who remain sober.
- 式勿從謂，無俾大怠。 There is no good in arguing with a drunkard;
you're wasting your breath if you try to curb their
abandon.
- 匪言勿言，匪由勿語。 Don't waste time telling them they're talking nonsense;
don't tell them their actions are senseless.
- 由醉之言，俾出童叟。 Any talk of sense from a drunkard;
is a contradiction in terms (a lamb with great horns).
- 三爵不識，矧敢多又。 Three cups under and they don't remember a thing;
the more they drink, the more sure of themselves they
get!

虞 繁 已 復

人 氏 悲 揭

招 夕 軒 楚

不 孤 主 王

進 工 跡 風

*Responding only to your rightful master,
Masterpiece over which the Bowyer of Jin
Slaved through the night,
Alas, we may no longer tread
In the footsteps of the Yellow Emperor,
Yet I hope to revive the spirit of the Kings of Chu.*

Ode to a Bow (《詠弓詩》)
by Emperor Yuan of Liang (梁元帝) (reg. 552–555)

The woodsman need only respond to his lord if summoned with the appropriate decorum (Mencius). See 7B1 for the Bowyer of Jin. Xuan Yuan (the Yellow Emperor) invented archery. The Kings of Chu were the greatest patrons of the art.



Bows, Arrows and Targets

Different ancient cultures may leave more or less complete records of things in daily use, depending on what importance those things held for the people of the culture. But to hope for a detailed brief on how bows, arrows and targets were constructed to be handed down for two to three thousand years is a tall order. Yet amazingly, Chinese culture has left us such records.

Bows in China have always been made of perishable materials, and it is only in exceptional circumstances that archaeological remains have provided whole bows that we can examine. The most ancient bows actually preserved that we can examine now date from the Warring States (戰國) period spanning 475–221 BC.¹

China's earliest consistent form of writing, the oracle bones script that dates from about 1500–1100 BC, contains many examples of words relating to bows which were originally pictorial representations. A form of script should not be a very reliable indicator of the shapes of bows in use when the form of writing was current: after all, writing — even with pictographs — becomes very stylized. Nevertheless, in dozens of ancient characters depicting a bow — both from the oracle bones and from inscriptions on ancient bronze vessels — it is hardly possible to find any which do not clearly denote a composite, recurved design with a strongly setback grip.

1. Some illustrations of such bows can be seen in 楊泓：《中國古兵器論叢》，圖版 31（北京：文物出版社，1985）。



Interestingly, over half the examples of pictographs depicting bows, such as those illustrated above, show a feature at the top end.² Consistently, wherever this feature is visible, it points forward in the direction the arrow would be shot. It is difficult to guess what this feature represented, but it seems that whether because of the addition of some extension at the top or because of how the string was conventionally attached at the upper string nock, the general visual effect of bows at that time was not symmetrical.

Indirectly, much can be understood about ancient bow designs from durable items used to reinforce the bow and decorate it. Bow-tips and parts of the grips were sometimes made of bronze, and in other cases, jade was used for the tips and for decoration on the body of the bow. An example of such decorations, dating from the Shang Dynasty, was excavated in a grave at Xiaotun (小屯) near Anyang in the 1940s and described in an article by Shi Zhangru (石璋如) in 1950.³

Shi Zhangru based his study on studies of recent bow manufacture in China in the 1940s, and reconstructed the Shang Dynasty bow as a static-tip recurve bow. However, the static-tip design is not clearly apparent in the illustrations which survive from before the Ming Dynasty, and it seems that while certainly recurved, the ancient bows were more likely to have flexible recurved tips.

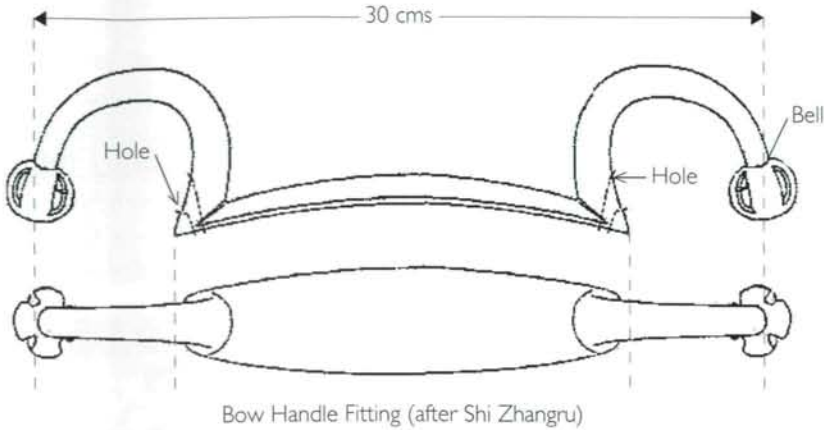
Shi Zhangru was puzzled — as many since him have been — by an object that has been found in association with many ancient burials containing bows from the Shang Dynasty up to the Han Dynasty. The appearance of the object is shown on p. 89.⁴

Shi Zhangru's find is particularly interesting because it was in a position directly associated with other identifiable parts of a bow. Other examples were found together with bow parts placed among horse and carriage fittings, so there is no way of knowing whether the fitting belonged to the bows or the carriage. In the burial where Shi found these items, there were also the remains of horses, but at a significant distance away from the bow fittings.

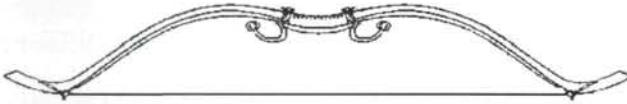
2. In oracle bone script, all characters which were oblong had the long axis oriented vertically. But the feature appears to be intended to represent the upper tip of the bow.

3. 石璋如：〈小屯殷代的成套兵器〉，《中央研究所歷史語言所年報》，1950年第22刊，頁19-59。

4. Following further research the author has concluded in 2001 that the object illustrated at the top of p. 89 was attached to the charioteer's belt to secure the reins while he was shooting.



From the position of the mysterious fitting in the burial, Shi reconstructed its relationship to the bow, when strung, as follows:



While this seems a sensible reconstruction given the way the various items were excavated, it looks as if this fitting — if this is the way it did fit — would interfere with the bow limbs at full draw. But assuming for the time being that the reconstruction is correct (for example that the horns on the fitting lay further back from the bow-limbs), then what would the fitting achieve? There are a number of possibilities:

- Ancient Chinese bows were made of relatively light materials but allowed for a heavy draw-weight. This results in rather low stability and a great deal of hand shock. The fittings were made of bronze and were quite massive. The addition of the bronze fitting at the grip would have added stability and reduced hand shock. The bells would have provided a pleasing jingle as the bow limbs vibrated following the release.
- The ancient bows were made of wood, horn and sinew, held together with a natural, water-soluble fish or bone glue and bound with silk and then lacquered. The grip was one of the parts subjected to the greatest stress. The glue at the grip was highly susceptible to moisture — so much so that (at least in more recent times) a silk handkerchief

was normally placed between the palm of the archer's hand and the grip to prevent the grip from becoming affected by sweat. It would also seem, if the illustration from the Warring States bronze vessel in Chapter 4 is accurate, that archers avoided handling the body of the bow, and held it by the string except when actually drawing. (See detail below.) The addition of the bronze fitting would prevent sweat from affecting the grip, as well as providing a reinforcement for the grip section.



Archers preparing to shoot from “錯嵌燕射水陸攻戰畫像壺” (成都百花潭十號墓)

- The bronze fitting might have provided additional purchase or protection of the grip while the bow was being strung. Unstrung, Chinese bows revert the reverse ‘C’ shape after a while. Reversing the recurve and stringing the bow — which might have a draw-weight of over 30 kg — was a difficult job and normally required some heating of the limb sections. Generally, either two people or a special jig was required to perform the manoeuvre. The bronze fitting might have also supported the grip when stringing in the field, thus avoiding exposing this fragile part of the bow to fire and risking damaging it.
- Finally, it is worth considering whether the fitting might have assisted in allowing the bow to be fired with one foot against the grip. This notion might seem far-fetched, but there is at least some evidence that this technique has been adopted in various places at various times.⁴

The *Rites of Zhou* (周禮) are traditionally attributed to Zhou Gong (周公), but are more likely to have arisen during the Han Dynasty. Part of the Rites is a section known as ‘An Examination of Crafts’ (考工記) which was ‘discovered’ later than its preceding five sections, and probably originated in the late Western Han Dynasty (about 2000 years ago).

4. Moseley, Walter Michael. ‘An Essay on Archery Describing the Practice of the Art in All Ages and Nations.’ London, 1792, p. 35 ff.

The 'Examination of Crafts' lists a number of crafts which were said to be accommodated in the royal palaces of the Zhou, and which produced tools and props associated with the royal rituals. The records include detailed accounts of the principles of construction of bows, arrows and targets. While we have no way of proving that the construction techniques in the 'Examination of Crafts' were very ancient, it is worth noting that the basic techniques used (including many details) were still being used in the 1930s.⁵ So if the techniques could remain current for two thousand years *after* the Han Dynasty, there is no reason why they could not have existed for a long period before.

The techniques in the 'Examination of Crafts' became the norm for the craft for the whole of the subsequent period when bows have been made in China.

How the Bowyer Makes Bows

6A1

The Rites of Zhou: Examination of Crafts under the Winter Officer, Number Six (弓人為弓〔周禮：冬官考工第六〕)

取六材必以其時。六材既聚，巧者和之。

- 幹也者，以為遠也。
- 角也者，以為疾也。
- 筋也者，以為深也。
- 膠也者，以為和也。
- 絲也者，以為固也。
- 漆也者，以為受霜露也。⁶

There are six materials which must be taken at the appropriate time.

- The bow stave is to give the bow distance.
- The horn is to give it speed.
- The sinew is to give it penetration.
- The glue is to bind it.
- The silk is to give it strength.
- The lacquer is to proof it against moisture.

5. 譚旦厝：《成都弓箭製作調查報告》，臺北：中央研究所歷史語言所年報，1951。

6. 冬官考工第六：“燕之角，荊之幹，胡之筋，……此材之美者也。” ‘The horn of Yan, bow-staves from Chu and arrow-shafts from the Western Barbarians . . . these are the finest materials.’

6A2

凡取幹之道七：柘為上，櫟次之，槩桑次之，橘次之，木瓜次之，荊次之，竹為下。

There are said to be seven materials for the construction of the bow-staves. In order of quality, they are: Zhe (*Cudrania tricuspidata*), Yi, Wild Mulberry, Chinese Orange, Papaya (*Carica papaya*), Thornwood and lastly, bamboo.

6A3

凡相幹，欲赤黑而陽聲，赤黑則鄉心，陽聲則遠根。凡析幹，射遠者用執，射深者用直。居幹之道，菑栗不迤，則弓不發。

When examining the [wood for the] bow-staves, you need look out for a dark brown colour and a ringing sound; if the colour is dark brown, then the wood comes from near the core; if the sound is ringing, then the wood has come from [a part of the tree] which is far from the root. When considering the bow-staves, then the ability to shoot far requires resilience [in the wood] and the penetration of the shot requires [that the wood be] straight. In preparing the bow-staves, the grain must not be twisted so that the bow will not warp.

6A4

凡相角，秋漚者厚，春漚者薄；稚牛之角直而澤，老牛之角紆而昔；⁷ 疾疾險中；⁸ 瘠牛之角無澤。角欲青白而豐末。

When examining the horn [for the face of the bow], if the horn is taken [from the animal] in the autumn, it will be thick; if taken in the spring, it will be thin. The horn of a young ox will be straight and moist; that of an old ox will be twisted and gnarled. When an ox is chronically ill, the core of the horn gets damaged. The horn of a thin ox will not be glossy. Ox horn must be clear white and solid at the point.

6A5

夫角之本，蹙於腦而休於氣。是故柔；柔故欲其執也。白也者，執之徵

7. “稚牛之角直而澤，老牛之角紆而昔。”註：“鄭司農(眾)云……昔讀為交錯之錯：謂牛角捫理錯也。玄謂昔讀履錯然之錯。”
8. “疾疾險中”註：“牛有久病，則角裏傷。”“疏：以疾疾為久病，故云牛有久病，險傷也。”(Chinese note: the horn of an ox which is chronically sick displays gnarling in the grain of the horn.)

也。夫角之中，恒當弓之畏。畏也者，必橈，橈故欲其堅也。青也者，堅之徵也。夫角之末，遠於胸而不休於氣，是固脆；脆故欲其柔也。豐末也者，柔之徵也。角長二尺有五寸，三色不失理，謂之牛戴牛。

The root of the horn is connected to the brain and receives the *qi*⁹ of the brain, which gives it flexibility; this flexibility is needed to make it resilient. Whiteness is an indication of resilience. The middle part of the horn needs to be attached to the face of the bow. The face of the bow must bend inwards, and this requires the horn to be elastic. Blackness is an indication of elasticity. The point of the horn is the furthest from the brain, and receives the least of the brain's *qi*, and therefore it is hard but brittle; and you need the most flexible of such hard, brittle horn. Solidity at the point is an indication of flexibility. A pair of horns about two feet and five inches (by classical Chinese measure), with all three colours present in an even grain, is said to be worth as much as a whole ox ('an ox wearing an ox on its head').

6A6

凡相膠，欲朱色而昔。昔也者，深瑕而澤，紵而搏廉。鹿膠青白，馬膠赤白，牛膠火赤，鼠膠黑，魚膠餌，犀膠黃。凡昵之類不能方。

Turning our attention to the glue, you need reddish colour and the glue must be aged. After ageing, the glue can seep deep into cracks and fill them, so that when it is twisted, it will not crack under torque. Glue made from deer is grey, glue from horses is pink, from oxen is bright red, from rats is black, from fish is translucent, and from rhinoceros is yellow. No close [substitute] for these types [of glue] can be effective.¹⁰

6A7

凡相筋，欲小簡而長，大結而澤。小簡而長，大結而澤，則其力為獸必剋；以為弓，則豈異于其獸？筋欲敝之敝。漆欲測，絲欲沉。

Turning our attention to the sinews, you need long, narrow strips with sturdy ligaments. Long, narrow strips with sturdy ligaments made the animal from which they came agile; so if you are making a bow from them, it cannot be any less agile than the animal. The sinews must be broken down into filaments, the glue must be clear and the silk glossy.

9. *Qi* (氣) is a 'living essence' or 'life-force' widely referred to in Chinese texts.

10. The Mongolian bowyer, Mendbayar, has told me that after his supply of fish-bladder glue dried up, he tried modern chemical-based glues. All failed.

6A8

得此六材之全，然後可以為良。

When all these components have been assembled, they can be made into a fine [bow].

6A9

凡為弓，冬析幹而春液角，夏治筋，秋合三材，寒奠體，冰析灂。冬析幹則易，春液角則合，夏治筋則不煩，秋合三材則合，寒奠體則張不流，冰析灂則審環，春被弦則一年之事。

In constructing a bow, the wood for the bow staves is cut in the winter, the horn treated in the spring, the sinews processed in the summer, the wood, horn and sinews assembled in the autumn, the assembly set in the forming jig at the onset of winter, with the onset of frosts, the lacquer coating is applied in layers. When wood is cut in the winter, it splits along the grain; when horn is treated in the spring, it becomes pliable; when sinew is processed in the summer, it does not tangle; when the wood, horn and sinews are assembled in the autumn and the assembly set in the jig at the onset of winter, it retains its shape after forming; when the lacquer coating is applied in layers with the onset of frosts, you can examine the way it fractures. So by the time it is strung in the spring, a whole year has gone by.

6A10

析幹必倫，析角無邪，斲目必荼。斲目不荼，則及其大脩也，筋代之受病。夫目也者必強，強者在內而摩其筋。夫筋之所由轡，恒由此作。

The bow-staves have to be cut along the grain of the wood, the horn must be cut without being distorted and the knots must be gently planed down until smooth. If the knots are not gently planed down until smooth, then in the long term they will cause damage to the sinews. All the knots have to be strong, because internally they come into contact with the sinews. Whenever problems arise with the sinews breaking away from the bow stave, this is invariably the cause.

6A11

故角三液而幹再液，厚其帑則木堅，薄其帑則(需)〔𠵿〕，是故厚其液而節其帑。約之，不皆約。疏數必侔，斲摯必中，膠之必均。斲摯不中，膠之不均，則及其大脩也，角代之受病。夫懷膠於內而摩其角，夫角之所由挫，恒由此作。

So the horn has to be treated three times, and the bow-staves treated repeatedly. If the lamination to the riser is thick, the wood will be [sufficiently] reinforced, and if it is thin, the bow will be weak. So [the horn] must be treated to achieve the right thickness, and the bow-staves reinforced to the correct extent. The [silk and glue] binding is not necessary throughout [the whole length of the bow-stave]. The density of the binding must be regular, the planing of the limbs must be balanced and [the consistency of] the glue must be even. If planing of the limbs is not balanced and the glue not consistent, then in the long term they will cause damage to the horn. Whenever the glue coating comes into internal friction with the horn and the horn starts to splinter, this is invariably the cause.

6A12

凡居角，長者以次戛。恒角而短，是謂逆橈。引之則縱，釋之則不校。恒角而達，辟如終繼，非弓之利也。今夫茭解終而變焉，故校；於挺臂中有柎焉，故剿。恒角而達，引如終繼，非弓之利〔也〕。

Turning to the attachment of the horn, the long ones are used to reinforce the bow limbs. If the full length of the horn is too short [to extend the length of the limbs they are reinforcing], this is said to ‘counter the recurve’. On the draw the bow will be soggy, and the release will not be crisp. If the full length of the horn extends beyond the limb, it would be like strapping the bow to a bow-case: it would be a waste of the bow’s power.¹¹ The length of the horn and the bow limb must always correspond exactly, and bend together, then [the release will be] crisp; if there is some build-out at the grip where the forearm extends to it, then [the bow] will be agile. Having the full length of the horn extended beyond the limb is like strapping the bow to a bow-case: it is just a waste of the bow’s power.

6A13

橋幹欲孰於火而無羸，橋角欲孰於火而無燂，引筋欲盡而無傷其力，鬻膠欲孰而水火相得，然則居旱亦不動，居濕亦不動。苟賤工，必因角幹之濕以為之柔，善者在外，動者在內；雖善於外，必動於內，雖善亦弗可以為良矣。

11. The author wishes to thank traditional bowyers Vittorio Brizzi and Alessio Cenni of Bologna, Italy for their valuable advice: ‘If the horn is added to cover some of the rigid parts of the bow limbs, it adds redundant weight that the power of the bow will then have to be expended on moving. One of the tricks of bow-making is reduce the mass of the bow tips.’

The bow-staves are straightened by turning them over the fire, but they must not overheat; the horn is straightened by turning it over the fire, but it must not be scorched; when stretching the sinews, they must be pulled out to their full extent, but their strength must not be damaged [through overextending]. The glue must be heated in water with the fire at the right temperature. By doing so, [the bow] will not be adversely affected if it is placed in a dry place, nor in a humid one. One place [where craftsmen] try to skimp on workmanship is to try to bend the bow into shape when it is still wet. It looks fine from the outside, but it will be adversely affected internally. However nice it looks on the outside, the inside will have been adversely affected and as good as [the bow] may be [in other respects], it cannot be a fine bow.

6A14

凡為弓，方其峻而高其柎，長其畏而薄其敝；宛之無已，應。下柎之弓，末應將興。為柎而發，必動於綱。弓而羽綱，末應將發。

In overall construction of a bow, the string-nocks at the limb tips should be angular, the brace should be high, the limbs should be long and the lamination for the build-out at the grip should be narrow: this will allow the bow to remain in tune [with the string] no matter how far it is recurved. A bow which has a low bracing height will suffer vibration in the limb-tips.¹² This results in damage to the splice between the riser and the limbs when the bow is fired. The bow will weaken the splice and the [vibration from] the limb-tips will cause [the splice] to split.

6A15

弓有六材焉。維幹強之，張如流水。維體防之，引之中參。維角堂之，欲宛而無負弦。引之如環，釋之無失體，如環。

Six materials make up a bow. As long as you make the bow-staves strong, the draw will be [as smooth as] running water. As long as you take care to maintain the shape, it will always draw to its standard draw-length. As long as you use horn to support it, it will curve without putting torque on the string. So when you draw it back it comes round into a circle, and when unstrung, it does not lose this basic form: it settles back into a circle.¹³

12. This, again, is the advice of Vittorio Brizzi and Alessio Cenni.

13. Acknowledgements to Vittorio Brizzi and Alessio Cenni for this interpretation.



Chinese bow unstrung

6A16

材美，工巧，為之時，謂之參均。角不勝幹，幹不勝筋，謂之參均。量其力有三均，均者三，謂之九和。九和之弓，角與幹權，筋三侖，膠三鈐，絲三邸，漆三斛。上工以有餘，下工以不足。

Quality of materials, skill of craftsmanship and proper attention to timing in carrying out the work are called the 'three balances'. If the horn and the bow-staves are not mismatched, and the bow-staves and the sinews are not mismatched, that is another 'three balances'. The measurement of the weight of the bow also involves 'three balances',¹⁴ and together, these are said to make up 'nine harmonies'. A 'bow of nine harmonies' has wood for bow-staves and horn in equal measure; three *mou* (侖) of sinew, three *lue* (鈐) of glue, three *di* (邸) of silk, and three *yu* (斛) of lacquer.¹⁵ Higher quality craftsmanship will be generous with these quantities, while inferior craftsmanship will skimp on materials.

14. Zheng's note (鄭注) on this invokes a rather complex formula which, however, may well reflect contemporary craftsmen's views: "若桿勝一石，加角而勝二石，被筋而勝三石，引之中三尺。假命弓力勝三石，引之中三尺，弛其弦，以繩緩擲之，每加物一石，則張一尺。" Where any bare bow-stave has a draw-weight of one stone (about 27.8 kg), the addition of sinew will increase it to two stone, and a layer of horn will increase it again to three stone. If an order is made for a three-stone bow, that is for a standard draw-length of three (Chinese) feet (approx. 60 cm), then if the bow is unstrung and is suspended by a cord at the tips, then the addition of each stone will cause it to be drawn by one foot (approx. 20 cm). A simpler interpretation for the 'three balances' of draw-weight might be '矢量其弓，弓量其力'.

15. These are clearly all measures, but their modern equivalents are not known.

6A17

為天子之弓，合九而成規。為諸侯之弓，合七而成規。大夫之弓，合五而成規。士之弓，合三而成規。弓長六尺有六寸，謂之上制，上士服之。弓長六尺有三寸。謂之中制，中士服之。弓長六尺，謂之下制，下士服之。

A bow made for imperial use has a circumference of nine;¹⁶ a bow made for the nobility has a circumference of seven; a bow for a sheriff has a circumference of five and a bow for a qualified officer has a circumference of three. A bow of six feet six inches¹⁷ is called a 'first-class product' and is used for higher qualified officers; a bow of six feet three inches is known as a 'second-class product' and is used for middle-ranking officers; a bow of six feet is known as a 'third-class product', and is used for junior officers.

6A18

凡為弓，各因其君之躬，志慮血氣。豐肉而短，寬緩以茶，若是者為之危弓，危弓為之安矢。骨直以立，忿執以奔，若是者為之安弓，安弓為之危矢。其人安，其弓安，其矢安，則莫能以速中，且不深。其人危，其弓危，其矢危，則莫能以愿中。

All bows are made-to-measure to their owner's stature, having particular regard to the owner's strength of character and aggressiveness. For those who are short and stout, of a slow temperament, one must make a swift bow, but for the swift bow one makes slow arrows. For those with an upright stature, violent and vigorous in their movements, one makes a slow bow, but for such a slow bow one makes fast arrows. If the man, the bow and the arrows are all slow, then you cannot take advantage of speed in hitting the target, and the arrow will not penetrate. If the man, the bow and the arrows are all fast, then one cannot take advantage of marking the rhythm of the shot to hit the target.

6A19

往體多，來體寡，謂之夾臾之屬，則射侯與弋。往體寡，來體多，謂之王弓之屬，利射革與質。往體、來體若一，謂之唐弓之屬，利射深。

A bow which has a larger recurved section and less straight section is called a *Jiayu* type; it is used for target shooting and fowling. A bow

16. These are apparently standard draw-length factors.

17. Ancient Chinese measures, not modern ones. One ancient Chinese foot was approximately 20 cm. This bow was thus 122 cm.

which has a larger straight section and less recurved section is called a 'Royal' type; it is good for shooting at leather and armour. A bow with equal outward and inward curve is known as a *Tang* type and has good penetration.

6A20

大和無濇，其次筋角皆有濇而深，其次有濇而疏，其次角無濇。合濇若背手文。角環濇，牛筋黃濇，麋筋斥蠅濇。

The 'Great Nine-Harmonies Bow' has no hairlines in its lacquer finish; the next [grade] has hairline cracks to the lacquer on the sinew [back] and the horn [face], but they are at the centre; the next grade has hairline cracks, but dispersed; the next grade has hairline cracks [on the sinew back], but not on the horn [face] of the bow. Where the hairline cracks on a bow run together, they are like the lines on the back of a man's hand. The hairline cracks above horn are circular, those above ox sinew are stippled like sesame seeds while those above deer sinew are convoluted like curled-up millipedes.

6A21

和弓輟摩，覆之而角至，謂之句弓。覆之而幹至，謂之侯弓。覆之而筋至，謂之深弓。

Sometimes a 'Nine-Harmonies' bow will become battered or rubbed. Where it has been restored and the horn made up to the highest quality, it is called a *Ju* bow; where it is restored and the wood made up to the highest quality, it is known as a *Hou* bow; and where it has been restored and the sinew made up to the highest quality, it is known as a *Shen* bow.

I have shown this text in translation to some modern bowyers who work with traditional designs and traditional materials. It is a tribute to the original Chinese author that they find his explanations lucid and relevant after over two thousand years.

Paragraph 6A1 discusses the material used in a general way. The stave, horn and sinew work together to give the optimal balance of draw-weight and lightness in hand. It is difficult to argue that the three materials can be divided into which gives speed, which gives distance and which gives penetration. But combined, these three materials yield this combination of qualities.

The part of the bow which faces the archer when he draws is called the 'belly'. The material on the belly is horn which can receive very high compression. The part of the bow away from the archer and facing the

target is called the 'back'. The sinew resists stretching, so it makes the bow harder to pull, while adding little 'weight-in-hand' (what the bow actually weighs when you carry it.)¹⁸

Glue of course binds the structure together at the joints. It is reinforced by binding the bow tightly in silk. And finally lacquer provides a partially weather-proof layer, which is necessary because the glue is itself water-based and under great tension, so is therefore very sensitive to humidity.

Paragraph 6A2 sets out the materials for the staves in order of preference. Two of the woods, Zhe and Wild Mulberry are able to feed silkworms, which will only eat from certain plants in the family *Moraceae*. Zhe has been known as the 'Silkworm Oak'.¹⁹ Mulberry wood is familiar to American bowyers, and the species will hybridize with a favourite tree of American bowyers, the Osage Orange. No further information is available to me on the tree called 'Yi', other than that it was also used to make arrow shafts. Papaya is a common tree in Southeast Asia. It has a very straight trunk with few branches, and would readily be cut into a bow-stave. Bamboo was mainly used for simple, training bows, but it is still used for traditional bows in Japan and Korea.

Paragraph 6A3 addresses the issue of what wood to select within a species. The core of the tree is known as heartwood, and is preferable to the still-growing outer layers known as 'sapwood'.

Paragraph 6A4 looks at the qualities of horn, which needs to be soft enough to be worked without splintering, but strong enough to withstand compression when the bow is drawn. Sinews (paragraph 6A7) are for backing the bow. Korean, Mongolian and American traditional bowyers use them. Those which are longest put the greatest tension into the bow, giving the greatest reflex and speed. Cutting the wood stave in the winter (paragraph 6A9) ensures that the sap is down and the new annual growth ring has not yet started to form.

Paragraph 6A10 and 11 discuss the planing of the wood and balancing of the limbs. This is known as 'tillering'. Tillering determines the balance of the bow (that is, whether the upper limb and lower limb move in a near-identical manner when the bow is drawn and released.) If the 'tiller' is not correct, there will be weak spots in the limbs, and the limbs will eventually fail at these weak spots.

18. Many of these technical insights were provided by an American bowyer, Ned Hilleren, whose generous help I gratefully acknowledge.

19. Cowles, Roy T. *The Cantonese Speaker's Dictionary*. Hong Kong: Hong Kong University Press, 1965, p. 26.

Paragraph 6A12 strongly makes the point that the horn must be attached to the bow-stave so that the whole of the limb is working. The whole length of the bow belly needs horn to receive compression, but any horn added to parts of the limb which do not recurve (e.g. the tips) adds weight but transfers no energy to the limbs. Attaching excess horn to the limb is no more use than attaching the bow-case to it.

Paragraph 6A13 points out the effect of working the materials when they have too high a moisture content. Moisture will reduce the resilience of the bow. It will also make the bow tend to settle in the direction the bow is drawn rather than recurve in the opposite direction.

Paragraph 6A18 seems curious looking at it today. Modern bow construction looks at the archer's height, how far back he draws the arrow and how much weight he can pull with comfort. No one today would think much about an archer's temperament.

A 'swift' bow is generally smaller, and would consequentially have a shorter draw-length. These qualities would suit a shorter, stouter archer. A 'slow' arrow suggests a heavier arrow, which would use the potential energy of the 'swift' bow efficiently and dampen shock in the bow, in turn enhancing accuracy.

A taller, more vigorous man will benefit from a 'slower' bow, which might correspond to a larger bow with a greater draw-length. To have speed and distance, this bow would require a lighter, 'faster' arrow. The 'slow-slow' combination would be ineffective because the arrow would lack speed and penetration, while the 'fast-fast' scenario (short, fast bow with light arrows) may shoot erratically.

How the Arrowsmith Makes Arrows (矢人為矢〔周禮：冬官考工第六〕)

6B1

鍬矢參分、莠矢參分：一在前，二在後。兵矢、田矢五分：二在前，三在後。殺矢七分：三在前，四在後。

Arrow shafts to take elongated metal arrowheads and tapered cane arrows have a point of balance one-third from the tip. Heavy military arrows and hunting arrows have a point of balance back two-fifths from the tip. Fowling arrows have a point of balance back three-sevenths from the tip.

682

參分其長而殺其一。

五分其長而羽其一。

以其筈厚為之羽深。

The taper extends over one-third of the shaft.

Fletching extends over one-fifth of the shaft.

The fletching height should equal the shaft's thickness.

683

水之以辨其陰陽；

夾其陰陽以設其比；

夾其比以設其羽；

參分其羽以設其刃，則雖有疾風，亦弗之能憚矣。

Immerse the shaft in water to see the line where part of the shaft floats above the water;

Then use this floatation line to set the nock.

And according to the nock position, you offset the fletching.

Triple-fletch the arrow, then even in a stiff breeze it will not be deflected at all.

684

刃長寸，圍寸，鋌十之，重三垓。

The blades of the arrowhead are one inch in length and the shank of the arrowhead is also one inch, while the length of the tang is ten times that length and the total weight is one *yuan*.

685

前弱則俛，

後弱則翔，

中弱則紆；

中強則揚，

羽豐則遲，

羽殺則趨。

If the front of the arrow lacks spine, it will tend to fly low;

if the rear end of the arrow lacks spine it will tend to fly high;

if the middle of the arrow lacks spine it will tend to porpoise;

if the middle of the arrow is too spiny it will fish-tail;
 if the fletching is too high, the arrow will experience drag in flight;
 if it is cut back too close to the shaft, the arrow's flight will be unpredictable.

6B6

是故夾而
 搖之，以賊其豐殺之節也。
 橈之，以賊其鴻殺之稱也。

Therefore it is necessary to grip the arrow and twirl it to ascertain whether fletching is even; and flex it to ascertain that the weight is balanced properly.

6B7

凡相筈，
 欲生而搏，
 同搏欲重，
 同重節欲疏，
 同疏欲衆。

When selecting material for the shaft, select first the shafts which are naturally cylindrical. From among those, you select those which are matched by weight; then among those matched by weight, you select those which have joints far apart; and from those with joints far apart, you choose those with a good chestnut hue.

This passage provides a wealth of technical detail, and it is worth looking at some of the principles underlying it.

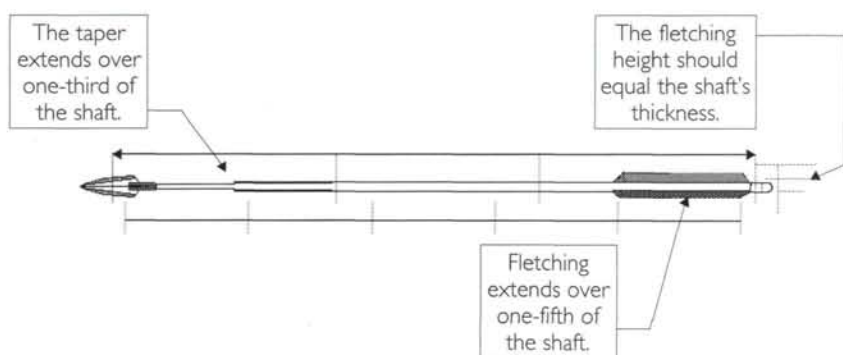
Paragraph 6B1 looks at the balancing points of several categories of arrows. Another part of the *Rites of Zhou*, 'The Armourer', (司弓矢) also refers to categories of arrows.²⁰ However, it puts the arrows into different groupings, and commentators²¹ have considered that the '莠矢' and the '殺矢' have been transposed by scribes. Therefore, the correct tabulations of arrow types and points of balance should be:

20. 《周禮·夏官·司弓矢》：“凡矢：枉矢、絜矢：利火射，用諸守城、車戰。剡矢、鏃矢，用諸近射、田獵。矰矢、莠矢，用諸弋射。恒矢、庠矢，用諸散射。”

21. 鄭玄註云：“司弓矢職，莠當為殺。”

<i>Arrow type</i>	<i>Units from tip</i>	<i>Units from nock</i>
Long head/tapered cane (鏃矢、殺矢)	1/3	2/3
Military/hunting (兵矢、田矢)	2/5	3/5
Fowling (弗矢)	3/7	4/7

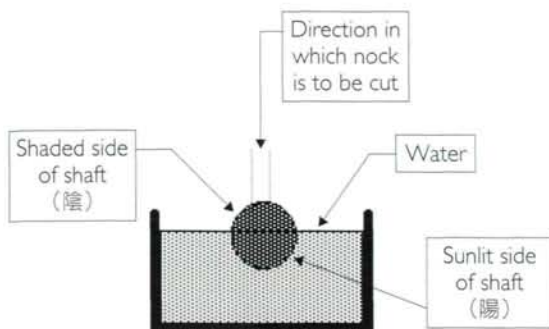
Paragraph 6B2 sets out the proportions of an arrow, which can be seen in the following diagram:



Arrow proportions according to the Rites of Zhou

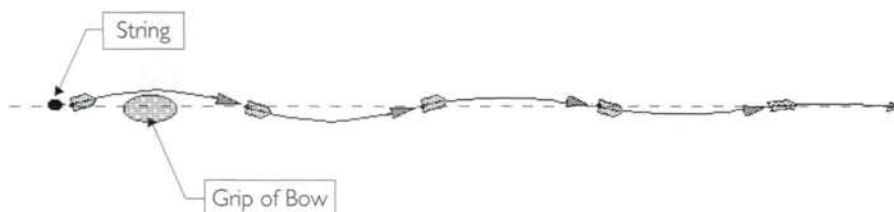
Paragraph 6B3 describes how the nock and fletching are set. The first step is to test the arrow's specific gravity by floating it in water. But this step does more than testing for specific gravity.²² The Qi craftsmen held that the cane from which the arrow was made would have one side normally facing the sun when the cane was growing, and that side would be denser and firmer. Accordingly, when floated in water, the sunward side (陽) — being denser — will float face down and the shaded side (陰) face up.

22. 《中國古代兵器》編纂委員會：《中國古代兵器》（西安：陝西人民出版社，1995），頁152–153。



Using a trough of water to position the arrow-nock

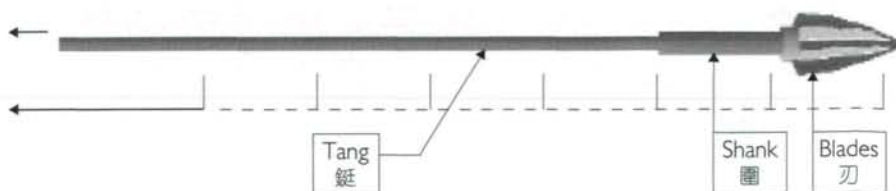
The most important objective of this test was to ensure that the nock — the channel at the end of the shaft along which the string is placed against the arrow — was at 90° to the line dividing the denser and less dense material. When an arrow is fired, rather than remaining stiff, the shaft bends in a curve along its lateral axis:



This fish-tailing flight, which is shown in the diagram as if looking down from above, flattens out to straight flight as the arrow shaft stops vibrating after absorbing the forward momentum of the string, and as the air passing over the fletching stabilizes the flight. If the elasticity of the shaft were uneven along each side, the air-resistance of the fletching would 'steer' the arrow in the direction of the side which was least elastic, preventing the arrow from flying true. This phenomenon, known to the court craftsmen of Qi, has only become observable to man through high-speed photography in the past few decades.

I have translated the character *ren* (刃) as representing an object with a triangular cross-section. The arrowhead and the fletching both shared this characteristic, and *ren* was the technical name used for the three blades of an arrowhead.

Paragraph 6B4 sets out the proportions and weight of the arrowhead, which was of bronze, or occasionally iron.



Paragraph 6B5 looks at the implications of having errors in the construction of the arrow. It is interesting that the craftsmen of Qi had concluded that the height of the fletching was optimal at equal to the diameter of the shaft, attaining a balance between excessive drag and insufficient stabilization. This formula is rarely followed today in the West (although Korean arrows are still fletched according to these proportions).

In the light of the potential effects of such errors, paragraph 6B6 suggests a way to test for the weight and proportions.

Finally, in paragraph 6B7, the general principles for selecting and sorting material for the shafts is explained.

The text does not explain how the arrowhead was normally set in the shaft, but from archaeological remains, we can tell that the long tang was inserted into the hollow cane shaft up to the shank. From some inches up the shaft where the cane has been whittled into a taper, hemp is platted. Finally, the whole shaft is covered with a layer of lacquer.



Arrowhead assembly and lacquered shaft

How the Woodcarver Makes Targets (梓人為侯)

6C1

梓人為侯，廣與崇方，參分其廣而鵠居一焉。

The woodcarver makes targets, equal in breadth and height, with a centre-panel ('bull's-eye') covering one-third of its width.

6C2

上兩個，與其身三，下兩個半之。

The two head-panels for the target are together three times the width of the centre target panel, while the foot-panels are half of the size.

6C3

上綱與下綱出舌尋，緝寸焉。

The upper and lower ties extend an arm-span beyond the head and foot-panels, with two one-inch securing loops at each end.

6C4

張皮侯而棲鵠，則春以功。

張五采之侯，則遠國屬。

張獸侯，則王以息燕。

When a pelt target is set up and laid on the centre-panel, then it is used to test skills in the spring. When a five-coloured target is set up, then it is for the attendance of nobles from outside the Capital. When a target depicting an animal is set up, then it is for royal recreation with guests.

6C5

祭侯之禮，以酒脯醢。其辭曰：《惟若寧侯（毋或），若女不寧（侯不屬於王所），（故）抗而射女，強飲強食，詒女曾孫，諸侯百福。》

The magic invocation ritual for the target is done with preserved meats and pickles. The words of the invocation are:

6C6

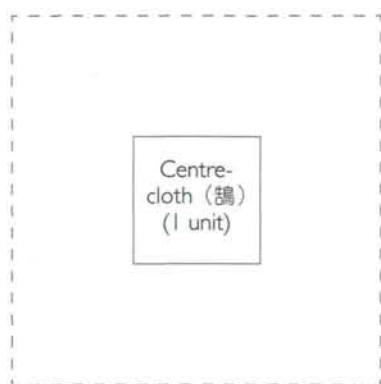
惟若寧侯，If this one is a compliant lord,
 □□□□。(Line missing; or perhaps 詒女曾孫) ←
 若女不寧，If you are not compliant,
 抗而射女，I will stretch and shoot you,
 強飲強食，Now I invite you to eat and to drink,
 [詒女曾孫，Let your future scions be extended,] ?
 諸侯百福。That all the Lords may enjoy abundant fortune.

The woodcarver (梓人) has three main tasks, according to the *Rites of Zhou*. He makes the wooden stands upon which the musical chimes are

placed; he makes drinking vessels for the rituals; and he makes targets. By implication, these three pursuits involve the carving or assembly of natural materials into props for the rituals, perhaps with suitable invocations to instil magic powers into them. The racks for the chimes have carvings of animals; the targets are painted with depictions of animals; and the drinking vessels may have had animal forms (although that is not explicitly stated.)

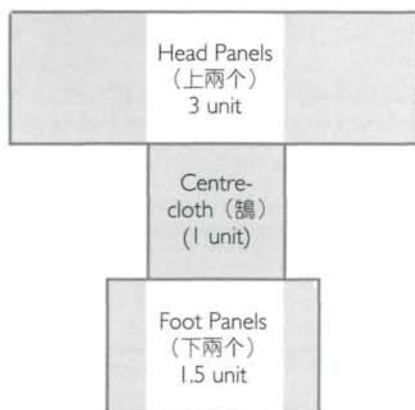
Paragraph 6C1 takes us through the first element of the target: the central cloth to which the different target elements (pelt, five colours or animal designs) would be attached.

Overall target structure (身): 3 units



A ninefold division is the standard for royal activities.

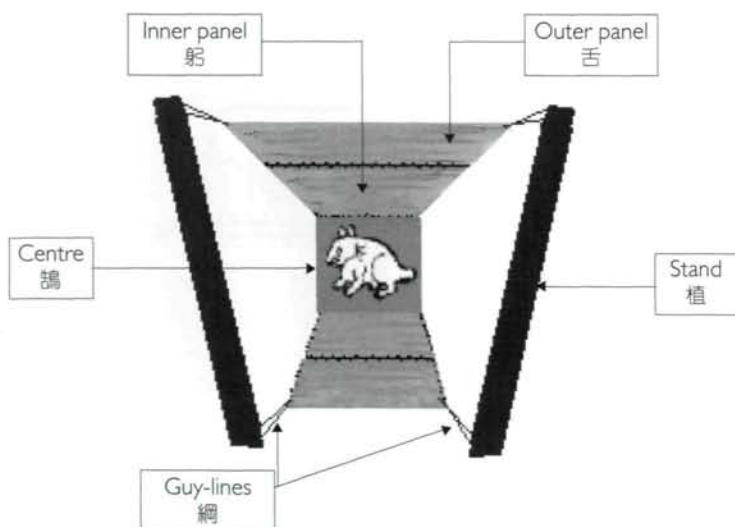
Paragraph 6C2 then sets out the general dimensions of the target butt structure.



Paragraph 6C3 explains the proportions of the guy-lines which attach the target panels to the supports poles, and gives us a clue to the overall size of the target. The length of the guy-lines is one *xun* (尋). The *xun* is the arm-span, fingertip to fingertip of an average person. For the author, that is 160 cm. Eight feet (尺) make one *xun*, six feet make a 'bow-length' (弓), and ten feet make one *zhang* (丈). Ten inches (寸) make one foot. This gives:

Ancient Chinese	Approx. Metric
inch (寸)	2 cm
foot (尺)	20 cm
'bow-length' (弓) [also one pace (步)]	120 cm
<i>xun</i> (尋)	160 cm
<i>zhang</i> (丈)	200 cm

The head and foot panels (个) of the target each had an inner and an outer section, the inner called *gong* (躬) and the outer, *she* (舌). These four segments were put together with the centre panel and the guy-lines as follows:²³



23. 明·王圻：《三才圖會》，1614。

Such targets did not have a fixed size: the dimensions depended on the length of the shooting range; and the length of the range depended on the occasion. The notes of the *Yi Li* (《儀禮·鄉射記》) state:

6D1

侯道五十弓，弓二寸以為侯中。倍中以為躬；倍躬以為左、右舌。下舌半上舌。

For a target range of fifty 'bow-lengths', the target centre panel will be a square with a side of two inches for every 'bow-length'. The width of the inner panel will double the width of the centre panel; and the width of the outer panel will double the width of the inner panel. The outer foot-panel will be half the width of the inner foot-panel.

From this formula, the ratio of the target distance to the side of the square centre panel is 1:0.0333. So for a 50-pace range, the metric distance is about 60 m. The centre panel of the target will be 2 m (十尺) on a side. The target face will be about 6–7 m high; the upper edge will be about 8 m wide and the lower edge about 4 m wide. These targets were massive.²⁴

How they were constructed looking from the side is not explained. But the illustration from a Warring States period bronze vessel which we referred to in the previous chapter appears to take a consistent cross-section through everything depicted. One part of the illustration shows a royal archery ritual in progress:



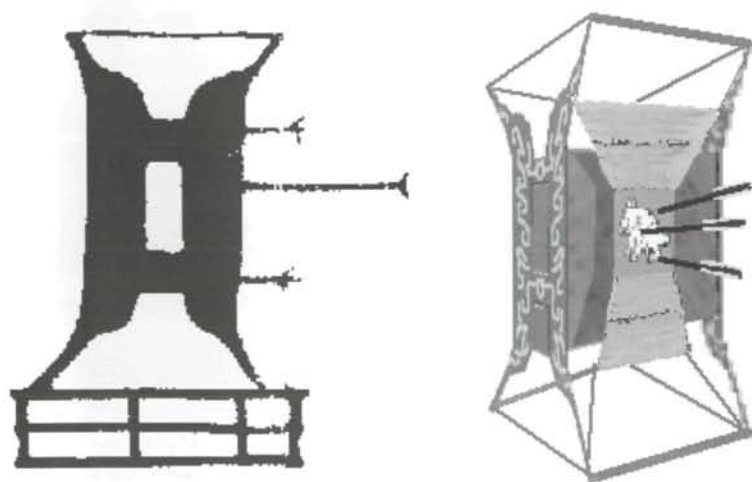
Ritual archery competition “錯嵌燕射水陸攻戰畫像壺”

It is always possible that this view is stylized so that although we clearly have a cross-section of the pavilion and the podium, and the arrows seem

24. The targets may have been designed to make an impressive bang when hit.

to be side-on, the target is still intended to represent a front or oblique view. But notice that the arrows have not passed right through the target as they would if it were just stretched cloth or an animal skin. As a front view, the target does not accord with the required proportions either.

But if we take it as a side view, then we could conclude that the target consists of a solid butt held vertical by a carved wooden panel at each end. The angle of the cross-beams is maintained by a cord or wooden strut securing the top limbs of the 'X'. If this guess is true, then the Warring States ritual archery target might have looked like this:



Paragraph 6C5 has traditionally been interpreted as a piece of prose, to the effect that the target represents a feudal lord (with which the word for target puns). In the last chapter, we saw how the scholar, Jeffrey K. Riegel, had developed this idea.²⁵ There can be little doubt that his view that the text of Paragraph 6C6 is in rhyme (intermixed with later prose commentary) is correct.

The orthodox view was that when archers performed the ritual, they were symbolizing the desire for proper attendance upon the emperor in the annual tributes, and a symbolic chastisement of those who failed to comply. This idea is echoed from the 'Six Secret Strategies of Tai Gong' (太公六韜[六韜逸文：《太平御覽》七百三十七]) .

25. Riegel, Jeffrey K. *Early Chinese Target Magic*. Journal of Chinese Religion. Society for the Study of Chinese Religions. No. 10 (1982).

6E1

武王伐殷，丁侯不朝。太公乃畫丁侯於策，三箭射之，丁侯病。《困》：卜者占云：“崇在周恐懼，乃請舉國為臣。”太公使人甲乙日拔丁侯著頭箭內，丁日拔著口箭，戌己日拔著腹箭，丁侯病稍愈。四夷聞，各以來貢。

When King Wu [of Zhou] attacked Yin, Duke Ding did not lend support. So Tai Gong drew a picture of Duke Ding on a bamboo cylinder and fired three arrows into it. Ding fell ill. [The yarrow stalks were cast and the *Yi Jing* hexagram] Kun emerged. The soothsayer interpreted it: 'Your excellency should face Zhou and quake: accordingly you should put your estates at his disposal.' The day Jiayi came, and Tai Gong pulled the arrow from behind the head of the picture of Ding; on the day Ding, he pulled the arrow from behind the mouth, and on the day Maoji, he pulled the arrow from the stomach, and Ding's illness gradually declined. The four tribes of the Yi heard of this and they all came forward to pay tribute.

The whole text of the *Rites of Zhou*, including the parts I have just quoted, represent a Confucian utopian state in which everything is in harmony. The workmen, it is said, work for love of their masters. Every craft represents harmony: the materials selected at the right time, dedicated with the appropriate invocations, possessing the correct qualities, and stored and distributed by officials in the appropriate quarters, operating at the right season. This represents a Confucian ideal of statecraft.

In terms of the Confucian canons, it is to be read together with the *Books of Rituals* quoted in Chapter 5 and the *Book of Changes* which related the cycle of natural events to a cycle of 'changes' represented by special graphic signs — the Hexagrams.

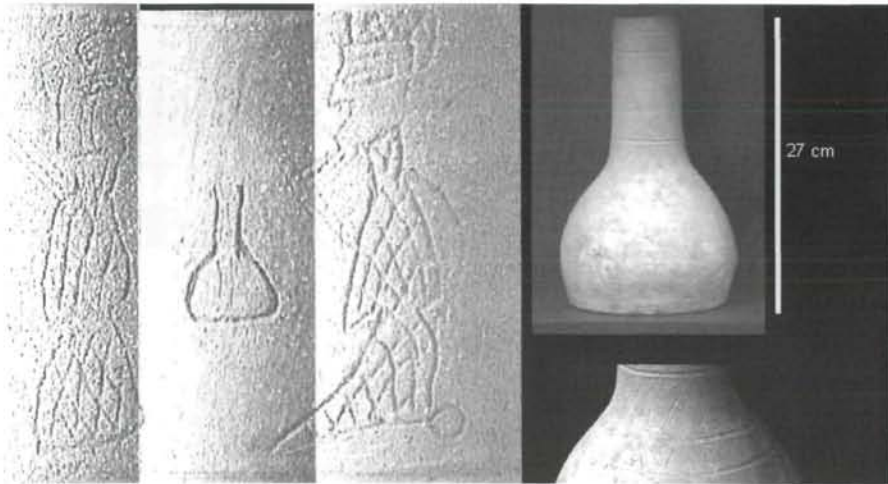
The heyday of these rituals was undoubtedly the end of the Zhou Dynasty and the early part of the Warring States period (from about 700 BC to 300 BC). Contemporary records relate that by the end of the period, ritual archery was becoming rarer and rarer. This 'high era' of courtly ritual was one in which the old aristocratic system flourished. The Han Dynasty brought the rule of the ancient aristocratic families who had ruled the Zhou state to its final end.

What did the performance of such rituals mean to those involved? Certainly it was a symbol of aristocratic status. The skills required for it were learned in the aristocratic schools. The implements required for it were built in the courts of the aristocratic ruling families. (The detailed record of bow-making is thought, on the basis of the language employed, to have originated in the court of the state of Qi (齊).) Performance of the ritual also symbolized the recognition of relative status among the

participants because they had already been seeded in the 'Wine Drinking Ritual'. Furthermore, it symbolized submission to the ruler.

A curious element of the ritual is that it seems that archery was associated with drinking bouts. A toast by the winner to the loser was required by the ritual; and if the *Book of Songs* is anything to go by, the whole exercise degenerated into a great deal of drunkenness.

As part of this drunken part, there emerged another form of ritual game, 'Tossing Arrows into a Vase' (投壺禮). This ritual game has also been set out in detail in the *Book of Rites*. The commentaries to the game suggest that it started as a bit of fun with arrows and empty wine jars, and was then employed as part of the ritual entertainment of important guests at times when the weather or health of the guest or host made a full archery ritual impossible.



A game of 'Tou Hu' and the vase used for playing it (Warring States period)

Yet as we can see from Chapter 3 (p. 43), this game also incorporated a mystical element. The 'vase' represented a balance of good and evil. The development of archery, says the *Yi Xi Ci*, was governed by the hexagram of the *Book of Changes* which represented a fine balance of good and evil, or rain and drought.

Finally, the Confucian scholars applied their own view of the proper order of things as the uppermost layer. The participants in these rituals were probably aware of layers of ancient mysticism, feudal rites of submission and Confucian statecraft just as those who celebrate Christmas in our time are aware of layers of pagan, Roman and Christian symbolism.

精暗草檠扇
將軍夾引弓
平明尋白羽
鴻壯石棧中

*Deep in the shadow of overhanging branches,
The grass rustles around something on the ground,
In the darkness of the night, the General draws his bow.
In the light of day, he searches out the white fletching,
Sunk deep into a stone outcrop
that he had taken for a tiger.*

A Verse Written below the Border with Commander Zhang
(《和張僕射塞下曲·四之二》)
by Lu Lun (盧綸) (748–800)

Calligraphy by Li Xinbao (李鑫寶)



Fact, Fiction and Stranger Yet

The Early Period

Over the period between the fall of the Western Zhou Dynasty (771 BC) to the end of the Han Dynasty (220 AD), a rich literature is recorded. For the Confucian tradition which dominated Chinese political life until the end of the Qing Dynasty (1910), the literature of this period was regarded as the flowering of Chinese literary achievement: following generations were thoroughly schooled in it, and literary style mimicked its manner of expression.

The period spans nearly a thousand years and I have arbitrarily sectioned it off as 'the early period' for the purposes of this book. Chinese history is recorded by 'dynasties' which, as previously mentioned, were typically described as having glorious starts and ignominious ends. While the cohesiveness of dynastic histories is certainly deceptive, certain traditions did bind the principal players.

In fact, from the end of the Western Zhou Dynasty to the reunification of China by the first Emperor of the Qin (the period from 770–221 BC), China experienced a period of federalism which, although condemned by later historians, had many positive sides to it. For our purposes, however, the great interest this period holds is its abundant literature which has survived to the present. This literature covers poetry (including later poems of the *Book of Songs* (詩經) mentioned in Chapter 5), history, philosophy (including the works of Confucius and the Daoist schools) and historical

fiction. Although the period certainly produced music and drama or opera, no examples of these art forms have survived.¹

Every literate person among the readership of the early period was familiar with archery. In the early part of the period, archery was still part of the standard educational curriculum of the aristocratic classes; later, it was an important element in defence strategy and formed the basis of hunting for ritual and recreational purposes, and was therefore widely practised.

Today, if you wrote a book in which you described the actions of driving a car completely incorrectly, you would be a laughing-stock. In ancient China, it would have been just as impossible to describe incorrectly the details of archery, and not lay yourself open to ridicule.

Later, we shall read some of the many tales from the works of Lie Zi (列子)² relating to archery, but the following extract illustrates how an exaggerated and impossible account of archery skills (reminiscent of the *Tales of Baron Munchhausen*) was ridiculed.

7A1

《列子·仲尼篇》

子輿曰：“吾笑龍之詒孔穿，言：‘善射者能令後鏃中前括，發發相及，矢矢相屬，前矢造準而無絕落，後矢之括猶銜絃，視之若一焉。’孔穿駭之。龍曰：‘蓬蒙之弟子曰鴻超，怒其妻而怖之。引烏號之弓，綦衛之箭，射其目，矢來注眸子而眶不眦，矢遂地而塵不揚。’是豈智者之言與？”

Ziyu answered, 'I think this story that Gongsun Long fooled Kong Chuan with is ludicrous: Gongsun Long told Kong Chuan that a great archer could hit the nock of his first arrow with the point of his second and then carry on like that with the rest of his shots so that each arrow hit the last. Each arrow became the target for the one following it until in the end, the last arrow was on the bow-string, and when you looked at them, they formed a single line to the target. And Kong Chuan was taken in by that.

'Then Gongsun Long told Kong Chuan that Pangmeng had a pupil called Hong Chao who had quarrelled with his wife and decided to give her a fright. He drew his bow of Wuhao mulberry, nocked an arrow made of cane from Qiwei, and fired at her eye. The arrow flew right up to her eyeball, but before she could even blink an eyelid, the arrow dropped to the ground and the dust never even stirred.

How could an intelligent person ever tell tales like this?'

1. Nevertheless, texts on musical theory, musical instruments and even pitch-pipes have survived, allowing us to piece together a lot about the nature of music of the early period.
2. A discussion of Lie Zi and the date of the work follows on p. 145.

In the early period, authors did not write for profit: they wrote to influence people. As a means to that end, they sometimes wrote to entertain. Accounts of archery which did not accord with contemporary general knowledge would not have achieved any currency. So we should be prepared to believe that all the fragments relating to archery technique were to be taken seriously unless, as in the extract above, they were explicitly intended to be ridiculous. On that basis, we should expect any statements on archery technique, or the moral or mental approach to archery, to be an accurate reflection of the state of the art at the time the author was writing. (What that time was, however, is not always undisputed.)

There are two likely sources of such technical knowledge. First, as I have said before, the author was very likely to have had direct experience and training in archery. This might have been either ritual, hunting or military. (The respective techniques for civil and military archery started to grow apart over the early period.)

Where he did not have direct experience, the author may well have had access to published technical works on archery. The Section on Art and Literature of the *Dynastic History of the Han Dynasty* (漢書·藝文志) and other similar histories record a number of archery manuals in circulation:³

'Pangmeng's Archery Method'	逢蒙射法
'The Wei Clan's Archery Method'	魏氏射法
'Powerful Crossbow General Wang Wei's' Shooting Method' by Wang Wei	強弩將軍王圍射法 (王圍)
'Secrets of Shooting the Crossbow' by Chen Min, Wang Chong	弩射秘法 (陳慙, 王寵)
'Shooting Method for the Long-range Multiple Fire Crossbow'	望遠連弩射法
'The Brigade-Protecting Marksman Wang He's Book on Shooting' by Wang He	護軍射師王賀射書 (王賀)
'General Li's Archery Method' by Li Guang	李將軍射法 (李廣)

3. This list is assembled from 張山、裴賜榮：《中華武術大辭典》(蘇州：江蘇科學技術出版社，1994) and 劉申寧：《中國兵書總目》(北京：國防大學出版社，1990)。

This formidable body of technical literature was probably readily available to writers two thousand years ago, but the original texts have long since disappeared.⁴ Occasionally, however, we might suspect that some passages describing shooting techniques may be quoted directly from such 'lost' texts. The most striking example is in the *Romance of Wu and Yue* (吳越春秋) by Zhao Ye⁵ (趙曄) (c. 40–80 AD): the portion in which Chen Yin expounds on crossbow construction and shooting technique is in a style markedly different from the rest of the novel. (The text is in the next chapter. The stylistic difference is only really apparent in the Chinese original: it is largely lost in translation.)

We shall start this literary tour with an account of archery method which was still being referred to in the Ming Dynasty as a statement of basic method: the 'Bowyer's Wife's Tale' from the *Lives of Extraordinary Women* of Liu Xiang.

7B1

The Bowyer's Wife's Tale (《列女傳·晉弓工妻》) by Liu Xiang (漢·劉向) 77–76 BC

弓工妻者，晉繁人之女也。當平公之時，使其夫為弓，三年乃成。平公引弓而射，不穿一札。平公怒，將殺弓人。

The bowyer's wife was the daughter of a court official of Jin. In the time of Duke Ping, an order was placed with her husband for a bow, and in three years it was ready. Duke Ping drew it and fired, but his arrow did not even pierce a single layer of leather armour. Duke Ping went into a rage and ordered the bowyer to be put to death.

7B2

弓人之妻請見曰：“繁人之子，弓人之妻也，愿有謁於君。”平公見之。妻曰：“君聞昔者公劉之行乎？羊牛踐蔑葦惻然為民痛之，恩及草木，豈欲殺不辜者乎？秦穆公有盜食其駿馬之肉，反飲之以酒。楚莊王臣援其夫人之衣而絕纓，與飲大樂。此三君者，仁著於天下，卒享其報，名垂至今。昔帝堯茅茨不翦采椽不斲，土階三等，猶以為為之者勞，居之者逸也。

4. Despite which, some extraordinary finds of 'lost' books have occurred in archaeological excavations. All hope is not lost.
5. It is possible that the text we have now is one of the same title by Yang Fang of the Jin Dynasty (256–420 AD) (晉·楊方).

The bowyer's wife sought an audience with the Duke saying, 'I am the daughter of one of your court officials and the wife of the bowyer. I wish to petition Your Highness.'

Duke Ping granted her an audience, and she addressed him as follows:

'Has Your Highness not heard of the conduct of Duke Liu?⁶ If his herds of goats or cattle trampled the young crops, he would agonize over the hardship it would cause to his people. When there has been one whose compassion extended even to [the peoples'] crops, how can you think of executing a guiltless man? And when Duke Mu of Qin had his fine horses stolen and eaten by his common people, he actually gave them wine to wash the horse-meat down.⁷ And after one of King Zhuang of Chu's ministers disarranged the queen's robes and she tore off the ribbon from his cap, the king still admitted him the festivities.⁸ These were three great men whose benevolence became known worldwide; their good deeds brought them rewards in the end and their names are still remembered in our time. Back in ancient times, the Emperor Yao never had trimmed thatch on his house, never had a finished log for his ridge-beam, had no more than tamped earth for his doorstep; yet he recognized all the effort that had gone into building it and so lived in it with peace and enjoyment.'

7B3

今妻之夫治造此弓，其為之亦勞矣！其桿生於太山之阿，一日三睹陰三睹陽；傅以燕牛之角，纏以荊麋之筋，餽以河魚之膠。此四者，皆天下之妙選也，而君不能以穿一札，是君不能射也。而反欲殺妻之夫，不亦謬乎？

6. A leader of the Zhou.

7. Prince Mu's prize horses ran off one day and he sent his servants off to round them up. But in the meantime, over 300 of his starving people had found them and eaten them. The servants rounded up the people and planned to punish them; but Prince Mu declared that an enlightened person does not put the people to hardship for the sake of his material wealth, and he gave them wine to drink because eating horse meat without taking wine could make them ill. Later, the same people heard that Prince Mu was being attacked and came to his rescue, many dying in the attempt. 《史記·秦本記》

8. King Zhuang of Chu gave some wine to his courtiers, and they drank all day until the evening. By then they were all tipsy. The lights in the palace were extinguished, when someone snagged the robe of the queen, who managed to tear the ribbon off his cap. The Queen went to King Zhuang and said, 'Just when the torches were put out, someone snagged my robe but I managed to tear the ribbon from his cap. I want to get a torch and pick out the one who snagged by robe.' But the king said, 'You will do no such thing!' and he went out and called, 'Come in and drink with me! But no one can join in the fun unless he tears the ribbon from his cap!' Later, some of those present repaid the King's graciousness by coming to his aid in battle and presenting him with the heads of his enemies. 《韓詩外傳·卷七》

'This bow that my husband has built has likewise been put together with a great effort. The bow-staves come from the valleys of Mount Tai Shan. Each day, they were turned three times to face the sun and then to face the shade. The belly was lined with the horn of an ox of Yan, its back reinforced with the sinews of the roe-deer of Jing, the air-bladder of the fish of the Yangtze River was boiled down to bind it. These four materials are the choicest from among all the materials available, but you were unable to shoot an arrow through even a single layer of armour: the sole reason is that you don't know how to shoot! And now you even want to put my husband to death. Won't that just compound the wrong?'

7B4

妻聞射之道：“‘左手如拒石，右手如附枝，右手發之，左手不知’，此蓋射之道也。”平公以其言為儀而射，穿七札。繁人之夫立得出，而賜金三鎰。

君子謂：“弓工妻可與處難。”

詩曰：“敦弓既堅，舍矢既鈞。”言射有法也。

'I have heard that the proper method for shooting is: *"Raise your left arm as if pushing against a boulder; your right close in" [to your ear]; the right hand releases the shot and the left hand does not react.*' Duke Ping tried shooting in the manner she had described and his shot pierced seven layers of armour. The husband of the court official immediately gained his freedom and was rewarded with sixty ounces of gold.

A Gentleman would say, 'The bowyer's wife would be a good partner to have if you got into a fix.'

The *Book of Songs*¹⁰ says, 'See them raise their lacquered bows! See the arrows fly, all the targets pierced!' This describes how archery has its method.

The bow construction materials described in 7B3 are familiar from the last chapter. In 7B4, the part in ***bold italics*** in the English translation is rhymed and in metre in the original Chinese. This is typical of the style adopted in military teaching manuals: teaching texts were frequently in rhyming cadences (歌訣) to allow them to be memorized easily.¹¹ This is a clue that Liu Xiang may have been quoting from a technical military work.

9. See Chapter 8 page 165 for an explanation of this choice of translation of '附枝'.

10. 《詩經·大雅·行葦》。

11. Some authors claim [e.g. 張山、裴賜榮：《中華武術大辭典》，蘇州：江蘇科學技術出版社，1994] that the rhyming cadences (歌訣) in military manuals only appear for the first time in the Tang Dynasty (in Wang Ju's *Archery Manual*). But the Han texts in this and the next chapter are clear examples of such cadences, so I must throw doubt on this claim.



'The Bowyer's Wife's Tale' – Ming woodblock illustration

The principal point of technique in 7B4 concerns the need to ensure that the bow hand does not react in any way as the string hand releases. When the body is tense, it is a natural tendency for a conscious action in one arm to be mirrored subconsciously in the other. This would mean that as the string hand releases, the archer risks subconsciously jerking the arrow off course with the bow hand. The body must become accustomed to separating the functions of the left and right side.

A well-known set of *qigong* (氣功) movements (which dates at least to the Jin Dynasty (265–420 AD)) contains the cadence, 'Shooting to left and right like shooting buzzards' ('左右彎弓似射雕'). This practises separation of left and right brain function and alternation of tension and relaxation. There is archaeological evidence that *qigong* was practised (under the name *daoyin* (導引)) in the Han Dynasty. As we shall see from later texts, the practice of *qigong* and Chinese archery are inextricably intertwined.

In an influential work dating from the Ming Dynasty 'A New Book of Discipline and Efficiency' (紀效新書), the author Qi Jiguang (戚繼光) quotes the text '怒氣開弓，息氣放箭' (Tense your body on the draw; relax on the release), and claims that it is a quotation from 'The Bowyer's Wife's Tale'. Actually, it is *not* to be found in current editions of 《列女傳》.¹² This

12. See 濱口富士雄：《射經》（東京：明德出版社，昭和五十四年（1980）），頁 96。

misattribution was then repeated in another influential Ming work by Gao Ying (高穎): *Orthodox Martial Archery Study* (武經射學正宗). By the end of the Ming Dynasty, this apocryphal quotation was probably ingrained in archery teaching. The principle that it expresses is also stressed in the practice of *qigong*: movements alternate between tension and relaxation.

The story of the bowyer's wife appears one more time in a Han Dynasty work by Han Ying (韓嬰), *The Supplement to Han's Tales from the Book of Songs* (韓詩外傳). The outline of the same tale is told with different characters, set in a different state, and most interestingly, with some slightly different advice on archery technique.

7C1

韓嬰：《韓詩外傳》卷第八

齊景公使人為弓，三年乃成。景公得弓而射，不穿三札。景公怒，將殺弓人。弓人之妻往見景公，曰：“蔡人之子，弓人之妻也。此弓者，太山之南烏號之柘，騂牛之角，荊麋之筋，河魚之膠也。四物者，天下之棟林也。不宜穿札之少如此。且妻聞，奚公之車不能獨走，莫耶雖利不能獨斷：必有以動之。夫射之道在：手若附枝，掌若握卵，四指如斷短杖，右手發之，左手不知。此蓋射之道。”景公以為儀而射之，穿七札。蔡人之夫立出矣。

Duke Jing of Qi ordered a man to make a bow and after three years, it was ready. Duke Jing got the bow and fired it; but he couldn't even pierce three layers of leather armour. Duke Jing went into a rage and was about to kill the bowyer. The bowyer's wife went to see Duke Jing, and said, 'I am the daughter of a man from Cai and the wife of the bowyer. This bow of yours was made from the mulberry of Wuhao, south of Mount Tai, the horn of a red ox, the sinew of a roe deer from Jing and the air-bladder of a fish from the Yellow River. These four materials are the best in the whole world. There's no way it would only be able to pierce so few layers of leather armour as these. What's more, I have heard that the carriage of Duke Xi could not move on its own; the famous sword Moye, sharp as it was, could cut nothing on its own: something must move them. The correct method for all shooting is: the [right] hand is close in [to the ear]; palm the grip like grasping an egg; the four fingers as if snapping a twig; the right hand released the arrow and the left does not react. This, then, is the correct way to shoot.' The Duke took her advice and fired, and he pierced seven layers of leather armour. The Lady of Cai's husband was released immediately.

While the plot here is the same, we have a different set of characters and some rather different archery coaching.

The Chinese text in 7C1 does not state which arm is 'close in' (附枝), but to be consistent with 7B4, it must be the right. The advice to palm the grip of the bow like holding an egg (i.e. firmly but not too tightly) is echoed in later archery training manuals, and accords with what many modern western archers would understand to be the correct grip.

The advice that the four fingers (of the bow-hand, as we would understand) should be like snapping a twig seems puzzling at first. What appears to be intended is that the four fingers at the front of the bow-grip (away from the archer) should be exerting an inward force on the grip which would cause the upper limb of the bow to rotate outwards and the lower limb inwards when the arrow is released. This grip is like holding a twig in both hands in front of you and snapping it in two with four fingers above and the thumb below. This 'twisting' or 'snapping' grip (劈) is echoed in Wang Ju's *Archery Manual* (see Chapter 11).

Master and Pupil

The Chinese archer had to learn his art from a master. For many of the aristocracy, this was in a formal school setting. Others learned it by seeking out the best master they could find and begging him to take them on a pupil. As in very many aspects of Chinese culture, both in ancient times and today, the master-pupil relationship was modelled on the father-son or ruler-subject relationship. The pupil would submit totally to his master.

