

故宮青銅兵器圖錄

Illustrated Catalogue of Ancient Bronze
Weaponry in the National Palace Museum



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國立故宮博物院
National Palace Museum

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序

左傳曰：「國之大事，在祀與戎。」戎之爲用，特所以衛社稷，闢土宇，壹以服敵禦寇焉。故器械不精，不可以言兵，而器械多端，譬之斧用以伐，斤用以斫，劍用以劈，戈戟用以刺，矢鏃用以射……剛柔之妙，或且繞指，或且摧堅。至於斧斤之所以不同於戈戟，戈戟之所以不同於矢鏃，實繫乎鑠金之劑之或多或少。先民冶金，至青銅而能事畢矣。顧兵器亦非止用於相砍而已，上至於王侯，下及於豪俠，晉接投贈，可謂兼具禮讓威儀，季札掛劍，世以爲美談。而兵器雕鏤攻錯，心智所靡，正不亞於鼎彝重器。至若需求多方，產地廣袤，又遠非禮器所能方駕。春秋名物，若鄭之刀、宋之斤、魯之削、吳越之劍，今之視昔，非徒材美工巧，要攸關乎一代之天時，一境之地利，一方之才智，推而廣之，戎政制度，戰陣攻取，名物相證而外，以至於藝術之風格，文化之變遷，科學之技法，雖云淺淺一物，實鑿鑿在其中矣。

宮廷夙以爲兵者兇器，以是故宮度藏商周青銅兵刃實少，博學如孔子尚謂：「胡簋之事嘗學之矣，甲兵之事未之聞也。」此種古兵器學術之研究，不正有待於今日之闡揚乎？本院器物處副研究員陳芳妹女士，以院藏兵器爲範疇，本其專長，參證近日考古發掘、援引科學測度，爬梳條貫，重爲編次，遂成商周青銅兵器研究一篇，斯則藉新知以發舊學之幽潛者也。顧其成書，亦實出衆力，如倫琴放射線攝影出楊源泉編纂，成色分析出余敦平助理研究員，圖版攝影出林傑人技正，美術編輯出黃秀碧女士，英文翻譯出明涓女士、徐臻浩先生，拓片傳摹出張銀武先生，庫藏提取出朱仁星副研究員、朱林澤先生，皆有足多，特識於此，以誌不忘其辛勤云。

中華民國八十三年履端之吉。衡山秦孝儀序。



Preface

According to the *Tso Chuan*, a commentary on the Spring and Autumn Annals, "the most important affairs of the State are sacrifice and warfare." The function of warfare was to defend one's kingdom and enlarge its territory through a combination of aggressive expansion and strong defense. Hence, if one's weapons were not well-made, one would have no military strength. There were a great variety of weapons, each with different functions, for example: the *fu* axe, used for truncating; the *chin* axe, used for chopping; swords, used for slicing; the dagger-axe and the halberd, used for piercing, and arrows, used in archery. Some weapons were ingeniously strong, able to destroy armor; others were subtly pliable, able to be wound around one's finger. It is the proportion of metals used in fusing the alloys that accounts for differences in hardness or strength between weapons such as axes and dagger-axes, halberds and arrows. In ancient metallurgy, bronze casting techniques were highly perfected. Amongst the aristocracy weapons were not only used for battle, but they also had ritual functions in matters of decorum and regalia as well. Weapons served as ceremonial gifts, as when Chi Cha placed his sword on his friend's grave as a final gift, an exemplary deed of the age. In fact, in ancient times the forging and engraving of weapons was not secondary in importance to the manufacture of sacrificial vessels. Weapons were also more versatile and widespread than ritual vessels. Looking back at well-known products of the Spring and Autumn period, such as knives of the state of Chen, *chin* axes of Sung, *hsüeh* knives of Lu, and swords of Wu and Yüeh, we find that the materials used are beautiful and the techniques employed are masterful, manifesting the geographical advantages of their respective kingdoms and the energy of their craftsmen. Furthermore, such artifacts can document the military and political systems of the time, along with the methods of warfare. Finally, although these objects are often overlooked by art historians, they are implicitly connected to developments in artistic style, technology, and material culture.

Weapons were traditionally thought of as menacing, ominous objects. As a result, the National Palace Museum's collection contains very few ancient bronze weapons. Even such an erudite man as Confucius said, "I once studied ceremonial vessels, but I have never heard of studying armor and weapons." Why has the research of ancient weapons had to wait until today to be advanced? Ch'en Fang-mei, an Associate Research Fellow in the Antiquities Department of the Museum, has used modern methods to go beyond the vague scholarship of the past. Consulting recent archaeological excavations and employing scientific analysis, she has expertly and systematically re-organized the objects in the museum's collection. Her work has led to this volume on ancient bronze weapons. This book has been completed through the industry of many people whose efforts should not be forgotten. I would like to thank X-ray photographer Yang Yüan-ch'üan, chemical analyst Yu Teng-ping, plate photographer Lin Chieh-jen, artistic designer Huang Hsiu-pi, English translators Natasha Pierce, Hsü Chen-hao and Antonio C.Tavares, rubbings expert Chang Yin-wu, and storage technicians Chu Jen-huang and Chu Lin-tse.

November 1994

Ch'in Hsiao-yi
Director of the National Palace Museum

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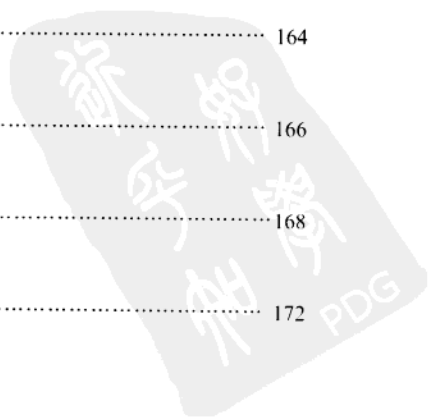
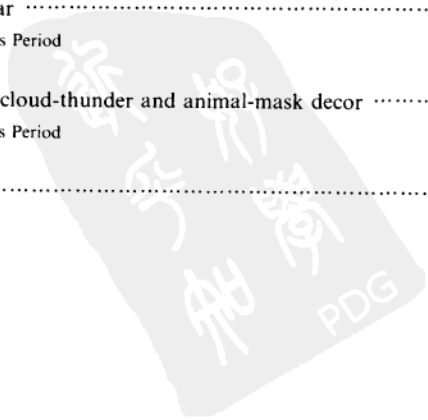


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MAJOR LINES OF DEVELOPMENT IN SHANG AND CHOU DYNASTY BRONZE WEAPONS

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故宮青銅兵器圖錄

Illustrated Catalogue of Ancient Bronze
Weaponry in the National Palace Museum



國立故宮博物院
National Palace Museum

序

左傳曰：「國之大事，在祀與戎。」戎之爲用，特所以衛社稷，闢土宇，壹以服敵禦寇焉。故器械不精，不可以言兵，而器械多端，譬之斧用以伐，斤用以斫，劍用以劈，戈戟用以刺，矢鏃用以射……剛柔之妙，或且繞指，或且摧堅。至於斧斤之所以不同於戈戟，戈戟之所以不同於矢鏃，實繫乎鑠金之劑之或多或少。先民冶金，至青銅而能事畢矣。顧兵器亦非止用於相砍而已，上至於王侯，下及於豪俠，晉接投贈，可謂兼具禮讓威儀，季札掛劍，世以爲美談。而兵器雕鏤攻錯，心智所靡，正不亞於鼎彝重器。至若需求多方，產地廣袤，又遠非禮器所能方駕。春秋名物，若鄭之刀、宋之斤、魯之削、吳越之劍，今之視昔，非徒材美工巧，要攸關乎一代之天時，一境之地利，一方之才智，推而廣之，戎政制度，戰陣攻取，名物相證而外，以至於藝術之風格，文化之變遷，科學之技法，雖云淺淺一物，實鑿鑿在其中矣。

宮廷夙以爲兵者兇器，以是故宮庋藏商周青銅兵刃實少，博學如孔子尚謂：「胡籩之事嘗學之矣，甲兵之事未之聞也。」此種古兵器學術之研究，不正有待於今日之闡揚乎？本院器物處副研究員陳芳妹女士，以院藏兵器爲範疇，本其專長，參證近日考古發掘、援引科學測度，爬梳條貫，重爲編次，遂成商周青銅兵器研究一篇，斯則藉新知以發舊學之幽潛者也。顧其成書，亦實出衆力，如倫琴放射線攝影出楊源泉編纂，成色分析出余敦平助理研究員，圖版攝影出林傑人技正，美術編輯出黃秀碧女士，英文翻譯出明涓女士、徐臻浩先生，拓片傳摹出張銀武先生，庫藏提取出朱仁星副研究員、朱林澤先生，皆有足多，特識於此，以誌不忘其辛勤云。

中華民國八十三年履端之吉。衡山秦孝儀序。





Preface

According to the *Tso Chuan*, a commentary on the Spring and Autumn Annals, "the most important affairs of the State are sacrifice and warfare." The function of warfare was to defend one's kingdom and enlarge its territory through a combination of aggressive expansion and strong defense. Hence, if one's weapons were not well-made, one would have no military strength. There were a great variety of weapons, each with different functions, for example: the *fu* axe, used for truncating; the *chin* axe, used for chopping; swords, used for slicing; the dagger-axe and the halberd, used for piercing, and arrows, used in archery. Some weapons were ingeniously strong, able to destroy armor; others were subtly pliable, able to be wound around one's finger. It is the proportion of metals used in fusing the alloys that accounts for differences in hardness or strength between weapons such as axes and dagger-axes, halberds and arrows. In ancient metallurgy, bronze casting techniques were highly perfected. Amongst the aristocracy weapons were not only used for battle, but they also had ritual functions in matters of decorum and regalia as well. Weapons served as ceremonial gifts, as when Chi Cha placed his sword on his friend's grave as a final gift, an exemplary deed of the age. In fact, in ancient times the forging and engraving of weapons was not secondary in importance to the manufacture of sacrificial vessels. Weapons were also more versatile and widespread than ritual vessels. Looking back at well-known products of the Spring and Autumn period, such as knives of the state of Chen, *chin* axes of Sung, *hsüeh* knives of Lu, and swords of Wu and Yüeh, we find that the materials used are beautiful and the techniques employed are masterful, manifesting the geographical advantages of their respective kingdoms and the energy of their craftsmen. Furthermore, such artifacts can document the military and political systems of the time, along with the methods of warfare. Finally, although these objects are often overlooked by art historians, they are implicitly connected to developments in artistic style, technology, and material culture.

Weapons were traditionally thought of as menacing, ominous objects. As a result, the National Palace Museum's collection contains very few ancient bronze weapons. Even such an erudite man as Confucius said, "I once studied ceremonial vessels, but I have never heard of studying armor and weapons." Why has the research of ancient weapons had to wait until today to be advanced? Ch'en Fang-mei, an Associate Research Fellow in the Antiquities Department of the Museum, has used modern methods to go beyond the vague scholarship of the past. Consulting recent archaeological excavations and employing scientific analysis, she has expertly and systematically re-organized the objects in the museum's collection. Her work has led to this volume on ancient bronze weapons. This book has been completed through the industry of many people whose efforts should not be forgotten. I would like to thank X-ray photographer Yang Yüan-ch'üan, chemical analyst Yu Teng-ping, plate photographer Lin Chieh-jen, artistic designer Huang Hsiu-pi, English translators Natasha Pierce, Hsü Chen-hao and Antonio C.Tavares, rubbings expert Chang Yin-wu, and storage technicians Chu Jen-huang and Chu Lin-tse.

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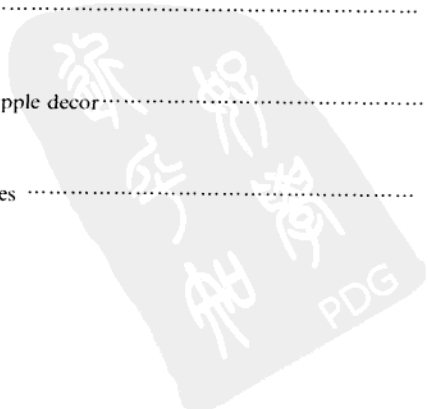


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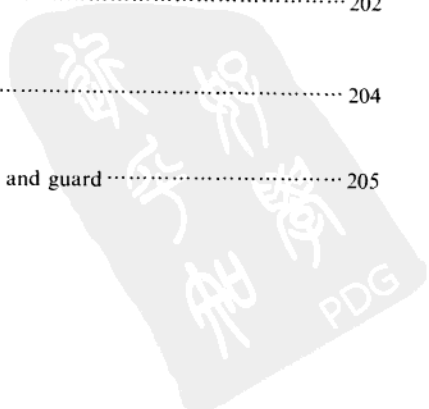
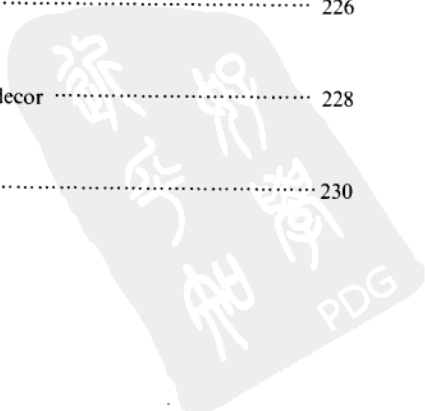


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商周青銅兵器發展的主要趨勢

——商周青銅兵器研究之一

陳芳妹

前言

故宮所藏商周青銅兵器稍過半百，與青銅禮器相比，其量甚小，因此罕為世人所矚目。故宮藏兵，主要來自清宮及中央博物院舊藏，後者包括前清名收藏家劉體智之兵器。此外，故宮所藏部分兵器則來自私人捐贈和價購。民國四十七年重編《故宮青銅器圖錄》時，除少部分帶有銘文的兵器外，大部分被編入簡目，屬次要或疑偽之作（註1）。近日由於考古出土青銅兵器與日俱增，這些藏品獲得參證檢驗的資料，再現其歷史價值。

《左傳》曰：「國之大事，在祀與戎」。在商周青銅時代，青銅即用來鑄造祭祀的禮容器及攸關生死的兵器。唯與青銅禮容器相比，青銅兵器的研究，歷來較為學者所疏忽。但青銅兵器作為研究資料自有其特質，值得注意。商周青銅兵器在商周青銅器發展史上具有科技、藝術及文化史的獨特意義。兵器攸關生死，其對新興質材的運用，似乎比祭祀禮容器更敏感。在中國，最早嘗試紅銅或銅錫合金者，似乎是兵器及工具（註2），它們成為中國文明進入青銅時代的重要標誌。此外，它決定中央共主之興替，以及列國興亡，青銅兵器因此在青銅時代有長足的發展，在科學技術發展史上占有一席之地。再者，部分青銅兵器具備禮器性質，標示貴族身分，在商周封建宗法社會中有其重要性，不只含有文化史的意義，也是青銅藝術發展史中不可忽視的一環。兵器是商周貴族的重要陪葬品，往往與禮容器共出；對低級貴族之武士而言主要的隨葬物即是兵器。由於經過科學發掘的商周墓葬與日俱增，數量上，兵器不但比容器多，在文化性質方面，更可能較鮮明地反映某些文化現象。

註1 國立故宮中央博物院聯合管理處，《故宮銅器圖錄》上冊上編簡目頁6，下編頁305，簡目頁33

註2 甘肅東鄉林家出土一銅刀，屬馬家濱文化（約3700-3000B.C.）；甘肅永登連城蔣坪出土一殘銅刀，屬馬廠文化（約2300-3000B.C.）（甘肅省博物館，〈甘肅省文物考古工作30年〉，《文物考古工作30年》頁141）；甘肅武威皇娘娘臺出土一銅刀，屬齊家文化（約3700-2000B.C.）（甘肅省博物館，〈武威皇娘娘臺遺址第四次發掘〉，《考古學報》1978：4，頁435）。前二者經化驗，材料屬青銅；後者則屬紅銅。北京鋼鐵學院冶金史組，〈中國早期銅器的初步研究〉《考古學報》1981：3，頁294-9

青銅兵器比禮容器更可能涉及大區域間相異文化關係的討論，因為第一，青銅兵器能呈現若干青銅禮容器所不易說明的層面。歷史的發展顯示，當人類逐漸掌握青銅時，不同地區的古文明皆相繼利用青銅鑄造兵器，但並不是所有地區都像中國用青銅鑄造禮容器以作為統治的象徵，可見兵器比禮容器更適用於用來比較各文化之特質，以反映異質文化間可能存在的互動關係。第二，兵器比禮容器有較明顯的區域性。由於兵器主要用於作戰，實用性的要求自然比禮容器高，它往往須要適應當地的地理特性和文化傳統。但不同區域間透過遷徙、婚嫁、戰爭等因素，又有交流。在區域性與文化交流的互動中，便有跨越不同區域的相關類型存在，它們以不同的性質存在於相異的文化系統中。

青銅兵器考古資料在近四、五十年來不斷累積，探討的課題愈趨多樣化，從宋至清的研究主要是名物之學，如名形關係及功能等問題（註3），直到近代擴及藝術史、文化史及科技史等層面。在藝術史方面，紋飾、形制及銘文往往表現各階段及文化區的美感意念，是青銅藝術史不容忽視的一環，唯這一方面的研究，仍有待發展。在文化史方面，學者往往根據較細緻的分類、分期以及出土地點，以探討多元化的文化區的個別特性（註4），以及文化區間的交流問題（註5）。更有藉由戰爭方法、軍隊制度、社會政治等變遷，以有機化的探討各類青銅兵器的演變（註6）。在科技方面，《周禮·考工記》早已注意到兵器成分特性，而有「四分其金而錫居一，謂之戈戟」等記載。近日來，有系統地分析兵器成分，以期瞭解成分特性與時代演變的嘗試已開始（註7）。更有試圖探討其表面化學處理者（註8）。而以兵器為專門範圍的通論著述也逐漸引起學者重視（註9）。

唯中國幅員遼闊，青銅兵器的出土資料類別瑣碎而龐雜，在名形、分類與分期上，研究成果精粗不一，各區域特性的探索也繁簡不同，欲建立較客觀的青銅

註3 程瑤田，〈考工記創物小記〉《通藝錄》。馬衡，〈戈戟之研究〉《凡將齋金石叢稿》5。郭沫若，〈說戟〉《殷周青銅器銘文研究》

註4 蕭夢龍，〈吳國青銅兵器研究〉《考古學報》1991：2，頁141-65；賀剛，〈先秦百越地區出土銅劍初論〉《考古》1991：3，頁252-62；翟德芳，〈中國北方地區青銅短劍分群研究〉《考古學報》1988：3，頁277-298

註5 李伯謙，〈中原地區東周銅劍淵源試探〉《文物》1982：1頁44-7；林滢，〈簡文青銅器與北方地區青銅器關係之再研究〉，蘇秉琦編，《考古學文化論集》頁129-55

註6 楊泓，〈中國古兵器論叢〉，1980，文物

註7 陳佩芬〈古代銅兵銅鏡的成分及有關製造技術〉《上海博物館館刊》1（1981）頁143-50；W. T. Chase and Ursula Martius Franklin, "Early Chinese black mirrors and pattern-etched weapons"。《Ars Orientalis vol.XI pp.215-58

註8 馬肇曾，韓如玢，〈古銅器表面化學處理研究〉《化學通報》1988：8頁59-61

註9 周繼，〈中國兵器史稿〉（1957）；林巳奈夫《殷周時代の武器》（1972）京都；成東等《中國古代兵器圖集》（1990）

兵器發展史殊非易事。故宮博物院稍過半百藏品，固不能說明兵器發展史全貌，但這些為數不多的收藏頗涉及藝術史、文化史及科技史等方面的關鍵問題，能顯示歷史、文化或民族的重要意義，不容忽視，本文即是這方面工作的初步嘗試。

考古出土的資料顯示，二里頭三期，中國已進入使用青銅兵器的階段。最晚到春秋早期，鐵製兵器已經出現（註10），西漢以後，青銅兵器終於為鐵製兵器所取代。因此，中國青銅兵器的主要發展時間約計一千五百年。此期間，隨著功能的複雜化以及殺傷力的增強，因時因地各具特色。它們反映了鑄造技術的改進，作戰方法的變遷，主力兵種的取代等等。青銅兵器的發展，大約可分作三大階段。

第一階段，青銅兵器由初期孕育到奠定日後發展的基礎，時間由二里頭三期到商晚期，約六百年間。

第二階段，青銅兵器的發展，呈現承先啓後性質，時間則由西周至春秋早期，約四、五百年間。

第三階段，青銅兵器蓬勃的發展，時間約由春秋中晚期到戰國，約三、四百年間。

茲先簡述青銅兵器的器名、功能與分類，再說明這三個發展階段的特色。

一、青銅兵器的器名、功能與分類

由於商周青銅兵器項目瑣碎而龐雜，近五、六十年來學者作綜述時，主要呈現三種分類方式：一種是在「武器」或「利器」名下，直接羅列各小類，如戈、矛等，代表學者有梅原末治、高本漢（B. Karlgren）、林巳奈夫等（註11）。李濟先生則提出富有新意的第二種分類方式。他認為第一種方式依功能而作的大分類，名詞內涵籠統，為澄清「形態與功能混攪之局」，根據小類間共通的形態特點，更名統稱為「鋒刃器」。依刃線部位的不同，再作次級分類：

註10 〈兩周考古又一重大成果：虢國墓地再度出土大量珍貴文物〉《中國文物報》1991.1.6；〈虢國墓地發掘又獲重大發現〉《中國文物報》1992.2.2。

註11 梅原末治，《河南安陽遺寶》圖版十四—二八（1940）京都；B. Karlgren, Some weapons and tools of the Yin Dynasty. *Bulletin of the Museum of Far Eastern Antiquities* 17 (1945) pp. 101-144；林巳奈夫，《前引書》

I 尖器：錐等

II 端刃器：斧斤等

III 邊刃器：厚背刀、脊背刀等

IV 雙刃器：句兵；戈、戣、瞿

刺兵：矛

長兵：矢鏃（註12）

基本上兵器主要包括在雙刃器類下。李先生強調形制分類的重要性，依形制特點以作為主要分類、次級分類的標準，為瑣碎的小類，理出清晰的條目，以呈現小類間的類別關係，可惜日後並沒有廣泛地被沿用。一般中國學者仍習慣以功能作為選用詞彙及分門別類的標準，而有第三種分類方式。在「武器」此大類下，依功能的分化，再作副分類。郭寶鈞因此依勾、刺、臂、殺、射遠等作用，而別分為：

勾兵：戈

刺兵：矛

勾刺兩用兵：戟

劈兵：斧鉞

殺兵：大刀

刺殺兩用兵：劍

射遠兵：弓、矢

防禦習射兵：弓、矢、盾、侯（註13）

馬承源先生則簡要地區分為：

攻擊型兵器：長兵

短兵

遠射

以上三類包括戈、戟、矛、鉞、鉞、戚、殳、刀、劍、匕首

防禦型兵器：冑、甲（註14）

本文綜合諸家特點，以為兵器主要為有刃器，往往依人敵間距的遠近而有不同的設計及類別，茲區分如下：

註12 李濟，〈記小屯出土之青銅器 中篇 鋒刃器〉；〈豫北出土青銅句兵分類圖解〉《李濟考古學論文集》上，頁333-394；頁415-440

註13 郭寶鈞，〈殷周的青銅武器〉《考古》1961：2，頁111

註14 馬承源，〈中國青銅器〉，頁44

長兵：須安裝木秘始可完成其功能，如戈、戟、鉞、矛、大刀、殳、鉞等，當敵人在適度距離時使用。

短兵：全器不須安裝木秘即可使用，如劍、刀，以備短兵相接之用。

遠射：如鏃、弓形器等，以攻擊遠距離的敵人。

防禦：甲、冑等。

故宮藏兵非各類皆有，如甲、冑、殳、鉞等即闕如，本文主旨不在對商周青銅兵器全面性的介紹，主要依故宮所藏器類為主，述其所涉及的發展趨勢問題。

今擇要分門別類簡述類名及功能如下：

甲 長兵：主要包括戈、戟、矛、鉞等。

1. 戈

華夏青銅兵制，戈為最主要器類。戈有自名器，如上村嶺虢國墓地【虢太子元徒戈】（圖1）（註15）即確指戈的名形關係。其長條形的「援」部有上下刃線，用以鈎殺，其下刃線往往延及「胡」部。「援」部後面即為不帶刃線的扁長方形「內」部，以利木秘夾之。「援」部與「內」部相鄰的援上有「穿」，以利木秘與戈的繫縛。這種形制可能即是《周禮·考工記·廬人》所稱的「勾兵」。戈各部位的名稱（圖2）則來自《考工記·冶氏》的「戈廣二寸，內倍之，胡三之，援四之」。但並非所有的戈皆有胡，商代常見的無胡戈便具象地顯現在金文（圖3）（註16）。

戈須有垂直的木秘配合使用，不只徵於文獻，如《考工記·廬人》「戈秘六尺有六寸」；亦見於考古實例留有木秘殘痕（圖4）（註17）；且徵於「戈」銘，以及戰國時銅鑑上的戰爭圖象（圖5）（註18）。戈秘的長度似隨著時代而不同，商晚期有60公分左右（註19）之例；西周中期則有82.5公分者（註20）；東周曾侯乙墓出土者則約在127—133公分之間（註21）。木秘長度與時俱增，似配合著胡的長度而變化，以適應作戰時的不同需求。《考工記·廬人》有「攻國之兵欲