Unlike our modern concepts of a master-pupil relationship, the Chinese martial arts master-pupil relationship was frequently not a matter of continuous teaching in a formal setting, but of an occasional encounter in which the master observes the pupil's performance and gives a very small amount of advice. It is only in the more modern setting that Chinese martial arts have come to be taught on the basis of regular sessions. In the recent past, it was quite common for a pupil to seek out a great practitioner and for the practitioner to accept the pupil. But it did not follow that the pupil then received any lessons. Indeed, he might be subjected to a long period as an unpaid servant of the master, and only gain a few scraps of information. The 'inner secrets' were grudgingly shared.

The pupil might have the benefit of observing the master over a period of time. But mainly he acquired his skill through practice and peer-support from other pupils of the same master. That he could validly claim to have been 'apprenticed' to a famous man was a valuable asset in itself.

It went without saying that the pupil was to treat the master with

all the respect that Chinese tradition requires a son to show his father. In the family setting, to turn on or kill a parent was the most heinous crime.¹³

7D1

Mencius: 371–289 BC (《孟子·離婁下》第二十四章)

孟子曰：

可以取，可以無取，取傷廉。

可以與，可以無與，與傷惠。

可以死，可以無死，死傷勇。

Mencius said,

'Supposing you could accept something, or on the other hand not accept it: then the question is one of whether accepting would give rise to a conflict of interests.

Supposing you could give something, or on the other hand not give it: then the question is one of whether to give it would bring your generosity into question.

Supposing you could sacrifice your life, or on the other hand not sacrifice it: then the question is one of whether the sacrifice would bring your courage into question.'

7D2

逢蒙學射於羿，盡羿之道；思天下惟羿為愈己，於是殺羿。

孟子曰：“是亦羿有罪焉。”

公明儀曰：“宜若無罪焉。”

曰：“薄乎云爾，惡得無罪！”

Pangmeng studied archery under Yi, and mastered everything that Yi knew. But he became consumed with the idea that only Yi in the whole world could shoot better than him, and so he killed Yi.

Mencius said, 'Yi must also share some blame in this.'

Duke Mingyi said, 'But you could also say he was blameless.'

[Mencius] replied, 'Well, perhaps you could say that he was not greatly at fault; but you would be hard put to say he should bear no responsibility at all!'

13. Patricide was the crime for which death by dismemberment (凌遲) was specified and carried out under Qing law.

7D3

鄭人使子濯孺子侵衛，衛使庾公之斯追之。子濯孺子曰：“今日我疾作，不可以執弓，吾死矣夫！”問其僕曰：“追我者誰也？”其僕曰：“庾公之斯也。”曰：“吾生矣！”其僕曰：“庾公之斯，衛之善射者也。夫子曰：‘吾生’何謂也？”

The people of Zheng appointed Master Zhuo Yuzi to launch an invasion against Wei. Wei appointed Yu Gongsì to catch up with him. Master Zhuo Yuzi said, ‘Today I am wounded: I can’t hold my bow. I shall surely die! Who is it who’s after me?’ he asked his page.

The page replied, ‘It’s Yu Gongsì.’

Master Zhuo Yuzi said, ‘Then I’m saved!’

‘But Yu Gongsì is the best archer in Wei!’ His page said, ‘What do you mean “I’m saved”?’

7D4

曰：“庾公之斯學射於尹公之他，尹公之他學射於我。夫尹公之他，端人也，其取友必端矣。”庾公之斯至，曰：“夫子何為不執弓？”曰：“今日我疾作，不可以執弓。”

Master Zhuo Yuzi replied, ‘Yu Gong Chai learned archery from Yin Gong Tuo, and Yin Gong Tuo learned from me. Now Yin Gong Tuo is an honourable man, and he is certain to pick honourable associates!’

Yu Gong Chai caught up with them, and said, ‘So what’s the problem? Why aren’t you holding your bow?’

‘Today I am wounded and so I can’t hold my bow.’

7D5

曰：“小人學射於尹公之他，尹公之他學射於夫子。我不忍以夫子之道，反害夫子。雖然，今日之事，君事也，我不敢廢。”抽矢扣輪，去其金，發乘矢而後反。”

Yu Gong Chai said, ‘I learned archery from Yin Gong Tuo, and Yin Gong Tuo learned from you. I cannot tolerate using your own skills to hurt you. But my order of the day comes from my Commander, and I cannot derelict my duties.’ Then he took his arrows and snapped off the heads on his chariot-wheel, fired off four and then turned back.’

The first of these two stories from Mencius (7D2) is the familiar story of the death of Yi at the hands of Pangmeng — not the Yi who shot down the suns, but the Yi who usurped the throne of Xia. (And yet it is not entirely certain that we are not dealing here with *yet another* Yi, for the Yi who usurped the Xia Dynasty, Duke Yi of Youqiong, was killed by retainers of Yi's disloyal minister, Han Zhuo. (See paragraph 2H1 in Chapter 2).

Mencius is the first author (whose account has survived) who claimed that Pangmeng was Yi's pupil. The curious concept of the archer who develops such a jealousy of his master that he kills him is not unique to this account by Mencius: we shall see it in other cases. The early archers of ancient China are characters of enormous conceit. They are occasionally capable of breaking fundamental taboos. The implication of this phenomenon is that it must have been possible for the top archers of any period to enjoy enormous adulation. They were the popular idols of their time: a position they were prepared to kill for.

But presumably by Mencius's own time, archers had gained a great deal more discipline, for the second part of this passage (7D3) deals with a more familiar concept: that of the pupil who is prohibited by ritual from harming his master.

This story is set in the heat of battle. But war was an art in the time of Mencius. Few battles were bloody engagements to the death: they were courtly engagements between parties who had become enemies through some slight or the breaking of a truce or temporary alliance.

Although the battles of the 'Spring and Autumn' period or the 'Warring States' were expressed in terms of being between states, the members of the nobility in the warring sides were likely to have been on the same side at some time in the not-too-distant past. Their battles were governed by rules of ritual conduct, and most of the accounts of them relate to deeds of proper ritual conduct in battle as much as to feats of martial prowess.

In 7D5, ritual behaviour wins the day, and Yu Gong Chai is unable to harm his master's master. But he is caught in a ritual dilemma because his highest duty is to his present employer. So he resorts to a ruse, breaking his arrows to give the impression that he has tried and failed to hunt down his quarry. This means that no one would suggest that he did not have the courage to complete his task, thus answering Mencius's original proposition: 'Supposing you could sacrifice your life, or on the other hand not sacrifice it: then the question is one of whether the sacrifice would bring your courage into question.'

This master-pupil relationship among arches is explored further in Master's Zuo's Commentary on the 'Spring and Autumn' Annals (春秋 ·

左傳). The events described were said to have occurred in the 14th year of Duke Xiang (559 BC).

7E1

《左傳·襄公十四年》

……初，尹公佗學射於庾公差，庾公差學射於公孫丁。二子追公，公孫丁御公。子魚曰：“射為背師，不射為戮，射為禮乎？”射兩箭而還。尹公佗曰：“子為師，我則遠矣。”乃反之。公孫丁授公轡而射之，貫臂。

Originally, Yin Gong Tuo had learned archery from Yu Gong Chai, who had in turn learned archery from Gongsun Ding. The former two were in pursuit of the Duke, whose chariot was being driven by Gongsun Ding.

Master Yu (Yu Gong Chai) said, 'If I were to shoot, I'd be turning my back on my Master; but if I don't, I'll get the chop. Am I going to shoot or act as required by Ritual?' So he fired an arrow into each chariot-shaft and returned.

But Yin Gong Tuo said, 'You were my Master, so I am further removed from Gongsun Ding than you.' Then he turned their chariot around; but Gongsun Ding passed the reins to the Duke and shot at Yin Gong Tuo, piercing his shoulder.

This is basically the same story as in 7D1. Here, it is suggested that although the taboo against a pupil killing his master is too strong to overcome, it is weaker as between the pupil and his master's master. In the end, however, the 'Grand-master' has no compunction in shooting his pupil's pupil.

As in the previous version, the conflict is apparent between the taboo against harming one's master and the taboo against dereliction of martial duty to one's employer. And once again, the matter is covered up by taking a harmless pot-shot so as to give cover to Yu Gong Chai.

Yang Youji (養由基)

If you cannot write about English archery without Robin Hood, or Swiss Crossbowmen without William Tell, then you can certainly not tell the history of Chinese archery without Yang Youji. He is the archetypal rash, brash archery-hero whose name has resounded down the centuries. Like so many great archers of early China, he is closely associated with the

culture of Chu (楚),¹⁴ where he was said to have been a high-ranking member of the aristocracy (大夫).

Chinese historians have not questioned whether he was a real historical figure, although some of the stories told about him are close to myth. If he was active at the battle of Yan Ling, as recorded by Sima Qian in his *History*, then he was alive in 575 BC. But the surname Yang appears very rarely in Chinese history.¹⁵ A slightly suspicious aspect of the name 'Yang Youji' is that if we look back at the 'Record of the Rites: The Archery Ritual' (Chapter 5, paragraph 5B9), we can see that the summation of the principle of Ritual Archery is:

求中以辭爵(酒)也。《酒》者：所以養老也，所以養病也“求中以辭爵”者，辭養也。

'Pray' is to seek to accord with the Rite so as to avoid 'taking the wine'. 'Taking the wine' signifies being supported in old age, being supported in sickness. 'To seek to avoid taking the wine' is to avoid becoming dependent on others.

The keyword in Chinese in this passage is Yang (養), so in this context, the Chinese characters for the name Yang Youji (養由基) accord ever so neatly with the literal meaning 'Basis-to-Support-Himself'. That could, of course, be coincidental. Or it could have been an epithet given to someone who stood out in the ancient archery rituals.

Here are the tales of Yang Youji:

7F1

《元·吾衍：“楚史檮杌”¹⁶·養由基第二十》

楚庭嘗有神白猿，楚之善射者莫能中。莊王自射之，搏矢而熙。使養由基

14. The Chu state appears to have a cultural history extending back to the dawn of Chinese civilization. They were said to have been descended from the San Miao (三苗) tribes of the southern-central region of China. Their cultural centre was around the area of present Hunan. Although the people of Chu were racially very close to those of the central Chinese plain, they retained strong local characteristics up until their full assimilation during the Han Dynasty. Their cultural centre was around the area of present Changsha.
15. Two occurrences only in 臧勵鵬編：《中國人名大辭典》(鄭州：中州古籍出版社，1993)。
16. The *Tao Wu* was said by Mencius to be a historical record based on the culture of Chu. 《孟子·離婁下》：“晉有乘，楚有檮杌，魯有春秋，一也。” This extract is from a fanciful Yuan Dynasty compilation of anecdotes relating to the reign of King Zhuang of Chu (楚莊王) by Wu Yan (吾衍). It has little connection with the original annals of Chu, which have been lost. However, the anecdotes were culled from the *Zuo's Annals* and other contemporary sources.

射之，矯弓操矢而往，未之發，猿擁柱而號矣。發之則應矢而下。王大悅。

Wu Yan's compilation entitled *Tao Wu* (Annals of Chu): Part 20, Yang Youji.

In Ting Chang, in the state of Chu, there was a miraculous white ape. Not even the best marksmen of Chu could hit it. King Zhuang himself shot at it but the ape caught the arrow [in full flight] and capered about. Yang Youji was summoned to shoot it. He straightened his bow [to string it] and grasped an arrow; but before [he had started to] shoot, the ape clung to the trunk of its tree and howled! When [Yang] fired, the ape took an arrow and down he came. The king was delighted.

This is not a tale to warm the hearts of conservationists. King Zhuang was infatuated with hunting, and occasionally his courtiers challenged him about it, pointing out that Chu could be attacked at any time and he needed to make preparations. He retorted that hunting was his way of testing the military prowess, physical strength and team spirit of his officers.¹⁷

The mystical white ape appears in many military traditions of China. The ape has a long-standing connection with martial arts skill (recall 'Monkey King' 孫悟空 in the famous Chinese novel *Journey to the West* 《西游記》). This account of Yang Youji getting the better of a mystical ape using a martial art symbolizes the pinnacle of martial skills.

The other symbolic element which has prominence in this tale is the ape's ability to sense that it is going to be hit. This accords with the ancient Chinese theory that archers could achieve a sort of thought transference over their target.¹⁸

7G1

《呂氏春秋·精通》(呂不韋)

養由基射兕，中石，矢乃飲羽，誠乎兕也。

The Annals of Clansman Lü: 'Mind Over Matter'. (Lü Buwei et al. c. 240 BC)

Yang Youji shot at a rhinoceros, but what he hit turned out to be a rock; yet the arrow still penetrated up to the fletch, because he had truly taken the rock for a rhinoceros.

17. 《楚史檇杙·好獵第十九》。

18. 《吳越春秋》：“古之聖人射弩，未發而前名其所中。”

This tale, with variations, appears a few times in Chinese literature. The feat is variously ascribed to the early Chu leader, Hong Qu (熊渠),¹⁹ as well as to the Han General Li Guang (李廣).

Both the oracle bones of the Shang period and descriptions of events from 500–600 BC make frequent reference to the rhinoceros as a prey in hunting. Whether this was the small rhinoceros of which a few still remain in Java, or whether it is another, completely extinct species, we can only speculate. Legendary hunters of superhuman strength were said to have grappled with them.²⁰

This short quotation illustrates two points which are important to Chinese archery theory.

The first is penetration. In modern western target archery, it is largely considered sufficient if your arrow sticks into the target. The ability to penetrate armour has long since become irrelevant. (Bow hunters, of course, must fire with sufficient force to gain a clean and humane kill, but short of the late Howard Hill, few would consider firing off a shot at an armoured quarry.)

Not so the Chinese archer: his ideal was to penetrate seven layers of leather. This was the maximum thickness employed in Chinese armour of the early period, and was used on the helmet adjacent to the ear.²¹ This explains the Chinese preoccupation in the earliest times with bows with enormous draw-weights, and the very early adoption of the crossbow in warfare.

Secondly, the title of the section of *The Annals of Clansman Lü* is 'Mind Over Matter'. Archery was understood to be a skill in which the mental approach was imagined to be capable of being honed to a level where things unattainable in everyday life could be achieved just by the power of directed desire (志). This is why archery and *qigong* (氣功) were regarded as bedfellows: the early form of *qigong*, known as *daoyin* (導引), was a training through which all the physical and mental resources available to the human body (known collectively as *qi* or 氣) could be directed towards a single goal.

Now, as in ancient times, it is believed that the effects that can be produced through mastery of *qi* verge on the supernatural.²² And indeed, it is a common defect of the teaching of *qigong* today, both in China and

19. 熊渠, "射石飲羽".

20. 《楚史檮杌·好獵第十九》: "其攫犀搏兕者, 吾以是知其勁有力也。"

21. 《呂覽愛士篇》: "韓原之戰, 晉惠公之右路石奮投而擊穆公之甲, 中之者六札矣。言六札者, 惟一札未陷耳。知甲以七札為數也。徹七札者, 猶貫甲也。"

22. The Chinese characters '導引' were both originally pictorial. *Dao* (導) showed head, hands and feet in alignment; while the character *yin* (引) showed a massive god-like figure brandishing a bow (𢏧).

in the West, that it is cloaked in a mystic aura which is promoted both for commercial effect and through a general misunderstanding of what can be achieved through an efficient marshalling of the human body's resources.

So the significance of paragraph 7F1 is that Yang Youji set up his shot as if he were going to penetrate the hide of a rhinoceros; and despite the fact that what he hit was a rock, not a rhinoceros, the arrow penetrated up to the fletching. Mind over matter.

The following and most famous tale of Yang Youji comes from Sima Qian in his *History*.

7H1

漢·《司馬遷·史記·周本記》²³

Sima Qian 'Annals of the Historian: the Origins of the Zhou'
(145(?)–85(?) BC)

三十四年，蘇厲謂周公曰：“秦破韓、魏，扑師武，北取趙蘭、離石者，皆白起也。是善用兵，又有天命。今又將兵出塞攻梁，破則周危矣。君何不令人說白起乎？”

In the 34th year, Su Li addressed the Duke of Zhou saying, 'Qin has broken the states of Han and Wei, thrashed Shiwu and captured the counties of Lin and Lishi in the state of Zhao — and it was all the work of Bai Qi. This is not just good warcraft: it had the backing of Heaven. Now they are going to take their armies over the borders to attack Liang. If Liang goes, then Zhou will be the next under threat. Why not send someone to dissuade Bai Qi?'

7H2

曰：“楚有養由基者，善射者也。去柳葉百步而射之百發百中之。左右觀者數千人，皆曰善射。”有一夫立其旁，曰：“善，可教射矣。”養由基怒，釋弓搥劍曰：“客安能教我射乎？”客曰：“非吾能教子支左誦右也。夫去柳葉百步而射之，百發而百中之，不以善息，少焉氣衰力倦，弓撥矢鉤，一發不中者，百發盡息。”

Tell him, 'In Chu, there was an archer called Yang Youji — a very fine shot. He could shoot at a willow leaf from a distance of a hundred paces, shoot a hundred arrows, and every one would hit the target. Thousands of people pressed around to watch, and they all said "Great shooting!"'

23. The same story is also in 《戰國策·西周·〈蘇厲謂周君〉》.

But one man standing at Yang Youji's side said, 'Good Shot. But I can give you a tip about shooting.'

Yang was furious. He unstrung his bow, unsheathed his sword, and said, 'Stranger, who are you to give me archery tips?'

The stranger said, 'I am not the one to teach you to "straighten your left arm or bend your right". But anyone who shoots at a willow leaf from a distance of a hundred paces, and every one of a hundred hits the target, doesn't know when to stop and rest on his laurels. Just a little bit more than that, and your breathing will become laboured and your strength will start to fail, your bow will start to waver and your arrows will start fish-tailing, and not a single shot will hit the target. When you have shot a hundred arrows, quit while you're up.'

7H3

“今破韓、魏，扑師武，北取趙蘭、離石者，公之功多矣。今又將兵出塞，過兩周，倍韓，攻梁，一舉不得，前功盡棄。公不如稱病而無出。”

'Now you have broken the states of Han and Wei, thrashed Shiwu and captured the counties of Lin and Lishi in the state of Zhao, You have achieved an enormous amount! If you try to take your armies over the borders, cross the two Zhous, retake Han and attack Liang, you won't even manage one of those tasks. Now you have achieved so much, quit while you're up. Why don't you weigh up the pros and cons of not venturing out?'

Here is a story within a story. Su Li proposes to send an ambassador to try and persuade Bai Qi that his run of good luck can't last forever. They plan to use the story of Yang Youji's archery demonstration.

The events described in 7H1 would have occurred in 293 BC when the Qin General Bai Qi attacked Han.

We have no way of knowing when Yang Youji was supposed to have given this display of archery skill. The essence of his skill, 'piercing a willow leaf at one hundred paces' (百步穿楊) has long been echoed in Chinese literature²⁴ and is still a current expression in Chinese (although nowadays often with the meaning of a piece of writing which is an instant literary success).

In 7H2, Sima Qian brings out the character of Yang Youji: not a heroic figure, but a mildly comic bully (reminiscent of Falstaff) who throws a

24. 全唐詩四七：李涉《看射柳技》：“萬人齊看翻金勒，百步穿楊逐箭空。”

tantrum when his superlative marksmanship is called into question by a stranger. And the stranger has a good piece of advice — not just a simple bit of archery coaching such as given in the 'Bowyer's Wife's Tale' — 'stick out one arm and bend the other' — but a piece of psychological counselling: understand your limitations.

We understand from the advice offered that exhaustion can be understood to lead to a failure of the proper solid stance (characterized in Chinese archery as *Gu* or 固), so that the bow does not stay steady and as a result arrows start to fire askew. And once that happens, a single miss will ruin the effect of 100 hits. For what people will remember is not that the champion scored perfect hits 100 times; but that he missed once.

So quit while you're up.

The Battle of Yanling (鄢陵之戰)

To observe Yang Youji's progress further, we have to follow him into battle. Through observing this famous battle, the Battle of Yanling (575 BC), we have a chance to see how battle was waged in the period of the 'Warring States'.

We see the battle through the eyes of nobles in each of the armies, as recorded in *The Annals of Mr Zuo*. *Zuo's Annals* (左傳) are read together with the historical work attributed to Confucius, the *Spring and Autumn* (春秋). *Zuo's Annals* are attributed to Zuo Qiuming (左丘明), a Grand Historiographer of the state of Lu (魯). Traditionally, each chapter quotes the text of Confucius, followed by Zuo's text as if the latter were a commentary on Confucius.

Zuo's Annals are a grand attic of ancient Chinese culture, containing folklore, history and romance; but by and large the work is considered to be historically accurate. The account of the Battle of Yanling is particularly vivid. If, as is reported, Zuo Qiuming lived at the time of Confucius (551–479 BC), then he could have been alive during or just after the time of the battle. One of his last entries refers to a posthumous name which could only have gained currency after the year 424 BC, thus he could have interviewed eyewitnesses or have had access to eyewitness accounts of the events.

Zuo's way of writing is difficult to follow at a great separation in time: he jumps from camp to camp, skirmish to skirmish. He refers to the same *dramatis personae* with different names, sometimes referring to characters by rank, sometimes by personal name, and sometimes by posthumous appellation. In later times, literary critics judged that this technique was due to an intricate convention of assigning praise, blame or neutral

judgement to the characters of the piece. But another reason may have been that his account is based on an assemblage of contemporary data and eyewitness accounts.

We start, like a drama, with a list of the principal players.

The Jin Camp (晉)	The Chu Camp (楚)
<p>High command Duke Li (厲公) (Leader) Fan Wen Zi (范文子) (adviser)</p> <p>Military leadership 中軍 Centre force 1. Luanshu = Luan Wuzi (樂書 = 樂武子) 2. Shi Luan (士燮) 上軍 Upper force 1. Yuyi (郤錡) 2. Gouyan (苟偃) 下軍 Lower force 1. Hanjue (韓厥) 2. Yuzhi (郤至)</p>	<p>High command King Gong (共王) (Leader) Gong Zi Cheng (公子成) (emissary)</p> <p>Military leadership 中軍 Centre force 1. Zifan (子反) 2. (Not named) 左軍 Left wing 1. Zizhong (子重) 2. (Not named) 右軍 Right wing 1. Yin Zixin (尹子辛) 2. (Not named)</p> <p>Allies Zheng (鄭) (Zheng was aligned with Chu, breaking an alliance with Jin) Yao Ju'er (姚句耳) ambassador</p>

Here is a summary of the political background to the battle. (To help navigate the unfamiliar names, personal names are *italics* while the names of states and place names are in **bold** print.)

It is the sixteenth year of Prince *Cheng* of **Lu**. King *Gong* of **Chu** has sent out an emissary to buy off **Zheng** (which had entered into an alliance with **Jin**) with the promise of some land on the south side of the **Ru** river. **Zheng** breaks off its treaty with **Jin** and sides with **Chu**, sending an emissary to sign up with **Chu** at **Wucheng**.

Zijian of **Zheng** attacks **Song**. **Song** appoints *Chu* and *Yuequ* as generals. They defeat **Zheng** at **Goubo** and then retreat. **Zheng** attacks again and defeats the **Song** generals at **Fuqu**, taking them prisoner (**Song** having underestimated its enemy after defeating them the first time round).

Duke *Ding* of **Wei** attacks the **Zheng** troops and advances to **Minghuai**. **Jin** holds a council of war. *Fan Wenzi* advises the dukes of **Jin**: 'If all of the nobles of **Jin** were defecting, there would be a case for taking punitive action; but if it is just **Zheng** alone, we will only bring misfortune upon ourselves.' But *Luan Wuzi* says, 'As long as we are in charge here, no noble gets away with defection.' Prince *Li* agrees and starts punitive expedition against **Zheng**.

Jin's officers travel to neighbouring states to seek reinforcements. One of these states is **Lu**. **Lu**'s minister thinks that **Jin** would certainly win. **Jin** is encouraged and sends out punitive expeditionary force.

Zheng panics and sends an ambassador, *Yao Ju'er*, to run to **Chu** for help. **Chu** decides to assist **Zheng**. *Zifan* gets advice from a minister of **Shen** as he passes through. **Shen**'s minister provides a critique of **Chu**'s politics: 'Internally, **Chu** has lost support of its people; internationally, they have broken their alliances and backed away from their commitments. Their leadership doesn't enjoy enough public support to beat **Jin**.'

Zheng's Ambassador *Yao Ju'er* returns to **Zheng**, and is asked for a sit-rep. *Yao* says that **Chu** is fast, but they have poor discipline and are sloppy. He feels that **Chu** do not believe in their own ability to defeat **Jin**.

Jin crosses the Yellow River in the fifth month. Hearing that the **Chu** forces are near, *Fan Wenzi* wants to retreat and pretend to be avoiding the **Chu** force. He feels unable to achieve a political reconciliation with all the nobles: it will have to be left to someone more talented. He'll do his best to get the minor officials to serve the Duke. But General *Luan Shu* does not agree.

The two armies stand off at **Yanling** in the sixth month. **Jin**'s Minister, *Fan Wenzi*, does not want to enter battle, but *Xizhi* recalls previous humiliations in the face of **Chu** and begs to enter battle. *Fan Wenzi* believes that previous battles were lost against vastly superior forces. Most of those forces were gone now: only **Chu** remains. Every effort must be made to secure victory so that there can be no more misfortunes in the future.

It is the end of the sixth month, and **Chu** carry out manoeuvres in sight of the **Jin** army. *Fan Wenzi* gets more worried than ever; his son *Fan Mang* says, 'Let's pull up our camp and prepare for battle: it is all in the laps of the Gods.' *Fan Wenzi* retorts angrily that children cannot know anything about the will of Heaven. *Luan Shu* says that the **Chu** troops are lightweight: if **Jin** reinforces its camp and waits three days, **Chu** will retreat.

The **Jin** leadership believe that **Chu** has six defects which should be exploited at all costs:

- their two leading ministers are at odds;
- the king's personal bodyguards are behind the times in their tactics;

- the **Zheng** army forms up but their columns are ragged;
- the southern tribes have their forces, but cannot fight an infantry battle;
- they range up for battle disregarding inauspicious days in the calendar;
- they are rowdy in battle; they put up a greater din when they are in a crowd, but in fact each is concerned with his own back and they lack courage;
- they have always ignored the need for excellence, and this is an attribute which Heaven abhors. **Jin** must be able to beat them.

The King of **Chu** got up onto a high lookout vehicle to overlook the **Jin** positions. *Zizhong* orders a defector from the state of **Jin**, *Bo Zhouli*, to advise the king. We take up *Zuo*'s original narrative from here.

711

The Annals of Mr Zuo – The 16th Year of Duke Cheng (575 BC)
(左傳·成公十六年)

楚子登巢車而望晉軍，子重使大宰伯州犁侍於王後。

王曰：“騁而左右，何也？”

曰：“召軍吏也。”

“皆聚於中軍矣。”

曰：“合謀也。”

“張幕矣。”

曰：“虔卜於先君也。”

“徹幕矣。”

曰：“將發命也。”

“甚囂，且塵上矣。”

曰：“將塞井夷灶而為行也。”

“皆乘矣，左右執兵而下矣。”

曰：“聽誓也。”

“戰乎？”

曰：“未可知也。”

“乘而左右皆下矣。”

曰：“戰禱也。”

伯州犁以公卒告王；苗賁皇在晉侯之側，亦以王卒告。皆曰：“國士在，且厚，不可當也。”

[Behind Chu lines]

The King of Chu climbed a mobile lookout tower to observe the Jin

army. Zizhong ordered the Grand Minister Bo Zhouli to attend on the king.

The king asked, 'What's all that galloping around to the left and right in aid of?'

'They're summoning the military commanders, M'lud,' Bo Zhouli replied.

'Now they're all gathering in the centre division!'

'That would be to co-ordinate their tactics, M'lud.'

'Looks as if they're putting up some sort of tent over there!'

'Yes, well they do that when they pray and consult the oracles in front of the memorial tablets of their forefathers, M'lud.'

'There! They've taken the tent down now!'

'Then they'll be giving the order to attack any time now, M'lud.'

'What a racket! And look at that dust flying up!'

'That'd be them stopping up their wells and shifting the cooking stoves so they can get their columns formed up, M'lud.'

'Now the whole lot of them have got on their chariots; but the left and right side officers have got their weapons and got down again!'

'They'll be getting ready to have the oath of allegiance administered to them, M'lud.'

'Are they really going to fight or not?'

'Hard to say just now, M'lud.'

'They're getting back on again now — no! The left and right side officers have got down *again*!'

'Yes, that'll be for the battle hymn, M'lud.'

At the same time as Bo Zhouli was reporting the Duke of Jin's troop-dispositions to the King of Chu, Miao Fenuang was pointing out the King's troop dispositions to the Duke of Jin. Both of them were saying, 'They've brought in their top people, and they've brought a large force, too. There'll be no stopping them.'

712

苗賁皇言於晉侯曰：「楚之良在其中軍，王族而已。請分良以擊其左右，而三軍萃於王卒，必大敗之。」公筮之，史曰：「吉，其卦遇『復』，曰：『南國蹇，射其元，王中厥目。』國蹇王傷，不敗何待？」公從之。

[Behind Jin lines]

Miao Fenuang briefed the Duke of Jin: 'The best elements in the Chu army are there in their centre formations: they're the soldiers of the royal household and they're the only good troops they've got. I want to split our best elements so we can attack their left and right formations first, then our three formations can converge on the royal troops and it will be a rout.'

The Duke decided to consult the oracle about this plan and the recorder said, 'It's a good omen: the symbol represents "restoration".'²⁵

Miao Fenhuang said, '“*The Southern State is hard-pressed; shoot for the head; the king is shot in the eye.*” If the state is in dire straits and the king is injured, what can come of it but a rout?'

The Duke took Miao Fenhuang's advice.

713

有淖於前，乃皆左右相違於淖。步毅御晉厲公，欒鍼為右；彭各御楚共王，潘黨為右；石首御鄭成公，唐苟為右。

[Overview]

There was deep mud in between the opposing forces and they had to skirt to left and right to avoid it. Buyi was charioteer for Duke Li of Jin and Luancheng rode in the archer's position. Pengge was charioteer for the King of Chu, and Pandang rode in the archer's position. Shishou was charioteer for Duke Cheng of Zheng and Tanggou rode in the archer's position.

714

欒、范以其夾公行。陷於淖，欒書將載晉侯。鍼曰：“書，退！國有大任，焉得專之？且侵官，冒也；失官，慢也；離局，姦也；有三罪焉，不可犯也。”乃掀公以出於淖。

[With the Jin chariots]

The Luan and Fan clans flanked their Duke. [Suddenly], the Duke's chariot got bogged down and Luan Shu [who commanded the Jin centre divisions] moved forward to take the Duke onto his chariot. But Luan Cheng, [who was with the Duke] called out, 'Shu! Get back! The state has given you vital duties [commanding the central divisions of the Jin army]: how can you delegate them? You are encroaching on Charioteer Buyi's office: that denigrates his ability. You forsake your own duties: that is irresponsible. And you have absented yourself from your own division: that is dereliction of duty. That's already three infringements of discipline: you will not get away with it!' Luan Cheng then [got out of the chariot and] lifted the chariot from the mud [himself].

25. The symbol is '坤'.

715

癸巳，潘圻之黨，與養由基蹲甲而射之，徹七札焉，以示王，曰：“君有二臣如此，何優於戰。”王怒曰：“大辱國。詰朝，爾射死藝。”

[Behind Chu lines]

The day was *Kui-si*, and Dang, the son of Panwang, and Yang Youji set up some pieces of armour and shot at them; they were able to pierce seven layers. They took [the proof of their achievement] to show the king, saying, ‘With a couple of courtiers like us in your ranks, Your Highness, you don’t have anything to worry about in a battle.’

But the king replied angrily, ‘This sort of behaviour will bring shame to our State. Tomorrow morning, if you shoot like that, we shall become the victims of such skills.’

716

呂錡夢射月，中之，退入於泥。占之，曰：“姬姓，日也。異姓，月也。必楚王也，射而中之，退入于泥，亦必死矣。”

[Behind Jin lines]

Lü Yi had dreamed of shooting an arrow at the moon and hitting it. But he dreamed that as he retreated, he got into the mud. He asked the oracle to interpret the dream. The oracle said, ‘The name of the royal household of Zhou symbolizes the sun. The name of the other royal households symbolizes the moon. So [your dream] must be referring to the royal household of Chu. You shoot and hit him, then you retreat and get into the mud: that means you must die, too!’

717

及戰，射共王中目。王召養由基，與之兩矢，使射呂錡，中項伏弢。以一矢復命。

[During battle]

When it came to the day of battle, Lü Yi shot at the King Gong of Chu and hit him in the eye. The king called Yang Youji over, handed him two arrows and commanded him to shoot Lü Yi. Yang fired one arrow hitting Lü Yi in the neck and killing him outright so that he keeled over backwards onto his bow-case. Yang brought back the other arrow to report [back to the king] on his deed.

欲至三遇楚子之卒。見楚子必下，免胄而趨風。楚子使工尹襄問之以弓，曰：“方事之殷也，有韎韐之附注，君子也；識見不殺而趨，無乃傷乎？”欲至見客，免胄承命，曰：“君之外臣至，從寡君之戎事；以君之靈，間蒙甲冑，不敢拜命。敢，告不寧君命之辱。為事之故，敢肅使者。”三肅使者而退。

[During battle]

[The second-in-command of Jin's lower divisions,] Yuzhi's third sortie was against the troops of the royal household. When he saw that the King of Chu had to be [carried wounded] from his chariot, Yuzhi removed his helmet and advanced with respectful steps. The King of Chu sent his bandmaster, Yinxiang, with a ceremonial bow to address him [as if he were of the King's own household. Or inducing him to defect?]

Yinxiang said, '[The king said], "Just now in the thick of battle, that [warrior] with orange dyed leggings beneath his armour was a true gentleman. He recognized us and advanced with respectful gait: surely he is risking injury?"' (or impugning his honour?)

Yuzhi received the emissary, removed his helmet to receive the mission, and said, 'I am Zhi, an official of a foreign power, and I am on military service on behalf of my own Lord. Now I am in the glorious presence of your Lord, yet I am in armour and helmet, so I dare not acknowledge the mission. Should I dare to do so, I risk being accused of disloyalty to my Lord's command. In view of my obligations, I shall do no more than salute to [His Majesty's] emissary.'

He then saluted three times and retreated.

晉韓厥²⁶從鄭伯，其御杜溷羅曰：“速從之，其御屢顧，不在馬，可及也。”韓厥曰：“不可以再辱國君。”乃止。卻至從鄭伯，其右蒯聶胡曰：“諜輅之，余從之乘，而俘以下。”卻至曰：“傷國君有刑。”亦止。石首²⁷曰：“衛懿公唯不去其旗，是以敗于營。”乃內旌于弮中。唐苟²⁸謂石首曰：“子在君側，敗者壹大。我不如子，于以君免，我請止。”乃死。

[During battle]

Hanjue of Jin's [chariot] was behind the Duke of Zheng when his charioteer, Du Hunluo, said, 'Let's hurry after them! Their charioteer's

26. He was Yuzhi's senior commander in the Jin lower force.

27. He was a charioteer for Duke Cheng of Zheng.

28. He was in the archer's position on Duke Cheng's chariot.

mind is on looking behind him: not on his horses. We can catch them up.'

But Hanjue said, 'I can't make the mistake of being discourteous to a head of state again.' And he broke off the pursuit.

Yuzhi's [chariot] was behind the Duke of Zheng when his right-hand man, Fu Hanhu, said, 'Our scouts can intercept his chariot from the front, and I get up onto his chariot from behind, capture him and bring him down!'

But Yuzhi answered, 'Threatening a head of state is a punishable offence.' And he also broke off his pursuit.

[The charioteer for Duke Cheng of Zheng], Shishou, said, 'It was only the failure of Duke Yi of Wei to take down his flag which caused his defeat at Yong.' And he rolled up his signal flag and hid it in his bow-quiver.

Tanggou [who was in the archer's position] said, 'You are riding beside the Duke: this is a great defeat. I rank below you: you are the one who should escape with our Lord. I wish to remain behind.' He [remained behind and] died.

7110

楚師薄于險，叔山冉謂養由基曰：“雖君有命，為國故，子必射。”乃謝。再發，盡殲。叔山冉搏人以投，中車折軾。晉師乃止。囚楚公子茂。

The Chu generals were backed into a corner. Shu Shanran said to Yang Youji, 'Although you are under orders from our Lord [not to shoot], you must shoot now for the sake of the State.'

So Yang started shooting, and after a few shots [the attackers] were all dead. Shu Shanran wrestled with a man and threw him so that when [the man] hit the [Jin] chariot, he snapped the transom-bar. After that the Jin commanders broke off the attack. But Prince Fa of Chu was taken prisoner.

The *leitmotif* of archery in this battle has little to do with its importance as a military skill. Archery is the curse of the Battle of Yanling. It has been invoked through an oracle taken by the Jin side, and has given rise to a superstitious dread.

711 gives us an intriguing 'fly-on-the-wall' view of a military briefing for the Chu King. Bo Zhouli is in fact a noble of the opposing side who has been induced to go over to Chu. He is therefore an expert in Jin military tactics. Curiously, Jin also has a defector, Miao Fenuang, on hand to brief the Duke.

In 712, we see the oracle consulted. No venture was undertaken at this early period in Chinese history without seeking to find out the

intention of Heaven. The divination technique was based on the *Yi Jing* (易經) or *Book of Changes*. But the order of the signs and their interpretation in the 5th century BC was very different to what appears in modern editions. The oracle read here was the symbol which means 'restoration'. Jin takes this to mean that their vassal state, Zheng, will be restored to its rightful master. The recorder then interprets the oracle. His interpretation, involving shooting the king in the eye, is not known from any surviving commentaries on the *Book of Changes*. It is immensely significant in the Battle of Yanling because it appears to sanction an act which would have otherwise been taboo: the attempted assassination of a monarch by a sniper.

In 713, we have reference to the manning of the war chariots. A charioteer held the reins and took the centre position. To the right of the charioteer was the archer's position. To the left, the halberdeer's position. These functions were all performed by members of the aristocracy. In 714, we can see a typical symptom of the age of the Warring States: the preoccupation of the players with individual heroics rather than submission to the discipline of teamwork.

Paragraph 715 is initially difficult to fathom. Why has the King of Chu reacted so badly to the archery feats of Yang Youji? (See footnote 21 for the significance of the feat.) It could be that for some reason (which has not come down to us) the day Kui-si in the Chinese calendar is not auspicious for the sort of feat that Yang Youji has performed. More likely, the king has, through spies, found out about the Jin oracle, and now feared that he is to become the victim of an assassination attempt in the form of an arrow in the eye. He is therefore seeking to put Yang Youji off any similar breach of taboo (firing an arrow at a noble's head armour: an insult to the state of Chu) which would give a pretext for a similar attempt against himself.²⁹

Jin's conviction that Heaven has decreed a breach of taboo is reinforced (716) by Lü Yi's dream. But the breach of taboo, although ordained by Heaven, is not to go unpunished: the perpetrator of the crime will die.

Any qualms the King of Chu may have had about archery disappear when he does eventually get shot in the eye. He immediately calls on Yang Youji for revenge. Such must his fear of Yang's insubordination be that he appears to have confiscated Yang's arrows, but now allows him two arrows back to wreak his revenge. Needless to say, Yang only needs one to complete this task.

The next few paragraphs (718–719) illustrate the elaborate chivalry of the Warring States period. In 718, the king sends an emissary to Yuzhi

29. 王世貞：《湖廣武舉鄉試錄後序》：“若養叔之射也。蹲甲而踰七札焉，楚子不悅，曰：‘詰朝而射，死藝。’然竟以其藝，出其主於險。”

with a bow. This is the normal behaviour of a person who wishes to engage another in employment of fealty (聘). One can only surmise that the king has assumed from Yuzhi's respectful approach that he is about the defect. Yuzhi, however, has either not intended to do so, or changed his mind.

But finally (7110), Chu have their backs literally against the wall, and so Yang Youji is persuaded to break the discipline of his King's orders for the sake of the greater good: the security of the state. But despite his efforts, the battle ends in a rout for Chu. Whether Yang Youji survived the battle is unclear: he could have been killed, or committed suicide following defeat. Some later works have concluded that he died on the field at Yanling; but the texts we have do not say so in so many words.

The description of the Battle of Yanling in *Zuo's Annals* has been regarded as one of the great works of early Chinese prose literature. But it was never intended to be a historical romance, despite the vivid description of the battle. It is a reminder to the Chinese reader of the period that everything is ordained by Heaven and that mortals are only agents of Heaven's will.

The Mental Approach

Lie Zi (列子) was a Daoist philosopher of the Han period, and the writings which have come down to us were probably collected and set down in the Jin Dynasty, around 300 AD.³⁰

The Daoist religion is a combination of many things: it encompasses some of China's most ancient folklore together with the folklore of some of the neighbouring national minorities in ancient times. It includes study of Chinese traditional astronomy, medicine and physiology. The word *dao* (道) implies 'an ordered way of doing things', and in fact came to mean any principle or school of philosophy. The religion is also concerned with *de* (德), which is the store of power granted to every human at birth, which can be either increased or diminished according to which style of *Dao* the individual adopts. This balancing act involves seeking a balance of all of those traditional factors — astronomy, medicine and physiology. It also involves unifying and balancing the body's mental and physical functions through the appropriate control of *qi* (氣). These principles underlie many of the physical and mental aspects of the practice of Chinese archery.

30. 嚴捷、嚴北溟：《列子譯注》（香港：中華書局，1987），頁4。

In his works, Lie Zi uses as examples a number of anecdotes of his own or others' experience in learning archery. These are used by Lie Zi to illustrate aspects of the occult (玄學) — particularly the operation of 'the basic *qi*' (原氣), which is the means by which heaven was thought by the Daoists to exert control over the physical world.

7J1

《列子·說符篇》

列子學射中矣，請于關尹子。尹子曰：“子知子之所以中者乎？”對曰：“弗知也。”關尹子曰：“未可”。退而習之。三年，又以報關尹子。尹子曰：“子知子之所以中者乎？”列子曰：“知之矣”。關尹子曰：“可矣，守而勿失也。非獨射也，為國與身亦皆如之。故聖人不察存亡而察所以然。”

Lie Zi had learned shooting until he could hit the target. He told Master Guan Yin [of his achievement].

Master Yin asked, 'Can you tell what it is about your form that makes you able to hit?'

'No,' replied Lie Zi.

'Then you haven't made the grade yet,' said Master Guan Yin.

Lie Zi went away to practise. Three years later, he went again to report [his progress] the Master Guan Yin.

'[Now] can you tell me what it is about your form that makes you able to hit?' Master Yin asked.

'Yes, now I know,' Lie Zi replied.

'Then you have made the grade,' said Master Guan Yin. 'Now you must keep to that form and never lose it. And that doesn't just apply to archery: whether in politics or your personal affairs, the same principle applies. That's why the Sage Kings didn't just accept the way things are: they always sought out what makes things the way they are.'

7J1 comes from the conclusion of Lie Zi. It is a section on how subjective experience can be analysed. The text illustrates an important element in learning to shoot: that the archer must have a full understanding of all the components of his shot: the stance, the grip on the bow, the draw, the release and the mental approach. When he has a conscious understanding of all of these things, he 'knows why he has hit'.

The obverse — not knowing why you have hit — means that you cannot analyse the reason for missing and make corrections. On this basis, later technical writings on Chinese archery provide a number of tools for analysing shooting style.

At a more generalized level, as can be seen from the conclusion, it is not sufficient to be able to achieve something through your own

independent mental process: it has to be achieved through the application of a 'method' (道) shared in common with the rest of the community.

7K1

《列子·黃帝篇》，《莊子·田子方》

列禦寇為伯昏無人射，引之盈貫，措杯水其肘上，發之，鏑矢復沓，方矢復寓。當是時也，猶象人也。伯昏無人曰：“是射之射，非不射之射也。當與汝登高山，履危石，臨百仞之淵，若能射乎？”於是無人遂登高山，履危石，臨百仞之淵，背逡巡，足二分垂在外，揖御寇而進之。御寇伏地，汗流至踵。伯昏無人曰：“夫至人者，上窺青天，下潛黃泉，揮折八極，神氣不變。今汝怵然有恟目之志，爾於中也殆矣夫！”

Lie Zi put on a show of his archery skills for [his friend] Bohun Maoren. Bringing the bow to full draw, [someone] balanced a cup of water on the inside of his elbow and he shot off his arrows so that the arrowheads struck one after the other against the arrow he had loosed off before. Throughout the shooting, Lie Zi's stance was as solid as a statue.

Bohun Maoren said, 'This is shooting with an ordinary archer's skills: not shooting from the soul. Supposing you and I climbed a high mountain, scaled a precipice and faced a yawning chasm, what would your shooting be like then?'

There and then Bohun Maoren [took Lie Zi] straight up a mountain, scaled a precipice, faced a yawning chasm, turned his back out to the chasm so that half of his feet stuck out over the edge and waved to Lie Zi to come up and join him.

Lie Zi grovelled on the ground and sweated so much his feet got wet.

Bohun Maoren said, 'Any man who has attained his skill in full will have an unbending spirit, no matter whether he faces the sky above, plunges into the foaming depths, or journeys to the corners of the earth. But now you are scared out of your wits and there is terror in your eyes. I think you still have some way to go towards perfecting your archery, don't you?'

The story in 7K1 is to be found in both *Lie Zi* and *Zhuang Zi* (莊子).

Lie Zi shows off textbook archery skills to his friend. The first skill is the full draw (彀), at which the line from the bow-hand through the shoulders and through to the draw-arm elbow is perfectly level and still so that a bowl of water can be balanced on the inside of the elbow (which is turned to face upward). The stance is firm with the knees flexed to lower the centre of gravity.

Unfortunately for Lie Zi, this display of book-learning does not impress



his friend at all. The reason is that Lie Zi's skill is all in the conscious mind. The Chinese text, '射之射，非不射之射也。' can be translated literally as 'This is the skill of the archery ritual, not the skill of non-ritual archery.' The point is then whether, if you fill that archer's mind with another preoccupation (like leaning out over a yawning chasm), can he still shoot? In Lie Zi's case, the answer is simply 'no'.

This theme is pursued in later writings on archery. It is most strongly enunciated in the *Great Learning* (大學) — one of the books of Confucius. The principle advocated by Bohun Maoren, and by the *Great Learning*, is that study must take the student past the mere mastering of mechanical skills. The ultimate goal must be to study a subject until it is fully mastered at the conscious and subconscious level. In that way, the mastery of the skill will remain in place beyond the point that basic instincts (e.g. fear of heights) would otherwise cause you to fail.

7LI

《列子·湯問篇》

甘蠅，古之善射者，彀弓而獸伏鳥下。弟子名飛衛，學射于甘蠅，而巧過其師。紀昌者，又學射于飛衛。飛衛曰：“爾先學不瞬，而後可言射矣。”紀昌歸，偃臥其妻之機下，以目承牽挺。二年之後，雖錐末倒而不瞬也。以告飛衛。飛衛曰：“未也，必學視而後可。視小如大，視微如著，而後告我。”昌以犂縣虱于牖，南面而望之。旬日之間，浸大也，三年之後，如車輪焉。以睹餘物，皆丘山也。乃以燕角之弧、朔蓬之箠射之，貫虱之心，而懸不絕。以告飛衛。飛衛高蹈撫膺曰：“汝得之矣！”

Gan Ying was a great archer in ancient times. When he drew his bow, the beasts cowered and the birds took shelter. His pupil was called Fei

Wei, and after training under Gan Ying, Fei Wei's skill in archery surpassed that of his master. Ji Chang was in his turn taught to shoot by Fei Wei.

Fei Wei told him, 'Only when you have learned not to blink can you make any real progress in archery.'

Ji Chang went back home, lay down by his wife's loom and kept his eyes wide open next to the treadle. After two years' [practice like this], he would not even blink when the shuttle point passed [near his eye].

He reported [his progress] back to Fei Wei. Fei Wei answered, 'You're still not ready. You need to learn to concentrate your vision. When you can concentrate [so well that] something small looks large, something faint looks clear, then come back and tell me.'

Ji Chang hung a flea from the window frame by a hair and facing south, watched it. In a couple of weeks it seemed larger, and after three years of practice, it seemed like a cartwheel. Looking at other things around him in this way, they seemed like hills and mountains. Then he took a bow reinforced with horn of the ox of Yan, and an arrow of cane from Chu and shot [at the flea]. He hit the middle of the flea and the hair did not even break.

He reported back to Fei Wei. Fei Wei jumped [with glee], patted his chest and said, 'Now you've got it!'

7L2

紀昌既盡衛之術，計天下之敵己者，一人而已，乃謀殺飛衛。相遇于野，二人交射，中路矢鋒相觸，而墜于地，而塵不揚。飛衛之矢先窮。紀昌遺一矢，既發，飛衛以棘刺之端扞之，而無差焉。于是二子泣而投弓，相拜于塗，請為父子，剋臂以誓，不得告術于人。

By the time Jichang had mastered all of Fei Wei's skills, he reckoned that there was only one person in the world who could compete with him and so he planned to kill Fei Wei.

They met out in the country and both men fired at each other; but their arrowheads collided half way and fell to the ground and the dust was not even stirred. Fei Wei ran out of arrows first. Ji Chang had one arrow left; but as soon as he loosed it off, Fei Wei warded it off with a blow from a bamboo rod and his blow did not miss its mark.

At this the two fellows burst into tears, cast aside their bows and kowtowed to each other on the bare earth. They pledged to become like father and son, and they tattooed their arms as a pledge never to teach their skills to anyone else.

This is another very famous archery tale. There is no way to know if the characters in the story really existed. The quality that Ji Chang had to

learn was 'concentration' (審). The first element consisted of overcoming the blinking reflex. (What was intended here might also have included resisting moving the eye when something comes into the field of vision.)

Next comes the question of focusing on the target. Chinese archery manuals stress the need to concentrate on the target at all times: not on the arrowhead or any other aiming 'props'. By application, the Chinese archer believed, you could achieve things which could not be achieved in ordinary life (just as was believed of the practice of *qigong*).

Then in 7L2, we have another example of the boundless pride of the archer. Jichang could not live with the idea that there was an archer better than him — even though that archer was Jichang's own master. Luckily, this fit of jealousy came to a happy end.

Finally, this little tale from *Zuo's Annals* prove that archery can overcome anything.

7M1

《左傳·昭二十八年》：(514 BC)

“昔賈大夫惡，取妻而美，三年不言不笑。御以如皋，射雉獲之，其妻始笑而言。”

Annals of Master Zuo: 'The Eighteenth Year of Zhao'

Once there was a Marquise of Jia who was ugly, and he married a very pretty wife. For three years she refused to speak or laugh. Then he drove her by carriage out to Gao where he shot a pheasant and bagged it, and from then on she laughed and talked.

These stories are the folklore of the Chinese archer. Frequently, the archer central to the story is a show-off, and in one way or another he gets deflated. The moral always seems to be that the archer lacks something — the control of a higher authority, ritual discipline or the acquisition of a higher level of skill or spirituality.

What these tales also seem to be telling the archer is that technical skill in hitting the mark is not the only signs of 'perfection' (善射). Perfection is 'skill plus something else'. And 'something else' is sublimation of the basic skill to ritual discipline and filial piety.

挺質本軒皇
機張驚雉雉
高鳥行應盡
蘇秦六百步

申威振遠方
玉彩耀星芒
卿猿坐見傷
持此說韓王

*Built of the sturdiest materials,
In the spirit of the Yellow Emperor,
You spread your power and distant lands quake.
The string put on the lock, the game-birds tremble,
Your quarrel shoots among the stars,
The skeins of geese flee from the skies above,
The ape foresees his doom in the hands of he who holds you.
With your range of six hundred paces.
Su Qin could make his point to the King of Han.*

Ode to a Crossbow (《詠弩》)
by Li Qiao (李嶠) (644–713)

Calligraphy by Li Xinbao (李鑫寶)



The Crossbow and Other Forms

The first crossbows probably appeared in China even before the Spring and Autumn period (770–476 BC). Judging from evidence in literature and drawing an inference from simple crossbows used by China's national minorities, the concept of mounting a bow on a stock so that it could be held at full draw without calling on the strength of the archer should have already been known before the Zhou Dynasty.¹

During the Warring States period (475–221 BC), rival states started to find themselves in bitter conflict to the death involving large armies rather than engaging in courtly engagements between noble knights in war chariots. Starting with the breakup of the Zhou Dynasty and throughout the 'Spring and Autumn' period, the ancient aristocracy began to lose their influence to ministers less tied to each other by blood-line or the ancient bonds of chivalry. The aristocracy of the many kingdoms which had made up the Spring and Autumn period died out or were enslaved following the destruction of their states in war, and the ministers who gained political and military influence in their place preferred a more cut-throat style of warfare. Conscripted armies of hundreds of thousands, many of whom consisted of enslaved families and troops of previously vanquished enemies (both Chinese and from without the borders) were put into the battlefield. These ministers in turn were gradually ousted during the Warring States

1. See 楊泓：《中國古兵器論叢》（北京：文物出版社，1985），頁 206–209。

period by educated technocrats, some of whom were specialized in the science of efficient warfare.²

As we have seen in the preceding chapters, mastering the bow and arrow required a major educational exercise, and few achieved the highest pinnacles of proficiency. Early Chinese warfare was a highly ritualized art and was fraught with taboos and prohibitions about shooting. You could not shoot at your rival nobility (with whom you were likely to be bound by family links), and to make any impression against ranked infantry you needed a great many proficient archers from among the uneducated rank-and-file rather than chivalrous knights shooting with bows from chariots. If archery was to play a part in this style of warfare, something was needed to make the power of the bow more accessible to the masses.

The reason that the crossbow found favour in the battlefield was not simple superiority over the bow and arrow. It was recognized from early on that the bow and arrow were superior in many situations. But by allowing a relatively unfit and untrained recruit to pull a heavy draw-weight (by using two hands with the middle of the bow held under the feet), many more soldiers could exploit the range and power of the bow without needing a large investment in training and strength-building.

What the early evolution of the crossbow may have been and who the inventor of the Warring States crossbow was we cannot be sure. But Chinese literature has a story to answer the question. In fact, one work offers a complete history of Chinese archery (as perceived in the Han Dynasty), together with a technical overview of the crossbow, its construction and use. I have already mentioned the *Romance of Wu and Yue* (吳越春秋) by Zhao Ye (趙曄) (c. 40–80 AD) on page 120. This historical romance contains much which is regarded as of historical value. For our purposes, though, it is a rich source for understanding Chinese perceptions of the cultural background of archery. Ming Dynasty authors such as Gu Yu (顧煜) in his *Encyclopaedia of Archery* (射書四卷, 第四卷) takes the account of the history of archery in Zhao Ye's romance as historical fact.

Gu Yu goes to the trouble of recounting two sections of the Romance: one relates to how Fan Li recruited a young woman who was an outstanding pole and sword fighter into the army of the King of Yue, and the other is about how he recruited the crossbowman Chen Yin³ as

2. See Cho-yun Hsu (許倬雲), *Ancient China in Transition*, Stanford CA: Stanford University Press, 1965, Chapter 3.

3. Astonishingly, Gu Yu treats both extracts as commentaries on archery and edits the wording of the first extract to suit his case! But such treatment of both subjects together is not unique; it can be found in Ming Dynasty, Yu Da You's (余大猷) *Swordsmanship Classic* (劍經) as well.

instructor. I shall take the same liberty as Gu Yu did and retell both of the stories, because they are typical of the style and content of early archery and martial arts teaching manuals. They are also wonderful tales.

8A1

趙曄：《吳越春秋·卷九：句踐陰謀外傳》

越王又問相國范蠡曰：“孤有報復之謀，水戰則乘舟，陸行則乘輿。輿、舟之利，頓於兵弩。今子為寡人謀事，莫不謬者乎？”范蠡對曰：“臣聞古之聖君莫不習戰用兵，然行陣、隊伍、軍鼓之事。吉凶決在其工。今聞越有處女，出於南林，國人稱善。愿王請之，立可見。越王乃使使聘之，問以劍戟之術。

Zhao Ye (Circa 40–80 AD): *Romance of Wu and Yue. Vol. 9*

The King of Yue asked Fan Li, ‘I have a scheme to get even again. For a naval battle, you rely on ships; for a land battle, you rely on chariots: but the power of our ships and chariots is blunted by the quality of our short and long weapons. You are my strategist; isn’t there some scheme to get us out of this fix?’

Fan Li replied, ‘As I recall, the ancient sage kings never failed to exercise in warfare and the use of weapons; and only then did they form up their battalions, line up the divisions and march off to war. The outcome hung on their martial arts instructors. I hear there is a young woman of Yue who came from the Southern Forests; the people of Yue speak highly of her. I think your Majesty should send her an invitation and you can see for yourself how good she is.’

So the King of Yue sent an emissary with a polite invitation, to ask whether the King could get her advice on skill in use of swords and halberds.

8A2

處女將北見於王，道逢一翁，自稱曰袁公。問於處女：“吾聞子善劍，願一見之。”女曰：“妾不敢有所隱，惟公試之。”於是袁公即拔箴簳竹，竹枝上枯槁，末折墮地，女即捷末。袁公操其本而刺處女，處女應即入之，三入，因舉杖擊袁公。袁公即飛上樹，變為白猿。遂別去，見越王。

The Young Woman of Yue travelled north for her audience with the king. On the way, she met an old fellow who said his name was ‘Old Mr Yuan’.

He said to the young woman, ‘I hear you fight well with a staff. I’d like to see a demonstration.’

She replied, 'I wouldn't presume to keep anything from you: you are welcome to test my skill, Sir.'

So Old Man Yuan drew out a length of Linyu bamboo. But the bamboo was rotten at one end. The end fell to the ground and the young woman immediately snatched it up. The old man wielded the top end of the staff and thrust towards the young woman, but the young woman parried straight back, thrust three times, and finally raised her end of bamboo and drove home her attack against Old Man Yuan. Old Man Yuan hopped off up a tree, turning into a white ape. Then each went their own way, and she went on to meet with the king.

8A3

越王問曰：“夫劍之道則如之何？”女曰：“妾生深林之中，長於無人之野，無道不習，不達諸侯。竊好擊之道，誦之不休。妾非受於人也，而忽自有之。”越王曰：“其道如何？”女曰：“其道甚微而易，其意甚幽而深。道有門戶，亦有陰陽。開門閉戶，陰衰陽興。凡手戰之道，內實精神，外示安儀，見之似好婦，奪之似懼虎，布形候氣，與神俱往，杳之若日，偏如膝兔，追形逐影，光若佛衍，呼吸，往來，不及，法禁，縱橫，逆順，直復：不聞。斯道者，一人當百，百人當萬。王欲試之，其驗即見。”越王大悅，即加女號，號曰“越女”。乃命五校之隊長、高才習之以教軍士。當此之時皆稱越女之劍。

The King asked her, 'Of all the methods of fighting with the staff, which is the best?'

She answered, 'I was born in the depth of the forests and I grew up in the wilds where no other people ever ventured. So there was no "method" for me and I followed no course of instruction, for I never ventured into the feudal fiefs. Secretly I yearned for a true method of fighting and I practised endlessly. I never learned it from anyone: I just realized one day that I could do it.'

'And what method do you practise now?' asked the King.

'The method involves great subtlety and constant change [of movement]; its principles involve great mystery and depth. The method involves both "front doors" and "back doors" as well as hard and soft aspects. Opening the "front door" and closing the "back door" closes off the soft aspect and brings the hard aspect to the fore.

'Whenever you have hand-to-hand combat, you need to have nerves of steel on the inside, but be totally calm on the outside. I must look like a demure young lady and fight like a startled tiger. My profile changes with the action of my body, and both follow my subconscious. Overshadow your adversary like the sun; but scuttle like a flushed hare. Become a whirl of silhouettes and shadows; shimmer like a mirage. Inhaling, exhaling, moving in, moving back out, keeping yourself out

of reach, using your strategy to block the adversary, vertical, horizontal, resisting, following, straight, devious, and all without a sound. With a method like this, one man can match a hundred; a hundred men can match ten thousand. If Your Majesty wants to try me out, you can have a demonstration right away.'

The King of Yue was overjoyed and immediately gave her the title 'Daughter of Yue'. Then he ordered the divisional commanders and crack troops to practise the new method so that they could pass on their skills to the troops. From then on, the method was known as 'The Daughter of Yue's Swordsmanship'.

8A4

於是范蠡復進善射者陳音。音，楚人也。越王請音而問曰：“孤聞子善射，道何所生？”音曰：“臣楚之鄙人，嘗步於射術，未能悉知其道。”越王曰：“然願子一二其辭。”音曰：“臣聞弩生於弓，弓生於彈，彈起古之孝子。”

Then Fan Li went back to the king and recommended the marksman, Chen Yin. Yin was from Chu. The King invited Yin over and asked, 'I hear you are a fine marksman. Tell me, what is the origin of archery?'

Yin replied, 'I'm just a country bumpkin from Chu. I've tried to make some progress in archery, but I don't know the art thoroughly yet.'

The King said, 'In that case, I would just like you to tell me what you know from the beginning.'

Yin said, 'As far as I know, the crossbow originated from the bow and the bow originated from the stone-bow. The stone bow had its origins with "The Pious Son".'

8A5

越王曰：“孝子〔作〕彈者奈何？”音曰：“古者人民樸質，飢食鳥獸，渴飲霧露，死則裹以白茅，投於中野。孝子不忍見父母為禽獸所食，故作彈以守之，絕鳥獸之害。故古人歌曰：‘斷竹屬木，飛土逐肉。’遂令死者不犯鳥、狐之殘也。”

'Tell me about how "The Pious Son" invented the stone-bow,' said the King of Yue.

Yin answered, 'The people of ancient times were rough fellows: when they were hungry, they ate wild birds and animals; when thirsty, they drank the dew. When they died, they were wound in cogongrass⁴

4. *Imperata cylindrica*. 《本草綱目·集解》：“茅根生於楚地谷田野，六月采根。”

and [their bodies] left in the open air. "The Pious Son" could not bear to see his father and mother ultimately being eaten by the birds and beasts, so he made the stone-bow to stand guard with over their bodies and put an end to the predations of the birds and beasts. That's why there's an ancient chant:

*Cut the bamboo; splice the wood,
Pebbles fly to catch our food!*

From then on, the dead were spared the humiliation of being defiled by [carrion] birds and foxes.'

8A6

“於是神農、黃帝弦木為弧，剡木為矢，弧矢之利，以威四方。黃帝之後，楚有弧父。弧父者，生於楚之荊山，生不見父母，為兒之時，習用弓矢，所射無脫。以其道傳於羿。羿傳逢蒙，逢蒙傳於楚琴氏。”

'Next, the God of Agriculture and the Yellow Emperor strung wood to make the bow, whittled wood to make arrows; and the power of the bow and arrow allowed them to dominate in every direction. After the Yellow Emperor came "The Bowman" of Chu. "The Bowman" was born in the Jing Hills in the Land of Chu. His father and mother disappeared at the time he was born, and as a child, he learned to shoot so well with bow and arrows that nothing could ever escape his arrows. He passed on his skills to Yi. Yi passed his skills to Pangmeng, who in turn passed them on to Clansman Qin of Chu.'

8A7

“琴氏以為弓矢不足以威天下。當是之時，諸侯相伐，兵刃交錯，弓矢之威不能制服。琴氏乃橫弓著臂，施機設郭，加之以力，然後諸侯可服。琴氏傳大魏，大魏傳楚三侯，所謂句亶、鄂、章，人號麋侯、翼侯、魏侯也。自楚之三侯傳至靈王，自稱之楚累世蓋以桃弓棘矢而備鄰國也。自靈王之後，射道分流，百家能人用莫得其正。臣前人受之於楚，五世於臣矣。臣雖不明其道，惟王試之。”

'Clansman Qin considered the bow and arrow insufficient to achieve total domination. In his time the fiefdoms were fighting each other, everywhere the clash of arms was heard; and the power of the bow and arrow could not bring things under control. So Clansman Qin turned the bow on its side and added a stock, invented the trigger mechanism and its housing and thus added power to the bow with the result that the fiefdoms could be brought under control. Clansman Qin passed on [his skill] to Great Wei, and Great Wei passed them to the Three Fiefs of Chu, known as Dan, E and Zhang; their personal names were Lord

Mi, Lord Yi and Lord Wei. From the Three Fiefs of Chu the skill passed to King Ling of Chu, and since the Kingdom of Chu entered onto the world stage, all the generations have armed themselves with a peach-wood bow and jujube arrows to fend off their neighbours. After King Ling of Chu the art of archery became fragmented and even the ablest men in all the families could not fathom it. Before I was taught the art in Chu it had already passed through five generations. Although I am no adept in the art, Your Majesty is welcome to test me if you will.'

8A8

越王曰：“弩之狀何法焉？”陳音曰：“郭為方城，守臣子也；敖為人君，命所起也；牙為執法，守吏卒也；牛為中將，主內裏也；闕為守禦，檢去止也；錡為侍從，聽人主也；臂為道路，通所使也；弓為將軍，主重負也；弦為軍師，禦戰士也；矢為飛客，主教使也；金為穿敵，往不止也；衡為副使，正道里也；叉為受教，知可否也；弣為都尉，執左右也。籍為百死，不得駭也。鳥不及飛，獸不暇走，弩之所向，無不死也。臣之愚劣，道悉如此。”

The King asked, 'What makes the composition of a crossbow so effective?'

Yin answered, 'The firing mechanism casing is like the walls of a city: it protects all the "ministers". The trigger-lever is the overlord: all commands originate from it. The release is the enforcer: it controls the officers and men. The latch is like a lieutenant: it holds the inner formations in check. The firing mechanism assembly is like the cavalry commander: it commands an advance or a halt. The axle-bolts are passive servants: they comply with whatever is ordered. The stock is like a roadway, it provides a path for whatever is sent. The prod is like the general, it is responsible for the most onerous duties. The string is like the commander, it drives the warriors. The quarrel is like the flying knight: at the command and guidance [of the master]. The arrowhead is the penetrator of the enemy: it charges forward and never stops. The fletching is like an assistant-commander: it corrects the line of attack. The lobes of the nock receive the order: once acknowledged, they are never disobeyed. The riser of the prod is like the lieutenant of the centre division: it keeps left and right [phalanxes] in order. The point of the quarrel is the killer of hundreds: no one can dodge it. Birds cannot get away, beasts have no time to flee; for whatever the crossbow is aimed at dies without fail. That is the method as I learned it.'

8A9

越王曰：“願聞正射之道。”音曰：“臣聞正射之道，道眾而微。古之聖人

射弩，未發而前名其所中。臣未能如古之聖人，請悉其要。夫射之道，身若戴板，頭若激卵，左足縱，右足橫，左手若附枝，右手若抱兒，舉弩望敵，翕心咽煙，與氣俱發，得其和平。神定思去，去止分離，右手發機，左手不知，一身異教，豈況雄雌？此正射持弩之道也。”

The King of Yue said, 'I wish to hear about the proper method of archery.'

Chen Yin replied, 'I have heard of the proper methods of archery; there are many and they are profound. When people in ancient times shot with the crossbow, they could name the exact spot they would hit before even pulling the trigger. I am no match for the archers of old, so please accept the basic outline. The basic form in all shooting is: the body is as erect as if it were held in a wooden frame; the head relaxed like a pebble rolling in a stream; the left foot aligned with the target; the right foot at right-angles to the target; the left hand as if glued to the grip; right arm as if cradling a baby; you raise the crossbow towards the enemy; draw your concentration together as you inhale and then fire in co-ordination with your breathing so that the whole series of actions is in harmony. Your inner mind is settled and all conscious thoughts must be driven out. There must be absolute separation of those parts which move from those which don't: the right hand pulls the trigger and the left never reacts, as if one body were controlled by totally different impulses set at opposing extremes. This is the orthodox method of shooting with a crossbow.'

8A10

“願聞望敵、儀表、投分⁵、飛矢之道。”音曰：“夫射之道，從分望敵，合以參連。⁶弩有斗石，矢有輕重，石取一兩，其數乃平。遠近高下，求之銖分。道要在斯，無有遺言。”

[The King said,] 'I want to know about the relationship between the use of aim, physical considerations and calibration of elevation in determining the flight of the arrow.'

Chen Yin replied, 'The rule in all archery is: let your eye follow the calibrated line of fire from you to the target, then line up the three

5. It is common to gloss '投分' in this passage as referring to some form of mental picturing of the flight of the arrow. The following explanation makes the best sense, however, if '投分' is understood literally as the gradations of elevation marked on the sighting mechanism of the crossbow — already commonplace in the time of the author, Zhao Ye.
6. Recall the mysterious 'five archery techniques' in the *Rites of Zhou*: '周禮地官保氏：三曰五射。' 鄭注：“五射：白矢、參連、剡注、襄尺、井儀也。” Here we may have a near-contemporary technical explanation of '參連'.

elements (calibration, arrowhead and target). The power of crossbows is measured in heavy or light poundage; arrows differ in their weights. The ratio of arrow weight to bow poundage is one ounce to one stone (120 catties):⁷ this gives you the correct proportion. Different distances and elevations can be compensated by minute differences in this weight. This is the whole method: I have held nothing back.'

8A11

越王曰：“善。盡子之道，願子悉以教吾國人。”音曰：“道出於天，事在於人，人之所習，無有不神。”於是乃使陳音教士習射於北郊之外。三月，軍士皆能用弓弩之巧。陳音死，越王傷之，葬於國西山上，號其葬所曰陳音山。

The King said, 'That's fine. I'd like you to use your expertise to teach our citizens.'

Chen Yin said, 'All orthodox methods follow the rules of nature, but their application lies with the individual. Whether the individual attains what he studies or not has no mystery to it.'

The King then arranged for Chen Yin to instruct his officers outside the northern suburb. After three months, the troops and officers all became proficient in the use of the crossbow. When Chen Yin died, the King regretted his loss bitterly and had him buried up on the Western Hills and they called his grave 'Chen Yin Hill'.

This is a wonderful and clear piece of writing. By contrasting the tale of the 'Daughter of Yue' and the account of Chen Yin, we can observe two aspects of martial arts. The swordswoman's way is an art, full of spiritual allusions and grace. Chen Yin's approach is pure science. There is an element of contrast of male and female or *Yin* and *Yang* aspects to what Zhao Ye is describing: and this may explain why Gu Yu in the Ming Dynasty felt that he could not quote one without the other.

8A2 is a curious bit or romantic legend. But in Chinese martial arts classics, it was a convention to invoke divine intervention as an authority for military teaching. Once again, the mystic character is an ape.

8A3 alerts us to the fact that prowess in the martial arts is no longer the monopoly of the nobility. This is no more than a subtle reminder of the revolution which overtook tactical thinking at the end of the Spring and Autumn period. No longer are the nobility to be considered the

7. The ratio is 1:1920, or one gram arrow weight to 1.92 kg draw-weight.

warriors and the peasantry cannon-fodder. The young woman of Yue admits that her method is not a 'Way' (道),⁸ meaning a recognized and honoured form for the nobility, for she has never mixed with them. This is martial arts for the masses.

Her instructions encompass the juxtaposition of firm and relaxed, hard and soft, moving and still, and concealment of intentions which is at the core of all martial arts and is applied also to archery.

In 8A4, Chen Yin starts off by making the same point as the young lady of Yue: Chen Yin is no aristocrat. His world is military science, not a noble art. Once again, we are reminded of the close association of archery with the state of Chu. The lineage of archery is the lineage of the Chu culture.

8A5 talks of the ancient people of China, and the description of the death rites with the body left in the open wrapped in fragrant grass. The little rhyme, 'Cut the bamboo; splice the wood, pebbles fly to catch our food!' is known from other records, and may indeed be a very ancient incantation for success in hunting with the stone bow.

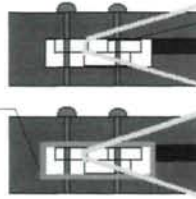
In 8A7, we come to the claimed inventor of the crossbow. We have no information from other sources about 'Clansman Qin'. In the *Rights of Zhou*, (周禮) the word '氏' denoted a class of hereditary court official. If the same practice existed in Chu at that time, it is possible that the words '楚琴氏' denoted a professional class whose origin might have been connected to the management of stringed musical instruments. A zither maker would be a good candidate for inventor of the crossbow.

If their contribution to the development of the crossbow was indeed as late as the Warring States period, then they might in fact have been the inventor of the bronze housing for the crossbow mechanism (郭). This development allowed the main force-bearing elements of the firing mechanism to be housed in a bronze box so that the tension of the string was transmitted to the wooden stock of the crossbow across the whole surface area of the sturdy housing, rather than by the very limited surface area of the pins which held the latch.

The implications of this development were that the crossbow had, for the first time, sufficient penetrating power to pierce simple armour, and the draw could be held and the bow aimed with a lower investment in the development of strength and skill, thus allowing the bow to become an effective weapon in the hands of the ordinary infantryman.

8. '無道不習' in the context of '不達諸侯' which follows must mean 'there was no "method" for me and I did not follow any course of instruction' rather than 'there was no method I failed to study'.

In the improved crossbow, a bronze housing allows tension to be transmitted to the wood over a larger surface area, thus permitting greater draw-weight.

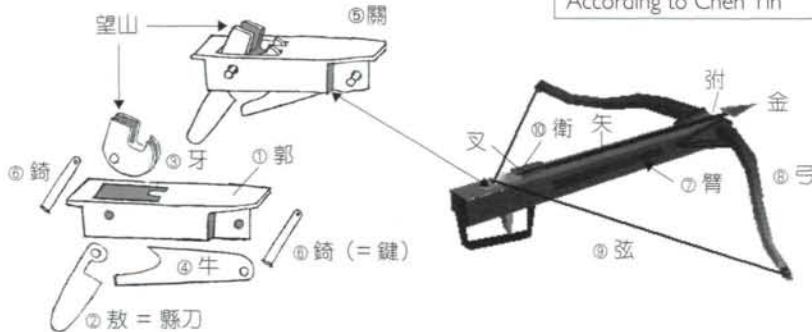


In the early crossbow, tension from the string was transmitted directly to the wooden stock through the bolts.



Han crossbow mechanism with a bronze housing

The Anatomy of the Crossbow According to Chen Yin



- ① 郭 Firing mechanism housing
- ② 敖 Trigger
- ③ 牙 Release
- ④ 牛 Latch
- ⑤ 關 Firing mechanism assembly

- ⑥ 錡 Axle bolts
- ⑦ 臂 Stock
- ⑧ 弓 Prod
- ⑨ 弦 String
- ⑩ 衛 Fletch

Crossbow and mechanism (after 茅元儀: 《武備志》)

In the rest of the paragraph, we see a progression of transmission of skills which, even if it is not historically accurate, conveys that skills in archery passed from the exclusive domain of the nobility and into the hands of ordinary people (including the self-confessed 'bumpkin', Chen Yin).

The explanation of the crossbow mechanism in 8A8 is a sort of mnemonic likening the parts of the crossbow to the members of an army.

Like any soldier in the field, the Han Dynasty trooper needed to know his weapon well. The Han crossbow could be disassembled for cleaning and maintenance just like a Kalashnikov, and no doubt every trooper had to take down his weapon in the field and put it together again, hence the need for the mnemonic.

As I mentioned in Chapter 7, this description reads much like a piece of standard military training quoted verbatim from a manual and it is quite likely to have had its origin in one of the 'lost' archery manuals of the Han Dynasty.

Next (8A9), the King of Yue wants to know about the technique of shooting with the crossbow. It is worthwhile to compare basic hand positions in Chen Yin's method with the crossbow to the shooting methods described in Chapter 7: the two versions of the 'bowyer's wife's method'.

Source	Chinese	English
Liu Xiang: <i>The Bowyer's Wife's Tale</i> (列女傳) (Bow)	左手如拒石，右手如附枝，右手發之，左手不知。	Raise your left arm as if pushing against a boulder; your right close in [to your ear]; the right hand releases the shot and the left hand does not react.
The Supplement to <i>Han's Tales from the Book of Songs</i> (韓詩外傳) (Bow)	手若附枝，掌若握卵，四指如斷短杖，右手發之，左手不知。此蓋射之道。	The [right] hand is close in [to the ear]; palm the grip like grasping an egg; the four fingers as if snapping a twig; the right hand releases the arrow and the left does not react.
<i>Romance of Wu and Yu</i> (吳越春秋) (Crossbow)	左手若附枝，右手若抱兒……右手發機，左手不知，一身異教，豈況雄雌？	The left hand as if glued to the grip; right arm as if cradling a baby . . . the right hand pulls the trigger and the left never reacts, as if one body were controlled by totally different impulses set at opposing extremes.

The three Chinese texts contain two common elements. The first is the enigmatic words: '附枝'. This is clearly an action or position of the arms or hand. But what does it mean? '附' literally means 'in proximity to', while '枝' means 'the horizontal branch of a tree'. The first text says explicitly that it is a *right* (string) hand action; the second text does not make explicit which hand it is talking about, and the third (crossbow) text says it is a *left* hand position.

To seek help on the meaning of the term '附枝' which must have been clearly understood in the Han Dynasty if it was found in similar circumstances in three texts on the same subject, we have to look to the *Book of Songs* (詩經). Here, in a poem entitled 'The Horn Bow' (meaning 'the composite bow') we find the following stanza:

8B1

.....
毋教猱升木，如塗塗附。
君子有徽猷，小人與屬。

An ape knows instinctively how to climb a tree,
He clings to it (附) like sticky mud.
As long as a noble lord is virtuous,
The common people will attach themselves to him.

The theme of this poem, which starts off, 'Springy horn-backed bow; swiftly it flies back to its natural shape . . .' pursues the theme that without control, courtiers tend to go against the interests of their lord. To the Han reader of military manuals who knew the *Book of Songs* (and they all would), the association of '附' (close proximity) and '枝' (branch or tree) would have brought to mind the image of the ape clinging closely to his tree like sticky mud. This is similar to the idea of 'three proximities' (三靠) which appeared in much later archery manuals. (See Chapter 14, 14A5.)

So in the 'Bowyer's Wife's Tale' of Liu Xiang, the *left* hand is as if pushing against a rock, while the *right* is close up against the ear. In the 'Bowyer's Wife's Tale' of *Han's Tales from the Book of Songs*, we must interpolate that the *right* hand is close against the ear and the *left* palm is grasping the bow grip like an egg. Finally, in the *Romance of Wu and Yue* the *left* hand is as if glued to the stock of the crossbow. Since the crossbow stock is not held up against the cheek like a modern rifle stock, but out in front of the body, and the right hand does nothing but operate the release, the reversal of the 'close proximity' from right hand (bow and arrow) to left hand (crossbow) is consistent.

The second concept common to all three quotations is that the actions of the left and right hand must be completely separated. (‘右手發之，左手不知’ or ‘The right hand releases the arrow and the left does not react.’)

Finally (8A10), the King asks for a discourse on artillery science. Classical annotations on the *Romance of Wu and Yue* gloss the term ‘投分’ incorrectly, believing it to be some spiritual reference. But in context, the passage only makes sense when the term is interpreted literally. ‘投’ literally means ‘cast’, while ‘分’ means ‘calibration’. These calibrations were to be found on the sights of the Han Dynasty crossbow (望山).

Once this simple interpretation of ‘投分’ as ‘sighting calibrations’ is accepted, the passage becomes quite clear. The trajectory is a function of the angle at which the crossbow is held (determined by a line through the appropriate sighting calibration and the arrowhead to the target), the draw-weight of the crossbow and the weight of the quarrel. Apply the arrow-weight: draw-weight constant (one gram arrow weight to 1.92 kg draw-weight) and compensate for underweight arrows with small incremental weights affixed to the quarrel. Although Chen Yin omitted the windfactor from his lecture, the rest is adequate for a foundation lecture in crossbow ballistics.

Chen Yin’s final comment in 8B11 is very interesting: ‘*All orthodox methods follow the rules of nature, but their application lies with the individual. Whether the individual attains what he studies or not has no mystery to it.*’ He is denying any spiritual mumbo-jumbo when it comes to his crossbow method: it is just a science which the individual has to master. Consider how far this approach differs from the writings of Lie Zi quoted in Chapter 7.

Another comment on Han crossbow technique comes in the writing of Hua Jiao (華嶠) who was renowned for his scholarship in Han history and was appointed by Emperor Wu of Jin (晉武帝) (263–290 AD) to revise the *Dynastic History of the Later Han* (後漢書). One of his notes concerns Liu Chong, one of the sons of Emperor Ming of Han (58–76 AD), who was enfeoffed as ‘King of Chen’ (東漢劉寵，漢明帝之子，封為陳王。). Liu Chong was a crack shot with the crossbow and distinguished himself in the ‘Yellow Turban’ Uprising.

8C1

華嶠書

寵射，其秘法以：“天履地載，三連為奇。”又：“三微三小，三微為經，三小為緯。經緯相將，萬乘之方，[然]要在機牙。”

Liu Chong’s secret formula for shooting was: ‘Of all the things in the

whole wide world, there is none so extraordinary as the principle of sighting.' Also: 'There are three "minute points" and three "small points". The "three minute points" are upon the warp and the "three small points" are upon the weft. When the warp and the weft are co-ordinated, that is the formula for countless victories; and they unite upon the catch of the crossbow mechanism.'

Liu Chong's formula is a metaphor based on the ancient Han silk loom. The warp and weft are the vertical and horizontal strands of silk. The 'three minute points' are the reticle on the sight of the crossbow (望山), while the 'three small points' would be three horizontal points of reference near the arrowhead. The vertical and horizontal reference points have to be co-ordinated and they unite on the catch, which is where the crossbow sight is located. The metrical mnemonic lines of Liu Chong's formula are further candidates for quotations from the missing shooting manuals of the Han Dynasty.

In the Northern Song Dynasty, a scholar called Shen Gua (沈括) (1031–1095) came across an old crossbow mechanism dug up from a tomb which had gradations stamped on the sight. He recalled the account of Liu Chong.

8D1

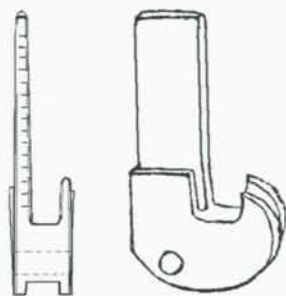
北宋·沈括撰《夢溪筆談·卷十九·器用》

予頃年在海州，⁹人家穿地得一弩機，其“望山”甚長，“望山”之側為“小矩”，如尺之有分寸。原其意，以目注鏃端，以“望山”之度擬之，准其高下，正用算家句股法也。《太甲》¹⁰曰：“往省括于度則釋，”疑此乃度也。漢陳王寵善弩射，十發十中，中皆同處。其法以“天覆地載，參連為奇，三微三小，三微為經，三小為緯，要在機牙”。其言隱晦難曉。大意天覆地載，前後手勢耳；參連為奇，謂以度視鏃，以鏃視的，參連如衡，此正是句股度高深之術也。三經三緯，則設之于棚，以志其高下左右耳。予嘗設三經三緯，以鏃注之，發矢亦十得七八。設度于機，定加密矣。

For a brief year, I was at Haizhou (*present part of Jiangsu*), and someone broke the ground and found a crossbow mechanism. Its sighting-blade was very long and along the edge, it was incised with gradations like the tenths and inches on a ruler. Its original purpose would have been to sight along the point of the arrowhead, then you'd line it up with the gradations on the sight to get the elevation: i.e. the trigonometric method used by mathematicians.

9. 今江蘇灌雲縣西南。

10. 即《尚書·太甲》上篇。



The 'Tai Jia' says: 'Always bring the nock to the gradations, then shoot.' These must be the 'gradations'. The Han Dynasty King of Chen (Liu Chong) was a crack shot with a crossbow and could score ten hits out of ten, all in the same place. His method was: 'Of all the things in the whole wide world, there is none so extraordinary as the principle of sighting. There are three "minute points" and three "small points". The "three minute points" are upon the warp and the "three small points" are upon the weft. They unite upon the catch of the crossbow mechanism.' His explanation is pretty obscure. Probably, the phrase *'covered by heaven and supported on the earth'* is the position of the front and rear hand position.¹¹ The phrase *'there is none so extraordinary as the principle of sighting'* refers to measuring by sighting along the arrowhead along to the target so that the three are aligned like the arm of a set of scales. This is really a very sophisticated trigonometric method. The 'three minute points' and 'three small points' are just something you place onto the target face to estimate the elevation and lateral position. I tried out putting three 'minute points' and three 'small points' on a target face and aiming with the arrowhead, and scored seven or eight hits out of ten. If I could have rigged up a graduated sight, I could certainly have done even better.

In the tomb of the first Emperor of the Qin in Xi'an, one of the famous terracotta warriors (秦始皇兵馬俑) is clearly a crossbowman (see p. 169). While the terracotta figure has been preserved perfectly, his original crossbow has long since rotted away. In the illustration on p. 169, I have put a smart new crossbow in his hands. His body position is much as described by Chen Yin: body erect and firm, feet at right-angles, eyes on the target, crossbow lowered ready to be raised to the firing position.

In his comprehensive study of the discoveries among the Qin terracotta warriors, the archaeologist Wang Xueli (王學理) makes a very important

11. The author does not agree with this explanation by Shen Gua; hence the inconsistencies of translations of the same Chinese text.

point:¹² in the whole excavation of the Qin Emperor's tomb, not one bow has ever been discovered. Only crossbow stocks, quarrels and mechanisms have come to light.

This suggests to me the idea that in the early period, the bow and the crossbow were not entirely separate: the bow could be used on its own, or attached to a stock so as to be used together with the crossbow mechanism. The crossbow of the early period was especially constructed to allow easy attachment and removal of the bow (prod) just by untying a sturdy leather thong. Chen Yin relates that Clansman Qin 'turned the bow on its side and added a stock, invented the trigger mechanism and its housing and thus added power to the bow . . .' The crossbow stock is truly the slave to the bow: it does all the hard labour so that the archer can concentrate on the skill of shooting.



A Qin terracotta warrior in Xian

The *Rites of Zhou*, which is the source of the Warring States period account of the construction techniques of the bowyers, arrowsmiths and target makers discussed in Chapter 6, also mentions crossbows. In each case, crossbows are differentiated by reference to the standard types of bow

12. 王學理：《秦俑專題研究》（西安：三秦出版社，1994），頁 312。

attached to the stock. The bows, however, are described as being for 'instruction' (i.e. in the noble household) while the crossbows are described as having military uses.

There is little mystery about why the builders of the Qin tombs put crossbow stocks and arrows into the graves but not the bows themselves. Crossbow stocks, firing mechanisms and quarrels were mass-produced items which could be made in days, if not hours. But the bow, as we saw in Chapter 6, took three years to make. Excavation pit No. 1 of the Qin Emperor's Tomb alone contains 5000 terracotta warriors in full war array. Of these, 1087 were archers, and 288 crossbow mechanisms have actually been found among the remains. The bows for this number of archers (who can only represent a portion of the total in the burial) would have required 3261 man-years of skilled labour. Not even allowing for the pomp of the burial of the First Emperor of Qin would a state have considered depleting its fighting resources by burying such a huge number of valuable weapons for the First Emperor's use in the afterlife.

The development of the crossbow allowed the creation of a new tactic: saturation fire. The earliest and most dramatic account of this strategy in action is to be found in Sima Qian's account of the Battle of Maling (馬陵) in the *Historical Records*.

The Battle of Maling (341 bc) (司馬遷：《史記·孫子吳起列傳》)

8E1

後十三歲，魏與趙攻韓，韓告急於齊。齊使田忌將而往，直走大梁。魏將龐涓聞之，去韓而歸，齊軍既已過而西矣。孫子謂田忌曰：“彼三晉之兵素悍勇而輕齊，齊號為怯，善戰者因其勢而利導之。兵法，百里而趣利者蹶上將，五十里而趣利者軍半至。使齊軍入魏地為十萬黿，明日為五萬鵞，又明日為三萬鵝。”

Thirteen years later, Wei joined with Zhao in attacking Han. Han turned to Qi for military assistance. Qi appointed Tian Ji as general and he proceeded directly to [the capital of Wei], *Da Liang*. The Wei general, Pang Juan, heard about this and he quit Han and returned, as the Qi forces had already crossed [into Wei] and had penetrated to the west of him.

Sun Zi remarked to Tian Ji, 'These forces of Wei, they're wild and overconfident. Just now they make light of the forces of Qi, but if the Qi forces shouted, they would jump in fright. A person skilled in warfare would assess their power better and profit from managing it effectively.

According my *Art of War*, when an army rushes in a hundred miles to snatch an advantage, the General risks a fall; when an army rushes in fifty miles to snatch an advantage, half of the force will lag behind. Forcing the Qi army into Wei territory, they may start off with 100 000 campfires; but by tomorrow the number will be down to 50 000, and by the day after, it will be down to 30 000.'

8E2

龐涓行三日，大喜，曰：“我固知齊軍怯，入吾地三日，士卒亡者過半矣。”乃棄其步軍，與其輕銳倍日并行逐之。孫子度其行，暮當至馬陵。馬陵道狹，而旁多阻隘，可伏兵，乃斫大樹白而書之曰：“龐涓死于此樹之下。”於是令齊軍善射者萬弩，夾道而伏，期曰：“暮見火舉而俱發。”

Pang Juan marched for three days and was very pleased with himself. He said, 'I bet the Qi forces are nervous. They've made an incursion into our territory for three days and they've lost more than half of their officers and men.'

So he left his infantry behind and took his light-armoured crack troops in a forced march in pursuit of the Qi forces.

Sun Zi estimated their rate of march and reckoned they would reach Maling by evening. The Maling road passed through a defile and there were obstructions on either side where he could hide troops in ambush, so he cut down a big tree, whittled off the bark and wrote on the exposed white wood: 'Pang Juan is going to die under this tree!' Then he got together ten thousand of his best crossbow marksmen, hid them along the narrow road, and ordered: 'Shoot together if you see a fire lit!'

8E3

龐涓果夜至斫木下，見白書，乃鑽火燭之。讀其書未畢，齊軍萬弩俱發，魏軍大亂相失。龐涓自知智窮兵敗，乃自剄，曰：“遂成豎子之名！”齊因乘勝盡破其軍，虜魏太子申以歸。孫臏以此名顯天下，世傳其兵法。

So Pang Juan came across the place where the tree had been felled in the night. He saw that there was something white with writing on it, so he lit a torch. Before he had finished reading what was written on it, the ten thousand crossbows of the Jin army fired together and the Wei forces fell about in disorder. Pang Juan realized that his whole force was lost through his own lack of judgement and so he committed suicide, saying, 'So much for my reputation now!' As a result of the total defeat of his forces, Qi was able to take prisoner the Wei Prince, Shen and return home. Thus Sun Bin's fame spread worldwide and his *Art of War* passed down the generations.

Apart from doing a lot for the reputation of Sun Zi's *Art of War*, it also did a lot for the reputation of the crossbow in warfare. The *Warring States Papers*¹³ describe how Su Qin was sent to talk the King of the state of Han into a treaty in around 330 BC:

8F1

《戰國策卷二蘇秦為楚合從說韓王》

蘇秦為楚合從說韓王，曰：“韓北有鞏洛、成皋之固，西有宜陽、常阪之塞，東有宛、穰、洧水，南有陘山，地方千里。帶甲數十萬，天下之強弓勁弩，皆自韓出。谿子、少府、時力、距來，皆射六百步之外。韓卒超足而射，百發不暇止，遠者達胸，近者掩心……。”

The Warring States Papers: Su Qin undertakes a mission on behalf of Chu to persuade the King of Han to join in an alliance

Su Qin undertook a mission on behalf of Chu to persuade the King of Han to join in an alliance. Su Qin said, 'To the north of Han are the fastness of Gongluo and Cheng'ao; to the west are the borderlands of Yiyang and Changban; to the east are the rivers of Wan, Rang and Wei; and to the south are the Mountains of Jing: your lands stretch a thousand miles in either direction. You have 100 000 armoured troops. The hardest bows and most powerful crossbows in the world come from Han. The bows named "Xizi", "Shaofu", "Shili" and "Qulai" all have a range of more than six hundred paces. Your Han troops use their feet to pull their crossbows and when they shoot, not a shot in one hundred fails in its effect: they pierce the chest of any enemy who is far off, and the heart of any who is near . . .'

The Han army required crack troops to be able to draw a crossbow with a draw-weight of 12 stone (石). In modern terms, that would have been around 360 kg.¹⁴ (The 1996 Olympic weightlifting record was 475.5 kg.)

By the Han Dynasty, the crossbow in the hands of heavy infantry had replaced combat with the bow fired by a skilled, noble marksman from a chariot. The texts of the military strategists who flourished during the Warring States period clearly reflect this.



13. It is also found in 史記：《蘇秦列傳》。

14. 《漢語大辭典》。附錄：中國歷代衡制演變測算簡表。

There is enough material to write a whole book about Chinese crossbows. This is not the place to write it. The important thing for the present study is to establish how the crossbow fitted into the unfolding history of Chinese archery. Until the Warring States period, the technology that went into bow-making produced bows with draw-weights heavy enough to pierce leather armour up to the seven layers thick. But the technology of the crossbow had not come up with a firing mechanism sufficiently robust to support such bows.

Then along came an inventor who put the whole firing mechanism into a sturdy bronze casing. From then on, the power of the crossbow was no longer limited and all that was needed was a sturdier metal assembly for the firing mechanism. The crossbow developed in power, and by the end of the Warring States period, crossbows had been developed which fired multiple quarrels; crossbows with automatic breach loading then appeared, followed by crossbows which could fire a succession of quarrels like a machine-gun.¹⁵

The precision of bronze allowed not only for upsizing but also for downsizing. Crossbow pistols appeared with delicate mechanisms like clockwork. These would have fired small quarrels with poisoned tips. At the other end of the scale, by the Song Dynasty, mammoth bed-mounted crossbows were firing gunpowder-propelled missiles.

The Changing Landscape in Archery

The crossbow by no means spelled the end of archery with bow and arrow in China. But the breaking-down of the centralized power of the Zhou Dynasty, followed by the destruction of the old ruling families during the Spring and Autumn period meant that the ancient magic of the bow and the role of ritual archery came more and more into question.

One particular element came into play and radically affected the development of archery tactics in China. At the end of the Warring States period and into the Han Dynasty, the expanding 'Middle Kingdom' found itself faced with a new menace: hordes of mounted foreign archers mounted on horseback, the Huns (匈奴).

15. This invention is traditionally credited to Zhuge Liang (諸葛亮) at the end of the Han Dynasty. But a repeating crossbow was excavated in at the *Qinjiayazi* (秦家嘴墓) tomb dating from the end of the Warring States. See 舒之梅、張緒球：《楚文化》(中國地域文化大系) (香港：商務印書館，1997)，頁 109, Ill. 138。

司馬遷《史記·匈奴列傳》

毋文書，以言語為約束。兒能騎羊，引弓射鳥鼠；少長則射狐兔，用為食。士力能貫弓，盡為甲騎。其俗：寬則隨畜，因射獵禽獸為生業；急則人習戰攻以侵伐，其天性也。

Sima Qian: 'Account of the Huns'

[The Huns] had no written language: they governed themselves on the basis of the spoken word alone. Infants could ride on a goat and draw a bow to shoot small birds and rats. As they grew up, they would shoot foxes and hares and these are what they used to eat. Their warriors were powerful archers, and all were armoured cavalymen. Their custom when at peace was to follow their flocks, and thus archery and hunting formed part of their way of life. When war threatened, they practised battles and attacks so that they could invade or make unexpected attacks. This was part of their very nature.

These border tribes could be exploited and sometimes the warring factions forged alliances with them to fight their neighbours,¹⁶ but the Chinese states had never tried systematically to adopt the mounted tribes' tactics for themselves. Finally, however, against the protests of his nobles, King Wuling of Zhao (趙武靈王) (325–298 BC) changed into the battle-dress of the mounted tribes, carried out mounted archery exercises with his troops and then broke the hold of the nearby tribes. This was China's first mounted archer-cavalry.

The debate in which King Wuling of Zhao found himself embroiled over this change in tactics was symptomatic of the wider debate in which the Chinese leadership found itself in the Warring States period: how to respond to the need for change. The weight of educated public opinion was in favour of following respected precedents and observing the old rituals. But King Wuling of Zhao was an innovator. The revered long, flowing gown, the national dress of the Chinese race, stood between him and the achievement of his goal of subduing the border tribes and his enemies within. To get his troops up onto horseback to practise mounted archery, King Wuling of Zhao had to discard the flowing Chinese robes and get them into the short tunics and jodhpurs of the border tribes. To get the troops into this attire, he first had to get his fellow nobles to adopt it.

16. 司馬遷：《史記·匈奴列傳》：“周襄欲伐鄭，故娶戎狄女為后。與戎狄兵共伐鄭。已而黜狄后……”

A lengthy debate on the subject is recorded in the *Warring States Papers*.¹⁷ The reason we can say that this debate was 'symptomatic' is that it is repeated, in almost identical language but modified in respect of subject matter, in two other historical and philosophical works of the period.¹⁸ This is a clear indication that the raging debate between conservatives and innovators covered not only statesmanship but also military tactics.

Once the Chinese nobility took the plunge, however, the move to foreign tactics and modes of warfare were thoroughly adopted by the Chinese military machine. The full play of these tactics and the place of the bow and crossbow in Han warfare are set out in detail in the advice of the military strategist Chao Cuo (晁錯) who lived during the reign of the Emperor Jing (漢景帝) (156–140 BC).

8H1

《漢書·晁錯列傳》

臣又聞，用兵臨戰合刃之急者三：一曰得地形；二曰卒服習；三曰器用利。兵法曰：“丈五之溝，漸車之水。”山林積石，經川兵阜，艸木所在；此步兵之地也；車騎二不當一。土山丘陵，曼衍相屬，平原廣野；此車騎之地也；步兵十不當一。平陵相遠，川谷居間，仰高臨下，此弓弩之地也；短兵百不當一。兩陳相近，平地淺艸，可前可後；此長戟之地也；劍楯三不當一。萑葦筑蒲，艸木蒙籠，支葉茂棲；此矛鋌之地也；長戟二不當一。曲道相伏，險阨相薄，此劍楯之地也；弓弩三不當一。

Something else I've heard is: three things become urgent when the use of arms, military engagements or close fighting are imminent. The first is to take advantage of the terrain; the second is to get the troops fully trained; and the third is to have effective equipment. The *Art of War* says, 'A three-and-a-half metre¹⁹ ditch has enough water to swamp a chariot.' Wooded hills, tumbled rocks, fording rivers, fortified townships, grassy or wooded areas: these are terrain for infantry, and one infantryman is worth two chariots or cavalymen in those circumstances. Hillocks and grave-mounds which extend to join one to another, wide plains and grasslands: these are terrain for chariots or cavalymen, and one mounted soldier is worth ten infantrymen in those circumstances. Plains sparsely dotted with hillocks, open riverbeds and valleys, places which overlook [the enemy]: these are terrain for archers and crossbowmen. One archer

17. 《戰國策·武靈王平晝間居》。

18. 《商君書》、《史記·商君列傳》。See Cho-yun Hsu (許倬雲), *Ancient China in Transition*, Stanford CA: Stanford University Press, p. 155.

19. 1.5 *zhang* (一丈五尺) is equal to 346.5 cm (中華大辭典)。

is worth a hundred footmen armed with close-range weapons in those circumstances. But when two divisions are fighting at close quarters with level ground and short grass so that you can move back and forth, this is terrain for long halberds: one halberdier is worth three soldiers armed with swords and shields in those circumstances. Where crops are maturing or reeds and rushes are thick, or in thick grass or woods where foliage and branches are dense, these are terrain for lances or light spears: one lancer is worth two halberdiers in those circumstances.²⁰ On winding roads with hidden bends, or where the way is hemmed in by ravines, these are terrain for short-swords and shields. One swordsman is worth three archers or crossbowmen in those circumstances.

8H2

“士不選練，
卒不服習。
起居不精，
動靜不集。
趨利弗及，
避難不畢。
前擊後解，
[與]金鼓[之音]相失。”
此不習勒卒之過也：百不當十。

*Officers are not properly selected and trained;
The men are insufficiently drilled;
Setting and striking of camp are inefficient;
Moving on and coming to a halt unco-ordinated;
The thrusting advance does not meet its objective;
When they need to get out of danger they can't come to a halt;
Advancing in attack or falling back,
They can't keep to the beat of the drums and cymbals.*

This describes the error of having insufficiently-trained troops: ten good soldiers are enough to stop a hundred like those.

8H3

“兵不完利，
與空手同。”

20. A halberd had a blade at right-angles to the staff and was swung laterally; a lance or spear had a blade at the end of the staff and was thrust forward.

甲不堅密，
與袒裼同。
弩不[可以]及遠，
與短兵同。
射不能中，
與亡矢同。
中不能入，
與亡鏃同。”

此將不省兵之過也：五不當一。故兵法曰：“器械不利，以其卒予敵也。卒不可用，以其將予敵也。將不知兵，以其主予敵也。君不擇將，以其國予敵也。四者，兵之至要也。”

*If weapons are not in good order,
It's no better than being unarmed.
If armour isn't tough and dense,
It's no better than going naked.
If crossbows don't have a long range,
They're no better than short weapons.
If shots don't hit the mark,
It's no more than a waste of arrows.
If they hit but don't penetrate,
It's just a waste of arrowheads.*

This is the mess a commander can end up in if he doesn't conserve his weapons: five [soldiers from such a force] are no match for one [from a properly regulated force.] Thus the *Art of War* says, 'If arms and equipment are not in good order, you're making a gift of your troops to the enemy. If the troops can't use them properly, you're making a gift of their commander to the enemy. If the commander doesn't understand weaponry, he's making a gift of the sovereign to the enemy. If the Ruler doesn't choose a good commander, he's making a gift of his state to the enemy.' These four points lie at the heart of the use of weapons.

8H4

臣又聞：“小大異形，彊弱異藝，險易異備。”夫卑身以事彊：小國之形也。合小以攻大：敵國之形也。以蠻夷攻蠻夷：中國之形也。今匈奴地形技藝與中國異：上下山阪，出入溪澗，中國之馬弗與也。險道傾仄，且馳且射，中國之騎弗與也。風雨罷勞，饑渴不困，中國之人弗與也。此匈奴之長技也。

Another thing I've heard is 'How protagonists of different sizes interact depends on style; how protagonists of different relative strength interact depends on their skills; and how ventures of differing risk turn out turns

on preparation.' Serving strong powers submissively is the style of small states; to unite small groups to attack a large power is the style of our enemies; and to set foreign tribes at each other's throats is the Chinese style. These days, the talents and skills of the Huns and the Chinese in dealing with terrain are different: when it comes to going up and down hillsides, wading in and out of streams and rivers, our Chinese horses are not up to theirs. When it comes to narrow roads and under cliffs and overhangs, shooting at full gallop, our Chinese cavalry is not up to theirs. And when it comes to putting aside fatigue in wind and rain, enduring hunger and thirst, our Chinese men are not up to theirs. These are the natural talents of the Huns.

8H5

若夫平原易地，輕車突騎，則匈奴之眾易撓亂也。勁弩長戟，射疏及遠，則匈奴之弓弗能格也。堅甲利刃，長短相雜，遊弩往來，什伍俱前，則匈奴之兵弗能當也。材官趣發，矢道同的，則匈奴之革筈木薦弗能支也。下馬地門，劍戟相接，去就相薄，則匈奴之足弗能給也。此中國之長技也。以此觀之，匈奴之長技三，中國之長技五。

But when it comes to plains with level terrain, attacks with light chariots or a cavalry charge, the Hun hordes easily fall into disarray. When it comes to heavy crossbows and long halberds, when the shooting is light and at long range, then the Huns' bows are outclassed. When it comes to tough armour and sharp blades, when long and short weapons are used in combination, when artillery crossbows are brought into play, when brigades and divisions advance together, then the Huns' troops can't withstand them. When the heavy crossbow divisions mount an assault with heavy fire concentrated on a single target, then the Hun's leather breastplates and wooden shields cave in under the onslaught. Once you get them off their horses and fighting on the ground, battling it out with swords and halberds, pressing them back and forth, then the Huns can't keep their footwork together. These are the natural talents of the Chinese. Looking at it like this, the Huns have three natural talents and we Chinese have five.

Fowling

The stone-bow and pellet (彈、丸) were thought in China to be the precursor of the bow. In 8A5, we have already read the story of how they were said to have been invented by 'the Pious Son' to keep carrion birds away from the bodies of his parents.

The stone-bow is distinctive because of the pocket on the string which

holds the pellet. We can therefore identify it among the oracle bone pictorial characters²¹ from just as far back in history as the bow itself.



The stone-bow was a relatively weak bow. In the Han Dynasty, it was said to have been made of lacquered bamboo without horn or sinew.²² It was used for fowling. In general, fowling with the stone-bow was intended to bring birds down, not to kill them. The birds, when caught, would be domesticated.



Han tomb brick showing an archer fowling with the stone-bow on horseback

The technique of using the stone-bow is very distinctive. Where it is shown in early illustrations, the bow is always shown with the string drawn from well below centre and the bow-arm ready to flick the bow sideways at the release so that the pellet would not hit the grip. The technique of using the stone-bow was always said to be the most difficult of any form of archery.

21. 許進雄：《古文諸聲字根》。

22. 李尤，《彈銘》：“昔之造彈……合竹為樸，漆飾以霑，不用筋角。”

From time to time in Chinese literature, the image of a man using gold to make pellets for the stone-bow was adopted as an image of profligacy. There was the tale of Han Yan who was good at shooting with the stone-bow, and who used gold pellets. Good as he was, he would regularly lose a dozen or so a day, so the children of the capital, Chang'an used to come rushing whenever they heard that he was going shooting, hoping to pick up his lost pellets.²³

The use of the stone-bow has been a popular pastime up until this century in China. Bows were made in Beijing up until the 1960s. The design was very complex: the bow was made with bamboo and horn but no sinew. Unlike the later Chinese bow, the static tips were short and the string-bridges were shallow and broad. The string was made in a special way. String loops ran around the string nocks at the bow-tips, but were then attached to a pair of thin bamboo splices which then were attached to strings again towards the centre. The effect then was like tramlines: a pair of strings which then had a small basket at the centre to place the baked clay pellet in.

In Beijing, it was popular at the turn of this century to use stone-bows to catch roosting pigeons so that they could be fattened up for the pot. Stone-bows were also popular as crossbows. They were made by the apprentices of Beijing bowyers to learn skill in woodwork.

Waterfowling with a tethered arrow

Water-fowling with a tethered arrow (弋、矰) was a pursuit often illustrated in Han Dynasty tomb carvings.



Water-fowling with tethered arrows from a Han Dynasty tomb rubbing

23. 《西京雜記》：“韓嫣好彈，以金為丸，一日所失者十餘。長安為之語云云：京師兒童每聞嫣出彈，輒隨之，望丸所落，便拾取焉。”

As you can see from the illustration above, the fowlers carried baskets with bobbins of cord to which the arrows were tied. They took aim at flocks of birds, presumably relying on luck as much as good marksmanship.

As far as we can ascertain from contemporary illustrations, the tethered arrow was intended to ensnare the fowl (mostly geese), not to pierce them.



Water-fowling scene from a bronze vase from the Warring States period (《宴樂紋銅壺》)



Shooting with a tethered arrow, from the lacquered clothes chest from the Chu tomb of Duke Zeng (《曾侯乙墓·弋射衣箱》)

The first illustration shows the fowlers in the act of entangling the birds. On the far left of the picture, you can see a man on a coracle scaring up the birds in flocks while on the right, the fowlers let off their tethered arrows. This illustration may have depicted one of the royal pleasure parks which were popular in the Warring States and Han times, stocked with abundant game for the royal households to hunt.

The second picture, however, seems to represent the legend of Yi the Archer. He has picked off one of the crows from the Fusang tree with

a tethered arrow (see Chapter 2) while two remain in place. On the right hand tree are two chimeras, and on the far right, you can see the head of the double helix man-snake, Fuxi and Nüwa.

Unlike the stone-bow, references to shooting with tethered arrows appear to die out early, and by the Tang Dynasty, such references are figurative rather than accounts of actual events. As a technique of hunting, then, fowling with a tethered arrow may have been so inefficient that it was not kept up once agriculture could provide an adequate supply of birds for consumption.

The Demise of Ritual Archery and the End of the Han Dynasty

Over the four hundred years of the Han Dynasty, the archery ritual continued sporadically, but was not a regular feature of courtly life. More importantly, archery competitions featuring bow and arrow became a favoured method of assessing military skills, and its ritual aspect gradually became ignored.

811

《後漢書·劉昆傳》

王莽世教授弟子，恆五百餘人，每春秋響射。常備列典儀，以素木瓠葉為俎豆，桑弧蒿矢以射菟首。每有行禮，縣宰輒率吏屬而觀之。

History of the Later Han: 'Biography of Liu Kun'

Wang Mang taught pupils all his life, usually over five hundred of them. Every spring and autumn he would arrange ceremonial meals for the elderly and archery. He always followed the rituals scrupulously, down to the wooden implements and ritual cauldrons, and the mulberry bows and reed arrows to shoot at a 'rabbit's head'. Every time the rituals took place, the county administrators would immediately send staff and retainers to see the spectacle.

This quotation illustrates how, by the end of the Former Han Dynasty, the civil archery ritual had become the exception rather than the rule. Instead, the examination of skill in archery centred on military skills. While the rank-and-file learned to use the crossbow, more traditional archery skills were used to identify military excellence. The Ming author, Gu Yu, provides an account in his *Book of Archery*:

明·顧烜：《射書四卷》卷第四《歷代武制考》

漢興，六郡良家子選給羽林期門，以材力為官。各將多出焉。軍功多用超等；大者封侯、卿、大夫，小者郎。漢制，常以九月都試，太守、都尉、令、長丞相。會都試，課殿最。

東漢制，立秋日，自郊禮畢，始揚威武。武官肄兵習射儀²⁴，斬牲之禮，名曰“緇劉”；兵官皆肄孫吳兵法、六十四陣，名曰“乘之”。

'Examination of Historical Military Systems' from Gu Yu's *Book of Archery in Four Volumes*, Vol. IV

At the establishment of the Han Dynasty, candidates were selected from the sons of the great families of the six prefectures for entry into the Imperial Guard, and they were assessed as potential officials on the basis of their prowess and strength. The great generals all started off like that. Those with the greatest number of martial skills formed the top echelon; and the greatest of these were enfeoffed as nobles, marquises and sheriffs, while the lesser ones became ordinary officials. Under the Han system, the examination usually took place in the ninth month in the capital and the prefectural magistrates, commanders, and major and minor sub-prefectural officers acted as examiners. On gathering in the capital for the examination, they would be ranked into upper and lower grades.

Under the later Han system, as soon as the provincial rites for the first day of autumn were over, they would start the martial exercises. The military officials trained their troops in the archery ritual and the ritual of cutting the sacrificial animals, called *Chuliu*. The soldiers and officials all received training in Sun Zi's *Art of War* and the *Sixty-four Formations*, and these were known as 'Completing the Set'.

There is further evidence that some military ranks were awarded on the basis of skills in archery. An example can be found in the following quotation from the *History of the Han Dynasty* (漢書).

《漢書·直官》

射聲校尉。

漢直射聲校尉，掌待詔射聲。士工射者，冥冥中聞聲射，則中之。因以名也。須待命而射，故曰“待詔射聲”。

欽飛射士。

24. 後漢書禮儀志：“立秋日，武官肄兵習戰陣之儀，斬牲之禮，名曰‘緇劉’。”

宣帝時，募飲飛射士。飲飛，即飲非：古侵士。漢取為武官名；一說，飲：便利也。取勇力人以名官，言其便利輕疾若飛也。為少府屬官，掌弋射。

History of the Han Dynasty: 'Official Appointments'

'Field Commander Who Could Shoot by Sound'

In the Han Dynasty, there was the rank of 'Field Commander Who Could Shoot by Sound' who, on receiving the appropriate command, would shoot at the source of a sound. The officers and instructors would take part in the shooting and in the pitch darkness, they would hear a sound and shoot at it and they could hit the source. That is how they got their name. As they had to wait for a command and then shoot, that is why they were known as 'Wait for an order and shoot at a sound'.

Cifei Archers

In the time of Emperor Xuan (73–49 BC), they appointed 'Cifei Archers'. They were named after a famous brave of old called Cifei. One explanation has it that 'Ci' stands for 'at the ready'. So naming the official after this renowned brave was meant to indicate that he was at the ready and could speed off as if flying. He was an official of the sub-command who was responsible for shooting wildfowl.

One of the greatest archers of the Han Dynasty was Li Guang (李廣). Many stories are told of his prowess. This one, which records events around 120 BC, is particularly famous.

811

《前漢書·李廣列傳》

後四歲，廣以衛尉為將軍，出鴈門擊匈奴。匈奴兵多，破廣軍，生得廣。單于素聞廣賢，命曰：“得李廣必生致之！”胡騎得廣，廣時傷，置兩馬間絡而盛之。臥行十餘里，廣陽死，睨其旁有一兒騎善馬。暫騰而上胡兒馬，因抱兒鞭馬，南馳數十里，得其餘軍。匈奴騎數百追之，廣行取兒弓，殺死追騎，以故得脫。

Four years later, Li Guang was appointed general and left Yingmen to attack the Huns. But the Hun army greatly outnumbered him: his force was destroyed and only Li Guang survived. The Khan had heard of Li Guang's greatness and issued an order: 'If you catch Li Guang, you must bring him here alive!' The Hun horsemen captured him while he was wounded, and they tethered two horses together and carried him between them. Lying between the two horses they travelled over ten miles and Li Guang played dead. But through half-closed eyes, Li Guang saw that a boy was riding a fine horse by his side. Suddenly he sprang up onto

the Hun child's horse, and with one arm around the boy to restrain him, he whipped the horse on. Galloping a few dozen miles southward he ran into the remainder of their army. A few hundred of the Hun horsemen chased after him, and so Li Guang snatched up the boy's bow and firing at full gallop he managed to kill some of the pursuing horsemen and so made his escape.

At the end of the Han Dynasty, central rule over the now widely extended Chinese territory collapsed. Rebellions which had broken out sporadically became more intensified, and Dong Zhuo (董卓) (a renowned archer of superhuman strength who could shoot left or right-handed at full gallop and terrified the Huns)²⁵ put down a rebellion by the 'Yellow Turbans', but then he in turn tried to usurp the leading position in China by taking over control of the puppet emperor. Meanwhile, real power had fallen into the hands of aristocratic families, the principle among whom were led by Cao Cao (曹操), Liu Bei (劉備) and Sun Quan (孫權). These three gradually placed themselves as the rulers of 'Three Kingdoms' — Wei (魏), Shu (蜀) and Wu (吳) — and the Han Dynasty came to an end.

Despite the fact that the magic of the bow had become detached from the practice of archery over the centuries in which the art had passed from the control of the aristocracy, a feat of archery was still able to instil superstitious awe in those who witnessed it, as the following tale shows. The tale, 'Lü Bu Shoots the Halberd on the Camp Gate' is still popular in the repertoire of the Beijing Opera.

Lü Bu was the warrior who killed Dong Zhuo (who overthrew the Han Dynasty) and galloped off with Dong's head lashed to his saddle. He made his reputation through horsemanship and archery, and had once been Dong Zhuo's 'godson' through swearing an oath. But he became alienated by Dong's paranoid behaviour. Later, he allied himself with the warlord Liu Bei and extracted him from a predicament by this feat of archery:

8MI

《後漢史·呂布列傳》

術遣將紀靈等，步騎三萬，以攻備。備求救於布。諸將謂布曰：“將軍常欲殺劉備，今何假手於術？”布曰：“不然。若破備，則北連太山吾為在術圍中，不得不救也。”便率步騎千餘馳往赴之。靈等聞布至，皆斂兵而止。布屯沛城外，遣人招備，并靈等與共饗飲。布謂靈曰：“玄德布弟也。為諸君所困，故來救之。布性不喜合門，但喜解門耳。”乃命軍候植戟於營

25. 《後漢書·董卓列傳》。

們。布彎弓，顧曰：“諸君觀布射戟小支。中者，當各解軍；不中，可留決鬥。”布即一發正中戟支。靈等皆驚，言將軍天威也。明日復歡，然後各罷。

History of the Later Han: 'The Biography of Lü Bu'

Yuan Shu sent generals, including Ji Ling with 30 000 infantry and horsemen to attack Liu Bei. Liu Bei appealed to Lü Bu for assistance. The other generals said to Lü Bu, 'You've always wanted the chance to kill Liu Bei; now you can make use of Yuan Shu to get at him.'

But Lü Bu replied, 'You've got it wrong. If I destroy Liu Bei, then the whole of the North Region up to Tai Shan will be encircled by Yuan Shu. I can't avoid going to Liu Bei's aid.'

Then he detached over a thousand horsemen and infantry and set off to Liu Bei as fast as possible. When Ji Ling and the others heard that Lü Bu was on his way, they all pulled back their troops and stopped. Lü Bu encamped outside the city walls of Pei and then sent someone to invite Liu Bei over and gave a feast for him, inviting Ji Ling and the others.

Lü Bu said to Ji Ling, 'Liu Bei and I are brothers. Now he is entrapped by all you gentlemen and I have come to help him. By my nature, I'd rather that we'd come together to resolve a quarrel than to get into a scrap.'

Then he ordered the camp commandant to set up a halberd on the gate of the camp. Lü Bu drew his bow and looking back over his shoulder, said, 'You gentlemen watch me shoot the smaller point on that halberd. If I hit it, then we all disband our armies; if I miss, then you can stay here and fight it out.'

Then Lü Bu fired and hit the halberd right on the smaller point. Ji Ling and the others were overawed and said that General Lü Bu must have supernatural power. The next day they resumed the festivities and then they all gave up the fight.

The reign of the warlords of the Three Kingdoms was very short (although through being the subject of a romantic historical novel, the *Romance of the Three Kingdoms*,²⁶ as well as providing the staple plot material for traditional Chinese opera, the period features disproportionately in modern Chinese cultural consciousness).

The period came to an end in 280 AD, when the state of Wu (吳) was overrun by the Jin (晉). Nominally, the Jin Dynasty lasted from 265 AD to 420 AD; but in fact the Jin fell quickly into civil strife between the ruling classes as they struggled for overall power. The period was worse for

26. 羅貫中：《三國演義》。

flooding which affected the Yangtze River plain and made millions move away from flooded areas.

As China was weakened by internal warfare, the border tribes saw their chance and made bolder and bolder incursions into the Chinese heartland, with as many as 16 minor states having a transient existence in the northern part of China. The Jin ultimately moved south of the Yangtze in 317 AD, leaving the north of China under the Togbut, Hun, Tangut and Mongols.

The Northern rulers set up their kingdoms of Wei (魏) and Qi (齊), and the period, although unsettled, witnessed great creative activity. Buddhism gained a strong position, and the Wei Dynasty pressed its defeated enemies into carving enormous Buddhist sculpture caves near their capitals at Luoyang (洛陽) and Datong (大同).

The rulers of Northern China at that time were originally of nomadic, agrarian stock and shared a cultural archery heritage with the Huns. They brought to China improved techniques in horse-breeding, together with development in saddlery and stirrups, which allowed further developments in archery skills.²⁷

The many records of events in the dynastic histories show not only a continuing emphasis on skills in mounted archery, but also an interest in archery as a competitive sport (with a cup of wine (金匱) presented to the winner). There is also sporadic mention of the persistence of archery ritual as a method for determining merit. King Zhen of Nan An still held the opinion, 'Poets can express themselves in poetry and lyrics, archers can use their art to express their virtue. So let those with no skill in poetry attend the archery ceremonies.'²⁸

Throughout Chinese history until the Wei, hardly any mention is made of women archers. But in the Wei, under the influence of the border tribes who included women among their fighting forces, a number of eminent women archers are mentioned. One was Li Yongrong (李雍容), daughter of the tough local family of Li Bo (李波), who was recorded in the following folksong:

8N1

《魏書·卷五十三·李安世傳》

李波小妹字雍容，
褰裙逐馬如卷蓬。

27. 林伯原：《中國古代體育史》（臺北：五洲出版社，1996），第5章。

28. 魏書景穆十二王：南安王楨。

左射右射必疊雙，
婦女尚如此，男子那可逢？

Li Bo's²⁹ little daughter, Yongrong is her name;
Her skirts hiked up she spurs her horse, leaves others looking lame.
Left and right she fires her bow, one arrow splits the other,
If all the girls were like Yongrong, we men just needn't bother.

It seems that the rulers of the 'Northern and Southern Kingdoms' kept up the archery rituals to some extent, as there are a number of references to them in the dynastic histories of Wei and Qi.

Over the period from when the archery rituals were flourishing at the end of the Warring States period, about 250 BC, to the end of the divided post-Han period, about 800 years elapsed over which archery diversified:

- Crossbow technology developed, resulting in:
 - hand-pulled crossbows which were used on cavalry engagements,
 - foot-pulled crossbows used for infantry engagements, and
 - artillery crossbows pulled by groups of men or draught animals used for defence of cities.
- A science of ballistics developed to exploit the developing power of the crossbow.
- A completely new field of mounted archery opened up. The military elite migrated from traditional military archery based on the war chariot to horsemanship and mounted archery.
- Archery developed as a sport, and formal competitions started to appear.
- Archery ritual became rare during the later Han period, but was revived somewhat under the Northern Wei and Southern Qi Kingdoms.

This then was the background against which the second main period of archery activity developed, starting from the Sui and Tang Dynasties.

29. Her father, Li Bo, died in 493 AD.

上
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鷺
啼
猿
影
枝
轉

*As I string my bow,
the clear moon is my companion,
I release my arrow
and it races the distant shooting star.
Without an arrow, perhaps,
the goose may yet fall dead,
Before I shoot, perhaps, the howling ape
may shrink back against a branch.*

Ode to a Bow (《詠弓詩》)

by Emperor Taizong (唐太宗) of the Tang Dynasty (reg. 627–650)



China's Middle Ages

Chinese culture is a homogeneous tradition built up over thousands of years; but its main contributors were not a single tribe or race.

There are many who have (or seek to promote) the impression that 'Han Chinese' racial influence spread over the millennia sweeping aside or absorbing all that it encountered. There is no doubt that there were local cultures who were swept aside and there were those who totally lost their local identity in the Chinese cultural environment; but Chinese culture also readily accepted elements from what it came into contact with. In the late Han period and the tumultuous centuries of the northern 'Sixteen Kingdoms' and southern 'Six Dynasties', Indian Buddhism took a hold on Chinese culture both in the north and the south, and Taoism developed somewhat at the expense of the influence of institutional Confucianism.

From the time of King Wuling of Zhao in the Warring States period, Chinese rulers did not hold back from adopting the weapons and tactics of their enemies if they had proved successful. Over the period following the fall of the Han Dynasty in 220, the northern part of China had essentially been under control of their traditional enemies, the tribes of the northern and western borders, and therefore the style of archery practised and the tactics employed were essentially those of the northern horsemen, supplemented by Chinese techniques in crossbow manufacture and deployment.

In the year 581, an aristocratic general of the Tuoba tribe named Yang Jian (楊堅) usurped control over the state of Northern Zhou and set up a

new dynasty under the title Sui (隋). Eight years later, he managed to defeat the southern state of Chen (陳), thus reunifying China for the first time in 264 years. That period had seen enormous turmoil in China: repeated civil war, invasions from competing border tribes, natural disasters and huge migrations of Chinese people from the north of the region to the south.

The Sui Dynasty had only two emperors, Yang Jian and his son Yang Guang (楊廣). These two energetic and ambitious men undertook between them a far-reaching overhaul of China's administration and defences, repairing the Great Wall, expanding the Grand Canal, reducing nepotism in the civil service and putting into place a more meritocratic system. But together with this, they attempted an ambitious campaign of military expansion, finally attempting unsuccessfully under the second emperor, Sui Yang Di (隋煬帝), to invade Korea with an enormous army of over one million troops. This and other exploits so weakened China's resources and alienated the agricultural population who had to give up manpower to man the army, that the dynasty fell in 618.

But in the 37 years of the Sui Dynasty, the Chinese population had a period of relative stability in which to consolidate: reserves of grain grew to unprecedented proportions as a result of the country being free from incursions by border tribes. The financial, monetary and weights and measures systems were standardized again.

A system of competition for official posts which had started to appear under the Northern Wei became more standardized under the reign of Yang Jian. This sowed the seeds of a new incarnation for archery outside the battlefield which persisted until the end of the Qing Dynasty.

Yang Jian's main purpose in improving the examination system was to bring new talent into the management of China, which, following his conquest of the south, now included a very extensive area. But he had to avoid falling back on the feuding tribes of north China and seek the support and participation of the gentry from the regions. To this end, he started a system of relatively objective examinations of officials proposed by the provinces for promotion to national posts. These examinations were arranged by disciplines (科舉).¹

The examinations were far from being entirely open and democratic. Those from the working and commercial classes were debarred from taking part, and officials from the ninth rank and above were exempted from them. To become a candidate for such examinations, one had to be sponsored at the district level in an annual presentation of candidates — an extension of the system which had prevailed in the Han Dynasty.

1. 謝青、湯德用主編：《中國考試制度史》（合肥：黃山書社，1995），頁 60。

Information about the contents of the Sui examinations is not directly available: it has to be inferred from the biographies of the officials of the period. From the evidence of both earlier and later periods, archery must have played a part, at least in the military aspects of this examination system.

The two Sui emperors' efforts at expansion, raising enormous armed forces, placed immense pressure on rural communities who were required to come up with both horses and manpower to support the attacks against Korea. Finally, the rural communities were driven to armed uprisings and Li Yuan (李淵), a member of the military aristocracy, took advantage of the weakening power of the Sui ruling household to install a puppet emperor, and eventually proclaimed himself emperor of a new dynasty named Tang (唐).

The famous second emperor of the Tang Dynasty, Li Shimin (李世民) was a formidable general and archer. As his father was emperor, and thus by custom not permitted to lead an army into battle, Li Shimin normally led Chinese forces in putting down remaining dissent against the new rulers. Once, when pressed by an enemy in a battle with an opposing force led by Wang Shichong (王世充) and on the point of being defeated, he shot left and right, killing an enemy with every shot.²

At the beginning of his reign, China was beset with famine and incursions by the Tuque tribe. This made Li Shimin sufficiently concerned with military practice that he personally supervised archery practice by his senior staff.

9A1

《舊唐書·太宗本紀》

丁未，引諸衛騎兵統將等習射于顯德殿庭，謂將軍已下曰：“自古突厥與中國，更有盛衰。若軒轅善用五兵，即能北逐獯鬻；于周宣驅馳方、召，亦能制勝太原。至漢、晉之君，逮於隋代，不使兵士素習干戈，突厥來侵，莫能抗禦，致遭中國生民塗炭於寇手。

The Old Dynastic History of the Tang: The Record of Emperor Tai Zong's Reign (September 622 AD)

In September, [the Emperor] summoned guards, cavalry and the commanders together and got them practising archery at the Xiande palace. He went down among them himself to address the commanders

2. 《舊唐書：太宗本紀上》：“太宗以輕騎挑之，時眾寡不敵，陷於重圍，左右咸懼。太宗命左右先歸，獨留後殿……太宗幾為敗，太宗左右射之，無不應弦而倒。”

and said, 'From the earliest times the fortunes of the border tribes and the Chinese have waxed and waned. For example, the Yellow Emperor excelled in using the five categories of weapons and was thus able to go after the Huns in the north. And King Xuan of the Zhou was able to mobilize his chief ministers and thus gained control over the Central Plains. But coming to the Han, Jin and right up to the Sui, we did not get the troops hard at work practising their pikes and halberds, so that when the Tuque came and invaded, none could resist and our Chinese populace suffered greatly at the hands of the enemy.'

9A2

“我今不使汝等穿池築苑。造諸淫費，農人恣令逸樂。兵士唯習弓馬，庶使汝鬥戰，亦望汝前無橫敵。”于是每日引數百人於殿前教射，帝親自臨試射。中者隨賞弓刀、布帛。

'Now my reign has arrived, and I shall not have you digging fish pools and building pleasure gardens. Once we become inveigled into pleasure-seeking and profligacy, the agricultural classes will turn their backs on our commands and give themselves up to pleasure. Let the troops just concentrate on practising archery and horsemanship and you [generals]: just concentrate on your skills in warfare. That way, we can be sure no enemy can stand before you.' After that, he assembled several hundred men before the palace each day to practise archery; and the Emperor would turn up in person to test them. The ones with good scores were rewarded with bows and swords as well as cloth and silks.

9A3

朝臣多有諫者曰：“先王制法：有以兵刃至御所者刑之。所以防萌杜漸，備不虞也。今引裨卒之人彎弧縱矢於軒陛之側，陛下親在其間。正恐禍出非意，非所以為社稷計也。上不納。自是後，士卒皆為精銳。

During audiences, some ministers tried to talk him out of this practice. They argued, 'The Ancient Kings had a rule: coming into the presence of the monarch armed with arms or sharp objects is a punishable offence. This allowed any trouble to be nipped in the bud and prevented any unforeseen disasters. In Your Majesty's reign, you are allowing ordinary troops to fire off in all directions at the side of the Royal Palace, and Your Majesty is there in person right in the thick of it. You can imagine the sort of disaster that might occur — even by accident. It does not augur well for the fortune of the State.'

But the Emperor would have nothing of it, and from that time on the troops became a force to be reckoned with.

Li Shimin, was a popular military commander: he was particularly open to the idea of joining in with his troops during training sessions. Accession to the throne did not change his natural inclinations so quickly. But it seems from passage 9A that a new precedent was being set. Certainly, from the Tang Dynasty onwards, there is plenty of evidence from paintings and literature that the emperor would attend archery training and competitions in person.

Although the Tang was not a predominantly Confucian dynasty, some echo of the old tradition was still present in that the location of the archery practice was the Xiande Palace (顯德殿庭), which translates as 'Displaying Virtue Palace'.

Compared to his father, the third Emperor of the Tang Dynasty, Gao Zong, was a great disappointment. He was neither active nor influential. However, he took as his wife an empress Wu Zetian (武則天) who was to become one of the most famous characters in Chinese history due to her ruthlessness and strong-mindedness. At first Wu ruled as the emperor's wife. Then she wielded power through her sons, Zhong Zong and Rui Zong, and finally, she declared herself empress in her own right, becoming the only female absolute ruler of China in the whole of its history.

Chinese historians have never approved of women as rulers, so the overall assessment of Wu's reign is negative and China's historians have always emphasized her autocratic and ruthless methods. But it is questionable whether she was any more ruthless and autocratic than her male counterparts; and even her murderous tendencies are far from unique in Chinese history.

Wu Zetian started the military examination system in order to develop military skill and leadership. In 702, she inaugurated the military examination system under the control of the Defence Department. The military examinations had three levels and all people skilled in military arts from every province and county had to undertake the examination. The graduates of this examination system became the elite of the Chinese civil service in the Tang Dynasty and this phenomenon continued throughout history, and may even have influenced British administrative practice. In recent years, the Chinese government has reinstated the policy of using examinations as an assessment and advancement tool in civil service management.

Archery formed an important element in the military examination system: there was a general archery syllabus, a cavalry archery syllabus and an infantry archery syllabus as well.³ The general archery syllabus involved

3. 《新唐書·選舉志上》。

setting up a long mound (長垛) which served as the target area. It was divided into three regions, and those taking the examination were required to stand at a distance of 105 paces, draw a one-stone⁴ bow with an arrow weighing six ounces.⁵ They were tested over 30 shots and to pass the examination, they were required not to have any arrows outside the target region. If they all hit the central region, they were regarded as 'first class', if they hit the second region they were termed 'second class', and if they hit the outer region they were failed.

For cavalry archery, candidates had to shoot at full gallop. The target was a piece of doe-skin five by three Chinese inches,⁶ and they fired at a range of 105 paces with a draw-weight of seven dou.⁷ If all the shots hit, the candidate passed with 'first class'; if some hit, then he was 'second class', and if none hit, he failed.

In the infantry archery examination, the target was a straw mannequin. Those who hit the targets with all their shots passed with 'first class'. Those who hit but had poor technique or who missed were failed.

Later on, the military examinations were revised. They were held each year in the spring, and divided into two categories: one category was the 'general archery' (平射) category and the other was the 'military examination' (武舉). The syllabus for the 'general archery' examination was the same as before.

The Archery Manual of Wang Ju

As you can see from the infantry archery examination syllabus, just hitting the target was not enough. The examination candidate had to display a command of the 'appropriate archery skills'. In the Tang Dynasty, what was regarded as 'appropriate archery skill'? Fortunately, a contemporary archery manual has survived which sets the answer out in great detail.

The author, Wang Ju (王珣), was a contemporary of Empress Wu Zetian. He was orphaned at an early age, but grew up with a love of the high life and little respect of propriety: an archetypal Chinese archery ace, in fact. His sybaritic lifestyle and determination to get his own way made him many enemies, and in the end one of them implicated him in a crime and got him executed. His *Archery Manual* has come down to us after

4. 76 kg (《漢語大詞典：附錄》，頁 18)。

5. 24.8 g (《漢語大詞典：附錄》，頁 18)。

6. 15 cm x 9 cm (《漢語大詞典：附錄》，頁 5)。

7. 42 kg (《漢語大詞典：附錄》，頁 5)。

editing in the Yuan Dynasty by Tao Zongyi (陶宗儀). Its title, '射經', may be based on the title of a lost work from the Jin Dynasty author Du Yu (杜預).

It is immediately apparent from reading the *Manual* that it is a combination of instruction directly relevant to the Tang examination procedures, and a commentary on the basic principles set out in the Confucian 'Archery Ritual' (paragraph 5B, Chapter 5). This shows that at the heart of the 'correct technique' was the Confucian ethic.

9B1

(唐王珣) 射經

總訣

凡射，必中席而坐，一膝正當垛，一膝橫順席。執弓，必中在把之中，且欲當其弦心也。以弓當左膝前，豎按席，稍吐下弣向前，微令上傾向右。

General Technique

Every shot must [start with] the archer taking up position on the centre of the mat, one knee directly pointed directly at the target mound, while the other is at a right-angle to it along the mat. When you grasp the bow, you must grip it at the centre of the grip, and you should have [your hand] level with the very middle of the string. Keeping the bow in front of the left shin, place it vertically resting on the mat, allowing the lower limb-tip to jut forward slightly and making the top limb lean slightly out towards the right.

9B2

然後取箭，覆其手微拳，令指第三節齊平。以三指捻箭三分之一，加於弓亦三分之一，以左手頭指授之，則轉弓，令弦稍離身就箭：即以右手尋箭羽，下至闊〔筈〕，以指頭、第二指節當闊〔筈〕，約弦徐徐送之。

Then grasp the arrow, slightly curling the fingers but keeping the third finger joints level. Next, pinch the arrow with three fingers (i.e. thumb, index and middle) one-third along its length and place it against the bow, also one-third along the arrow's length; then taking up the arrow on the left forefinger, turn the bow so that the string moves slightly away from the body and closer to the arrow. Then let your right hand find the fletching and then move down to the nock until the first and second joints are level with the nock, and slide the nock gently onto the string.

9B3

令眾指差池如鳳翮，使當於心，又令當闊〔筈〕，羽向上，弓弦既離身，即見見箭之高下，取其中平直。

Next, spread out the fingers (like a peacock tail) and place them level with the middle of the string and touching them against the nock once again, check that the fletching is pointing upward, then move the bow and the string away from the body so that you can easily check the vertical alignment of the arrow and ensure that it is correctly located in the centre with the correct horizontal alignment.

9B4

然後抬弓離席，目取睨其的，按手頤下，引之令滿。其持弓手與控指及左肘肘平如水准，令其肘可措杯水，故曰“端身如桿，直臂如枝”。

After [your check is] complete, you can raise the bow up off the mat and look sideways at the target, and bringing the draw-hand past the lower part of the cheek, come to full draw. [At full draw,] the bow hand, draw-hand, left shoulder and elbow should be absolutely horizontal so that a bowl of water could be balanced on [the inside of] your elbow. That is why it is said, 'The body should be as straight as a flagpole and the upper arms should stand out like branches.'

9B5

直臂者，非初直也。架弦畢，便引之，比及滿使臂直是也。引弓不得急，急則失威儀而不主皮。不得緩，緩則力難為而箭去遲。唯善者能之。

The upper arms, however, are not straight from the outset. After laying [the arrow] on the string, then draw the string, and the upper arms should be extended straight at the point of full draw. The draw should not be too fast, otherwise it will lack dignity and fail to score. Also, it must not be too slow, otherwise it is difficult to maintain the power [of the draw] and the arrow will fall short: only experts can really do it properly.

9B6

箭與弓把齊為滿，地平之中為盈貫，信美而術難成。要令大指知鏃之至，然後發箭。故曰：“鏃不上指必無中矢，指不知鏃同於無目”。試之至也；或以目視鏃，馬上與暗中則乖，此為無術矣。故矢在弓右，視在左。

Full draw is achieved when the arrow [head] is level with the handle; full 'passing through' is achieved when [the arrow] is completely parallel

to the ground at the middle of the grip. To do this really aesthetically is a skill that is hard to perfect. The [bow hand] thumb must feel the arrowhead as it reaches [the grip] before the arrow is released. This is why it is said, 'If the arrowhead does not mount the thumb, the arrow cannot hit; if the thumb does not feel the arrowhead, it is like being blind.' You must test whether you are achieving these objectives. You might think you can check the [position of the] arrowhead visually; but such a method is not available when on horseback or in darkness, so this does not amount to a skilful technique. That is why the arrow passes to the right of the bow but you aim through the left of the bow.

9B7

箭發則靡其弰，厭其肘，仰其腕，目以注之，手以指之，心以趣之，其不中何為也？

Immediately following the release, the bow-tips should be allowed to revolve to a horizontal position, the elbow should be kept low, the wrist allowed to rise, the eye to mark the line of the shot, the hand should point towards it, your subconscious should take over control and then there should be no reason to miss.

9B8

又曰：“矢量其弓，弓量其力，無動容，無作色，和其文體，調其氣息，一其心志”，謂之“楷式”。知此五者為上德。故曰：“莫患弓軟，服當自遠。若患力羸，恆當引之”。但力勝其弓則容貌和，發無不中。

Another frequent saying goes: 'The arrow goes according to the [weight of the] bow and the bow goes according to the strength of the archer. [The body] should not waver, you should not be flushed, get your form together, regulate your breathing, your conscious and subconscious aims should be the same.' This is called the 'official style'. Knowing how to co-ordinate all five of these elements makes [an archer] outstanding. This is why the Method states, 'Don't worry that the bow's [draw-weight] is light: get used to it', then you'll still get a good distance from it. If you're worried that a bow's draw is weak, persevere and keep on drawing it.' As long as your strength surpasses that of your bow, you will get your form together, and every shot you take will hit.

9B9

故始學者，先學持滿：須能制其弓，定其體，後乃射之。然其的必始於一丈，百發百中，寸以加之，漸至於百步亦百發百中，乃為術成。或升其的

於高山，或致其於深谷，或曳之，或擲之，使其縱橫前卻，所以射禽獸與敵也。

So as a novice, first learn to bring the bow to full draw: you have to be able to bring your bow under control, firm up your stance, then you can shoot. To achieve this, you must start off with your target set at one *zhang*.⁸ Then, when one hundred per cent of your shots hit it, inch it away until you can hit a hundred per cent at a hundred paces. At that point, you have achieved your skill — whether you place your target high up on a hill, or put it down at the bottom of a deep ravine, tow it around, throw it up in the air, move it sideways, up, down backwards, forward — you will possess sufficient skill to use your archery in the hunt or to engage the enemy.