註15 中國科學院考古研究所，《上村嶺虢國墓地》，頁28

註16 中國社會科學院考古研究所安陽工作隊，〈1969-1977年殷墟西區墓葬發掘報告〉《考古學報》1979：1，頁81

註17 中國社會科學院考古研究所，《殷墟發掘報告》1958-1961，頁249

註18 中國科學院考古研究所，《山彪鎮與琉璃閣》，頁20

註19 高去尋，《侯家莊一〇〇四大墓》，頁35

註20 中國社會科學院考古研究所禮西發掘隊，〈陝西長安張家坡M170號叔墓發掘簡報〉《考古》1990：6，頁504-10

註21 湖北省博物館，《曾侯乙墓》（上），頁253



圖1 號太子元徒戈 河南陝縣三門峽上村嶺墓1052：53
西周末春秋初 全長17.1公分
(《上村嶺虢國墓地》圖版35：2)



圖3 金文的人持戈形
河南安陽殷墟西區墓284鼎器壁
高後期
(《考古學報》1979：1頁84：4)

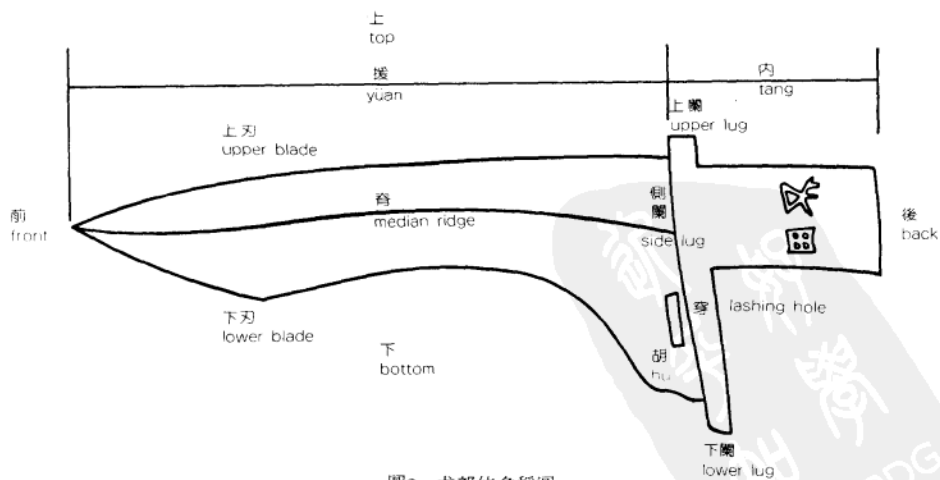


圖2 戈部位名稱圖

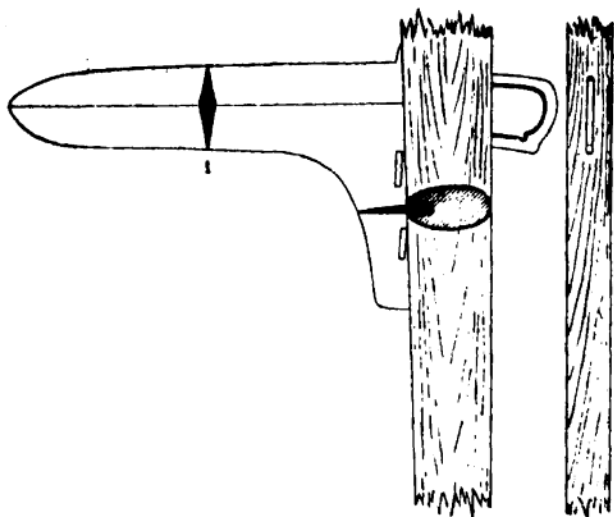


圖4 戈安柁方法示意圖（根據小屯西地墓234：10木柁殘痕復原）
（《殷墟發掘報告》頁249·圖189：1）

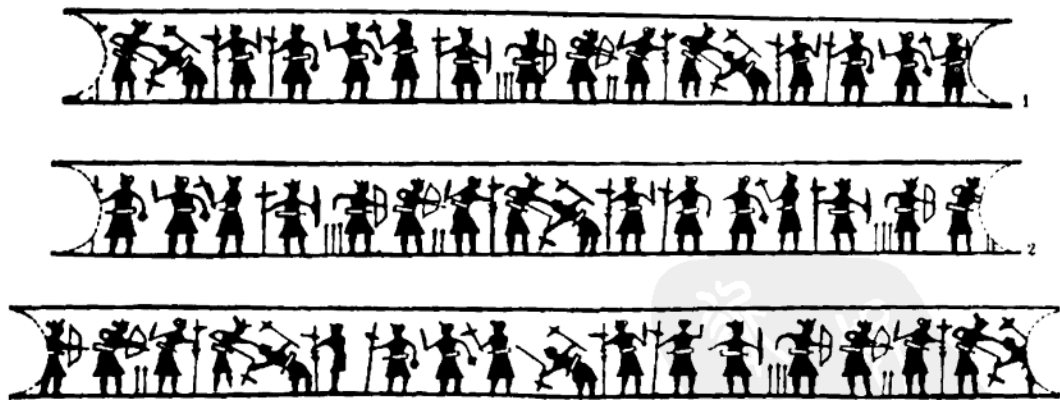


圖5 甬上花紋拓片 河南汲縣山彪鎮墓1（《山彪鎮與琉璃園》圖10：1）

短，守國之兵欲長」，或可說明。東周以後，戈也常與秘帽、戈鐔等成套出現（註22）。


2. 戟

「戟」指稱何形？有清以來至今，包括程瑤田、馬衡、郭沫若、郭寶鈞及楊泓等（註23）學者皆有說法。隨著資料的增加，學者們從解釋文獻到結合考古實物以辨析，目前對戟制已有起碼公認的標準。

戟有自名器。安徽舒城九里墩（註24）（圖6）出土的【蔡口戟】即是。其戈與矛分鑄，秘已腐朽，但位置未改動，自名為「戟」。《說文》「戟，枝兵也」即是，正合郭沫若所稱的戈矛二器合而為戟，兼有勾、刺功能。此勾刺功能兼備的枝兵，學者多傾向於包括聯體戟。唯北京琉璃河墓1193出土的聯體戟自名為「戈」（註25）。王逸注《楚辭》，以戈為戟。趙歧注《孟子》，以戟為戈。孔穎達疏《尚書牧誓》以戈即戟也，正反映戈與戟，二者密切相關也。此外，曾侯乙墓出土的多戈戟（圖7），有一件以上的戈頭，但沒有矛，亦自名為「戟」，是戟的另一種形式，亦為有枝兵也。

戟的木秘似較長，根據曾侯乙墓出土的自名戟，長約330公分左右（註21），東周青銅器上水陸攻戰圖（圖5）戰士持戟，木秘亦長。《詩經·秦風·無衣》「修我矛戟」，鄭玄《箋》「戟，車戟常也」。但也有認為戟的木秘並不必然長者（註26）。

3. 矛

矛有自名器，湖北江陵藤店出土【吳王夫差矛】即自名為「」（圖8）（註27）。其中脊雙葉，雙刃線沿雙葉在頂端匯聚成鋒，成為矛完成功能的主體部分。主體之下有斂，其有斂孔以容納木秘，因此刃線與木秘平行，是為用于衝刺的兵器，即是《周禮·考工記·廬人》所稱的「刺兵」。河北保定出土的【燕王喜

註22 湖北省荊州地區博物館，《江陵雨臺山楚墓》，頁83

註23 程瑤田，馬衡，郭沫若，〈前引文〉

郭寶鈞，《濟縣辛村》頁43，〈戈戟餘論〉《中央研究院歷史語言研究所集刊》（1935）5：3，頁313-26

郭德維，〈戈戟之再辨〉《考古》1984：12，頁1108-1113

楊泓，〈中國古代的戟〉《中國古兵器論叢》，頁155-6

李健民，〈中國古代青銅戈〉《考古學集刊》7（1991），頁126-9

註24 安徽省文物工作隊，〈安徽舒城九里墩春秋墓〉《考古學報》1982：2，頁233

註25 中國社會科學院考古研究所琉璃河考古隊等，〈北京琉璃河1193號大墓發掘簡報〉《考古》1990：1，頁28

註26 李健民，〈前引文〉《考古學集刊》7（1991），頁128

註27 湖北省博物館等，〈越王勾踐劍與吳王夫差矛〉（1984）

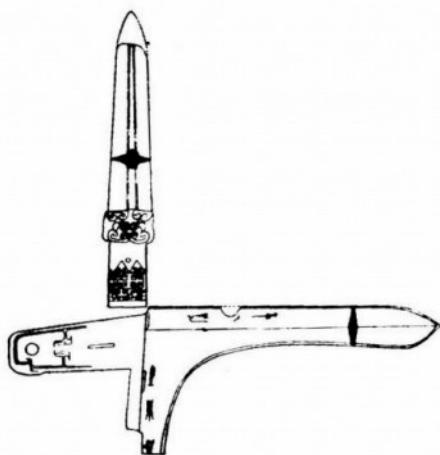


圖6 蔡口戟 安徽舒城九里墩 春秋晚期 矛總長15 戈長24公分
 (《考古學報》1982: 2頁 233)

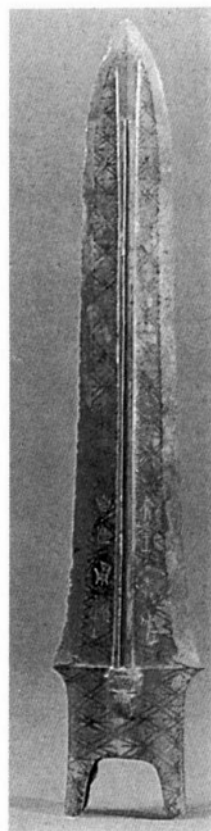


圖8 吳王夫差矛及銘文
 江陵馬磚墓5
 吳王夫差
 (西元前495-473)
 長29.5公分
 (《越王勾踐劍
 與吳王夫差矛》圖十)

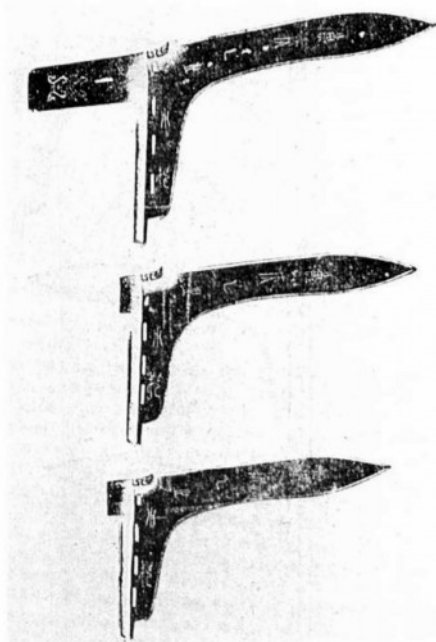


圖7 曾侯乙之用戟 湖北隨縣曾侯乙墓(N209.1)
 戰國早期 長24.4公分 (《曾侯乙墓》
 頁270, 圖160: 1)



圖9 金文的人持鉞形
 (《金文編》上5, 頁799)

矛】（註28），具有相近的基本形制，如帶銚孔的銚部及帶刃線的雙葉，其設計使木柶得以與刃線平行，唯自名為「鉞」，或是區域不同，名稱互異吧！《尚書·周書·牧誓》有「立爾矛」，《詩經·秦風·無衣》有「修我戈矛」，可見戈矛常並用。根據考古出土資料，矛木柶的長度有長達2米左右者（註29）。《周禮·考工記·廬人》稱「酋矛常有四尺，夷矛三尋」，可見柶的長短不一。

4. 鉞

甲骨文（註30）、金文有鉞的象形文字（圖9）（註31），顯示鉞與木柶的接合形象。

一般習慣以「鉞」稱呼這種直內弧刃的邊刃器。目前這類形制尚未見有自名「鉞」者。唯一九七四至七八年間，河北平山三汲（即中山國墓葬）的二號車馬坑出土一夾內弧刃邊刃器（註32），自名為「鉞」，為此類型所罕見的自名例證。但「鉞」稱未見著錄，歷來學者又已約定俗成地採用於典有據的「鉞」名稱之，此稱遂未曾彰顯，學者或疑其為別名。從此類形制的發展時間論，其主要盛行於商後期及西周早期，中山國的「鉞」時代屬戰國，鉞制已甚罕見。從此類形制的區域發展論，其以商後期安陽一帶最密集。此例出土自戰國中山國，乃非華夏系而為北方系，且為孤例，其或為晚期區域性的稱法，「鉞」稱目前仍保留，以俟來日資料定位。

然稱直內弧刃的邊刃器為「鉞」，在學界也並非必然一致。由於客觀上缺乏自名器，上古經典又有文無圖，因此著錄經常把鉞、斧、戚三種稱法混用。宋至清以來，《宣和博古圖》（註33）、《西清古鑑》（註34）等皆稱為「戚」，陳夢家則改稱為「鉞」（註35）。近數十年來，出土例證激增，考古報告中鉞、戚、斧等混稱的例子甚多。

鉞、戚、斧三種名稱關係的密切乃來自上古經典。《左傳》昭公十五年連稱「戚鉞」，孔穎達疏《左傳》，又將「斧」稱帶入，所謂「俱斧也」。看來鉞戚斧同類的概念，其來有自。唯同類卻又異名，必然有些分別，古來注疏家也試圖

註28 河北省博物館等，《河北省出土文物選集》141

註29 湖南省博物館，〈長沙瀏城橋一號墓〉《考古學報》1972：1，頁64

註30 李孝定，《甲骨文字集釋》12，頁3795

註31 容庚，《金文編》，上五，頁799；上八，頁804

註32 河北省文物管理處，〈河北省平山縣戰國時期中山國墓葬發掘簡報〉《文物》1979：1，頁4

註33 王黼，《宣和博古圖》，卷26，頁49-50

註34 清高宗，《西清古鑑》，卷37，頁5

註35 陳夢家，《海外中國銅器圖錄》，頁77。

加以區分，區分的標準在大小。《尚書·顧命》：「一人冕執鉞」，鄭玄注曰：「鉞，大斧也」。孔穎達疏《左傳》昭公十五年亦稱「蓋鉞大而斧小」。《六韜·虎韜》以「天鉞又名大柯斧，重八斤，柄長五尺」，鉞乃大斧，其意甚明。

以上從文獻知戚、鉞、斧類同，其間之別，只在大小，但大小的準則並無定數；況且記載中的鉞，亦有大小之分，《史記·周本紀》謂「周公旦把大鉞，畢公把小鉞」，可見鉞不見得都是大器，也有小的。所以鉞、戚、斧雖類同，似也不全然以大小區分。

近代學者范勇研究西南斧鉞，根據形制特點以定義斧鉞，取肩的有無及刃的圓心角度的大小為標準，大於100度者為鉞，小於90度者為斧，比較具有科學性。唯如此的區分並未落實到各種標示，全文仍通稱斧鉞（註36）。

本文討論木秘與刃線平行的端刃器不稱作「鈇」，因為經典未載，暫時採取最通行的「鉞」或「斧鉞」。

從經典文獻、銘文及出土情況，皆顯示鉞的使用者及功能極特殊。西周【虢季子白盤】銘云：「賜用鉞，用征蠻方」，可見鉞與征伐之權息息相關，具有征伐權力的軍事首長，可以被賜而持有鉞。經典文獻更記載著鉞的持有者。身分最高的是王，《詩經·商頌·長發》曰：「武王載旆，有虔秉鉞」，明言及持鉞。《史記·殷本紀》周武王伐商紂，「左杖黃鉞，右秉白旄以麾」。其次是高級貴族或將領，如上引的周公，畢公與虢季子白。在特殊場合，武士也可執鉞，如《尚書顧命》云「一人冕，執鉞，立於西堂」。從出土情況論，商王大墓多遭盜掘，西周王墓至今未見，皆難斷言是否隨葬鉞，今日所見「凡出土青銅鉞的墓，墓形都較大，有棺槨為葬具，有成套的青銅禮器隨葬，大部分墓中都有殉葬人和動物」（註37），可見擁有鉞陪葬之人至少都是當時身份較高的貴族。

至於須安裝木秘的大刀、鉞及殳等，有關兵器的綜論著作皆已包括，不再贅述。

乙 短兵：主要包括劍與刀等

1. 劍

劍有自名器，故宮的【越王州勾自作用劍】（圖版叁柒）即自名為「劍」，其為雙刃有格有柄有箍有首器。但這只是東周中原及南方通行的劍制；有些劍無首、無箍，但具有劍身，且有柄。有柄雙刃器，是為劍的通制。

註36 范勇，〈我國西南地區的青銅斧鉞〉《考古學報》1989：2，頁161

註37 楊錫璋〈商代的青銅鉞〉《中國考古學研究－夏鼎先生考古五十年紀念論文集》，頁135
鉞也有作為刑具者，唯與兵器不相干，本文從略。

《說文》：「劍，人所帶兵也。」《釋名·釋兵》：「劍，檢也，所以防檢非常也」，正說明了劍的功用。

劍的各部位名稱，主要根據《周禮·考工記·桃氏》而來：「桃氏爲劍，臘廣二寸有半寸，兩從半之，以其臘廣，爲之莖圍，長倍之，中其莖，設其後，參分其臘廣，去一以爲首廣而圍之，身長五其莖長」。由於漢至清以來注疏家各有說法，因此對部位名稱的使用也有不同。本文所採劍各部位名稱如圖（圖10）（註38）。

2. 刀

刀爲邊刃器，《說文》：「刀，兵也，象形」。金文皆有刀的象形（圖11）（註39）。青銅兵器中有需要接木秘的大刀，也有接短木頭的長刀，也有有刃有銅柄的刀。

丙、遠射器

1. 矢鏃

矢鏃爲箭前端的鋒利帶雙刃的部分，其形制也隨功能而設計，鋒刃部分沿著兩葉由鋒而下，對稱分布於脊的左右，脊的後端有莖，以與箭相接。

2. 弓形器

弓形器形制特點爲：器身微作弧形，兩端向上向外作對稱雙勾如臂身，臂身末端往往裝飾鈴首或獸首。這類形制的器名和功能目前仍衆說紛紜，但可能與弓有關則爲大部分學者所接受，也是本文包括此項的原因。

石璋如先生從弓形器上有革帶或繩索縛繫的痕迹，背後有朽木痕，以爲是繫縛於弓上的，其名稱爲《周禮·考工記》上的「柎」或「弣」（註40）；唐蘭先生則以爲應是【毛公鼎】銘中的「金單弣」，亦即弣，是秘的本字，即弓繫，是弓上的輔助器物，弛弓時，縛在弓背中央部位，以防止損壞的（註41）。雖然，也有學者以爲可能是「掛纏器」（註42），或與駕馬有關（註43），那或許是北方草原民族的使用方法。我們從小屯墓中的革帶朽木痕，以及在殷墟等地大部分

註38 成東等，《中國古代兵器圖集》，頁58

註39 李孝定，《前引書》4，頁1513；容庚，《前引書》

註40 石璋如，〈小屯殷代的成套兵器〉《中央研究院歷史語言研究所集刊》1950：22，頁18-25

註41 唐蘭，〈「弓形器」（銅弓秘）用途考〉《考古》1973：3，頁178-179

註42 林漢，〈商文化青銅器與北方地區青銅器關係之再研究〉，蘇秉琦編《考古學文化論集》頁144-54

註43 孫機，〈試論「弓形器」的用途和定名〉，頁42

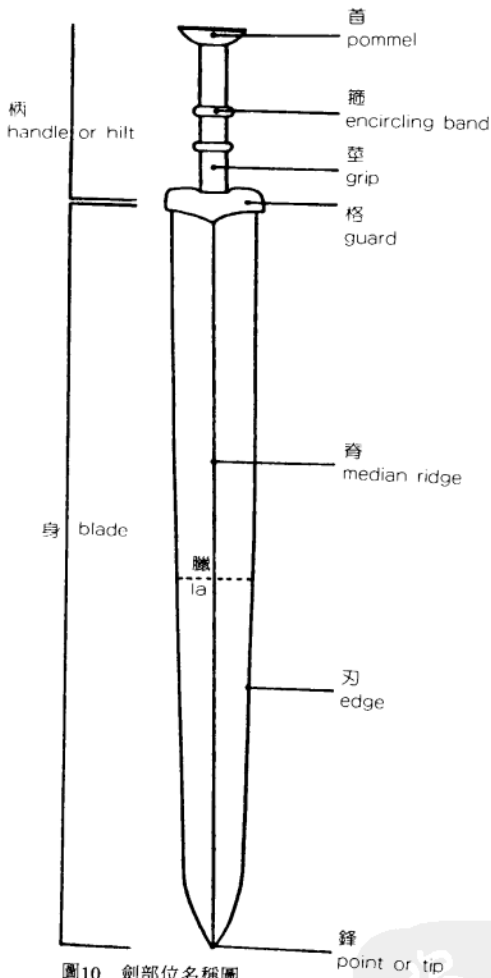


圖10 劍部位名稱圖
 (《中國古代兵器圖集》
 頁34, 圖2-73)

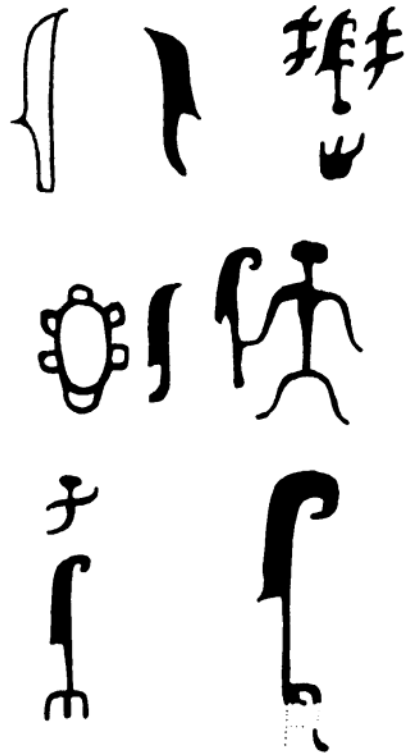


圖11 金文中的刀形
 (《中國古代兵器圖集》
 頁31, 圖2-51)

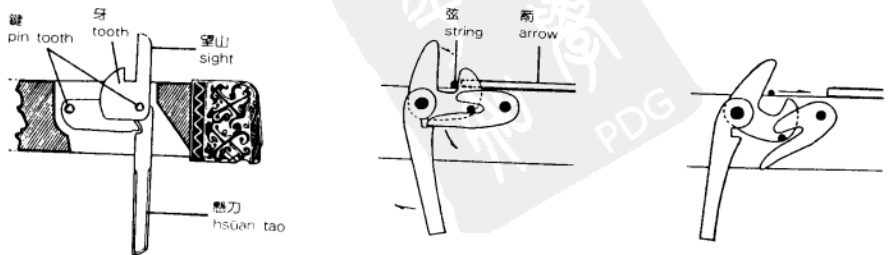


圖12 弩機部位名稱示意圖 (《中國古代兵器圖集》頁91)

墓葬中弓形器與鏃共出，中原弓形器的作用可能與弓息息相關（註44）。

3. 弩機

《說文》稱：「弩，弓有臂者也」；《釋名》並有弩的部位名稱：「弩，怒也，有勢怒也。其柄曰臂，似人臂也。鈎弦者曰牙，似齒牙也。牙外曰郭，為牙之規郭也。下曰懸刀，其形然也。合名之曰機，言如機之巧也」（圖12）。弩機以其各部分的組合得以把箭遠射，增進射程及殺傷力，「勢如彊弩，節如發機」（《孫子兵法·勢篇》）是也。

此外，防禦性的兵器如甲、冑，故宮未藏，本文從略。

二、奠定基礎（二里頭三期至商後期，約西元前十七至十一世紀）

從二里頭三期到商後期（約西元前十七至十一世紀）約六百年間，青銅兵器由初期孕育而奠定日後發展的基礎。

雖然，真正青銅兵器的出現，當不晚於二里頭三期，但以銅製造兵器應早已嘗試（註2），青銅兵器的萌芽或許會比較早，但目前資料仍然零散。二里頭三期以青銅所鑄造的兵器器類規模已經粗具，包括遠射的「鏃」，刃線僅在「援」部窄邊的端刃器「戚」，以及較寬的兩邊均為刃線的「戈」（註45）等。但青銅兵器到商後期，不只器類增多，包括遠射的「鏃」，及與遠射的弓可能有關係的「弓形器」；須要接木柶以使用的「戈」、「鉞」、「矛」；近體的「劍」、「刀」以及防禦性的「甲」、「冑」等。且單類器制及紋飾也多樣，這是中原與地方風格相互對疊與融合的結果。而戈制成為青銅兵器中最主要、使用時間最長、華夏本土性最濃的器類也醞釀於此階段，本節分別由這兩方面論述。