9B10

凡弓惡右傾，箭惡其偏音，頤惡傍引，頸惡卻垂，胸惡前凸，背惡後偃，皆射之骨髓疾也。故身前竦為“猛虎方騰”，額前臨為“封兕⁹欲斗”，出弓弣為“懷中吐月”，平箭闊〔筈〕為“弦上懸衡”，此皆有威容之稱也。

A whole range of shooting errors: bow canting to the right, arrows flying weakly, positioning the cheek next to the string, the neck arching back, the chest jutting out, the spine arching backwards — all of these are fundamental errors of shooting form. So [the first stage] where the body tenses forward is called ‘the fierce tiger gathers himself to spring’. [The second stage] where the brow inclines forward is called: ‘The mighty unicorn [lowers its head] to do battle.’ [The third stage] where the bow-limbs are pushed forward is called: ‘Producing the moon from within the chest.’ [The fourth stage] the arrow nock is drawn straight is called: ‘Hanging the scales on the string.’ These are all terms denoting dignity of stature.

9B11

又曰：凡控弦有二法：無名指疊小指，中指壓大指，頭指當弦直豎，中國法也。屈大指，以頭指壓勾指，此胡法了。此外皆不入術。胡法力少利馬上，漢法力多利步用。然其持妙在頭指間，世人皆以其指末覘弦，則致箭曲，又傷羽。但令指面隨弦直豎，即脆而易中，其致遠乃過常數十步，古人以為神而秘之。

8. 3 m (《漢語大詞典：附錄》，頁 5)。

9. ‘兕’ was a mythical or extinct species of ox with a single horn; a sort of bovine unicorn. It was historically linked with archery because its name was given to a tally for keeping count of archery scores.

The Method continues, 'There are two ways of setting the draw-hand position: placing the ring finger next to the little finger and placing the middle finger over the thumb, with the index finger placed vertically along the string is the Chinese style. Bending the thumb and hooking the index finger around the end of it is the Mongolian style. No other techniques are recognized. The Mongolian style lacks in strength, but is better for shooting on horseback. The Chinese style is more powerful, and is suited to shooting on foot. The distinctive knack of the latter lies in the way the index finger is used: many people like to give the string a twist with the end of their fingers. This bends the arrow and also damages the fletch. But if you let your index finger lie vertically along the string, the release will be cleaner and it is easier to hit the target; also, it adds over a few dozen paces to the normal distance the arrow will fly. In the old days, people thought this was a magical method and kept it secret.

9B12

胡法不使大指過頭亦為妙爾。其執弓欲使把前入扼，把後當四指本節，平其大指承鏃，卻其頭指使不礙，則和美有聲而俊快也。射之道備矣哉！

According to the Mongolian style, not putting the [bow-hand] thumb over the index finger is also a useful [bow-hand] technique. They try to make the face of the grip fit into the palm and make the inner joints of the four fingers touch the back of the grip, extending the thumb level to support the arrowhead and drawing back the index finger until it will not go back any further. If this is properly co-ordinated, then you can hear the sound [at the release], and [the release] is fast and smooth. That wraps up the physical form [part of the Method].

9B13

五射說解

井儀：開弓形，所謂懷中吐月也。

襄尺：襄，平也。尺，曲尺也。平其肘，所謂肘上可置杯水也。

白矢：矢白鏃至指也。所謂穀率也。

剡注：注，指也。以弓弣直指於前，以送矢，俗所謂劈捺也。剡，銳也，弓弣也。靡其弣。

參連：矢行急疾而連參也。

Explanation of the 'Five Archery Techniques'

'The *jing* ("well") character (井) form of wielding the bow': this is what is known as 'Producing the moon from within the chest'.

'Xiangchi': *xiang* (襄) means 'level'; *chi* (尺) means 'a carpenter's square'. This refers to keeping the elbow level, that is to say 'being able to balance a cup of water on the [inside of] the elbow'.

'White arrow': if 'the arrow is white', it means that the arrowhead has reached the finger; that is to say: full draw.

'Yanzhu': *zhu* (注) means 'to point at'. That is: to allow the bow limb to pitch forward when shooting the arrow: what is commonly called 'snapping' (掣). *Yan* (剡) is 'sharp': that is to say, the tip of the bow. That is, allowing the bow-tips to revolve to a horizontal position.

'Three-in-a-row': that is to say, firing three shots in rapid succession.

9B14

步射總法

左肩與胯對垛之中，兩腳先取四方立，後次轉左腳尖指垛中心。此為「丁字不成，八字不就。」左手開虎口微松（鬆）下三指，轉弭側臥，則上弭可隨矢直指的，下弭可抵胛骨下，此為「靡其弭」。右手摘弦，盡勢翻手向後。要肩、臂與腕一般平直。仰掌現掌紋，指不得開露，此為「壓肘仰腕」。

General Method for Infantry Shooting

The left shoulder and hip should be facing the centre of the target mound. Both feet start out parallel at the first stage then at the later stage, turn the left foot pivoting until the toes point at the middle of the platform. This is almost a '丁' shape, and not quite a '八' shape. [Then] part the left thumb and forefinger, relaxing them slightly and with the lower three fingers, revolve the bow grip to a horizontal position so that the upper tip can point along the path of the arrow straight at the target while the lower tip can reach to below the shoulder-blade — this is 'allowing the bow-tips to revolve to a horizontal position'. The right hand grasps the string, and you complete the movement by pulling your arm backwards, so that you have your shoulder, upper arm and wrist straight in a straight line. You should be able to see the lines on the palm of your draw-hand; but your draw-hand fingers should not stick out. This [movement] is 'depressing the elbow and raising the wrist'.

9B15

《射經》曰：“無動容，無作色。按手頤下，引之令滿，取其平直。”故曰：“端身如桿，直臂如枝。”箭發則靡其弭，壓其肘，仰其腕。”“胸凸，背偃，皆是射之骨髓疾也。”

The *Archery Classic* says, '[The body] should not waver; you should not

be flushed. Bring the draw-hand past the lower part of the cheek and come to full draw so that your stance is set up vertically and horizontally'. Therefore, they say, 'The body should be as straight as a flagpole and the upper arms should stand out like branches. As soon as you have released, allow the bow-tips to revolve to a horizontal position; your elbow should be low, your wrist should be raised,' and 'The chest jutting out, the spine arching backwards — these are all fundamental errors of archery posture.'

9B16

步射病色

(前漢將軍李廣校訂)

“開弓勘手”謂前手太高，後手低不平。

“開弓提手”謂前手太低，後手高。

“開弓偃弰”謂身直頭偃，前手腕仰。

“兩摘”謂不一發：用力及前、後分解不齊。

“斫弦”謂遣箭分弓，實握不轉腕，微鬆手轉弰。

“脫弰”謂手太鬆，倒提手，弰不轉。

“鑲弰”、“弰子大”：二件謂下弰傳右胛。

“後手約”謂手側不仰腕。

“後手小”謂斂定手，不放平。

“後手偃”、“後手捲”：二件謂遣箭不直硬腕，斫弦捌手。

Errors in Infantry Shooting

(Attributed to the Western Han General Li Guang)

- 'The arms contrast at the draw' means that the elevation of your bow-arm and the depression of your draw-arm are not even.
- 'Arms come up at the draw' means that your bow-arm is too low and your draw-arm too high.
- 'Letting the tip of the bow fall back at the draw' means that while your body is straight, your head tips backwards and your bow-arm wrist is raised.
- 'Double action' means the shot is uneven: when you apply force to the bow-hand, it is not matched by force applied to the string-hand.
- 'Chopping the string' means, as you release the arrow and the arms move apart, you hang tightly onto the grip and don't let the wrist revolve, relaxing the hand slightly so that the grip can revolve.
- 'Parting company with the grip' means the hand is too relaxed so that the bow turns right round but the grip does not revolve.
- 'Slapping the limb' or 'Big Limb': These two mean that you lower the bow-tip and turn the right shoulder blade.

- 'Rolling up the draw-arm' means when your arm is horizontal, you do not raise your wrist.
- 'Small draw-hand' means holding back the arm without making it horizontal.
- 'Raising the draw-arm' or 'Folding the draw-arm': these two mean that as the arrow is released, you are not straight with the wrist rigid so that as you thrust forward, the string slaps the bow-arm.

9B17

前後手法

宋·盧宗邁太尉釋撥說文云：側手擊物曰撥。謂當後手如擊物之狀。令臂與肩一般平直是也。捩，說文云：捩，拗也。謂以前手推弣，後手控弦，如用力拗捩之狀。劈說文云：劈，斷也。謂當以後手摘弦，如劈斷之狀。翻手向後，仰掌向上，令見掌紋是也。擲，說文云：擲，擲也。即當以前手點弣，如擲物之狀。令上弣指的，下弣抵手押骨下也。

Bow Hand and Draw-hand Method

In the Song Dynasty, Commander Lu Zongli¹⁰ glossed the word *sa* (撥), as follows: 'To punch something with your arm held horizontally is called *sa*.' That means, putting the draw-hand in a position as if about to punch something. You must hold your upper arm and shoulder at the same level. The word *lie* (捩) is glossed as: '*Lie* is to twist.' That means, you push the grip with you bow-hand, the draw-hand controls the bowstring, so that it looks as if you were forcefully twisting something. The word *jue* (劈) is glossed as: '*Jue* is to snap.' That means when the draw-hand grips the string, you hold it as if you were snapping something off. You rotate your hand backwards, and raise the palm so that the lines on your palm are visible. The word *die* (擲) is glossed as: '*Die* is to throw.' That is, when you contact the bow-tip with your bow-arm, it looks as if you were throwing something away from you. You point at the target with your upper bow-tip, and the lower bow-tip reaches below your shoulder blade.

9B18

馬射總法

勢如追風，
目如流電，
滿開弓，緊放箭，

10. Author of *The Archery Method* (射法), a Song Dynasty work in two volumes, now lost.

目勿瞬視，
身勿倨坐，
不失其馳，
舍矢如破。

General Method for Shooting on Horseback

As powerfully as if chasing the wind,
The eye moves like a bolt of lightning,
Draw the bow, immediately loose off the arrow,
The eye is fixed unblinking,
Your body and your equipment as solid as rock,
Don't lose your momentum,
Loose off the arrow with determination.



Song Dynasty illustration of Wang Ju's Archery Method from 陳元靚《事林廣記》

9B19

持弓、審、固

左手垂下，微曲大指羈弣，第二、第三指著力把弓箭，餘指斜籠，下弣指左腳面。曲右手當心，右臂貼肋，以大指、第二、第三指於節上，四指弦髮捉弣，箭筈與手齊。

訣曰：“持弓審固事須知，垛在南時面向西，右手捉弓左當靶，仍令箭筈兩相齊”。

Grip on the Bow, Concentration and Firm Stance

With the left (bow) arm hanging down, slightly bend the thumb to encircle the grip; the index and middle finger gripping the bow and arrow firmly; the remaining fingers obliquely cradle the lower bow-limb; the lower bow-limb points down at the front of the left (bow-arm-side) leg. The right arm touches the bow-string serving, the right upper-arm presses against the ribs, with the thumb, index and third finger above the joint and the fourth finger holding the bow-limb at the string-guide. The arrow nock should be level with the hand. The mnemonic goes: 'Grip on the bow, concentration and firm stance are all things you must master. The target mound is at the south, and you face the west. The right hand holds the bow while the left is level with the grip. Yet you keep the arrow and the nock level.'

9B20

舉靶按弦

欽身微曲，注目視的，左手輪指坐腕靶，弓箭如“懷中吐月”之勢。續以左手第二指與第三指靠心斜入拔弦，令弓上傳著右肩，然後舉左腳，三移步以取箭。訣曰：“舉靶拔弦橫縱腳，輪指坐腕身微欽，上弰斜傳右肩膊，左手持把橫對心”。

Raising the Grip and Pressing on the String

Incline your body slightly forward then turn your eyes to look at the target. Settle all the fingers of the bow hand and the wrist into the grip so that the bow and arrow are like 'producing the moon from within the chest' movement. Continue by inserting the index and middle fingers of the left hand obliquely and pulling on the string near the serving so that bow turns towards your draw-arm shoulder. After that, raise your left leg, make three movements of the feet in preparation for 'Nocking the Arrow'. The mnemonic goes: 'Raise the grip, pull on the string and set the feet at right angles; revolve the fingers, depress the wrist and incline your body slightly; let the limb-tip come to rest then turn it towards the right shoulder; the left hand grasps the grip exactly opposite the serving.'

9B21

抹羽取箭

以左手三指丞下緊抵前，四指、五指鉤落上籠。先舉右腳，隨步合左手指弰抵靶。以二指按箭，三指斜擗箭，四指五指向裏斜鉤。左手二指三指羈

幹掣箭至鏃。訣曰：“前當弓弣一般齊，三實二〔兩〕虛勢漸離，小指取箭羈緊鏃，抹羽入弦無暫遲”。

Stroking the fletch and nocking the arrow

Firmly grip underneath the four arrows towards the front with the middle finger of the left hand, then use the ring and little fingers to hook around and cradle them from below. First raise your right foot, and in time with this step bring the fingers of the left hand to the bow-limb where it meets the grip. Then press on the arrows with the index finger, separate the arrows with the middle finger and use the ring and little fingers to hook them obliquely inwards. The index and middle fingers of the left hand encircle the remainder and pull the arrow back as far as the head. The mnemonic says: 'At the front, level with the grip, three [fingers] firm and two relaxed move on gradually to the next movement, the little finger taking the arrow tightly encircling the head, stroke the fletch and place [the arrow] on the string neither too fast nor too slow.'

9B22

當心入筈

右手第二指緊控箭筈，大指捻筈當心，前手就後手，撈筈入弦。¹¹ 左腳尖指垛，腳跟微出，右腳橫，直鞋袂對垛，淺坐箭筈，左手第二第三指坐腕羈前，雙眼斜覷的。訣曰：“右手二指抱箭筈，兩手相迎穩入弦，捻筈當心斜覷帖，緊膨兩膝直如衡”。

Nocking the arrow at the middle of the serving

Hold the arrow nock firmly with the right index finger, pinch the nock onto the serving with the thumb, and using both hands squeeze [the string] into the arrow [nock]. Point towards the target mound with the left foot, the heel pointed slightly outwards and the right foot at right-angles to it, the open side of the sandal towards the target mound, lower the arrow nock a small amount, the index and middle fingers of the left hand encircling the front [of the grip] as the wrist settles down, while you obliquely take a peek at the target with both eyes. The mnemonic goes: 'Cradle the arrow nock with the right index finger, bring it steadily onto the string with both hands, pinch the nock at the middle of the serving and glance at the [examination] target; rotate the knees apart until they are as level as a steelyard.'

11. The original text here is either '撈幹入箭' or '撈余入箭', depending on the source adopted. The first makes no sense and the second very little. I have therefore amended the main text, which now accords with the wording of the mnemonic.

9B23

鋪膊牽弦

輪指把弣，推出前手，微合上弣。兩臂弦曲，不可展盡。左手輪指空，第二指過弓弣節上，大指面緊著弓弣，屈起指節，餘指實屈鋪下。前膊、左右腳膝著力，同入筈法。訣曰：“前腳鋪下若推山，右指彎弓緊扣弦，兩臂稍曲不展盡，文牽須用緩投肩”。

Spreading the shoulders and hauling the string

With all the fingers, grasp the grip and push forward the bow-hand drawing the upper bow-limb in slightly. The arms are bent and the string part-drawn: do not stretch fully [at this point]. Then relax the fingers of the left hand and extend the index finger one joint above the grip; set the cheek of the thumb firmly up against the grip and bend up at the joint; then curl the other fingers firmly around to cover [the grip] below [the thumb]. The bow-arm and both knees are held tense, like when nocking the arrow onto the string. The mnemonic goes: ‘The front leg is crooked as if you are pushing a mountain, the right hand fingers curve around the bow — firmly hold back the string, both upper arms slightly at an angle — don’t extend them fully, to take up the string tension according to the civil style you must drop the shoulders gently.’

9B24

欽身開弓

以右手第二指取箭，弣外覲帖，側手引箭至鏃。大指靠定血盆骨為進。凡鏃與弣齊為滿，半弣之間為貫盈，貫盈信美雖有及者，大抵脅肋，腳膝著力，亦同入筈法。訣曰：“開弓發矢要欽身，弣外分明認帖真，前肘上翻雙膊聳。脅肋腳膝力須勻”。

Inclining the body and coming to the draw

Take the arrow with the index finger of the right hand, sighting at the target face on the outside [of the bow]. With the hand held sideways, draw back the arrow its full length as far as the arrowhead. When the [draw-hand] thumb draws close to the sternum you have initiated [the draw]; when the arrowhead draws level with the grip full draw is reached; when the arrow is exactly half way down the grip, you have ‘fully passed through’. Even when you have ‘fully passed through’ perfectly, keep your ribcage held in and spread your weight evenly between your knees. This is also like when nocking the arrow onto the string. The mnemonic goes: ‘When you draw and release you must incline the body, check the outside of the bow-limb to get a clear view of the target face. The bow-arm elbow rotates up and shoulders are held aloft.

You should distribute tension evenly across the ribcage and between the knees.'

9B25

極力遣箭

竦腰出弰，上弰畫地，下弰傳右膊。後手仰腕，極力越後肘過肋，倚後手向後。前手猛分虎口，著力向下急捺，轉腕，以第四、第五指緊鉤弓弰兩肩凸出，則箭力倍勁。訣曰：“弰去猶如搥斷把，箭發應同捻折弦，前弰畫鞋後靠脊，極力遣出猶自然”。

Loosing an arrow with maximum force

Straighten at the waist and extend the bow-tips so that the upper bow-tip points at the ground and the lower bow-tip points towards the right arm. Raise the wrist of your right hand and pull back the draw-arm elbow as hard as you can past your ribcage, pulling the bow-hand backwards. Part the bow-hand thumb and forefinger wide and press strongly downwards. Then turn the wrist and grip the bow grip firmly with the ring and little fingers and let your shoulders fly back. This will double the power of the arrow. The mnemonic goes: 'The bow-tips go as if they are being held down and would snap at the grip; the arrow is released and at the same time the string is given a twist; the front bow-tip marks your sandal and the rear one is close to your spine; to loose off the arrow with all your strength will seem quite natural.'

9B26

卷弦入弰

後箭，兩手相迎，直右手過胸，曲左手卷弦，以右第二指取箭。前腳跟著地，聳身稍斂，雙眼覷帖。曲右手貼肘，以左手第二指、第三指側手羈，直右手上臂，仰腕過胸取箭。訣曰：“右指羈箭當胸出，左手卷弦弰靠肩。箭已中時無動手，抹羽入筈法如前”。

Rolling the string into the bow-tip

After loosing the arrow, bring both arms together, and hold the right arm straight and bring it past the chest, bend your left arm around the string and take the arrow with the index finger. Touch the ground with your front heel and holding your body erect, step back slightly and look at the target with both eyes. Bend your right arm sharply at the elbow; then turning the ring and middle fingers sideways, cradling the rest [of the fingers] round the arrow-shaft; straighten the upper right arm and raise the wrist past the chest to take the arrow. The mnemonic says: 'The right hand cradles the arrow and extends level with the chest; the left

hand encloses the string and the bow-tip rests against the shoulder; when the arrow has already hit, still don't move the arm; stroking the fletch and nocking the arrow is just like before.'

9B27

弓有六善

一者性體少而勁，二者太和而有力，三者久射力不屈，四者寒暑力一，五者弦聲清實，六者張便正。凡弓性體少則易張而壽，但患其不勁，欲其勁者，妙在治筋，凡筋生長一尺，乾則減半，以膠湯濡而極之，復長一尺，然後用，則筋力已盡。無復伸弛，又揉其材令仰，然後傳角與筋。此兩法所以為筋也。凡弓節短則和而虛。〔虛謂挽過吻則無力〕。節長則健而柱。〔柱謂挽過咳¹²則木強而不來。節謂把稍。¹³裨木長則柱，短則虛〕。節得中則和而有力，仍弦聲清實。凡弓初射，與天寒則勁強而難挽。射久，天暑則弱而不勝矢則膠之，為病也。凡膠欲薄而筋力盡，強弱任筋而不任膠，此所以射久力不屈，寒暑力一也。弓所以為正者，材也。相材之法視其理，其理不因矯揉而直中繩，則張而不跛，此弓人之所當知也。

A bow has six qualities

First: small in size but powerful; second: first-class workmanship and strongly constructed; third: it does not weaken after being used for a long time; fourth: it has the same strength in hot or cold conditions; fifth: the string sounds clear and firm; sixth: it retains its form when drawn. Bows which are small in size are easier to draw and are durable. The only problem is that they tend to be less powerful. The key to making them powerful is in the treatment of the sinews. Sinews which stretch a foot when fresh will shrink to half that length when dried. They have to be soaked in glue and stretched as far as they will go: out to a full foot in the summer season, then they can be used.

For the number of reasons, this text presents a great challenge to the translator.

For a start, it is clear from the fact that a Song Dynasty author is quoted in paragraph 9B17 that the work cannot be a pure Tang text. In fact, it was common for archery teachings to be passed down from generation to generation by mouth and it might not have been until the Yuan Dynasty that the work was set down in writing by Tao Zongyi (陶宗儀).

12. This is possibly a misprint for '吻' and is translated accordingly.

13. This is probably supposed to be '弣' and is translated accordingly.

It is also clear that the text does not seek to describe a single shooting procedure; rather, it jumps from activity to activity, covering archery from a kneeling position, infantry archery and mounted archery. In fact, it appears that the text describes a number of basic procedures that are supplemented by some stylistic flourishes.

Finally, there are genuine problems in translating old texts about Chinese archery without knowing the basics of Chinese archery technique, and it is impossible to learn Chinese archery technique without studying the old texts on Chinese archery!

Linguistically, also, the text incorporates a number of different styles. The original text in classical Chinese has no punctuation; at least two modern editions of the text have taken radically different approaches to putting in punctuation, with the result that in a number of cases, the same text can be understood in substantially different ways.

The author considers that there is the very real possibility that only the mnemonics in verse actually date from the Tang Dynasty, while everything else is elucidation and annotation by later authors. You should not regard the translation in the previous paragraphs as the final word on the matter: other readers and translators may take a different approach to some paragraphs.

In the following paragraphs, I shall comment on the text, having myself attempted to carry all of the actions and sequences described. By trying the actions out, it is easier to form a judgement about what the original authors actually meant.

Paragraphs 9B1 to 9B12 describe a 'general technique'. This is a description of the underlying technique which is then developed into two separate activities: infantry archery and mounted archery. The general technique is described in relation to an archer kneeling on a mat on the floor. This may have been a training method which would allow the archer to concentrate on correct handling of the bow and arrows without worrying too much about foot position or the complications of controlling his horse. We could, therefore, regard the first part of the text as describing an underlying upper body technique which can be further built upon for developing specialized infantry or equestrian archery skills.

Throughout the text, the reader must bear in mind that in all orthodox Chinese archery methods, the bow was held in the left hand and the string was pulled with the right hand. So if you are left-handed and you plan to try out any of the instructions, you need to substitute 'bow hand' for 'left hand' and 'draw-hand' for 'right hand'.

Paragraphs 9B2 and 9B3 describe the nocking of the arrow. But where did the arrow start off? There are at least three general possibilities:

- the sequence started off with the arrow already in the archer's right hand;
- the sequence started off with the arrows in the archer's belt or in a quiver at his right side; or
- the sequence started off with one or more arrows held against the bow-grip with the left hand.

I believe that all these situations are described in the course of the whole *Archery Classic* and we have to take an educated guess, based on the circumstances and the wording, as to what was going on in any particular sequence.

In paragraph 9B2, the text says '以左手頭指授之' (then taking up the arrow on the left forefinger). The Chinese character '授' means 'giving away', but in the context, it may be necessary, as I have done, to suggest that '授' is a mistranscription for '受', 'to receive'. This allows the action to be understood as placing the arrow against the grip of the bow and then securing it with the bow-hand forefinger.

For readers acquainted with Western bare-bow technique, it is also important to understand that the Chinese bow-hand position has the arrow resting on the thumb on the *outside* of the bow rather than the Western method of having it pass over the knuckle of the forefinger on the *inside* of the bow.

Paragraph 9B4 largely repeats the advice found in the translation of the 'Bowyer's Wife's Tale' at paragraph 7B4 in Chapter 7. The essence of good style is that the arms must be extremely straight and level. Paragraph 9B5 refers to the need for a dignified style, reflecting the requirement of the Tang examination syllabus: the shots must not just hit the target; the technique must be correct as well.

The end of paragraph 9B6 makes it clear why it is necessary for the arrow to pass on the outside of bow. The forefinger passing in front of the bow plays an important part in securing the arrow while the thumb has to be able to sense that the tip of the arrow has reached full draw.

Just reading paragraph 9B7, it would be hard to imagine the type of action being described. In fact, it is only by looking at some later illustrations dating from the Song Dynasty that it becomes possible to see what author was getting at. The following illustration is taken from an 11th encyclopaedia¹⁴ which includes a section Wang Ju's *Archery Manual*.

14. 南宋·陳元靚：《事林廣記》。



Song Dynasty illustration of Wang Ju's infantry archery 陳元靚《事林廣記》

As a part of the shooting 'cycle', the left and right arms are extended towards and away from the target so that the bow (without an arrow nocked) points at the target. The value of this movement was that it made the archer concentrate on the target and gave him a moment to feel for the correct extended bow-arm position before the bow was drawn. The extended draw-arm was then also in the correct position to take the next arrow from the belt or quiver. The natural follow-through after release with a Chinese bow leaves both arms extended, and relaxing the fingers makes the bow fall to horizontal naturally. (See paragraph 9B14.)

The movement thus served a triple purpose: to set up the shot, to follow through after the release, and as a transition to taking the arrow to set up the following shot.

Paragraphs 9B8 and 9B9 cover the basics of training method for Chinese archery. It consists of a gradual conditioning in which the archer gains confidence with a light draw-weight and a near target, and then moves progressively to heavier weight and longer target distance. The ultimate distance (100 paces) need not be taken literally: as we have seen in Chapter 7 (paragraph 7H2), excellence was conventionally described in terms of marksmanship at 100 paces.

The ultimate purpose of the training was to produce an archer who was completely confident in his skills — the kind who, in the case of the story of Lie Zi, would not be fazed by having to shoot while looking out over a precipice!

The purpose of paragraph 9B10 is to draw attention to the aesthetic demands of archery. Ungainly postures are frowned upon, and the correct positions are graced with fanciful names.

The position of the hand gripping the string is the most important factor in Chinese archery. As you can see, (paragraph 9B11), in the Tang Dynasty, only two hand positions were recognized. The Mediterranean draw was not included in any recognized method. In later periods, the Mongolian draw came in two flavours: one involved supporting the thumb with the forefinger alone, while the other involved supporting the thumb with both the forefinger and the middle finger. The latter method was employed to assist in the drawing of very heavy bows. It is worth noting the comment about twisting the string. Although frowned upon in Chinese archery, this remains a respectable method for drawing Korean and Mongolian traditional bows.

Paragraph 9B13 sets out some explanations of the 'Five Archery Techniques' which are mentioned in the *Rites of Zhou* (See Chapter 7). In this context, the comments are a digression, and I propose to return to them later in this chapter. Suffice it to say for now that the author does not agree with Wang Ju's explanation of the terms.

Infantry Shooting

The first part, 'General Method', lays a foundation for all other types of shooting. It is not known whether shooting from a kneeling position was a common form of archery. It can be seen in some of the terracotta soldiers from the grave of the First Emperor of the Qin, and it occurs, for instance, in Japanese archery.

Wang Ju may have chosen to introduce the 'General Method' in the kneeling position first because it may have been that in normal training, that was the first technique taught, not requiring upper-body and foot co-ordination. (The latter skill was, according to the archery method of Wang Zhengnan¹⁵ in the Qing Dynasty, as important to archery as to Chinese boxing.)

15. 黄百家：《征南射法》。

In paragraph 9B14, you can see that in Wang Ju's time, it was required that the feet be placed at *almost* right-angles. First of all, the bow had to revolve to a horizontal position pointing at the target. (It is helpful that the Chinese text on the Song Dynasty illustration refers directly to Wang Ju's wording.) The draw follows only after the bow is horizontal. In this paragraph, the draw is only described in general terms and there has not yet been any explanation of nocking the arrow.

Paragraph 9B15 quotes from the Confucian Archery Classic (Chapter 5, paragraph 5B1), and stresses the need for a firm, erect body position. The Qing Dynasty Manchu work by Narancangjun, *Hitting the Target*,¹⁶ starts off by saying:

9C1

“余嘗三復乎射以觀德之說。知射之道果在德不在力也。何也？德：其體也；力：其用也。”

I have pursued archery relentlessly to gain an understanding of the meaning of 'Virtue'. Now that I know the Method of archery, it emerges that archery is based in Virtue, not in strength. What does that mean? It means that Virtue is in the body and strength is in the use of body.

Wang Ju's stress on a firm position reflects this preoccupation with stance: it is the stance that displays the 'Virtue'. That is why merely hitting the target did not automatically secure a 'pass' for the candidate: it could be a result of strength without Virtue.

Paragraph 9B16 is attributed to the great Han archer Li Guang and consists of an analysis of errors. The text occurs in numerous renditions of Wang Ju's manual quoted in later works with numerous errors. This version, taken from a Song encyclopaedia (事林廣記), is the only one which makes proper sense.

Paragraph 9B17 is clearly a Yuan or Ming annotation quoting a Song Dynasty work to explain another group of technical terms. The characters quoted do not appear in normal dictionaries, and may in fact have been dialect words which had not entered the normal written language.

Paragraph 9B18 dismisses mounted archery with a brief verse of poetry. Clearly, it was something which could not be taught with a detailed written instruction in a book.

Paragraphs 9B19 to 9B26 describe a number of discrete actions which do not form a part of the standard method. They have been set aside for

16. 那蘭常鈞：《射的》。

separate elaboration in these paragraphs, maybe because they were 'special effects' rather than standard archery method.

The first action, 'Grip on the bow, concentration and firm stance' (9B19) is a preparatory movement. Its purpose is to gather your thoughts, concentrate and prepare for the full series of actions to follow. Two Qing Dynasty illustrations show this position: one with an arrow in hand and one without:



In 'Raising the grip and pressing on the string' (9B20), it is not clear to me why the left (bow) hand would be plucking the string at this stage (which hand 'plucks' is not made explicit in the mnemonic). I suggest that left and right hands have here become transposed through a misprint. (The Chinese characters are easily confused in bad printing or hurried writing.) Nor is it clear what was intended by 'shift the foot three times forward'. The mnemonic itself (on which the text forms a commentary) does not mention moving the feet.

My proposal for understanding this paragraph is to assume that it describes the preliminary actions for setting the feet correctly. First, the bow is pointed horizontally at the target while the feet remain immobile. Then three foot movements take place (not 'steps'). The right foot is first

set into position at right-angles to the target; the left foot is then placed at a proper distance from the right foot. Finally, the left foot is turned to face the target. This corresponds to the 'set the feet at right-angles' in the mnemonic.



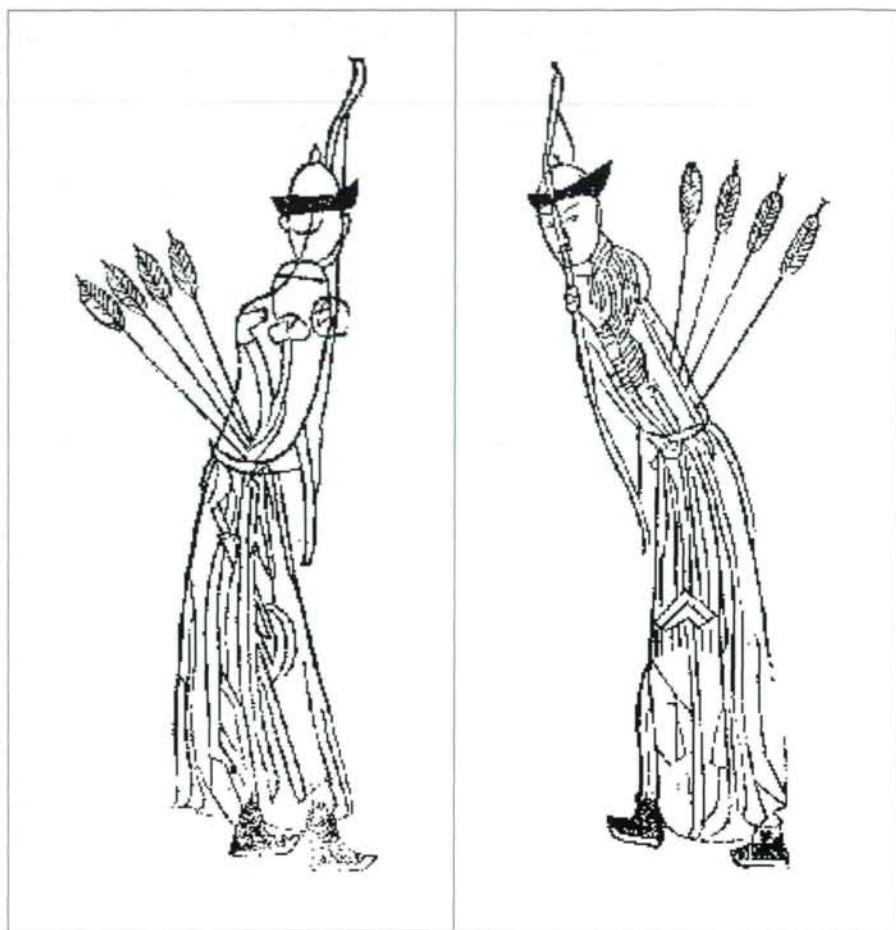
The paragraph 'Stroking the fletch and nocking the arrow' (9B21) describes a method for nocking a single arrow from four arrows held in the bow-hand while shooting. The original mnemonic does not indicate that the manoeuvre required is as complicated as the commentary makes out; it could just be a description of nocking a single arrow.

'Nocking the arrow at the middle of the serving' (9B22) covers the nocking of the arrow and the preparation for the draw. The traditional Chinese arrow was 'self-nocked', that is, it did not have a 'clip-on' action like a modern Western arrow. It just slid onto the string, and probably none too tightly either. So it was necessary to use the action of both hands to nock it, and then use pressure from the string-hand middle finger against the nock to keep it in place during the draw. That is why the mnemonic says, 'cradle the arrow nock with the right index finger'.

'Spreading the shoulders and hauling the string' (9B23) describes the start of the draw. The first part of the draw stops before the arms are fully extended: the completion of the draw was regarded as a separate action, although there is no indication that there was a pause between the stages.

'Inclining the body and coming to the draw' (9B24) describes the second part of the drawing action. The index finger of the string hand is keeping the arrow in place and the target is sighted on the outside of the grip. (Remember that the arrow passes on the outside of the grip in Chinese archery.) You can see that the previous sequence stopped with the draw-hand level with the sternum and the bow-arm bent. Full draw is when the arrowhead draws level with the grip. This is a classic tenet of Chinese archery which all the texts repeat. The touch of the arrowhead on the forward edge of the bow-hand middle finger acts as a 'clicker', marking the point of release.

The body position at full draw has the archer leaning slightly forward to get a proper look at the target, as the following pair of illustrations from a Qing manual, *Illustrated Guide to Examination-Ground Archery* show:



科場繡像射法指南車

'Loosing an arrow with maximum force' (9B25) is clearly a 'special effect', as the method conflicts with the standard methods described elsewhere in the text. It appears to be an alternative style of draw: instead of starting the draw from a high initial position and bearing down, the draw starts from a low position and moves up and out. The actions are clearly quite fast and energetic: this may have been a horseback archery style rather than the examination style which places stress on slow and dignified movement.

'Rolling the string into the bow-tip' (9B26) describes the nocking of arrows between shots, completing the shooting cycle. It is not clear whether the arrow is taken from a quiver or whether it is one of three remaining arrows being held against the grip by the left hand.

This completes the description of shooting in Wang Ju's Method. The text finishes with a description of the desired qualities of a bow, reflecting those set out at the end of 'The Bowyer' from the *Rites of Zhou* (See Chapter 5).

The 'Five Forms of Archery'

Returning now to 9B13, it is necessary to come to grips with the mystery of the 'five forms of archery', which has exercised Chinese scholars over the centuries.

This riddle starts off with the *Rites of Zhou* which contains the following passage describing the duties of the 'Bao Clan' of hereditary court officials:

9D1

保氏掌諫王惡，而鄙國子以道。乃教之六藝：一曰：五禮；二曰：六樂；三曰：五射；四曰：五馭；五曰：六書；六曰：九數。

The Bao Clan is in charge of remonstrating with the king when he is in error. Moreover, he instructs the children of the aristocracy in the syllabi. That is to say, they teach them the six skills: the first is the five forms of ritual, the second is the six forms of music; the third is the five forms of archery; the fourth is the five forms of charioteering; the fifth is the six forms of literature and the sixth is the nine forms of mathematics.

Chinese scholars have always been engrossed with numerical groupings: it was unthinkable to let such a text pass without an explanation. But the sad truth is that the exact meanings of these terms may not have survived from the Warring States period, when the text was first composed, to the Han Dynasty when an explanation was demanded.

One Han commentator who attempted to explain these terms was Zheng Zhong (鄭眾) in around 100 AD. His much-quoted gloss on the 'five forms of archery' (五射) lists five enigmatic terms,¹⁷ and it is these terms that Wang Ju seeks to explain in paragraph 9B13. The terms, each with two characters, are not readily understandable and have puzzled Chinese scholars for centuries.

Almost at the same time, another commentator, Jia Kui (賈逵) (30–101 AD) expanded on the terms listed by Zheng Zhong as follows (it is not clear which was written earlier):

17. “五射：白矢、參連、剡注、襄尺、井儀也。”

疏：“云白矢者，矢在侯而貫侯過，見其鏃白。云參連者，前放一矢，後三矢連續而去也。云剡注者，謂羽頭高鏃低而去，剡剡然。云襄尺者，臣與君射，不與君並立，襄（讓）君一尺而退。云井儀者，四矢貫侯，如井之容儀也。

The gloss is: ‘white arrow’ refers to when the arrow has passed through the target face and you can see that the arrowhead is white. ‘Three-in-a-row’ means letting off one arrow first, then letting off three arrows in succession. *Yanzhu* means the fletching goes high and the head goes low so that it porpoises. *Xiangchi* means that when a minister shoots with his lord, he can’t stand level with the lord; *xiang* is *rang*: the minister steps one pace back from the lord. *Jingyi* means that four arrows pierce the target in a tic-tac-toe arrangement.

Wang Ju’s explanation is just one of a long series of attempts to come to grips with these mysterious formulations. At paragraph 9B13, I have translated literally what his explanation says. But do Wang Ju’s explanation or the explanations of the Han commentators ring true? Even allowing that we are over 2000 years on from the events described, it is difficult to accept that Jia Kui’s explanations really showed what formed the syllabus of an archery course for young nobles in the Warring States period. One of his proposed explanations relates to a shooting error (*Yanzhu*): if it formed part of the syllabus, why was it set apart on its own? Subsequent works do indeed discuss errors, but not concentrating on one to the exclusion of others. The other issues described seem to be a random collection of possible occurrences during archery.

Let’s think back to the time these explanations were set down. The original texts of the *Rites of Zhou* had come down from pre-Qin times, and were highly regarded as the works of a previous era. But they had come down without explanation, and those who knew or had written down the original answers had not survived the political purges of the first Qin Emperor. We shall probably never know exactly what was meant by the ‘five forms of archery’.

That said, the duties of the Bao Clan are not the only instance in the *Rites of Zhou* where five forms of archery are described. In the description of the duties of the Sheriffs (鄉大夫), there is the following passage:

退而以鄉射之禮、五物詢眾庶。一曰：和；二曰：容；三曰：主皮；四曰：和容（頌）；五曰：興舞。

On leaving the Capital, they use the Archery Rituals of the Shires and the five criteria (*lit*: shooting lines) to examine the common people. The five shooting lines are: co-ordination, appearance, accuracy,¹⁸ musicality and performance of the choreography.

From paragraph 4E1 in Chapter 4, we know that the word *wu* (物) is associated with a ground mark which acts as a standard for archery. The criteria listed in paragraph 9F1 are five discrete, rational criteria which accord with the textual descriptions of the main features of the Archery Rituals of the Shires. The element in this passage which is curious is that it was the common people who underwent the examination. That does not fit in with our preconception that ritual archery was a sport restricted to the nobility. The explanation might be that it was the local aristocracy who underwent the examination. They would have received basic training in ritual skills, but would not yet have been examined and passed the rituals for entry to the 'national' aristocracy. Thus they could still be referred to as 'common people'.

So one possibility was that the 'five forms of archery' (五射) were the same as the 'five criteria' (五物) set out in the 'Duties of the Sheriffs'. This is my preferred explanation. But then what are we to make of the explanation Zheng Zhong supplied in around 100 AD? I suspect that either through his personal experience or through asking his associates, Zheng Zhong was aware of another 'five forms of archery', i.e. those current in contemporary military training.

We already know (see paragraph 8I1 in Chapter 8) that in the mid-Han, ritual archery was a very rare event. And in the army, apart from cavalry archery, the main weapon was the crossbow. So it is worth looking back at the material on crossbow shooting in Chapter 8. Indeed, one of the terms in Zheng Zhong's list of the 'five forms of archery,' 'three in a row' (參連), is already explained.¹⁹ It is not three arrows in a row, but three aiming elements in a row: the sight reticule, the point of the arrow and the target. But the other terms, read literally, seem to have little relation to the study of artillery. We should not jump to any conclusions unless we can see some other evidence that the terms can readily be linked to the science of shooting with a crossbow.

Let us take each of Zheng Zhong's terms in turn.

18. Accuracy was as much in technique as in actually hitting the target.

19. See Chapter 8, paragraphs 8A10, 8C1, 8D1.

參連

We shall start on the basis that this part of the equation is solved by the explanations of crossbow aiming method in Chapter 8. The word '參' is the same as '三' and means 'three', while '連' means 'to connect'. This is the basic system of aiming: rear sight, fore sight and target connecting three points.

剡注

'剡' means 'to sharpen or whittle' — particularly of things like spears and arrows.²⁰ While '注' means 'to pour' but also 'to aim',²¹ a literal translation might mean 'to aim with the point of the arrow', which was exactly how the crossbowman did aim.

白矢

'白' means 'white' while '矢' means 'arrow'. In terms of artillery practice based on the crossbow, there is an obvious use for a white arrow. It is the 'sighting arrow' which is the first of all arrows fired. As it is easy to see where it falls, the archer can see the effect of crosswind or arrow weight and adjust all his subsequent shots accordingly.

裹尺

'裹' originally meant 'to broadcast seeds in a furrow' but subsequently gained many meanings, some of which were related to 'vertical' or 'raise'.²² '尺' means 'a ruler or measure'. It is consistent with this range of meaning to interpret '裹尺' as meaning 'elevation scale'.

井儀

'井' means 'a well' and '儀' means 'to look'. But the meaning of '儀'

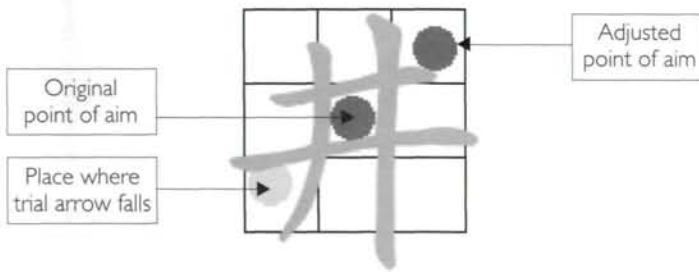
20. 《史記》：“民困兵盡，或剡木為矛矢……。”

21. 《左傳·襄公二十三年》：“樂射之，不中。又注，則乘槐本而覆。”

22. 《漢書·鄒陽傳》：“臣聞，交龍裹首奮翼。”

had gained a special meaning in early texts connected with sighting in archery.²³

The meaning of the character '井' (well) was extended as early as the Zhou Dynasty to cover the tic-tac-toe shape suggested by the character itself. It meant a division of a square into nine smaller squares with the central square being the most significant.²⁴ The word was in fact used to characterize the early Chinese system of feudal landholding. This strongly suggests an important technique in archery sighting: you divide the target area into nine regions with your target in the centre and then shoot a trial arrow. Depending on the weight of the arrow and any crosswind, the arrow may fall into one of the eight regions around the centre rather than bang onto the target. You then correct subsequent shots by aiming into the opposite region.



You can see that to start this process off, you need a test arrow — the 'white arrow'. The idea of a grid of vertical and horizontal lines is also echoed in the words attributed to Liu Chong (paragraph 8D1): 'Of all the things in the whole wide world, there is none so extraordinary as the principle of sighting. There are three "minute points" and three "small points". The "three minute points" are upon the warp and the "three small points" are upon the weft. They unite upon the catch of the crossbow mechanism.'

On the basis of these explanations, there is nothing in the words Zheng Zhong used to describe the 'five forms of archery' which is not consistent with Han period terminology used in crossbow artillery theory. It seems that what has in fact happened is that a piece of Han artillery theory has

23. 《淮南子·說林》：“射者儀小而遺大。”《淮南子·齊俗訓》：“夫儀不可以為發，一衣不可以為歲。儀必應乎高下，衣必適乎寒暑。”高誘註：“儀：弩招頭也。射百發，遠近不可皆以一儀也。”

24. 《周禮·考工記·匠刃》：“九夫為井，井間廣四尺。”《孟子·滕文公上》：“方里而井，井九百畝，其中為公田。”

inadvertently got mixed into a commentary on the *Rites of Zhou*. Not so much help for Confucian scholars: but interesting for us!

Decline and Fall

Wu Zetian's long period of political control in China ended in 705. During her reign, Buddhism was the dominant religion in China and people from neighbouring states came to China to study in the many, powerful monasteries which flourished there. Among these visitors were the Japanese, who came to study the many forms of Buddhism and were enormously influenced by all aspects of courtly life, including the preparation of tea, courtly dress, music, drama, and poetry. These influences persisted in Japan long after the fashions had passed in China; indeed many traces of the Japanese infatuation with Tang Chinese culture persist until today.

An example of this can be found in a book published in Japan in 1688 which describes a courtly sport called 'Willow Bow Archery' (楊弓射禮).²⁵

9GI

夫楊弓之監觴者，貴妃資始之。明皇兼明妃，長生私言，誓曰：“在天願為比翼鳥，在地願為連理枝。”²⁶可謂“漆膠交”²⁷，“于造次，于顛沛。”²⁸事勝遊而盡善盡美。於是截未央楊柳削弓，折太液芙蓉為矢。矢羽嘈嘈相似比翼鳥，弓弦切切恰如連理枝。古今風流美談也。爾來傳楊弓於吾本朝，以射者多，而於北闕，七夕七遊，以之第一恭惟。

'Willow Bows' had their origins back in the days of the Consort Yang Guifei (楊貴妃). The glorious Tang Emperor (Xuan Zong) (玄宗) and his Consort Guifei talked intimately in the Chang Sheng Palace and swore an oath to each other: 'In the sky we shall be like the mythical love-birds who fly with linked wings; on earth we shall be like the two mythical trees which grow with entwined trunks.' You could say, 'As closely bound as lacquer and glue, regardless of life's bustle, regardless of its perils.' That is how they lived their lives, so full of elegance, so full of grace. So they cut the willows of the Wei Yang palace and whittled them into bows; they broke the twigs of the hibiscus at the Tai Ye Pool

25. (日)館重慶註釋：《楊弓射禮蓬矢抄》。奈良院天文十八年。

26. 《長恨歌》。

27. 《後漢書·獨行傳》。

28. 《論語·里仁》。

to make arrows. And the fletching on the arrows swished like the sound of the love-birds with linked wings; and the sound of the string and the bow were just like the intertwining trunks of the mythical tree. Maybe this is all just romantic fairy tales; yet the tradition of the willow bow has come down to our present time; at the Great Lookout Tower it is the most widely-enjoyed among the seven popular festive sports.

Japanese archery developed independently of Chinese archery. (The distinctive form of the Japanese bow was already being remarked on in China as early as 243 AD in the Northern Wei Dynasty.)²⁹ 'Willow Bow Archery' describes how this courtly sport was thought by Japanese romantics to have developed from Tang Dynasty China and have come to Japan in the Nara Period during the eighth century.

Although paragraph 9G1 is probably no more than a fanciful tale, it is true to say that in the Tang Dynasty, popular sports flourished and women took to sports in ways unprecedented in previous centuries. Tang paintings and pottery figures frequently show women on horseback, hunting, playing polo and taking part in other courtly sports. This was the height of fashion.

The tale of the courtesan, Yang Guifei is one of the great romantic tragedies of Chinese literature. It has found its way into poetry, music and drama, and it is fitting that it also found its way into the lore of Chinese archery. In the end, the Emperor Xuan Zong was forced by his mutinous troops to have his favourite, Guifei, strangled after she had fraternized with the rebel An Lushan who subsequently rebelled against the throne. These events were a turning point in the Tang Dynasty, and after 763, the Tang court lost central control over the country to local warlords to the extent that the remaining century and a half (up to 906) was a period of dynastic rule in name only.

The Tang Dynasty witnessed a high degree of cultural interchange between China and countries to the East and West. Apart from the deep impression which Chinese culture made on the Japanese people, there was also a great interest in Western art forms among the Chinese. Decorative designs from the Sessanian culture were being woven in China for export to the West along the Silk Route. Tang tomb figurines demonstrate that it was high fashion to have Central Asian retainers and slaves in wealthy Chinese households. Central Asian retainers took part in hunts, with leopards riding on their horses, ready to take part in the chase. Eastern Turkish mercenaries were brought into military campaigns.

29. 《三國志·魏書·倭人傳》：“兵用矛、盾、木弓。木弓短下長上，竹箭或鐵鏃或骨鏃。”

It is therefore very likely that in the Tang Dynasty there was exchange with Central Asia in archery techniques. I hope that readers with the necessary language skills will look for parallelism between the expression in Wang Ju's *Archery Manual* and the famous works on archery of early Persian and Turkish writers.

There is also scope for investigating for correspondences between the Chinese tradition of archery and those recorded in the Indian Vedas — particularly the *Dhanurveda* — given the contacts that were being built up between India and China through the promotion of Buddhism.³⁰

30. The *Dhanurveda* is not a Buddhist work, however.

挽 用 射 搗

弓 箭 人 寇

當 當 先 先

挽 用 射 搗

強 長 馬 王

*When you pull a bow, then pull a bow that's strong,
And when you fire an arrow, fire the one that's long!
Before you shoot the rider shoot the horse,
First take the leader, ere you take the rebel throng!*

*Before Going up to the Border (《出塞前》)
by Du Fu (杜甫) (712-770)*



China Shared

The outlook of China following the rebellion of An Lushan was very different from that at the height of the Tang Dynasty. The merchant class lost faith in the ability of the Tang ruling class to provide centralized rule over China, and at the same time, the rulers lost both the will and the ability to impose central rule.

The Emperor, Tai Zong, was forced to flee the capital, Chang An, in 755, and it was only recaptured eight years later with the help of forces of the Central Asian Turks. The Silk Route had been secured by military expansion in the first half of the Tang Dynasty, and the merchant class who had enriched themselves with trade with the West through the Silk Route now eclipsed the traditional ruling classes in power. They developed networks of merchants' associations throughout the country and the ability to influence affairs in their own regions as much as, if not more than, the ruling house.

The trade corridors in the latter part of the Tang Dynasty were not held open by the Chinese ruling house, but by the Soghdians and Uighur Turks. The Soghdians provided the trading know-how and managed the transportation, while the Turks handled the security. This arrangement served the merchant community well: maintaining a strong Chinese military presence was expensive for the taxpayer. On the other hand, allowing foreign border communities to develop a sufficient financial interest in China's economy to be prepared to protect it was much more cost-effective.

Thus trade flourished in the cities in China and the peasant population relied more on the local merchant classes for protection than on the central government. A tradition grew up in which people of all classes saw their security best assured by organizing themselves into local militia than in waiting for the Tang cavalry to come charging to the rescue.

One focus of peasant loyalty in the later period was the Buddhist monasteries. They had numerous temples and temple landholdings, thus managing a large amount of money which otherwise would have found its ways into the imperial coffers. This situation encouraged an imperial crackdown on Buddhism in 845 which led to a serious decline in Buddhism in China proper (although it continued to flourish among the nomadic tribes of the northern and western borderlands). Meanwhile, a bandit army led by Huang Zhao ravaged central China and destroyed Chang An.

Finally, the Tang central government could no longer be sustained and it fell in 906. The north-eastern part of China was taken over by a local leader who set up an eastern Liang Dynasty; and from 907 to 960, five dynasties appeared and disappeared in succession while in the west, the Tanguts (西夏), a tribe with origins in the Tibetan plateau, developed a power base.

The Nomadic Tribes

From the time when the Han Dynasty broke up in the third century, tribes of the steppes had managed successfully to impose themselves on the northern part of China. Aristocratic families in the area had included elements of the Xianbi (鲜卑) clan of the Tuoba (拓拔) and Tuque (突厥) who had also established aristocratic lineages in the area. At the beginning of the 10th century, the Mongolic Khitan (契丹) tribal group united ten of their tribes to become a dominant force in the northern part of China.

One of the leading groups of the Khitan was the Yelü (耶律) clan. While keeping to a mainly nomadic traditional lifestyle, the Khitan leading house of Yelü considered itself to share its lineage with the Han Chinese, and proclaimed as a matter of royal ideology that the Chinese and Khitans both descended from the Yellow Emperor and were therefore one and the same nation.

This was not surprising. Northern nomads from the Mongolian and Tungus groups had been in China since about 304 AD and had widely intermarried. Nomads had taken Chinese wives and Chinese nobles had taken nomad women into their households. To become integrated into the Confucian system of ritual ancestor worship, some nobles from the

nomad tribes had changed their original tribal names to single-syllable names based on old Chinese clan names. As early as the Han Dynasty, Hun princes were given the name of the Han ruling house, 'Liu'. The ninety-nine tribal names of the Tungus tribes who ruled Northern China between 386 and 558 were all converted into single-syllable Chinese surnames.¹

The Khitan were not totally nomadic. They grew millet as well as keeping horses, sheep and pigs. As they developed their control over the northern part of the Chinese borderlands, they operated a 'one-country-two-systems' policy. The sixteen prefectures to the south, which were peopled mainly by Chinese people and sinicized nomads, were ruled under a Chinese system, while the larger northern region was ruled by nomadic people who operated each under their own clan laws.

Thus the Khitan ruling house of Yelü had a civil service made up of Chinese Confucian officials recruited through the official examination system, while their military power derived from Khitan households. This military power was formidable because every male Khitan was a soldier. The system was simple: 'Everyone between the ages of fifteen and fifty was required to be entered on the military roster.'² They tended their flocks and hunted when at peace and formed a battalion in times of war.

Despite their reliance on Chinese officials, the Khitan continued to protect their own cultural heritage. They developed a script for their own language and set up a parallel examination system based on it. They were not averse to flogging publicly those officials who showed lack of respect for the Khitan culture and court rules — something that was anathema to traditional Chinese courtiers.

10A1

《遼史·蒲魯傳》

〔耶律〕蒲魯，〔耶律〕庶箴子。重熙中舉進士第，主文以國制，無契丹試進士之條。聞於上，以庶箴擅令子就科目，鞭之二百尋。命蒲魯為牌，印：「郎君應詔賦詩立。」成以進，帝嘉賞，顧左右曰：「文才如此，必不能武事。」蒲魯奏曰：「臣自蒙義方兼習騎射在流輩中，亦可周旋。」帝未之信，會從獵，三矢中三兔，帝奇之。

Yelü Bulu was the son of Yelü Shuzhen. In the reign period of Chongxi (1032–1055), he passed the official examination for the rank of *jinshi*,

1. 《魏書·官氏志》，魏書卷一百一十三。

2. 《遼史·衛兵志上》：「遼國兵制，凡民年十五以上，五十以下，隸兵籍。」

specializing in literature in the [Chinese] national curriculum. He never qualified in the Khitan curriculum for the *jinshi* grade. This came to the notice of the Emperor who accused Yelü Shuzhen of defiance in encouraging his son to take the [Chinese] national curriculum and subjected him to two hundred lashes. He ordered Yelü Bulu to make a notice with an inscription: 'This candidate is offering himself for examination in literature.' [Yelü Bulu] succeeded in passing [the Khitan curriculum] and the Emperor praised him. Turning to those about him, he said, 'This chap's a literary genius. But I bet he's useless at military skills!'

Yelü Bulu replied respectfully, 'Since I was young, I have pursued traditional virtues, but at the same time I learned to shoot on horseback with my brothers and I am a proficient all-rounder.'

The Emperor didn't believe a word of it and assembled his followers for a hunt. Yelü Bulu took three hares with three arrows and the Emperor considered him outstanding.

The Khitans relied heavily on mounted archery skills, but were also skilled in the use of swords and spears. Horses were one of their most potent weapons, as well as being the product for which they had been famous among the Tang Dynasty Chinese through their annual tributes. When they ran short of food on campaigns, they could survive on mares' milk or even small amounts of their horse's blood. According to a Khitan proverb, 'Our wealth is in our horses and our strength is in our warriors. Drawing a strong bow to kill game provides us with our daily needs.'³



A Khitan horseman from 《古今圖書集成》

3. 《遼史·食貨志上》：“契丹舊俗，其富以馬，其強以兵。挽強射生，以給日用。”

Like the ancient Chinese, the Khitans also held that there was a connection between firing an arrow and praying for rain. This was probably no more than a coincidence, albeit a very intriguing one.

1081

《遼史·國語解》116

“若旱，擇吉日行瑟瑟儀以祈雨。前期；置百柱天棚。及期，皇帝致奠于先帝禦容，乃射柳。皇帝再射，親王、宰執以次各一射。中柳者質誌柳者冠服，不中者以冠服質之。不勝者進飲於勝者，然後各歸其冠服。又翼日，植柳天棚之東南，巫以酒醴、黍稷荐植柳，祝之。皇帝、皇后祭東方畢，子弟射柳。皇族、國舅、群臣與禮者，賜物有差。既三日雨，則賜敵烈麻都馬四匹、衣四襲；否則以水沃之。”

Dynastic History of the Liao, Vol. 116

If there was a drought, they chose an auspicious day and performed the *sese* ritual to pray for rain. In advance of the date, they would put up a canopy with 100 posts. On the day, the Emperor attended in person to pay respects before the images of the first emperors, then he would 'shoot the willow'. The Emperor would shoot twice, and those installed in regional kingdoms and the ministers would each have one turn at shooting. The ones who hit would pledge their cap and gown to the scorer, and the ones who missed would also be recorded using their caps and gowns. The losers offered wine to the winners, and then each would get his cap and gown back. On another appropriate day they would plant a willow at the south-east of the canopy and bless it with a libation of wine, put crops and animal fodder before the willow and pray to it. After the Emperor and the Empress had prayed towards the east, other members of the royal family took their turn to 'shoot the willow'. Members of the royal family, the nobility, the ministers and others present at the ritual were given different gifts according to their ranks. If rain fell within the three days of the ritual, the Emperor presented the officials with four horses from the city of Diliema and four suits of clothing; otherwise he gave them a soaking with water.

'Shooting the Willow' was in fact a sport which provided entertainment, developed archery skills and was part of the *sese* ritual. The game is not described in detail in the history of the Liao, although it is described in the *History of the Jin* who adopted it (or had their own version).

10C1

《金史·禮志八》

插柳毬場為兩行，當射者以尊卑序，各以帕識其枝，去地約數寸，削其皮而白之。先以一人馳馬前導，後馳馬，以無羽橫鏃箭射之。既斷柳，又以手接而馳去者，為上。斷而不能接去者，次之。或斷其青處，及中而不能斷，與不能中者，為負。每射，必伐鼓以助其氣。

Two lines of willow branches were set in the ground of a polo field. The archers, according to their different ranks, chose their own branch and marked it with a piece of cloth; then they whittled away the bark of the twig a few inches above the ground so that the white wood showed through. Led by one galloping rider, the others followed at full gallop, shooting with an unfletched arrow with a horizontal blade for an arrowhead. An archer who could cut through the willow branch and catch the cut end at full gallop took top marks. Second came the one who could cut the willow twig but couldn't catch it. Those who could hit the whittled part but not cut it, or those who missed altogether, lost. When they shot, people beat drums to egg them on.

The concept behind this *Khitan* archery ritual is strikingly similar to the ancient Chinese rituals before the time of Confucius. But the nomad people also venerated the willow, which sprouts green shoots from an apparently lifeless twig in spring and symbolizes regeneration. A tree-planting ritual was also recorded among the Huns.⁴

'Shooting the willow' was not the only archery ritual of the *Khitan*. The arrow was also used to ward off evil spirits and keep them away from warriors in the battlefield, as well as a punishment for corrupt officials.⁵

10D1

《遼史·禮志三》

出師以死囚，還師以一諜者，植柱縛其上，于所向之方亂射之，矢集如猥，謂之射鬼箭。

When out in the field, they would take a condemned prisoner; or if not on campaign, they would take a spy, and bind them to a post. Then they would stand in front of him and shoot at will so that the arrows stuck in him like a hedgehog, and they called it 'shooting the devil's arrow'.

4. 《漢書·匈奴傳上》。

5. 馮繼欽、孟古托力、黃鳳崎：《契丹族文化史》。（哈爾濱：黑龍江人民出版社，1994），頁320。

The Liao Dynasty established by the Khitans lasted from 916–1125. In that year, they were defeated by another grouping of tribes from the eastern areas, the Ruzhen (女真). The Ruzhen took over the Khitan institutions and added their lands to the dynasty they had established in 1115, the Jin (金).

Although from a different ethnic background, the Ruzhen were in many respects close to the Khitan in habits and dress, although less acquainted with agriculture. They also differed in language, speaking a language closer to that of the Manchus who ruled China from 1644. Near the end of the Khitan dominion over northern China, the Wanyan (完顏) clan of the Ruzhen established their claim to sovereignty over northern China. The following account gives a glimpse of their archery skills. It concerns Wanyan Zongxiong who was selected as a special favourite by the first Jin ruler, who saw special qualities in him from birth:

IOEI

《金史·宗雄傳》

[完顏]雄九歲能射逸兔，年十一射中奔鹿。世祖坐之膝上，曰：“兒幼已然，異日出倫輩矣！”以銀酒器賜之賞。走馬射三獐，中其二，復挽弓，蹶躍而下。控弦如故，遂彀滿，步射獲之。宗雄方逐兔，撻懶亦從後射之，已發矢。撻懶大呼曰：“矢及矣！”宗雄反顧，以手接其矢，就射兔，中之。其輕健如此！

At the age of nine, Zongxiong could already shoot a fleeing hare and by eleven, he could shoot a deer in full flight. The Emperor set him on his knee and said, ‘He’s like this and he’s just a kid! What a credit he’ll be to his generation in the future!’ and he gave him a silver wine flask as a reward . . . One day, Zongxiong was in pursuit of three roe-deer on horseback. He had bagged two of them and was just drawing his bow again when his horse stumbled and he fell. But he kept his grip on the string and pulled to full draw without missing a beat and bagged the third roe-deer standing on the ground. Zongxiong went on in pursuit of a hare, but Talan, who was just following behind had taken a shot at it and just loosed his arrow. Talan yelled out, ‘The arrow’s going to hit you!’ Zongxiong looked over his shoulder and caught the arrow in his hand, then went on to shoot the hare and hit it. That is how light and strong he was!⁶

6. This event took place within a few years of the death of William Rufus of England in an accident while hunting deer in the New Forest in 1100.

The Jin also demanded a high level of military skills from their people. The imperial guard was selected from those five feet and five inches tall, who were skilled at cavalry archery.⁷ What is more, they were quick to learn, both adopting military use of gunpowder and taking command of naval divisions if the need arose. Their four strong points were: cavalry skills, hardiness and endurance, heavy armour and archery skills.⁸ They could make lightning raids into the south and defeat their enemies before they could react. Their armour included a strong headpiece with just holes for their eyes. When the Khitan tried to attack them with staffs or spears, many fell off their horses in the effort.⁹ Their upper armour was heavy, but they used a light-armoured tunic which went down to their knees and they had light armour on their horses as well.

Two similar contemporary eyewitness accounts by Fan Zhongxiong (范仲熊) record their approach to using archers in battle:

IOFI

《三朝北盟會編》卷九九范仲熊《北記》：

皆槍為前行，號曰硬軍，人馬皆全副甲，腰垂八稜棍棒一條或刀一口，槍長一丈二尺，刀如中國屠刀。此皆驍衛之兵也。弓矢在後，設而不發。弓力不過七斗，箭多者不滿百隻。自大金兵外，其他國兵皆不帶甲，弓矢或有或無，皆旋斫道傍木，執之為兵。

Their spearmen were all in the forward ranks and were known as 'the hard troops'. Both men and horses were fully armoured and at their waists they carried a single eight-pronged bludgeon or else a sword. Their spears were one *zhang* two feet (3.74 m) in length, and their swords were like Chinese butchers' knives. These were all hussars. Their bows and arrows were held at their backs, at the ready but not taken out of the bow-case. The power of their bows would not have been more than seven *dou* (斗),¹⁰ and their arrows would not have been more than 100 apiece at the most. Outside the main Jin troops came those of other nations, all without armour, some with bows and some without. They would cut staves from trees along the route and use them as weapons.

7. 《金史·兵志》：“取身長五尺五寸，善騎射者。”

8. 《宋史·吳璘傳》：“金人有四長，曰騎兵，曰堅忍，曰重甲，曰弓矢。”

9. 《會編·卷三〇》。

10. 47 kg (《漢語大詞典·附錄》，頁 12)。

《三朝北盟會編》卷三

其用兵，則戈為前行，人號曰硬軍，人馬皆全甲。刀楯自副，弓矢在後，設而不發，非五十步不射。弓力不過七斗，箭鏃至六、七寸，形如鑿，入輒不可出，人攜不滿百。

They arranged their army as follows: the halberdeers were all in the forward ranks and people called them 'the hard troops'. Both men and horses were fully armoured and at their waists they all carried a sword and bludgeon. They carried their bows at their backs, at the ready but not taken out of the bow-case, and they never shot at a range of more than fifty paces. The draw-weight of their bows was no more than seven *dou* and the heads of their arrows were six or seven inches in length and shaped like a chisel so that when it pierced it couldn't be removed easily. Each man carried under a hundred of them.

鑿子頭箭圖



These chisel-pointed arrows inflicted horrible wounds:

10H1

《揮塵後錄》卷九

〔趙立〕中箭鏃，入舌下，堅不可取，命醫以鐵箝破齒，鑿骨鉅去，移時乃出，流血盈襟。

[General Zhao Li] was hit by an arrow which penetrated [the jaw] under his tongue and stuck so firmly it wouldn't come out. They called a doctor to use iron pliers to break his teeth and to chisel the jawbone away and finally they wiggled it until it came out. [By that time] the doctor's sleeves were drenched in blood.

Unlike the Khitans, who were at pains to identify with the Han nationality and Confucian ideals, the Jin were highly suspicious of the Han Chinese and other nationalities. As you can see from the quotations from 10F1 and 10G1, non-Ruzhen troops were a second-class rabble who were driven ahead of the Jin cavalry and not provided with weapons. In the latter part of the 12th century, the Jin Court also decreed that a separate examination system should be established for Ruzhen candidates, based on the Confucian classics translated into the Ruzhen written language. Notwithstanding this, most of the successful examination candidates still came from the Chinese nationality.

Like other nomadic tribes, the Xixia (西夏) who controlled the west and north-west levied troops from each family. Only the regular troops were trained as archers, and those who could not qualify had to fight with lesser weapons and were regarded as the weaklings. So there was a lot of competition to enter the regular troops. In any case, the Xixia performed poorly on the ground with short weapons, and always sought to maximize use of their cavalry. They could dominate the Chinese quite adequately in this fashion; and they had little need to fight with the Khitan and Ruzhen. But the Mongol hordes of Genghis Khan overcame them easily.¹¹

There is little recorded about their prowess as archers. They did, however, share with other nomadic tribes some superstitious beliefs about the power of the arrow to overcome misfortune and evil:

11. 林旅芝：《西夏史》，香港：林旅芝出版，1975。

《宋史·西夏傳》

〔西夏〕不恥奔遁……敗三日，輒復至其處。捉人、馬射之，號曰：“殺鬼招魂。”或縛草人埋於地，眾射而還。

[The Xixia] were not ashamed to take tail . . . they could be beaten three days on the run, and then the next day, back they would come. They shot any men or horses they captured, yelling out, 'Kill the devil and call up the spirits!' Alternatively, they would make a straw effigy of a man and bury it in the ground, then they would all shoot at it and then return.

The Xixia, who were ethnically connected to present-day Tibetans, had good diplomatic relations with the Khitans and then the Ruzhen. They had a reputation for being very hardy and well-armed. However, they were not organizationally so well-established as other nomad groups. They relied almost entirely on rapid raids, and were always ready to retreat and come back to fight another day. Their generals preferred to remain inaccessible during battle, to avoid being caught and taken prisoner.

The Chinese

It is not conventional to start a study of Song Dynasty China from outside the Great Wall looking in, but it helps place the nomadic tribes of the north and north-west clearly on the map. This is important because traditionally, Chinese historians have treated these cultures as marginal and semi-cultured, notwithstanding the fact that they dominated the Chinese for the best part of 500 years from 906–1368.

As it turned out, the Chinese ruling house which established the Song Dynasty in 907 never got into the position of being able to restore China to the geographical area it had covered in the Han and Tang Dynasties. Indeed, it existed at all only by virtue of submitting as a tributary state of the dominant border tribes. Chinese historians traditionally try to explore and explain the 'weakness' of the Song Dynasty in the face of the 'strength' of the border tribes whom they regarded as culturally inferior.

The border tribes had gained firm control of northern China during the fragmentation of the Tang empire, at first with the Khitans in control of the north and north-east and the Xixia in the west. The southern part of China had degenerated into warlordism, with 'ten kingdoms' representing the short-lived power-grabs by the various warlords.

However, a paradox repeated itself: just as in the Warring States period, far from atrophying, the states of the south enjoyed considerable prosperity and cultural development. The commercial cities developed into important regional cultural centres, and one of the most prosperous was Kaifeng (開豐) at the mouth of the Grand Canal.

One of the military leaders in one of these last warlord states was Zhao Kuangyin (趙匡胤) who managed to take power after serving as commander of the imperial bodyguard of his warlord master. Almost as if it were a necessary qualification for a pretender to the imperial throne, the official annals of the Song Dynasty recorded that even at a tender age he was an outstanding archer.

10J1

《宋史·太祖本記》

太祖十歲好弓矢，甫成童即善射。一日遼使坐府中，顧見太祖手持弓矢。使射群鳥，連三發皆中。遼使矍然，曰：“奇男子也！”

At the age of ten, Tai Zu¹² was keen on bows and arrows and when just a teenager he was already an excellent shot. One day, the Liao ambassador was sitting in Kuangyin's home and, looking round, he saw Kuangyin holding a bow and arrows. He got him to shoot at a flock of birds and three shots in succession hit. The Liao ambassador was startled and said, "This is no ordinary lad!"

10J2

太祖賞宴紇石烈·布活渦罕家，散步門外，南望高阜，使眾射之，皆不能至。太祖一發過之，度所至，逾三百二十步。宗室護都訶最善射遠，其不及者猶百步也。天德三年立碑以識焉。

Zhao Kuangyin was entertaining Heshilie Buhuo Khan and his kinsmen, and they were walking outside the city gates when they noticed a high mound to the south. He got everyone to shoot at it but none could reach it. Kuangyin passed over it with his first shot and when they measured where his arrow had fallen, he had passed the other shots by 320 paces. Among the [Khitan] royal household, Manduhe was the best at flight-shooting, but he fell short by some 100 paces. In the year 946, they put up a stone tablet to commemorate the event.¹³

12. This was the name given to Zhao Kuangyin after he claimed the throne.

13. The tradition of putting up stone tablets to mark feats of flight-shooting is a characteristic of the Mongolian and Central Asian cultures, including both Persians and Turks.

On gaining power over the major city of China, Kaifeng in 960, Zhao Kuangyin declared himself ruler of a new dynasty (as ten others had done in quick succession before him) and gave himself the title Tai Zu (太祖) of the Song Dynasty. For decades military power had been held in the hands of local warlords. Tai Zu set about bringing them under his central control and buying the allegiance of the generals so that he was in full command of his army. This also involved demilitarizing the regions by putting into place a system of civil government.

The army which developed in the Song Dynasty still had a strong complement of archers: in the royal bodyguard, twenty per cent were bowmen, sixty per cent were crossbowmen and the remaining twenty per cent were equipped with spears and shields.¹⁴ A strong reverence of archery persisted, as the following quote dating from the 1200s of Hua Yue (華岳) testified:

10K1

宋·華岳《翠微北征錄》卷七《弓制》

軍器三十有六，而弓為稱首。武藝一十有八，而射為第一。

There are thirty-six types of military weapons and the foremost among them is said to be the bow; there are eighteen martial skills and the leading one is archery.

Song dynasty military trainers, it seems, only had the *Archery Manual* of Wang Ju to fall back on. The author Xu Dong (許洞), in the section on teaching archery skills in his major military work *The General's Commission* (虎令經) first published in 1005, simply quoted the first section of Wang Ju's manual (Chapter 9: 9B1–9B12) verbatim.

Writing between 1040 and 1043, one of the authors of the *Essentials of Military Theory* (武經總要), Zeng Gongliang (曾公亮) had some reservations on Wang Ju's method:

10L1

曾公亮《武經總要前集·教弓法》

昔唐·王琚《教射二篇》，多言射之容止：非陣所急。今掇其切，可施於兵家者。

14. 《宋史·兵志》：“諸路禁軍近法，以十分為率：二分習弓，六分習弩，余二分習槍、牌。”

Previously, Wang Ju of the Tang Dynasty wrote a manual for teaching archery in two volumes. It went on a lot about the aesthetic aspects of archery; *c'est magnifique mais ce n'est pas la guerre*. Now I shall extract the most important parts which can be applied by military people . . .

Zeng Gongliang regarded the most practical part of Wang Ju's manual for military purposes as being the information I have translated at Chapter 9: 9B8–9B12, and quoted it almost verbatim. Zeng Gongliang's compendium was compiled in 40 volumes at the behest of Emperor Ren Zong (仁宗) and should thus have been comprehensive; it appears from looking at it that no effort had been made to develop any new theory in training on archery.¹⁵

There is evidence of some lack of agreement about how the main divisions of the Song Army should be trained. There were those who favoured training strength and courage through pulling a heavy bow, and others who were less concerned with draw-weight and more concerned with accuracy (射觀). In discussions of training practice, there is record of some instructors abolishing the use of heavy bows and simply placing a target butt with concentric circles at twenty paces from the archers and ordering them to shoot.¹⁶ Those who achieved high scores received a cash reward. Cavalry archers found incapable of shooting in full armour had their horses taken away and forfeited to the camp. Another technique is mentioned in which archers were taught to move their feet in co-ordination with their draw so that they could advance or retreat and shoot at the same time.¹⁷

Song military strategists also valued the crossbow. In fact, they regarded it as indispensable, even long after they had started using gunpowder. Heavy crossbows were used like mortars to lob explosive shells.¹⁸

One of the most popular crossbow designs for infantry use was the 'Mighty Shoulder Crossbow' (神臂弩) developed in the year 1068.

15. It is necessary, however, to enter a reservation that the Mongols of the Yuan Dynasty and Manchus of the Qing Dynasty carried out purges of written materials which could have posed an ideological or strategic threat to their rule. So there is a chance that such innovative works did exist but did not survive.

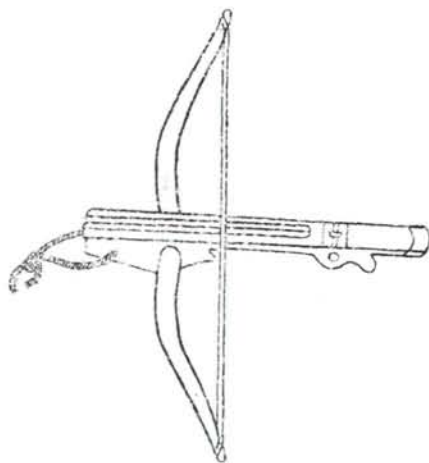
16. Archery training in this fashion was recorded in the 16th century Turkey by Ogier Ghiselin de Busbecq.

17. 《宋史·兵志九：訓練之制》。

18. I have seen Western comments that the Chinese invented gunpowder but did not use it for warfare, only for fireworks. This is untrue. The earliest depiction of use of gunpowder showed it in military use.

熙寧元年 (1068) 始命入內副都知張若水、西上閣門使李評，料簡弓弩而曾修之。若水進所造神臂弩，實李宏所獻，蓋弩類也。以槩為身，檀為弰，鐵為蹬子，槍頭銅為馬面、牙登，麻繩扎絲為弦。弓之身三尺有二寸，弦長二尺有五寸，箭木羽長數寸。射三百四十餘步，入榆木半筈。

In 1068, the Deputy Capital Commander Zhang Ruoshui and Commissioner of the Western Upper military district, Li Ping, were first summoned to consider and improve upon the simple-prod crossbow. Zhang Ruoshui came up with a new design for the crossbow and it was recommended by Li Hong and was actually a [new] variety of crossbow. The stock was made of mulberry and the prods of sandalwood. It had a stirrup made of iron and the arrow channel and latch were made of the bronze used to make spearheads. The string was hemp wound with silk. The stock was three [Chinese] feet and two inches (1 m) in length and the length of the string was two feet five inches (78 cm). The arrows were wood with fletching and a few inches long. It could penetrate a log of elm up to half an arrow-length fired from a distance of over 340 paces.



'Mighty Shoulder Crossbow' 《古今圖書集成》：神臂弩圖

But like their writings on the bow and arrow that I have just mentioned, the Song military writers had few new insights to offer on shooting technique. Both Xu Dong and Zeng Gongliang who contributed to major military writings in the first half of the 1000s were unable to come up with more than some (rather inaccurate) quotations from the Tang Dynasty *Universal Encyclopaedia* (通典) by Du You (杜佑) (735–812)

which had been compiled between the years 766 and 801. To give an example, Zeng Gongliang says:

1001

曾公亮《武經總要前集·教弩法》

然張遲，難以應卒。臨敵不過三發、四發而短兵已接。故或者以為“戰不便於弩。”然則非弩不便於戰：為將者不善於用弩也。

Yet [the crossbow] is slow to load and it is not easy to [use it to] deal with [advancing] troops. When the enemy are upon you, you have three or four shots at best before engaging them in hand-to-hand combat. So some might be forgiven for thinking that battle doesn't favour the use of crossbows. But in fact it's not that crossbows are no use in battle: it's a problem of ignorance among those in command of how to use the crossbow effectively.

The original instructions on crossbow training, which had been collected (probably not created) by Du You in the Tang Dynasty, are as follows:

1001

唐·杜佑：《通典·弩》

凡弩：古有黃連、百竹、八擔、雙弓之號。今有絞車弩：中七百步攻城拔壘用之。擘張弩：中三百步，步戰用之。馬弩中二百步，馬戰用之。

In terms of crossbows, in earlier times there was the 'Huang Wood Repeater', the 'Hundred Bamboo', the 'Eight-prod' and the 'Double Bow'. Nowadays we use the 'Carriage Mobile'. It has a range of 700 paces and is used for attacking walls and breaching fortifications. Then there is the 'Split Loader' with a range of three hundred paces which is used in infantry warfare. The 'Cavalry Crossbow' has a range of 200 paces and is used in cavalry warfare.

1002

弩張遲，不過一、二發：所以戰陣不便於弩。非弩不利於戰，而將不明於弩也。不可離於短兵，當別為隊攢。

But the loading cycle of the crossbow is slow: you can't get in more than a couple of shots, which makes it unsuitable for normal use in the infantry ranks. But that is not to say that the crossbow is not a practical weapon of war; only that generals don't understand properly how to use

it. Crossbows cannot be separated from close-range weapons, but they have to be organized in separate ranks of their own.

1003

箭注射，則前無立兵，對無橫陳。復以陳中張，陳外射。番次輪迴，張而復出，射而復入。則弩無絕聲，敵無薄我矣。

The arrows must be shot with saturation fire then no enemy can stand before you and no troops can keep their ranks in formation facing you. Over and again you use the inner rank for reloading and shoot from the outside of the rank; in rotation, load and then out, shoot and then back in again. In that way the roar of the crossbows goes on without pause and the enemy can't cover the distance to get at us!



'In rotation: load and then out, shoot and then back in again.'
(Composite of three Ming illustrations from 《古今圖書集成》)

1004

夫置弩，必處其高。爭山奪水，守隘塞口，破驍陷騎，非弩不克。

For the positioning of your crossbows, you need to choose an overlooking position. Whether you are fighting for a hill or a river,

defending narrow defiles and passes, breaking an oncoming cavalry charge or entrapping horsemen, you'll never manage without crossbows.

1005

教法，命曰：“張弩丁字立，當弩八字立，高揎手，屈衫襟，左手承撞，右手迎上，當心開張。張有闊狹，左脰右膊還復。當心安箭，高舉肘。敵遠：抬弩頭，敵近：平身放，敵在左右：迴身放，敵在高上：挈腳放。放箭訖喝：‘殺’！卻挈拗喝‘尾’！覆弩還著地。”

When you carry out your training, you command as follows,

- Draw with your feet set at right-angles!
- Load with your feet in an open stance!
- Bare your arms!
- Roll up your sleeves!
- Take up your left hand and bring up the right hand then pull on the crossbow string level with the serving.
- When drawing, the prod-tips go from spread-out to drawn-in and as that happens, your left thigh and right upper arm are drawn back.
- Place your quarrel adjacent to the serving and raise your elbow.
- If the enemy is far off, raise the crossbow to head level; if they are near, fire level with the body; if they are to the left and right, swivel your body to fire; if they are above you, raise your foot [onto something] to shoot.
- As you release, shout 'Kill!'
- As you step back and reset the trigger lever, shout 'Done!' then return the crossbow to rest the end on the ground.

So this technique of crossbow tactics, familiar now from the 'Thin Red Line' of Balaclava¹⁹ has been in use at least from the Tang Dynasty. In terms of individual crossbow technique, the training regime demanded that the crossbowman would suffer a demotion if they dropped an arrow or if the string missed the nock of the quarrel and the crossbow misfired.²⁰

All in all, the Song Dynasty seems to have contributed little to tactics or practical techniques in archery even though weapons technology in general certainly made enormous advances. Why should that have been? One reason may be that they had a somewhat defeatist view when it came to tackling the border nations head-on in archery. The following passage by Hua Yue gives an example of late Song Dynasty wisdom on the subject.

19. This refers to the 93rd Sutherland Highlanders at the Battle of Balaclava on 25 October 1854.

20. 《宋史·兵制十》。

10P1

《翠微先生北征錄卷第五：破敵長技一：陷騎》

臣聞：吳人善舟，晉人善騎；吳人非不善於騎也。番長於馬，漢長於弩；諸番非不善於弩也。吳人生於圯澤之鄉，故舟楫之事，不待於教習而自能彼。諸番生於馳逐之地，故騎射之巧不待於指使而自精是。豈得之見聞，求之閱習如漢、晉之士邪？蓋人力之所充，不如天性之自巧。出於勉強學習之所致者，其與夫與生俱生者過人遠矣。

I have heard it said that the people of Wu²¹ were expert boatmen and the people of Jin were expert horsemen: no one would claim that the people of Wu were expert horsemen. The border tribes are naturally outstanding horsemen and the Han people are naturally outstanding crossbowmen: nobody would credit the border tribes with being expert crossbowmen. The people of Wu grew up among the fenland villages with oars in their hands. They didn't need any lessons on how to row a boat. The border tribes grow up where galloping and the chase is the normal way of life and mounted archery comes to them naturally without anyone having to tell them what to do. What need do they have for training like the people of Han and Jin when they can absorb it from experience? A man exerting his strength to the full hardly compares with an innate skill. Even the person who undertakes most arduous study can come nowhere near the ability of one who is born into an instinctive skill.

10P2

況今日之事地，不可同技非其敵。前代名將固嘗討論番漢短長，以求致其所能矣。彼以騎制騎，猶不足以取勝。

What is more, given the state of affairs today, you can't beat the enemy at their own game. In the old days, the famous generals were always discussing the relative merits of the skills of the Han and border tribes,²² in an effort to make the best of their talents. But their policy of fighting cavalry with cavalry was never sufficient to hand them real victory.

If this is a reflection of the general mood of Song military thinking, then it is not surprising that no one was prepared to devote efforts to developing new techniques and tactics.

21. The writer is referring back to the Warring States period.

22. This is a reference to Chao Cuo (晁錯) translated at Chapter 8: 8H1 ff.

The border nations were not rough, uncultured herdsmen: they had been rubbing shoulders with the Chinese for centuries, and had learned to value the qualities of the Chinese people and their culture while maintaining their own self-esteem. If anything, they tended to despise the Chinese for their consistent policy of treating them as inferiors and exploiting them. The Han Chinese of the north of the country, moreover, had lost much of their 'racial purity' (if it ever existed) through many generations of intermarriage — especially in the centuries between the Han and Tang Dynasties. Thus in northern China, cultural and even family ties would have been looking as much northward as inward towards central China.

And what did central imperial rule have to offer the northern Chinese since the middle of the Tang Dynasty? Certainly not strong leadership, military protection or relief from taxation. As we shall see in a moment, the people of the Song Dynasty had learned to support themselves through mutual-support groups rather than reliance on the imperial ruling house.

So when Zhao Kuanyin came to power, there was little merit in adopting once again the conventional dynastic policy of expansion and control. The people that the Han Chinese leaders of the Song might have 'liberated' from foreign control probably had little wish to be 'liberated'. Zhao himself knew the leading political figures of the northern ruling nations intimately and had been fraternizing with them before assuming power (see paragraph 10J2). He was, moreover, a tolerant man who was not averse to dissent and pluralism, and he commended a similar policy to his successors.

Song China was ruled by pacifists who saw a role for a policy of economic engagement and appeasement where their predecessors had consistently demanded domination and subjugation. It is inadequate to condemn them as 'weak': the ruling house of the Song Dynasty and the majority of their court and commercial leaders had their priorities elsewhere.

Archery in the Examination System²³

The Song Dynasty civil and military administrations required talented leaders and so the examination system developed in the Tang Dynasty was

23. This section draws on both 林伯原：《中國古代體育史》（臺北：五洲出版社，1996），頁 301 and 謝青、湯德用：《中國考試制度史》（合肥：黃山書社），頁 134–135。Some portions of these two works relating to the Song military examinations are identical in places, and I cannot be sure which work is the original.

built upon and developed. The basic principle of military examinations as envisaged by the Emperor Ren Zong (仁宗) in 1030 was 'to set strategy as the pass/fail criterion and then use archery and horsemanship to set the grading.'²⁴ After the military examinations had been held in abeyance for a number of years, they were revived on the original lines in 1064, but with grading on achievement in the strategy examination added.

Provincial examinations took place in which candidates were tested on military skills including infantry archery, mounted archery, use of the foot-loaded crossbow, and knowledge and use of other weapons. Archery on foot and on horseback were the main subjects.

The following quotations illustrate how the examinations were run and scores were awarded.

10Q1

《文獻通考·選舉七》卷三十四

弓：步射一石一斗，馬射八斗力，各滿不破體，及使馬精熟，策略、武藝俱優者等。弓步射一石一斗力，馬射八斗力，各滿但一事破體，及使馬生疏，策優藝平者為次優。弓步射一石，馬射七斗力，各滿但一事破體，及使馬生疏，策、藝俱平者為未等。……凡頭偃為破體。

In archery, infantry shooting required a draw-weight of one stone and one *dou*²⁵ and for mounted shooting, eight *dou*.²⁶ In either case, they had to come to full draw without any deterioration in their stance, their horsemanship had to be of a high standard and natural and they had to have the highest scores in strategy and tactics to come out top. If, when tested in the infantry shooting at a draw-weight of one stone and one *dou* and for mounted shooting at eight *dou*, they could reach full draw but their stance became faulty or their horsemanship fell below par, and they had a high standard in strategy but were just average on tactics, they took second place. Those who could shoot on foot with a draw-weight of only one stone²⁷ and on horseback at just seven *dou*²⁸ and who could come to full draw but with faults in their stance, and whose horsemanship fell short, and whose strategy and tactics were just so-so, all fell into the bottom rank . . . If they let their heads lean back, that was 'a fault in their stance'.²⁹

24. 《宋史·選舉三》：“以策為去留，以弓馬為高下。”

25. One stone and one *dou* is equal to 73 kg (《漢語大詞典·附錄》，頁 12)。

26. Eight *dou* is equal to 54 kg (*ibidem*).

27. One stone is equal to 67 kg.

28. Seven *dou* is equal to 47 kg.

29. Also: 《宋史·兵志十》：“開弓偃身不應法：黜之。”

《宋史·選舉三》

馬射：三上垛。九斗為五分，八斗為四分，七斗為三分。九斗、八斗、七斗再上垛，及一上垛，視一為差，理為分數。馬射一中帖當兩上垛，一中的當兩中帖。

For mounted archery, they had three chances to hit the target mound. A draw-weight of nine *dou* was worth five points, eight *dou* was worth four points and seven *dou* three points. The candidates at nine, eight and seven *dou* took their turns at the target mound, and as they performed their rounds, each was examined one against the other, and they were graded accordingly. For mounted archery, one hit on the target sheet was worth two arrows reaching the mound, and one hit on the bull's-eye was worth two hits on the target sheet.

As you can see from these rules and scoring schemes, a powerful draw was of the essence. Although the policy may not have been consistent throughout the Song Dynasty (there were a number of reforms to the examination system during the period), a trend emerged of testing for physical strength as much as — if not more than — accuracy. But as 10Q1 demonstrates, a system of 'accuracy indices' allowed the markings to be scaled upwards dramatically for accuracy. A hit on the target sheet at a draw-weight of seven *dou* gave the candidate six points while a hit on the target mound with a draw-weight of nine *dou* gave five. A real crack-shot with a soft bow might outscore the lot.

The Ruzhen Jin Dynasty also instituted its own examination system in 1201. They were held at the municipalities and in the provinces, as were the Chinese examinations, and also tested a combination of practical and theoretical skills. The practical tests focused on infantry archery, mounted archery and the use of the pike.

All candidates for the Jinshi (進士) degree had to take an archery test ten days before the written exam. Men aged 40 years and below were eligible to be tested. A target mound was set up sixty paces away and fifteen paces from it two poles were set up 20 paces apart, linked with a cord. Neither the draw-weight nor ability to hit the target was taken into account: only the skill and ease with which the candidate drew the bow and his technique. To score, the archer had to release the arrow with sufficient energy to hit the target mound after passing under the cord, which was two *zhang* (6.2 m) above the ground. Two successful shots out of ten were required to pass.³⁰

30. 《金史·選舉一》。

The infantry archery test required firing a one stone (67 kg) bow with a seven *qian* (錢) (28 g) arrow at a target sheet set up at a range of 150 paces. At municipality level, a hit with one shot in ten would result in a pass. Two hits were required for a pass at provincial level, and three at the national level. There was also a long-range shooting test where candidates had to hit a target mound set at 210 or 250 paces with one shot out of three. For mounted archery, a course of 150 paces was set out with two targets in the shape of a crouching deer at intervals of 50 paces. Each was five by eight Chinese inches (15.5 × 25 cm). The required bow-weight was seven *dou* with two large arrows with chisel heads. In the municipalities, four rounds were allowed, in the provinces three and at the national level, two, with two shots having to hit.³¹

As you can see, in comparison with the Chinese examination system, the Ruzhen Jin examination was primarily looking for accuracy, technique and outstanding horsemanship.

Philosophy and Ideology

The Chinese Song Dynasty witnessed a strong reversion to Confucian philosophy and the strength of Buddhism among the Chinese of the southern part of the country never regained its position after the attack on Buddhism at the end of the Tang Dynasty. (Nevertheless, the Khitan, Ruzhen and Xixia nations were all devout Buddhists.)

The scholar-statesman Zhu Xi (朱熹) built greatly on the basic Confucian doctrines handed down from the Han Dynasty. Although his teachings fell into disrepute for a time, they soon became re-established as the orthodox form required for official examination purposes. Under the influence of this revitalization, the Confucian rituals were restated, a ritual archery ground was inaugurated in around 1111, and detailed instructions were set down for the 'Hospitality Archery Ritual', broadly based on the original *Book of Rites*.³² Zhu Xi brought into Confucian practice concepts of meditation and the manipulation of breathing which originated with Daoism and Buddhism. The simplistic Han Dynasty analysis of the relationship between Heaven and mankind through the play of *qi* (氣) was superseded with a more complex theory in which nature has an underlying pattern (理) which finds form and motion through *qi*.

31. 林伯原：《中國古代體育史》（臺北：五洲出版社，1996），頁 305。

32. 《宋史·禮志》。

These developments found their way into the theory of archery, although we see them fully expressed in relation to archery only in works dating from the Ming Dynasty. Nevertheless, you can see a strong link between some of the mental approaches to archery described in later dynasties and the principle enunciated by Zhu Xi of 'Preserving the underlying pattern set by heaven while eradicating the intervention of human emotion.' ('存天理，滅人慾。') This principle finds its most extreme expression in the Japanese forms of *kyudo* (弓道) based in Zen Buddhism.

The Confucian ethics enunciated in the Song Dynasty strongly opposed participation of women in sporting activities. Zhu Xi himself, during his periods in office in Tong'an and Zhangzhou, issued a proclamation preventing women from travelling freely outside the home and requiring them to appear veiled in public.³³ This puritanical attitude effectively put an end to the wide participation of women in active sports in China — a trend only reversed in the twentieth century.

Another Confucian statesman, historian and poet was Ouyang Xiu (歐陽修) (1007–1072). Among his prolific output of essays, he jotted down the rules of an archery game which seems to have been based on a system of entropy. The players who scored best had to down a cup of wine. Through advancing intoxication, all the players descended into an equal state of blissful incompetence. The final rules were decided by those still left standing at the end. Readers are advised not to try this game on their own at home.



33. 《同安縣志》。

10S1

九射之格其物九。為一大侯，而寓以八侯。熊當中，虎居上，鹿居下，雕、雉、猿居右，鷹、兔、魚居左，而物各有籌。

'Nine Division Target' has nine target-circles. Make one larger target-circle surrounded by eight [smaller] target-circles. Place a picture of a bear in the centre, a tiger at the top, a deer at the bottom, a snipe, pheasant and ape in the right-hand positions and an eagle, rabbit and fish in the left-hand positions, and make counters corresponding to each animal.

10S2

射中其物則視籌所在而飲之。射者，所以為群居之樂也。而古之君子，以爭九射之格，以為酒。

Whoever hits a particular target-circle takes a drink if he is holding the corresponding token. Archery is a communal pastime. In the old days, gentlemen used to compete at 'Nine Division Target' as a drinking game.

10S3

禍起於爭。爭而為歡，不若不爭而樂也。故無勝負，無賞罰。中者不為功，則無好勝之矜。不中者無所罰，則無不能之誚。探籌而飲，飲非觥也；無所恥。故射而自中者有不得免飲，而屢及者不得辭所以息爭也。終日為樂，而不恥不爭，君子之樂也。

Rivalry leads to trouble. Competing for fun is different from participating in a non-competitive entertainment; so there should be no winners or losers and no prizes or demerits. He who scores a hit gains nothing by it, and will therefore not fall victim to arrogance due to being bent upon winning. He who misses loses nothing by it, and will not be the butt of caustic remarks about his lack of skill. If you pick a token and have to drink, at least what you drink is not an overflowing flagon: so you will not lose face. So you shoot, and the one who scores a hit is not allowed to get away without drinking; and anyone who keeps on scoring hits is not allowed to get away with bowing out of the competition. Any form of entertainment which can carry on all day without loss of face or rivalry is truly a gentlemanly entertainment.

10S4

探籌之法。一物必為三籌。蓋射賓之數多少，為之籌以備也。凡今賓主之

數九人，則人探其一。八人則置其熊籌；不及八人而又少，則人探其一而置其餘籌可也。益之以籌而人探其一：或二皆可也。

Scoring method: Three tokens are required for each target-circle. Make sure you have tokens prepared according to the number of guest competitors shooting. If it so happens that the number of guests and hosts is exactly nine, then each one picks one of the tokens. If there are eight, then leave aside the bear token; and if there are even less than eight, you can have each person pick one of the tokens and put aside the rest. Or you can add in the other tokens and each person picks one: either method is allowed.

1055

惟主人臨時之約，然皆置其熊籌。中則在席皆飲。若一物而再中，則視執籌者飲量多少而飲器大小，亦惟主人之命。若兩籌而一物者，亦然。

From time to time, the host may give an instruction, and then every contestant puts aside his bear token. Thereafter, if anyone hits the bear, then everyone present has to drink. If anyone hits one of the target-circles a second time, then depending on the ability of the one who draws the counter to hold his drink, and the size of the wine-cup, the host again decides on what should happen. If someone has drawn two tokens for the same target-circle, the same rule applies.

1056

凡射者一周，既飲醕，則斂籌而復探之；籌新而屢變。

Every time the participants shoot a full round, they have to drain the cups, then they hand in their tokens and draw again. The tokens are new and different from the last round.

1057

矢中而無情；或適當之，或幸而免。此所以歡為樂而不厭也。

If the arrow hits, then no emotions are aroused. Either it is your turn and you are caught out, or you may just be lucky and avoid [having to drink]. This way you get entertainment which is all fun and no upset.³⁴

34. At least, not until the morning after.

Rural Militia

A feature of the late Tang period and the Song Dynasty was the formation, in response to the failure of central imperial government, of local militias and self-defence groups. The successors of some of the mutual-assistance groups which emerged at that time can still be found operating in Hong Kong today.³⁵

The Song military system recognized two formal formations: the Imperial Guard (禁軍) and the Provincial Army (廂軍). But in addition, the *Song Dynastic History* of the Song recognized a third, informal category: the local militia (鄉兵).

Two elements in the local militia were focused on archery: the Bowmen (弓箭手) and the Companies of Archers (弓箭社). Bowmen (弓箭手) had been raised in the Shaanxi area from around 951. Recruits were provided with the produce of a vacant field to support them and provide for armour and a horse. They were called to the front line in emergencies and fought alongside the Provincial armies.

They were divided onto eight ranks and their pay was related to their rank. They had to undergo tests for the accuracy of their shooting and cavalry warfare in open ground (射親、野戰). They used bows with a standard draw-weight of one stone one *dou* (83 kg) or nine *dou* (68 kg) for horseback shooting.³⁶

The Companies of Archers, unlike the bowmen, were a true mutual-defence force set up and supplied by the local communities themselves. The *Song Dynastic History* has much to say about them, and they were held in high esteem.

1011

《宋史·兵志四》

河北州縣近山谷處，民間各有弓箭社及獵射人，習慣便利，與夷人無異。

In the prefectures and counties of Hebei near the hills and valleys, there are 'Companies of Archers' and 'Huntsmen' among each of the communities. Their habits were simple: no different from the Yi tribe [of old].

They started in the border areas of Hebei, where people were accustomed to hunting on horseback. Those who were willing to get

35. For example, the West New Territories (忠義堂).

36. 《宋史·兵志四·鄉兵一：河東陝西弓箭手》。

training in archery formed their own companies. They held an annual recruitment test in the spring and recruited on the basis of speed and strength.

One of the great literary characters of the Song Dynasty was Su Shi (蘇軾) (1037–1101), also known by his pseudonym, Su Dongbo (蘇東坡). From his own lifetime to the present, he has been renowned as a statesman, poet, artist, calligrapher and political philosopher. In 1093, he wrote a memorial seeking political support for maintaining the Companies of Archers who, he felt, were doing sterling work defending China at no cost to the imperial coffers — unlike the state-sponsored Bowmen, whom he considered second-rate. An extract from his memorial reads:

10U1

蘇軾《乞增修弓箭社條約狀》³⁷

今河朔西路被邊州軍，自澶淵講和以來，百姓自相團結為弓箭社。不論家業高下，戶出一人，又自相推擇家資武藝眾所服者為社頭、副社、錄事，謂之頭目。帶弓而鋤，佩劍而樵，出入山坡，飲食長技與敵國同。

Since the peace negotiations at Chanyuan, in the eastern sector of the Border Divisions at the region north of the river, the communities have of their own accord been uniting into Companies of Archers. Regardless of family or professional status each household provides one man, and they themselves select a head, deputy head and secretary from among those households who are recognized on the basis either of wealth or military skill. They call these leaders 'the head and eyes'. They carry a bow along with their hoes, a sword with their bundles of firewood. They pass in and out of the foothills and in terms of their diet and their native skills they are like their enemies.

10U2

私立賞罰，嚴於官府。分番巡邏，鋪屋相望。若透漏北賊及本土，強盜不獲，其當悉人皆有重罰。遇其警急，擊鼓，傾刻可致千人。器、甲、鞍、馬，常若寇至。蓋親戚墳墓所在，人自為戰，敵甚畏之。……弓箭社實為邊防要用其勢，不可廢。……

They devise their own private system of rewards and punishments, even stricter than the government ones. They divide into watches and go on patrols, and their homes and enterprises operate a neighbourhood

37. 《宋史·兵志四·鄉兵》。

watch scheme. If any of the northern brigands sneaks through into their territory or a powerful robber-band is not apprehended, all those who should have known about it are severely punished. In case of emergencies, they beat drums and they can put a thousand men at the scene in no time. In weapons, armour, saddlery and horses, they are the equal of the enemy. Their men do battle among their own loved ones and the graves of their ancestors and the enemy fear them greatly. The Companies of Archers are really a vital resource in border defence: they must not be allowed to degenerate.

IOU3

……弓箭手官給良田以備甲、馬。今河朔沿邊弓箭社，皆是人戶祖、業田產：官無絲毫之捐。

As for the Bowmen, the government gives them good fields to supply them with armour and horses. But now the Companies of Archers in the He-Shuo border region all [live off] the produce of their ancestral or agricultural fields: the government doesn't have to pay a cent for them.

From the information available in the official histories of the Song Dynasty, Lin Boyuan has outlined the operation and training of the Companies of Archers as follows, but without specifically identifying his sources:³⁸

- Each Company selected a large temple for its base, as a place for discussing and practising strategy, and selected a piece of open common land for practising archery.
- Each Company selected a top-class archer to head it, and people skilled in military arts as deputies, as well as a proficient scribe as secretary. Each member had to provide himself with a bow, thirty arrows and a sword. Those with outstanding drawing strength from a poor family background who could not afford this equipment could be supplied with it by a wealthier member of the same Company.
- Each Company kept a library of military classics and arranged regular lectures. Archery practice was held in March, June and September each year. There were regular archery skills tests.
- Methods of archery included:
 - Close range shooting: A three-foot post was placed at a range of forty paces, and they had to shoot until they could hit it with every shot.

38. 林伯原：《中國古代體育史》（臺北：五洲出版社，1996），頁293。

- Shooting in a circle: three straw targets dyed in different colours with a covering of the faces of the enemy. An instructor pointed with a red flag at each in turn and the members had to hit it.

In spite of the intellectual, artistic and technological energy of the Song Chinese, the whole period known as the Song Dynasty (960–1127) was virtually all spent in retreat from the powerful nations of the north and west. The Ruzhen conquered the Khitan Liao Kingdom in 1125. The Chinese lost their capital, Kaifeng, to the Ruzhen in 1126 and even the Chinese Emperor Hui Zong (徽宗) was captured and taken prisoner of war. He never returned to the Chinese domains.

The Chinese moved south of Kaifeng and regrouped from 1127 under a new Emperor, Gao Zong (高宗) in a dynasty known as the Southern Song (南宋). Powerful cliques of 'hawks and doves' developed and then were unable to resolve whether to fight the Ruzhen or come to terms with them. Legendary among the 'hawks' was the general Yue Fei (岳飛) who became a hero of fiction and opera. Among other things, Yue Fei was renowned as an archer, although little is recorded other than how as a young peasant he learned from his teacher and could ultimately shoot with either hand. Although a brilliant general, he could not cope with the politics of his age and was finally assassinated by a leading figure of the 'dove' faction.

One military commander sent into the field in the south-west to quell an uprising of some of the southern tribes was Cao Keming (曹克明). Among those who used weaker bows or crossbows, such as the tribesmen of Yunnan, it was normal to shoot with poison arrows. This is Cao Keming's approach to testing new pharmaceutical products:

IOVI

《宋史·曹光實傳》

蠻人獻藥一器，曰：“豁洞藥。藥箭洞人，以是解之。可不死。”

克明曰：“何以驗之？”

曰：“請試以雞犬。”

克明曰：“當試以人！”

乃取藥箭刺首股而飲以藥，即死。群蠻慚懼而去。

The Tribesman presented [Cao Keming] with a vessel containing medicine and said, 'It's an antidote. If someone is pierced by a poison arrow, you use this as an antidote to the poison and it may save your life.'

Keming asked, 'What can I try it out on?'

They said, 'You could try a chicken or a dog.'

'No,' said Keming, 'It needs to be tried out on a human!' He immediately stuck a poisoned arrow in the Head Man's bottom. Then he gave the man the medicine to drink. The man died immediately. The tribesmen retired in confusion.

The Mongolian Invasion and the Yuan Dynasty

A Chinese historian who takes a broad sweep over the history of the Chinese people will conventionally hurry past the Mongolian Yuan (元) Dynasty (1279–1368), pausing mainly to mention the bitter resistance of the Chinese people to foreign rule, and the achievements in art and literature of the Chinese people during their eighty-nine years under the Mongol yoke.

Some Western historians pause to marvel at the 'achievement' of the Mongolian empire of Genghis Khan (reigned 1206–1227) and his successors, which stretched from the south-eastern shores of China, past northern India, westwards to eastern Europe and north to the wastes of Siberia. But few, looking at a similar phenomenon in their own times, would admit to regarding systematic massacre of millions of people and wiping out a number of civilizations as an 'achievement'.

From the Western perspective, based on accounts by Rashid al-Din³⁹ of the invasion of the Mongolian hordes into the European and Persian sphere of power, you could gain an impression that Genghis Khan's repeated victories can be put down to the novel attack method of using an onslaught of skilled horsemen firing powerful bows on horseback. But in the East that method of attack was not novel, and the ability of the Mongolian horsemen in cavalry archery should not have presented an unbeatable challenge either to the Chinese, nor to the other Turkic tribes they attacked and defeated. The success of the Mongols lay elsewhere.

The seeds of the Mongolian expansion over Asia lay in desperation. The nomadic tribes of Central Asia lived a predatory existence, keeping to their ancestral grasslands while the going was good, but prepared to invade the grazing lands of others and repel invasion of their own lands as severe weather conditions drove the nomads and their herds here and there over the steppe. In the early part of the thirteenth century, the climate had been particularly severe causing the loss of extensive pasturing grounds.

39. A Persian chronicler (1247–1318).

The nomadic way of life and the common hardships that such a lifestyle presented resulted in a degree of cultural unity among all the tribes of the Central Asian steppe. This can be seen from the Chinese historical and cultural accounts that were put together over centuries before the nomadic tribes wrote their own histories. The description of the Huns given by Sima Qian in the Han Dynasty (Chapter 8, 8G1) could be an apt description of the Xianbei of the Northern Wei, the Tuque of the Sui, the Khitan, the Ruzhen or indeed of the Mongols themselves. With the right mixture of need, self-interest and leadership, these ethnic nomad groupings could come together to forge alliances, and then would fall apart to fight among themselves with great speed.

The nomadic peoples had a legend⁴⁰ in which a mother figure rebuked her quarrelling sons by telling each to take an arrow and break it — something they could do easily. Then she told them to put together as many arrows as there were sons and break them — something none of them could do. This was the way that the nomads of the steppes, regardless of ethnic grouping, taught the value of unity.

Genghis Khan, a member of the Mongolian nobility, drew the nomads of Central Asia through a mixture of force of personality, superstitious faith in the wish of 'heaven' to create a great empire for the nomadic tribes, and a strong appeal to their self-interest. The practice of the nomads at that time was to name themselves in accordance with the dominant group in the region. On starting to gain the upper hand in his relations with other nomads in the region, Genghis named his tribe 'Mongol', and accordingly the other nomad groups who joined him called themselves 'Mongol' as well. Ultimately, every nomad tribe who considered themselves under Genghis's sovereignty styled themselves 'Mongol', just as those aligned with a previous powerful tribe had called themselves 'Tartar'.⁴¹

Apart from gathering the nomadic tribes like a rolling snowball, Genghis Khan was able to use people of other nationalities. Principally, it was the Muslim Uighur Turks and the Nestorian Christian traders of Soghdiana whom he recruited to bolster civil administration — an element in which the Mongols themselves were weak. In the years 1212 and 1213, Genghis and his armies attacked the Ruzhen Kingdom of Jin in north China, destroyed nearly one hundred cities, and drove the Ruzhen Ruler towards the south-west. Employing Persian experts in siege warfare, they managed to capture and sack Beijing in 1215.

40. 《魏書一〇一：土谷渾傳》，《蒙古秘史卷一第二十二節》。

41. The broad grouping who had aligned with the Khitans ultimately gave rise to the word for 'China' known in the West through early missionary explorers: 'Cathay'.

In 1227, Genghis died and his place as supreme Khan was taken by his son, Ögödei. Ögödei continued his father's onslaught against China. The Mongol war machine gained momentum, and most who were confronted with it realized that it was unstoppable. Ögödei ensured that his enemy was strongly motivated to surrender without a fight. The slightest resistance from one of the walled cities could result in a bloodbath on a massive scale. Following no more than a token resistance, one million were slaughtered in Chengdu alone. The Ruzhen were completely defeated in 1234, and their sinicized officials were also employed to strengthen civil government in China.

Genghis's grandson Kublai Khan finally gained control over the northern part of Chinese territory in 1271 and established a new Chinese dynasty styled Yuan (元). He then set about gaining control over the whole territory of South China previously held by the Song Dynasty. Using foreign advisers, they built a fleet to carry themselves across the great rivers which had previously barred their way. The sweep continued. The populations of whole cities were massacred. The last emperor of the Song, a child, was defeated in 1279 and China was Kublai's.

The bow and arrow was not the main tool of the expansion of the Mongolian empire. The success of the Mongolian expansion arose from the common cultural bond between the Central Asian nomads which could be appealed to in time of hardship and exploited through promises of lands and booty. It relied on the self-interest of Central Asian merchants who saw trade benefits in huge areas of Asia under a strong and cooperative ruler. But ultimately, it rested on terror and a holocaust of unprecedented proportions.

The government which ruled China during the eighty-nine years of the Yuan Dynasty barely featured Chinese people other than in relatively menial positions. The whole army machine was centred on the Mongolian military-elite who were given territories to run. The Mongolian military system was founded on hereditary leadership based on decimal sub-divisions of 10 000. All national defence was in the hands of the Mongols or the other Central Asian nationalities they had recruited to their cause. When the examination system was finally re-established in 1315, one half of the quota of passes was reserved for Mongols, one quarter for other non-Chinese nationalities and the last quarter for the Chinese themselves. The Chinese scholar class were virtually excluded from the running of their own homeland, with only low-level scribes, uneducated in Confucian ethics, being maintained for civil administration work.

The Chinese were generally barred from any sort of military practice; they were not permitted to keep weapons. Sometimes, they were even prohibited from obtaining bamboo from which bow-staves and crossbow prods could be made.

In a military regime totally dominated by a people to whom the bow and arrow were as much part of daily life as the clothes they wore, it is not surprising that the bow, arrow and crossbow hardly merited any special mention. Indeed, the 'Military Section' (兵志) in the *Dynastic History of the Yuan* (元史) barely mentions them. However, a holdover from the Song does appear in the 'Bowmen' organized at local level to police rural areas against bandits.⁴²

A curfew was enforced from the third hour of the first watch to the third hour of the fifth watch (with exceptions allowed for urgent official business, funerals, medical emergencies and childbirth). Breaching curfew earned the offender 27 lashes (or seven — commutable to a dollar fine — if he was an official). These curfews were enforced by bowmen who were raised from a corvée from villages and market towns. Moreover, each group of bowmen had to meet a quota on the number of criminals they apprehended, otherwise they faced punishment.

Judging from the fact that the post of Bowman was filled by a levy on villages, you would imagine that most of them must have been Chinese. However, there is some reason to doubt whether they were: first, the Chinese were not supposed to carry weapons, and second, the Chinese were prohibited by law from harming people of Mongol descent. Since most of the local brigands were members of Mongol military families who were underemployed during peacetime, the value of the Chinese bowmen would have been extremely limited. The official histories do not solve this riddle.

As for the Mongol nobility, archery played a part both in the hunt and in courtly ritual. Their most famous ritual sport was 'Shooting the Straw Dog'.

10W1

《元史·祭祀志六》

每歲，十二月下旬，擇日，於西鎮國寺內牆下，灑掃平地。右府監供綵幣，中尚監供細氈、鍼、絨，武備寺供弓箭、環刀。束稗草為人形一，為狗一。剪雜色綵段為之腸胃。選達官、世家之貴重者交射之。非別速、札刺爾、乃蠻、忙古台、列班、塔達、珊竹、雪泥等氏不得與列。射之糜爛，以羊酒祭之。祭畢，帝、后及太子、嬪妃併射者各解所服衣俾蒙古巫覡祝讀之。祝讀畢，遂以與之。名曰：「脫災」，國俗謂之「射草狗」。

42. 《元史·兵志四》：「元制，郡邑設弓手以防盜也。」

At the end of the twelfth month of each year, they chose an auspicious day and cleared a piece of flat land below the inner wall of the State Temple in the Western Encampment. The Superintendent of the Right Palace supplied coloured bunting, the Superintendent of the Central Secretariat provided rugs, pins and floss, the Temple of Military Preparedness provided bows, arrows and side-arms. They would bind sheaves of straw into the shape of a man and a dog, and they would cut pieces of bunting to make their intestines and stomach. Then they selected ranking officials and members of the nobility to take turns in shooting at the effigies. Only members of the noble families [of . . .] were permitted to take part. When they were shot to pieces, they offered a prayer to them with sheep's milk. After the prayers, the Emperor, Empress, Princes and their Consorts took off their [old] outer garments which were then blessed by a Mongolian shaman. After the blessing, they presented them straight away to the shaman. This [ceremony] was called *Tuoza*⁴³ and the Chinese informally called it 'shooting the straw dog'.

And then they left. The Mongols appeared at first to be able to set up a form of government capable of running China, farming taxation out to Central Asian merchants and employing sinicized nomads in important administrative positions. They marginalized the educated classes of the Chinese population who, in turn, turned their backs on the rulers and took up private professions such as private education, medicine and astrology, and perfected themselves in literature and art.

But without military objectives, and in an alien environment where the primary concerns of nomadic life were irrelevant, the Mongolian military aristocracy progressively fell to internal feuding and brigandage. Meanwhile, Chinese warlord groups and militant religious sects also arose. Ultimately, Chinese groups were able to become sufficiently organized to make the Mongol grip on power untenable.

Millions of dead and hundreds of razed cities later, the Mongols — nobility and commoners alike — retreated back to their heartland. The holocaust they carried out against some population centres such as heavily-populated Sichuan, starvation and plague resulting from interruptions to agriculture, and deportation of skilled craftsmen to the Mongolian capital caused a halving of the population of China (a loss of up to 60 million people) in the latter half of the 13th century. The Yuan Dynasty fell in 1368.

43. If this is a Chinese word and not a Mongolian one, then it means 'throwing off calamity'.

ନିର୍ଦ୍ଦେଶକ

ॐ नमो भगवते वासुदेवाय ॥

موسى بن جعفر

مجله

महाराष्ट्र

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射箭

The languages of the 'Five Nationalities' of China as recorded by order of the Emperor Qianlong (1736–1796). The words reproduced comprise (from the left) the terms for 'to shoot with a bow', 'cause to shoot with a bow', 'go shooting' and 'come to shoot'. The languages (from the top) are Manchu, Tibetan, Manchu phonetic rendering of Tibetan, Mongolian, Uighur, Manchu phonetic rendering of Uighur and finally Chinese.

Source: 《御制五體清文鑒》



Action and Overreaction: The Ming Dynasty

The character of the Ming Dynasty was strongly imprinted with the character of its founder, Zhu Yuanzhang (朱元璋). Zhu grew up in a poor peasant family and became an anti-Mongol activist in a Buddhist-founded group. He gradually managed to attract a following of Confucian scholars who were able to put together for him the trappings of Confucian courtly administration and in 1368, he established the first reign period of the Ming Dynasty, styled Hong Wu (洪武) giving himself the imperial title Tai Zu (太祖).

The former Mongol rulers, while taking on many of the ceremonial trappings of Confucianism, had nevertheless been happy to leave the financial management of China in the hands of tax farmers and Central Asian merchants who milked the system for what they could get out of it. As a boy, Zhu Yuanzhang had spent many years in abject poverty. When his parents died, he fell back on financial assistance from a Buddhist monastery to bury them. After that, he spent a number of years attached to the monastery and learned to read and write from Buddhist monks. He rose to power through leading an idealistic grouping of anti-Mongol rebels. Once in power, then, he dedicated himself to ruling according to a number of thoroughly idealistic Confucian principles. Three years into his reign, he re-established the Imperial Examination system, including an archery syllabus, and from reading his proclamation announcing the syllabus, we can see some of his preoccupations.

IIA1

祖制

洪武三年初設科舉條格詔

詔曰：“朕聞，成周之制取材於貢士。故賢者在職而其民有士；君子之行，是以風俗淳美。國易為治而教化彰顯也。”

Imperial Edict on the Syllabus for the Imperial Examinations dated 1371¹

We have heard that at the height of the Zhou Dynasty, there was a system of recruiting officials through an annual feudal tribute of qualified officers. Thus honourable people were in official positions and the people enjoyed good leadership; the behaviour of refined gentlemen sufficed to ensure the refinement of the moral climate; the state was transformed to the rule of law and the teaching and influence of their administration is there for all to see.²

IIA2

漢、唐及宋科舉取士，各有定制。然但貴詞章之（文）學而未求六（德）藝之全。至于前元，（依古設科，）待士甚優而權豪勢：要（之官）每納奔競之人。

In the Han, Tang, and up to the Song Dynasty, qualified officers were selected through the Imperial Examination system which varied from dynasty to dynasty: yet each set store in turning a nice literary phrase rather than seeking an all-round ability in the Six Arts.³ When it came to the previous Yuan Dynasty, (while they had the examination divisions of old), they had high expectations of the qualified officers that they would get, and they assessed them on the basis of aggression and strength, but their principle officers were people who just relentlessly pursued profit through competition.

IIA3

黃緣阿附輒竊仕，（祿所得資品或居舉人之上），（其）懷材抱德恥於並進。

1. The text used here is taken from 顧煜：《射書四卷》. It was published in 1637 and contains much text absent from what is recorded in the official history.
2. The text in brackets is absent from the version quoted in the official history of the Ming Dynasty (《明史·科舉二》).
3. The version in the official history of the Ming reads: 'yet each set store in literature rather than a mix of virtue and skill.'

甘隱山林而不起風俗之弊一至於此。今朕統一中國，外撫四夷。與斯民共享昇平之治，所慮官非其人，有傷吾民。願得君子而用之。

The characters who clawed their ways to the top were no more than a bunch of thieves (what they could make from their positions in terms of emoluments and goods was sometimes more than the highest graduates). Those who were morally upright and virtuous would feel ashamed to stand together with such people; they would rather retire to the sidelines than work in a moral climate which had deteriorated to this extent. But now We have reunited the country and put the minority states outside Our boundaries under control. Together with Our people we enjoy the fruits of peace and stability: yet We must beware of officials who may put Our people to harm. Our people wish to find refined gentlemen and employ them.

IIA4

自洪武三年八月為始，特設科舉以取懷材抱德之士。務在《經》明行修博古通今，文質得中，名實相稱。其中選者朕將親策于廷，觀其學識，品其高下，而任之以官。果有材學出眾待以顯擢。使中外文武皆由科舉而選。非科舉毋得與官。感有遊食奔競之徒，坐以重罪，以稱朕責。實求賢之意，所有合行事宜條列于後：……

Thus with effect from the eighth month of the Hongwu Reign Period (1371), We are re-establishing the Imperial Examination system with the express aim of obtaining morally upright and virtuous people. They must labour to learn from the Classics to practise refinement, to master the things of ancient times and be conversant with current affairs, to be properly proficient in literary skills and to ensure that their ability matches their reputations. We shall personally examine the successful ones, observe their learning and knowledge, give an assessment of their performance and appoint them to the appropriate posts. Thus, those with real ability and learning can expect to be selected on the basis of the talents they display. We shall cause all selections in Chinese or minority literary or military areas to be made via the Imperial Examinations. No one shall attain official office without it. Anyone who makes the mistake of earning a living through profiteering from their positions will be guilty of a serious offence and shall be answerable to Us. Those who wish to advance their virtue shall apply themselves to bringing their conduct and their affairs into line with the following syllabus: . . .

Tai Zu abhorred the 'survival of the fittest' mentality of rough-house capitalism. He had an idealistic vision of a type of official who would achieve a natural virtue through persistent application to the Classics (as

viewed through the neo-Confucian eyes of Zhu Xi). He went to great lengths to ensure that the examination system achieved that: the syllabus consisted of the Confucian classics with Zhu Xi's commentaries, the Confucian Rituals, Ritual Music, horsemanship,⁴ archery,⁵ writing and arithmetic (the Six Arts discussed in Chapter 4, p. 52).

There is no doubt that Tai Zu achieved a lot in establishing the credibility of the examination system. It was regarded as fair and open, and he took stern action if he considered that the results contained anything caused by prejudice of favouritism (for example, too many successful candidates from one region). As a result, more candidates were attracted to take the examination than at any time previously.

But where he failed most significantly was in making no allowance for the Confucian virtue of speaking out against superiors who are making mistakes. Tai Zu saw all attempts to correct his errors or to take firm, independent action as a threat to himself and the ideal state he was trying to build. He brutally suppressed independent action and criticism. He attempted to run everything himself, taking up the functions of a number of ministers personally.

His mistakes were many. The sad fact was that, lacking any background in financial management, he was incompetent in finance. He attempted to keep his civil service small and his agricultural levies to within one-tenth of output, but he was unable to come up with a civil management system which would allow his ideas to work in economic terms. He was preoccupied with small, economically self-sufficient units of military, public works and agricultural enterprises, with sources of revenue tied into points of expenditure. But the management required for such a complicated system was either absent (in which case the systems would become corrupt or break down), or else the taxes would be so expensive to administer that their administration costs ate up much of what was collected.

Before long, his system of government was living a lie: he despised raw capitalism, yet private enterprise on the part of civil administrators was the only way his ideal social system could be made to work. He suppressed the use of silver as a currency, but his copper coinage readily lent itself to forgery. He failed to understand the enormous growth in international maritime trade in the Asian region,⁶ and tried to shoe-horn all foreign trade into a semblance of feudal tribute from abroad, and thus played into the hands of pirates and smugglers.

4. “騎觀其馳驟便捷。”

5. “射觀其中數多寡。”

6. By this time, there was strong trade between the Chinese, Japanese, Arab merchants and the Portuguese.

Despite this, however, the agricultural base, which was still building up after the effects of the Mongol occupation of the northern rural areas and had been hard hit by plague between 1331 and 1354, started to build up again. By the end of the Hong Wu reign period, the total area under cultivation was some four times greater than at the start and agricultural output almost doubled.⁷

The Yuan military system had the Mongol nobility forming the backbone of the army on a hereditary basis. This was continued by appointing hereditary military families who were not permitted to leave their profession, and were granted land to support themselves (a thing they largely failed to do in practice.) At the start of the Hong Wu period, the Emperor also commanded the raising of 10 000 households of troops from the people and the provision of training for them. People living on the borders were encouraged to take up arms in self-defence. Border self-defence groups with skills in mounted archery appeared again.⁸

Early Ming Archery

With the Chinese once again permitted to take up arms against the border tribes and with archery firmly on the examination syllabus, serious study of archery technique was set in motion anew. By the early part of the 16th century, after 200 years of Ming rule, there existed 14 schools of archery and crossbow theory.⁹ The detailed content of these schools' teachings have not been recorded,¹⁰ but an encyclopaedia compiled in the Song Dynasty and added to significantly during Yuan and early Ming times gives a good overview of the basic contents. The encyclopaedia is the *Guided Tour Through the Forest of Facts* (事林廣記), by the Song author Chen Yuanliang (陳元靚).

The archery section of the encyclopaedia, as printed in the Yuan Dynasty, mainly consists of Wang Ju's *Archery Manual* (Chapter 9, paragraph 9B). But early Ming printings supplemented this with additional material which, together with Wang Ju's teachings, represented the basis of archery theory of those times. Much of the material in the *Guided Tour Through the Forest of Facts* appears in later manuals which I shall discuss in

7. 《明史·食貨一》。

8. 《明史·兵誌》、《明會要·兵二》。

9. 鄭若曾，《江南經略》：“使弓弩之家十四。”

10. The proponents were largely illiterate: see below, paragraph 11C1.

subsequent chapters and does not add much to what we have learned about technique. Nevertheless, there are some interesting issues covered there which do not appear elsewhere. Here are three of them:

Rapid Shooting

II B I

執弓取箭

古法曰：“遠之能，近之功。”蓋挽力既進，然後習以左手連雙箭夾弓而執。箭筈齊上梢，上三指實，下二指虛，其箭自偃。以右手下三指仰，抹取偃箭至箭之半。即以小指勾定，推近箭鏃分寸之間。次以食指勾其上，箭控筈上弦。不可以目視筈。凡取箭之體，須側右手於右，則不撞弣。不視筈，則恐不真。不真則不能及弦。揣、摸久之，則又非式，亦恐有落架、脫弦之病。必控筈之際以食指包幹，其筈縱末。遷入弦，可以一移而無落脫。先習於十步之內，百發百中，然後增五步，推而上之至百步止。此古善射者之法。

Grasping the bow and gripping arrows

The classical method says: 'What you can manage at a distance becomes a boon at short range.' Once you have built up your drawing strength you need to practise gripping two arrows together against the bow with the bow-hand. The arrow-nocks need to be level with the upper bow-limb,¹¹ the thumb, index and middle fingers firm and the ring and little fingers relaxed.¹² Let one arrow lean away from the bow by itself. Reach out with the middle, ring and little fingers of the draw-hand and touch the leaning arrow about half way down. Then hook it with the little finger and slide it [up and] out [from the bow-hand] to a fraction of an inch from the arrowhead. Next, use your index finger to hook the top of the arrow and ease the nock onto the string. You mustn't look at the nock. Whenever you take the shaft of the arrow, you hold your draw-hand horizontally out to the right [draw-hand] side, then you won't knock against the grip. As you can't look at the arrow-nock, you have to be careful that you don't get it wrong, otherwise you won't get it onto the string. If you try to palm the arrow or fiddle around with it for a long time, it goes against the correct style and what is more, you have to watch out for the arrow failing to nock properly and dropping

11. That is, arrowheads pointing downward.

12. My understanding is that the two arrows are held against the bow grip at an oblique angle by the ring finger and little finger of the bow-hand.

off the string. What you need to do is to cradle the shaft with your index finger while you are nocking the arrow, keeping the end of the arrow horizontal. Like that, you can get it onto the string in a single movement and it won't drop off. Start your practice within ten paces and when you can hit a hundred per cent, move out by five paces; then carry on like that until you can do it at a hundred paces. This is how they perfected their archery in the old days.

Three Key Elements in Archery

11B2

造放求親

古法曰：“射不入鐵，不如不發；射不入石，徒勞爾力。”又曰：“有力不親，不能害人；親而無力，不能入物。”又曰：“疾而箭狂，反被敵傷；親而射遲，敵可閃移。”

The classical method says:

‘If your shot can’t pierce steel, don’t bother to shoot; if your shot can’t pierce stone, you’re trying to use brute-force alone.’

‘If you’re powerful and inaccurate, you can harm no one; if you’re accurate but lack power, you can’t pierce anything.’

‘If your shot is fast but the arrow is wild, you’ll just get injured by your enemy; if you shoot accurately but slowly your enemy has a chance to dodge.’

The Archer’s ‘Ten Commandments’

11B3

治心調攝

古法曰：“得之於心，應之於手。”蓋心一不治，則射無中理。凡射有十不可：它想不可，它憂不可，奔走而至不可，醉不可，饑不可，飽不可，怒不可，不欲射不可，射多而好不止不可，爭斗不可。戒此十者，則不徒射矣！射中不喜，則心易而反跌。射不中勿憂，則心感而無主。平執其弓、弦，安其箭，自注其的，心實運之。平居暇日，更當調其氣息，節其飲食，避其寒暑，持其喜怒，誠其嗜慾。此射之至要。

Mental control and keeping in proper physical shape

The classical method says: 'Set up your shot in your mind, then carry it out with your hands.' So if your mental control goes, your shot has no basis for hitting the target. In archery, there are 'Ten Commandments':

- thou shalt not let your mind wander;
- thou shalt not be distracted by worries;
- thou shalt not arrive [for your archery session] in a rush;
- thou shalt not be drunk;
- thou shalt not be hungry;
- thou shalt not shoot after overeating;
- thou shalt not be angry;
- thou shalt not shoot when you don't want to;
- thou shalt not be so engrossed in shooting that you don't want to stop;
- thou shalt not compete aggressively.

Don't plan on taking up archery if you can't break these bad habits! If you score a hit, don't be happy, otherwise your mind will turn contrary on you. If you miss, don't be unhappy, otherwise you will lose your concentration and it will be beyond control. Normally, when you grasp the bow and the string and you nock your arrow, you should concentrate naturally on your target, and use the power of your mind to carry the shot. In your daily life, make an extra effort to control your breathing, regulate your intake of food and drink, avoid extremes of temperature, control excesses of joy or anger and restrain your interests and desires. This is very important in archery.

Defence of the Ming Realm

The military preoccupations of the Ming Dynasty lay in three directions. The first was the extension of Chinese domination to the south-west, suppressing the national independence of the Dali State (大理國) so as to provide for expansion of military units in the south. Here a number of methods were employed to gain territorial control, varying from outright annexation to joint rule by Chinese and native nationalities. Rebellions against Chinese rule took place sporadically and were put down by military force.

Secondly, although the Mongols were ejected from traditional Chinese territory at the fall of the Yuan Dynasty, the Mongolian heartland was never taken. As a result, raids from the Mongolian tribesmen continued incessantly. This not only necessitated the honing of mounted archery skills, but resulted also in the quixotic response of trying to seal the steppes

nomads behind sections of wall — resulting in much of the Great Wall of China as we know it today. In 1449, the Emperor Ying Zong (英宗) was induced to try an attack into the Mongol heartland, only to be captured together with his forces. Rather than ransom him, the Chinese court crowned another emperor, Dai Zong (代宗), to replace him.

However, from the point of view of archery, by far the most important military campaign was that against the 'Japanese Pirates' (倭寇戰爭).

From the time when the Japanese successfully beat off an attack by the Mongol army of Kublai Khan in 1281, the Japanese coastal area continued to be highly militarized with a strong naval fleet, but the defence of Japan against the Mongols had proved expensive and the economy was badly affected. This resulted in many of the maritime population turning to piracy. Piratical raids against the Chinese coastal areas of Jiangsu, Zhejiang, Fujian and Guangdong were incessant. The military governments of Japan were complicit in the raids, as were some of the Chinese coastal population themselves.

At first, the first Ming Emperor, Tai Zu, tried diplomacy in an effort to get the central government of Japan to crack down on the pirates. In 1400, the Shogun Yoshimitsu responded to repeated diplomatic efforts and he issued an edict against the pirates in 1405, but to no avail. After his death, diplomatic relations between his son Yoshimochi and the Ming court broke down. However, they revived again in 1432. Trade between China and Japan in porcelain, lacquer-ware, silks and silver offered good pickings for the pirates. When valuable freight was scarce, the pirates did not hesitate to cross the sea and raid the Chinese coast.

In the early 15th century, the Ming court had authorized diplomatic expeditions by sea that travelled to India, Persia and got as far as East Africa. However, such expeditions were very costly and in the face of the poor state of the Chinese economy, coupled with a traditionalist Confucian view disavowing foreign trade and diplomacy (tribute should come to China, not the other way round), the efforts were discontinued and developments in shipbuilding were curtailed and restricted to small coastal vessels.

Given the opportunity of diplomatic contacts and an opening up of trade, the Japanese court was inclined to clamp down on piratical activity, but the response of the Ming court in spurning open trade meant that it was largely in the interests of Japan for smuggling and piracy to continue.

The campaigns which continued through most of the Ming Dynasty generated a quantity of military writings, many of which have survived to the present time. The most significant of these are as follows:

Approximate Date	Title	Author
1550	《正氣堂集》餘集卷四《射法》	俞大猷
1565	紀效新書	戚繼光
1589	陣紀四卷	何良臣
1619	武編	唐荊川
1621	武備志	茅元儀
1629	射史八卷(之八：射法直述圖)	程宗猷
1637	武經射學正宗指迷集	高穎
1637	射書四卷	顧煜
1638	武備要略(卷四：《射論》)	程子頤
1646	《射經》	李呈芬

Among these principal works, the best known today in China are the *Military Writings* (武編) of Tang Jingquan (唐荊川, 1507–1560) and the military encyclopaedia, the *Guide to Military Preparedness* (武備志) of Mao Yuanyi (茅元儀). But as far as archery is concerned, both works contribute no new material: they quote in its entirety the Song Encyclopaedia which I discussed above in 11B.

Two other works add to this pool of knowledge by exploiting the skill in book illustration which became popular in the Ming Dynasty. Both the *History of Archery in Eight Volumes* (射史八卷) of Cheng Zongyou (程宗猷), an adherent of the Shaolin school of martial arts and the *Principal Strategies of Military Preparedness* (武備要略) of Cheng Ziyi (程子頤) used accurate woodblock illustrations which clarify many elements of contemporary archery technique. But the technique they illustrate is still basically that of the early Ming schools.

The techniques current in the early Ming period perhaps formed the core of state military training used in the Ming army. This would account for the fact that they endured so long and were represented so much in military writings.

Finally, however, it was innovation which won the day. The heroes of the Chinese campaign against the Japanese pirates were two generals who trained their own troops and employed their own, home-grown techniques in military training. Their names were Yu Dayou (俞大猷, 1504–1580) and Qi Jiguang (戚繼光, 1528–1587).

Yu Dayou turned from a life of literary pursuit to the study of military matters following the death of his father and achieved distinction in the military examinations of 1535. Ultimately, he took control of military forces on the eastern and southern coastlines and achieved substantial victories

over the pirates.¹³ He is said to be the author of a book on pole fighting, the *Manual of Swordsmanship* (《正氣堂集》餘集·卷四〈劍經〉) which includes a section on archery.

Qi Jiguang was born into a military family and learned much from his father. He was appointed general in 1555 and won a decisive victory over the pirates at Taizhou (台州) in 1561. He worked effectively together with Yu Dayou to battle against the Japanese in Guangdong in 1563. He wrote two of the most popular works on Chinese military strategy and training, the *Substance and Discipline in Military Training* (練兵實紀) and *A New Book of Discipline and Effectiveness* (紀效新書). His literary style is innovative: much of his work consists of colloquial records of lectures to his troops and commanders and reading them gives a feeling for his personality.¹⁴

Qi Jiguang's theme was to go for practical and simple methods every time, and to dispense with anything in military technique which served just aesthetic purposes. To this end, he adopted in full the archery technique of his senior, Yu Dayou.

Yu Dayou's archery technique, adopted by Qi Jiguang as well as He Liangchen (何良臣《陣紀》), builds upon some of the more practical aspects found in Wang Ju's manual. He proposes a simple-to-learn, battle-oriented approach which should, however, be equally suited to the examination ground. He deals sympathetically with issues such as stress in the battlefield and examination conditions.

Instead of quoting the text of Yu Dayou's and Qi Jiguang's works on archery,¹⁵ I shall fast-forward to a later writer who extensively quoted and developed their archery technique, combining with their ideas certain ideas on mental approach, training and self-perfection expounded by the famous philosophical writer Wang Yangming (王陽明, 1472–1529). Wang Yangming was brilliant scholar who had excelled in the exposition of the neo-Confucian ideas of Zhu Xi, but found them too restrictive and elitist. After gaining an interest in the practice and principles of qigong, Wang Yangming developed a new view on the Confucian classics which dwelt on the correct approach to study and self-refinement, the *Great Doctrine* (大學), and put forward the view that artificial social divisions should be broken down; that self-imposed limitations should be removed, and thus self-perfection was within the grasp of all men.

This later writer, who at the very end of the Ming Dynasty combined the ideas of Yu Dayou, Qi Jiguang and Wang Yangming was Li Chengfen

13. 林伯原：《中國古代體育史》（臺北：五洲出版社，1996），第8章。

14. *Ibidem*.

15. Since this would inevitably lead to identical text appearing twice.

(李呈芬), a little-known writer whose *Archery Manual* has been preserved in a Ming Dynasty encyclopaedia, the *Complete Collection of Ancient and Modern Books and Pictures* (古今圖書集成). According to a record in a historical work (皇明經世全書), Li Chengfen was born in Anhui province and lived in the latter part of the 16th and start of the 17th century.¹⁶ He deeply respected Qi Jiguang and the Wang Yangming school.

The Archery Manual (射經) of Li Chengfen (李呈芬)

11C1

李呈芬曰：前輩有言，“兵險道也”而陽言之。“我能往，寇亦能往。”¹⁷射家手口相傳，不立文字。豈謂“挽二石，不識一、丁。”耶？蓋秘之矣。

There's a saying among the older generation: 'The use of arms is a treacherous path.' They used to conceal the truth about such things. The answer to that is, 'Anywhere I can go, the enemy can go too.' Archers pass their skills on by practice and word of mouth and are not known for their literary talents. Why else did people say: 'He can pull two stone but he can't read his ABC?' It's for this very reason that everything has been so shrouded in secrecy!

11C2

周官保氏教國子五射，曰：“白矢”：白鏃至指也。此彎弓之法，所謂“穀率”也。曰：“參連”謂先發一矢，三矢夾於三指間，相繼拾發，不至斷絕。此注矢之法也。曰：“剡注”：剡，銳也。弓弰也。注：指也。箭發則靡其弰，直指於前，以送矢。所謂“斲”（租說切）“擗”（丁結切）是也。¹⁸斲者，後手摘弦如斲斷之狀，翻手向後，抑掌向上，令見掌紋也。擗者，以前手點弰，如擲物之狀，令上弰指的，下弰指脾骨下也。或謂，矢頭剡處，直前注於侯，不從高而下。即諺所謂“水平箭”。此發矢之法也。

In *The Rites of Zhou*, the Bao Clan taught the children of the aristocracy the five forms of archery.¹⁹ 'White Arrow' meant that the white

16. 日・濱口富士雄：《射經》（東京：明德出版社，1980），頁7-8。

17. 《左傳·文公十六年》：“楚人謀徙於阪高。蔣賈曰：‘不可；我能往，寇亦能往。不如伐庸。夫麋與百濮謂我饑不能師，故伐我也。如我出師，必懼而歸。’”

18. See paragraph 11B2 in this chapter.

19. See Chapter 9, paragraph 9D1.

arrowhead reaches the finger: that referred to the method of drawing, what is known as 'coming to a full draw'. 'Three-in-a row' meant first firing one arrow with three arrows held under the middle finger, then firing the rest off one after the other without interruption: that is, a method of intensive shooting. The *yan* in *Yanzhu* means 'sharp': that is, the tips of the bow. *Zhu* is 'point at': that is, allowing the bow-tips to revolve to a horizontal position after the release pointing directly forward to follow through after the shot. What they call 'snapping' and 'breaking'. 'Snapping' means that the string-hand grasps the string as if it were going to snap it and rocking the string-hand back. 'Breaking' means letting the bow arm touch the bow-tips as if you were going to throw it, letting the upper bow-tip point to the target and the lower bow-tip point to the armpit. Some people say it means letting the point of the arrow point straight at the target: not slanting downward. This is what some colloquially call 'horizontal arrow'. This refers to firing the arrow.