甲. 戈制多樣性的形成與發展

值得注意的是，中國青銅時代最主要的兵器——戈，在二里頭時期已出現，

註44 陳芳妹，〈再論故宮所藏商末周初的異形兵器——兼論殷墟與北方文化關係問題〉（未刊稿）

註45 中國科學院考古研究所二里頭工作隊，〈偃師二里頭遺址新發現的銅器和玉器〉《考古》1976：4，頁259-263

它成爲中國青銅兵器有別於其它文明的特殊形制，而青銅時代也成爲戈的主要發展期。青銅戈的主要特點已在二里頭時期建立，諸如帶有刃線的「援部」呈寬條形，刃線在寬條兩邊，而援部前端呈鋒，援部的後端，則緊接沒有刃線的長方形的「內」，內有穿（圖14）。戈安裝木柶的方法，根據河南安陽殷墟西區墓355的出土情況，戈與木柄相連（註46）。許多戈出土時，內部殘留木質纖維，紋路與戈身垂直，推測戈制功能的完成須輔以木柶，木柶與戈身呈垂直。戈制的形制設計似配合其使用方式，中國青銅戈制的基本型態在二里頭時期早已形成，那就是採用木柶夾內的方法。

這時青銅戈的形制，帶刃的「援」部較修長，安裝木柶的「內」部有曲內（圖13）和直內（圖14）之分，尤其援部與內部尚未以上下欄分開，用以固定木柶的方法尚較原始，似乎主要依賴內上的圓「穿」。其特點，與當時的玉戈無太大差別，至於青銅戈是否受石玉戈制的影響，則尚有爭議（註47）。

但河南偃師二里頭墓三出土的曲內戈，「內」部呈圓曲狀，內上又裝飾雲紋，戈的近旁並且出土規整的片狀綠松石，可能是鑲嵌在雲紋間的凹槽的。此件曲內戈似乎充分利用青銅的可塑性，以成就石器所不易達成的「曲內」形制，其鑲嵌裝飾更說明了此戈在實用之外，可能具有藝術或禮儀上的性質。這種曲內戈發展到商晚期而臻於高峰，「內」部多裝飾花紋，或鳥喙向內卷曲，或順著曲內之勢鏤雕成獸的長鼻，深富禮器性質及藝術效果。

此外，商後期戈制在技術與美感等方面有更新穎的突破。故宮所藏【玉援銅曲內戈】（圖版參）正顯示商後期時，融和玉與銅兩種不同質材及特點的高度成就：結合玉的溫潤的色澤與質地，及青銅的易塑性與堅硬，以表現超越實用的美感。此器乃本院近日所添購，玉與銅相接的鑄造痕跡，經過近人修補。本院科技室利用X光透視（圖版參1）可見內部有穿孔，表面上已爲銹所掩蓋，肉眼不能察覺。至於玉銅鑄接痕跡仍看不清楚。河南安陽小屯墓三三一出土一玉援銅內戈（圖15）（註48），在銅內與玉援相接處留凹槽，玉援得以嵌入，玉援入槽處有圓

註46 中國社會科學院考古研究所安陽工作隊，〈1969-1977年殷墟西區墓葬發掘報告〉《考古學報》1979：1頁91-97

註47 關於銅戈的起源，或謂石戈。福建等地雖有石戈出土，但石戈的年代是否較早，尚有爭議，石戈曾被認爲屬新石器時代，但一般仍以爲受青銅戈的影響（曾凡，〈關於福建史前文化遺存的探討〉，《考古學報》1980：3，頁263-284）；曾凡，〈關於福建與中原商周文化的關係問題——從出土的石戈談起〉，《中國考古學會第四次年會論文集》（1983）頁146-15。或認爲青銅戈源自新石器時代石鏃，（楊錫璋，〈關於商代青銅戈矛的一些問題〉，《考古與文物》1986：3，頁65）

註48 石璋如，《小屯》第一本 遺址的發現與發掘·丙編 殷墟墓葬之五 丙區墓葬，頁88-9

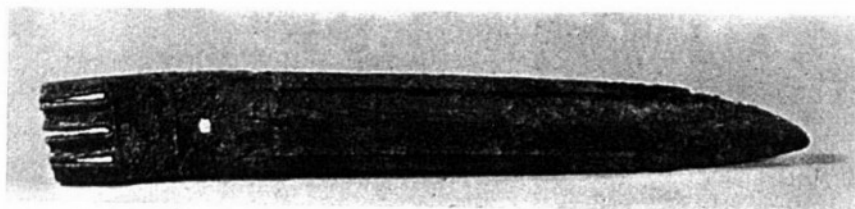


圖13 直內戈 河南偃師二里頭 (採集) 長28公分

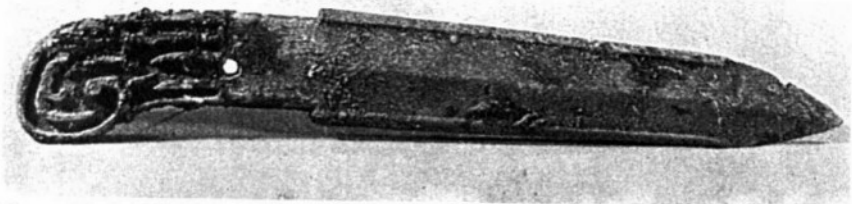


圖14 曲內戈 河南偃師二里頭 (75YLV1K32) 長23.5公分
(《河南出土商周青銅器(一)》四)

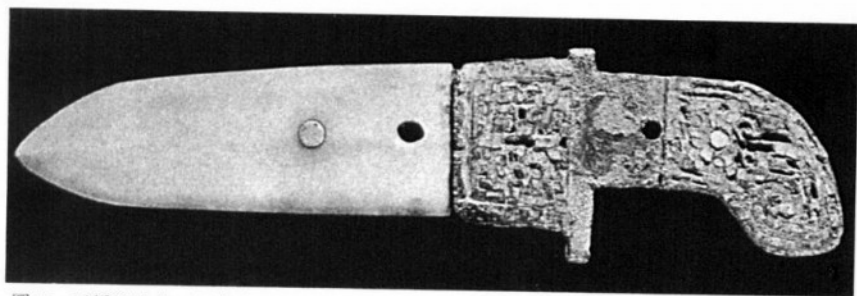


圖15 玉援銅內戈 河南安陽小屯墓321(R850) 商後期 全長32.9公分
(《小屯》五, 圖版 66:2)

形穿孔，可能用以牢固玉援與銅內，這件例證有助於瞭解當時相異質材的鑄造技巧(註49)。河南安陽小屯婦好墓也出土有嵌松綠石的玉援銅內戈(註50)，是商後期工藝的精品。

曲內銅戈的形制及花紋裝飾，從商前期到商後期，時代愈下愈精緻，然而引人注意的是這類戈制到西周早期逐漸稀少，終於式微，是不是這種「華而不實」的風格不適合周人務實的作風，所以不能獲得重視及再發展呢？當等待其他資料來印證。

註49 王琳以為銅與玉的接合非鑲嵌，乃是經鑄造接合的。〈從幾件銅柄玉兵看商代金屬與非金屬的結合鑄造技術〉《考古》1987：4，頁363-4。

註50 中國社會科學院考古研究所，《殷墟婦好墓》頁106。

戈制的基本形制在二里頭時期已出現，其多樣性則至商後期始成熟。如何固定木柲與器身的關係，以確保或增益戈的砍斫功能，決定著戈制發展的主要趨勢，其多方面的嘗試則形成戈制的多樣性。

對二里頭時期的夾內戈制，「欄」的出現正昭示著二里崗時期（也就是商前期或中期）的改變。「欄」將有刃線的「援」部與無刃線的「內」部隔開，以凸出於器身的上緣與下緣，使繩索可以更牢固地繫縛木柲與戈身（註51）。此形制至商後期，成為戈的通制之一（註52），故宮的【有欄無胡直內戈】（圖版壹）即是，與曲內戈同樣盛行於商後期。

商後期對固定木柲的方式有更大膽創新的嘗試與變革。就原本已發展的夾內戈制而言，以側欄輔助繫縛木柲（註12），曾被嘗試，或以效果不彰，未曾通行。而延長「援」與「內」的銜接地帶成為「胡」（圖16）（註53），不只擴大了木柲夾內時與器身的接觸部位，以更牢固地繫縛木柲，而且直接延長援部下緣刃線，增益了橫砍及鉤啄的功能。

對原本的夾內戈制，商後期更進一步作固柲方法上的結構性的改變。在「內」與「援」接觸地帶，不再平板式地以柲夾內，而是藉著管狀的盞孔接納木柲。故宮的【三角援有盞戈】（圖版貳）可能即是此期間的產物。侯家莊西北崗一〇〇四大墓出土72件有盞戈是為突出的例證，其木柲殘痕更揭示了有盞戈的使用方法（註54）。此新興的方法不只應用在單純的直內戈，且見於曲內戈（註52）及帶胡戈（註53）。此有盞戈制在商後期有一定的普遍性（註52）。

以上各種新嘗試形成商後期戈制的多樣性。以「內」夾柲的曲內戈、有欄直內戈和以盞納柲的盞內戈制在商後期的前階段皆曾流行，而有胡直內戈在商後期後階段始出現（圖16）（註55），卻在商後期多種戈制的嘗試中，脫穎而出，成為西周以後戈制的主流，或許是歷史之潮流所選擇的最佳的固定木柲與器身的一種器制吧！

由二里頭、二里崗至殷墟（商後期）時期一路發展出來的戈制，今日考古所

註51 河南省博物館等，〈鄭州商代遺址的發掘〉《考古學報》1957：1，頁71

註52 陳芳妹，〈故宮所藏殷至周初的異形兵器及其所反映的文化關係問題－簡周青銅兵器研究之二〉《中華民國建國八十年中國藝術文物討論會》器物（上），頁257-306。參本書附錄。

註53 中國社會科學院考古研究所安陽工作隊〈1969-1977年殷墟西區墓葬發掘報告〉《考古學報》1979：1，頁91

註54 高去尋，〈侯家莊1004大墓〉，頁35

註55 楊錫璋〈關於商代青銅戈矛的一些問題〉《考古與文物》1986：3，頁65；陳志達，〈殷墟武器概述〉《慶祝蘇秉琦考古五十五年論文集》（1989）頁328；李學勤，〈商末周初的多穿戈〉《文博》1991：6，頁3-5

見在安陽一帶最為密集，主要集中分佈在商王朝行政中心地區，同時也隨著商文化遺存的廣佈而分散在陝西、甘肅、山西、山東、江西、湖北、四川、廣西、遼寧等地（註26）。



圖16 有胡戈 河南安陽殷墟西區墓698 商後期（《河南出土商周青銅器（一）》圖版230）

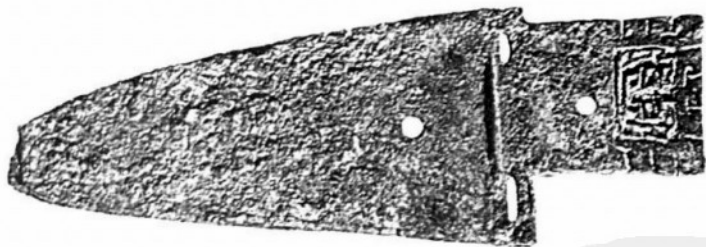


圖17 三角援戈 河南安陽小屯墓232（R2108） 商後期 長24公分
（小屯丙編（三）南區墓葬圖版30:1）

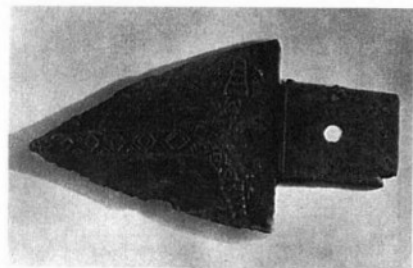


圖18 三角援戈 陝西城固蘇村
商後期 長26公分
（《陝出土商周青銅器（一）》圖版107）

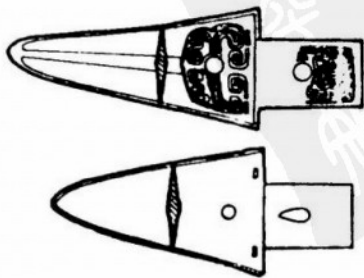


圖19 三角援戈 四川彭縣竹瓦街 商後期
（《文物》1980：12頁38，圖1：7）

乙. 器類與風格的多樣化：中原與地方風格的對壘與融合

商後期青銅兵器的多樣性，不只形之於戈制，亦見於其它器類，它不限於商王朝中心，相對的，各地區域風格也趨於明顯。商王朝行政中心與區域風格的對壘與交融，此一複雜的關係網形成商後期青銅兵器器類、器制與風格的多樣性，它們尤其表現在三角援戈、矛、鉞、刀、劍與弓形器等類。前三類在源起上或與南方及西南有關；後四類在發展上或與北方作風相繫連。

1 安陽與南方、西南關係問題試探：從戈、矛、鉞談起

前述安陽多樣的戈制中，獨三角援戈制尚未論及，它比其它安陽戈制簡單，僅有三角形「援」部及平板的方形「內」部，無所謂的「欄」、「胡」或「管盞」等。此形制曾出土在安陽如墓二三二（圖17）、二七〇（註56）等（註57），因此曾經被認為「發源於中原地區，不過在傳入巴蜀地區以後，發展成一種帶有地方色彩的武器」（註58）。由於出土器日增，商後期的三角援戈在城固（圖18）（註59）及巴蜀（圖19）（註60）二區占有頗高的份量，因此，三角援戈的起源地也隨之被移轉到城固（註61）或涇渭地區（註62）。總之，其「對安陽來說，很可能是外來的」（註63），但卻存在於安陽，增益了晚商政治中心戈制的多樣性。三角援戈制在西周早、中期時仍見於陝西寶雞魚國墓地（圖20）（註61），在戰國時成為四川特有戈制，故宮的【三角援無胡有穿戈】（圖版拾柒）可能是西周早期的鑄品（註52）。

今知三角援戈存在於安陽的分量不多，相反的，鉞及矛的出土則以安陽最多，但其源起，卻隨著相關出土資料的日增，而趨向於「南方起源」或「南方影響」的可能性。

青銅矛為刺兵，使用時須安裝木秘。根據隨葬的腐朽木痕知其木秘長約1.4米

- 註56 石璋如，《小屯》第一本 遺址的發現與發掘 丙編 殷虛墓葬之三 乙區墓葬
- 註57 郭寶鈞，〈1950年殷墟發掘報告〉《考古學報》1951（5）圖版二四，1
馬得志等，〈1953年安陽大司空村發掘報告〉《考古學報》1955（9）圖版一一：3
- 註58 童恩正，〈我國西南地區青銅戈的研究〉《考古學報》1979：4，頁445
- 註59 唐金裕等，〈陝西省城固縣出土殷商銅器整理簡報〉，《考古》1980：3，頁212；程學華等，〈陝西省城固、寶雞、藍田出土和收集的青銅器〉《文物》1966：1，頁2
- 註60 馮漢驥，〈四川彭縣出土的銅器〉《文物》1980：12，頁28；王家佑，〈記四川彭縣竹瓦街出土的銅器〉《文物》1961：11，頁28-31
- 註61 李伯謙以城固為源起地（〈城固銅器群與早期蜀文化〉《考古與文物》1983：2，頁70；盧連成等《寶雞魚國墓地》頁431-3
- 註62 霍巍、黃偉，〈試論無胡蜀式戈的幾個問題〉《考古》1989：3，頁254-5
- 註63 楊錫璋，〈前引文〉《考古與文物》1986：3，頁65

(註64)。商後期時在安陽一帶，矛出現於墓葬的次數雖不及戈，但數量卻超過戈，其形制也多樣(註65)，其中以二種矛制最盛行：一種是三角葉形如西北岡一〇〇四大墓所見(圖21)(註54)；一種為凹腰尖葉形(註66)。由於中原的二里崗期墓葬目前似尚未發現矛，而南方的湖北黃陂盤龍城已發現三件(圖22)(註67)，其形制正可將二里崗期到殷墟期的演變過程繫連起來。因此，有學者

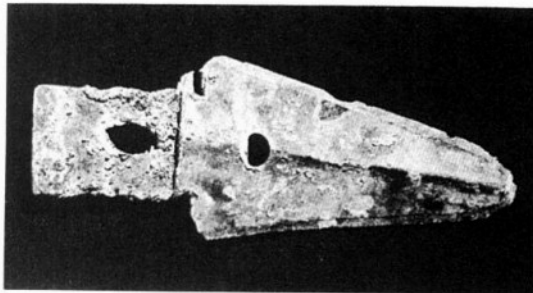


圖20 三角援戈 陝西寶雞強國墓7 西周早期 長18.8公分
(《寶雞強國墓地》圖版50:4)

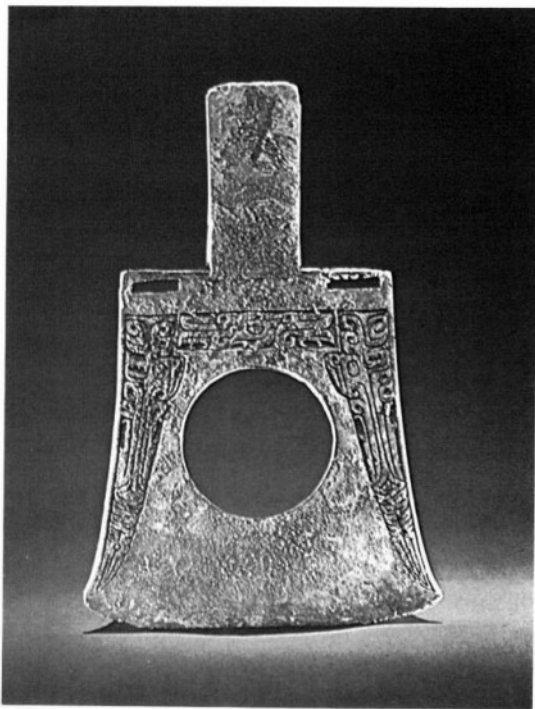


圖23 鉞 湖北黃陂盤龍城李家嘴墓2 商前期 長42公分
(《文物》1976:2, 圖版5:5)



(《侯家莊1004號大墓》圖版135:1)

圖21 矛 河南安陽侯家莊
西北岡1004大墓(R6760)
商後期 全長23.6公分



(《文物》1976:1頁56, 圖24:7)

圖22 矛 湖北黃陂盤龍城樓子灣墓3 商前期

推測矛制的來源或許與南方有關（註55），南方對商後期矛制的多樣發展似有孕育之功。

類似的情況也見於青銅鉞制。青銅夾內鉞制在商後期安陽一帶最為密集，其主要形制特點是：器身腰線往往作內凹形，至與刃線交接處而外張，使連接兩腰的刃線呈圓弧狀。器身與「內」相接處形成兩肩，兩肩往往各有一穿孔，與「內」上的穿孔共同縛繫木秘。這種形制特點在二里崗時期的中原，如鄭州（註68）可能已經形成。但時代相近或稍晚的南方如湖北黃陂盤龍城（圖23）等已有突出的藝術表現（註69）。而中原夾內鉞制的特點雖尚未見於中原一帶的二里頭玉鉞，然在南方的豐富的新石器時代的玉石鉞傳統中卻可找到相近的源頭（圖24）（註70）。中原青銅夾內鉞制的基本特點，若溯其玉石鉞的來源，南方似有不可忽視的地位（註71）。

總之，矛與鉞制在商後期，以安陽為中心而開花結果。三角援戈亦小部分存在於安陽，溯其本源，南方或西南，似有孕育之功。這方面的研究，目前已引起部分學者的注意，進一步的討論則有待更全面的資料才比較可能。

2 安陽與北方關係問題：從鉞、刀、劍與弓形器論起

安陽青銅兵器的部分源流，似與南方有不可忽視的臍帶關係；商後期青銅兵器器制與類別的多樣性，更是安陽與北方或相互對疊，或互為交流的結果。

鉞即是中原與北方互相對疊與交流的明顯例證。考古證據顯示，青銅鉞在商前期已出現，其主要盛行於商後期及西周早期，以後就罕見了。青銅鉞在商後期以其紋飾及形制的特具藝術性而凸顯於兵器行列，可能由於其深富禮制性，而為一般地位較高的貴族或可能為軍事首領所使用（註37）。其尤其密集地出土於安

註64 馬得志等〈前引文〉《考古學報》1955（9），頁51

註65 陳志達，〈前引文〉《慶祝蘇秉琦考古55年論文集》頁329

註66 《殷墟發掘報告》圖一八九

註67 湖北省文物館，〈1963年湖北黃陂盤龍城商代遺址的發掘〉《文物》1976：1，圖版五：10；〈盤龍城商代二里崗期的青銅器〉《文物》1976：2，頁26

註68 廖永民，〈鄭州市發現的一處商代居住與鑄造銅器遺址簡介〉，《文物》1957：6，頁73-4

註69 湖北黃陂盤龍城見註67。唯近日江西新淦亦出土一鉞，裝飾手法亦極突出，該群年代或可早到二里崗時期，唯下限仍有爭論。江西省文物考古研究所等，〈江西新淦大洋洲商墓發掘簡報〉《文物》1991：10，頁1-23

註70 傅憲國，〈試論中國新石器時代的石鉞〉《考古》1985：9，頁820-832；王仁湘，〈關於我國新石器時代雙肩石器的幾個問題〉，《南方民族考古》1987：1，頁21-36；張明華，〈良渚玉戚研究〉，《考古》1989：7，頁624-5；南京博物院，〈1982年江蘇常州武進寺墩遺址的發掘〉，《考古》1984：2，頁109-129

註71 陳芳妹，〈商周青銅斧鉞試論——藝術史探索的新嘗試 商周青銅兵器研究之三〉（未刊稿）



圖24 石斧 江蘇青浦崧澤 新石器時代 長14公分
（《上海博物館出土文物》圖版2）



圖25 鉞 河南安陽大司空村墓25
商後期 長22.5公分

（《考古》
1989：7頁592，
圖三2）

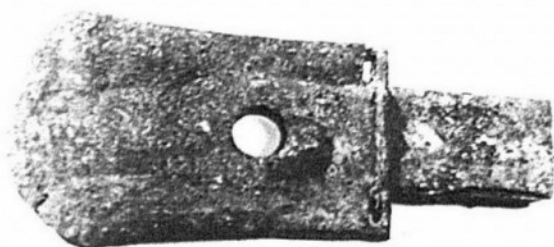


圖26 鉞 陝西西安老牛坡 西周早期 長19.4公分
（《考古與文物》1981：2頁17，圖版9：2）

陽一帶，而以夾內鉞制為主。殷墟婦好墓的【婦好鉞】（註50）、安陽戚家莊東墓二六九（註72）以及大司空村南地墓二五（圖25）（註73）等較具規模的墓葬皆有出土，故宮的【獸面紋鉞】（圖版陸）可能屬此系統。此夾內鉞制有其相當的分佈範圍，包括山東、河北、陝西、四川等地（註71）。

但商後期有另一種固定木秘方法的鉞制，也就是管鑿鉞，其主要分佈地在北方。隨著管鑿高度與器身高度的比例而分為四類：第一類為管鑿低於刃寬，但與內的高度相當。這類有鑿有內的鉞制在四類中與夾內鉞制最接近，其分布地主要集中在山西、陝西北部，如山西靈石旌介村（註74）及陝西西安老牛坡等（圖26）（註75），甚至還遠及山東泗水（註76）。第二類則與夾內鉞制稍遠，其管鑿高於刃寬，因此在全器中管鑿已相當凸顯。故宮的叁把管鑿鉞（圖版柒、捌、玖

）即是。這類形制一般也常見於北方，尤其是山西北部，如山西柳林高紅（圖27）（註77）及石樓義牒（註74）等。到西周早期，北方（註78）及西北（註79）仍然可見。第三種管釜斧鉞與中原夾內鉞形制相差更遠，其釜口與刃身上緣大約齊平，而管釜的後面基本上是近似啄錘的「丁形柱」。這類管釜斧鉞目前所見主要分佈於北方，包括遼寧新民大紅旗（圖28）（註80）等。第四類為半圓形刃管釜鉞：這種類型與安陽的夾內鉞制極不相同，但其刃線與木柶平行則一。此型雖罕見，但仍有二件出土例證，主要也來自北方：一為【七孔半圓形刃管釜鉞】出土於青海湟中（圖29），其時代或斷為商代後期（註81），或斷為西周早期（註82）。故宮的【七孔半圓形刃管釜鉞】（圖版拾壹）風格與之相近，時代可能相當。後者《西清古鑑》著錄作【周舞戚】（註83），其有長達18.7公分的管狀釜，以及半圓形刃。管狀釜上小下大，（下釜孔徑約為上釜孔徑的二倍），似乎有利於固定木柶（本器木柶可能係清宮所加）。上釜孔孔口疑係後世以銅填補，與原器接合處顯現一環修補痕。此器花紋更富特色，主要集中在管狀釜上：釜上有三道箍狀裝飾，中間飾有二大節點狀紋及鋸齒狀帶紋，背各有小突起，三個小突起連線下延，隱約可見範線痕跡。鉞身近管狀釜處有七個圓孔，向刃邊及釜孔邊各伸出突起線。

另一件三孔半圓形管釜鉞，也出自北方，傳出出土自陝西榆林（圖30）。其時代或定為商晚期（註84）；或定為西周早期（註82）。故宮的【三孔捲雲狹刃半圓形管釜鉞】（圖版拾）形制紋飾與之相似，時代宜相近。