IIC3

曰：“襄尺。”襄，平也。尺，曲尺也。謂平其肘，使肘上可置杯水。蓋架弦畢，便引之。比及滿使臂直如矢也。或曰：襄，包也。肘至手為尺，射者常以肱蔽其胸脅，無使他人之矢從虛而入。此自防之法也。

Xiangchi: *xiang* means 'level'; *chi* means 'a carpenter's square'. This refers to keeping the elbow level, that is to say 'being able to balance a cup of water on the elbow.' Thus you have nocked the arrow on the string, you draw it. This refers to coming to a full draw and your arms are as straight as the arrow. Others say that *xiang* means 'to enclose': when an archer's forearm is extended like a ruler, they often protect their ribcage with their upper arm so that there is no space for an enemy's arrow to penetrate. This is a protective measure.

IIC4

曰：“井儀”。言開弓圓滿，似井形也。或謂：四矢集侯如井字。即詩“四矢如樹。”²⁰此法之妙也。嗚呼，射之道備矣。

'*The jing ("well") character form of wielding the bow*': this refers to drawing the bow so it is perfectly circular like the shape of a well. Some others say that it refers to four arrows grouped on the target in the form of the character '井'. This is, to quote from the *Book of Songs* 'four arrows [as

20. 《詩經·大雅·行葦》：“即挾四鍬，四鍬如樹。”朱熹注：“如樹：如手就樹之，言貫革而堅正也。”

sturdy and straight] as trees.' Hooray: we have already covered the basics of archery!

11C5

鄧鐘²¹曰：“射法雖多大，要不過：審、固、滿、分，四字耳。持弓欲固。開弓欲滿。視的欲審。發矢欲分。（分者，兩手齊分也。）知鏃者，滿之象也。而審益精。臂力者，固之徵也。而分始齊。射有臂力，知鏃工夫，靡不命中矣。而先之以入扼、壁立為入門。”

Deng Zhong said, 'As many and as great as the methods of archery may be, they all boil down to no more than the following four words: "concentration", "firmness", "fullness" and "partition". Your grip on the bow requires "firmness", your draw requires "fullness", your sighting on the target requires "concentration" and the release requires "partition". ("Partition" in this context means that both arms move apart at the same time.) Feeling for the arrow point [to reach the bow-hand] is central to "fullness". This permits your concentration to be maintained to the full. Strength of the shoulders is the key to "firmness". Only then can the "partition" be even. Archery demands that you devote your efforts to perfecting shoulder strength and feeling for the arrow point: without these, you can never score a hit. The first element in the learning process is getting the bow settled into the palm of your hand and standing up straight.'

11C6

凡執弓，欲使把前入扼。把後當四指本節。平其大指承鏃，卻其頭指使不礙，則和美有聲而俊快也。凡開弓，身直。頭偃，前手腕仰為病色：宜戒。

As to gripping the bow, you must settle the face of the bow-grip well into the palm, and the back of the grip needs to be level with the inner joint of your four fingers. Make your thumb level to support the arrow and bring your index finger right back to that it won't obstruct the arrow. That way, the shot will be co-ordinated nicely with a good clean sound and will get off crisply. When drawing the bow, the body needs to be quite straight. Letting the head come back, turning up the bow-hand wrist are all errors, and they have to be eliminated.

21. Deng Zhong was a writer from the late 16th to early 17th century, some of whose remarks on are recorded in 《武備輯要》。

IIC7

正心、養氣為根本。至於射敵，又與射的不同。射的貴從容，射敵貴神速。從容，則引弓稍輕，而調猶可以及遠、中微。神速者，非強弓重矢，安能殺敵於百步之外哉。故倭虜矢重弓勁，中之者必斃。彼近而始發，發必中人。乃華人徒畏之，而不知用其所長也。

Mental preparation and correct breathing are basics. But when it comes to shooting at an enemy, the approach must be quite different from target shooting. The target marksman values relaxation in his movements, while the man who shoots at the enemy values agility. To achieve relaxation, you need to draw a slightly lighter bow and with the correct co-ordination you can both cover a long distance and hit a small mark. As far as agility is concerned, there's little chance of killing the enemy at a range of more than a hundred paces without a hard bow and heavy arrows. That's why the Japanese pirates use heavy arrows and strong bows: anyone who gets hit dies. They get close in before they shoot and what they shoot at, they hit. So the Chinese troops are afraid of them and don't understand how to take advantage of their own native skills.

IIC8

雖然，弓、矢：器耳。²²射：藝耳。器：形而下。道：形而上。²³藝成而下。德成而上。²⁴禮不盡於玉帛，樂不盡於鐘鼓。²⁵射亦不盡於弓矢。張弓挾矢，下學之方。得手應心，上達之妙。²⁶下學可言，上達不可言。可言者，吾不得而秘之。其不可言者，存乎人之自得矣。²⁷故以所嘗試師友之法，分篇十三，系之以歌訣，而射儀附焉。俟同仇²⁸者共力之。

But for all that, a bow and arrows are no more than the tools. Archery is no more than a skill. The 'tool' represents the lower form, the 'method' represents the higher form. 'Skill' represents preparedness at the lower level, 'virtue' represents preparedness at the higher level. 'There is more

22. 《易·系辭傳下》易曰：“公用射隼於高墉之上，獲之無不利。”子曰：“隼者，禽也。弓、矢者，器也。射之者，人也。君子藏器於身，待時而動，何不利之有？動而不括，是以出而有獲。語成器而動者也。”
23. 《易·系辭傳上》：“是故，形而上者，謂之‘道’，形而下者，謂之‘器’。”
24. 《禮·樂記》：“是故，德成而上，藝成而下。行成而先，事成而後。是故，先王有上有下有先有後，然後可以有制於天下也。”
25. 《論語》子曰：“禮云禮云，玉帛云乎哉？樂云樂云，鐘鼓云乎哉？”
26. 《論語》子曰：“不怨天，不尤人，下學而上達，知我者，其天乎。”
27. 《孟子·離婁下》孟子曰：“君子深造之以道，欲其自得之也。自得之，則居之安。居之安，則資之深。資之深，則取之左右逢其原。故君子欲其自得之也。”
28. 《詩經·秦風·無衣》：“豈曰無衣，與子同袍。王於興師，修我戈矛，與子同仇。”

to the rituals than jade and brocades; there is more to ritual music than bells and drums.' [Likewise], there is more to archery than bows and arrows. The pulling of bows and grasping of arrows is a method of 'study at ground-level'; but when [the skill] comes naturally to your hands and flows from the heart, then it becomes 'a soaring achievement'. I can write about the 'study at ground level', but words cannot express the 'soaring achievement'. Anything that I can express in words, I shall not keep secret. What cannot be expressed in words remains something that a man must 'discover for himself! So I have taken my own experiences and experiments, as well as the techniques of teachers and friends, put them into thirteen sections and 'bound' them with mnemonic rhymes with the Archery Ritual appended to it.

IIC9

利器第一

《荀子》曰：“弓矢不調，羿不能以必中。”夫調之云者：“矢量其弓，弓量其力”。蓋手強而弓弱，是謂“手欺弓”。弓強而手弱，是謂“弓欺手”。余所交游，善射之友，有能引滿數十力弓者。其所常習，無過九力之弓。所以養勇也。蓋弓、箭、力量欲其相稱。

1. The Lethal Weapon

To quote *Xun Zi*, 'If the arrow isn't right²⁹ for the bow, even Yi couldn't score a hit with it.' When he talks of 'right', it means 'the arrow goes according to the [weight of the] bow and the bow goes according to the strength of the archer'.³⁰ So when the arm is strong and the bow is weak, we call it 'the arm fooling the bow'; and when the bow is heavy and the arm is weak, we call it 'the bow fooling the arm'. In my travels and among my sharp-shooting friends, I have some who can fully draw a bow of ten *li* (54.6 kg). But in their day-to-day practice, they never draw more than nine. This illustrates the desire to co-ordinate bow, arrow and strength.

IIC10

古者，弓以石量力。今之弓，以個〔箇〕量力。未詳出處。然相傳，九斤四兩為之一個力；十個力為之一石。或曰，九斤十四兩為一個力云。凡弓五個力而箭重四錢者，發去則飄不穩。而三個力之弓重七錢之箭，發之必遲而不捷。何哉？力不相對也。

29. There is no evidence that 'arrows being right for the bow' refers to the arrow's spine. Chinese authors were concerned with weight of the arrow, not rigidity of the shaft.

30. Chapter 9, paragraph 9B8.

In the old days, they used to use 'stones' to measure the draw-weight of bows. Nowadays, we use *li* as a unit of weight. I don't know what caused the change. Anyway, nine catties and four ounces (5.46 kg) makes a *li* and ten *li* make a stone (54.6 kg). Another version has it that nine catties and 14 ounces (5.83 kg) makes a *li*. If a bow had a draw-weight of five *li* (27.3 kg) and the weight of the arrow was four *qian* (15 g), then it would fishtail in flight and be unstable. On the other hand, if the draw-weight of the bow were three *li* (16.4 kg) and the arrow weight was seven *qian* (26 g), the flight of the arrow would be sluggish and the release wouldn't be crisp. Why would that be? Because the weights are not correctly adjusted!

11C11

故三力之弓，用箭則長十拳。所謂“一拳”名曰一把。十把之箭，其重四錢五分。如四力之弓，則用箭九把半以長，或至十把猶為相，稱其重，則五錢五分。至於五力六力之弓，用箭亦長九拳之半。七力、八力之弓，用箭只長九把，即長至九把半亦可也。故箭之長短，隨弓力以重輕。弦扣之精粗，亦視弓之強弱。扣者，屬弦以附弓弣。其粗細不稱，則弓弦不調。

Thus for a bow with a draw-weight of three *li*, (16.4 kg), the arrow to use is ten *quan* in length. The term *quan* is equivalent to one *ba*, and an arrow of ten *ba* has a weight of 4.5 *qian* (16.6 g). A bow with a draw-weight of four *li* (21.8 kg) uses an arrow length of between 9.5 *ba* and 10 *ba*, either of which is within the correct proportions, and the weight should come out at 5.5 *qian* (20.3 g). Draw-weights of five to six *li* (27.3–32.8 kg) also need an arrow length of 9.5 *quan*; and when you get up to draw-weights in the region of seven of eight *li* (38.2–43.7 kg), you use an arrow of only 9 *quan*, and if the length is up to 9.5 *quan*, that is still acceptable. So the length of an arrow depends on the draw-weight of the bow. And the bracing height also depends on the draw-weight of the bow. The 'bracing height' is the measurement from the string to the limbs. If it is of the incorrect height, then the string won't be properly adjusted to the bow.

11C12

是故調弓，審矢，使輕重、長短、強弱適均。然後，目力會意，縱送³¹無虞。而弓面之於弦口，把力之方，箭翎之制，不必工拙而貴乎適宜。

So when you are adjusting a bow, examine the arrows and get the weight and length of the arrows right for the weight of the bow. Once that is

31. 《詩經·鄭風·大叔於田》：“叔善射忌，又良御忌。抑磬控忌，抑縱送忌。”

done, [the sharpness of] your eye and power [of your draw] work together and your [shot] will never err. Moreover, you can allow no shoddy workmanship as regards the breadth of the bow-limbs, taken together with the bracing height, the rigidity of the grip and the way the fletching is done: proper adjustment between all these things is of the greatest importance.

IIC13

弓面貴窄，不貴寬。弦口貴緊，把力貴軒，歪寧一順，不宜十字。箭之制，貴上粗而下細。若秤榦狀，寧粗毋細。箭翎貴短，弓弦貴粗。弦粗，滿扣則穩當而不走滾。弓矢調矣。

A good bow has a narrow face rather than a broad one. The brace height should allow for proper tension and the grip should be wide enough to give sufficient strength. The broadening of the grip should be gradual, not abrupt. The cutting of the arrows should provide for a taper from the nock towards the head. If the arrow shafts are cylindrical, it is better for them to be on the thick side. The fletching should be short and the string should be thick. If it is thick, it will fit snugly into the nock and remain steady without sliding out. That is all on adjusting the bow and arrows.

IIC14

而於閑習、臨敵器不同。用弓窄，則美觀：平時用之可矣。若御敵，則宜寬。弓重則扎深；弓寬則不滾。箭之至短，不過九拳耳。少則撒放時，難加筋節也。

The equipment you use in normal, daily practice is different to what you use in battle. If you use a narrow bow, it looks pretty and you can use it day-to-day. But in the battlefield you need a broad bow. If the bow is heavy, it will have good penetration, and if it is broad, it won't come unstrung. The minimum length for an arrow should be no less than nine *quan*. Shorter than that and it cramps the shoulder and back joints [at the draw].

IIC15

或有用三力半之弓，而長十拳重六錢之箭，似不如法，而其射甚平快。是必有法，在於加意精熟之。此利器之概也。

Supposing you have a bow with a draw-weight of 3.2 *li* (19 kg), and you use an arrow ten *quan* in length weighing six Chinese ounces (22 g).

This seems not to follow the correct proportions, yet it will still fly very fast and stably. A correct proportion is certainly involved here, and it is to be found by giving further attention and becoming conversant with it. This is the outline of 'the lethal weapon'.

IIC16

訣曰：

“弓用輕，箭用長。

搭箭得弦，意怒強。

開弓勢，前、後分陰陽。

箭出門時，一點功、平、准、狠，

去何用忙？”

曰“平”，曰“准”，曰“狠”，三者射之方也。夫善事者，必利器斯知其端倪矣。

The mnemonic goes:

'Take a light hand to your bow, and choose an arrow long;

Set the arrow on the string and make your intent fierce and strong.

The way to draw the bow has the fore and rear arms dividing into a yin and yang;

As the arrow leaves the bow, it carries one point each of skill, stability, accuracy and viciousness.'

'Stability', 'accuracy' and 'viciousness' are three methods in archery. A person who wants to excel in his field must have a comprehensive grasp of the ins and outs of his 'lethal weapon'.

IIC17

辨的第二

夫箭稱〈百步之威〉，所謂殺人於百步之外者也。故其效在於中人，而所習先於破的。的者，箭之候；世俗通呼為〈把子〉。諺曰：“箭無落頭，不知遠近也。”是〈野矢〉。〈落頭〉謂落矢之所至。如“射的者至的，射人者至人。”是也。〈野矢〉謂不經師授，放縱無法。

2. Setting the Target

When people talk about 'the arrow which dominates a hundred paces', they mean that a person can kill a man at a range of over a hundred paces. So the effect we're talking about here is killing, and the primary aim of practice should be to knock out the target. The 'target' is the target face: what we know colloquially as the 'bull's-eye'. The saying goes, 'Unless you can see where the arrow falls, you cannot get your

range.' That's what is known as the 'loose cannon' [lit: 'wild arrow']. 'Where the arrow falls' is the place where your arrow ends up: like 'The target shooter hits his mark, the assassin hits his man.' 'Loose cannon' refers to someone who learns without proper tuition with the result that he shoots off all over the place without following any system.

11C18

故的分遠近而前手應之。如把子八十步，前手與前肩對。把子一百步，則前手與眼對。把子一百三、四十步，則前手與眉對。其最遠至一百七、八十步，則前手必與帽頂對矣。

For this reason, the target has to be analysed to get the range, and then your bow-arm is positioned accordingly. Say your target is at eighty paces³² (124 m), then your bow-hand should be level with your shoulder. If it's at a hundred paces (155 m), the bow-hand should be level with your eye. At 130–140 paces (about 210 m), it should be level with the eyebrows. When you get out to a range of up to 170–180 paces (about 270 m), then the bow-hand has to be right up level with the top of your cap.

11C19

目力審真，氣至，意注。二目審顧不真，則箭發倉茫無准矣。由近及遠，漸習精求。善學射者，其的必始於一丈。百發百中，寸以加之，漸至於百步。亦百發百中，是為術成。此不易之法也。

Your eyes have to be concentrating to the full, your breathing deep and your mind fully focused. If both eyes are not focusing together, your arrow will appear fuzzy at the release and the shot will be completely inaccurate. You need to start out seeking to achieve distance, and then gradually work up your accuracy. A good student of archery has to start his target off at one *zhang*³³ (3.1 m). When you're scoring a hundred per cent, then you inch the target away from you, gradually getting it out to a hundred paces. When you can score a hundred per cent at that range, that is when you've made the grade. This is the invariable method.

11C20

凡把子五十步近者，前手下前肩二寸，直對把子中射之。把子三十步者，

32. According to 日·濱口富士雄《射經》，one pace was equal to 1.55 m in the Ming period.

33. *Ibidem*, one *zhang* was equal to 3.11 m in the Ming period.

前手與左胯對，正望把子根底射之。故學射之初，必滿拽而遠發。寧高而過，勿低而不及。能及遠矣，然後自近求准。毋畫地以自局焉。³⁴ 初學者，曾未開弓，便止射三、二十步，如此是自局也。豈能遠耶？

If your target is only fifty paces (77.5 m) away, you need to have the bow-hand two inches below the shoulder and shoot straight for the middle of the target. At only thirty paces (46.5 m), your bow-hand is going to be level with your hip and you will be sighting right at the base of the target. So when you are starting to learn, you have to bring the bow to full draw and shoot for distance. You are better off aiming high and passing over your mark than aiming too low and falling short. Grasp shooting for distance first! Then work on your accuracy from close in. Don't set yourself too limited a goal. As a beginner who has never pulled a bow, if you just limit yourself to twenty to thirty paces, you are just holding yourself back. How can you ever achieve any distance?

11C21

法曰：“莫患弓軟，服當自遠。莫患力羸，引之自伾。”³⁵ 弓之力強勁曰“硬”；力小而弱曰“軟”。“服”者：久而習熟之謂也。“羸”：猶弱也。“伾”：有力也。夫力勝於弓，則氣和而命中。及其升高俯壑，隨地勢之低昂，必移的習之。縱橫曳擲，發無遺矢矣。言預習之閑，以需臨敵進退之熟也。

[Wang Ju's] manual says: 'Don't worry that the bow's [draw-weight] is light: get used to it, then you'll still get a good distance from it. If you're worried that a bow's draw-weight is weak: draw it and it will naturally fire crisply.' When a bow is powerful, we call it 'heavy'; if it has little power and is weak, we call it 'light'. 'Getting used to it' refers to practising with it until you are familiar with it. 'Weak' is another way of saying 'light'. 'Crisp' means 'powerful'.³⁶ As long as [the archer's] strength is greater than the weight of his bow, his breathing will be well co-ordinated and he can hit [the target] with it. You need to manage shooting low-to-high, high-to-low, facing uphill or downhill, regardless of the contour of the ground: you have to practise changing your shooting to various positions. Then wherever you shift the target to left, right, up or down, no shot will miss the target. [Wang Ju] is referring to the need to use quiet practice to build up the familiarity you need for the vicissitudes of battle.

34. 《論語·雍也》：子曰：“力不足者，中道而廢，今女畫。”

35. Cf. Chapter 9, paragraph 9B8; the wording in the second phrase is slightly different.

36. 《詩·魯頌·駟》：“以車伾伾。”(“Strong and quick.”)

11C22

戚將軍曰：對敵射箭，惟膽大力定，勢險節短，³⁷ 則人莫能避矣。凡臨敵，必挽弓矣。且勿滿拽，且勿輕發。只四平架手，立定以養其勢。必待將近數十步計之，一發必中，必能殺敵。又或患將切身，或為賊先鋒，然後一發而中，收功十倍矣。

General Qi [Jiguang] said, 'When you fire in the face of the enemy, as long as you keep up your courage, keep the level of your strength stable, keep your potential energy high and restrain it on a short leash, then no one will be able to get away from you. In the face of the enemy, you are forced to draw, of course. But do not pull the bow to the full extent of your strength, and make sure every shot counts. Only with your arms straight and even can you take a firm stance: this will enhance your potential energy. Then you need to wait until the enemy is within about ten paces. Fix it so that you are sure of hitting with a single shot, then you are sure to make a kill. Even if you are afraid the enemy is almost upon you, even if you fear the points of the first blades upon you, [wait for that moment] and then shoot to kill and your skill will be rewarded tenfold.'

11C23

蓋弓矢長兵也，長兵短用焉。力百步者，五十步而後發，力五十步者，二十五步而後發。長則謂之勢險；短謂之節短也。力百步謂力可至百步也。力量倍而半用其力，則勢有餘而無錯失之患。

Although the bow and arrow are long-range weapons, long-range weapons can be put to short-range use. If your strength gives you a range of a hundred paces, you can shoot at fifty paces; if you can only manage fifty paces, you should shoot at twenty-five. The length of your range can be regarded as your 'potential energy'; the use at short range can be regarded as 'restraining it on a short leash'. ('Strength with a range of a hundred paces' means an effective shooting range of a hundred paces.) If you adjust your shooting so that you shoot with just half of the strength available to you, that leaves you with power to spare and you will not be plagued by errors and losses.

11C24

故馬戰射敵，射其大者。不必的於射人。語曰：³⁸ “射人先射馬，擒賊先

37. 《孫子·勢篇第五》：“激水之疾，至於漂石者：勢也。鸞鳥之疾，至於毀折者，節也。是故，善戰者，其勢險，其節短。勢如彍弩，節如發機。”

38. 唐·杜甫《出塞前》：“挽弓當挽強，用箭當用長。射人先射馬，擒賊先擒王。”

擒王。”所以論其要也。嘗觀時俗，嗤武舉試，圍之箭曰功名箭。謂其徒能博第，而不足以臨敵也。於戲士取功名，何為哉。

So when you are involved with the enemy in cavalry warfare, shoot the largest target on the field: don't feel that you always have to shoot at people. The famous poem goes:

*When you pull a bow, then pull a bow that's strong,
And when you fire an arrow, fire the one that's long!
Before you shoot the rider shoot the horse,
First take the leader, ere you take the rebel throng!"*

That's a metaphor for the nub of this argument.

In this day and age, the Military Examination has become a bit of a joke and the archery shots in it are known as 'arrows of honour'. What people mean is that they are only intent on getting a graduation certificate and couldn't make the grade in the face of the enemy. What does anyone care whether a graduate gets a certificate, for heaven's sake?

11C25

明教第三

《孟子》曰：“羿之教人射，必至於彀。”學者亦必至於彀。又曰：“羿不為拙射變其彀率。”“彀率”者，盈滿之謂也。蓋鏃與弣齊為滿。（弣：弓弣也。）半弣之間謂之“貫盈”。明乎盈滿之旨，不以目，而以指。是故，拽弦扣矢之節，屈壓撒放之方，古人秘妙，可以意授矣。

3. Understanding the Full Draw

In *Mencius*, it says, 'When Yi taught archery, he insisted that [students] drew their bows fully.' Our students must also draw their bows fully. Another quotation says, 'Yi would not demonstrate an imperfect full draw just because the archery student was not up to it.' 'Full draw' refers to drawing the bow-string back fully. Whenever the arrowhead draws level with the grip (that is, the grip of the bow), that is called 'full' draw. Passing through the centre of the bow-grip is called 'a centered full draw'.³⁹ Reaching a full draw is sensed not through the eyes but through the finger. Thus the details of the [draw-hand] drawing upon the string and nocking the arrow, and the techniques of gripping the bow, depressing the shoulder and releasing the shot were all regarded by the people of ancient times as secret tricks of the trade. This was what made up the contents of their teaching.

39. 《莊子·田子方》：“列御寇為伯昏無人射，引之盛貫。”朱駿聲曰：“貫借為彎。”

IIC26

凡射，必大指壓中指把弓：此至妙之古法。須以大指上一指節，探過中指上一節，大指與中指並，平攢緊，中指屈。要平大指，要微屈二指，靠弓弣平。屈無名指與小指。要十分屈，十分緊。

When you shoot, you grip the bow with the thumb resting on the middle finger: this is the greatest of the old shooting tricks. You need to get the top joint of the thumb to feel its way over the first joint of the middle finger and then make sure that the thumb and middle finger are [horizontally] level and held tense. Keep your thumb level and bend your index finger just slightly, keeping it level at the grip. The ring and little fingers must be bent right round and held very tense.

IIC27

自肩至肘與手，要直如箭。若一節彎屈，骨節不對，便無力，不勁也。後手以二指勾大指上一節，二指要斜靠箭，扣指頂下垂。箭扣搭宜最正；稍上亦可。若搭下，恐箭多上起而不直前也。

Shoulder, upper arm and lower arm must all be as straight as an arrow. Any flexing in any of the joints ends up with the joints not properly aligned, which in turn leaves you without the necessary rigidity and strength. For the draw-hand, bring the index finger round to hook the top joint of the thumb. The index finger needs to curve round next to the arrow and point downwards at an angle. Nock the arrow as near to a right-angle to the string as you can, but it is all right if it is above centre by a small amount. If it goes below centre, however, there is a risk of the arrow leaving the bow high and not flying straight.

IIC28

拽弓未滿時，前後手且少用力。至箭鏃方進弓弛之時，前、後手掌十指並加力，上緊，審固，撒放之。法曰：“鏃不上指，必無中理。指不知鏃，同於無目。”此“指”字，乃左手中指之末。“知鏃”者，指末自知鏃到，不假於目也。必指末知鏃，然後為滿。必箭皆知鏃，方可言射。把持定而知鏃，則無打袖，搖指之患。凡打袖，皆因把持不定。凡矢搖而弱者，皆因鏃不上指故也。

Before the draw comes fully back, you shouldn't put too much force into the bow-arm; but just as the arrowhead is drawing level with the grip, you have to increase the tension in the ten fingers of both hands together, and then you come to full concentration followed by release.

[Wang Ju's] manual says, 'Without the arrowhead against the finger,

there is no potential for a hit; if the finger doesn't feel the arrowhead, it's just like being blind.' 'Finger' here means the end joint of the middle finger of the bow-hand. 'The finger feeling the arrowhead' refers to the feeling the arrowhead against the joint of the middle finger — not using your eyes. The draw is not full unless the arrowhead is felt against the finger. This has to happen with every shot, otherwise you're not shooting properly. As long as you get a firm grip on the bow and the arrowhead comes in contact with the finger, you won't have any problems with the string slapping against the sleeve or the arrow porpoising. The string slapping against the sleeve is always caused by an insufficiently steady grip on the bow. The arrow porpoising and lacking force is always due to the arrowhead failing to contact the finger.

11C29

箭有“脱靶”之射者：名家也。非初學可語。脱靶箭，名射之號也。其鏃進過虎口，審固而發，為勢甚險，觀者悚心。此非初學可能，然當效法之習之，久而自能也。然有志之士，縱不能過，何可不及。不及者，非力不足也：不努力之故也。人不努力，百事無成。豈獨射藝乎哉？故曰：“中道而立，能者從之。”

There is a shooting technique called 'overdrawing': it is a very advanced technique and not for the beginner. 'Overdrawing' is a term at the expert level. The arrowhead passes right over the web of the thumb [of the bow-hand], then maximum concentration is reached followed by the release. This maximizes the stored potential, and it's enough to give onlookers a heart attack. Beginners cannot manage this; but with long practice using an effective course of study, it will come naturally. Given all that, if a gentleman has sufficient willpower, and he commits no great errors, how could he fail to make the grade? If anyone fails to make the grade, it's not because they lack the strength, but because they don't make the effort. No one will ever succeed in anything without a commensurate effort. And why should that apply just to archery technique? That is why we say, 'We instructors can do no more than set ourselves as a model: it is up to the pupil to follow to the best of his ability.'⁴⁰

11C30

正志第四

按《列女傳》曰：“怒氣開弓，息氣放箭。”蓋氣怒，則力雄而引滿；氣息，則心定而慮周。此正志之則也。

40. 《孟子·盡心上》：“大匠不為掘工政廢繩墨；羿不為掘射變其彀率。君子引而不發，躍如也。中道而立，能者從之。”

4. Form and Mental Approach

According to the 'Biographies of Eminent Women', you should 'draw the bow in a state of tension and release it in a state of relaxation'. The 'state of tension' means coming to full draw with all your might; the 'state of relaxation' means that your mind should be calm and concentrated. These are the principles of 'form' and 'mental approach'.

11C31

若夫校試於演武之場，則兢業操持，而神凝思曠。若無監司之臨其上，若無大眾之列其左右，徐徐然，若閑習於野曠之間。則心泰而力完，必無嘈雜之驚，倉遑之失。於是，鏃鏃能知，而矢矢審固。如之，何不中。

Anyone who is out in the parade ground under examination conditions is performing under enormous mental pressure. Under these conditions, you have to remain calm and collected, just as if there were no examining officer watching over you, and no crowds all around you: you must remain cool and calm. Just imagine yourself practising out in the middle of nowhere; that will help you settle your mind and thereby bring you to the height of your powers; you won't let noises startle you or make panicky mistakes. When you have achieved that state of mind, make sure that the arrowhead contacts the finger every time, and that you stop to concentrate and firm your stance for each shot. Like that, how can you miss?

11C32

故，中的之可取必者，自從容閑暇得之也。未有匆忙恍惚而可取必也。匆忙有中，亦幸耳。從容閑暇，乃善射之主宰。設若試場校射一發至五矢，上下而猶未中者，更要從容、審、決。必勿因不中而動荒忙之念。動念，則益乖張，而六、七、八、九矢更無中理矣！

So every arrow which hits the target has to be assured of doing so by virtue of being fired while you are at ease and doing things at your own pace. That assurance can only come from the absence of nervousness or haste. If you are hasty or nervous and you still hit, that's no more than a lucky shot. 'Being at ease and doing things at your own pace' is the cornerstone of good shooting. Supposing you are under examination conditions: if you have still not scored a hit after your first five shots, you must still keep yourself at ease, keep up your concentration and your resolve. You must never fall into the error of rushing your movements just because you still have not scored a hit yet. If you rush your movements, you will just compound the problem, and then shots six to nine have no way of hitting either.

IIC33

又如長驅接戰之期，旌旗蔽空，鉦鐃震地，倭鋒耀日而來，胡馬揚塵以進。懼心一動，則手顫身寒。即平日能穿七札。亦必委而不振矣！故為將之道：當先治心。譽之不喜，激之不怒。勝而不驕，敗而不懼。若泰山之崩於前而不驚。若虎、兕之出於後而不震。

You are on the road to battle, the sky darkened with flags and pennants,⁴¹ the ground shaking with the crash of gongs and cymbals, the sun obscured by the blades of the enemy, the dust churned by the hooves of the advancing nomads' horses. With each thump of your heart, your hands shake and a chill enters your body. The hand that on a normal day can shoot through seven layers of armour must not let you down on this day! Thus in the spirit of generalship, you have to bring your mind under control.⁴² You must feel no pleasure in the face of praise, nor anger in the face of provocation; no pride in the face of victory nor anticipation of defeat. Before you, Mount Tai's slopes tumble and you do not flinch; behind you the tiger and the rhinoceros break their cover and you never turn a hair.

IIC34

無動容，毋作色，而和其肢體，調其氣息，一其心志。備此五德，惟毅率之是圖。失諸正鵠，反求諸其身。此君子之道也。

The body should not waver, you should not be flushed, get your form together, regulate your breathing, your conscious and subconscious aims should be the same. Only when you possess all five of these virtues can you hope to perfect the full draw.⁴³ Any error on the target face has its origins in the archer himself. This is the way of the true gentleman.

IIC35

昔之觀射者，見其百發百中，乃曰：“可教射。”問之，則教以善息。善射者以技善息者，進乎技矣！苟志不先正，隨氣為盈涸，即命中。烏能比乎禮樂哉？

Once there was somebody who watched an archer shooting and, after the archer scored a hundred hits with a hundred shots, he said, 'I can teach

41. 宋·蘇軾《赤壁賦》：“方其破荊州，下江陵，順流而東也，舳艫千里，旌旗蔽空，酺酒臨江，橫槊賦詩。”

42. 宋·蘇洵《蘇老泉先生全集》卷二：〈心術〉。

43. 明·王陽明《王陽明文集》卷七：文錄四，〈觀德亭記〉。

you something about shooting.' When the archer asked him about it, he explained how to perfect his breathing. If an accomplished archer utilizes the appropriate technique to breathe properly, he can progress beyond simple technique.⁴⁴ If [an archer] has not first set up his form and mental preparation for the shot, and his breathing is not deep and full, how can he expect to 'compete to the accompaniment of the ritual music'?

IIC36

身法第五

夫人之射，雖在乎手，其本主於身。每射時，如身挺然直立，兩足相並，此謂“大架”第。足並而下無力。肩高而手易搖。如兩股盡開，身伏手低，此謂“小架”第。身伏，手不能起。足開，腿急難收。二者，若與敵人對射，大架不便躲避，小架苦於收足：均未為善。

5. Stance

Although all shooting is done with the hands, it is rooted in the body. When you shoot, if your body is held fully erect with the feet parallel, this is called 'the big frame' form. But keeping your legs parallel deprives them of strength. When your shoulders are held high, it is easy for your arms to waver. When you spread your buttocks to the full, the body leaning forward and the arms low, this is called 'the small frame' form. If the body is leaning forward, the arms cannot rise. If your feet are far apart, you cannot get your thighs together in a hurry. In either case, if you're shooting in the face of the enemy, the 'big frame form' makes it inconvenient to dodge and the 'small frame form' is uncomfortable when it comes to bringing your feet back together. Neither is ideal.

IIC37

身法之善，莫若蹲腰坐胯，最為便宜。腰蹲，則身不動；坐胯，而臀不顯。肩、肘、腰、腿力萃於一處。易起，易伏。遇敵之際，前手挽弓，可衛一身。控拽、撒放，身俱不動。在射者有法，而旁視者美觀矣。

For a more ideal method, there is nothing to match settling down your hips and resting your weight on your haunches like sitting: this is the most convenient. If you settle your hips down, then your body will remain still; and if you rest your weight on your haunches, your bottom will not stick out. This [position] allows your shoulders, elbows, hips and thighs to concentrate the strain evenly in one place. You can get up or bend down easily. When you encounter the enemy, the bow-hand with

44. 《莊子·養生主》：“臣之所好者：道也。進乎技矣。”

the bow can defend the whole body. When you take the string, pull back and then release, your body will not waver. This makes sense for the archer and looks good to the onlooker.

11C38

《射經》曰：“頤惡傍引，頸惡卻垂，胸惡前凸，背惡後偃。皆射之骨髓疾也。故身前竦為‘猛虎方騰’。額前臨為‘封兕欲斗’。出弓弣為‘懷中吐月’。平箭闊為‘弦上懸衡’。此皆有威儀之稱也。”

[Wang Ju's] manual says, 'Positioning the cheek next to the string, the neck arching back, the chest jutting out, the spine arching backwards — all of these are fundamental errors of shooting form. So where the body tenses forward is called "the fierce tiger gathers himself to spring". Where the brow inclines forward is called "the mighty unicorn [lowers its head] to do battle". Where the bow-limbs are pushed forward is called "producing the moon from within the chest". Where the arrow nock is drawn straight, it is called "hanging the scales on the string". All of these are terms denoting dignity of stature.'

11C39

手法第六

昔晉平公使工為弓。三年乃成，射不穿一札。公怒，將殺工。其妻見公，曰：“妾之夫造此弓，亦勞矣。而不穿一札，是君不能射也。妾聞射之道：‘左手如拒，右手如附枝，右手發箭，左手不知。’”公以其儀而射，穿七札。此儀也。端身如榦，直臂如枝，左臂毫髮不動。巧力盡用之右手。是射家極則也。

6. Arm Position

Once upon a time, Duke Ping of Jin ordered a bow from a bowyer.⁴⁵ In three years it was ready, [but the Duke] could not even make it pierce a single layer of leather armour. Duke Ping flew into a rage and ordered the bowyer to be put to death. The bowyer's wife went to see the Duke and said, 'My husband made this bow, and what a lot of trouble it gave him! And now the fact that you can't even shoot through a single layer of leather armour is just down to your not knowing how to shoot. I have heard the correct way of shooting is: "Raise your left arm as if pushing against [a boulder]; your right close in [to your ear]; the right hand releases the shot and the left hand does not react."' Duke Ping

45. See Chapter 7, paragraph 7B.

tried shooting in the manner she had described and his shot pierced seven layers of armour. This is the proper method. Straighten your body like a flagpole; make your arms as straight as branches; don't let your left upper arm move by a hair's breadth. The strength and skill is all in the right hand. This is the archer's ultimate creed.

IIC40

射雕、穿楊之技，非學者所易到也。今學射者，曰：前手，搦弓以緊為主；後手拽弦撒放有法。是前力也，後巧也。其法：左手執弓必中。“中”云者：在把之中。且欲當其弦心也。

The technique to shoot eagles [in full flight] and hit a willow leaf [at a hundred paces] is not one the learner can easily attain. For today's students, they say that for the bow-hand, firmness is the main factor in gripping the bow, while for the string hand, pulling the string and releasing is a matter of technique. That is to say, the bow-hand uses force and the string-hand uses craft. The method requires that the bow-hand gripping the bow must be centred. 'Centred' means centred on the grip opposite the nocking point on the string.

IIC41

右手取箭，覆其手微拳，令指第三節齊平。以三指捻箭三分之一，加於弓亦三分之一，以左手頭指授之，則轉弓，令弦稍離身就箭：即以右手尋箭羽，下至闊，以頭指、第二指節當闊，約弦徐徐送之。令眾指差池如風翻，使當於心，又令當闊，羽向上，弓既離身，即易見箭之高下，取其中平直。⁴⁶

Grasp the arrow with the right hand, slightly curling the fingers but keeping the third finger joints level. Next, pinch the arrow with three fingers (i.e. thumb, index and middle) one-third along its length and place it against the bow, also one-third along the arrow's length; then taking up the arrow on the left forefinger, turn the bow so that the string moves slightly away from the body and closer to the arrow. Then let your right hand find the fletching and then move down to the nock until the first and second joints are level with the nock, and slide the nock gently onto the string. Next, spread out the fingers (like a peacock tail) and place them level with the middle of the string and touch them against the nock once again. Check that the fletching is pointing upward, then move the bow and the string away from the body so that you can easily check the

46. See Chapter 9, paragraph 9B2.

vertical alignment of the arrow and ensure that it is correctly located in the centre with the correct horizontal alignment.

11C42

然後，前手如推泰山，後手如握虎尾。一拳主定，前後直正，慢開弓，緊放箭。射大，存於小；射小，加於大。務取水平。前手撇，後手絕。“存”云者：壓其前手。“加”云者：舉其前手。總之，欲拳與肩齊也。

Then you [push forward] your bow-hand as if pushing away Mount Tai, and your string-hand is like hauling on a tiger's tail. One fist keeps control. Keep the front and back fists level and straight. Draw the bow slowly, then release with your hands held tense. If the target is big (close), drop the hand to the small [area of the target you are aiming at]. If the target is small (distant), raise your hand to aim at the whole of it. Strive to keep [the bow and draw-arm] level. The bow-hand 'thrusts' and the string hand 'snaps'. 'Dropping' the hand means dropping the bow-hand, while 'raising' means raising the bow-hand. In short, you keep the fist and shoulder moving in unison.

11C43

“前撇後絕”射之元機。“一撇一絕”乃相應之妙。萃聚精神，奮力推拽，胸銳前挺，背猛後夾，則箭疾而加於尋常數等矣。

'Thrust the bow-hand and snap the draw-hand' is fundamental to archery. 'Thrust and snap' are the essence of co-ordination. Concentrate, divide your strength between pushing and pulling, pull up your chest to expand at the front and force your back to pinch together [at the shoulder blades]. Then the arrow will go off fast and will go several times as far as it would otherwise.

11C44

學者之病，在始拽弓時，兩手就緊，至放手轉不加力，矢去不遠。若肩手不對，矢向兩旁。或後手得法，前手不應，箭不平快，出門便動。或前手得法，後手不應，箭必懈怠，將落必動。此巧力之妙，在撒放時用。

One beginner's error, when they start for the first time to pull a bow, is that as both arms start to feel the strain, it gets to the point where the [beginner] drops his efforts and doesn't push any more so that the arrow doesn't go far. If the shoulders and arms are not level, the arrow will be deflected horizontally. Or if the draw-hand works correctly and the bow-hand does not co-ordinate with it, the arrow will not be level and fast and it will not leave the bow straight. Or again, if the bow-hand works

correctly and the draw-hand does not co-ordinate with it, the arrow will lack energy⁴⁷ and start to waver as it loses momentum. These are the tricks of skill and strength to be employed at the point of release.

IIC45

凡箭去搖頭，乃右手大食指扣弦太緊之故。其扣弦太緊，是無名、小指鬆開之故。射時，用小草梢一寸，以無名指、小指共掐於手心。箭去而草不墜，即箭不搖擺矣。

If the arrow doesn't fly straight, the problem stems from the draw-hand thumb hooking the string too tightly. This is in turn caused by the ring finger and little finger being open and relaxed. When you shoot, try pressing an inch or so of straw between your ring finger/little finger and the base of the palm of your hand. The straw mustn't fall when you release, and then the arrow will fly straight.

IIC46

凡此皆下學之方耳。今之射者，疇能右發而左不知也。“不知”云者，學造乎熟，形神俱凝，乃上達之妙也。聖人天君⁴⁸泰然，常應常靜，左手如拒，亦復如是。吾輩由用力，以造於不動，由知礙以造於不知，庶乎古之絕技哉。

All of the above is the approach to 'ground-level' work. Anyone who shoots these days knows how to release without the bow-hand reacting. 'Not reacting' is something that you become accustomed to through study: the external appearance and the mental process become fused as one. This is what then becomes the 'soaring achievement'. The Great Rulers and adepts maintained their inner peace: always aware but always tranquil. The action of the bow-hand, as if 'holding off' something, reinforces this. Nowadays, we use force as the basis for preventing any movement and use feeling for the arrowhead as a trigger for releasing without any [bow-hand] reaction. This is the most high-powered technique of ancient times.

IIC47

足法第七

凡射，前腿似櫛，後腿似癰。隨箭改移，只在後腳。左肩與胯對垛之中，

47. 《韓非子·八姦》：“是以賢者懈怠而不動……”。

48. 《荀子·天論》：“心居中虛，以治五官，夫是謂之‘天君’。”

兩腳先取四方立，後次轉左腳大指，對左肩尖，當垛中心。右腳橫直，鞋袂對垛。此為“丁字不成，八字不就”。

7. Foot Position

Whenever you shoot, your forward leg position should be as if you were stepping on something and the rear leg should be bowed. Any movement to follow the aim of the arrow should only be with the rear foot. The bow-hand shoulder and the hip should be level, pointing at the centre of the target mound. Start off with both feet parallel. Next, bring the toe of the bow-hand foot in line with the bow-hand shoulder, pointing towards the middle of the target mound. The draw-hand foot remains at right-angles with the side-opening of the sandal facing the target mound. This is called 'not quite at right-angles and not quite in a "V" '.

11C48

射右改左，射左改右，射之之常法也。迨學之，既熟，則便截如轉環，所以能應變。此又不可不知。

Shooting to the right then changing to the left, then back again is a common method in target archery. You need to wait until your studies are quite advanced and then move on to how to turn around, so that you will be able to handle the change. But this is another subject you cannot afford to overlook.

11C49

眼法第八

昔，飛衛教紀昌射，以鰓懸虱著牖。望之三年，若輪。貫虱心而懸不絕。蓋視小如大，學不瞬，而後能。此射家第一義也。

8. Using Your Eyes

Once upon a time, Fei Wei taught Ji Chang. [Ji Chang] hung a flea on a thread in the window and stared at it. After three years, it appeared to him as big as a wheel. When he shot the flea, he hit its heart and the thread never broke. This was something he could do only after he had learned to look at something small until it appeared large, and learned how to avoid blinking. This is the greatest virtue an archer can possess.

11C50

人每拽弓，便看把子，滿俱把子矣：箭多不真。如兩目正視把子，亦不得真。然，用目看扣，看鏃，非能射也。對敵之際，目稍瞬，則不及避而制於人矣。

Whenever people draw a bow, they look at the target face and fix their whole attention on it. But then many of their shots don't score. If you look directly onto the target with both eyes, it's also difficult to be accurate. And yet using your eyes to nock the arrow or check [the position of] the arrowhead is also a recipe for failure. In the face of the enemy, if you blink for a moment, you may be unable to dodge in time and someone would get the better of you!

IIC51

故，凡射對敵或對把，站定，意在把子或敵人，不得看扣。至箭頭進弓弰時，便審顧把子中心，即放。箭去無有不中的者。其審顧法：要兩眼角斜視，得真。我輩欲求箭穩多中。當於此注意焉。

So whether you're shooting at an enemy or at a target, you must take a firm stance and keep your attention on your target or your enemy: don't look at the arrow while you nock it. When the tip of the arrow reaches the grip, release it immediately. Firing like that never misses. There is a method of aiming looking sideways: both eyes must look sidelong at the target, then you will be accurate. Nowadays, when we want our shots to be consistent with a lot of hits, we have to pay attention to this.

IIC52

審固第九

南唐子曰：《記》稱“持弓審固”。“審”者：詳審。“固”者：把持堅固也。“審”字與《大學》：“慮而後能得”。“慮”字同。君子於至善，既知所止，而定，而靜，而安矣。又必能慮焉，而後能得所止。君子於射箭，引滿之餘，發矢之際，又必加審，而後中的可決。

9. Concentration and Stance

Qi Jiguang said, 'The "Record of the Rituals" refers to "Grasping the bow, concentration and firm stance". 'Concentration' is minute attention [to your shooting]; 'firm stance' refers to maintaining a firm grip on the bow. The word 'concentration' is the same as 'meditation' found in the *Great Learning*.⁴⁹ 'He meditates on it and then he is able to achieve it.' When a gentleman is seeking to perfect himself completely, he knows at what point he should have reached that [perfect] stage, and resolves to attain it, then becomes tranquil, then at peace. And he must be able to meditate on these qualities before he will be able to totally fulfil his

49. 《大學》：“大學之道在明明德，在親民，在止於至善。知止，而後有定，定而後能靜，靜而後能安，安而後能慮，慮而後能得。”

aim. When a gentleman is practising archery, at the point where he has already drawn his bow fully, and in the moments before he releases the arrow, he must concentrate on his shooting stance, and then he will have the assurance of hitting the target.

IIC53

今射者，多於大半矢之時審之。亦何益乎？且，夫審者，今人皆以為審的而已。不知審的第審中之一事耳。蓋弓滿之際，精神已竭，手、足已虛，若卒然而發，則矢直不直，中不中，皆非由我心使矣。必加審之，使精神和易，手、足安固，然後發矢。其不直不中，為何故？欲知“審”字工夫，合於“慮”字工夫，玩味之乃得。

Nowadays, archers start this concentrating process as soon as they have drawn the arrow over two-thirds of the way back. What good does that do them? And as for ‘concentration’, lots of people just think it’s no more than concentrating on the target. They do not realize that concentrating on the target is secondary to the issue of concentrating on how you are going to hit it. The point is, at the moment of reaching full draw, your attention is stretched to the full, your arms and legs are no longer straining. If you release without premeditation, then whether the arrow travels straight, and whether it hits is not determined by your conscious mind. You have to deepen this concentration, make your mind open,⁵⁰ your arms and legs firm but relaxed. After that, the arrow is released, and there is no reason for it not to fly straight, not to hit the target. So you need to know what is behind the concept of ‘concentration’, relate it to the concept of ‘meditation’ [in the *Great Learning*], get completely into it and then you will succeed.

IIC54

指機第十

射之有決，俗名“指機”。眼宜少長，不宜圓。所以然者，取其緊夾大指。庶臨陣無疏虞。此不易之法也。吾友于一躍，別有獨得之妙。其言曰：用決之策，原為手指皮、肉不能與絲弦相當。故用此借木堅也。今人多苦大力勾挽，致箭縱橫不調。

10. The Thumbring

The ‘thumbring’ (決) in [classical] archery is now known as ‘指機’. The hole ought to be oval and not circular; the purpose of that is to ensure that

50. 《禮記·學記》：“和易以思，可謂善喻。”

it sits snugly on the thumb, and there will be no untoward accidents when it comes to the battle line. This is not easy. My friend, Yu Yiyue, has a another special trick. According to him, the original purpose of the thumbing was to keep the skin and flesh of the fingers from making contact with the string. So they used the rigidity of wood to achieve this. Nowadays it's painful for most people to hook the string and draw the bow with great force, and this causes them to let off the arrow off-centre and out of control.

IIC55

用是機者，其中有微妙焉。如用於大指極根，箭去木而不靈，動搖遲鈍隨之。用於大指紋中，扯拉無力，滑泛易去。巧、力、審、顧、撇、放之法，會用不及而箭去矣。世人有此二病，莫知其端。

The use of the thumbing also has its own little tricks. If you put it right at the base of the thumb, the arrow will lose its springiness as well as wavering and travelling slowly. If you put it on the fold of the thumb-joint itself, you can't apply proper force when you pull and it's easy to slip and misfire. All the skills [of the string hand], pushing force, concentration, sidelong aim, 'thrusting' and 'snapping' cannot be applied in time because the arrow is already on its way! Everyone suffers from these two errors and no one understands the cause.

IIC56

今善射者，用決於大指近根處。搭箭拽弦時，決自徐徐前行，方到大指紋中。弓開已滿，審、顧、用力，即放矢去平快俊妥。良由此耳。指機徐徐之妙，難以言形。惟以意念，學射者參之。

The expert archer puts the ring near the base of his thumb. When he nocks the arrow and pulls the string, the ring slides gradually forward, finally arriving at the fold of the joint. When the bow is fully drawn, you concentrate, aim sidelong, tense your hands and the arrow is released. Then it will fly straight, fast and in fine form. This is how to improve your style. This creeping of the ring is not easy to put into words. I'm just giving you the general idea: the archery student will have to try it out in practice for himself.

IIC57

馬射第十一

王珣馬射法曰：“勢如追風，目如逐電。滿開弓，急放箭。目勿瞬視，身勿倨坐。不失其馳，舍矢如破。”

11. Horseback Archery

Wang Ju's manual for horseback archery says,

'As powerfully as if chasing the wind,
The eye moves like a bolt of lightning,
Draw the bow fully, immediately loose off the arrow,
The eye is fixed unblinking,
Your body as solid as rock,
Don't lose your momentum,
Loose off the arrow with determination.'

11C58

夫馬者，人之命。則調馬先之矣。凡馬，須平日適飼，養時調度，蹤躡聽令，觸物不驚，馳道不削。前腳從耳下齊出，後兩腳向前倍之，則疾且穩，而人可用器。胡馬慣戰，數倍中國。居常調度之功也。

A man's life depends on his horse, so training your horse is the thing you put first. Always attend to your horse's appropriate feeding and seasonal rota. Train her to pace correctly, to be obedient over moving on and stopping, not to panic when she encounters obstacles, and not to cut corners at the gallop. The forelegs should move forward together from the level of the ears, and the rear legs need to come forward coordinated with the front legs. This makes the movement both quick and stable, allowing the rider to use his weapons. The steppe-land horses are used to warfare much more than those of the Chinese. This is the fruit of regular training.

11C59

馬上射把，有以箭插衣領內，或插腰間；俱不便。必須以箭二枝，連弓弣把定，又以一枝，中弦掛為便。

When it comes to target archery on horseback, there are some who stick arrows into their collars or belts; neither is effective. For effectiveness, you should always take two arrows, grasping one firmly against the grip of the bow while nocking the other on the string.

11C60

馬始騎時，左手挽弓，右手攬轡。馬一縱時，身即左跨，便搭箭當弦。左手高張，如鳥舒一翼。弓拽圓滿，至把子與馬相對，左手即落與左膝，相對望把根，射百發百中。

When you first get the horse to move on, your left hand is used for

grasping the bow and the right for holding the reins. Once the horse has got going, lean over to the left to allow you to nock the arrow onto the string. Bring the bow-arm up high like a bird stretching its wing, and bring the bow to full draw [with the bow-hand high]. Then as your horse draws level with the target, bring the bow-hand down level with the left knee and shoot while looking at the base of the target stand; that way you will always hit the target.

IIC61

凡開弓，必至九分滿乃發。即七、八分亦難中也。馬多右開，人身左跨。左重，馬不能右開。間有左開，身一右轉，馬即過矣。馬行直否，盡在兩腿。

When drawing, release when you are [at least] ninety per cent of full draw: it's difficult to hit when the bow is just seventy or eighty per cent drawn. Mostly, horses lead with the right leg and the rider rotates his waist to turn to the left. [But] if you put your weight onto the left side, your horse can't lead with his right leg. Occasionally, you'll get a horse that leads with the left leg: as soon as you rotate your body to the left, [such] horses will swerve [the same way]! Whether the horse runs straight is decided by the thighs of the rider.

IIC62

若久馳純熟，則馬上身法，如分鬚，對鐙，抹秋云者，惟所用之。鄭若曾⁵¹曰：“武士之常技三。曰分鬚：向前射也。曰對鐙，向旁射也。曰抹秋：向後射也。”

Only once you are long used to riding at full gallop can you try the styles of horseback archery, known as 'shooting across the mane', 'shooting level with the stirrup' and the 'Parthian Shot'. Zheng Ruozeng said, 'The warrior has three native skills: "shooting across the mane" (meaning forward), "shooting level with the stirrup" (meaning down sideways at the ground) and the "Parthian Shot" (meaning to the rear).'

IIC63

分鬚者，以馬之頸鬚為界，一邊挽弓，一邊發矢。乃弄花巧之法。邊軍

51. Zheng Ruozeng was a Ming military commander who fought the Japanese pirates. He was the author of 《籌海圖編》, 《江南經略》, 《四奧圖論》 and 《黃河圖議》. See 臧勵蘇編：《中國人名大辭典》（鄭州：中州古籍出版社，1993），頁1564，top row, third entry.

不然。以身俯出馬外，於此挽弓，就於此發矢，臨敵倉皇之際，庶無謬誤。

When shooting over the mane, you use the horse's neck as a divider, drawing back on the bow on one side, and then loosing off the arrow on the other. This is a show-off style: the border divisions don't shoot like that. What you do is to lean off the alignment of the horse's body, and in that same position both draw the bow and fire the arrow. In the heat of battle, won't this give rise to embarrassments?

11C64

對鐙者，主左一邊而言。今北方響馬，常勒馬由道右而行。讓客於左以便發箭。亦此義也。然，是法但可施於途遇一、二人耳。設使眾敵叢射，或敵在右，將旋馬以應酬之也。

'Shooting level with the stirrup' mainly refers to shooting on the left side. With horses reared in the north, they normally ride on the right, letting strangers pass them on the left so that they can shoot [if necessary]: this is the same idea. However, this method is only good when you meet just one or two opponents on the road. If a whole bunch of opponents are shooting together, or if your opponent is on your right, then you have to turn on him by bringing the horse around.

11C65

學騎射者，須習左右手皆便方可。雖然此以射言也，若披堅執銳，攻戰於白刃之外，又必兩邊用力，身活直坐，以張弄武藝。身若太伏，恐馬前失。身若後倚，恐馬仰坐。左右少跨，與射不同。蓋射不用力，身猶輕也。手持器械，盡力使用。身太離鞍，馬蹶人仆。是可以不慎乎哉？

If you want to learn horseback archery, you have to learn to shoot with either hand. You have to shoot ambidextrously before you can achieve anything. I mention this in relation to archery; but actually whatever your form of combat, with stave or blade, with any fight involving unsheathed weapons, you had better be able to apply your strength on either side, and keep your body erect but flexible if you are to apply your martial skills. If your body is too far forward, you risk the horse stumbling forward; and if too far back, you're in trouble if the horse rears up. If you have little leeway to turn left or right, you have to shoot with different hands. If you are forced to shoot without sufficient strength, then you are playing with your life. The hand which grasps a weapon must wield it with all its might. If the body loses contact with the saddle too far, you will lose your mount if the horse stumbles. Can you afford to be incautious about that?

IIC66

神奇第十二

夫射，貴神貴奇。凡射，以目至。神射，以意至。凡射，惟中左。奇射，兼中右。此今世之所間有，而學者所致也。

12. Instinctive Shooting and Other Exceptional Skills

All archers love instinctive shooting and other exceptional skills. Archery relies on the eye, while instinctive shooting relies on the mind. Most archers just shoot right-handed, while exceptional ones shoot with either hand. These are rarities nowadays, yet the student can achieve them.

IIC67

今夫彈鳥雀者，不視弓，不視彈：以意逆飛者而中之。挾矢者何獨不然？初學時，手、足、身、眼之法，毫不可廢。及其後也，諸法渾忘，意的之所在而矢無虛發。若樊進德輩是已。

People who shoot birds with stone-bows don't look at the stone-bow or the stone: they mentally intercept the line of flight and hit [the bird]. Why should those who wield arrows be a unique exception? For the beginner, proper hand, foot, body and eye technique is indispensable. But after attaining those skills, you can put aside all the [formal] techniques, mentally visualize the position of the target, and never miss a shot. This is like the descendants of Fan Jinde.

IIC68

夫射左者，敵出乎右則難矣。射右者，敵出乎左則難矣。吾友張一白，左右開弓，命中如一。擬古岳武穆之臂。

If you a right-handed archer, you're in trouble if the enemy comes at you from the left, and vice versa. My friend, Zhang Yibo, can hit just as effectively drawing with the left hand or the right, with shoulders like General Yue Fei of old.

IIC69

或有用撇懷射法，正馳馬，張弓以向左。忽轉跨而射右。前、後、上、下隨其所欲。射之勢險，節短，莫過乎此。《孟子》有言：“夫仁亦在乎熟之，而已。”惟射亦然。是以君子習焉。

Supposing you had someone who could shoot pushing out from the chest, and he draws at full gallop as if to shoot to the left, but then he

suddenly turns straight round and shoots to the right; he can shoot just as well forward, behind, up or down. The potential power and sharp release of the arrow can never be made greater than this. Mencius said, 'Benevolence, like grain, must be ripe before it is good.' Archery is the same: it becomes good by virtue of a gentleman's practice.

IIC70

習射，以堊為圈。兩人各立圈內，由遠及近，射相較，以避矢出圈者為負。眼明，手疾，身法步法俱到，而矢不及於其身。

Some students have a game where they make two chalk circles [on the ground], starting at a distance and gradually moving closer to one another. Each player stands in his circle and they shoot at each other from a distance. The one who has to leave his circle to avoid being hit is the loser. Quickness of the eye, hand, good foot and body technique are needed to keep from being hit.

IIC71

若獨習於家者，環堵之室，懸草荐於梁下，中粘紅紙，大如指頂，以為的。日日射之。的雖數步，其引滿，盡力，悉如百步法。至於箭箭紅心，則出而射百步，猶是矣！故曰：“閉門造車，出門合轍。”古人以投壺寓射，以滴油寓射。惟其理一，機同。顧所習謂何耳。

For those of you practising alone at home, find an enclosed space and tie a straw string with a piece of red paper the size of your fingertip stuck to it beneath a roof-beam to make a target and shoot at it every day. Although the target is just a few paces away, you should draw the bow to the full in just the same way as if it were a hundred paces away. When each arrow hits the red centre of the target, go out and shoot at a range of a hundred paces and you will do just as well! As the old saying goes, 'The end result is the same, though the means are different.'⁵² In the old days, people used to throw a short arrow into a narrow-necked bottle as an analogy for archery, or dripping oil through a tiny hole back into its bottle as an analogy for archery. It all boils down to the same thing. Can't it apply to your studies as well?

IIC72

諺稱：“武藝長一寸，強一寸。”射為諸藝之首，以其長也。更有長於射者，必也大器乎？雖然，三軍之命，懸於一將。今特患無將耳。

52. 朱熹《中庸或問》：“古語所謂：‘閉門造車，出門合轍’，蓋言其法之同。”

There's a saying, 'An extra inch of martial skill is an extra inch of power.' Archery is placed at the head of martial skills on account of its range. A person who has reached the top of the range in archery is a truly formidable asset. Nonetheless, the fate of great armies can hang on a single general; so the problem for us is: what if there is no proper leadership?

IIC73

《易》曰：“師，貞。丈人吉。”“丈人”者，為人所倚仗者也。使有仁義之將，恩、威足以服吾人之心，智、勇足以破敵人之膽。將見眾有所恃，而技藝可施，自皆膽大，力定，“一發五狍”矣！不然，雖有神射，亦何益哉？

The *Book of Changes* says: 'Before going on campaign, if the battalion makes a divination [and this hexagram appears] the "old man" will enjoy good fortune.' The 'old man' is the leader on whom the people rely.⁵³ As long as there is a general with the right qualities of benevolence and probity, his compassion and his stature will suffice to win over the hearts of our side, and his wisdom and courage will be sufficient to destroy the spirit of the enemy. Once such a general sees that the forces massed against him are afraid of something, and he has military skills to display, and his own side are all bold, strong and resolved, he can 'spear five boar with a single arrow'.⁵⁴ If you do not possess such qualities of leadership, no amount of extraordinary archery skills will be of any use to you.

IIC74

考工第十三

按古，天子之弓，合九而成規。諸侯合七而成規。大夫合五而成規。士合三而成規。蓋弓以直為良。故句弓者，謂之‘弊弓’。

13. Examination of Crafts

According to the ancient formula, a bow made for imperial use has a circumference of nine;⁵⁵ a bow made for the nobility has a circumference of seven; a bow for a sheriff has a circumference of five and a bow for a qualified officer has a circumference of three. A bow is only good as long as the limbs are straight: so if it is warped, it is called a 'deformed bow'.

53. 《周易》：“師：貞，丈人吉，無咎。”

54. 《詩·周南·驕虞》: A reference to the resounding victory of King Wu of Zhou (周武王) over the Shang Dynasty.

55. See Chapter 6, paragraph 6A17.

IIC75

夫弓有六善焉：一曰性體少而勁；二曰太和而有力；三曰久射力不屈；四曰寒暑力一；五曰弦聲清實；六曰一張便正。凡性體少，則易張而壽。

A bow has six qualities. First, small in size but powerful; second, first-class workmanship and strongly constructed; third, it does not weaken after being used for a long time; fourth, it has the same strength in hot or cold conditions; fifth, the string sounds clear and firm; sixth, it retains its form when drawn. Bows which are small in size are easier to draw and are durable.

IIC76

但患其不勁。欲其勁者，妙在治筋。凡筋生長一尺，乾則減半。以膠湯濡而極之，復長一尺。然後用，則筋力已盡，無復伸弛。又揉⁵⁶其材，令仰，然後傅角與筋。此兩法，所以為筋也。

The only problem is that [small bows] tend to be less powerful. The key to making them powerful is in the treatment of the sinews. Sinews which stretch a foot when fresh will dry out to half that length. They have to be soaked in glue and stretched as far as they will go out to a full foot. After that, when you use them, the full strength of the sinew has been exploited and they won't stretch back and relax again. Furthermore, you roughen the wood and make it stick up before you attach horn and sinew to it. Both these methods are for dealing with the sinew.

IIC77

凡弓節短，則和而虛；挽過吻，則無力。節長，則健而柱；挽過吻，則木強而不來。節（節謂把梢裨木）得中，則和而有力，仍弦聲清實。

If the joints of the bow are too short, it will be weak when it is tillered. When [the string] is pulled back beyond the corner of archer's mouth, it will fail. If the joints are too long, the bow will be strong, but it will stack; when [the string] is pulled back beyond the corner of archer's mouth, the wood will be strong but the bow will be hard to pull. (The word 'joint' used here refers to the overlap of the splice at the grip and the ears.) Between the two extremes, the bow will be powerful once it is tillered, yet the sound of the string will be clear and firm.

56. See Chapter 6, footnote 10.

11C78

凡弓初射，與天寒，則勁強而難挽。射久，天暑，則弱而不勝矢。此膠之為病也。故膠欲薄，而筋力盡。強弱任筋而不任膠。此所以射久，力不屈，寒暑力一也。

Supposing you shoot with a new bow for the first time, or the weather is cold, and it is very stiff and hard to draw; or else after you have shot with it for some time, or the weather is hot, it becomes weak and insufficient to drive the arrow, that is a defect in the application of the glue. Therefore, the glue must be made very thin and the strength of the sinew exploited fully. The strength of the bow is a function of the sinew, not the glue. This is the basis of the words: 'it has the same strength in hot or cold conditions'.

11C79

弓所以為正者，材也。相材之法，視其理。其理不因矯揉而直中繩，則張而不跛。此弓人之所當知也。噫，古者上有道，則百工信度。且得執藝事以諫。⁵⁷

The thing that maintains the proper overall structure of the bow is the wood. The way to select wood is to examine the grain. If the grain is straight and follows the plumb-line without the need for bending or scraping, then it will not deform when drawn. A bowyer should know this. Truly, in ancient times, the aristocracy acted in a proper manner and then all the craftsmen would accept their system of weights and measures. This is how [the ancient rulers] could govern the crafts and trades so as to eliminate errors.

11C80

唐太宗聞弓人論木：“心不直，則脈理皆邪：深致取焉。”猶有古人遺意：“若射而穿，則斬函人；射而不穿，則斬矢人。”⁵⁸雖曰“威克厥愛允濟”⁵⁹，然於正心以正百工之道遠矣。

When Emperor Tai Zong of the Tang Dynasty discussed wood with a bowyer, [he said]: 'If the core-wood is not straight, then all the knots and grain will be crooked. You must take the wood from as far in as

57. 《書經·胤征》：“官師相規，工執藝事以諫，其或不恭，邦有常刑。”

58. 《孟子·公孫丑上》：“矢人豈不仁於函人哉？矢人唯恐不傷人；函人唯恐傷人。”

59. 《書經·胤征》：“嗚呼，威克厥愛，允濟。愛克厥威，允罔功。”

possible.' In the old days, they also had a tradition: 'If the shot penetrates, then execute the armourer. If the shot does not penetrate, then execute the arrowsmith.' Although it is said, 'Severity must prevail over benevolence to fulfil good management', to me, the far greater principle is to lead the craftsmen by setting a good example through your own rectitude!

11C81

夫兵，凶器也。始之以正心，終之以來百工，則遠人將服之。其可忽哉？其可忽哉？

All weapons are the instruments of destruction. But the starting point must be to put your own mind-set in order; your finishing point must be to use your personal example to win over all who work for you. Then you will influence even those who have no connection with you. How can you possibly overlook this? How can you possibly overlook this?

From the book translated above, we can gain a quite clear understanding of the mainstream of Ming archery theory. Judging from illustrations from Ming times, the bow in common use was smaller than those which came into use in the following Qing Dynasty (1644–1911). In size, they were close to the size of bow used by traditional Korean archers today, and very similar in construction.

The details of Ming bow manufacture were recorded in a survey of industry, agriculture, fisheries and crafts (天工開物) by Song Yingxing (宋應星) (1587–?). The details vary little from the Han Dynasty description translated in Chapter 6 (paragraph 6A). Those who are curious can read Song Yingxing's description in *Chinese Technology in the Seventeenth Century* (T'ien-Kung K'ai-Wu) translated into English by E-Tu Zen Sun and Shiou-Chuan Sun,⁶⁰ Chapter 15.

Song Yingxing's motive in researching and describing the crafts was to recognize their contribution to Chinese culture and the economy — a contribution that conservative Confucian elements in the Ming court were constantly belittling. Such was the strength of feelings among Ming official circles against commerce and trade that officially China was sealed off from external trade and technological development was stifled. Although firearms were undergoing constant development and diversification, there seems to have been little advancement. Military technology broadened, but failed to deepen. For example, muskets of limited accuracy and reliability were

60. Dover Publications Inc. New York: 1997.

commonplace. But the sort of accurate and reliable muskets that the Japanese developed on the basis of Portuguese technology were not found in China. Indeed, much ingenuity was put instead into rockets, bombs and weapons to spread poison gas.

In archery, we can see a symptom of this technological failure. Song Yingxing devotes a section of his survey to the construction of crossbows. He regarded the crossbow as a weapon for strategic defence purposes but unsuitable for use in the field. Made of wood, the prods were a single piece of wood reinforced by a number of bamboo laths bound together to increase their strength. This gave the Ming crossbow better resistance to adverse weather conditions in the field. The number of layers of bamboo reinforcements varied between three, five and seven. The string was made of hemp waxed with wax or goose-grease.

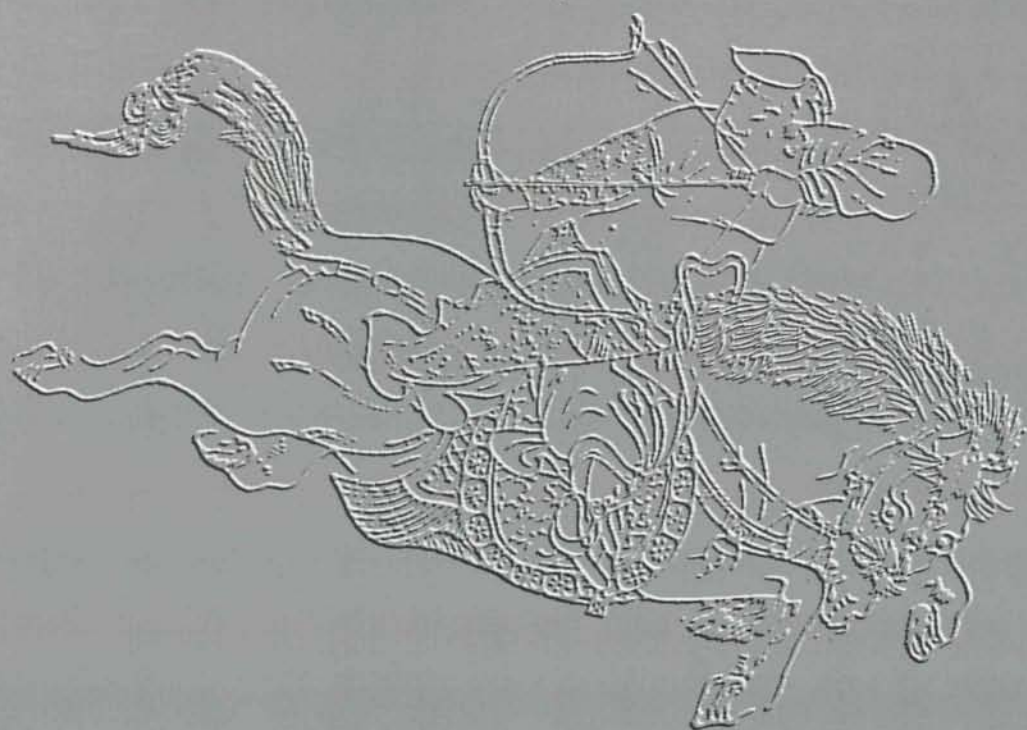
The manufacture of such crossbows, you might have thought, should have benefited from the long tradition started in the Han Dynasty, added to by development in bronze casting.⁶¹ It is shocking, then, to find that at the end of the Ming Dynasty, the writer Mao Yuanyi in the *Guide to Military Preparedness* was amazed at the technology of the Han bronze crossbow mechanism he discovered in the collections of a few antiquarians during his time, and admitted that the technology to produce such technical wonders no longer existed in his time. The graduated sighting scale was new to him. Instead, he writes, crossbow mechanisms were being made from deer antler, and frequently failed during use.⁶²

This is just a small illustration of how the stifling policies of the Ming governing class resulted in lost opportunities to develop technology. Possibly, the disruption of life in China in the Yuan Dynasty had caused the total loss of the skill in bronze casting, so that old technology could not be applied and new technology could not be developed.

Either way, the major developments in thinking on technique and mental approach in archery were not matched by technological development in the bow and crossbow, and development in firearms fell far behind similar developments in Europe at the time.

61. See Chapter 8, pp. 153–170.

62. 茅元儀《武備志》：“今四方擅弩之地，而皆不用古機：惟以鹿角為機。如弦轟大，一入角機則滾出弦逃。”



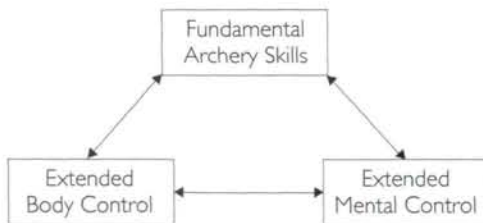
Mounted Archers
Ming Dynasty Woodblock Print (Anon.)



The Transition from Ming to Qing

Perfecting the Mind and the Body

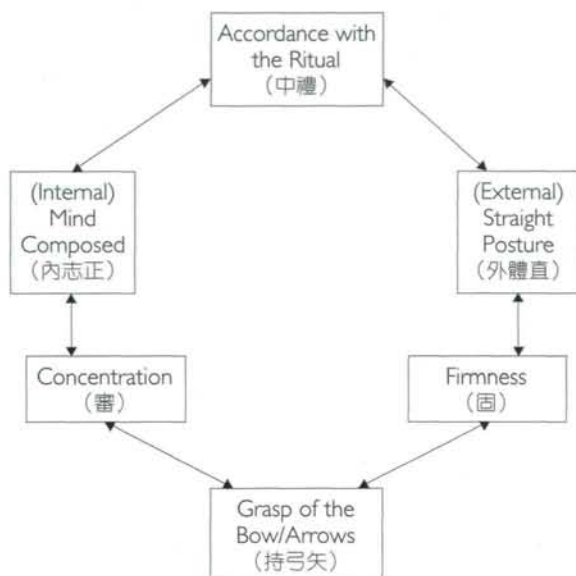
The concept of the ‘accomplished archer’ (善射者) comprised the achievement of a number of goals. In the view of writers writing at the end of the Ming Dynasty and the beginning of the Qing Dynasty, these could be summarized as:



Fundamental Skills

The fundamental archery skills were those practical skills described in the works of Wang Ju and Li Chengfen. As you can see, both authors drew on a structure laid down in previous works — at the most basic level, the core material found in *The Archery Ritual* of Confucius (Chapter 5, paragraph 5B1).

The basic core of fundamental skills in *The Archery Ritual* and their relationship to body control and mental control could be expressed as follows:



You can see Li Chengfen amplifying on this subject in Chapter 11 (paragraph 11C52).

Mental Control

In Chapter 7 (paragraph 7K1), you will recall that Lie Zi had perfect archery technique. He could do all the party tricks that were part and parcel of an external display of excellent archery; and yet Bohun Maoren was not impressed. The reason was that Lie Zi did not have the necessary *mental control*. The route to correct mental control was set out in Confucius's *Great Learning*, and it was elaborated by the Song philosopher Zhu Xi into a contemplative method of self-perfection (possibly influenced by Zen techniques of meditation).

Mental control techniques certainly could not be employed before the fundamental skills had been thoroughly learned. Chinese instructors looked down upon self-taught methods. The reason for this will become clear when we study the writings of Gao Ying (高穎) later in this chapter. The student had to perfect himself in the fundamental skills belonging to a recognized method (道). These skills had to be practised unceasingly until

perfect form was no longer a matter of conscious effort. That is because any resources being used for conscious control of the shot inevitably diminished the resources needed for the ultimate purpose of the shooting.

The *Great Learning* is also a 'recognized method'. It teaches that the ultimate mastery of the study of any subject is achieved only when a predetermined goal has been attained. (《大學》：“止於至善。”) This ultimate mastery is perceived in advance as a target and the student then steadies himself before it (“知止而後有定。”). If he has steadied himself, he is then able to clear his mind of extraneous matters. (“定而後能靜。”) Once having cleared his mind of extraneous matters, he can be at peace. (“靜而後能安。”) Once at peace, he is able to meditate. (“安而後能慮。”) Through meditation, he gets to tell the forest from the trees, tell causes from effects, and to put first things first. (“慮而後能得物有本末，事有終始，知所先後。”) This is close to the principle expressed in the *Great Learning*. None of these stages involves the learning of basic technique: that must be assumed to have been thoroughly ingrained before this process starts.

If we want to go back and review the enigmatic comment of Bohun Maoren to Lie Zi (Chapter 7, paragraph 7K1, “是射之射，非不射之射也。”), we should be able to understand it better on the basis of the explanation of the *Great Learning*. Lie Zi's shooting 'was shooting', merely according to the principles of archery, not according to the 'non-archery' concept of perfection.

If you want to understand what it is that the Japanese practitioner of *kyudo* or the Korean traditional archer seeks to achieve, it is this concept of holistic perfection expressed in the *Great Learning* and stressed by the Ming philosopher Wang Yangming.¹ That a Japanese practitioner may express the aim in terms of the teaching of Zen makes no difference.

Bodily Control

If mental control can be extended beyond the immediate mental clutter of the requirements of the shot, it is also true that the archer's control of his body can also be developed beyond the details of the physical performance of the shot. The most important of the methods to achieve this was controlling *qi*.

Control of *qi* is not magic. On the other hand, it cannot be explained in standard Western medical terms. *Qi* is understood in Chinese medicine to 'flow' like a liquid along a system of channels that Western medicine

1. 王陽明《大學問》：“大人者，以天地萬物為一體者也。”

does not recognise. I shall couch my explanation which follows in Western terms, notwithstanding that doing so will result in the loss of many nuances.

The term *qigong* (氣功) can be analysed as 'mental control over breathing'. At least, that is where the theory and its study start. In the Warring States period, the writer Guan Zhong (管仲) (d. 644 BC) explained that the mind's position in the body was the dominant position (心之在體，君之位也。); the 'spirit' (精) was the distillation of *qi* (氣之精也。), and *qi* was the 'charge' of the body (氣者，體之充也。).² Set out in these terms, the early view of *qi* was that it was a form of energy which could be concentrated, and this could be achieved through the mind. From the Han Dynasty on, the concentration and movement of *qi* was one of the major endeavours of traditional medicine.

The Daoist school believed that animals could instinctively marshal their *qi* to rid themselves of illness. In particular, the tortoise was considered to achieve extreme age through the fact that its breathing was so slow as to be almost imperceptible. From this developed the idea that the typical movements of animals — the elasticity of the snake's body, the stretching of a birds' wings, the belligerent stance of the bear or the undulation of the dragon — could all be mimicked by man to good effect. Added to this, slow, deep breathing would maximize the charge that breathing brought into the body.

From this theory there developed many styles of exercises, and such exercises became combined with almost every religious persuasion and every branch of Chinese martial arts. The effective mastery of *qigong* exercise could not be divorced from the practice of mental control as set out in the *Great Learning*. In martial arts, the aim of the integration of *qigong* was firstly to ensure that the demands of natural breathing did not conflict with the moment-to-moment demands of physical movement of the body, and if possible to bring to bear the 'gathering' of *qi* to make one's fighting more effective.

One technique of *qigong* is learning to breathe by using both the ribcage and the diaphragm to inflate the lungs. The muscle tension required to keep a heavy bow at full draw inhibits the free movement of the ribcage; so facility in diaphragm breathing (丹田呼吸) is clearly helpful in that it helps ensure that sufficient air comes into the lungs.

Another technique is hyperventilation. Practitioners of *qigong* interpret the tingling at the ends of the fingers caused by hyperventilation as a sign that the *qi* has effectively been pushed to the extremities of the body. Hyperventilation before the draw can also help ensure a sufficient supply

2. 《管子》。

of oxygen to allow the muscles to work longer under tension without the onset of shaking.

A further aim of *qigong* is to cause the combination of the meditation technique of the *Great Learning* and bodily control techniques of *qigong* to bring about a semi-hypnotic effect. This state is not difficult to enter, requiring only the combination of any thoroughly familiar set of slow body movements and deep, natural breathing. The resultant mental state can be used to counter the fear of competition or battle. It is claimed — although this is not beyond doubt — that this condition can make an a performer of martial arts or archery achieve feats that would otherwise not be possible.

Finally, *qigong* once learned is able to discipline the body even when only being practised in the mind. For example, a series of complex actions (such as setting up an archery shot) combined with proper breathing can be rehearsed *mentally* without any body movement in both the left hand and right hand. Such repetition will gradually make a right-handed archer able to shoot left-handed or vice versa. Handedness is in the brain, and it is not unreasonable that mental exercise can overcome it.

Qigong does not start and stop with breathing. It encompasses diet, bodily functions and mood. That is the principle underlying the 'Archer's Ten Commandments' in Chapter 11 (paragraph 11B3). It also contains a strong element of achieving balance. In Chinese traditional psychology, a positive mental condition is built up only gradually yet can flip instantly to its opposite like the *yin-yang* symbol. That is the principle underlying the statement in paragraph 11B3: 'If you score a hit, don't be happy otherwise your mind will turn contrary on you. If you miss, don't be unhappy, otherwise you will lose your concentration and it will be beyond control.' (‘射中不喜，則心易而反跌。射不中勿憂，則心感而無主。’)

The distinctive external features of Chinese archery — the knees bent and the legs spread at the hips, the elbows, shoulders and wrists in a straight line, the belly inflated at full draw — are all symptoms of the archer's attempt to 'move his *qi*' in the correct way.

The Schools of Archery

Many of the greatest surviving Chinese literary works on archery come from the relatively late period after the Ming generals Yu Dayou and Qi Jiguang had established control over the southern coastal regions in the middle of the 16th century.³ Li Chengfen's *Archery Manual*, which

3. Chapter 11, pp. 276–278.

encapsulated the teachings of Yu Dayou and Qi Jiguang, was written at the time when the Ming Dynasty was disintegrating. His works were being distributed among the Chinese archery community when the Manchu leader Hong Taiji (皇太極) (1626–1643) was announcing the establishment of a new dynasty, the Qing, which claimed the right to rule over the whole of China. In fact, the major period of publication of new material on archery, as can be seen in Chapter 11, was between 1600 and 1650.

During the first half of the 17th century, China's economic strength was falling while financial demands on the Ming government were rising. By 1620, there were about 23 000 members of the Ming imperial household who had to be provided with stipends out of the Ming fiscal reserves. An expensive military campaign was under way against the Japanese on the Korean Peninsula, and serious famines struck Central China in the winter of 1627–1628. All the while, land holdings were becoming more fragmented under the Chinese traditional system of dividing land between sons upon the death of the owner, and major landlords were thus able to accumulate more land, which they carefully sheltered from tax liabilities. Many Chinese merchants had sought to escape the anti-commercial policies of the Ming court by emigrating to south-east Asia. As a result, major international trade transactions were being carried out offshore, depriving the Ming court of tax revenues.

Trade had been growing, especially with the Japanese. Demand for silver currency (minted from Mexican silver obtained from the Spanish trading through Chinese merchants in Manila) had become established in China. But by the end of the 1630s, the Japanese court had already cut off trade with China and economic relations between the Chinese in Manila and the Spanish had broken down. Hoarding of silver and grain in China resulted from the ensuing economic uncertainty.

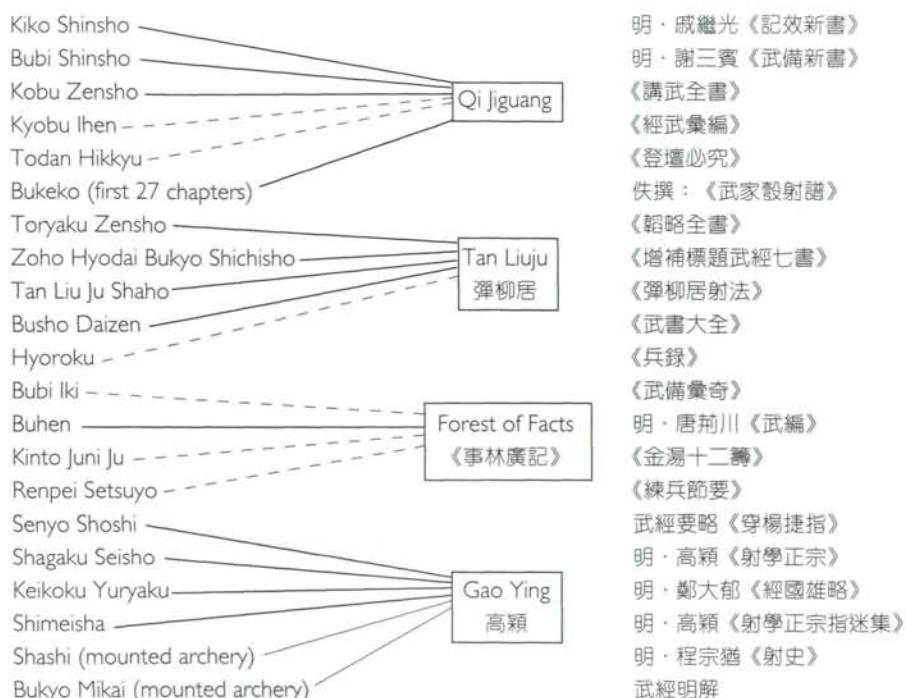
Perhaps it is understandable, against the background of a fragmenting dynastic household, a failing national economy, growing rebellion and natural disaster, that stronger and stronger challenges were being made against orthodox thinking, including thinking about methods of archery.

Were it not for one of Japan's greatest writers and sinologists, Ogyū Sorai (荻生徂徠, 1666–1728) it is likely that the name of one of China's most original writers on archery might never have come down to us. Ogyū Sorai was a Confucian scholar who was widely read in Chinese literature and philosophy. Because of his interest in the practical application of Confucian thought and his concern with reviving the Japanese military classes in the Edo period, he took a close interest in Chinese archery. He edited a work,⁴

4. 荻生徂徠：《射書類聚國字解》（京都：日本京都琉璃廠，1786）。

published posthumously, which analysed the techniques set out in the archery manuals that were current in the Ming Dynasty.⁵ His analysis is shown below, with dotted lines showing works which are digests or are more tenuously related.⁶

Chinese Archery Sources in Shasho Ruiju Kokujikai (射書類聚國字解)



In his *Collection of Chinese Archery Books*, Sorai argues that nearly all of the books in current circulation in China were derived from three or four common sources, as illustrated above.⁷ The one truly original work was the *Introduction to Martial Archery* (射學正宗止迷集) by Gao Ying (高穎). Such was the reverence in which Sorai was held in Japan, and such was his esteem for Gao Ying's book, that became a very important influence in the development of Japanese traditional archery, *kyudo*, and remains so to this day.

5. Li Chengfen's manual was not included in his survey.

6. The material for this analysis was provided by Charles E. Grayson. He has kindly granted permission to use the translations he commissioned of *Shasho Ruiju Kokujikai* (射書類聚國字解).

7. The chart is my own, based on Sorai's analysis.

Gao Ying's name⁸ is almost unknown now in China. However, part of his book has been incorporated into a number of later works, principally the *Encyclopaedia of Archery in Four Volumes* by Gu Yu⁹ and *The Reprinted Compendium of Explanations of the Military Classics* edited by Qingxi Zhuyong¹⁰ published in about 1700, where the first section of it is reprinted without attribution under the title 'Archery Method' (射義).¹¹

In the preface to the *Orthodox Method of Archery Study* dated 1637, the author describes himself as 'getting old'. This might mean that he was around sixty, and he could have therefore been active in operations against the Japanese at the end of the sixteenth century. One curious way in which his convention for writing about archery differs from his contemporaries is that he uses the terms 'bow-hand' and 'string-hand' instead of 'left and right'.

The reason for that was that Gao Ying shot left-handed. He explains that as his archery technique developed, he found himself at a dead end, with his technique going downhill. In despair, he sought a new master to cure him of his defects. Finally, he realized that he would have to relearn archery from scratch; the only way to do that was to abandon using his conventional right-handed technique and learn over again using his left hand.

In the following excerpt, I have translated the main section from his *Orthodox Method of Archery Study*, together with the section from his companion work, *The Guide Through the Maze of Archery Method* in which he develops his own technique.

An Orthodox Introduction to Martial Archery: The Short Cut (武經射學正宗·捷徑門) by Gao Ying

12A1

夫射之道，若大路焉：入路自有次序。得其路而由之，始而入門。既而昇堂，又既而入室。計日可到。不得其路而由之，一入旁門；猶適燕越轍，逾趨逾遠。

A proper, recognized style of archery is like a highway: it has a natural logic to it. Once you get onto it and keep going, in the end you arrive

8. Gao Ying (高穎) is also known as Gao Shuying (高叔英).

9. 顧煜：《射書四卷》。

10. 青溪朱壩：《重刊武經彙解》末卷。

11. See 中國兵書集成編委會：《中國兵書集成·武經七書彙解·二》(北京：解放軍出版社、遼沈書社 1995)，頁 1883 ff.

at the main city gate. From there, you can get to City Hall and from there again you can get into the rooms of the Hall. It's a matter of days before you get where you want. But if you get on the wrong road and keep going, you get to some suburban side-gate. It's like going to the capital and taking the wrong exit: the harder you drive, the further away you get.

12A2

當其年少初習時，病未入骨。筋力強，神、氣銳，引弓可彀。機、勢一熟，便可中的。習射既久，病根一深，不過數年精神未及。衰老引弓，遽爾難彀。逾久而矢離的逾遠。回視昔年中的時，若兩截人物。

When an archer starts to practise in his youth, his faults have not become ingrained. His joints are still strong; his faculties and stamina are vigorous: he can pull a bow and reach full draw. Once he has become familiar with co-ordinating timing and power, he is ready to start scoring. But the longer he practises, the more his faults have a chance to become ingrained, and the day will not be far off when he is not up to the challenge. As he ages and then tries to draw a bow, reaching a proper full draw will get harder and harder. As time passes, his shots will stray further and further off-target. Looking back over the years to the time when he could hit, it will seem as if it was a younger generation doing it.

12A3

今人莫曉其故。此無他：只因習射之初，妄自引弓，或為掘射。所誤：偶入旁門，不得正門而由耳。若果循正路，則射逾久法逾熟。烏有射久而逾不如前者乎？

These days no one seems to understand why this happens. Actually, it's quite simple: if you rush headlong into pulling the bow by yourself in the early days of learning to shoot, you may easily fall into bad shooting habits. The problem that people have is: they blunder into a side-road and can never get back onto the highway. If they just kept to the highway, they would get more familiar with the technique the more they shoot. That way, they are not going to embark on a downhill path, are they?

12A4

所云“正路”者，一曰審，二曰彀，三曰勻，四曰輕，五曰注。穎請以法，詳著於篇，使人得循途而進，不為邪徑所迷。近不過百日，遠不過期年，命中可幾矣！其功最捷，故名其門曰“捷徑”云。

What I call 'a highway' has the following elements: (1) concentration, (2) full draw, (3) balance, (4) lightness at the release and (5) focus. I have pulled together a technique and put it down into this publication so that everyone has a road to move forward along and they won't get sidetracked into dead ends. In a hundred days at the least, and no more than around a year at the outside, you'll be able to score quite a few hits. This is the quickest route to achievement so I'm naming it the 'short cut'.

12A5

世人只欲旦熙期效。一聞期年之說，便爾駭然。詎之無法之射，逾趨逾遠？白首而無成。穎所云“期年”者，合法之射計日可到。期年之期，豈不為“捷徑”乎？

These days, everyone is after instant results. Talk to them about 'taking around a year' and they take fright. Who would have imagined that an unsystematic approach to archery would take you further and further from where you want to go? Your hair could have turned white and you still wouldn't have got anywhere. When I talk in terms of 'around a year', then if I can offer you a systematic method that can bring results in days rather than years, wouldn't you call that a 'short cut'?

12A6

論審法第一

發矢必先定一主意。意在心而發於目：故審為先。審之工夫直貫到底，與後“注”字相照應。俱以目為主，故欲射，先以目審定，而後肩臂眾力從之而發。然審法不同：有審鏃於臨發時者；有審於弓左者，皆非也。

1. Concentration

Before releasing an arrow, you need to have total control of your conscious mind. Consciousness is part of the mind, and the release is done with the aid of the eyes. This is why concentration is primary. The technique of concentration goes to the root of everything, and it has its response in the 'focus' that I come to later. Given that the eye governs the process, when you are going to shoot you have to concentrate with the eyes first, then all the power of your shoulders and upper arms obeys them and you release. For all that, there are two current systems of 'concentrating': one concentrating with the arrowhead just before the release, and one concentrating to the left of the bow. Both are wrong.

12A7

審於臨發時者，固已，倉猝且專審於箭鏃。恐鏃對而箭桿不對，發矢亦

邪。若審於弓左者，箭在弓右，目不見鏃注的，不清矢之遠近，何從分別。總之，以意度之耳。

Supposing you concentrate just as you're about to release: you've got yourself all geared up and then all of a sudden you move your concentration to the arrowhead. You have to watch out in case the arrowhead is on target and the shaft is not lined up properly, otherwise the shot will be off-centre. Or supposing you concentrate to the left of the bow.¹² Since the arrow is on the right, you're not going to be able to see the arrowhead to get it aimed on the target. That means no way to find the range so how are you going to deal with range variations? In the end, you would just have to fall back on reckoning the distance mentally.

12A8

故，審之正法，惟於開弓時先以目視的，而後引弓將彀時以目稍自箭桿至鏃，直達於的。而大、小、東、西了然。是之謂審。

So there's really only just one way of concentrating: as you predraw, look at the target, then come nearly to full draw and let the eye move along the arrow shaft, over the arrowhead, and then straight to the target. In one glance, you take in close, far, left, right. This is what is meant by 'concentration'.

12A9

然此審法，射遠乃爾。若五十步以內者，俱視在弓左，與騎射同。騎射非十步、二十步內不發。射近而亦用前審法，則矢揚而大矣。故射近者前手須低於後手。安能審在弓右乎。此又不可不知。

This technique of concentration applies to a distant target. However, within fifty paces, you look to the left of the bow, like for archery on horseback. When shooting on horseback, you don't fire unless you are within 10–20 paces. If you use this technique at a short range, the arrow will go high and pass over the target. So at close range, you need to have the bow-hand arm lower than the draw-hand arm. There's no way you can aim to the right-hand side of the bow, that's for certain.

12A10

論彀法第二

彀者：引箭鏃至弓弣中間之謂，乃射之根本巧妙之所從出也。惟彀，則

12. Gao Ying is here addressing the conventional, right-handed archer.

前端前段“審的”工夫有所托以用。其明後，勻、注之功有所托以收中之效。

2. Full Draw

‘Full Draw’ is the term used to denote the point at which the bow has been drawn until the arrowhead reaches the middle of the bow grip. It is the thing from which all the basic skills of archery flow. Only on the basis of a full draw does the task of ‘concentration’ described above become any use. Once you have understood it, you have the basis on which to exploit the skills described below — ‘balance’ and ‘focus’ — to score hits.

12A11

倘引弓不彀，骨、段、節未盡，肩臂俱鬆，猶不根之木生意：何有發？喪心之人，百務必不集；縱有巧法，安從施哉？世人講射法者紛紛，但不講所以彀之法。是舍本逐末，老而不精。故射之根本必先於彀。

Supposing you draw a bow without reaching full draw: your bones, extremities and joints will not have been stretched to the full, the shoulders and upper arms will lack rigidity and you can be compared to a rootless tree: how can you shoot? There are some perverse people whose efforts are all over the place: they have a plethora of clever techniques, but how can they put them into practice? People talk in terms of dozens of forms of shooting without getting down to what it takes to come to a full draw. They can't see the wood for the trees: even in their old age, they won't get it. So in archery, before anything else, the foundation is the full draw.

12A12

然，彀法有不同：有“鹵莽彀”，有“氣虛彀”，有“泄氣彀”。夫“鹵莽彀”者：引弓將彀時，將射鏃露半寸許於弓弭外；臨射時，急抽箭鏃至弓弭中間而出。是全以氣質用事。急於求彀，激動箭鋒，矢發必不準。名曰“鹵莽彀”。

However, there are differing techniques for the full draw. One is the ‘Rough-and-Ready Draw’; another is the ‘Low Energy Draw’ and another is the ‘Excess Energy Draw.’¹³ In the ‘Rough-and-Ready Draw’, just when the bow is coming to full draw, and before making the shot, the arrowhead is kept about an inch outside the bow-grip; then when

13. No description is given in Gao Ying's text of the ‘excess energy draw’.

the archer shoots, he quickly brings the arrowhead back to the middle of the bow-grip and then releases. This is a completely insubstantial way of doing things. In the rush to complete the full draw, they just jog the arrowhead and the arrow is bound to be deflected when it is released. So this is called the 'Rough-and-Ready Draw'.

12A13

“氣虛彀”者：引弓迅速，急抽箭鏃至弓弣中間。不及審的，後手力量已竭，膽氣俱虛，曾不能少留，隨即發出。矢亦不準。名“氣虛彀”，以形彀而氣不彀也。此皆非彀之正法。

The 'Low Energy Draw' is when the bow is drawn rapidly and the arrowhead is rushed to the middle of the bow-grip. Before he has any time to concentrate, the archer's draw-arm is exhausted, his nerves are ragged, and without any chance to collect his thoughts the arrow is gone. Here again, the arrow will not fly accurately. This is called the 'Low Energy Draw': it looks like a full draw, but the body's resources never come to a full draw. This isn't a proper way to come to a full draw either.

12A14

夫正法者，只有一條大路。世人不知；偶合一、二者有之，然非心知其善，亦未必能守也。及習射，既久病根漸增。始之偶合者，亦漸消滅，原歸不彀矣！彀之大路云何？

So as ever, the correct method is just a single highway. Nobody seems to know it. Now and then you come across one or two people who seem to have it, but they cannot grasp what it is that they are doing right, and so they don't know how to hang on to it. As they get into their practice, the old faults start to show themselves more and more. The ones who stumbled on the right form by chance also gradually lose it and they end up not being able to reach full draw at all! So what is this 'Full Draw Highway'?

12A15

彀法根本全在前肩下捲。前肩既下，然後、前臂及、後肩、臂一齊舉起與前肩平直如衡，後肘屈極向背。體勢反覺朝後。骨節盡處，堅持不動，箭鏃猶能浸進，方可言彀。

The whole key to the full draw is getting the bow-arm shoulder to rotate forward and down. Once the bow-arm shoulder is down, you can then get the bow-arm and draw-arm upper-arm in line, and then the draw-

arm shoulder and upper-arm can come up level so that they form a perfect line with the bow-arm shoulder. The draw-arm elbow is pushed hard backwards. Your limb position ends up pulled back so far you feel as if you are going to lean backwards. Only at the point where your joints have extended as far as they can and won't budge an inch further, and the arrowhead is ready to edge the final little bit onto the bow: only at that point can you talk of having reached 'full draw'.

12A16

人之長短不齊，各以其骨節盡處為彀。則力大者不能太過；力小者不能不及。此天造地設之理。

Whatever a person's height, their full draw is represented by having their joints extended to the utmost. That way, a person who is strong can't overdraw and a person who is less strong will not fail to reach it. That is a full draw made in heaven.

12A17

今人不知彀法，傳恃力以引弓，鏃至弓弣為彀。骨節平直之法，置而不講。則就一人之身，一日之間。力亦有衰旺。夫人朝氣銳，晝氣心惰，暮氣歸。氣銳時則力旺而彀，氣衰而不彀矣！彀不彀分而矢之遠近亦因之。

Today people don't know how to come to full draw properly: they perpetuate [the practice of] drawing the bow by brute force and then [they reckon] once the arrowhead has reached the bow grip, they're fully drawn. As to how to get the joints straight and level, they don't give two rows of beans. This system is all right for one man for one day. But strength will wane: everybody's at their best in the morning; by mid-day the energy and mind get lazy; in the evening, the system starts to run down. If you can reach full draw at the time when you are in peak condition and your strength is full, then you won't be able to do it when you're at your worst! Whether your draw is full governs how far your arrow will fly.

12A18

安有定衡乎惟以骨節盡處？為彀，則長人用長箭，短人用短箭，力大用勁弓，力小用軟弓，矢鏃俱引至弓弣中間為彀：方有定準。然骨節平直工夫全在前肩下捲，下前肩法。

What is behind setting the standard at just the point where the joints are fully extended? It's the fact that then, no matter whether a tall man is using long arrows, or a short man short arrows; or a strong-man is

drawing a heavy bow, or a weak man a light bow — once the arrowhead has reached the middle of the bow-grip, they have reached full draw. Only like this do you have a proper standard. However, the whole knack of getting the joints aligned straight and level lies in rotating the bow-arm shoulder down to keep the bow-arm shoulder low.

12A19

今人絕不講；間有言及者，俱出耳聞，不得其竅。此所以前肩不得下，欲彀而未能耳。下肩法，詳於辨惑門潦草引弓章內。宜細求之，則肩不期下而自下，弓不期彀而自彀矣。此下手入彀工夫也。

Nowadays no one explains anything about this. People mention it from time to time, but although they know the tune, they can't play the notes. That's why they can't get their bow-arm shoulder down and they can't draw to the full, try as they might. (See the section about 'Sloppy Drawing of the Bow' in the section called 'Identifying Errors'.)¹⁴

12A20

論勻法第三

勻者：前後肩臂分勻而開之謂；所以終彀之功，而啓後輕、注之巧妙者也。今人當引弓既彀時，骨節盡而筋力竭，信手便發。

3. Balance

'Balance' is the term used to describe the even parting of the bow- and string-arms and shoulders. It is the skill which rounds out the full-draw and initiates the skills of 'lightness' and 'focus'. Nowadays, as soon as people have reached full draw, their joints are stretched to the full and they are fully exerting their strength, they just let go of the arrow.

12A21

何暇浸進而加勻之功？勻開之功不加，發矢時斟酌不清，所以矢之大、小、左、右俱不暇顧。發矢一偏，則彀之工夫總為無用。此彀之後當繼之以勻。而勻開之功，為最急。

Why bother with the additional skill of balance, once the arrowhead has eased back [to the grip]? If you don't add the skill of 'balance', the shot will not be properly set up at the time of release and you won't have

14. It is not included in this translation.

any opportunity to concern yourself with whether the arrow overshoots, falls short or wide of the target. If your arrow gets deflected, then all your effort in reaching full draw is completely wasted. That's why you need to follow up your full draw with 'balance', and why it is most urgent to get the knack of 'balance'.

12A22

然匀之法，“莫妙於用肩，而勿用臂。”何也？臂之力小而肩之力厚也。引弓既彀時，筋力已竭；欲使兩臂分匀而開，勢必不能。

However, the secret of balance lies 'not in using the shoulders, but in *not* using the arms'. What does that mean? While the arms are relatively weak, the shoulders are stronger. When you're just at full draw, your muscular strength is [supposed to be] exerted to the full, so even if you want to open out evenly with both arms, you're not going to have the [residual] strength do so.

12A23

惟肩力厚，則能施運而悠張。弓彀之時，臂力將盡，以肩力繼之。前肩極力下捲，後肩堅持泄開，則箭鏃從弓把中間徐徐而進如水之浸漬然。豈非匀之正法乎？

Provided your shoulders are strong enough you can bring them into play to extend your draw. When you have come to full draw, the strength of your arms is exerted to the full, but the strength of your shoulders can push them out a bit further. If you use all your strength to rotate the bow-arm shoulder forward and you keep on forcing your draw-arm in the opposite direction, then the arrowhead will gradually glide onto the centre of the grip like leaking water. This is the real way to add 'balance', isn't it?

12A24

今人當彀之後，只用臂力分開。臂之力小：如何能開？必將彈力而抽，箭鏃急進，激動前臂發矢必邪。前功盡棄！

When people these days reach a full draw, they just keep on pushing with the arms. But the arms are not strong enough: how are they ever going to open further? They have no choice but to use up the last of their strength in giving one more twist, yanking the arrow inward. This jerks the bow-arm and so the arrow is bound to be sent crooked. That's a waste of all their bow-arm skills!

12A25

故曰：“勻之法，莫妙於用肩，而勿用臂。”古云：“胸前肉開；背後肉緊”者，此也。此勻之下手工夫，則說得，行不得，說之何益？下手工夫，獨得之秘。當為智者道也。

This is why they say, ‘The knack is not in using the shoulders, but in *not* using the arms.’ The old saying goes: ‘Stretch the chest muscles and pinch the back muscles’ referring to what I have described. The practice of ‘balance’ is no use if you can describe it but you can’t do it. Practice is the only way of getting it right. When you manage it, you will be on the inside track.

12A26

論勻輕第四

輕者：後拳與前拳相應，輕鬆而發矢也。然，輕之功極細發矢時。

4. Lightness

Lightness of release comes about when the bow- and draw-hands work together and release the arrow in a light and relaxed fashion. Thus, the technique of ‘lightness’ comes into play most precisely at the point of release.

12A27

若欲輕而不敢用力：矢鏃必然吐出。即使不吐而定，發矢亦覺無氣。氣怯則矢發必傷於小。懼其小也，而稍用力，則力微而矢不能進。懼其不進也，而極力求進，必然一抽而出，就著氣質。機神衝動，不能凝注：矢不能不小偏矣。

Supposing that in seeking lightness you are afraid to apply force, then you are bound to end up with the arrowhead sticking out beyond the bow-grip. Even if [the arrowhead] sits firmly without sticking out [beyond the grip], at the release you will also feel that the arrow has insufficient energy. If it lacks energy, then the arrow is going to fall short of the target. Once you start worrying about it falling short, the amount of force you apply will be slightly reduced, with the result that your [surplus] strength is too small and the arrow can’t come back the last inch to the full draw. Then you start worrying about the arrow not coming back the last inch to the full draw and you will try to force it back with all your strength: you are bound to give it one wrench and it will go off, and then the shot will lack substance. If you subconsciously rush things at the last moment, you can’t fix your focus and you can’t avoid deflecting the arrow!

I2A28

故既勻之後，後肩瀉開時，箭鏃已至弓弭中間，決機命中全在於此：後拳必將筋力緊收，與前拳相應。前、後肩臂彈力，並實堅凝一片，輕輕運開後拳與前拳約勻，平脫。後肘又須垂下向背。

So as soon as you have applied 'balance' and the draw-arm shoulder has reached back as far as it can, and when the arrowhead has already reached the middle of the bow-grip, the exact moment at which to set the arrow on course to score a hit devolves on this: the draw-hand must exert its muscular strength backwards while working together with the bow-hand. The strength of your draw-arm and bow-arm shoulders is already at its limit and they are frozen together in tension; then you very lightly ease back the draw-hand, co-ordinating with the bow-hand to come to the point of 'balance', then allow the string to slip out with the fist held horizontally. The draw-arm elbow will also have to drop down and back.

I2A29

若拳平脫後肘不垂，發矢無勢。如此肘垂而拳平脫，氣質煙火之性：泯然不露，如蜻蜓點水；輕揚活潑，如瓜熟蒂落，全出天然。鬆而且脆，矢出如荳，細衝至的。

If the elbow doesn't come down after the hand has released horizontally, the released arrow will have no power. Dropping the elbow and letting the fist release horizontally like this, it will be as insubstantial as smoke and fire. It will be so quiet that it cannot be perceived, like a dragonfly touching the surface of the water. It will be light but sudden, like a ripe gourd falling off the vine, completely naturally. It will be relaxed but crisp, the arrow departing like thistledown and rushing precisely towards the target.

I2A30

是下手用輕之工夫。古云：“後手發矢，前手不知”者也。

This is what 'lightness' means in practice. They used to say, 'The left hand releases the arrow, the right hand doesn't react.'

I2A31

論注第五

注者：目力凝注一處，精神聚而不分之謂。與前“審”字相應。夫人一身之

精神皆萃於目。目之所注，神必至焉。神至而四體、百骸、筋力、精氣俱赴矣。

5. Focus

'Focus' is the focusing of your sight in one place with the attention concentrated and undivided. It goes together with the word 'concentration' above. The subconscious control of a person's whole body is concentrated in the eyes. Whatever the eyes focus upon, the subconscious always reaches out to. Wherever a man's subconscious reaches towards, his limbs, all his joints, his muscular power and his physical energy all follow.

12A32

李將軍射石一發沒鏃者，以虎視石也：神之至也。故發矢時，目力必凝注一塊。目注而心到，意到，手到：發無不中矣。古云：“認的如仇”者，此也。此下手用注工夫也。

When General Li Guang was able to shoot at a rock (which he had taken to be a tiger) so that the arrowhead penetrated it, that was a question of mind over matter. So when you shoot, the vision in both eyes must be focused on a single point. Where the eyes are focused, the mind, the aim and the hands reach out and it is impossible to miss. The old saying gets it just right: 'Discern the target as if you had a grudge against it.' This is the practical aspect of employing focus.

12A33

然“注”與“審”不可分為二事。引弓之初，以目視的：是之謂“審”。發矢時，以目注的，亦謂之“審”：總之皆用目力。原非二事，何為分“審”與“注”之名也？

However, 'focus' and 'concentration' can't be separated one from the other. When you start your draw, you fix your eyes on the target: this is what is called 'concentration'. When the arrow is released, you focus on the target: this is called 'concentration' as well. What both have in common is that they rely on sight. But if they were originally no different, why am I dividing them into the terms 'concentration' and 'focus' now?

12A34

只為世人引弓時，雖能目視的，及既發之後，筋力已竭：信手便發，無暇認的，精神散漫，發矢俱偏。

Only for this reason: whenever anyone draws a bow these days, although

they can fix their sight on the target, and although they can extend their muscular power to the limit once they have reached full draw, they just let go [at that point] and they never get a chance to really distinguish their target. If their subconscious is all over the place, they are bound to deflect the arrow at the release.

12A35

故於勻、輕之後，復立一“注”之名，以提醒世人：使發矢時，目認的間一塊，或認的之心，或認的之足與首，精神、手法俱向此一塊，而發。

So after 'balance' and 'lightness', I have added another term, 'focus', as a reminder to everyone: when they are preparing to release the arrow, they must visually distinguish some point on the target, or else the centre of the target, or the top or the bottom, project their subconscious and their hand technique towards that point and then release.

12A36

故“注”之名，原為世人之掘射而設。善射之人，手一舉弓，目力便審，精神便凝注一塊。自始至終，神氣精專：弓一彀，而勻、輕以出矣。何待勻、輕而注哉？善學者不可不察。

So the term 'focus' is actually something I have invented for faulty archers. As far as the perfect archer is concerned, as soon as his hands raise the bow, his vision will concentrate and his subconscious will focus on a single point. From beginning to end, his mental energy will be finely attuned: as soon as the bow is at full draw, he will achieve balance, and then lightness, and then off the arrow will go. Why does 'focus' come after 'balance' and lightness? That is something the accomplished archer can't afford to overlook!

12A37

捷徑門總結

審、彀、勻、輕、注雖為五段，其實一貫。審與注，首尾相應。總之皆用目力。審於開弓之時，注於發矢之頃也。

Conclusion

Although 'concentration', 'full draw', 'balance', 'lightness' and 'focus' are five stages, they are actually a single process. 'Concentration' and 'focus' operate together at the beginning and end: they both involve employing your vision. 'Concentration' comes at the predraw, and 'focus' comes at the very point of release.

12A38

中間“彀”字乃開弓之根本。勻者，乃所以終彀之力量而斟酌發矢之機宜。

The term ‘full draw’ in the middle is the basis of the draw. ‘Balance’ is what you use to even out the forces at the end of the full draw and to position yourself for the correct moment of release.

12A39

世人言射，只言“彀”字，一彀便發；大小左右俱不暇顧。詎知，彀者乃發矢遠到之本；非中的之本也。

Everyone who discusses archery talks of the ‘full draw’ as if you just released the shot as soon as you had reached the full draw, without a moment to reflect on whether the arrow will overshoot, fall short, or go wide of the mark. As you should all know, full draw is the basis of attaining *distance* in your shot: not *accuracy*.

12A40

彀而不勻，發矢皆偏。何取於彀？惟於彀之後，復引箭鏃，勻調浸進分許，斟酌已定，而預為出矢輕鬆之地。故有勻之功，而彀力始不虛。

If you reach full draw and don’t achieve balance, every arrow you release will be deflected. What is it you must strive for at full draw? Once full draw is reached, you must pull that little bit further to get the arrowhead evenly a little further back onto the bow-grip; then when you have set up the shot, you will have laid the ground for a light release. So if you have the skill of ‘balance’, your full draw will not lack substance.

12A41

輕者，乃竟勻之機而法必中節者也。上文“勻”之時，矢猶未發而斟酌定矣。輕者，承勻之後而輕鬆以出，發矢以準。故有輕之功，而後勻之妙始著。

‘Lightness’ is the element which creates the moment of release at the end of the ‘balance’, providing for your technique to result in a hit. When the ‘balancing’ I describe above is in progress, the arrow has not yet been released, but the shot is all set up. ‘Lightness’ takes up where ‘balance’ leaves off and provides the lightness and relaxation that the release depends on for accuracy. The skill of lightness is what makes the trick of balance work.

12A42

注者，合眾法之精神，萃而歸之的，以終審、彀、勻、輕之大成也。

'Focus' brings together the spirit of all the other skills, and hones them onto the target so that 'concentration', 'full draw', 'balance' and 'lightness' can be brought to a successful conclusion.

12A43

自審而彀而勻而輕而注，相通一氣：一審便彀，一彀便勻，輕而注，發以達於的。捷於呼吸，猶人一身自頂至足，疾痛相關，不隔一縷，而射之道盡矣！

Starting from 'concentration', through 'full draw', then 'balance', then 'lightness' and through to 'focus' is all in the space of a single breathing cycle. As soon as you have concentrated, go to full draw; as soon as you have gone to full draw, get the balance; then do the 'lightness' and 'focus' and release the arrow to hit the target. As quickly as a single breath in and out, as if going through the human body from head to foot, connecting quickly without the slightest interruption: that is all there is to the 'highway of archery'!

12A44

然有終身習之而不得其門者，亦足為掘射所惑：偶入斜路，白首難改。猶學文者，一入惡套，揮之不去。又猶學書者，把筆一差，到老仍誤習舛；若一更改，反覺不便。此初射者斜、正之門不可不辨，而下文“辨惑”之門，所由作也。

Yet the fact that there are those who practise their whole life long and never get the hang of it is enough to demonstrate the error in acquiring faulty archery technique. One false turn on the highway and you're saddled with it until your hair has turned white. Just like a student of literature can never write successfully once he gets into a bad style. Or a student of calligraphy who grips his brush wrongly will still have a poor hand even in old age. If you try to correct yourself you will feel things are even worse. This is what happens when the beginner veers off course and can't work out which the right turning is. So the following section,¹⁵ 'Identifying Errors' has been written for this purpose.

15. This section is not included in this translation.

The main theme of this text is a plea for a consistent form. It is certainly true to say that a consistently repeated set of movements, whether Gao Ying's or another, helps to form the basis of a more balanced muscle development and a greater confidence on the part of the archer. In another part of his book, he sets out a series of critiques of both the current method and of other popular archery textbooks. These textbooks have not been transcribed in this book, but mainly reflect the teachings in the *Guided Tour Through the Forest of Facts*. Gao's principle criticisms of these techniques are:

- that there is insufficient concentration of the mind at the moment of release. This is addressed by his 'focus' (paragraph 12A35).
- that traditional methods of releasing i.e., the 'snap' (掣) and the 'twist' (轉),¹⁶ resulted in too much hand shock. This is addressed by special attention to 'lightness' (paragraph 12A29).

Gao Ying's unsparing attacks on other schools of archery may have been one of the reasons that he fell into obscurity in China. Barely a single copy of his work, the *Orthodox Introduction to Martial Archery* can be found now in China, and the *Guide Through the Maze of Archery Study* seems to have been lost completely in China, with copies only remaining in Japan.

Gao Ying's method draws on the mechanics of a type of repeating crossbow to develop his own style of draw, the 'Inchworm' draw. The inchworm metaphor derives from the Zhou Dynasty's *Book of Changes*, where the movement of the inchworm is used to illustrate the cyclic nature of economic change. Gao Ying borrows the metaphor to refer to the concept of *reculer pour mieux sauter*. The text of his method, with illustrations from a Japanese edition from about 1750, follows below.

An Orthodox Study of Martial Archery: A Guide Through the Maze of Archery Study (武經射學正宗·射學指迷集) by Gao Ying

1281

指迷集尺蠖勢開弓圖第七。

III. No. 7 The Maze Guide Inchworm Movement: The Predraw

16. See Chapter 11, paragraph 11B2.



“尺蠖惟屈所以能伸。”¹⁷ 開弓將前肩先下，前臂番直向地，後肘朝上扣弦提起。前肩下定不動，只將前臂舉起，兩拳一齊撐開。前拳與目齊，後拳與腮齊而弓已彀矣。

‘Only by curling back can the inchworm stretch forward.’¹⁸ At the predraw, you keep the bow-arm shoulder down first, turning the bow-arm to point down towards the ground, and bring the draw-arm elbow to point upward as you grip the string. The bow-arm shoulder is kept low and immobile while the bow-arm itself is raised and the two fists are forced evenly away from one another. Once the bow-arm hand draws level with the eye and the draw-hand comes level with the cheek, the bow is fully drawn.

I2B2

此時前肩尚低，前後臂俱高，前肩從下達上，送前掌托出。後臂從高瀉下，而後拳平引，則弓不期彀而自彀矣。

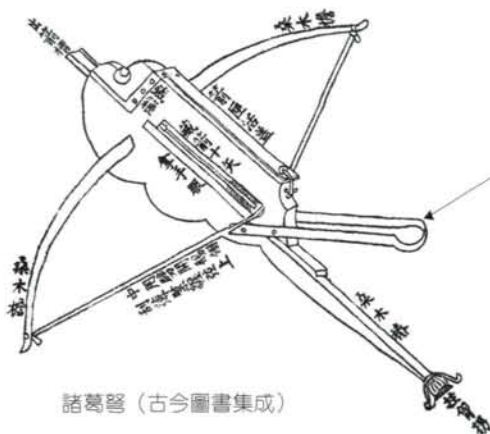
At this point the bow-arm shoulder is still low and both arms are relatively high: the bow-arm shoulder pushes the bow-hand palm upward from a low position. The draw-hand comes down smoothly from above and the draw-hand fist pulls while remaining level. That way the bow comes to full draw without your having planned to draw it fully!

17. 《易繫辭下》。

18. This quotation from the *Book of Changes* refers to everything occurring in a cycle of recession followed by progress. The character ‘伸’ is sometimes given in the archaic orthography ‘信’.

I2B3

如諸葛弩之控弦，只以後機從高壓下，弩身直挺安定不動，故不努力而弩自彀。



諸葛弩（古今圖書集成）

It's just like the way that Zhuge Liang's repeating crossbow draws back the string: you just pull down the loading lever at the back, the stock of the crossbow remains stiff and immobile, and the crossbow comes to full draw by itself without any effort.

I2B4

今人不知彀法。引弓先聳前肩：專恃臂力撐開。故弓一彀，臂力已竭，隨即吐出不能從容審的，如何發矢必準？若用尺蠖勢彀弓，後手向上一提便彀。既彀之後，前肩從下按實，則前拳直撐，力量有餘。後拳平引於前拳相對，以張其勢。兩肩並實運開，輕、勻以發矢，大小、左右隨意所指。何難於中的乎哉？（輕、勻法詳〈捷徑門〉。）

People today don't know how to come to full draw. When they predraw, they start off with their bow-arm shoulder hunched high and they put all their reliance into the strength of their arms to drag the bow open. Like that, their arms are out of strength by the time they've come to full draw and they let off the arrow straight away without being able to concentrate calmly on the target. How can the arrow be accurate like that? If you use the Maze Guide Inchworm Movement to bring the bow to full draw, you're finished just as soon as the draw-arm pulls up and back. Immediately on reaching full draw the bow-arm shoulder remains firmly pushed down, and then the bow-arm fist is forced straight out and you have strength to spare. The draw-arm pulls the string horizontally in opposition to the bow-hand fist to extend the movement. Together both shoulders move apart firmly, then you use 'lightness' and 'balance' to release the arrow and you are in full control of your vertical and lateral aim. Then what problem could you have in hitting the mark? (For details of 'lightness' and 'balance', please see the 'short cut'.)

指迷集尺蠖勢引弓將彀圖第八。

Ill. No. 8 The Maze Guide Inchworm Movement: Coming up to Full Draw



引弓將彀時，前肩愈按實下捲，送前掌根托實弓心。大抵引初滿時，前拳翹起，與鼻齊，後拳與耳齊。弓極彀時，前拳撐實對的，後拳漸抵與腮齊。此時前肩尚低於前、後拳、臂：則骨節猶未平直也。

As you bring the bow up to full draw, the bow-arm shoulder revolves and presses firmly further down. This pushes the middle of the bow-arm palm to send the middle of the bow-grip firmly forward. Roughly when you start to reach the full-draw point, the bow-hand has risen up level with your nose and the draw-hand is level with your ear. At complete full draw, the bow-hand fist extends firmly forward to point at the target while the draw-hand fist gradually comes down level with the cheek. By this point, the bow-arm shoulder should be a little lower than the two fists and arms: that is to say, the arm joints are still not totally in a straight line.

然臂力將盡，以肩力繼之。兩肩并力瀉開，矢鏃已至弓弣中間浸進，則兩臂平直彀極矣。將發矢時，後拳無退步。故後肘宜漸垂，輕、勻以脫出，後肘垂。圖在後。

So when your arms have exerted their full strength, you continue the movement with your shoulders. The power of both shoulders spreads them apart and when the arrowhead has come to the centre of the bow-grip, both arms are straight and horizontal and full draw has been reached. As you are about to release, the draw-arm fist must not move back. That means that the draw-arm elbow has to drop eventually: you apply 'lightness' and 'balance' and release, and then your elbow drops. See the following illustration.

12B7

指迷集尺蠖勢引弓發極矢臨發圖第九。

III. No. 9 The Maze Guide Inchworm Movement: Complete Full Draw before the Release



弓極彀時，後臂骨節已盡，後肘與膊合緊。發矢時，後肘不垂，後拳更無退步。故以肘稍垂，(矢發時，方可垂；若未發時，肘不宜垂。)後拳切勿垂：只宜平脫。

When the bow is fully drawn, the draw-arm joints are fully extended and the draw-arm elbow goes back and the shoulder-blades are forced together. As you are releasing, you should not [yet] drop your draw-arm elbow and you must not bring up your draw-arm fist. That means, when you do let the elbow drop (you only do that when the arrow has gone off: before releasing the arrow your elbow must not drop) the draw-arm fist must never drop. You can only release the string with your fist held horizontally.

12B8

今人學尺蠖勢者，始初亦知下前肩矣。至弓彀發矢時，後肘稍垂，後拳亦從之而垂。引弓非不彀也：但後拳垂，前拳亦為後拳所牽而垂。前拳既垂，前肩復聳矣！

People these days who learn the Inchworm Movement know from the start that they must keep the bow-arm shoulder low. But when they come to full draw and release, their draw-arm shoulder drops, and down comes the bow-hand fist in sympathy with it. It's not that they can't fully draw the bow: their problem is that they let their draw-arm fist drop down and the bow-arm fist is brought down by the draw-arm fist. If the bow-hand fist drops, up pops the bow-arm shoulder!

12B9

孰知前拳若垂，發矢必不及遠。前肩復聳，則前臂主持不定，矢出亦不準。而始初下前肩之功俱不效。所以學尺蠖勢者未見其美也。故學尺蠖勢而先下前肩者，當極彀時發矢，必將後拳守定，與前拳相對勿垂。

It's a certain thing: drop the bow-hand fist and the shot won't go far; bring up the bow-arm shoulder and the bow-arm can't keep a firm grip and the arrow will go off askew as well. That means that even if you *can* get your bow-arm shoulder down at the start your skill will be for nothing. This is what keeps so many students of the Inchworm Movement from making a success of it. So if you're learning the Inchworm Movement and you've managed to get your shoulder down at the start, then once your bow is fully drawn, make sure you keep your draw-arm fist fully under control and working level with the bow-hand fist; do not let it drop down.

12B10

只將後肘垂，而前肩從下送前拳，從上達出。弓愈滿，前肩愈下，後肩愈聳。兩肩繃開。

Just let the draw-arm elbow come down and make the bow-arm shoulder force the bow-hand fist up and forward from below. The fuller the bow is drawn, the lower the bow-arm shoulder gets and the higher the draw-arm shoulder gets. Both shoulders stretch apart.

12B11

鐵至弓弣中間浸進，兩拳相對平脫。此時前肩之下屈者方伸。後肘之勢將

垂而矢正從此出：是得機于此，得勢于此，而尺蠖之法方見全美而收其效。

The arrowhead draws into the centre of the bow-grip and the two fists draw away from each other horizontally. At this point, the bow-arm shoulder is first drawn back then stretched forward. The draw-arm elbow's movement tends to drop and the arrow is released from this movement: this gives rise to the precise timing of release and to the power of the release. Only through this can the Inchworm Movement be perfected and brought into full effect.

12B12

使前肩未盡伸而矢即出，則失其早。前肩已伸而矢不出，則失其遲。後肘不垂而出矢，則氣未足而出無勢。後肘已垂而後出矢則氣竭，出亦無勢。是前肩、後肘之間遲速失宜：出矢皆不可言得機、勢。

If you let the arrow go off before the bow-arm shoulder is fully extended, that's too quick off the mark; if you get the bow-arm shoulder fully extended and don't release the arrow, that's too slow off the mark. If you release the arrow and then the draw-arm elbow doesn't come down, the potential energy will be insufficient and the shot will lack power; if the draw-arm elbow comes down before the arrow has been released, then the potential energy will be exhausted and the shot will also lack power. So if you can't co-ordinate the timing of your bow-arm shoulder and draw-arm elbow, the timing and power of your shot will be uncertain.

12B13

惟前肩下極方伸，後肘平極將垂，矢正從此發。飽滿充足，不先不後，方為得機得勢。嗟嗟非沉雄之士安能至此哉？

It has to be: get your bow-arm shoulder right down, then push forward — get your draw-arm level completely horizontal before you let it drop down, and then let the shot go off from there. Everything completely fulfilled, not early, not late, and then you can gain the right timing and the right power. Sad to say, how can an officer reach this stage unless he is steeped in chivalry?

12B14

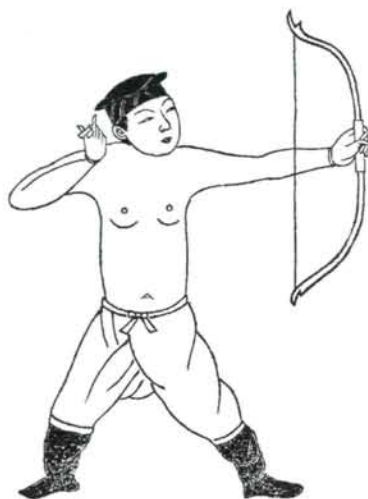
夫射法只有三大端。始而引弓之速彀也。既而持盛之堅固也。終而發矢之得機、勢也。非從尺蠖勢者不能到此妙境也。(尺蠖勢妙境在此：數行，智者勿輕也。)

All forms of archery can basically be split into just three main phases: they start with the predraw and rapidly come to the full draw; then there is a hold at full draw and firming up the stance; and finally the arrow is released with the right timing and power. You'll never be able to reach the full extent of your skill in this without using the Inchworm Movement. (The power of the Inchworm Movement to bring out the full extent of your skill is something that the wise student will truly appreciate once he has tried it out a few times.)

12B15

指迷集尺蠖勢撒放圖第十。

III. No. 10 The Maze Guide Inchworm Movement: The Release



發矢法不專用臂：專托力於肩。直推而出，不撇不絕。前肩從下送，前掌根直托而前虎口自然不緊。穀極，肘垂而矢即發。掌心自然向前，輕、勻平脫。

The right way to release does not rely on the arms but on drawing power from the shoulders. You push out straight and let the shot go: don't snap back or twist with the draw-hand or the bow-hand. The bow-arm shoulder pushes forward from below, the base of the bow-arm fist comes forward straight and the web of the bow-hand thumb stays natural and relaxed. At full draw, the draw-arm elbow drops down just as the arrow has been released. The root of the palm will face naturally forward, you apply 'lightness' and 'balance', and the arms separate along a horizontal plane.

12B16

體勢反覺朝後，聲色不動，出矢自雄，正所謂“後手發矢，前手不知”者也。較之《要略》所載“撒放勢”，專以撒、絕發矢，矢銳氣盡露於外。彀弓沉雄之實則不足。手動身搖，矢發偏斜者異矣。

Your body position will feel as if you are leaning backwards, you never waver the slightest bit. The arrow leaves the bow with power — truly what they call ‘the draw-hand releases the arrow and the bow-hand does not react’. In comparison, the release technique illustrated in the ‘Principle Strategies of Military Preparedness’ relies on ‘snapping’ and ‘twisting’ to release the arrow: they are just trying to give a superficial impression of the sharpness of the arrow and the maximization of potential energy. Once the bow is fully drawn, the hands will move and the body will waver, then the off-centre release of the arrow will produce a very different impression from the brave appearance of the archer!

The fall of the Ming and the invasion of China by the Manchus saw a period of disorder in which many of the intelligentsia were, as during the Yuan Dynasty, not prepared to submit to Manchu rule. The Manchus at first cruelly suppressed any attempts at resistance. They forced all Han Chinese males to adopt the Manchu hairstyle. While certain official posts were open to Chinese candidates, many of the literati refused to take part in the Manchu examinations at first.

As a result, a number of the intelligentsia retired to rural life, and were prepared to study and write about martial arts — a pursuit that traditional Confucian scholars might have abhorred in earlier times. Martial arts therefore benefited from academic study, and the number of books on archery which appeared in the early part of the Qing Dynasty can partly be attributed to this increase in academic interest.

The reign periods of the three early Qing Emperors, Kang Xi (康熙), Yong Zheng (雍正) and Qian Long (乾隆), spanned a period of 133 years from 1662–1795. This was a period of growth and stability under three enlightened monarchs. While Han Chinese culture was venerated, any expressions of anti-national minority feelings among the Han Chinese was suppressed. This resulted — particularly during the reign of Qian Long — in a suppression of books which were considered insulting to the Manchus or any of the steppe-land tribes. Books containing strategic information which could be used to resist the Manchu reign were also banned. It is possible that the implementation of Qian Long’s *Literary Inquisition* by overzealous officials may have resulted in a number of works being lost.¹⁹

19. 程子頤《武備要略》was one of the military works proscribed at the time (禁書). Luckily, copies have survived.

As a reaction to the Qing rulers' attempts to suppress potentially subversive activities among the Han Chinese, a number of religious or quasi-religious factions went underground. These religious groups often sponsored schools of martial arts, and underground martial arts activities were a hallmark of the Qing period. However, they leave their traces today mainly in the schools of Chinese boxing, sword fighting, staff fighting and acrobatics which have survived up to the present. The extant schools of martial arts have not retained traditions of archery.

The Manchus themselves had their own traditions of archery; in particular, they favoured a massive bow with long heavy arrows which became established as the standard, supplanting the smaller bows that are invariably illustrated in Ming woodcuts of archery. The Manchu bow, while constructed in most respects like the Chinese bows of earlier dynasties with wood or bamboo, horn and sinew, were large and heavy.

Many of these bows survive today. When strung, they were around 196 cm from tip to tip. When new, they would have a draw-weight of around 30 kg. They were often finished in the Manchu fashion with birch bark into which patterns were laid with peach bark strips depicting bats or the stylized character for 'ten thousand' — symbols for longevity. The static tips ('siyahs') of such bows were long at around 30 cm, and the bow was prevented from becoming unstrung by a massive, bone or horn string bridge at the joint of the limb and the static tip.



Qing archer photographed by John Thomson in about 1870

The military organization of the Qing Dynasty was based on the 'Eight Banners', which were originally established by the unifier of the Manchu people, Nurhachi (1559–1616) (努爾哈齊). Banners were organized as administrative, production and military groupings (like the Mongols, the early Manchus did not distinguish between these functions), but later developed into military groupings.

Following their invasion of China, the Manchus under Nurhachi's youngest son, Huang Taiji (1626–1653) (皇太極) supplemented their own eight banners with eight banners for the Mongols and eight for the Han Chinese. But the principal military role in the early part of the Qing Dynasty was played by the Manchu eight banners who numbered about 220 000, half of whom were based at the capital as the imperial guard, and the other half distributed around the country for defence of the borders.

In the Ming Dynasty, the Chinese army already had firearms available, purchased from the Portuguese. But until the Qing Dynasty, such firearms (mainly artillery pieces and muskets) were insufficiently accurate and reliable in bad weather to gain the confidence of the military leadership. In Ming military theory, firearms were mainly used as land-mines, siege weapons and incendiary devices: the gun was not favoured as a battlefield weapon. (This may have given rise to the erroneous Western perception that the Chinese used gunpowder for fireworks rather than weapons of war.) By the Qing, however, muskets and rockets were an established part of the Chinese military arsenal, and musketry became an established part of Chinese military technique.

Yet at first the Manchu court held firmly to its nomadic roots. The first three Manchu Emperors were at pains not to allow the Manchu race to become 'softened' by becoming alienated from nomadic skills. For this reason, they took extra care to ensure that archery remained as an important part of military training.

12C1

《清史稿·兵志十》

以滿州夙重騎射，不可專習鳥槍而廢弓矢，有馬上槍箭熟習者，勉以優等。

Texts on Qing History: Military affairs No. 10

Because the Manchus had long emphasized mounted archery, it was not permitted to specialize in musketry alone to the detriment of skill with bow and arrow; and those who practised on horseback with spears and arrows did their best to achieve the highest skills.

The early training regimen of the Manchu banners is recorded as follows:

12D1

《清稗類鈔·技勇類·旗人以習射為娛》

滿州夙重騎射……開國之初，其射也，弓用八力，箭長三尺，鏃長五寸，名『透甲鏃』。所中必洞，或連貫二人而有餘力。

The Manchus had long emphasized mounted archery . . . when they first established their state their archery was as follows: they used bows of eight *li* draw-weight; their arrows were three Chinese feet long and the arrowheads were five Chinese inches long and were called 'armour-piercing gimlets'. Whatever they hit, they pierced, and they could even transfix two men with some power to spare.

The Chinese troops raised to make up the numbers necessary for the defence of the Qing realm were assembled under a 'Green Banner'. The 'Green Banner' troops were all schooled in the Ming traditions of use of weapons; but as far as archery was concerned, they were considered relatively weak.²⁰ They made up for this, however, with an enormous assortment of weapons (including over sixteen varieties of sword and a number of varieties of gingalls and muskets). In terms of fighting technique, however, the Green Banner was thought to be outmoded, preserving the worst of the impractical but good-looking styles to which Qi Jiguang had been so opposed.²¹

Ultimately, the bow and arrow lost all its significance in warfare while the crossbow no longer made an appearance in the battlefield. The survival of archery in the Qing Dynasty was mainly due to its preservation as part of the syllabus for the military examinations.

The Qing Military Examination System

The Qing military examination (武舉科) system represented the final stage of the Chinese examination system formally initiated under the Tang Empress Wu Zetian in 702. One thousand years later, it still had many of the main

20. 王先謙：《乾隆東華錄》〈卷六十九〉。“弓箭非綠軍所長……。”

21. 《皇清奏議》〈卷六十五，議陝甘兵諸疏〉：“皆傳自前朝，相沿舊樣，平時較閱，雖屬可觀，臨敵打仗，竟無實用。”

features with which it had started out: it was formally sponsored by the royal household and strictly Confucian in its precepts, and it was also the door to elevation to the upper ranks of the Manchu or Chinese civil service and military establishment. The basic format, however, closely followed the Ming model, although standards were progressively lowered as the Qing Dynasty progressed. The general structure of the system was as follows:

Name	Frequency	Level	Degree awarded
Elementary level examinations (童試)	Every 3 years	Sub-Prefectural (縣), Prefectural (府), Provincial (院)	Elementary candidate (武童)
Provincial examinations (鄉試)	Every 3 years (additional for celebrations)	Capital (北京), Provincial capitals (各省城)	Licentiate (武舉人)
National examinations (會試)	Every 3 years in the year following provincial examinations (additional for celebrations)	Capital (北京), Provincial capitals (各省城)	Doctor (武舉進士)
Imperial examinations (殿試)	Every 3 years in the 10th month following provincial examinations	Beijing (北京)	Post-doctoral degree (武狀元、武榜眼、 武探花、武進士 同武進士出身)

Candidates for the examinations were exclusively male, and had to be aged less than 60.²² Those who wished to pursue a military career were excluded from taking the literary examinations, and vice versa. In the mid-1890s, near the end of the dynasty, a learned Chinese Jesuit priest from a Catholic Mission in Shanghai, Etienne Zie (徐), set out a detailed eyewitness account of the Qing military examinations in Nanjing (南京). Details of his account follow.²³

22. This was a general rule, but was made explicit by decrees of Qian Long in 1744 and 1753.

23. Le P. Etienne Zie (Siu) S.J. *Pratique des Examens Militaires en Chine*. Shanghai: Variétés Sinologiques No. 9. 1896.

'The examinations were divided into three sessions (頭、二、三場). The first session consisted of a test in mounted archery, the second consisted of archery on foot, together with three tests of strength,²⁴ and the third was a written examination. The first two were outdoor tests (外場) and the last was taken indoors (內場). This formula predated the Qing Dynasty, having been already current in the Ming. At one point (1660) the tests of strength were dropped, only to be reintroduced later (1774). The third session, i.e. the written examination, originally consisted of a dissertation on a subject from the military classics, but in 1807, this was replaced²⁵ by a test in which a candidate was required to write down from memory a paragraph of about 100 characters from the works of Sun Zi (孫武《兵法》), Wu Zi (吳起《吳子》) of the *Sima Bing Fa* (穰苴《司馬兵法》)'.²⁶

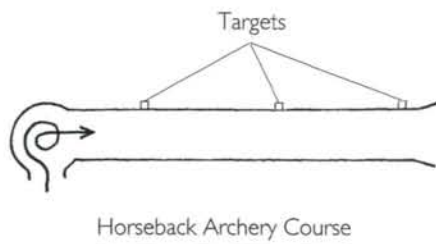
Elementary Level

The First Session (頭場)

'On the appointed day, starting at dawn, the candidates presented themselves to the Sub-Prefect dressed in ceremonial dress (hat, gown and ceremonial boots, without an outer garment). This normally took place at the military training ground (教場). The Sub-Prefect is usually accompanied by a military official as his assistant, and in their presence, the candidates are grouped into groups of ten.

'Next a roll-call (點名) is taken of the first group of ten by the Ministry of War, and they then present themselves at the point where they mount their horses (發馬處).

'The horses belong to the candidates, or else they are hired. At Nanjing, hiring a horse on the day of the examination costs double what it would cost on a normal day.



24. The three tests were: drawing on a heavy bow (引硬弓), wielding a heavy halberd (揮花刀) and raising a heavy stone (掇石).

25. 嘉慶十二年：“嗣後，內場策論改為默寫武經，擬出一段，約百餘字。”

'Holding a bow with an arrow in his left hand, and with two more arrows stuck obliquely in his belt behind him, the candidate mounts his horse and gallops into the curving part of archery course. At the required moment, he fires at the first target. If he hits, the attendants who are standing nearby beat a few times on a drum. Then he shoots his two other arrows in the same fashion at the second and third target and if he is successful, the drums sound out once again. (Around Songjiang (松江) and Suzhou (蘇州), the local hotheads almost always try to grab the arrows in full flight, resulting in varying degrees of injury!) Still on horseback, the candidate calls out his own name (報名), dismounts and hands his horse over to someone (收馬). If during the test the candidate loses an arrow, his hat or falls off his horse, he is considered as having breached decorum (失儀), and he is disqualified from the whole of the outdoor sessions.

'The candidate dismounts with his bow in hand, and presents himself before the Presiding Officer, who is standing at the far end of the entrance to the course. He bows, gives his name once again, and retires modestly. This continues in the same way for all the candidates in the group until they have finished the test; then they continue with the second group, and so on.