後者《西清古鑑》著錄作【周片雲戚】（註83），管狀釜長達18.2公分，釜

- 註72 安陽市文物工作隊，〈殷墟戚家莊東269號墓〉《考古學報》1991：3，圖版五：5
- 註73 中國社會科學院考古研究所安陽工作隊，〈1986年安陽大司空村南地的兩座殷墓〉《考古》1989：7，頁592
- 註74 包括山西靈石旌介村（戴尊德，〈山西靈石縣旌介村商代墓和青銅器〉《文物資料叢刊》3（1980）頁48，圖四）；石樓義牒會坪（〈山西石樓義牒會坪發現商代兵器〉《文物》1974：2，頁69）；陝西中角楊家崕（宗宇等，〈陝北發現商周青銅器〉《考古》1988：10，頁956，圖二，3。）
- 註75 保宗，〈西安老牛坡出土商周早期文物〉《考古與文物》1981：2，頁17，圖版九：2
- 註76 趙宗秀，〈山東泗水發現商代青銅器〉《考古》1988：3，頁284，圖三
- 註77 楊紹舜，〈山西柳林高紅發現商代銅器〉《考古》1981：3，頁211-2
- 註78 北京市文物管理處，〈北京地區又一重要考古收穫——昌平白浮西周木柶墓的新啓示〉《考古》1976：4，頁250
- 註79 盧連成、胡智生，《寶雞魚國墓地》頁115，圖版五〇：1、二六：1
- 註80 略左縣文化館等，〈遼寧省喀左縣山灣子出土殷周青銅器〉《文物》1977：12，頁28
- 註81 中國美術全集編輯委員會，《中國美術全集》4 工藝美術青銅器（上），頁33
- 註82 馬承源，《中國青銅器》（1988），頁65-8
- 註83 清高宗編，《西清古鑑》，卷37，頁6：12
- 註84 《中國美術全集》4，頁32；北京市文物管理處，北京市新徵集的商周青銅器，《文物資料叢刊》（1978）2，頁818-20。

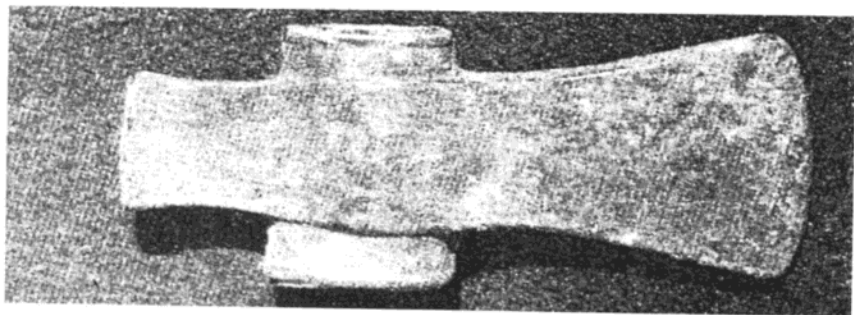


圖27 鉞 山西柳林高紅 商後期 長15.7公分 (《考古》1981:3, 圖版4:1)

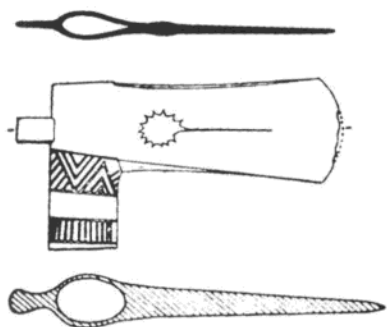


圖28 斧鉞 遼寧新民大紅旗
商末或周初
(《文物》1977:
12頁28·圖8:1)



圖29 七孔管釜鉞 青海湟中下西河潘家梁
商末或周初 長16 寬8公分
(《中國美術全集》4, 圖版98)



圖30 三孔管釜鉞 傳陝西榆林 商末或周初
長18 寬14公分
(《中國美術全集》4, 圖版91)

徑亦上小下大（釜口上徑3.6×2，釜口下徑2.95×1.72公分），不只後世所填補的上下釜孔的新銅，與器壁接縫痕跡隱約可見，經X光透視正面管釜，知管狀內為空心，因此上下花紋隱約可見重疊（圖31）；復經X光側面透視（圖32），其中間呈現黑色，正是空心的明證，因此知此器原本應是空心的管狀釜，可以穿入木柲。花紋集中於管狀釜上。釜上有四道箍狀裝飾，上行飾點狀紋，中間有兩道長方形凹槽，亦經後人填補（圖33），銹色與原器極不相同。四道箍狀裝飾中間間距三節，各飾點狀紋及鋸齒帶紋。釜背中間有鈴，上有小繫環，鉞身有三圓孔，刃角外侈反捲，皆富北方特色（註85）。

以上四類管釜鉞皆以管釜為通制，而與行政中心安陽的夾內鉞制形成不同的木柲使用方法及風格。而夾內鉞制與管釜鉞制的共同出現區也見於山陝一帶（註71）。鉞制在中原與北方風格的對壘與交融，形成了商末周初鉞制的多樣性，在當時青銅兵器的陣容中是相當凸顯的。

在中原與北方器制交互輝映中也同時形成晚商豐富的刀制，其部分器制，是中原由二里頭時期以來逐漸發展的結果。刀單面側刃，二里頭時期，中原已有刀。依安柄的方法主要可分成兩類：一為自身已有銅柄；一為自身僅有小銅柄，須插入相異質材的柄才能使用。唯當時刀身與柄的分化尚不明顯（註86）。其明顯區分開來，似已到二里崗時期（註87）。殷墟時期刀制隨著功能的分化、裝飾手法的加入和區域文化間的交流，形制也多樣。就刃線的形狀分，或凸刃、或凹刃；就柄首裝飾說，有環首、鈴首、獸首等（註52）。但就其功能說，並非所有刀制皆被認為是兵器。像極薄而小的凹刃或凸刃有柄刀等，便很可能是工具刀（註88

註85 此半圓形刃長管釜鉞制，形制特殊，目前殷墟尚未見到，與殷墟通見的鉞制基不相類，亦非北地所常見。但極為相近的例證，一出土於青海，一傳出土於陝北，可能也是屬於北方的作風。我們亦可由其它相類似的例證獲得輔證。陝西淳化出土一三孔鉞（姚生民，〈陝西淳化縣出土的商周青銅器〉，《考古與文物》1986：5，頁13），雖然較小，其半圓刃、三孔、管狀釜以及釜上的長方形凹槽和裝飾，皆與故宮二鉞有近似之處，此墓年代被定為商末或西周初。另外，陝西岐山魏家河出土的晚商銅刀（陝西省考古研究所等，〈陝西出土商周青銅器〉（一）（簡稱《陝一》）圖版一四），刃部作捲雲狀，刃上有四孔，形制特點與故宮三孔鉞有共通處。陝西扶風呂宅村出土一晚商鉞，以及西安老牛坡墓41的晚商鉞（劉士嶸等，〈西安老牛坡商代墓地的發掘〉，《文物》1988：6，頁12），鉞身有「突起線」裝飾，皆與故宮七孔鉞有共通之處。另外，北京昌平白浮墓二出土一異形戈，戈的內部即為管狀釜與半圓形內組成（北京市文物管理處，〈北京地區又一重要考古收穫——昌平白浮西周木柲墓的新啓示〉《考古》1976：4，頁250，圖版叁：一），形制與淳化及故宮二鉞相近。總之，似乎與故宮長管釜半圓形鉞相近的鉞制或其它兵器形制，在商末或周初之際，在北方雖非盛行，但也並不陌生。

註86 中國社會科學院考古研究所二里頭工作隊〈1980年秋河南偃師二里頭遺址發掘簡報〉《考古》1983：3，頁204，圖一〇：8

註87 李維明，〈簡論商代青銅刀〉《中原文物》1988：2，頁42-7。

註88 高去尋，〈刀俯葬中的銅刀〉《中央研究院歷史語言研究所集刊》37(1967)，頁355-381

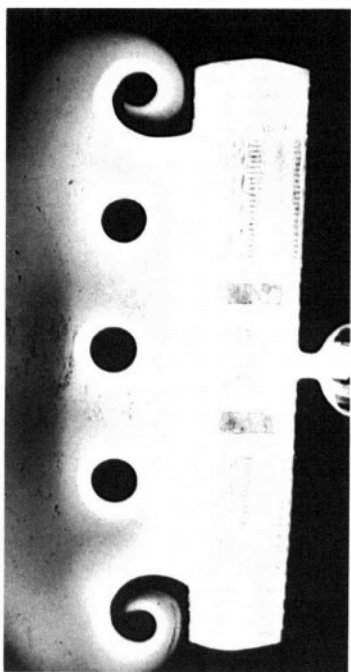


圖31 三孔鉞X光透視



圖33 三孔鉞管壺上有經後人填補的長方形凹槽

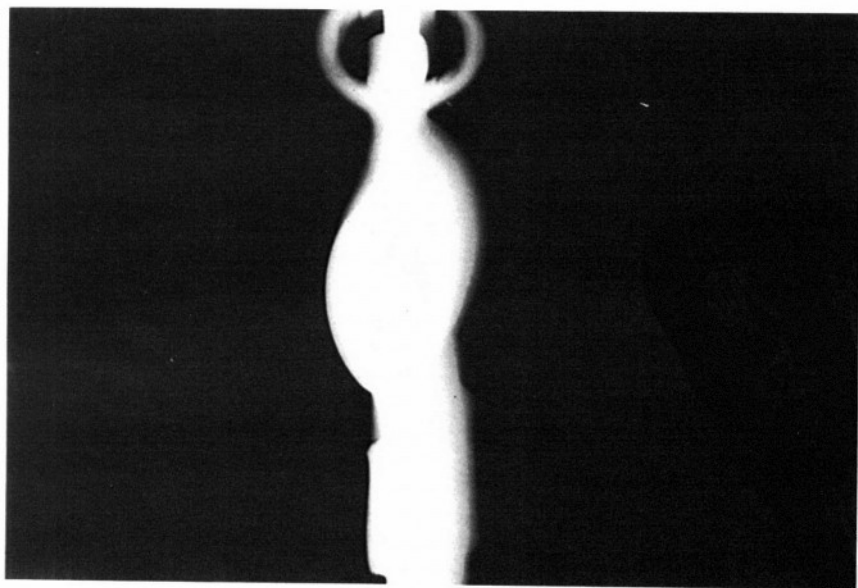


圖32 三孔鉞管壺X光側面透視

），而二種厚實的大刀則被認為可能是兵器。甲型是只有小銅柄，與刀背相連，須另安裝木柄使用，凸刃凹背，刀尖上翹，背部往往裝飾明顯的稜脊，器身往往裝飾花紋（圖34）（註50）；乙型是大型長條刀，刀背近首處或有管形銜環或有穿，可納安柅（圖35）（註89）或夾柅，此型被認為確知用作武器的一種（註55）。此外，小型的獸首、鈴首、環首彎刀，也被認為可能是短兵相接的兵器（註48）。

以上多樣化的刀制，似有其區域特性，或主要存在行政中心的安陽一帶（註90）如甲型大刀；或主要見於北方，如小型獸首、鈴首或環首曲背彎刀類型。後者散見於河北青龍抄道溝（圖36）（註91）、山西石樓（圖37）、陝西綏德塢頭村等（註92）。因此這類刀制一般接受為北方民族使用之器。故宮的【曲背鈴首彎刀】（圖版伍）可能屬於北方器制。其全長28.3公分，通體側曲，作弓背曲柄狀。鈴首係八道放射形鏤孔，內置一鈴丸組成，側角有一環扣，以利懸掛。扁莖，莖前後各有一排鋸齒狀花紋，上下則有點狀花紋。身與莖相接處有鈎狀凸起，身部背厚而刃薄。

上述刀制，隨類型不同而分佈互異，但仍有所交流。如小型獸首曲背彎刀，也有小部分見於安陽（註93）。又如乙型大刀，散見於山西、陝西一帶（註94），此長條形刀，頂端或為捲頭，或為直頭，其背部接觸木柅處，或為銜環以納柅

註89 中國科學院考古研究所安陽工作隊〈安陽殷墟西區一七一三號墓的發掘〉《考古》1986：8，圖版肆：2

註90 甲型大刀見於《殷墟婦好墓》（圖版六五）等

註91 鄭紹宗，〈河北青龍縣抄道溝發現一批青銅器〉《考古》1962：12，頁644

註92 楊紹舜，〈山西石樓褚家裕、曹家垣發現商代銅器〉《文物》1981：8，頁51-3；楊紹舜，〈山西柳林高紅發現商代銅器〉《考古》1981：3，頁211；吳振祿，〈保德縣新發現的殷代青銅器〉，《文物》1972：4，頁62-6；田廣金等，〈鄂爾多斯青銅器〉頁2。

郭勇，〈石樓后蘭家溝發現商代青銅器〉《文物》1962：4、5，頁33.34，圖四；山西考古研究所，〈山西靈石旌介村商墓〉《文物》1986：11，頁4；齊天谷，〈陝西子長縣出土的商代銅器〉《考古與文物》1989：5，頁14，圖一：2；黑光、朱捷元，〈陝西綏德塢頭村發現一批窖藏商代銅器〉《文物》1975：2，頁82-7

註93 石璋如，〈小屯一，遺址的發現與發掘，丙編，北組墓葬上〉頁126-141；高去尋〈刀斧葬中的銅刀〉《中央研究院歷史語言研究所集刊》37（1967），圖版貳：1、2，圖版七：2；中國社會科學院考古研究所安陽工作隊，〈安陽殷墟兩區1713號墓的發掘〉《考古》1986：8，頁709。；楊育彬、賈巖，〈河南出土商周青銅器〉（一），圖版二九一；河南省文化局文物工作隊，〈1958年春河南安陽市大司空村殷代墓葬發掘簡報〉，《考古通訊》1958：10，頁56

註94 如山西石樓（〈山西石樓新徵集的幾件商代青銅器〉《文物》1976：2，頁94）；石樓義牒（〈山西石樓義牒發現商代銅器〉《考古》1972：4，頁30）；陝西綏德后蘭家溝（〈陝西綏德發現和收藏的商代銅器〉《考古學集刊》2（1981），頁41）；西安老牛坡（保全，〈西安老牛坡出土商代早期文物〉，《考古與文物》1981：2，頁17）；岐山魏家河（〈陝西出土商周青銅器〉圖版一四）及淳化（姚生民，〈陝西淳化縣出土的商周青銅器〉《考古與文物》1986：5，頁13-19

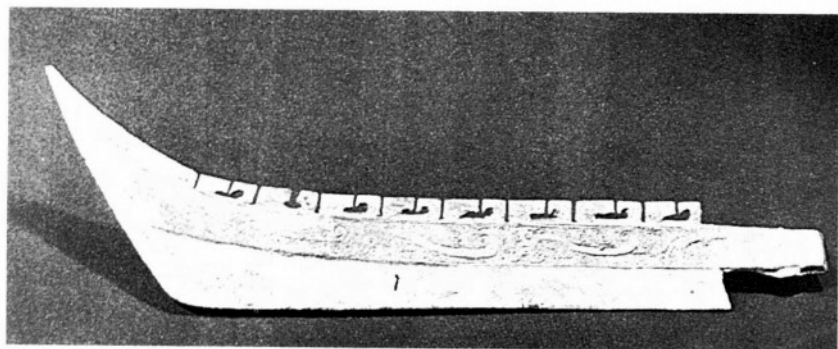


圖34 凸刃凹背大刀 河南安陽殷墟墓5 長45.7公分(《殷墟婦好墓》圖版65:1)



圖35 長條形大刀
河南安陽殷墟
西區墓1713
商後期
長31公分
(《考古》
1986: 8,
圖版 4: 2)

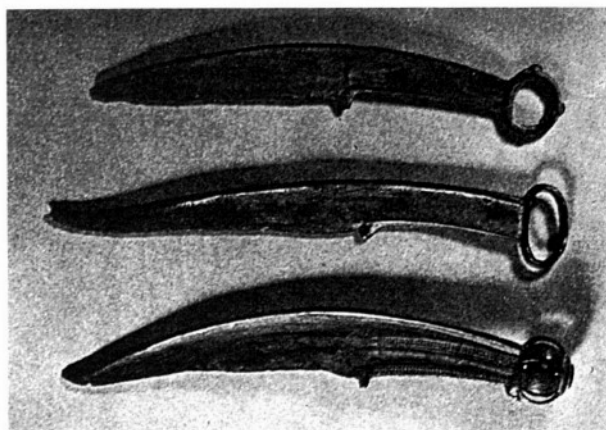


圖37 曲柄鈴首短劍 山西石樓曹家垣 商後期 長25.5公分
(《文物》1981: 8頁51, 圖13)



圖36 曲背鈴首彎刀 河北青龍抄道溝 商後期 長26公分 (《考古》1962: 12, 圖版5: 1)

，或為小穿以夾秘，一般接受為北方特有刀制（註95），故宮的【乳丁紋有蓋刀】（圖版貳壹）即屬蓋環納秘的直頭刀，可能是北方作風。但乙型大刀在安陽一帶也有出土，且具有一定分量（註96），唯頂端多作捲頭。這類型刀制甚且在江西新淦大洋洲出土（註97），顯示了北方、安陽以及南方在商後期相互交流的可能性（註98）。

唯曲柄短劍類型及曲背彎刀類型雖同樣刀身微曲，卻罕見於安陽（註99），而主要見於北方。如河北青龍、張北、山西石樓曹家桓、柳林高紅、保德林遮峪、吉縣城關、陝西延川，且遠及內蒙古伊金霍洛旗等（註92）。故宮的【曲柄鈴首短劍】（圖版肆）中脊雙刃，全長23.4公分，刃長只有13.6公分。通體向一側微曲，鈴首由八道放射形鏤孔內置一鈴丸組成，側角有一環扣，以利懸掛，扁莖，莖上花紋共分成五排，以鋸齒狀花紋為中心，上下各有點狀及絃紋對稱分佈，一字形外凸的格，中有柱狀脊，宜屬北方系的短劍系統。這類短劍是否為安陽所吸收，仍有待更多的資料說明。

弓形器也反映著中原與北方的交流問題。它主要分成二型：一種形制是器身微作弧形，兩端向上向外作對稱雙勾如臂身，臂身末端往往裝飾鈴首或獸首。如故宮的【蟬紋弓形器】（圖版拾貳、拾參）等。這種類型至遲在商後期已出現，且密集出土於安陽一帶至少已有26件（圖38）（註101），並共存於山陝一帶，但後者分量較少。

第二類弓形器則器身成板狀，雙臂的雙鉤較平緩，且兩端有鈴，器底兩端各

註95 李學勤，〈商青銅器對西土的影響〉《殷都學刊》1987：3收入《李學勤集》頁122-133，1989，哈爾濱；劉一曼，〈殷墟青銅刀〉《考古》1993：2，頁159

註96 乙型大刀見於西北崗墓1335，共10件（感謝中央研究院史語所惠告），與郭寶鈞的出自墓1355，9件。略有出入（郭寶鈞，〈殷周的青銅武器〉《考古》1961：2，頁114）；殷墟西區墓1713，2件（楊錫璋，楊寶成，〈安陽殷墟西區1713號墓的發掘〉《考古》1986：8，頁703-712）；安陽郭莊墓6件，（〈河南安陽郭莊村北發現一座殷墓〉《考古》1991：10，頁907）；郭家莊墓160，2件（安陽郭家莊160號墓，〈考古〉1991：5，頁390-1）；戚家莊墓269，2件，（〈殷墟戚家莊東269號墓〉《考古學報》1991：3，頁343）

註97 〈江西新淦大洋洲墓發掘簡報〉《文物》1991：10，頁12

註98 李學勤，〈新淦大洋洲商墓的若干問題〉《文物》1991：10，頁36

註99 高本漢的殷代兵器及工具一文圖版32，編號182（8）二把短劍稱出土自安陽，且182號有標準安陽銅鏽。（B. Karlgren, Some weapons and tools of the Yin Dynast. *Bulletin of the Museum of Far Eastern Antiquities*, 17 (1945) pp 111-2.）提出安陽也有青銅短劍的可能性

註100 林漢，〈商文化青銅器與北方地區青銅器關係之再研究〉蘇秉琦編，《考古學文化論集》頁191-155

陳芳妹，〈前引文〉《中華民國建國八十年中國藝術文物討論會》器物上，頁257-306

註101 陳芳妹，〈再論故宮所藏的商末周初的異形兵器——兼論殷墟與北方文化關係問題〉（未刊稿）

有對稱的雙環。故宮的【乳丁紋弓形器】（圖版拾伍）是爲例證。此類形制正是南西伯利亞米奴斯克盆地(Minusinsk basin)一帶弓形器的形制特點（圖39）（註100）。



圖38 弓形器 河南安陽西北岡墓2124 (R1147)
商後期 長34.2公分
(《東吳大學中國藝術史集刊》2, 圖版2.2)

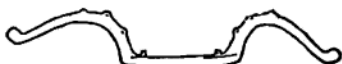


圖39 弓形器 托姆斯克大岬墓28
(《考古學文化論集》1, 圖8.6)

這兩種類型的弓形器或以爲是卡拉蘇克 (Karasuk) 文化受商文化影響的結果；或以爲弓形器兩端飾以鈴首或獸首，非商文化傳統，反映出北方系青銅文化色彩（註102）。從目前資料看來，弓形器的起源問題仍不明朗，但中原與北方互有交流，且隨著區域與環境的不同而各具特質，則是肯定的。

三、承先啟後（西周至春秋早期，約西元前十一至六世紀）

西周到春秋早期，是中國青銅兵器發展的第二階段，也是承先啟後期。青銅兵器在第一階段，特別是商後期，戈制發展成爲最主要的兵器，形制多樣化。戈在第二階段，則在多樣形制中作了選擇性的吸收及發展，開啓下一階段的演變大勢。

再者，爲進一步擴展戈的功能，由鉤殺而增益刺殺，於是此第二階段有「

註102 林漢，〈前引文〉，頁144；〈C.B.吉謝列夫通訊院士在北京所作的學術報告〉《考古》1960：2，頁53

戟」制的嘗試，日後發展成第三階段的重要兵制。至於近體衛身的劍也在此階段萌芽，而在下一階段蓬勃發展。

甲. 戈制的承先啟後：有胡戈的盛行

西周早期，對商後期已發展出來的兵器，尤其是多樣化的戈制，似作了選擇性的吸收。曲內戈及有銜戈雖然較盛行於商後期，在周初卻趨於式微。有欄無胡直內戈也日漸減少。只有商後期萌芽的有胡戈，在西周以後一枝獨秀。

銜內戈可能有易於脫祕的性能，不利實用，因此經過商後期及早周約三百年後自然減少。曲內戈及有欄直內戈靠著稍微高出戈援高度的上欄及穿固定木祕，仍不如欄有胡戈牢固。特別是商後期的晚階段，由於刃線延長至胡部，以及胡部的傾斜所帶動的欄與援角度關係的改變，由90°角改變成近100°角，使得「內」部在全器所占比例變小，而增益了戈的砍與鉤的功能（註103），這種改變，在商後期的晚階段萌芽，卻為戈制的發展開啓了一片天空。到西周早期，此胡部微微傾斜的帶胡戈遂蔚為風氣。

西周的有胡戈，一穿到四穿不等，【成周戈】（圖版拾陸）胡上一穿，有上下欄，戈援微見纖維痕，可能係織品包裹埋入土中的殘痕。「內」上鑄「成周」二字，當係成周之鑄品。河南濬縣辛村墓四二出土一【成周戈】（圖40）（註104），也是短胡一穿戈。同一墓葬群之墓五五也有一穿戈，形制與【成周戈】幾乎雷同，時代皆屬於西周早期到中期。近日河北琉璃河墓一一九二也出土一件【成周戈】（圖41）（註105），形制近似，看來【成周戈】的鑄造不只一件，其分佈也不限一



圖40 成周戈 河南濬縣辛村墓42
西周早期-中期 長23公分
（《濬縣辛村》圖版19：4）



圖41 成周戈 北京琉璃河墓1193
西周早期 （《考古》1990：
1頁28，圖7：2）

註103 林巳奈夫，《中國殷周時代の武器》，頁31

註104 郭寶鈞，《濬縣辛村》，頁40-1

註105 中國社會科學院考古研究所琉璃河考據〈北京琉璃河1193號大墓發掘簡報〉《考古》1990：
1，頁20-31

地。總之，西周有胡戈的盛行，實繫於西周對商後期的戈制傳統作了選擇性的吸收，有胡戈遂成爲戈的定制，奠定了日後戈制的發展方向。此後戈制的變化主要即在刃線的角度及增廣刃線的部位等。在西周晚期到春秋早期間，戈制的上下緣刃線，在交鋒處呈現等腰三角形如圭狀(圖1)(註15)，是爲一變，但仍然屬於有胡戈。

此外，西周早期戈制在裝飾上似有其特色，尤其表現在裝飾部位及裝飾體裁兩方面。商後期，戈的主要裝飾部位基本上在「內」部，此時裝飾部位則移轉至援部及胡部。裝飾的紋飾，或以張口吐舌的夔紋，如【吐舌夔紋戈】(圖版拾捌)；或飾似虎似變變形紋，如【變紋戈】(圖版拾玖)，動物的口部皆張向鋒口。甘肅靈台白草坡(圖42)(註106)及濬縣辛村(圖43)(註104)出土有近似的例子。這種裝飾部位及手法到春秋戰國時尤其成爲蜀式戈的特色，而溯其端倪，則商後期的三角援戈似可尋繹(註52)。這是否是西南民族的特色？抑或是西南與中原交流的結果？皆有待進一步追究。

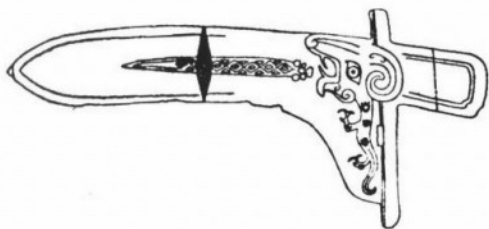


圖42 戈 甘肅靈台白草坡墓2 西周早期 長23.3公分
(《考古學報》1977：2頁113，圖2：2)



圖43 戈 河南濬縣辛村墓42
西周早期-中期 長22.4公分
(《濬縣辛村》圖版18：15)

乙.戟制的嘗試：連體戟的出現

戈能割殺，矛能刺殺，如有一器鉤刺兼備，當如虎添翼，增益殺傷功能。這樣的嘗試遂產生「戟」的形制。

關於「戟」的形制，據《說文》，「戟，有枝兵也」；《考工記·冶氏》曰：「戟廣寸有半寸，內三之，胡四之，援五之，倨句中矩，與刺重三鈞。」由於傳世文獻有文無圖，學者衆說紛紜：或推測爲十字形(註107)；或強調調戈矛結合

註106 甘肅省博物館文物隊，〈甘肅靈台白草坡西周墓〉《考古學報》1977：2，頁113,115

註107 程瑤田，《通藝錄》〈考工記創物小記〉冶氏爲戈戟考

，重點在刺（註108）。爾後出土資料日多，學者也紛紛藉助出土資料以圓其說，對戟制的認識遂更多面。或以濬縣辛村出土的例證，肯定戈矛結合之說（註109）；或以曾侯乙墓的自名戟為立論的中心，歸納戟與戈之區別及特點，如戟援較戈援窄而瘦長，戈為短兵，戟為長兵等（註110）；或以更全面的資料修正前者戈戟之別在定義上的狹窄性（註111）。總之，綜合戟制的自名例證及相關資料，戟的發展是以戈制為基礎（註111），試圖藉著增益某些部分，或改變部分形制的方法，以增加戈的功能。這類嘗試，商前期已啓其端，西周趨於明顯，到春秋戰國形成定制並普遍化。

西周時期「連體戟」的出現，對戟制的發展是重要的「嘗試」階段，因為它並沒有為下一階段所延用，也未臻至普遍發展，卻為下一階段戟制的到來預先試驗！唯此試驗，商前期已顯端倪，因此，西周時期在戟制的發展上充分顯現承先啓後特性。

戟的原始形制見於商前期，河北藁城台西村墓十七出土一件戟，木秘頂端有矛，秘端插入矛的鑿孔中，矛下的木秘橫置一戈頭，戈與矛相互垂直（圖44）（註112）。此時這種戈與矛聯裝的武器尚未形成有機的整體，它們合鑄一體的嘗試最遲在西周早期就出現了，【侯戟】（圖版貳拾）即為一例。

【侯戟】呈十字形，高度大於寬度，戟援中間有脊，後有一大圓穿，胡三穿，用以固定木秘。內上銘鑄「侯」字。類似的戟制及銘文亦見於濬縣辛村墓二出土的【侯戟】（圖45）（註104），時代屬西周早、中期。濬縣辛村墓地屬於衛國，該墓也出土帶有衛國銘文的器物，【侯戟】也有可能即是衛侯之戟。與其它散見於陝、甘、豫、冀、魯等省戟考古例證參照，戟出土量少，且多集中于少數中型以上墓，似乎，西周聯體戟的使用，與貴族身分有關。再者，【侯戟】體輕而質薄，可能不利實戰，而是儀仗用器。這種現象並非孤例，也見於濬縣辛村其它墓中，及靈台白草坡墓（註106）等，西周戟制在墓葬中的禮制意義是值得注意的。但並非所有西周戟皆作儀仗用，由於有些戟與車馬器及其它兵器共出，如山東膠縣西菴車馬坑出土者（註113），因此西周戟制應有部分仍是為實際車戰而作。

註108 郭沫若，〈說戟〉《殷周青銅器銘文研究》

註109 郭寶鈞，〈戈戟餘論〉《中央研究院歷史語言研究所集刊》（1935）5：3，頁313-26

註110 郭德維，〈戈戟之再辨〉《考古》1984：12，頁208-1112

註111 李健民，〈前引文〉《考古學集刊》7（1991），頁129

註112 河北省博物館等，〈藁城臺西商代遺址〉，頁32

註113 山東省昌濰地區文物管理組，〈濰縣西庵遺址調查試掘簡報〉《文物》1977：4，頁67
中國科學院考古研究所琉璃河考古工作隊，〈北京附近發現的西周奴隸殉葬墓〉，《考古》1974：5，頁315

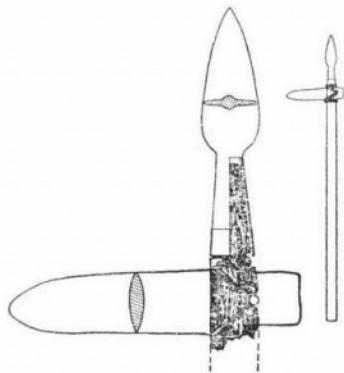


圖44 戟 河北藁城臺西基17 商前期
（《藁城臺西商代遺址》圖22）



圖45 侯戟 河南濬縣辛村基2
西周早、中期
通刺長26.75 內長22.4公分
（《濬縣辛村》圖版21：2）

或許矛與戈呈十字形，合鑄一體，鑄造的困難度似乎更大，技術較難，自然不易大量生產。其十字造形可能容易折斷，不利於實際作戰，這類合鑄戟在西周以後遂極罕見（註114）。由於西周時期對戟制的經驗，使得戟制在春秋戰國可以不再重覆其經驗，而早日迄於定制，並日趨普遍化。

丙.劍的興起

劍至東周才普及，地方特性也趨於明顯，對東周中原及南方的長劍類型而言，西周劍制數量甚少，但有其啓後的特質。對於東周北方短劍而論，西周更具備了承先啓後特性。

針對北方劍制而言，北方是以青銅短劍為其不變的特色。唯與其它階段相比，西周早期並非興盛期。但此時期繼承了商後期所建立的某些特質，並加以適度的調整，開啓日後劍制發展的趨勢，北京昌平白浮出土的短劍（註78）適足以說明。商後期的北方青銅短劍基本上以直刃曲柄、一字格、柄首有裝飾、柄首下有

註114 楊泓先生對西周戟制有極精闢的研究，以上西周戟制發展的相關問題，乃根據其研究，〈中國古代的戟〉《中國古兵器論叢》，頁152-162（1985）

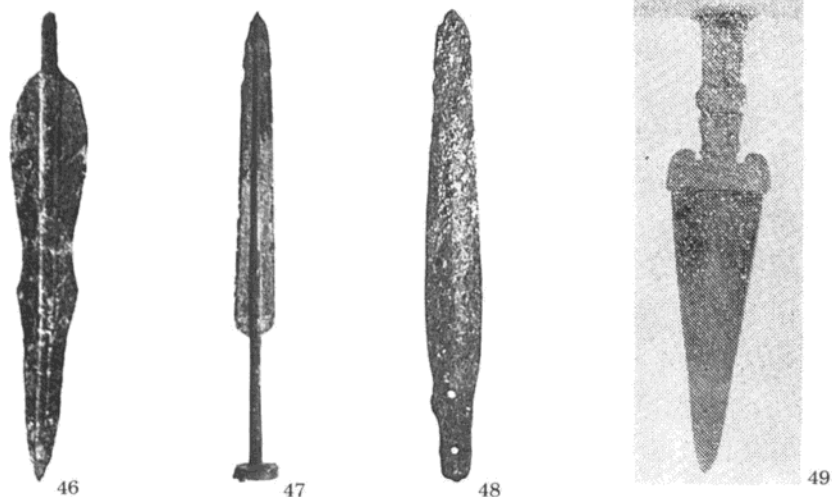


圖46 曲刃劍 遼寧寧城南山根基101 西周晚期-春秋早期 長31.9公分 (《考古學報》1973: 2, 圖版6: 1)

圖47 柱脊劍 河南陝縣上村嶺虢國墓1052 西周晚-春秋早期 長33.5公分 (《上村嶺虢國墓地》圖版35: 1)

圖48 柳葉形劍 陝西長安張家坡墓178 西周早期 (《澧西發掘報告》圖版70: 3)

圖49 有首有格劍 浙江長興楊灣 西周早期 長21.6公分 (《文物》1979: 11頁94)

一環鈕為主要特點(註115)。北京昌平白浮短劍則保留了商後期的基本特色，唯將曲柄改為直柄，此直柄短劍遂成為東周北方青銅短劍的特點。因此西周北方短劍具有承先啓後特性。

但西周晚期到春秋早期，在北方出現了柱狀脊的曲刃短劍(圖46)(註116)，開啓了春秋戰國盛行於東北一帶的主要短劍類型。

時代相近的柱脊式的直刃劍(圖47)(註117)也出現在中原一帶，但這種劍制似未在日後的中原蔚為風氣。此中原及北方柱脊式劍，其劍刃及劍首形式皆不相同，但以柱脊為其共通性，是否有淵源或影響的關係，待考(註118)。

相對於北方青銅短劍，西周時期中原及南方的劍制及性質則有所不同。就目前資料所示，在中原及南方，東周劍制似源起於西周。在中原包括陝西岐山、張家坡(圖48)、甘肅靈台及北京一帶(註119)出現一種扁莖、無格、柳葉形劍，扁莖上一般有穿孔，據推測可能在其上釘夾柄形木板以使用(註38)。這種劍制或許是東周中原所流行的扁莖無首柳葉形劍的祖型(註118)。

在南方吳越地區也出現了另一種青銅劍，其特點為圓首、圓莖或扁圓莖、有格，莖上或有箍，浙江長興(圖49)出土者是為例(註120)。近似的例子也見於

西周末春秋初的江蘇溧水溧陽等（註121）。這類有首、圓或扁圓莖、有格、或有箍的特點，可能是東周南方及中原主要劍制的祖型（註118）（註122）。

總之，西周時期到春秋早期此一階段，在青銅兵器的發展上有其重要性。其從商後期的多樣性的戈制中，選擇了有胡戈制，奠定了戈制日後發展大勢，此其一。其為擴展戈的功能，而發展戟制，卻止於嘗試，而把發展成定制的任務交付給下一階段，此其二。此期間的劍雖止於少數，且大多只發現於大型墓葬中，有的學者遂認為僅限於貴族佩帶，尚未普及到一般士卒，因此這階段不是劍的盛行期，但劍制在此階段所反映的區域間的交流跡象已隱然可見，此其三。要言之，它預示了下一階段青銅兵器蓬勃發展的先河。

- 註115 烏恩，〈關於我國北方的青銅短劍〉《考古》1978：5，頁325-6
- 註116 遼寧省昭烏達盟文物工作站，〈寧城縣南山根的石椁墓〉《考古學報》1973：2，頁32-3
- 註117 中國社會科學院考古研究所，〈上村嶺虢國墓地〉M1052，圖版三五：1；M1705，圖版四六：6；《洛陽中州路》M2415：1，圖版四六：1
- 註118 李伯謙，〈中原地區東周銅劍淵源試探〉《文物》1982：1，頁44-8
- 註119 甘肅省博物館文物隊，〈甘肅靈臺白草坡西周墓〉《考古學報》1977：2，頁114-5
- 陝西博物館，〈陝西岐山賀家村西周墓葬〉《考古》1976：1，頁36
- 中國科學院考古研究所，〈禮西發掘報告〉，頁118-9
- 陝西省博物館等，〈陝西岐山禮村附近周遺址的調查和試掘〉《文物資料叢刊》2（1978），頁29
- 中國社會科學院考古研究所禮西發掘隊，〈長安張家坡M183西周洞室墓發掘簡報〉《考古》1989：6，頁524-9
- 註120 夏星南，〈浙江長興出土五件商周銅器〉《文物》1979：11頁712；夏星南，〈浙江長興縣發現吳、越、楚銅劍〉《考古》1989：1，頁19
- 註121 劉和惠，〈刑盟考〉《文物集刊》（1981）：3，頁291
- 馮普仁，〈吳國青銅兵器初探〉《中國考古學會第四次年會論文集》（1983），頁139
- 葉玉奇，〈江蘇吳縣出土一批周代青銅劍〉《考古》1986：4，頁372-4
- 註122 蕭夢龍，〈吳國青銅兵器研究〉《考古學報》1991：2，頁4

四、蓬勃發展（春秋中晚期至戰國，約西元前五世紀至三世紀）

春秋中、晚期到戰國，青銅兵器蓬勃的發展，不只有胡戈制在追求擴大功能中形制更多樣化，戟制也找到定制，而趨於普遍化。劍制更在各地呈顯其形制的多樣化、數量的普及化，並在科技上有新的嘗試。遠射器則在機械功能方面有重大的突破，而出現了弩機。再者，此階段的兵器除實用之外，更有突出的藝術性表現。

甲.劍制的興盛

春秋中晚期到戰國，劍制由零星的例證到普遍，區域特性及區域交流也由隱晦而趨於明顯。

在北方，仍以商後期以來所發展的短劍傳統為其特色，但更加普遍化，且發展出明顯的區域特色。東北以柱脊式的曲刃短劍為主，往往有枕形或乳狀加重器，主要分佈於遼寧、吉林等遼東地區（圖50）（註123）。西北以觸角式青銅短劍為主，實心柄，有較明顯的格，柄首飾以動物式的觸角或幾何化的雙環。內蒙鄂爾多斯及河北懷來（圖51）（註124）皆出土其典型，故宮的【雙環柄首短劍】（圖版肆拾）屬之。

【雙環柄首短劍】的特點，在於短短22公分的長度中，劍柄與劍身約各占一半，為翼狀的劍格所隔開，劍柄上裝飾有相向的半環狀紋。尤其突出的是劍首作相對的雙環鏤空裝飾。其雙環已看不出動物屬性，僅留下「觸角」遺意，有些劍首的動物裝飾則較寫實。

【雙環柄首短劍】富於北地色彩，【鏤空蟠虺紋柄短劍】（圖版參玖）則顯

註123 瀋陽故宮博物館等，〈沈陽鄭家甸子的兩座青銅時代墓葬〉《考古學報》1975：1，頁141-155

遼寧省博物館，〈遼寧凌源縣三官甸子青銅短劍墓〉《考古》1985：2，頁125-130
吉林省文物管理委員會，〈吉林懷德大青山發現青銅短劍〉《考古》1974：4，頁276

註124 田廣金，〈桃紅巴拉的匈奴墓〉《考古學報》1976：1，頁131-143

田廣金，郭素新，《鄂爾多斯式青銅器》，圖版二六、二七

河北省文化局文物工作隊，〈懷來北辛堡戰國墓〉《考古》1966：5，頁235

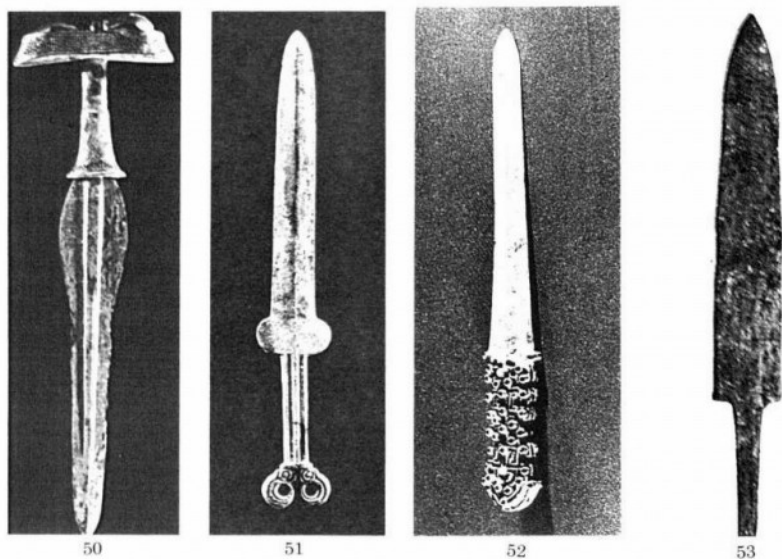


圖50 曲刃劍 遼寧凌源三官甸 戰國早中期 全長44.5公分 (《考古》1985: 2, 圖版1: 18)
 圖51 觸角式短劍 河北懷來北辛堡 戰國早期 全長30.3公分 (《考古》1966: 5, 圖版3: 9)
 圖52 嵌松綠石柄短劍 河北懷來大城 春秋晚期 全長31.2公分 (《河北省出土文物選集》96)
 圖53 無首劍 河南洛陽中州路墓2737 春秋晚期 全長36公分 (《洛陽中州路》圖版57: 7)

示了北方與華夏作風交融之痕跡。【鏤空蟠虺紋柄短劍】劍長30公分，柄長11公分，較原柄長，可能部分是附加的。其劍身短，重視劍柄及劍首的裝飾，這種手法顯示與北方傳統息息相關。唯其裝飾的母題——蟠虺紋，則是華夏容器上常見的紋飾，以兩面合范的鏤空方式表現出來。河北懷來大古城出土一把鑲嵌松綠石柄的青銅短劍（圖52）（註125），時代屬春秋晚期，同樣反映北方與華夏作風的融合。這類短劍，曾零星出土於山東長島、陝西鳳翔及河北平山一帶，雖採用了華夏的裝飾母題，似未在華夏植根，華夏主要流行的仍是長劍。

以上富有北地色彩的青銅短劍，其區域分佈與分區特性（註126），如何與北方游牧民族包括史書所載的東胡、山戎及匈奴等繫連（註127），此文物特性與族

註125 河北省博物館等，《河北省出土文物選集》圖96

註126 在翟德芳對北方青銅短劍分群研究中，另有中群銜柄短劍類型等，（〈中國北方地區青銅短劍分群研究〉《考古學報》1988: 3, 頁282）

註127 「……是以北伐山戎，南伐楚」（《史記》匈奴列傳）

屬的認定問題，近來頗為學者所關注（註128）。

包括今河南、河北、山西三省，原周、鄭、晉、衛、燕國等地的中原，到春秋戰國之際，劍也趨於普遍。不只在長度上呈四、五十公分，與北方的二、三十公分的短劍不類，在形制特點上更不相同。根據劍首的有無、莖的圓扁、籬的有無、劍格的形式等不同情況，中原的劍制主要分成三式（註129）：一式是劍身似柳葉形，扁莖，劍身與莖分界呈直角，莖上無格、無籬（圖53）（註130）。故宮的【無首劍】（圖版叁伍）屬之，本件經X光透視，知原型為無首，其玉劍格、柄及首係經後代補接。二是圓首、圓莖或扁圓莖、無籬、窄格劍（圖54）（註130），故宮的【「奇字」劍】（圖版參陸）即是。三是圓首、有籬、有格劍（圖55）（註130），故宮的【有首雙籬有格劍】（圖版叁肆）屬之。

以上中原三種劍制的後二式，正是盛行於南方的主要劍制（註131）。故宮的【「奇字」劍】（圖版參陸）銘文風格顯示可能是越國劍，即是第二式的圓首扁圓莖、無籬、窄格劍。安徽淮南蔡家崗趙家孤堆出土的【攻敵大子姑發瓘反劍】（圖56）（註132）及襄陽蔡坡墓十二的【吳王夫差劍】（註133）等皆屬此制。另外，中原盛行的第三式劍，以有首、籬、格的圓莖劍為其特色，亦盛行於南方，故宮的【越王州勾自作用劍】（圖版參柒）（註134）是為例。湖北江陵藤店的【越王州勾劍】（註135）及安徽廬江的【吳王光劍】（註136）皆屬此型。

以上二種劍制，雖行於中原，卻尤其盛行於南方。其以圓形劍首、有格為主要特點，尤其可以追溯至前一階段，早期的例證如浙江長興劍等主要來自南方。

- 註128 林滢，〈東北系銅劍初論〉《考古學報》1980：2，頁139-161
張錫瑛，〈試論我國北方和東北地區的「觸角式」劍〉《考古》1984：8，頁749-751；
翟德芳，〈前引文〉，頁394-7
- 註129 李伯謙先生分東周劍制為四式（〈前引文〉《文物》1982：1，頁44），但以柱脊劍式屬本文的前一階段，且該式在中原雖出現，但並不盛行，故仍採林壽晉三式分類法（林壽晉，〈東周式銅劍初論〉《考古學報》1962：2，頁75）
- 註130 中國科學院考古研究所，〈洛陽中州路M2737，圖版五九：7；M2717，圖版六七：1；M2729，圖版五八：9
- 註131 蕭夢龍，〈吳國青銅兵器研究〉《考古學報》1991：2，頁150-1
賀剛，〈先秦百越地區出土銅劍初論〉《考古》1991：3，頁252-262
- 註132 安徽省文化局文物工作隊，〈安徽淮南市蔡家崗趙家孤堆戰國墓〉《考古》1963：4，頁204，圖版四：9（2.18.6）
- 註133 襄陽首屆亦工亦農考古訓練班，〈襄陽蔡坡12號墓出土吳王夫差劍等文物〉《文物》1976：11，頁65，圖版四：1
- 註134 關於故宮所藏的越王二劍的銘文及國別問題，請參閱陳芳妹，〈故宮的蔡國戈與越王劍——商周青銅兵器研究之四〉（未刊稿）
- 註135 荊州地區博物館，〈湖北江陵藤店一號墓發掘簡報〉《文物》1973：9，圖版二：1
- 註136 馬道闊，〈安徽廬江發現吳王光劍〉《文物》1986：2，頁64

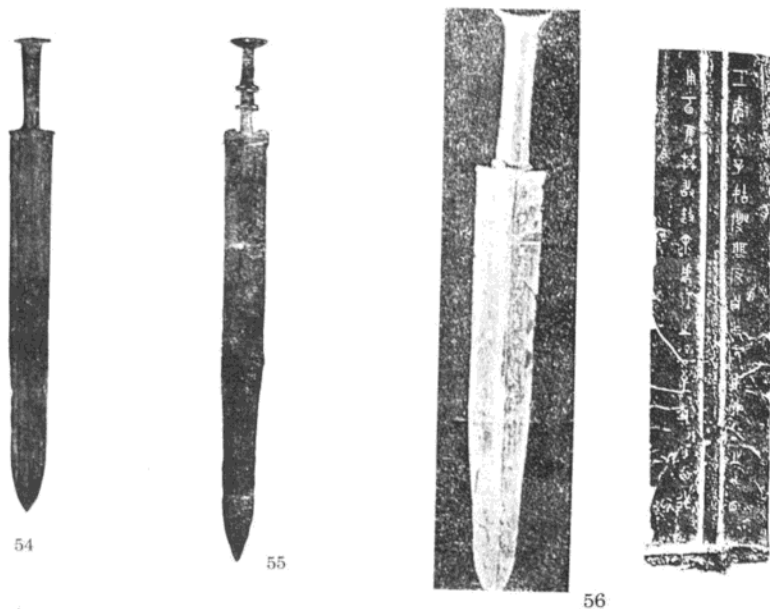


圖54 有首無箍有格劍 河南洛陽中州路墓2717 戰國早期 (《洛陽中州路》圖版67:1)
 圖55 有首有箍有格劍 河南洛陽中州路墓2729 春秋晚期 (《洛陽中州路》圖版58:9)
 圖56 攻敵太子姑發對反劍及銘文 安徽淮南蔡家崗趙家孤堆墓2 吳諸樊 (下限西元前560) (《考古》1963:4, 圖版4:9)

因此對盛行於中原及南方的二種劍制，學者多傾向於南方起源說（註137）。

南方不只在中原劍制的發展上可能有孕育之功，在科技上也有突出的表現，「複合劍」技術即為例證，故宮的【「奇字」劍】即是以複合技術鑄成的。從器表看，此劍身中脊部分與左右兩邊色澤不同，經本院科技室的立體式顯微鏡四十倍放大，其中間與邊刃的色澤的分野尤其明顯。經本院科技室協助，分別由脊部、刃部及柄部三部分各取一點，以感應耦合電漿原子發射光譜分析，測出其銅、錫等主要成分及其它微量元素成分附表如下：

百分比 部位	元 素									
	Cu	錫 Sn	鉛 Pb	鋅 Zn	鐵 Fe	鈷 Co	鎳 Ni	銀 Ag	鋁 Al	總量
中脊	86.50	11.10	0.164	0.528	0.0786	0.0417	0.205	0.0592	0.0125	98.689
刃部	81.25	17.20	0.431	0.448	0.0282	0.0523	0.159	0.0563	0.0114	99.6362
柄部	74.97	19.20	5.27	0.360	0.0499	0.0370	0.0994	0.0994	0.0162	100.0747

註137 李伯謙，前引文，《文物》1982:1, 頁44
 蕭夢龍，前引文，《考古學報》1991:2, 頁150-1
 賀剛，前引文，《考古》1991:3, 頁252-262