'Once the test of mounted archery is over, the Presiding Officer does not announce the results; he just gives the time fixed for the archery on foot, either in the afternoon of the same day, or on the following day.'

Second Session (二場)

'Archery on foot normally takes place in the official building of the Sub-Prefect, behind closed doors and under the supervision of the Sub-Prefect himself. He is assisted by a military official. The roll-call is also carried out by the Ministry of War, and once again the candidates are divided into groups of ten.

'After the roll-call and the division into groups, they present themselves before the Sub-Prefect, and one of the candidates steps forward with his bow in his left hand and five arrows inserted in his belt behind him. After placing a thumb-ring²⁶ (玦) on the thumb of his right hand, he assumes a serious and modest expression and stands for a few moments with his right side turned towards the Presiding Officer. Then he takes an arrow, nocks it against the string, spreads his feet, leans to one side, grasps his bow and

26. The most prized thumb-rings are of jade, dating from the Han Dynasty (漢玉). They are greyish-white in colour, with red veins and stripes of green. Those which have been retrieved from the tombs of military graduates are reddish in colour. The idea of protection by the spirits [of the ancestors] is attached to such rings.

with his eyes fixed on the target, he releases the arrow. If his has scored a hit, the drum sounds. Then he puts his feet back together with his arms still stretched out and remains like that for a few moments before standing erect once again. Then he takes the second arrow and continues in the same fashion until the fifth. At the conclusion of his round, he goes and presents himself once more to the Presiding Officer and, as in the mounted archery, another candidate takes his place.

'Once the examination is over, the doors are opened once again and those assembled are dismissed without music or the firing of artillery. The result is not published. The Sub-Prefect just indicates the time set for the gymnastic exercises.'

The 'gymnastic exercises' were a test of physical strength of the candidates. One of these tests was carried out with special bows known as 'numbered bows' (號弓). These bows were extraordinarily large and heavy. Their standard sizes — No. 1, No. 2 and No. 3 — were 12, 10 and 8 *li*²⁷ respectively (70.8 kg, 59 kg and 47.2 kg). They were constructed in exactly the same way as the archery bows, except that they were broader and had more massive tips. While archery bows had hemp or silk strings, the 'numbered bows' had strings made of ox gut. They were usually only slightly decorated, and often had a seal near one of the tips bearing the number of the bow.

These 'numbered bows' were never intended to shoot arrows.²⁸ The candidate stood before the Presiding Officer with a bow (usually the No.1 at 70.8 kg)²⁹ held at the centre in his left hand. He would extend his left arm, taking up the string in his right and bringing it full draw (grasping the string with his full fist, without an arrow). Then, he would let it down again immediately. He had to perform this action three times, and then announce his own name and go down on one knee before the Presiding Officer.

27. Zie gives the standard of the *li* (力) in his area as ten *jin* (斤). A *jin* was 0.59 kg (585.79 g), so a *li* was equivalent to 5.9 kg (13 lb).

28. Such 'numbered bows' can frequently be found in flea markets in China. They have given rise to fantastic speculation about the types of draw-weights used in Chinese archery. Occasionally, Chinese and Mongolian acrobats perform feats of strength with them, so they remain in occasional use.

29. 'Numbered bows' are at 13, 14 and 15 *li* (76.7 kg – 88.5 kg). They were available to candidates who wanted them. Success in the test would give the candidate a special grade called '出號弓'.

Archery Examination for Military Licentiate (武進士)

The mounted archery examination for the licentiate differed from the elementary examination in one respect: the shot at the ball (射地球). According to Zie: 'The ball is about the size of a small pumpkin, about 60 cm high and 30 cm in diameter. It is made of leather and painted bright red, and highly reflective due to the varnish on its cover. Its shape is rather like a roll of butter. There is only one on each course, placed on a small hummock in the centre raised for the purpose. An arrow of 119 g is used to knock it down, 108 cm in length and 4 cm in circumference. It is natural wood-coloured, but the fletched part is painted red. It is tipped with a leather blunt 6.5 cm in diameter and 4.5 cm in length.

'When shooting, the candidate has not only to touch the ball: he must knock it out of the supporting hummock. All the candidates, in the same order as previously, shoot at the ball, not at a right-angle, but slightly obliquely. It spins easily enough when hit from the side and, if struck in the centre, it readily falls down. If it falls, the drum is struck or else a flag is waved. The rider calls out his name immediately and goes over to present himself to the Presiding Officer, giving his name again and bending at the knee.

'In all the candidates fire seven arrows: six at the targets and one at the ball. As long as three out of seven arrows hit their target, this is counted as "conforming to the regulations". (Contrary to common belief, a candidate is not automatically disqualified if he fails to hit the ball.) He has thus met the minimum requirements for being admitted to the remaining outdoor sessions. They each had a seal attached to their arm in evidence of this.'

At the archery examinations, there was an officer whose duty was to check the draw-weights of the bows brought with them by the candidates. The regulation target was five Chinese feet and five inches high, and two feet and five inches wide (1.92 m x 0.90 m). In the early part of the Qing Dynasty, it was placed at a distance of 80 *gong* (弓)³⁰ (123 m); but this was reduced to 50 *gong* (77 m) in 1693 and finally to 30 *gong* (46 m) in 1760.

'In the morning, at the appointed hour, the candidates went to the examination ground. A roll-call was again taken, in groups of ten, and each candidate showed the seal on his left arm. This part of the examination was to test archery on foot, and the candidates shot in pairs. Thus two candidates, each with a bow held in his left hand, and with six arrows

30. According to Zie, one *gong* is equal to 5 *chi* (尺) or 1.537 m.

inserted in his belt behind him, presented themselves before the Presiding Officer and then placed themselves before him, one to the left and the other to the right, facing towards the west. A little stone lion cub placed on the ground marked the position from which the candidate was to shoot. Each stands straight, grasps an arrow at the rear of the shaft and places it against the bow. Then he spreads his feet leans slightly forward and raises his hands with the bow, looking towards the south at the target. Finally, he brings the bow to full draw, shoots at the target, holds himself immobile for a few moments and then stands upright again. The arrows are too light, and if the wind is blowing during the test it renders the whole venture very chancy.

'If the arrow hits, a clerk near the target makes a note of it and the drum is struck, while another clerk who stands next to the Presiding Officer takes a baton from a stand and places it into a wooden pail. This makes it easy to keep track of the successes and failures. All six arrows are shot in this fashion.

'Previously, the ten candidates in a group took it in turn in pairs to fire off a single arrow, pair after pair. But in 1786, this was changed so that each candidate fired off all his six arrows in succession. If two arrows out of six stuck in the target, this was regarded as "meeting the requirements" .

'Although two candidates take the test at the same time, they do not shoot together. One of the pair shoots his six arrows, and when he has finished, the clerk in charge of the batons counts the number in the wooden pail and announced aloud to the Presiding Officer how many hits there are. The candidate then goes over to the Presiding Officer, calls out his name aloud and bends his knee. And so on until the end.'

The following specifications of the equipment used in the military examinations were noted by Zie:

Specifications of the Bows and Arrows Used in the Examinations

Length from tip to tip	Small: 1.59 m, medium: 1.78 m, large: 1.81 m
Weight in hand	Small: 470 g, medium: 650 g, large: 1100 g
From string nock to bow-tip	3 cm
Length of 'siyahs'	27 cm
Length of grip	21 cm
Thickness at centre of limb	1 cm
Maximum breadth of medium bow	4.5 cm

Maximum breadth of large bow	4.8 cm
Dimension of string bridges	Large: 6.5 cm x 3 cm; Small: 4.4 cm x 1.8 cm
Arrow for horseback archery	Length: 98 cm; weight: 80 g; circumference: 4 cm
Arrow for foot archery	Length: 92 cm; weight: 35 g; circumference: 3.2 cm
Length of fletching / depth of fletch	26–36 cm / 5 cm

The bow has a layer of horn 2 mm thick attached to the belly, and the opposite side is covered with a layer of ox sinew stuck down along it. The string is as thick as your little finger or a thick pencil, and is made up of a dozen or so filaments of hemp whipped with another filament to keep them in place, and there is a loop at each end. The length of each loop, including the knot, is 25 cm, and that of the string is 110 cm, giving a total string length of 1.6 m.

Specification of the Target for Archery Examination on Foot

The target is made from white cloth stretched on a frame 1.92 m high and 0.90 m wide. Held up by guy-lines. (Two small, triangular pennants at the top corners help show the wind direction at the target face.) It is decorated with a large red circle bearing a dragon design to indicate the point at which the arrow should strike. However, a hit anywhere on the white cloth, in fact, suffices to secure a hit. A hit on the frame or the pennants does not count.

Course and Targets for Mounted Archery

The course for the mounted archery examination (馬路/ 馬道/ 箭路) is 307 m in length, consisting of an excavated track with a low packed earth embankment on each side. Three targets are placed about 1.8 m from the wall along the length of the course, roughly 90 m apart. The targets were made of straw wrapped in white paper and made in the shape of very elongated barrels about 1.6 m high. There was a black circle marking the top and bottom, and a red circle with a red crescent below in the middle. An alternative form was made of a rolled-up mat of rattan about 2.5 m high, wrapped in white paper with three red circles and two small pennants at the top. This design was widely used for archery target practice and was called the 'heaven-man-and-earth target' (三才靶子).

As the nineteenth century came and China became more and more exposed to aggressive imperialist powers from the East and West, the value of archery in the battlefield came more into question, and thus the wisdom of selecting China's military leaders on the basis of an archery examination came increasingly into doubt. In fact, by the beginning of the nineteenth century, a few rustic huntsmen apart, the imperial military examination system became the main *raison d'être* of archery in China, notwithstanding that there were still those who believed that archery was therapeutic and therefore regularly shot for exercise and relaxation. This artificial foundation was to be the reason for the ultimate loss of the art.

高 良 後 己
為 將 鬼 己
己 將 己 己
散 龍 妻 立

*High above, the skeins of autumn geese have flown;
Now is the time to put away my trusty bow.
The wily old hares are no more in the fields;
Now is the time to sacrifice
my coursing hounds to my ancestors.*

Fan Li (范蠡) quoted in *The Romance of Wu and Yue* (《吳越春秋》)
by Zhao Ye (趙曄) (c. 40 – c. 80)



The Final Years

Archery Literature in the Qing

Confucius was the role model for generations of scholar-officials throughout Chinese history. In order to attain this idolized position in Chinese society (thus bringing glory to the family and the whole local community), it was necessary to take part in the Imperial Examinations. Although the maximum prestige attached to the literary examinations, unprecedented numbers of candidates presented themselves to be examined in mounted and foot archery, the physical tests with the heavy bow, halberd and weightlifting, and a simple test of memorizing the military classics, which were a prerequisite for high rank in the army until the middle of the nineteenth century.

Confucius's idealization of the archer (whether real or apocryphal) was firmly stamped on the Military Examinations, and provided an excuse for the literati to take an interest in archery technique. Archery skills were to be acquired either through finding a suitable tutor, or through self-study. Throughout the Qing Dynasty, a constant stream of material¹ was published for the self-taught student of archery. Such material was mainly marketed at the examination candidate.

1. I have omitted fiction from the list.

Approximate Date	Title	Author
1679	貫虱心傳	紀鑑
1697	征南射法	黃百家
c.1700	射餘偶記	汪正榮
1700	武經七書匯解末卷	青溪朱墉
1719	射說	顧鎬
1722	繡像科場射法指南車	鑾江劉奇
1750	奇射秘論，弓箭譜	張次美、徐祥
1770	射的	滿·那蘭常鈞
1839	射略	王廷極 (手抄本)
1854	新鐫射藝詳說	崔起潛
1860	射訣集益	陳王謨
1862	武經集要	徐亦
1868	射藝津梁	史德威
1879	學射錄二卷	李埏

The approach adopted in these works consistently differentiates between internal techniques (內功) and external techniques (外功). 'Internal techniques' included mental control, *qigong* (氣功), concentration and dignified appearance.² 'External techniques' included stance, grip on the bow, correct nocking of the arrow, draw-hand technique, aiming and follow-through. Frequently, the books provide a glossary of terms, an analysis of common shooting faults and philosophical comments about the Confucian classics relating to archery. It was also common to provide a critique of types of bows and arrows and instructions for their proper maintenance. Some books covered archery on foot only, while others covered both foot and horseback archery. None is exclusively on horseback archery. Some books on horseback archery include detailed instructions for riding technique and care and training of the horse.

A thorough examination of the techniques and teaching methods, as well as the schools of archery displayed in the Qing archery manuals is a fascinating study, but would be well beyond what is appropriate in this book. I shall instead discuss examples from the three main styles of Qing archery writing: the illustrated manual, books of mnemonic rhymes and the discursive treatise.

2. These are explained at the beginning of Chapter 12.

Illustrated Manuals

Relatively few of the Qing archery manuals are illustrated to the extent that we would expect a sports manual to be illustrated today. Cost was not such a consideration: including black and white woodblock line drawings in a book was not expensive given that the text was carved into the woodblock anyway. Rather, authors tended to assume that illustrations were of limited use. They took for granted that the 'internal techniques' could not be illustrated at all, and that pictures could not represent movements.

However, two books are particularly interesting for their attempts to provide guidance by fulsome use of drawings. The most elaborate book is the *Illustrated Guide to Archery Method* (繡像射法指南車) by Liu Qi (劉奇) published in 1722.³ Unique elements in Liu Qi's book are the attempt to depict Manchus of the Royal Bodyguard in Beijing as the model, and the use of front, side and oblique views of the models in an attempt to explain body position more comprehensively.

The *Illustrated Guide* starts with a discussion of technique. The discussion is in thirty-six sections, of which the first eight, 'mental preparation' (養心), 'concentration' (定志), 'breathing' (行氣), 'balance of strength' (齊力), 'the predraw' (引弓), 'firmness of stance' (固勢), 'aim' (審的) and 'moment of release' (發機) are 'internal techniques'. Liu points out through a rhetorical question that 'predraw' and 'moment of release' might be expected to be 'external techniques', but he considers them as being based internally.

Liu then continues with an examination of the role played by various parts of the body — feet, shoulders, upper arms, fingers, etc. — and follows with an examination of the components of the shot itself. He then recommends some practice methods and describes the method for horseback archery.

The book ends with the 'Cavalry and Infantry Archery Illustrations' (馬、步圖象) which are reproduced below:

13A1

馬、步圖像，十有三式，皆自京衛巧正。且關係古今要緊法，則圖以備覽。原取作一對證，非徒飾觀而已：其自踵至訂，無一點不合法，無一點不用。要細細看玩，得其神勢。即移於鏡中燈下，摩擬仿佛，使在我全體架子於他出一個模樣。規矩始定，即與識者面談不過如此。

3. The whole book was reproduced in the 1940s by the Shanghai Municipal Martial Arts Advancement Association under the title '清代射藝叢書' edited by the eminent martial arts historian, Tang Hao (唐豪, 1897–1959). Only one original copy remains.

There are thirteen of these illustrations of [archery] on horseback and on foot, all modelled on the technique of the Royal Bodyguard. Everything which relates to the important [archery] methods — both old and new — is set out for you to see in these drawings. Their purpose is to provide you with a point of comparison; they are not just for decoration. From head to toe there is nothing [in these models] that is not in accordance with the correct method; nothing which is not of use. You must carefully observe every position and grasp what underlies each action. Then you go in front of the mirror or under the light of a lamp and try to mimic them, and try to get the position of your whole body exactly like theirs. Once you are set in the mould, you would not have been able to do better even talking face to face with a knowledgeable master.

13A2

正體執弓法

此勢宜看他內正外直，從容閑雅，一片精神俱在含養不露中為上。至於執弓出箭，冠冕有度，又其次矣。然亦大方舉動，不可不學。

Setting up Stance and Grasping the Bow

Pay attention to his internal alignment and external straightness. He is natural and relaxed. His whole state of mind is based primarily on not making a show of his internalized skill; second to this is his grip on the bow, which is dignified and reserved. This demeanour also has an air of expansiveness which you cannot afford not to learn.



13A3

定志認扣勢

此勢宜看他端莊靜默，凝神相的，無半點情色處為上。至於“抱弓如懷月，理扣如執星”，不過是都門新樣，略見大方而已。然學之亦有妙處。

Fixing the Aim and Finding the Nock

Note his dignified and still appearance, his concentration as he studies the target without the faintest trace of emotion. As to 'grasping the bow like embracing the moon, handling the nock as if plucking a star', these are just fashions in the capital and you need only note the general elements, but you can gain a little extra skill by learning them.



13A4

架弓提氣勢

此勢宜看他兩手不高不低，兩肋不偏不紐，腰申臍吸，面正肩平處。然皆外相，易於看出。惟提氣最難，須細看吸臍處，則見其妙矣。提氣正在此時，不可忽略，切記切記。

Setting the Bow and Controlling Breathing

In this illustration, note the following points: how he holds his arms — not too high and not too low; his ribcage not too expanded and not too twisted; he has spread at the hips and is expanding at the waist to inhale deeply; he is facing directly on to the target and his shoulders are level. Nevertheless, these are all external features and you can see them

easily; it is the control of his breathing which is the most difficult [to portray]: you have to look carefully at the point by his navel where he is inhaling, then you can see the skill in it. This is the stage [in the whole procedure] where you control your breath, and you must not overlook it. Remember that!



13A5

合胯讓弦勢

此勢乃旁取，非正像也。宜看他肩、肘、背三處足後勁工夫。全在此時要緊。至於腰不軟，臀不現，腹不鼓，脈不曲，雖是外相，非內功所在，然不可不如此。若不如此，則有病矣。

Drawing Together the Hips and Drawing the String to the Chest

This illustration is taken obliquely, not directly from the side. Observe how he has managed to fully apply tension to his shoulders, elbows and back. This is all vital at this juncture. As for his hips not being tense, his bottom not sticking out, his belly not protruding, his pulse-points not bent: although you are looking from the outside and his internal stance is not visible, you cannot set your form other than in this way. If you get this wrong, it is an error of form.



13A6

齊加後勁勢

此勢宜看他引弓到八九時，並氣集力，胸、腹、腰、肘一齊加勁處。然後兩肩可開，背骨可合，正是入彀先一着工夫。當細心揣摩如式，則入彀有餘力矣。



First Adding Tension Evenly, then Gaining Strength All Round

Look at the illustration and see how, after drawing the bow to 80–90%, he redoubles his breathing control and marshals his strength so that he gains even tension in his chest, stomach, hips and elbows. Once he has done that, he can spread his shoulders and compress his dorsal muscles: this is the task that comes before the full draw. You must work hard on imitating this model then you will have sufficient strength remaining for the full draw.

13A7

引弓入彀勢

此勢乃正取，故不見讓弦。宜看他胸骨開展，左右肩、肘平直如衡，則背自合無疑。此入彀之正式也。學者須漸次加功，其妙必得。至於前手得力，後歸位，腰、腹用勁處，俱有相助之功，悉宜留心。



Bringing the Bow to Full Draw

This illustration is taken directly from the side, so you cannot see how the bow is drawn close in to the chest. Note how his chest is opened out and his left and right shoulders together with his elbows are as straight as the arms of a balance. Like that, his dorsal muscles are sure to be compressed. This is the correct way to come to full draw. The student needs to go in stages and he will attain the skill properly. As for taking the strain with the bow-arm and the string-arm reverting to the [correct]

position, and the waist and stomach being held tense: these all have the advantage of supporting each other, so you should pay special attention to them.

13A8

撒手驗法勢

此勢宜看他前手不動不搖處。乃畫龍點睛：末後第一着工夫。正是古法云：“後手法矢，前手不知”之意也。至於後掌平出，不過取其中正之妙。若太猛，則又有失矣。二法俱是要緊，不可輕視。

Effective Use of Hands at the Release

In this illustration, note how his bow-arm remains immobile. This is the final point in the process and is the last task to be undertaken. It is just like the ancient method: 'The bow-hand releases the shot and the string-hand does not react.' As for letting the string-hand extend straight out, this is just ensuring that the shot goes absolutely straight. But if you do it too violently, that will also be an error. Both of these points are of importance and should not be overlooked.



13A9

對面認準勢

此勢宜看他立弓平準，正面審的，不偏不倚，前後對針處。是要緊工夫。餘無他勢同。

Frontal View of the Aim

In this illustration, note how he has the bow held level with his target, neither tilted nor canted, with bow- and string-hands pointing in a straight line. This is a vital thing to work on: no other stance can equate with this one.



13A10

後肘得力勢

此勢宜看他肘不鬆，肩不吐，手不懸，乃最得勁處。其頭、胸、背、腰、臀亦宜揣摩如式。

Taking the Strain on the Draw-Arm Elbow

In this illustration, note how his elbows are not loose, the shoulder is not hunched, the arm is not hanging down: this provides the greatest rigidity. You also need to work on imitating his head, chest, back, waist and bottom positions.



13A11

領正撒馬勢

此勢宜看他勒馬上道，不慌不忙處要緊。至於手、臂、腰、膝、足，俱是得法，亦不可忽略。

Bringing the Horse onto the Course

In this illustration, note how he is bringing the horse onto the course without nervousness or fluster. The position of his hands, arms, hips, knees, and feet are also correct: none of these points should be overlooked.



13A12

平射牆靶勢

此勢宜看他側腰而臀不動，探臂而肩自舒要緊，其弓滿直處。得力又在兩膝間矣。當細察之。

Normal Target Archery Practice

In this illustration, note these important points: how he has his hips sideways to the target and his buttocks are immobile; he is extending his arms forward and his shoulders are at ease. When the bow is fully drawn, it is vertical. And once again, his weight is spread between his knees. You should observe this model carefully.



13A13

低射地毬勢

此勢宜看他跪膝斜胯，讓弦取準處。乃滿州家之熟，平中生巧式也。學之亦易，但右足不可跳蹬，兩膝不放鞍頭。此要緊法則。

Shooting Down at the Ball on the Ground

In this illustration, note how he has his knees flexed and is bent forward at the hips; he has also raised the string to his chest to get a view of his target. This is the style that the Manchus are accustomed to: the stance that gives the facility usually to be able to hit. Learning it is easy; however, but do not let your right foot leave the stirrup and do not relax your grip on the top of the saddle with both knees. This is an important method.



13A14

射畢收馬勢

此勢宜看他從容收韁，兩膊靠近脅，全身一齊著力，不俯不仰，步步加勁處。不但是慣家模樣，而且令馬之四蹄明白，永無顛蹶之誤。

Bringing the Horse Back in After Shooting

In this illustration, note how he is calmly reining in the horse, both upper arms pressed into the ribcage, his strength distributed over his whole body, leaning neither backwards nor forward, driving forward with each step. Besides having the appearance of being at ease, it keeps the four hooves regular, thus permanently avoiding errors of shying or stumbling on the part of the horse.



13A15

右騎射四勢，皆自京衛仿佛滿式，至穩至便，毫無擬議者也。止自我輩闡場中，拔萃超群，最要留心。此外，雖有多端，不過弓馬嫺熟。自能貫通：不必備於是冊內。

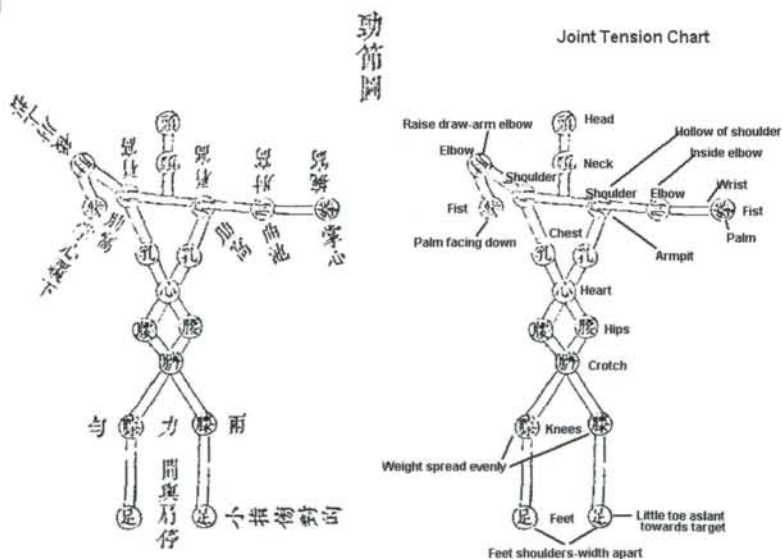
康熙壬寅夏月望日義莊較錄。

The foregoing four⁴ mounted archery positions are all closely based on the style of the Royal Bodyguard. That they are extremely reliable and conversant [with the art] is beyond any doubt. Starting from our own generation, they have been selected for their excellence from among all candidates in the Imperial Examinations. The only thing you need is complete familiarity and ease with your horse and your bow. This is something that you can acquire on your own: it does not need to be covered in this volume.

Renyan Year of Kang Xi (1722).

The *Illustrated Guide to Archery Method* broke some new ground in using different views of the same subject to give the reader a more complete picture of the correct stance for foot and mounted archery. Another book, the *Concentrating the Mind to Pierce a Flea* (貫虱心傳)⁵ by Ji Jian (紀鑑) published in 1679 also tried something new: a diagrammatic representation of the joints.

13B1



4. One of them (paragraph 13A12) is a standing position, used in practising for horseback archery.
5. A reference to the story by Lie Zi, included in Chapter 7, paragraph 7L1.

The body position which the diagram on p. 372 is trying to achieve is one that is frequently depicted in Qing art showing archers in action.

This position must have been considered graceful. It appears to reflect in an infantry archery stance the position that would be adopted by an archer on horseback. The illustration below is also from the *Concentrating the Mind to Pierce a Flea*, and the larger bow shows that training was being undertaken using the large, Manchu bow. Note also that the bow-hand index finger is extended to feel for the arrowhead, in contrast to the earlier Ming style in which the arrowhead was to be drawn back to the middle of the grip.



The book *Concentrating the Mind to Pierce a Flea* also provides detailed illustration of the bow-hand and draw-hand positions. The use of the Chinese thumbing has always been a puzzle to Western archers who are used to the Mediterranean draw.

13B2

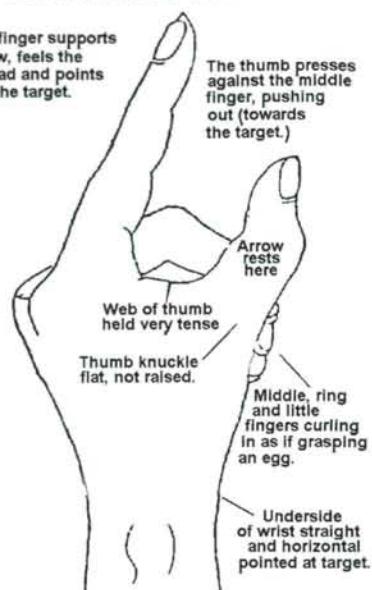
持固圖



Bow-hand Position

The forefinger supports the arrow, feels the arrowhead and points toward the target.

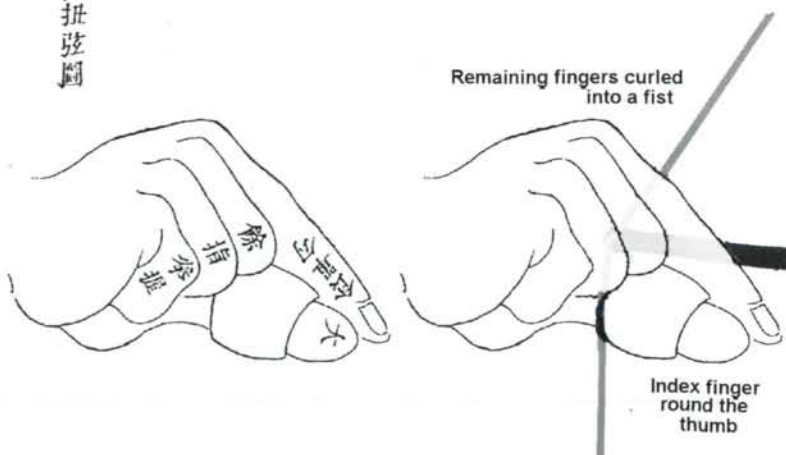
The thumb presses against the middle finger, pushing out (towards the target.)



13B3

握挽扭弦圖

Right Hand Grip on the String



In the above illustration, I have 'improved' the original drawing to show the alignment of the arrow and the string, which would both be obscured by the hand.

Mnemonic Rhymes (歌訣)

We have already met mnemonic rhymes in the Han Dynasty's *Romance of Wu and Yue* and in Tang Dynasty Wang Ju's *Archery Manual*. But both of them fail to give a proper picture of how pervasive rhymes were in Chinese martial arts teaching. Nearly every school had rhymes associated with its style of martial arts.

The rhymes varied from doggerel to quite pretty verses. They frequently drew from the better-known classics. Mostly they comprised a number of lines of seven-character couplets with a rhyme. In contrast to classical Chinese poetry, the rhymes usually reflected current colloquial pronunciation rather than the 'established' rhyme groups (韻) used among the literati, which were based on the dialect of Chang An (長安) in the Tang Dynasty. On the other hand, they often had rhymes which were only apparent to speakers of particular dialects.

These rhymes also followed a regular grammatical pattern: the sense groups were seven characters each with the subject in the first four characters and the predicate or a dependent phrase in the last three. The effect is quite like rap.

Clearly the rhymes were intended to help the illiterate to remember the main features of their school of archery. Often they were treated as secrets (秘訣), and students were initiated into higher and higher levels (as represented by more and more 'secret' rhymes). No doubt a suitable fee or services to the teacher was involved. In this way, the rhymes were handed down from generation to generation. Needless to say, they mutated in the process so that numerous versions existed of the same basic rhymes, perhaps reflecting attempts to adapt rhymes to suit different dialects.

On their own, the rhymes were of little use: they represented only snapshots of movements or fragments of technique. So a whole subclass of textbooks set out to analyse popular rhymes, explain their meaning in detail and show the relationship between them. The 1860 work, *Collected and Expanded Archery Rhymes* (射訣集益) by Chen Wangmu (陳王謨) is an example. But many archery manuals from the Ming Dynasty on approached their subject through analysis of popular rhymes.

Here are two examples taken from the *A Bridge to Skill in Archery* (射藝津梁) by Shi Dewei (史德威) published in 1868. I have not risen to the

challenge of rendering these rhymes in elegant English verse; the Chinese language is better suited to rendering technical detail elegantly in verse than English.

13C1

立身歌

立身形式似蹲鷹，勿曲勿挺身須正。
心定氣平神注目，令胸進步體莊凝。
觀靶先將後腳衡⁶，以心對靶認分明。
梢柯扣弦緩緩搭，舉手開弓必中心。

Rhymes on Stance

When you stand [to shoot] the position is like squatting on an eagle,⁷ neither bent, nor rigidly upright, your body must be properly aligned. The heart steady, the breathing regular, the mind concentrated through the eyes; make your chest expand, your body firm and still. Before you look at the target, get your rear foot at right-angles to it; and with your mind make out every detail of it.⁸ Glance at the nock as you nock the arrow⁹ and bring the arrow gently to the string; raise the arms and draw the bow and you are sure of hitting the middle of the target.

13D1

善射歌

善射由來有的傳，但傳形勢巧自專。
全身勁力由心發，拉放從容在兩拳。
神定眉平項不偏，雙分兩手力須堅。
平舒背力能施展，束肋鬆襠欹落肩。
定氣平胸入彀明，細看靶近鏃相迎。

Rhymes on Marksmanship

The origin of good marksmanship can be told, but one can only tell of

6. Perhaps this should be '橫'.

7. That is to say, as if riding on an eagle's wings: a fast and unstable thing. This suggests a stance like surfing.

8. There was a recognized shooting error called 'big eye' (的大眼大), in which the archer let his eye waiver around a large target rather than distinguishing a particular spot on it (認分明).

9. Note how this contradicts earlier admonitions, i.e. never to look at the arrow while nocking it.

the body positions: the technique you learn on your own. The strength of your whole body has its start in the mind; the ease of your draw and release is found in both hands. Your mind must be still, your eyebrows level and your neck must not lean on one side. The two arms must come apart as a pair, their strength must be firm. If the strength in extending your dorsal muscles is even you can bring them apart. Hold in the ribcage, spread your legs at the crotch and bring the shoulders out and down. Settle your breathing, get your chest level and make sure your bow is fully drawn. Carefully check the distance of the target and adjust your arrowhead for it.

I3D2

左手持弣宜扁握，右指放箭貴速輕。
前拳力大後微鬆，箭出離弦恐失中。
後手力強前手弱，矢頭發出多落空。
前後分明兩力齊，裏推外裏是元機。
扁開握放能如式，箭箭穿楊中不移。

The left hand grasps the bow with a broad grip; the right hand fingers release the arrow: we prize speed and lightness. If the grip of the bow-hand is powerful while that of the draw-hand light and loose, then the string moves away from the face as the arrow goes off and you will risk missing the target. If the draw-hand applies force while the bow-hand is weak, as the arrows are fired many will fall all over the place. The bow- and draw-hand must part clearly and the force applied must be equal. The secret skill lies in pushing out from the inside [of the bow] while embracing from the outside. Spread-draw-grip-release: this is the correct sequence. Every arrow will hit its target without any spread.

I3D3

力微只合用輕弓，箭短箭長與臂同。
弓強力弱難施放，硬則傷人軟在工。
弓矢須秤己力行，五平三靠記分明。
須將心平為真訣，法則當由十八精。
得心應手真神妙，貫虱穿楊信不慚。

If you are short of strength, the only thing for it is to use a soft bow. And the length of the arrow has to match with the length of your arms. If the bow is heavy and your strength not up to it, it is hard to control your shots; too hard and the bow will injure you; the soft bow is the better choice. The bow and the arrows need to match your own strength:

the 'five levels' and 'three proximities'¹⁰ need your close attention. The real secret lies in stilling your heart; the principles of shooting are to be found in the 'eighteen refinements'. Getting the mind and the hands into shape is a marvellous skill: the skill to pierce a flea or cleave a willow leave will be yours without a doubt.

Discursive Texts

Most of the works already translated in the present and previous chapters were in the discursive form. Some represented a combination of forms — with mnemonic rhymes and illustrations. Further examples of this form of writing are not strictly necessary.

However, this chapter is on the Qing Dynasty, which was founded by the Manchus — a people from the north-eastern part of China. Their ancestors, the Ruzhen, had previously ruled north China under the title of the Jin Dynasty (金朝). In the early part of the seventeenth century, the Manchus developed a script for their language based on Mongolian. Their script was purely phonetic and very easy to learn. (Later, it was expanded and used successfully as a standard phonetic alphabet for rendering the pronunciation of all the minority languages under Manchu rule.) Once they had a simple tool for writing their language down, the Manchus set about translating a large portion of Chinese literary, historical and scientific heritage, so as to be able to match up to the Chinese intellectually and to have a good basis in Chinese courtly ritual and Confucian ethics with which to legitimize their rule.

Although they thought so highly of archery, they seemed to have written little of their own ideas about it. Their ideas were very much influenced by Chinese style and thinking. One interesting work, written in Manchu with Chinese parallel text, is *Shooting the Target* (射的) by Naran Changgiun (那蘭氏常鈞). Here is a short extract which deals with the relationship between archery and the practice of one set from a well-known set of *qigong* exercises, the 'Eight-Part Brocade' (八段錦).

10. According to 'Bridge to the Art of Archery' (射藝津梁), the 'five levels' are: (1) eyebrows, (2) nipples, (3) chest, (4) back and (5) arms. The 'Three Proximities' are (1) string close to the chest, (2) the nocking point touching the arrow and (3) the arrow touching the face. In Chapter 79 of the Qing Novel *A Fleeting Encounter* (鏡花緣) by Li Ruzhen (李汝珍), they are given more plausibly as follows. 'Five levels' are: two shoulders, two elbows plus the bow-hand wrist all level. 'Three proximities' are: (1) fletching at the side of the mouth, (2) the string close in to the body and (3) the ear close in ('listening') to the string.

I3E1

清·葉河·(滿)那蘭氏常鈞識：《射的》

人身以氣充，而丹田又為氣歸宿之地……善養氣者……勿以喜樂耗其氣，勿以哀怒傷其氣。納而有常，出而有度，充於一身，達於四體。臨射連用之時，全身貫注，百節乃靈，而力與功便鼓舞於氣之中矣。

A person's body is imbued with strength through *qi*, and the diaphragm (*dantian*) is the place where *qi* returns and settles . . . A person skilled in the control of *qi* will not fritter it away with pursuit of enjoyment, and will not damage it through sadness or anger. His intake of breath is natural and exhalation is measured; then it imbues his whole body and penetrates to his four limbs. When it comes to the point of using *qi* in conjunction with shooting, it has penetrated throughout his whole body, all his joints are limber and his strength and proficiency are invigorated within his *qi*.

I3E2

演法

用功不外乎法。身法、手法、指法、眼法，皆用功之準繩也。善學者，不必日事弓箭，朝斯夕斯周身一想。空手作執弓、扣弦狀，久定之後，又作撒放勢，一如真射。

On Practice

Proficiency in martial skills is no exception to the need for a fixed technique. Body technique, arm technique, finger technique, eye technique are all parts of the criteria for judging martial skills. The good student does not need to slave incessantly with a bow and arrows, thinking about it day and night without pause. He can practise the actions of holding the bow and nocking the arrow empty-handed, and when he has managed to do it consistently for some time he can go on to practise the action of releasing just as if he were shooting for real.

I3E3

道書修養門，以左右挽手如引硬弓，能療風痺不仁。是此法原有所本也。且較之執弓空拉，功實倍之。蓋空拉不過練肋膀力，既不能撒放，隨弦收復，舐骨反拘，兩拳中一點巧處，不能法洩。不若空拉，多定之後，即可作撒放勢。久之，自然純熟，臨射則巧亦從熟生矣。

In the *qigong* practice described in Daoist texts, there is described a method of 'using both hands as if pulling a heavy bow' prescribed to cure

rheumatism. This is what the method was originally intended for. However, if applying it to drawing a bow, it has a double benefit. First, pulling without the bow is good exercise for the upper arms and lateral muscles; although you cannot release, you still draw back with the string, and pull back the dorsal muscles. Moreover, the proper technique for your hands must not be neglected. The best thing is to draw without the bow, and after a pause, you perform the action involved in releasing. After a time, you will become accustomed to it and when it comes to real shooting, your skill will come from familiarity.



The Demise of Chinese Archery

The proud Manchu military class, who managed to control the whole of the Chinese Empire, and expanded significantly into Mongolia, Turkestan and Tibet, ultimately fell to the same fate as the Mongols in the Yuan Dynasty. Once they had succeeded in their campaigns, they were retained on a state subsidy but were badly underemployed. On a journey in western China with the American consul to Amoy, Edward Alsworth Ross observed:¹¹

When, in the days of Cromwell, the Manchu Tartars overpowered China, they placed Tartar garrisons in the chief cities. These 'bannermen' living

11. Ross, Edward Alsworth. *The Changing Chinese: The Conflict of Oriental and Western Cultures in China*. New York: Century, 1912.

a privileged class in their own fortified quarter and fed by government rice, have vegetated and multiplied for generations. In Sianfu¹² the Tartar quarter is a dismal picture of crumbling walls, decay, indolence and squalor. On the big drill-grounds, you see the runways along which the horseman gallops and shoots arrows at a target while the Tartar military mandarins look on.¹³ These lazy banner men were tried in the new army, but proved flabby and good-for-nothing; they would break down on an ordinary twenty-mile march. Battening on their hereditary pensions, they have given themselves up to sloth and vice, and their poor chest-development, small weak muscles, and diminishing families foreshadow the early dying out of the stock . . .

The Manchu Qing Government turned more and more in on itself. The more they saw of aggressive foreign powers, the less they wished to emulate them. And yet without some degree of effort to copy foreign ideas, they were at the mercy of the more effective organization and mature military technology which foreign aggressors brought to bear on the them.

Finding no enthusiasm for trade among the Qing bureaucracy, foreign traders dealt directly with the population, and found a lucrative commerce in many commodities including wool cloth and opium. When unsanctioned trade was opposed by the Qing Court, foreign powers did not hold back from using military force to continue and further it. Through the enlightenment of the Meiji period, Japan thoroughly modernized its government institutions and military. When foreign powers realized that China had been weakened beyond effective resistance, Japan joined with the United States, England, France, Russia and Germany to compete for territorial concessions and trade benefits in Chinese territory.

Apart from increasing population and economic pressure, China was severely weakened by an uprising by the Taiping rebels and northern Muslims between 1850 and 1873. The Taipings held quasi-Christian beliefs and sought to forcefully evict the Manchus. At first, they had some successes. Ultimately, the Qing government was able to suppress the Taiping rebellion under the military leadership of Zeng Guofan (曾國藩) — something which was achieved at the expense of an enormous loss of life.

Following the suppression of the Taipings and a number of other outbreaks of rebellion which followed, China attempted to modernize its army and equip a fleet with modern, western weapons. They instituted a

12. Sianfu (西安府) is today's Xi An.

13. It is unclear whether this practice had continued after the examinations were scrapped in 1901.

'new army' and employed foreign tutors to provide instruction. But in a war against Japan in 1876, they were ignominiously defeated and much of the fleet was sunk. Not long after, another rebel group, the Boxers, who aimed to rid China of foreign interference, caused terrible damage in China and threatened the foreign legations. At first, the Empress Dowager, Ci Xi (慈禧) (1835–1908), who had put herself in the position of virtual ruler by totally controlling two young emperors from 1868 until her death in 1908, was inclined to sympathize with their anti-foreign sentiments. But once again, they were finally bloodily suppressed with foreign assistance. This time, China was forced to pay reparations for harm done to foreign concessions.

In 1898, the Qing Emperor Guang Xu (光緒) was for a short few months able to rule China without the immediate supervision of the Empress Dowager, Ci Xi. Kang Youwei (康有為) was at the time in Beijing. Seeing an opportunity to influence the Chinese court, he wrote several essays and submitted them to Guang Xu. Kang had for the previous ten years been advocating reform such as abolition of foot-binding and modernizing the examination system. He was also a strong advocate of absorbing more foreign ideas, although he also saw Confucianism as the ultimate answer to China's needs.

In 1898, Kang wrote in the following terms about the Chinese examination system:

13F1

康有為《請停止弓、刀、石武試改設兵校折》

夫武試之制，始於唐之武后，於今千二百年矣，乃在德意志初祖沙立曼未出世之前，此真博物院之古物，足供考古者，凱今猶可擄巨石以投人，舞大刀而相斗，鳴長鎗以相驚乎？以此弓、刀、石而與數十響之後膛槍開花彈之克虜伯炮相交乎？既必無是理矣！……

The whole military examination system started out in the Tang Dynasty in the time of Wu Zetian, 1200 years ago. That was even before the appearance of Charlemagne in Germany. It is a real museum-piece suitable for archaeologists. Does anyone imagine that in this day and age we are going to throw enormous rocks at people, fight with great halberds or frighten each other with the whistle of long arrows? Are we going to go into battle with these bows, halberds and rocks against the rifle bullets and bombardment of the Krupp guns which would open up after a few shots? Obviously not! . . .

13F2

……以言兵事，等于古玩兒戲；以言國計，則大為棄民傷財。……立下明詔，停止弓、刀、步、石之武試及旗兵習弓矢者，並廣設武備學堂。

Applied to military affairs, this is amusing ourselves with antiques. Applied to state strategy, it amounts to abandoning our people and squandering our wealth . . . Please issue a proclamation to stop the examination with bows, halberds, infantry archery and lifting rocks, as well as archery practice for the bannermen, and in addition set up military academies around the country.



Maison Martinet, 112, r. Rivoli et 61, r. Vercennes.

Lith. Deshayes 214, r. Jacobine 12, 4471.

— Que je suis donc fâché d'avoir inventé la poudre !

'How it annoys me now that we invented gunpowder!'

French political cartoon, 1856

Emperor Guang Xu might well have taken the advice of Kang Youwei immediately had not the Empress Dowager intervened to put an end to the 'One Hundred Days of Reform' and suppressed the reformist movement. Kang Youwei fled to Japan, and other less fortunate members of his reform school were captured, imprisoned and executed. Nevertheless, the scene was set, and in 1901, Emperor Guang Xu issued the following proclamation:¹⁴

1361

謂武科一途，本因前明舊制，相沿已久，流弊滋多，而所習硬弓、刀、石及馬、步射皆與兵事無涉，施之今日，亦無所用，自應設法變通，力求實際。嗣後武生童考試及武科鄉、會試，著即一律永遠停止。

The whole military examination process was originally adopted after the old Ming system. It has been kept up for a very long time and is riddled with malpractice. Furthermore, the training with bows, halberds, rocks, and mounted and infantry archery have no application in military affairs. To continue them in the present day is useless. We must try to bring about change and strive for what is practical. Hereinafter, the whole system of examining elementary candidates, as well as the graduate and postgraduate examination, are to be abolished permanently.

The military examination system was the mainstay of business for China's bowyers. In his *Study Report on Bow-Making in Chengdu* carried out in the mid-1940s, Tan Danjiong reports on his interviews with one of China's last remaining bowyers.¹⁵ He recounted that:

Chang Xing Bow-maker's fame spread far and wide, and in those years they sometimes couldn't make enough bows to meet all their orders, and the hostel rooms (which they rented out to candidates for the military examinations and their tutors) had to be booked well in advance. But unfortunately the heyday didn't last long. At the end of the Guang Xu reign period, the examinations were abolished and the bow-manufacturing industry went into a deep collapse. The younger son of the master-bowyer, Wu Zhengfu, was unwilling to continue with his apprenticeship and gave up half-way, preferring to do business in the town of Jiading. So the legacy was taken over by the elder son, Hongxing, who passed it on to the grandson, who is the owner of the current business.

14. 劉錦藻：《清·續文獻通考·選舉五》。

15. 譚旦罔：《成都弓箭製作調查報告》（臺北：中央研究所歷史語言所年報，1951）。

Production stopped for some time; but after the revolution in 1911, the state-sponsored Martial Arts Association of Chengdu established a 'Archery for Virtue Club' (射德會), and this revived a limited interest in archery. The bowyer restarted his shop in 1925 with an injection of capital from the Martial Arts Association. Frequently, business was too slow to be economical and they would have to seek further assistance from the association. They supplemented income by helping to give archery lessons on Saturdays in the city. By the time the Tan's Report was being prepared, business was dying out.

Ideas for maintaining China's archery tradition surfaced from time to time. In 1940, the lawyer and martial arts scholar Tang Hao (唐豪, 1897–1959), edited a collection of Qing archery manuals under the auspices of the Shanghai City Martial Arts Advancement Association¹⁶ with the idea that the principles of archery were not basically different from rifle shooting, and the military could benefit from the practice without wasting valuable ammunition — something which China was not in a position to afford.

However, interest in traditional archery did not survive the Anti-Japanese War, despite occasional reports of peasants resisting the Japanese with bows and arrows. Some remnants of traditional bow-making remained in Beijing. In 1955, Mongolian traditional archers found that they could not obtain enough bows from local suppliers and were able to obtain about 500 bows on a visit there.

The People's Republic of China was founded in 1949 in a China ravaged by war and famine. Mao Zedong's government inherited a new China from which Chinese archery and bow-making had almost disappeared, and the communist ideological struggle against feudalism and traditional Confucian thinking was unlikely to provide a sympathetic environment in which it might be revived. The former Chinese national archery coach, Xu Kaicai (徐開才), served in the People's Liberation Army in the 1950s, and developed his interest in archery from watching archery competitions among China's national minorities in Mongolia and the north-east. He went on to find an old archery master of the Manchu period and started to learn with him. However, the old traditional insistence of standing for long hours with arms outstretched to loosen the shoulder joints, and practising *qigong* to develop breathing seemed to Xu at odds with the needs of modern competitive archery. He and the Chinese archery team sought modern recurve bows, which were once again coming into fashion in the West and adopted the Western method.¹⁷

16. 唐豪：《清代射藝叢書》（上海市國術協進會，1940）。

17. Despite which, Mr Xu has offered great encouragement and support in the writing of this book, and has been generous with his time and materials.

In the 1930s, traditional bowyer, Yang Wentong (楊文通) followed his father, Yang Ruilin (楊瑞林) into the family business, Ju Yuan Hao (聚元號), in the traditional bow-makers' quarter of Beijing. In 1957, they were allowed to convert to an industrial co-operative, and continued to make bows, pellet-bows and pellet crossbows — especially for traditional Mongolian and Tibetan archers in Inner Mongolia, Qinghai and Tibet. But at the start of the Cultural Revolution in 1966, their profession was denounced by the Red Guards as bourgeois and father and son were ordered to turn their skills to carpentry. Recently retired from his carpentry, Yang Wentong, aged over 70, is now slowly starting once again to build traditional Chinese bows. A three-thousand-year-old tradition is today held in the hands of one man.

射貴形端 志正實端 六字
舒胸五字 二先足 此字足中
斤之重 平品 安祥大舒 故江停
紅泥空 活春風眼 最宜 雲松
滿方 能 乃中

謝書方 呈 筆 意
梅蘭竹 香 墨 三 齋 印

庚子年 月 日

*To shoot with upright mind and stance is best,
Your breath draw deep and long to fill your chest;
With five points level, three points close, you draw,
Your feet as if to bear ten tons or more.
Bring back the string with ease, your mind at peace,
And calmly pause for thought before release.
The 'phoenix eye' for draw-hand style is fit;
A full and steady draw ensures you'll hit.*

*A Chance Encounter (《鏡花緣》) Chapter 79
by Li Ruzhen (李汝珍) (c. 1763 – c. 1830)*

Calligraphy by Zhang Guoying (張國英)



Epilogue

I apologize. I have dragged you through three thousand years of Chinese history, across battlefields, through philosophers' backyards, over thickets of Chinese characters. Here you are, bruised and scratched, dragged backwards through half-a-dozen different styles and fashions of archery — mostly inconsistent with each other (and some not even consistent with themselves). Yet I have still not shown you how to shoot in the Chinese style, or any other style for that matter.

You have every right to be bitter.

At one point, I had thought of concluding this book with my own synthesis of Chinese archery: a nice series of drawings or photographs (of me, of course), clearly explaining every movement and finer point of technique.

Had I done so, I would have been defrauding you on two counts.

First, we have already encountered several styles and theories of archery at different times and different places. Who am I to say which one is right? In the thick of battle, with the sky black with dust from the hooves of horses and the air ringing of the thunder of drums and cymbals, which style would I pin my life to? The answer is 'none'. I'd run away.

Second, I am a rotten shot. If I had the cheek to teach any method, I would be encouraging high expectations about my own level skill. My fraudulence would very quickly be unmasked.

So what are we to do? I hate to leave you dissatisfied. Somehow, we need to listen to a proper Chinese archery lesson given by a good teacher.

Impossible? Nearly!

Let me introduce you to a young woman, Su Alan, an archery teacher and poet in the best tradition.

Alan is also fictional. In fact, she is a character in the Qing Dynasty novel *A Chance Encounter* written in about 1820 by Li Ruzhen.¹ The novel is set in the Tang Dynasty in a period when the Empress Wu Zetian, founder of the Chinese imperial examination system, overthrew the Emperor and set herself up as China's one-and-only female Empress with her own dynasty, the Zhou (周) Dynasty. (That part is true: she did so from 690–705). But from this point on, Li Ruzhen takes us on a fantasy in which Wu Zetian allows women to compete in the Imperial Examinations, and one hundred 'talented women' (in fact incarnations of flower spirits released after a drunken prayer uttered by the Empress Mother of the West) pass the examination with flying colours.

In the author's fantasy, the women celebrate their success by throwing a series of parties and taking part in other sports and pastimes normally reserved for men.² In each activity, the author displays his breadth and depth of knowledge of Chinese sports as they existed in his own time, the early nineteenth century.³

So here is your archery lesson from your very capable instructor, Alan. What could be better than to have three thousand years' worth of male-dominated Chinese experience in archery elegantly distilled by a woman.

Good shooting!

14A1

清·李汝珍《鏡花緣》第七十九回

次日把卷交了，陸續到卞府，彼此把詩稿看了，互相評論一番。用過早麵，仍在園中各處散步。遊了多時，一齊步過柳陰，轉過魚池，又望前走了幾步，紫芝手指旁邊，道：“這裏有個箭道，卻與玉蟾姐姐對路。諸位姐姐可進去看看？”

1. 李汝珍：《鏡花緣》。

2. Li was no great feminist, although he did have some ideals of equal opportunities in the examinations and abolishing foot-binding. He still saw the world exclusively through a man's eyes.

3. Many readers associate *A Chance Encounter* with tales of a visit by one of the women to numerous strange countries from Chinese mythology. That indeed is the plot of the first fifty chapters. Here I am talking about the second half.

A Chance Encounter by Li Ruzhen, Chapter 79

The next day, after they had handed in their assignments, they went one-by-one over to the Bians' residence. They exchanged the drafts of their poems and did a critique of each other's efforts. Then they had some noodles for breakfast and went out for a walk in the grounds of the house. After a long walk, they ambled together around the fish pond under the shade of the willows. As they walked a few steps further, Zizhi pointed off to one side and said, 'There's an archery range over there, just over the other way from where Yuchan is walking. Do you girls want to come and have a look?'

14A2

張鳳雛道：“此地想是老師射鵲消遣去處，我們進去望望。”一齊走進。裏面五間敞廳，架上懸着許多弓箭，面前長長一條箭道，迎面高高一個敞篷，篷內懸一五色皮鵲。蘇亞蘭道：“這敞篷從這敞廳一直接過去，大約為兩而設？”香雲道：“正是。家父往往遇着天陰下雨，衙門無事，就由這裏射鵲消遣。恐濕了翎花，所以搭這敞篷。”

'This must be the place where Teacher goes to do some archery to relax,' said Zhang Fengchu, 'Let's go and take a look.' So they went in together. Inside were five spacious pavilions and on a rack there were several sets of bows and arrows. In front was a long, long archery range leading to a very high canopy inside which was hung a five-coloured leather target face.

Su Alan said, 'The canopy stretches all the way from this pavilion: it must be to provide cover from rain, right?'

Xiangyun said, 'That's right. Often when it's cloudy or rainy and there's not much happening in the Magistracy, father shoots off a few rounds from here at the target for relaxation. He doesn't want to get the fletching wet so he put up this canopy.'

14A3

張鳳雛見這許多弓箭，不覺技癢，因在架上取了一張小弓，開了一開。玉蟾道：“姐姐敢是行家麼？”鳳雛道：“不瞞姐姐說：我家外祖雖是文職，最喜此道。我時常跟着頑，略略曉得。”紫芝道：“妹子也是時常跟着舅舅頑。我們何不同玉蟾姐姐射兩條舒舒筋呢？”瓊芝道：“蘇家伯伯曾任兵馬元帥，亞蘭姐姐自然也是善射了？”亞蘭道：“妹子幼時雖然學過，因身體過弱，沒甚力量，所以不敢常射，但此中講究倒知一二。如諸位姐姐高興，妹子在旁看看，倒可指駁指駁。”紫芝道：“如此甚好。”當時就同玉蟾、鳳雛射了三箭：紫芝三箭全中，玉蟾、鳳雛各中了兩箭。

Zhang Fengchu saw all the bows and arrows up on the racks and felt a sudden urge to get some exercise; so she took down a small bow and drew it. Yuchan said, 'You look pretty professional to me!'

'I won't make a secret of it,' answered Fengchu, 'Although our relatives on my mother's side are literary people, they're dead keen on archery. I'm always going shooting with them, so I know a little bit about it.'

'I often go for a spot of shooting with my uncle too,' Zizhi said. 'Why don't we and Yuchan shoot off a couple of rounds to give our joints a bit of a stretch?'

Qingzhi said, 'In the Su family, uncle has served as a military commander, so Alan must be a crackshot too, aren't you?'

'Although I learned when I was little, I was weak and short on energy so I didn't dare to shoot too much,' Alan replied. 'But if we are just discussing it here, I know enough about it. If you all think it would be fun, I could stand on the sidelines to watch and give you one or two tips.'

'That would be great!' Zizhi said. Then Zizhi, Yuchan and Fengchu each shot off a round of three arrows. Zizhi scored a hit with all three of hers, while Yuchan and Fengchu scored two hits each.

I4A4

紫芝滿面笑容，望着亞蘭道：“中可中了，但內中毛病還求老師說說哩。並且妹子從未請人指教。人說這是舒筋的，我射過之後，反覺胳膊疼。人說這是養心的，我射過之後，只覺心裏發跳。一定力用左了，所以如此。姐姐自然知道的。”

Grinning broadly, Zizhi turned to Alan and said, 'OK, so I can score some hits! But let's hear from the expert what mistakes I made when I was doing it. Actually, I've never employed a trainer. They say archery is good for stretching the muscles; but after shooting, my ribs and shoulders are aching like mad. And they say shooting is good for keeping down your heart rate; but all I feel after shooting is my heart racing. I must have done something wrong in the way I expended my energy to feel like this. I'm sure you know what the problem is.'

I4A5

亞蘭道：“玉蟾、鳳雛二位姐姐開放勢子，一望而知是用過功的，不必說了。至妹妹毛病甚多，若不厭煩，倒可談談。”綠雲道：“如此甚妙，就請姐姐細細講講，將來我們也好學着頑。倒是與人有益的。”亞蘭道：“妹子當日學射，曾撮大略做了一首‘西江月’。後來家父看見，道：‘人能依了這個，才算會射；不然，那只算個外行。’今念來大家聽聽——

‘射貴形端志正，寬襠下氣舒胸。
五平三靠是其宗，立足千斤之重。
開要安詳大雅，放須停頓從容。
後拳鳳眼是宜豐，穩滿方能得中。’

Alan said, ‘You just have to look at the style Yuchan and Fengchu used to shoot just now to know that that they were doing it properly. But as for you, you made quite a few mistakes. If you don’t mind, I can tell you about them.’

‘That would be great,’ said Lüyun. ‘Go on, Sister, tell us all about it. Then we can be good students when we try. Actually, we’ll get a lot out of this!’

‘When I was learning,’ said Alan, ‘I had a go at writing a poem in the *Xi Jiang Yue* style.⁴ After I’d written it, Father said, “No one should talk of being able to shoot without using these verses; and if they don’t they’ll be no more than amateurs!” This is how it goes:

*To shoot with upright mind and stance is best,
Your breath draw deep and long to fill your chest;
With five points level, three points close, you draw,
Your feet as if to bear ten tons or more.
Bring back the string with ease, your mind at peace,
And calmly pause for thought before release.
The “phoenix eye” for draw-hand style is fit;
A full and steady draw ensures you’ll hit.’*

14A6

“剛才紫芝妹妹射的架勢，以這‘西江月’論起來，卻樣樣都要斟酌。既要我說，諒未必見怪的。即如頭一句：‘射貴形端志正’，誰知他身子卻是歪的，頭也不正：第一件先就錯了。”

‘The form Zizhi used when she was shooting a moment ago could be criticized from every angle, if you look at it from the point of view of that *Xi Jiang Yue* poem. You’ve asked me to explain, so I hope you don’t take it badly. Take the first line for example, “*To shoot with upright mind and stance is best,*” what do you know? — her body was bent and her head wasn’t level: so she fell at the first hurdle!’

4. A form of poem which originated in the Tang Dynasty. It had a total of fifty words without a rigid rhyming scheme.

14A7

“至第二句：‘寬襟下氣舒胸。’他卻直身開弓，並未下腰。腰既不下，胸又何得而舒？胸既不舒，氣又安得而下？所以三箭射完，只覺嘔嘔氣喘，無怪心要發跳了。”

“Then as for the second line, “*Your breath draw deep and long to fill your chest*”, she stood straight upright to shoot and didn’t come down at the hips. If she doesn’t come down at the hips, how can she expand her chest? If she doesn’t expand her chest, how can her breath get down into her diaphragm? So when she had shot off all three arrows, that’s why she was panting away: no wonder her heart was racing.”

14A8

“第三句：‘五平三靠是其宗’：兩肩、兩肘、天庭，俱要平正。此之謂‘五平’；翎花靠嘴、弓弦靠身、右耳聽弦：此之謂‘三靠’。這是萬不可忽略的。以五平而論，他的左肩先已高起一塊，右肘卻又下垂，頭是左高右低，五平是不全的。以三靠而論，翎花並不靠嘴，弓是直開直放，弓梢並未近身，所以弓弦離懷甚遠，右耳歪在一邊，如何還能聽弦？三靠也是少的。”

“Then the third line, “*With five points level, three points close, you draw.*” Her two shoulders, two elbows and the point between her eyebrows all have to be level. That’s the “five points level”. Then the fletching has to be close in to the mouth, the string close in to the body and the ear close, “listening” to the string: that’s the “three points near”. It’s absolutely vital to remember them. But from the point of view of the “five points level”, her left shoulder was all hunched up and then her right elbow drooped down, and the left side of her head was higher than the right, so she short-changed herself on the “five points level”. And then in the “three points close”, the fletching wasn’t anywhere near her mouth; the bow was straight at the draw and straight at the release. The limbs of the bow weren’t close in to her body, so the string was much too far from her chest and her ear was tilted over to one side, so how could she be “listening” to the string? So we were short on the “three points close” as well.”

14A9

“第四句：‘立足千斤之重’，她站的不牢，卻是我們閨閣學射通病，這也不必講。”

“The fourth line was: “*Your feet as if to bear ten tons or more.*” Her stance

wasn't firm — that's an error we all make in our women's dormitory, needless to say.⁵

14A10

“第五句：‘開要安詳大雅’，這句紫芝妹妹更不是了。剛才他開弓時，先用左手將弓推出，卻用右手朝後硬拉。這不是開弓，竟是扯弓了。所謂開者，要如雙手開門之狀，兩手平分，方能四平，方不吃力。若將右手用扯的氣力，自然肘要下垂，弄成茶壺柄樣，最是醜態，不好看了。”

“The fifth line is: *“Bring back the string with ease, your mind at peace.”* Well, just now there was nothing peaceful or easy about Zizhi's draw. When she started to draw the bow, she pushed it out forward first, then hauled the string back with her right hand. That wasn't “drawing” the bow; that was “wrenching” the bow. “Drawing” means drawing the bow and string apart with both hands like opening a sliding door, with both hands moving apart at the same time. That's the only way to get the draw symmetrical, then you don't need to expend so much energy on it. If you let your right hand use a wrenching action, naturally your elbow is going to droop down, then it'll look like the handle of a teapot: hardly an attractive position — rather ugly really.”

14A11

“第六句：‘放須停頓縱容’，我看他剛才放時並不大撒，卻將食指一動：輕輕就放出去。雖說小撒不算大病，究竟箭去無力，樣子也不好看。射箭最要洒脫；一經拘板，就不是了。況大撒毫不費事：只要平時拿一軟弓，時時撒放，或者手不執弓，單做撒放樣子，撒來撒去，也就會了。若講停頓二字，他弓將開滿，並不略略停留：旋即放了出去，何能還講從容？”

“The sixth line is: *“And calmly pause for thought before release.”* Just now I saw that when you released, you didn't fling your arm back; you just lifted your index finger and let the arrow slip out. A very small release is not a serious error, but what happens is that the arrow leaves without enough power. It doesn't look as good either. More than anything, shooting needs a smooth release, but if the string gets hooked behind the thumbing, you won't achieve one. And a big release doesn't take that much effort to learn either; all you have to do is to get hold of a bow with a light draw-weight when you normally practise and keep on releasing with it. Actually, you don't even have to hold a bow — you

5. This is a reference to the foot-binding demanded by the masters of Chinese households in the Qing Dynasty. Li Ruzhen was very opposed to the custom.

could just pretend to do it and after releasing time and again you'll get the knack of it. As for a pause for thought, she brought the bow to full draw without any pause at all — just drew and released. How can that be called “calm”?”

14A12

“第七句：‘後拳鳳眼最宜豐’，他將大指並未挑起，那裏還有鳳眼？縱有些須鳳眼，並不朝懷，弦也不擰，因此後肘更不平了。”

“The seventh line is: “*The phoenix eye for draw-hand style is fit.*” But she didn't bring up her thumb, so what sort of “phoenix eye” was that? Well . . . she had a bit of a “phoenix eye” but it didn't face her chest and the string didn't get a twist put on it. That made her draw-arm shoulder even less level.”

14A13

“第八句：‘穩滿方能得中’，就只這句，紫芝妹妹卻有的。因他開得滿，前手也穩，所以才中了兩箭。但這樣射去，縱箭箭皆中，也不可為訓。”

“The eighth line is: “*A full and steady draw ensures you'll hit.*” This is the only one that Zizhi managed to get more-or-less right. She got the bow drawn fully and her bow-hand was quite steady, so two of her hits can be put down to that. But shooting the way she did, even though she could get all three arrows onto the target, you shouldn't do it like that yourself.”

14A14

紫芝道：“姐姐此言，妹子真佩服！當日我因人說射鴿子只要準頭，不論樣子，所以我只記了：‘左手如托泰山，右手如抱嬰孩’這兩句，隨便射去。那裏曉得有這些講究？”

“I really admire what you just said!” said Zizhi. “Those days, when I was learning, everybody said, “When you do target shooting, all you need is accuracy: you don't need to fuss about how you look.” So all I remembered was the two phrases: “Left hand like propping up Mount Tai; right hand like cradling a baby.” Otherwise, I just shoot however I like. Who'd have guessed all this other stuff is so important?”

14A15

亞蘭道：“妹妹：你要提起‘左手如托泰山’這句，真是害人不淺！當日不

知那個‘始作俑者’。忽然用個托字，初學不知，往往弄成大病，實實可恨！”瓊芝道：“若這樣說，姐姐何不將這托字另換一字呢？”亞蘭道：“據我愚見：‘左手如托泰山’六字，必須廢而不用才好。若按此句，托字另換一字，惟有改做攥字。雖說泰山不能下個攥字，但以左手而論，卻非攥字不可。”

‘Sister, that saying you just mentioned: “The left hand like propping up Mount Tai” has really caused people a lot of harm in the past,’ said Alan. ‘In those days, no one could have guessed what a load of trouble it would cause in the future. Suddenly you come across this word, “prop up”, and a beginner won’t know that it will lead you into a major shooting error. It’s really horrible!’

‘If it’s like that, Sister, why don’t you just use another word instead of “prop up”?’ Qingzhi asked.

‘In my humble opinion,’ answered Alan, ‘we’d be better off throwing the whole of “the left hand like propping up Mount Tai” out of the window. If you insist on keeping it and replacing “prop up” with something else, then I suppose “grasp” would be best, though I don’t see how you could “grasp” Mount Tai. But if you’re talking about the left hand, then “grasp” is the only word which will do.’

14A16

“若誤用托字，必須手掌托出；手掌既托，手背定然彎曲；手背既彎，肘也因之而翻，肩也因之而努。托來托去，肘也歪了，肩也高了；射到後來，不但箭去不準，並且也不能執弓，倒做了射中廢人。這托字貽一至於此！你若用了攥字，手背先是平正，由腕一路平直到肩，毫不勉強，弓也易合，弦也靠懷，不但終身無病，更是日漸精熟。這與托字迥隔霄壤了。”

‘If you make the mistake of using “propping up”, your hand is bound to push forward to prop something up. As soon as you push forward to prop up something the back of your hand is bound to be bent and when that happens, the elbow will turn in as a consequence and it follows that your shoulder will be strained. All this “propping” will leave you ending up with your elbow bent, too, and your shoulder will come up. In the end, not only will your arrows get less accurate, but you’ll stop being able to hold the bow properly. You’ll actually turn into a sharp-shooting cripple! That’s what would come of leaving that word “prop up” in the end. If you use “grasp”, the back of the hand has to be straight and level — level from the wrist all the way to the shoulder. You don’t have to strain at it at all: the bow-tips will come together easily, the string will be close in to your chest, and you won’t just be permanently error-free, you’ll actually get better and better the more you do it. That’s far better than having your form ruined by “propping up”.’

14A17

玉蟾道：“妹子也疑這個托字不妥。今聽姐姐之言，真是指破迷團，後人受益不淺。”綠雲道：“據妹子意思：只要好準頭，何必講究勢子，倒要費事？”亞蘭道：“姐姐這話錯了。往往人家射箭消遣，原圖舒暢筋骨，流動血脈，可以除痼疾，可以增飲食，與人有益的。若不講究勢子，即如剛才紫芝妹妹並不開弓，卻用扯弓，雖然一時無妨，若一連扯上幾天，肩肘再無不疼。倘不下腰，不下氣，一股力氣全堆胸前，久而久之，不但氣喘心跳，並且胸前還要發疼，甚至弄成勞傷之症。再加一個托字，弄的肘歪肩努，百病叢生，並不是學他消遣，倒是討罪受了。”

‘I was afraid there was something wrong with the word “prop up” as well,’ said Yuchan. ‘Hearing what you said about it has really cleared up the mystery for me. From now on, everyone will be much better off.’

‘I still think it’s all down to accuracy,’ said Lüyun. ‘Who needs all this fuss about form? It’s just a waste of time, isn’t it?’

‘No, Sister, you’ve got that wrong,’ Alan replied. ‘All along people have been doing archery for relaxation, to stretch their muscles and joints and improve their circulation. It can keep away chronic illness and increase your appetite. It’s healthy. But if you ignore proper form, like Zizhi just now wrenching the bow instead of drawing it, you might not come to any harm at first; but if you keep wrenching away for a few days your elbows and shoulders will ache all over. If you don’t get your hips down, then you can’t get your breath down to your diaphragm either, and the air pressure will build up at the front of your chest cavity. Then after a while, you’ll start panting and your heart will race and you’ll get a stitch in your chest, too. In the end, you finish up with a strain injury. Add the word “propping up” on top of all that, you’ll get a bent elbow and strained shoulder to boot, and then all sorts of injuries will crop up. Instead of learning archery for relaxation, you’ll end up sentencing yourself to punishment.’

14A18

張鳳雛道：“姐姐這番議論，真可算得‘學射金針’。”

Zhang Fengchu said, ‘This theory of yours is really a sort of “Key to Archery”.’



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