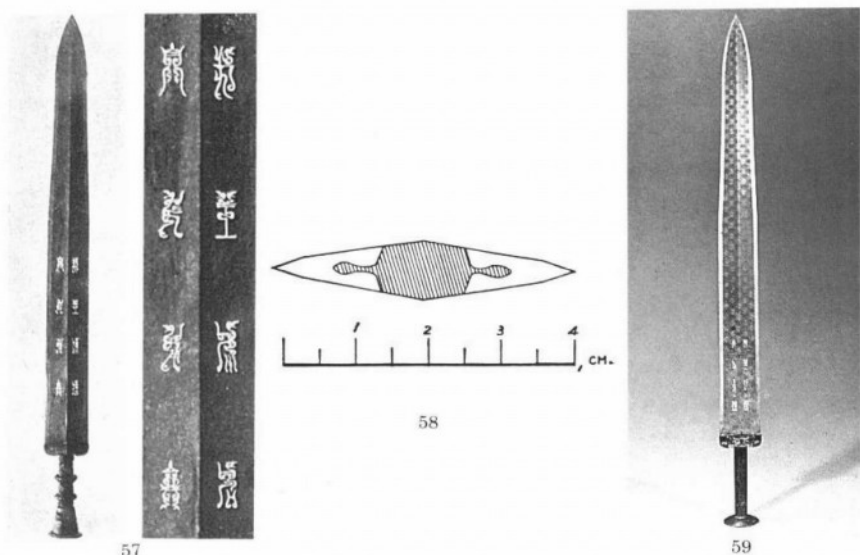


圖57 越王州勾自作用劍及銘文 湖北江陵藤店墓1 越王朱勾（西元前448-441）（《文物》1973：9，圖版21.3）

圖58 複合劍剖面 春秋晚期 上海博物館

圖59 越王勾踐劍 春秋晚期 湖北江陵望山 長55.6公分

證明了刃部的錫成分較中脊為高，可以加強劍的鋒利性，而脊部的銅成分則相對的比刃部高，這種現象，與上海博物館複合劍的成分分析結果相近（註138）。

同屬劍，而中脊邊刃成分不同，其鑄造技術如何？經科技室X光透視，見脊部的下端超過劍格，與兩刃分野明顯。據上海博物館的複合劍剖面（圖58）看，其鑄造的程序應該先鑄脊部，再嵌入範中鑄出刃部，並在脊部的兩端作凸起，以與刃部連接，以防止脫落（註139）。複合劍的科技成就由此可見一斑。

【「奇字」劍】及江陵出土的【越王勾踐劍】共同反映了越國在鑄劍技術方面的前瞻性，為史書對吳越名劍的贊詞找到注腳（註140）。唯越國複合技術似乎不

註138 陳佩芬，前引文，《上海博物館館刊》1（1981），頁147

註139 感謝華覺明先生函告

註140 《周禮·考工記》：「吳粵（越）之劍，遷乎其地弗能為良，地氣然也。……吳粵之金錫，此材之美者也。」

《莊子·刻意》：「夫有干（吳）越之劍者，押而藏之，不敢用也，寶之至也。」

《楚辭·國殤》：「操吳戈兮披犀甲」。

《戰國策·趙策三》記趙奢的話說：「夫吳干之劍，肉試則斷牛馬，金試則戴盤匝，薄之柱上而擊之，則折為三，質之石上而擊之，則碎為百。」

《呂氏春秋·恃君覽·行論》：「……於是殛之于羽山，副之以吳刀。」

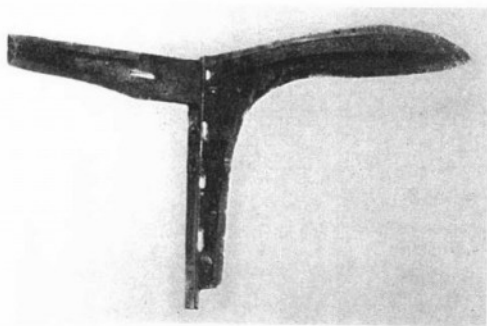


圖60 戈 河北易縣燕下都墓44 戰國晚期 長23.6公分
(《河北省出土文物選集》142)

只表現在劍脊的成分不同，且應用在器表有銀斑的方格紋飾，如【越王勾踐劍】（圖59）。這類技法，吳國也使用，如【吳王夫差矛】（註141），並見於湖南長沙楚墓（註142）。事實上，「安徽、湖南、湖北、浙江等地皆有出土，唯發表者不多。此類兵器多在長江中、下游，尤以越文化區所出較多」（註143）。看來複合技術應用在兵器上，似乎以南方為主要分佈區（註144）。它的源起，是否來自越國，由於資料發表的不完整性，目前似難遽以論斷，但依已知的例證如故宮【「奇字」劍】以及出土的【越王勾踐劍】及【吳王夫差矛】等可以確知，吳、越二國精於此道，並應用於王者鑄劍中。

戰國晚期到漢代，四川、雲南等西南地區有銅柄鐵劍類型，其銅柄與銅劍鞘皆裝飾有地方色彩的紋飾（圖版肆貳），極具區域特性。

乙.戈與戟的極致

隨著功能的強化，戈的形制也多樣化：或加強戈制的刃線部位，使「內」部也成為刃線的所在。【長胡內刃戈】（圖版貳玖）即在「內」部形成鋒刃。河北懷來北辛堡墓出土一件戈的「內」上即有二刃（註124）；河北易縣燕下都墓四四戈的「內」上則有三刃（圖60）（註145）。有些更在胡刃上形成棘突，河北易縣燕

註141 湖北省博物館，《越王勾踐劍與吳王夫差矛》，頁13（1984）香港

註142 湖南省博物館，〈長沙楚墓〉《考古學報》1959：1，頁50—51，圖版九：4.5，圖版十：1.3.5698。

註143 感謝上海博物館馬承源館長函告

註144 複合技術亦見於銅鏡，似主要也見於南方（〈長沙楚墓〉《考古學報》1959：1，圖版六：1）及西南（四川省博物館等，〈四川涪陵地區小田溪戰國土坑墓清理簡報〉《文物》1974：5，頁75

註145 河北省文物管理處，〈河北易縣燕下都44號墓發掘報告〉《考古》1975：4，頁234，圖十

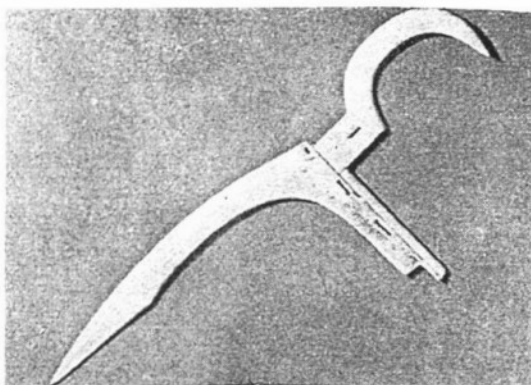


圖61 戈 湖北江陵天星觀墓1 戰國晚期 長35.7公分
(《考古學報》1982: 1, 圖版15: 8)



圖62 三戈戟
湖北隨縣曾侯乙墓
戰國早期
長25.4、16.8、15.6公分
(《曾侯乙墓下》
彩版12: 2)

下都二三號遺址出土的【燕王喜戈】及【燕王職戈】胡刃即各有二個棘突(註146)，以加強鉤刺性能。更有改變「內」的形狀，在內末呈現鈎鑷狀，如湖北江陵天星觀墓一之戈(圖61)(註147)；也有「內」部尾端內彎成鈎狀如河北濠平所出者(註148)。此外，在四川一帶的巴蜀戈制尤其具有地方特色，以商後期到西周早期以來所發展的三角援戈為基礎，以「內」為中心，援上下或對稱或不完全對稱，形制上多角轉折曲度以加強刃線的長度(註149)。

與戈相似，戟在第三階段也隨功能的強化而盛行。經過前一階段的試驗，聯體戟已很罕見，代之而起的是戈與矛分體聯裝共用的戟。此階段的考古資料顯示，戈與矛常成套出土，湖北江陵雨台山楚墓群出土的戟可向前直刺，援的上刃可以推擊，下刃可以鈎斫(註150)。戟的形制也隨著功能而多樣化，戟援上揚，援與胡交角從近於直角發展到約100度左右，再演變到近於110度；戟援由闊到窄，由直而富有曲線；戟鋒也隨之變得更銳利，更下斜成斜刃，形成折角，使得自折

註146 河北省文物管理處，〈燕下都第23號遺址出土一批銅戈〉《文物》1982: 8, 頁44-5, 圖五: 12)

註147 湖北省荊州地區博物館，〈江陵天星觀1號楚墓〉《考古學報》1982: 1, 圖版十五: 8 報告者稱為「戟戈」

註148 河北省文物研究所，〈濠平縣虎什哈炮石山山戎墓地的發現〉《文物資料叢刊》7(1983), 頁73, 圖一六。李健民等，〈中國古代青銅戈〉《考古學集刊》7(1991)頁118

註149 劉瑛，〈巴蜀兵器及其紋飾符號〉《文物資料叢刊》7(1983)頁14-5

註150 湖北省荊州地區博物館，〈江陵雨臺山楚墓〉(1984), 頁82

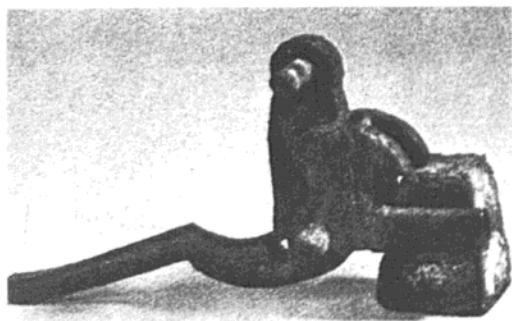


圖63 弩機 山東曲阜魯國故城墓3 戰國早期
長14.3公分 (《曲阜魯國故城》圖版85:6)

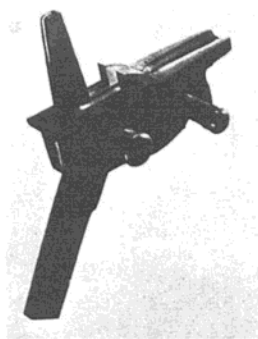


圖64 弩機 河北滿城漢墓墓1
西漢 郭長9.7公分
(《滿城漢墓發掘報告》下，
圖版47:2)

角處到弧接長胡的一段下刃的圓弧曲度，幾乎接近圓周的弧度。這些形制特點的改變，使得戰援下刃的鈎斫力更為提高。這類的改變，也同時可由用於車戰的皮甲加強對頸、肩、手的防護力反映出來（註151）。湖北隨縣曾侯乙墓出土一件多戈戟（圖62），木柩上安裝有三件戈和一件矛，最頂端的戈有「內」，下面二把戈則無，長度高達300—343公分。學者推測可能用在戰車上。唯戰爭錯殺而戰時，戟上有一戈似已夠用，因此以為其它兩把戈可能是車右所用，以應付敵方迫近戰車的步兵（註152）。

丙. 弩機的興起

戰國時弩機開始出現在人類的戰爭舞台，這是遠射兵器方面的大變革。在此以前，人類利用臂力張弓以遠射，而今弩機發射，將弦置於弩機上的牙，矢鏃置於槽上，以蓄勢待發（圖63），不只可延長發射的時間，以充分瞄準，也可以等待有利的時機萬弩齊射，充分發揮兵器遠射的功能。《史記·孫子吳起列傳》記載著齊國與魏國馬陵之戰，「齊軍萬弩俱發，魏軍大亂相失」的情狀，可見弩機在戰場的威力。根據弩機的出土地點看，戰國時代散見於南方的湖南、江蘇，西南的四川，以及北方的河南、河北、山東等地（註153），顯然弩機在戰國時是普遍為列國所使用的。其中，以湖南一帶出土較多。可能反映了楚國在當時造弩工

註151 楊泓，〈中國古代的戟〉《中國古兵器論叢》，頁17。

註152 孫機，〈有刃車戟與多戈戟〉《文物》1980：12，頁84

藝的先進（註154）。湖南長沙南郊掃把塘出土的弩機，有牙（鈎括）兩個（上一個有望山）和懸刀（扳機）、控塞等，其特點在於尚無銅郭。使用時，拉絃觸望山，牙即上升，將弦鈎住。前面的牙，窄長、橫放。在裝機件的下面有半環形木板和小木柱，便利以手把握，且在張弓弦後，以避免可能觸動懸刀（註153）。

故宮弩機，時代屬於西漢（圖版肆伍），與河北滿城西漢中山靖王墓出土者（圖64）（註155）相近。比戰國弩機複雜，加上銅槲，使機括可以承受更大的張力，加強了弩的強度及射程。

丁.兵器藝術的高峰

春秋中期以後，有一部分青銅兵器似乎在功能之外，表現了對形制、紋飾及銘文等藝術問題的關心，這種關心不只來自中原，也來自北方、南方及西南等地，充分表現各地區域特性，使得青銅兵器在藝術史上占有一席之地。

西周以來，「有胡戈」成爲戈制常態，此趨勢，在第三階段得以發展。木杵的固定問題既有定制，戈的藝術性也隨著戰爭的頻繁及列國諸侯的爭相競鑄而得以發展。

對中原及南方通行的夾內戈制而言，其主要的裝飾部位在「內」部，這是晚商以來的傳統，但到春秋中期後，其裝飾手法及內容皆有新意。如【鏤空蟠虺紋劍】（圖版叁玖）是將流行於青銅容器上的「蟠虺紋」裝飾於「內」上，以鏤空的方式表現。又南方的戈或以嵌金絲等方式表現紋飾，【蔡侯產（？）之用戈】（圖版貳陸）即裝飾夔紋，湖北隨縣曾侯乙墓戈及【蔡公子從之用戈】等（圖版貳伍）皆有不同的裝飾。

戈制的藝術化尤其表現在西南。西南一帶戰國的戈，打破了商後期以來中原戈制以「內」部爲主要裝飾部位的手法，援部成爲主要的裝飾部位，由於援部的裝飾部位比內部大，其紋飾多樣（圖65）（註156），虎紋尤其具有地方色彩（圖66）（註157）。西南兵器重視花紋裝飾，不只以戈制爲然，更遠及矛及劍制（註

註153 高至喜，〈記長沙、常德出土弩機的戰國墓——兼談有關弩機、弓矢的幾個問題〉《文物》1964：6頁33-45；鎮江市博物館，〈江蘇武進孟河戰國墓〉《考古》1984：2，頁136；四川省文物管理委員會，〈四川涪陵地區小田溪戰國土坑墓清理簡報〉《文物》1974：5頁63,71；洛陽博物館，〈洛陽中州路戰國車馬坑〉《考古》1974：3，頁171-8；河北省文物管理處，〈河北易縣燕下都44號墓發掘報告〉《考古》1975：4，圖版伍：4；山東考古研究所，〈曲阜魯國故城〉，頁155（1982）齊魯

註154 楊泓，〈弓和弩〉《中國古兵器論叢》，頁206

註155 中國社會科學院考古研究所等，〈滿城漢墓發掘報告〉，頁86

註156 〈荊門出土的一件銅戈〉《文物》1963：1，頁64

註157 成東《中國古代兵器圖集》圖4-163

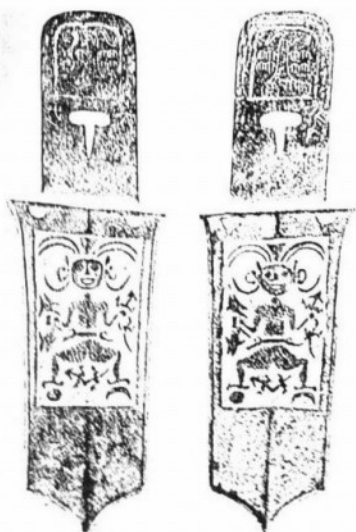


圖65 戈(拓片) 湖北荊門車橋
戰國 全長21.7公分
(《考古》1963:3,
頁153,圖1)



圖66 戈 四川郫縣 戰國
(《中國古代兵器圖集》4-163)



圖67 戈 山西太原金勝村墓251
春秋晚期 全長20.3公分
(《文物》1989:9,頁78圖31)

149)。故宮的【獸面雲雷紋矛】(圖版肆肆)即富有西南作風。

此外，戈也有嘗試以立雕作裝飾的，這種手法多用於當時已罕見的有銎戈類。可能因為有銎戈的木秘是穿入銎孔之中，使得戈的「內」與「胡」等部位，不必像直內戈一樣，為木秘預留空間，反而可以自由地裝飾，【鳥戈與鏃】(圖版參拾)及【鳥獸紋銎內戈】(圖版參壹)皆屬之。

【鳥戈與鏃】戈首裝飾一立雕的鳥雖銹蝕嚴重，猶然隱約可見鑲嵌的金絲。難得的是銎孔內尚殘存木秘。鏃有銎孔，以安插木秘，便於插置地面。鏃戈成套，又有木秘殘痕，有栩栩如生的立雕金鳥飾，是為精品。

【鳥獸紋銎內戈】則在「內」與「胡」之間裝飾有鳥與獸相盤繞的立體形象，它似不再是一件兵器，而是藝術品了。相近的手法及造型見於河南洛陽中州路墓2719戈(註158)及山西太原金勝村戈(圖67)(註159)。

【玄鏃戈】(圖版

註158 中國社會科學院考古研究所等，《洛陽中州路》，圖版七四：12

註159 山西省考古研究所等〈太原金勝村251號春秋大墓及車馬坑發掘簡報〉《文物》1989：9，頁74

叁貳)則可能有三種動物相互盤繞,可惜重銹掩蓋了精細的鏤空雕塑。

類似裝飾手法的兵器並不普遍,山西長治分水嶺出土【鳥首有銚斧】(註160)斧銚爲鳥首形,以斧援爲鳥喙,鳥首背後有怪獸,角下垂,內自口伸出,把全器的援與內也納入了鳥獸的立體造形中。由於此斧造形奇特,學者推測可能受北方影響。

劍制方面,北方的短劍系統的裝飾主要在劍柄及劍首,其劍柄往往裝飾著北方常用的連環紋、雙輪紋、繩索紋、珠粒紋、鋸齒紋(註161),以及蛇紋、龍紋、鳥紋(註162)等。故宮的【雙環柄首短劍】(圖版肆拾)即裝飾著連環紋。劍首方面,則有獸形、雙環式及觸角式等各類裝飾(圖68),形成北方特色。

相對的,中原及南方的長劍亦有其特質,其主要裝飾部位基本上以劍格爲主,青銅容器所通行的鑲嵌技術也應用在劍上,如故宮的【鑲嵌松綠石劍】(圖版叁捌)劍格即鑲嵌松綠石。【「奇字」劍】(圖版叁陸)的鑲嵌物則可能已剝落。有些南方吳越地區的王越劍,其花紋且及劍身,乃使用複合技術。例如1965年,在湖北江陵望山出土一把越王劍,乃勾踐所用,不愧是千古名劍(圖59)。劍身有菱形暗紋,格上的花紋鑲嵌有藍琉璃及綠松石,色彩斑斕,據說出土時是插在素色的漆器木鞘中,莖上還纏有絲繩。劍身近格處銘鑄有「越王勾踐自作用劍」,二行八字。據研究,此劍先鑄好劍的基體,在基體上留出菱形飾的空槽,再澆注上與基體不同成分的合金(成分爲銅77.62%、錫20.5%、鉛0.25%),基體呈金黃色;而菱形花紋則呈銀白色,(錫小於47%、銅小於31.27%、鉛小於11.8%),是當時複合劍技術的一種(註163)。

銘文的風格,尤其爲陽剛性的兵器憑添藝術氣息,特別是盛行於南方的鳥蟲書。

春秋中期以降到戰國,不只列國青銅容器呈現地域色彩(註164),在文字結構及書寫風格上,也走向「文字異形」(註165)之途。銘文由純粹書史性質走向重視韻語或字體的裝飾性(註166),在東、南方,字體普遍趨於細長,主要見於齊、徐、許(註167)、楚、蔡、吳、越諸國(註168)。在字形的審美意識興起

註160 中國美術全集編輯委員會,《中國美術全集》工藝美術編5 青銅器(下)66

註161 鄭紹宗,〈中國北方青銅短劍的分期及形制研究〉《文物》1984:2,頁48

註162 出廣金等,《鄂爾多斯式青銅器》,頁38-9

註163 馬承源,《中國青銅器》(1988),頁523

註164 李學勤,《東周與秦代文明》(1983)

註165 許慎《說文解字》序

註166 郭沫若周代彝銘進化觀《青銅時代》,頁317-8

註167 容庚《商周彝器通考》,頁87



圖68 短劍
內蒙古涼城
田家
毛慶溝墓59
春秋晚期
通長27.3公分
(《鄂爾多斯
式青銅器》
圖版26.3)



圖69 蔡侯產劍銘
安徽淮南蔡家崗趙家孤堆
蔡侯產(西元前471 - 西元前457)
(《考古》1963: 4, 頁204)

的潮流下，鳥蟲書即是當時圖案化的美術字，它主要出現在一些青銅兵器及樂器等，而以兵器為最。鳥蟲書即主要流行於越、吳，楚、蔡、宋（註169）等國。

常見於青銅兵器的鳥蟲書一般多以鳥或蟲為飾筆，與主要筆畫相結合，形成修長而富藝術化的字形。其形式雖多，但概言之，不外十三種（註170）。其或寓鳥形於筆畫中，如【蔡侯產劍】（圖69）（註171）之「蔡」字；其或附鳥形於字左，如【蔡侯產之用戈】（圖版貳伍）；或附雙鳥形於字上，如【越王州勾自作用劍】（圖版叁柒）等等。

春秋戰國，南方諸國不只以鳥蟲書而大別於北方的燕、晉，西方的秦等；在鳥蟲書盛行的南方諸國，雖然同為鳥蟲書，而具備通性，基本上仍各具特色，各有變革。銘鑄鳥蟲書銘的故宮蔡、越四器即為重要例證。此四器即是：【蔡侯產（？）之用戈】（圖版貳伍），【蔡公子從之用戈】（圖版貳陸），【越王州勾自作用劍】（圖版叁柒）【「奇字」劍】（圖版叁陸）。

註168 林素清〈春秋戰國美術字體研究〉《中央研究院歷史語言研究所集刊》61: 1 (1990), 頁30

註169 容庚〈鳥書考〉《中山大學學報》1964: 1

註170 馬國權, 〈鳥蟲書論稿〉《古文字研究》10 (1983), 頁39-67

註171 安徽省文化局文物工作隊, 〈安徽淮南市蔡家崗趙家孤堆戰國墓〉《考古》1963: 4, 頁204-212



圖70 楚王禽章銘
傳洛陽 楚惠王
(西元前448 -
西元前430)
北京故宮博物院
(《商周青銅器
銘文選》二, 657)

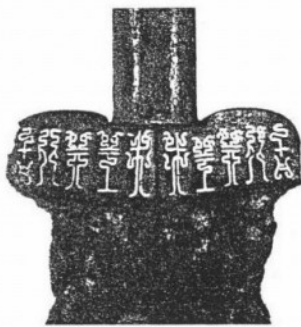


圖71 越王卬北古劍銘 越盲姑
(西元前458 - 西元前448)
上海博物館
(《商周青銅器銘文選》
二, 558)

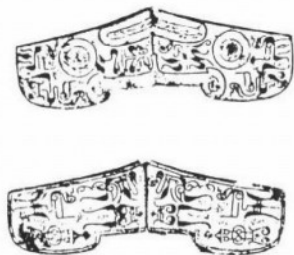


圖72 越王州勾劍 越王朱勾
(西元前448 - 西元前440)
北京故宮博物院
(《商周青銅器銘文選》
二, 頁560)

從西元前六世紀中葉到五世紀約一百五十年間，是鳥蟲書的主要發展期（註169），蔡、越四器集中在西元前五世紀後半葉，它們說明了蔡、越兩國鳥蟲書銘的獨特性及重要發展階段。蔡國鳥蟲書銘特性的建立，似乎來自蔡侯鑄器，它採用了蔡國彝銘結體修長、好用直筆的特性，融和似龍似鳥特有飾筆而形成。獨特性往往建立在飾筆手法的應用。以似龍似鳥的飾筆往往置於字左的裝飾手法，常見於蔡國，它可能是蔡國鳥蟲書銘的特性，它主要見於蔡侯產時期，故宮的【蔡侯產（？）之用戈】及蔡家崗【蔡侯產劍】銘（註171），正共同反映此趨勢。

相對的，【蔡公子從之用戈】則採用另一種繁飾手法——即彎曲若干豎筆，它主要使用在字體中間或收筆處，以加強字體修長且圓轉之美。如「子」字豎筆中間及結尾皆作轉折，尤其是收尾處作線條彎曲狀，如人跪坐姿勢。相同的筆法也見於【蔡公子果】及【蔡公子加】戈（註172）。尤其也見於楚國的【楚王禽璋戈】（圖70）（註173）。後者的年代一般定為楚惠王時代（西元前488—西元前430）（註167）。

註172 馬承源，《商周青銅器銘文選四》601,602,560

註173 于省吾《雙劍識古器物圖錄》上45；容庚，〈前引文〉頁75；馬承源《前引書》：657

總之，蔡國兵器所發展的鳥蟲書銘，其與楚國的關係及其獨特性，是值得繼續探討的課題。

越國鳥蟲書銘則有別於蔡國及它國的特有飾筆：如「𠃉」、「𠃊」及寫實性尖嘴鳥飾等。𠃉北古時期（西元前458—西元前448）更將飾筆線條化、幾何化，形成越國特有的「蟲書」，見於故宮（圖版叁柒）以及上海博物館的【越王𠃉北古劍】（圖71）等；州勾時期（西元前458—西元前441）則字體更圖案化，形同文飾，見於故宮（圖版叁捌）、上海博物館、北京故宮（圖72）（註172）以及湖北江陵藤店出土的（註174）【越王州勾】劍等。兩種劍銘代表了越國鳥蟲書銘的特有作風。以上蔡、越二國獨特性說明了南方鳥蟲書銘在西元前五世紀後半葉的主要發展給予春秋戰國兵器更豐富的藝術氣息。

餘論

商周青銅兵器歷經約計一千五百年間，有三大發展階段，在種類及內容上皆有極大的變化。軍隊制度的改變、作戰方法的變遷，以及王朝與四方的關係皆可能是變因。

從二里頭三期到商後期，約六百年間，青銅兵器開啓了發展史的序幕，即第一個階段。特別是在商後期，器類增多，單類的形制多樣，而考古出土的青銅兵器數量也顯著地增加，它似乎配合著商後期漸趨龐大的軍隊規模而變化。甲骨文、金文、經典記載及考古出土情況對商後期軍隊規模皆有所涉及。武丁卜辭常有登人三千或五千者（註175）。商代軍隊以「師」為名（註176），師的人數多寡，目前雖尚無定論（註177），但從甲骨文登人的數目，以及文獻所載商末用兵規模，如「紂發兵七十萬人拒武王」（《史記·周本紀》）「殷湯以良車七十乘，必死六千人」（《呂氏春秋·論威》）等推想，商後期軍隊規模可能不至於太

註174 荊州地區博物館，湖北江陵藤店一號墓發掘簡報《文物》1973：9，頁819

註175 「……登人三千，呼伐……」「……登人五千……」（羅振玉，《殷墟書契前編》6.34.2：7.15.4）

註176 「丁酉貞，王作三師右中左」（郭沫若，《殷契粹編》597）；楊升南，〈略論商代的軍隊〉，胡厚宣等，《甲骨探史錄》頁341

註177 貝塚茂樹，《京都大學人文科學研究所藏甲骨文字》本文篇，頁232；郭沫若，《中國史稿》1，頁211

小。換言之，商後期，配合著相當規模的軍隊，其兵器的須求量必然已至相當程度。劫餘的西北岡1004大墓有矛731件，戈72件，銅胄141具，便是突出的例證。

甲骨文及文獻記載多涉及殷王國與四土四方的關係（註178），征戰的頻繁，在甲骨文中尤其突顯（註179），當暗示著商後期兵器須求量的另外一面。唯它當不只關係量變，可能也帶來質變，以殷墟為代表的商後期青銅兵器器類與風格的多樣化，或許反映了這類變化。而商殷行政中心以外，來自南、北、西南、西北等地的青銅兵器尤其顯現區域性以及與殷墟的影響或被影響的關係。

在青銅戈、鉞與矛的源起及發展上，南方似有孕育之功，《詩經·商頌·殷武》有：「撻彼殷武，奮伐荆楚」；卜辭有「己未卜，貞：多冒亡囹，在南土？」（《甲編》2902），卜問多冒在南土安全與否？可見殷王朝與南方的關係密切。近日江西新淦大洋洲出土一商墓（註180），尤其引發了若干青銅兵器器類的源起及發展問題：第一，其有有胡戈（圖73），這類戈目前在安陽約在三、四期始出現。第二，其有聯體戟（圖74），向上伸延的戟刺向下捲成鈎狀。類似的聯體戟目前一般認為是西周早期才開始的（註181），但後者以直刺為主。第三，銜口鉞（圖75）與夾內鉞（圖76）並存。殷墟以夾內鉞為主。這種亞腰型弧刃銜口鉞一般是較罕見於商後期。新淦墓葬二類並存，其意義值得進一步的資料會觀再考。第四，匕首及異形劍的出現。南北劍異制，一般以為南方劍制可能始於西周早期，新淦匕首與商後期北方短劍形制不類。假若新淦墓的斷代，誠如學者所稱的，相當於殷墟早、中期，則南方在商代青銅兵器的發展上的地位及意義，便值得重新評估。

殷王朝與西南的關係，尤其顯現在三角援戈的例證上，它引起學者對商後期時蜀國地望、蜀式戈的來源以及殷蜀關係的推測（註182）。一九八六年，四川廣漢三星堆二號祭祀坑發掘了20件戈，戈援兩側呈鋸齒形，無刃（註183），極具地方特性，唯此類型戈並不像三角援戈，在戰國的蜀地盛行。

註178 陳夢家，《殷墟卜辭綜述》頁319-321

註179 王貴民指出《甲骨文合集》分出武丁時期「戰爭」一類有1715片，佔本期全部甲骨二萬來片近十分之一。《商周制度考信》，頁205

註180 江西省文物考古研究所等，〈江西新淦大洋洲商墓發掘簡報〉《文物》1991：10頁1-23

註181 以上二點，彭適凡等學者在討論新淦大洋洲商墓的年代問題時，也有相近的意見。〈關於新淦大洋洲商墓年代問題的探討〉《文物》1991：10，頁30

註182 李伯謙，〈前引文〉《考古與文物》1986：3頁70；翟琬等，〈前引文〉《考古》1989：3，頁254-5

註183 四川省文物物理委員會等，〈廣漢三星堆遺址二號祭祀坑遺址發掘簡報〉《文物》1989：5，頁13



圖73 有胡戈 江西新淦大洋洲
商後期 長25公分
(《文物》1991: 10圖版3: 6)

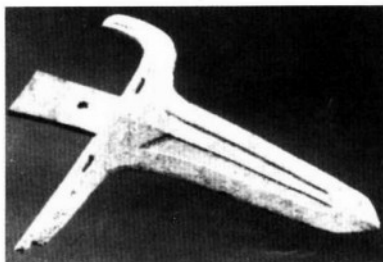


圖74 聯體戟 江西新淦大洋洲 商後期
長27.5公分
(《文物》1991: 10圖版3: 5)



圖75 鑿口鍬 江西新淦大洋洲
商後期 高11.1公分
(《文物》1991: 10圖9: 2)



圖76 夾內鍬 江西新淦大洋洲
商後期 長35.2公分
(《文物》1991: 10圖12: 1)

北方及西北在商後期以獸首、鈴首劍等獨具特色，也以獸首刀等與殷墟有所關係。學者推測北方及西北方，可能或是甲骨文中的「土方」及「土方」（註184）；或是《易經·既濟》中的「鬼方」（註185）出沒之地。

總之，第一階段的青銅兵器的發展，正反映著殷墟與四方或四國的複雜關係網。

從西周早期到春秋早期，約四、五百年間，青銅兵器發展到第二階段。此階

註184 鄒衡（《夏商周考古論文集》頁281）及李伯謙（〈從靈石旌介商墓的發現看晉陝高原青銅文化的歸屬〉《北京大學學報》（哲學社會科學版）1988: 2, 頁27）咸認為土方與土方地方望可能在山西石樓一帶。林小安則推測可能在黃河河套一帶（〈殷武丁臣屬征伐與行祭考〉《甲骨文與殷商史》2, 頁262）

註185 王國維，〈鬼方昆夷靈狁考〉《觀堂集林》卷13頁583-605；陳夢家，〈殷墟卜辭綜述〉頁275；張亞初，〈殷墟都城與山西方國考略〉《古文字研究》10（1983），頁400

段雖然不像第一與第三階段，有相當明顯的質變，但它卻孕育了第三階段新因素的先河，換言之，第三階段明顯的變化，在第二階段已顯現端倪。

中原的主要兵器戈有所變化，其形制朝著可以固定更長的木秘而發展。有胡戈成爲常制，它可以用來固定更長的木秘，從晚商到西周早期，由60公分加長到80公分以上（註186）。這些帶有木秘殘痕的例證，並非發現於車上，或許爲步兵所用。推測若使用於戰車上，或許更長。長沙瀏城橋一號墓，年代屬春秋（註187），戈的積竹柄除了三件在90—140公分外，其餘皆超過3公尺。它們都是胡部較長的有胡戈，由此推測早周發展有胡戈，不只徒兵用戈須要牢固的木秘，也許戈制牢固木秘的需求也正配合著車戰的愈趨重要而發展。

西周以來，車戰愈趨重要，它帶動兵器的發展，值得注意。商後期出土了不少車子，或與青銅兵器共現（註188）。大多數學者基本上同意，商後期已有戰車，殷王朝已建立了步兵及車兵兩類軍種（註189），甲骨文中「戎馬左右中人三百」（《殷墟書契前編》3、31、2）之載。唯車兵在當時軍隊中所占比例值得考慮。西周以後，車戰似乎愈趨重要。以戰車數目形容軍隊，屢見於金文及文獻。「率公戎車百乘，徒千」（【禹鼎】）；「戎車三百乘，虎賁三千人」（《史記·周本紀》）。戰車上，不只出現了商後期常見的鏃等遠射器。在長兵方面，除了戈之外，也出現了戟（註190）。戈與戟二類長兵，成爲西周早期到春秋早期階段所發展的主要兵器種類。相對的，近體衛身的短劍則只見端倪，或許與車戰爲主的作戰有關（註187）。劍在下一階段受到重視而發展，或許也意謂著另一戰爭型態的改變吧！?

劍的普及大概在春秋中期以後，青銅兵器的發展隨之步入了第三階段。這是和整個社會外在條件的變動息息相關。春秋中、晚期，作戰方式改變，獨立步兵與騎兵相繼興起，士兵的武器裝備自然跟著調整變化，適合於步兵騎兵的劍於是因應而生，並且受到重視。

春秋晚期到戰國期間，銅劍益形普遍，與軍隊組織主力兵種的改變有關。春秋中、晚期以後，封建國家雖然仍使用戰車，但戰車在整個戰爭的重要性已逐漸

註186 中國社會科學院考古研究所灤西發掘隊，〈陝西長安張家坡M170號井叔墓發掘簡報〉《考古》1990：6，頁504-510

註187 湖南省博物館，〈長沙瀏城橋一號墓〉《考古學報》1972：1，頁64-5

註188 楊泓，〈戰車與車戰〉《中國古兵器論叢》頁80

註189 石璋如〈小屯西區的墓葬群〉《中央研究院歷史語言研究所集刊》23下，頁447-487；陳志達，〈殷墟武器概述〉《慶祝蘇秉琦考古55年論文集》頁336

註190 山東省昌濰地區文物管理組，〈膠縣西庵遺址調查試掘簡報〉《文物》1977：4，頁67

被新出現的獨立步兵部隊所取代。以車戰為作戰主力的時代，雖然也有步兵，但步兵附屬於戰車，不是決定勝負的主力。步兵之重要，一方面表現在車乘中徒兵的比例提高，一輛戰車，三名甲士，配七十二位步卒。另一方面是步兵部隊可以獨力作戰。所以到戰國時期，配合另一新兵種騎兵，便形成以步兵為攻擊主力的三軍聯合作戰。所謂三軍即是車兵、騎兵與步兵。因此，適於近戰的劍對騎兵、步兵而言，當更為重要。在前一階段，劍可能僅為貴族武士所佩帶，現在則普及到一般士卒。劍在此階段益形普遍，當和軍隊組織的改變有關（註191）。

劍的發展尤其多在南方。當中原一帶主要仍靠戰車作戰時，南方楚地及吳越區則因地理環境之不同而具有特色。南方水鄉澤國，地多林莽，北方大平原所使用的戰車，在這裡顯然沒有用武之地，吳越的主力軍因此都是步兵，適於近戰的短兵——劍遂在吳越區得到長足發展。千古流傳干將、莫邪鑄劍的故事（《吳越春秋》閻閭內傳）即是吳越地區的傳說。今傳〔越王劍〕也正是出自「刀劍之鄉」的傑作。

春秋戰國之際，劍隨著騎兵、步兵的興起而盛行。趙武靈王十九年（西元前307年）雖然變法，胡服騎射，以對付北方游牧的「林胡」、「樓煩」，但七、八年後，騎兵的數量也只佔有軍隊總數的百分之八。至於其他諸雄，則不過百分之一而已。按照戰國兵法，騎兵用於追擊，戰車用作營衛，攻城野戰採取方陣戰術，短兵相接是最後關頭，一般除長射程的弩和箭之外，對陣相擊還是靠長兵器戈和戟。換言之，劍的興盛並不代表它取代了戈與戟，而是劍加入了戈與戟的陣營，使得戰爭中主要的兵器種類增加，形成第三階段兵器的興盛期，因此戈與戟在此階段仍然舉足輕重。戰國青銅禮容器上的戰爭圖像（圖5）即為持戈、持戟及隨身帶劍的武士。

春秋戰國期間，列國爭戰，規模之大，史書多所載記（註192）。隨著戰爭的頻繁及規模的擴大，青銅兵器的功能強化，形制多樣，藝術性也隨著王、侯的喜好與重視，而臻於頂峰。車兵、騎兵、步兵，水戰、陸戰、刀光劍影，征伐無數，邦興國滅，此起彼落。春秋早期，人們已發現另一種金屬——鐵，它出現在歷史舞臺，使用來鑄造兵器，其鋒利更銳不可當。漢以後，鐵兵器已是不可遏阻的趨勢。橫亘我國歷史千年以上青銅兵器，隨著戰國群雄爭戰的結束，漸漸地離開歷史舞臺。

註191 杜正勝《編戶齊民——傳統政治社會結構之形成》，頁51-92

註192 「秦虎賁之士百餘萬，車千乘，騎萬疋」（《戰國策·楚一》）；「魏武力20萬，蒼頭20萬，奮擊20萬，廝徒10萬，車六百乘，騎五千疋」（《史記·蘇秦列傳》）；「燕帶甲數十萬，車七百乘，騎六千疋」（《戰國策·燕一》）

附記：校稿之際得知陝西寶雞益門村二號春秋墓出土一金柄鐵劍，形制及柄部裝飾與本目錄【鏤空蟠虺紋短劍】（圖版叁玖）近似，報告者據該墓其它同出器物推定年代為春秋晚期偏早階段（〈寶雞市益門村二號春秋墓發掘簡報〉《文物》1993：10，頁1-44）可供參考。



Major Lines of Development in Shang and Chou Dynasty Bronze Weapons

Chen Fang-mei

Numbering somewhat more than fifty pieces, the bronze weapons of the Shang and Chou* dynasties in the collection of the National Palace Museum are very few in comparison with bronze ritual vessels and thus have traditionally been overlooked by scholars. The majority of weapons at the NPM derive from the imperial collections of the Ch'ing dynasty and from the Central Museum. The latter institution contained some pieces formerly belonging to the famous Ch'ing dynasty collector Liu T'i-chih. A portion of the present collection has also come from personal donations and museum purchases in recent years. In 1958, the new edition of *Illustrated Catalogue of Bronzes in the National Palace Museum* was published, but, with the exception of a small amount of inscription-bearing bronze weaponry, the majority of weapons, considered to be of secondary importance or counterfeit, were listed in a simplified index.⁽¹⁾ However, in recent times ever-mounting archaeological finds of ancient bronze weapons have provided a basis for comparison with the unresolved items in our collection, thus raising the possibility of verifying their historical value.

The *Tso Chuan* contains a passage that reads: "The most important affairs of the State are sacrificial rites and warfare." During the Shang and Chou dynasties bronze was the material used to create both ritual vessels and weapons, the latter being crucial in warfare. Throughout the years scholars have traditionally overlooked bronze weapons in favor of bronze ritual vessels. However, there are unique advantages to using weapons as research material. For one, they are grounds for examining at once the development of technology, art, and culture. Furthermore, as bronze weapons are decisive factors at moments when life and death hang in the balance, weapons technology seems to have been more sensitive to developments in the manipulation of new materials, in contrast to bronze ritual vessels. In China, the first experiments in copper casting and copper/tin alloys were in tools and weapons.⁽²⁾ They mark a milestone in the entrance of Chinese civilization into the Bronze Age. In addition, weapons were decisive factors in the coming to power of rulers and the survival or demise of the various feudal states. Consequently, bronze weapons developed fully during the Bronze Age, occupying a place of primary importance in the history of technology. In addition, a portion of bronze weapons also were treated as ritual implements, demarcations of noble rank. During the Shang and Chou dynasties, bronze weapons clearly played an important role in a society structured by feudalism and birthright, and they are a vital chapter in the history of bronze art. They were among the most important items buried in the tombs of the aristocracy, either holding the same importance as bronze ritual vessels or, in a warrior's tomb, acting as the major burial item. As scientifically conducted excavations of Shang and Chou tombs increase in number, not only are more weapons being found than ritual vessels, but they more clearly illustrate certain types of cultural phenomena.

In comparison with bronze ritual vessels, weapons are more likely to inspire discussions of the relations between different cultures, particularly with regard to border regions. This is

true because, for one, they shed light on certain points that ritual vessels don't easily illuminate. History shows that as humankind gradually learned to master bronze, a chain of ancient civilizations passed on knowledge of this material. China in particular used bronze ritual vessels as symbols of the consolidation of political power. Since bronze weapons were common to a greater variety of cultures and regions than were bronze ritual vessels, they are more appropriate for cross-cultural comparisons, illustrating the possible mutual influences of different cultures upon each other. At the same time, because weapons had to meet high demands for functional capability, they were adapted to specific environmental and cultural conditions. Nevertheless, through migration, inter-marriage, and war, there was a measure of intercultural exchange. Some weapon types existed in different forms in different cultural systems.

Due to the accumulation of archaeological finds in the last forty to fifty years, the number of topics currently being researched in the field of bronze weapons has accordingly increased dramatically. From the Sung to the Ch'ing dynasties, the majority of research was directed towards typology, the matching of names with shapes and the determination of the functions held by various weapon types.⁽³⁾ In modern times this field has widened to include art history, the history of culture, and also of technology. From an art historical perspective, the ornamentation, inscriptions, and shapes are statements of the development of aesthetic concepts in each region. Consequently they represent a branch of the art historical study of Chinese bronzes that is not to be overlooked. This branch is merely in wait of further research. In the field of cultural history, scholars have used relatively refined methods of categorization and dating, as well as information on site excavations, to analyse the elements within a pluralistic society and cultural exchange. This exploration has been performed in hopes of determining more exactly the regional characteristics of each of the many cultures of Shang and Chou China,⁽⁴⁾ as well as tracing the complex web of cultural interchanges during those periods.⁽⁵⁾ In addition, the methods of warfare and organization of armies, as well as the development of social structure and government matters, and being explored in a more organic manner in relation to the development of bronze weapons.⁽⁶⁾ From the technological viewpoint, as early as the *Chou Li* the unique content of bronze for weapons was treated in the chapter entitled "K'ao Kung Chi", as in "four parts are copper and one part is tin, this is the complete dagger-axe and halberd." Already, some modern analyses of the metal content of weapons have been made, in order to understand their special properties and the developments made in different periods.⁽⁷⁾ Further experiments are being performed on the surface chemistry of bronze weapons.⁽⁸⁾ In addition, scholars are paying increasing attention to publications dealing specifically with the topic of bronze weapons.⁽⁹⁾

Due to the vast area occupied by China, the materials available on excavations of bronze weapons are numerous and unorganized. The results of research on terminology, classification, dating, and regional characteristics have not been comprehensively organized. To establish a more objective and far-reaching history of the development of bronze weapons is truly a daunting task. This group of 45 weapons from the collection of the NPM can hardly form a complete statement of the overall history of Shang and Chou dynasty bronze weapons; however, a number of crucial problems in the history of this development, specifically from the viewpoints of art history, cultural history, and technological history are revealed in this collection, such being also the aim of this catalogue.

Records from archaeological excavations show that by the third period of the Er-li-t'ou culture, China had already begun using bronze weapons. Iron weapons made their appearance by the early Spring and Autumn period at latest estimate.⁽¹⁰⁾ By the Han dynasty bronze weapons had been completely outmoded by those of iron. Thus, China's bronze weapons developed over a period of approximately 1,500 years. During this period, there was

an increase in weapon types, as well as in both the complexity and destructive capability of any single weapon. The formation of local styles was indebted to the changing needs of times and locales. In the forms of these weapons are reflected advances made in casting technology, changes in methods of warfare, and variations in soldiery tactics. The development of bronze weapons can be roughly divided into the three categories below:

Stage One: During the six hundred years from the third stage of the Er-li-t'ou period to the late Shang, bronze weapons passed through a formative period to reach a set foundation.

Stage Two: From the Western Chou up through the early stage of the Spring & Autumn period, weapons makers built upon the basic traditions, opening up the way for future weapons.

Stage Three: During the three to four hundred years from the middle stage of the Spring & Autumn period to the Warring States period, bronze weapons entered their golden age.

I. Terminology, Function, and Classification of Bronze Weapons

Due to the overwhelmingly large scope of bronze weapon types, and the miscellaneous nature of this family, most scholars of the past fifty to sixty years have found it expedient to create a system of categorization. Basically, there are three such systems. In one, the various individual weapons are simply listed under the general heading of either "weapon" or "sharpened implement." The most prominent scholars employing this method include Umehara Sueji, Bernhard Karlgren, and Hayashi Minao.⁽¹¹⁾ Dr. Lee Chi, however, has suggested an insightful new method, stating that the method mentioned above, which takes function as the basis for classification, uses terms which are regrettably imprecise. In order to elucidate the "confused relations between shape and function", he has created a new term, "bladed implement" (鋒刃器), creating various specific categories based on similarities in shape. Subcategories are determined according to the positioning of the sharpened edge of the blade area.

Bladed implements:

1. Pointed implements: the awl, etc.
2. End-bladed implements: axes, etc.
3. Side-bladed implements: Knives with ridges or thick sides opposite the blade edge, etc.
4. Double-bladed implements:
 - for hooking: the dagger-axe, the *ku'ei*, the *ch'u*
 - for piercing: the spear
 - for long-range: arrowheads⁽¹²⁾

In general, weapons belong to the category of double-bladed implements. Dr. Lee emphasizes the importance of categorizing on the basis of shape, using the special characteristics of each shape to create general and sub-categories, creating clusters of finely defined sub-sub-categories, with names concise and evocative. Unfortunately, his system has not been widely adopted. The majority of Chinese scholars are accustomed to categorizing and choosing their vocabulary of terms for any given type according to the function they suppose it may have had. This leads to the third method of categorization. Under the general heading "weapons", the weapons are next divided according to function, and then into subcategories. It is by this method that Kuo Pao-chün has come up with the following:

1. Hooking weapons: the dagger-axe
 2. Piercing weapons: the spear
 3. Weapons with the double functions of hooking and piercing: the halberd
 4. Cleaving weapons: axes
 5. Massively lethal weapons: large knives
 6. Weapons with both piercing and killing capabilities: the sword
 7. Long-range weapons: bows, arrows
 8. Items used in defense against airborne weapons: bows, arrows, shields, targets⁽¹³⁾
- Mr. Ma Ch'eng-yüan has created an even simpler classification system:

For offense:

1. Long weapons
2. Short weapons
3. Long-range weapons

The above include dagger-axes, halberds, spears, *p'i*, *yüeh* axes, *ch'i* axes, *shu*, knives, swords and daggers.

4. For defense: armor, helmets⁽¹⁴⁾

This catalogue makes use of all these systems. It is the author's opinion that most weapons are bladed, and can be classified according to the distance between the enemy and the wielder of the weapon:

1. Long weapons: these can only function fully when fitted with a wooden shaft. They include the dagger-axe, halberds, *yüeh* axes, spearheads, large knives, *shu*, and *p'i*. They were used when the enemy was at an appropriate distance from the wielder.

2. Short weapons: these could be used without a wooden shaft and include swords and knives. They were used when the enemy was within arm's reach.

3. Long-range weapons: arrows, and the bow-shaped implement, used to attack a distant enemy.

4. For defense: helmets and armor.

The collection in the National Palace Museum does not contain all of these items, such as helmets, armor, *shu* and *p'i*. The aim of this catalogue is not to discuss at length the entire range of bronze weaponry of the Shang and Chou dynasties, but rather to discuss the developments and trends of Shang-Chou bronze weaponry on the basis of the collection in the National Palace Museum. For this purpose, a summary of weapon names and functions appears below:

A. Long Weapons

1. The Dagger-axe

This is the most important item in Chinese bronze weaponry. Some dagger-axes have inscriptions naming them as such, as the "Tu dagger-axe of Prince Yuan of Kuo" found at the tombs of the state of Kuo, at present-day Shang-ts'un-ling (Figure 1). (for figures, please see chinese text).⁽¹⁵⁾ This is proof that the proper name for this type of weapon is indeed dagger-axe (*ko*). The long double-edged blade area was used for hooking and killing. The lower edge of the blade extended down into the descending edge. At the end of the blade area was the shafting-plate, a flat rectangle usually without sharpened edges. It was to this that the wooden shaft was attached. On the blade area, near the shafting-plate, was a lashing hole, which functioned to secure the wooden shaft (Figure 2). It is this type of weapon that was

called a "kou ping", or "hooking weapon" in the "Lu Jen", "K'ao Kung Chi" chapter of the *Chou Li* (周禮). The Chinese names for the different parts of the dagger-axe come from the "Ye Shih", "K'ao Kung Chi" chapter of the *Chou Li*, such as "The dagger-axe is two *ts'un* wide, and the shafting-plate is twice that, (while) the descending edge makes up three portions of the dagger-axe, (with) the blade making up four." However, not all dagger-axes have descending edges. In fact, the commonly seen dagger-axe without descending edge of the Shang dynasty as seen on the character 'dagger-axe' seen in bronze inscriptions of that time (Figure 3).¹⁶

That a wooden shaft was necessary to wield a dagger-axe has been proven in ancient literary documents such as the "Lu Jen", "K'ao Kung Chi" chapter of the *Chou Li*, which comments that "the wooden shaft of a dagger-axe was six *ch'ih* (尺) and six *ts'un* (寸) long." As well, decayed remains of wooden shafts have been found at archaeological sites (Figure 4).¹⁷ Evidence also can be found in the inscriptions on bronze dagger-axes and depictions of war scenes that decorate some bronze vessels and mirrors of the Warring States period (Figure 5).¹⁸ The length of the wooden shafts seems to have varied according to the epoch: there are instances of shafts approximately 60 cm in length dating from the late Shang,¹⁹ and of 82.5 cm from the middle period of the Western Chou dynasty.²⁰ The dagger-axe found at the Eastern Chou tomb of the Marquis Yi of Tseng measures about 127-133cm.²¹ Wooden shafts increased in length of the descending edge, and to accommodate the changing demands of warfare. There is a passage in the "Lu Jen" section of the "Kao Kung Chi" that seems to explicate this. It reads: "the weapons for attacking another State ought to be short, while those for defending the State ought to be long." From the Eastern Chou onwards, the dagger-axe often appeared in tandem with bronze fittings for either end of the wooden shaft, which are called *mao* and *tsun*.²²

2. The Halberd

Just what did the halberd look like? Many answers have been provided by different scholars from the Ch'ing dynasty through to modern times. These include the likes of Ch'eng Yao-t'ien, Ma Heng, Guo Mojuo, Kuo Pao-chün and Yang Hong.²³ As evidence accumulates scholars are able to match descriptions in ancient literary documents with actual archaeological finds. At present there are generally accepted standards for defining the halberd. There exist several several examples of halberds that bear self-naming inscriptions, such as the "Ts'ai ? (pronunciation unknown) Chi" excavated from Chiu-li-tun, Shu-ch'eng, Anhui province (Figure 6).²⁴ The dagger-axe and spear portions were separately cast. While the wooden shaft had already decomposed by the time of excavation, the placement of the dagger-axe and spear portions make it evident that they were parts of the same halberd. The definition of halberd in the *Shuo Wen Chieh Tzu* (說文解字) says that "the halberd is a weapon that has several parts." This is in full accordance with Guo Moruo's statement that the halberd was a combination of the dagger-axe and the spear, with both hooking and piercing functions. This type of multiple-part weapon includes, in the eyes of many scholars, the halberd with dagger-axe and spear cast together. The exception is the one-piece halberd excavated at tomb # 1193, Liu-li-ho, Peking, which is named in its inscription as a *Ko*.²⁵ The ancient poetry anthology *Ch'u Ts'u* (楚辭) has annotations by Wang Yi which define the dagger-axe as a halberd. *Mencius* (孟子), as annotated by Chao Ch'i, defined the halberd as a dagger-axe. K'ung Ying-ta, in his annotation on *Shang Shu Mu Shih* (尚書牧誓) wrote that the dagger-axe was the same as the halberd. This is a strong indication that the halberd developed from the dagger-axe, and that the two are loosely related. Also, the halberd with multiple dagger-axes found at the tomb of the Marquis Yi of Tseng (Figure 7) have more

than one spearhead, yet is also inscribed with the word "*chi*." It is a variation of the halberd, being also a weapon with multiple parts.

The wooden shaft of the halberd seems to have been relatively long, according to the self-named *chi* which was found at the tomb of the Marquis Yi of Tseng. Its shaft is approximately 330 cm in length.¹²¹ Halberds with long wooden shafts are wielded by the warriors depicted on the Eastern Chou bronze seen in Figure 5. The poem "Wu Yi" from the "Ch'in Feng" section of the *Book of Odes* (詩經) contains a line that reads: "I will prepare my *Chi* halberd. My spear-halberd is long." The annotation by Cheng Hsüan on this line reads: "The *chi* halberd used aboard a chariot was one *chang* (16 feet)." However, some believe that not all halberds had long wooden shafts.¹²⁶

3. The Spear

Several specimens of the spear have been found that are inscribed with the word "*mao*" (spear), such as the "Wu Wang Fu Ch'ai Spear" unearthed at the T'eng-tien site in Chiang-ling, Hupeh. (Figure 8) The inscription uses the character "矛", the equivalent of "矛", or *mao*.¹²⁷ The spearhead has a median ridge, from which unfold two faces, leaf-shaped. The sharpened blades of each of these faces come together in a sharp point, which serves as the primary portion of the spear. The end of the spearhead is a shaft-ring into which was inserted the wooden shaft. In this manner, the blades and the line of the shaft ran parallel to each other, making this weapon ideal for charging and piercing. This would be the "piercing weapon" mentioned in the "Lu Jen" chapter of the "K'ao Kung Chi" in the *Chou Li*. The weapon excavated at Pao-ting, Hopeh, called the "Spear of King Hsi of Yen",¹²⁸ possesses the basic characteristics of the spear, such as a shaft-ring on the end, a two-faced leaf-shaped head with two blades, and a wooden shaft which runs parallel to the blades; the only difficulty is that it is inscribed with the word "*k'ou*" (鉤). Perhaps the names differ from region to region! A passage in the "Mu Shih", from the "Chou Shu" of the *Shang Shu* reads: "set your spear upright", while in the poem "Wu Yi" from the "Ch'in Feng" section of the *Book of Odes*, we find: "I will prepare my dagger-axe." Clearly the dagger-axe and spear were used together. According to archaeological evidence, the wooden shafts of spears were as long as two meters.¹²⁹ In the "Lu Jen" section of the "K'ao Kung Chi", *Chou Li*, it reads: "short spears are four *ch'ih* in length, and long spears are three *hsun* (24 *ch'ih*)."¹³⁰ Obviously, the length of spears was variable.

4. The Yüeh Axe

Inscriptions on oracle bones and bronzes¹³⁰ indicate that the *yüeh* and its wooden shaft were fastened to each other. Examples can be seen in Figure 9.¹³¹

By custom the term "*yüeh*" is used for all end-bladed implements with curved blade and straight shafting-plate. At present no objects have been unearthed that are self-inscribed as *yüeh* axes. The only self-inscribed weapon of this shape was uncovered at San-chi-kung-she, P'ing-shan, Hupeh (between 1974 and 1978), at the "2 pit for chariots and horses of the Chung-shan state tombs, yet the inscription is not *yüeh*, but 𠄎 (pronunciation unknown).¹³² However, this word does not appear in any ancient literary documents. For centuries, it has been the custom of scholars to use the term *yüeh*, which appears in literary documents. As the accuracy of this term is not clear, some scholars suspect it may be a synonym with another now lost word. This type of weapon mainly flourished in the late Shang to early Western Chou. The piece from the state of Chung-shan mentioned above belongs to the Warring States period, by which time weapons of that shape were quite rarely seen. As for the regions

to which this weapon type was native, it is most often seen in the An-yang area from the late Shang period. This particular specimen comes from the Chung-shan state of the Warring States period, which was not in the Central Plains cultural sphere, but rather in that of the north. Furthermore, it is the single such specimen so far known of. In light of all this, the word must await further evidence before we can determine whether it was a late word used in the outlying regions.

However, whether all other items of this form are to be called *yüeh* is still not commonly accepted. Objective evidence is lacking as no self-inscribed specimens have been found. The ancient literary documents, as well, contain merely verbal descriptions, and are bereft of illustrations. Consequently, the three terms *ch'i* (戚), *yüeh* (鉞), and *fu* (斧) are frequently used interchangeably in writings. Various writings dating from the Sung to the Ch'ing dynasties, such as *Hsuan Ho Po Ku T'u*, (宣和博古圖)⁽³³⁾ and *Hsi Ch'ing Ku Chien* (西清古鑑)⁽³⁴⁾ employ the word "*ch'i*", while Chen Meng-chia chose to use the word "*yüeh*."⁽³⁵⁾ In the past several decades, an increasing number of bronze axes have been recovered in archaeological digs, and instances of the interchangeable use of these three terms have accordingly become a common sight.

This complicated relationship among the three terms began in ancient times. In the *Tso Chuan*, in the records concerning the fifteenth year of the reign of the Duke Chao, the words "*ch'i*" and "*yüeh*" are used in tandem, while the annotation by K'ung Ying-ta further adds a "*fu*", stating that the other two were types of *fu* (axes). It appears that the belief that the three are synonyms has its roots there. Although they are 'the same', there exist different names--there must be some differences among the three. Throughout the ages, numerous scholars of ancient texts have attempted to determine what these differences might be. The standard for determining this lies in the size of a particular piece. For instance, in the "Ku Ming" chapter of the *Shang Shu*, a person in ceremonial dress carries a *yüeh*; the annotation by Cheng Hsüan reads: "A *yüeh* is a large *fu*." Likewise, in K'ung Ying-ta's annotation of the events of the fifteenth year of the reign of Duke Chao it reads that "a *yüeh* is large and a *fu* is small." In *Liu T'ao* (六韜), we find "the celestial *yüeh* is also called the Ta-k'o *fu*. It weighs eight *chin*, and has a wooden shaft that is five *ch'ih* long." Evidently, a *yüeh* is a large version of the *fu*.

Thus we see from these literary documents that the *yüeh*, *ch'i*, and *fu* are in the same family, and are distinguished merely on the basis of their size. However, the standards for determination aren't absolute. There are definite proportions and sizes. Furthermore, the *yüeh* axes mentioned in the ancient documents also vary in size among themselves. The "Chou Pen Chi" of the *Shih Chi* (史記) contains the passage reading: "Duke Tan of Chou held a large *yüeh*, the Duke of Pi held a small *yüeh*." Obviously, not all *yüeh* were large. The differences between a *yüeh*, a *ch'i*, and a *fu* would seem to be determined not merely on the basis of size.

The contemporary scholar Fan Yung, in his work on *fu* and *yüeh* axes of the Southwest, has come up with relatively scientific definitions of the *fu* and *yüeh* based on differences in shape and other characteristics. For instance, he takes note of whether or not there are "shoulders" (the protruding portion between blade and shafting-plate), and the degree of the angle of the rounded blade. Those of over 100 degrees are *yüeh*, those less than 90 degrees are *fu*.⁽³⁶⁾ However, as this method of distinguishing the *yüeh* from the *fu* has not yet been widely accepted, this catalogue shall use both "*yüeh* axe" and "*fu yüeh* axe" for this type of weapon with the blade running parallel to the wooden shaft.

Discussions in ancient texts of end-bladed implements whose wooden shafts run parallel to the blade do not use the character 「鉞」. Instead the popularly accepted *yüeh* which seems the most appropriate has been used.

The evidence gathered from ancient documents, inscriptions on bronzes, and

archaeological site conditions makes it evident that those persons who used the *yüeh* axe carried unique social status. The use of the *yüeh* axe was likewise extremely special. The inscription on the *Po pan* of Kuo Chi-tzu, of the Western Chou dynasty, reads: "A *yüeh* was bestowed for the receiver to levy war upon the barbarians of the south." From this it appears that the *yüeh* axe was closely related in significance to the matter of making war. It was bestowed upon generals who had the right and power to levy war. Moreover, ancient documents record that the *yüeh* was used by the kings who had the highest societal status. "King Wu had a banner on his chariot, and he carried a *yüeh* with great sincerity." This comes from the "Ch'eng Fa" poem in the "Shang Sung" section of the *Book of Odes*. It clearly states that King Wu of the Chou dynasty had a *yüeh*. When King Wu of Chou rose up against King Chou of the Shang dynasty, "King Wu leaned upon the yellow *yüeh* in his left hand, and held a white banner in his right hand to direct the troops." (from the "Yin Pen Chi" chapter of the *Shih Chi*) These were members of the aristocracy or generals as seen in the aforementioned King Chou, King Pi, and Kuo Chi-tzu. Under special circumstances, the warrior could use the *yüeh*, a recorded instance of which can be found in the "Ku Ming" chapter of *Shang Shu*: "Someone stood in ceremonial dress, holding a *yüeh*."

Due to the plundering of the royal Shang tombs, and the fact that the tombs of the Western Chou kings remain undiscovered, it is difficult to ascertain whether or not the *yüeh* accompanied burial. Speaking on the basis of archaeological site conditions, statistics show that all tombs wherein are found bronze *yüeh* axes are larger than others, with inner and outer coffins and full sets of bronze ritual implements. A majority also contain the skeletons of people and animals sacrificed in the burial.³⁷ No doubt the persons accompanied in burial by bronze *yüeh* axes were of high social status at the very minimum.

As previous authors have discussed the *p'i*, *shu*, and the large knives with wooden shafts, I will not further elaborate on them here.

B. Short Weapons:

1. The Sword

There exist swords with inscriptions that name them as such. One example is the "Sword used by King Chou-kou of Yüeh" in the collection of the National Palace Museum (Plate 37). This sword is double-bladed, possessing a guard, a hilt, an encircling band, and a pommel. This is the typical sword of the central plain and the south during Eastern Chou times. Some swords do not have the pommel and encircling band but possess a body. However, one common point for all swords is the possession of double-edged blades and hilts.

Shuo Wen Chieh Tzu defines the sword as "a weapon that is carried on the body." The function of the sword is explained in the "Shih Ping" volume of the *Shih Ming* (釋名): "The sword (劍, *chien*) is the equivalent of "to guard" (檢, *chien*); it is used to guard against emergencies."

The terms used for naming the various parts of the sword originate in the "K'ao Kung Chi" chapter of the *Chou Li*: "T'ao Shih made a sword. The guard was two and a half *ts'un*, the distance from the median ridge to each edge was half this, and the median circumference was determined by the width of the guard. The length of the guard was twice as wide as the handle. The handle was placed in the middle of the guard. The pommel was twice the width of the guard, and encircled the handle." Spanning the centuries from the Han to the Ch'ing dynasties, commentators on the "T'ao Shih" section of the "K'ao Kung Chi" chapter have all

offered their own opinions and interpretations. Consequently, there are different uses of the terms for the various sword parts. This catalogue shall use the terms as shown in Figure 10.⁽³⁸⁾

2. The Knife

The knife is a single-bladed implement. The definition in *Shuo Wen Chien Tzu* reads: "The knife is an implement. The character for knife (刀) is a pictorial rendering of one." Such pictorial representations appear in the oracle bone script and also in the inscriptions on early bronzes.⁽³⁹⁾ Bronze knife types include large knives used in conjunction with wooden shafts, long knives used with short wooden shafts, and knives with both blade and handle of bronze.

C. Long-range Weapons

1. Arrowheads

The shape was dictated by the demands of function. Double-bladed, with two symmetrical leaf-like segments divided by a median ridge, all meeting in a sharpened point. At the other end of the median ridge was the *t'ing*, which enabled the head to be attached to the body of the arrow.

2. The Bow-shaped Implement

The shape of the bow-shaped implement can be characterized as having a body that was slightly arched, with the outward-reaching ends hooking symmetrically. The hooked ends were often decorated with rattles or animal-heads. The proper name for this type of implement, and its true function, are mysteries currently still under heated debate. However, the basic fact that it was probably used in tandem with the bow is generally accepted. It is for this reason that this weapon type is included in this catalogue.

Mr. Shih Chang-ju has concluded that the bow-shaped implement was attached to the bow on the evidence provided by scars left from what seem to have been leather straps or rope, as well as traces of rotted wood on the back. He believes it is the "fu" (拊, or 拊) mentioned in the "K'ao Kung Chi" chapter of the *Chou Li*.⁽⁴⁰⁾ Mr. T'ang Lan, however, believes it must be the "Chin-tan-X" (金覃鬚) that appears in the inscription on the *Mao Kung Ting* bronze vessel. This, he states, would have been the original character for *pi* (秘). This implement functioned as reinforcement for the bow, to prevent it from snapping when bent.⁽⁴¹⁾ On the other hand, there are those who assume it to have been used with the bridle and reins of a horse,⁽⁴²⁾ or in some way connected to the harnessing of horses.⁽⁴³⁾ Possibly it was used this way by the horse-riding peoples of the north. But the cropping up of these implements in the company of arrows in many tombs at Yin-hsü and other areas, as well as the traces of rotted-away leather bindings and wood indicate that in the central plain, the bow-shaped implement could be closely related to the bow.⁽⁴⁴⁾

3. The Crossbow

Defined in the *Shuo Wen Chieh Tzu* as "a bow with arms", in *Shih Ming* we find names for the various parts of the crossbow. "Nu" (弩, crossbow) is the equivalent of *nu* (怒, imposing) and is awe-inspiring. Its handles are called arms (*pi*, 臂), as they resemble the

arms of a human. The grooves for the bowstring are called teeth (*ya*, 牙), as they resemble teeth. The chassis (*kuo*, 郭) supports the grooves. Below this is the *hsuan tao* (懸刀, hanging knife), a term descriptive of its appearance. The sum of these parts is called *chi* (*chi* means mechanism, as well as quick-witted and clever), as it is hoped that (the crossbow) will be quick and clever." (Figure 12) The sundry parts of the crossbow come together to form a weapon capable of shooting arrows great distances, increasing the length an arrow could fly and therefore its lethal capabilities.

As there are no helmets and armor in the collection of the National Palace Museum, these items will not be covered here.

II. The Formative Period From the Third Stage of the Er-li-t'ou Culture to the Late Shang: (ca. 17th-11th century B.C.)

During the approximately six hundred years from the third state of the Er-li-t'ou culture to the late Shang dynasty (ca. the 17th-11th centuries B.C.) bronze weapons passed through their initial stages, setting the foundations for the innovations to come.

Although we can be sure that bronze weapons had appeared by the third period of the Er-li-t'ou stage, evidently earlier attempts had been made in copper or bronze.¹² The beginnings of bronze weapons may be even earlier. However, the materials presently available are unorganized and fragmentary. The basic vocabulary of bronze weapons was established by the third stage of the Er-li-t'ou period. This includes long-range weapons such as arrows, the *ch'i* ceremonial axe, (an end-bladed implement, with the cutting edge only on the narrow side), and the rather wider dagger-axe, with blades on two edges.¹⁶ By the late Shang dynasty, there were new weapon types, including long-range weapons such as arrows and the bow-shaped implement, the latter possibly being connected to the long-range bow. Others include the dagger-axe, the *yüeh* ceremonial axe, and the spearhead, all of which required wooden shafts, and the short-range sword and knife, as well as armor and helmets for defense. In addition, there were new variations of each weapon type, and the variety of ornamentation increased. These new developments were born from the mutual borrowings that came from interaction between the central plains Chinese culture, and the outlying local styles. The dagger-axe came to be the most important of all bronze weapon types, remaining in circulation the longest. The weapons most vividly representative of the central plains culture were fully developed during this period. This chapter shall now separately discuss these two topics, beginning with the dagger-axe and proceeding to a general discussion of the effects of cultural interaction on weapon types.

A. Genesis and Development of the Varieties of Dagger-axes

One notable fact is that the most important weapon of China's Bronze Age--the dagger-axe--had already appeared by the Er-li-t'ou period. The dagger-axe of China is a completely unique weapon type. The Bronze Age was the crucial period of its development.

Its essential characteristics were formed in the Er-li-t'ou period, and is characterized by a wide blade area, with sharpened blades on both sides, as well as a sharp point on the pointed end. At the other end of the blade area is the rectangular shafting-plate, which has seldomly sharpened edges. The shafting-plate is pierced with a hole as seen in Figure 14. Circumstances at tomb # 355 in the western area of the Yin-hsü site at An-yang, have provided some idea of how the wooden shaft was attached to the shafting plate.⁴⁶⁾ Wood fibers clinging to the blades of excavated dagger-axes are perpendicular to the bronze piece. It seems plausible to say that the perpendicular wooden shaft was necessary to make the dagger-axe completely functional. The shape of the dagger-axe seems to have grown out of the way it was wielded. The bronze dagger-axe took on its basic form in which the shafting-plate was inserted into the wooden shaft during the Er-li-t'ou Period.

This early Er-li-t'ou type dagger-axe had a relatively longer blade area, while the shafting-plate was either curved (Figure 13), or straight (Figure 14). At this time, particularly as the lug separating the blade area and the shafting-plate had not yet developed, the method for securing the bronze piece to the wooden shafts was highly primitive, seeming to rely mainly on the round hole in the shafting plate. The dagger-axes of this period don't differ notably from the coeval jade dagger-axes; whether they were influenced by the stone and jade dagger-axes is still under debate.⁴⁷⁾

The dagger-axe with curved shafting-plate unearthed from tomb # 3 at the Er-li-t'ou site at Yan-shih, Honan, has a rounded shafting-plate, decorated with swirling designs reminiscent of cloud patterns. Near the dagger-axe were found neatly shaped shards of turquoise; possibly these had been inlaid in the grooves of the cloud pattern. It would seem that full advantage has here been taken of the malleability of bronze as opposed to stone; for this kind of curved shafting-plate would be difficult to coax out of either stone or jade. The inlaid decor suggests that this dagger-axe was not only meant to be functional, but also aesthetically pleasing, and even perhaps imbued with ritual significance. This type of dagger-axe with curved shafting plate reached its crescendo in the late Shang dynasty. The shafting plate was habitually decorated with various designs, sometimes in openwork that traced out the long nose of an animal or the beak of a bird, the shafting-plate thus taking on the semblance of these motifs. This type of decor is highly characteristic of ritual implements.

During the late Shang fresh advances were seen in the areas of technology and aesthetics, in relation to the dagger-axe. The "Dagger-axe with Curved Bronze Shafting-plate and Jade Blade" in the collection of the NPM (Plate 3) is a good example of the expertise the craftsmen of the late Shang were then capable of, harmonizing such different materials as bronze and jade. The luster, color and tactile qualities of jade, complemented by the malleability and durability of bronze, result in an object possessing qualities transcending the practical, that is, functional yet most beautiful. This piece, a purchase by the museum in recent years, had at one point been altered with the aim of covering up the traces of where the jade and bronze had been cast together. The Conservation Division of the NPM examined this piece by X-ray (Plate 3-1), finding that there is a hole in the shafting plate which has been covered by rust and is invisible to the naked eye. Although the traces of casting the jade and bronze together remain unclear, there is another dagger-axe with jade blade and bronze shafting-plate that was excavated at tomb # 331 at Hsiao-t'un, An-yang, Honan (Figure 15)⁴⁸⁾ which shows a groove at the point where the jade and bronze meet. The jade blade was inserted into this. A hole in the jade near this point of intersection may have strengthened the bond. This is very helpful evidence for understanding the techniques used at that time for casting together different materials.⁴⁹⁾ Yet another dagger-axe with jade blade and bronze shafting plate was unearthed from the Fu-hao tomb at Hsiao-t'un, An-yang, Honan. It is inlaid with turquoise.⁵⁰⁾ It is a masterpiece of the late Shang dynasty.

As we progress from the early to the late Shang, the decor on the curved shafting plates of bronze dagger-axes becomes ever more exquisitely worked. However, what is interesting is that by the early Western Chou dynasty, this kind of bronze dagger-axe gradually fell into decline. Could this be that the overly fancy, yet not sufficiently functional style was not to the taste of the more practical rulers and movers of the Chou dynasty, and consequently was not further developed? Further evidence must be collected before this puzzle can be solved.

While the basic form of the dagger-axe had appeared by the Er-li-t'ou stage, the shapes didn't fully mature until the late Shang period. The paths in which the dagger-axe eventually developed were largely determined by the methods of firmly attaching the wooden shaft to the bronze portion, in order to retain or even enhance the killing capability of the dagger-axe. Many experiments were made, through which the various shapes of the dagger-axe were born.

During the Er-likang period an innovation was made to the Er-li-t'ou style dagger-axe, with its shafting-plate that was inserted into a wooden shaft; namely, the lug appeared. The purpose of the lug was to separate the blade and the shafting-plate with protuberances on both sides of the weapon. In this way, lashing ropes could be used to secure the wooden shaft more tightly.⁽⁵¹⁾ This new shape was elevated to the status of one of the most common shapes of the dagger-axe by the late Shang.⁽⁵²⁾ The "Dagger-axe with Lugs and Straight Shafting-plate" in the collection of the NPM (Plate 1) is an example. Like the dagger-axe with curved shafting-plate, it enjoyed great popularity during the late Shang.

Bolder experiments yet were carried out during the late Shang in the area of securing the wooden shaft. As for the already developed dagger-axe with insertable shafting-plate, an attempt was made to use side lugs to aid the attaching of the wooden shaft.⁽⁵²⁾ Perhaps the result was unsatisfactory, as no further attempts were made. Another daring experiment was made, whereby the length of the descending edge that connected the blade and shafting-plate was extended (Figure 16).⁽⁵³⁾ Not only did this increase the size of the portion of the bronze weapon that adjoined the wooden shaft, making the attachment that much more secure, but the lower edge of the blade was lengthened, increasing the suitability of the weapon for murderous motions of horizontal swipings and slayings.

During the late Shang, further structural advances were made on the dagger-axe with insertable shafting-plate. No longer was the area between blade and shafting-plate left flat. Instead, a shaft ring was added. The "Dagger-axe with Shaft-ring and Triangular Blade" in the collection of the National Palace Museum (Plate 2) may be a product of this period. Tomb # 1004 in Hsi-pei-kang at the Hou-chia-chuang site saw the discovery of 72 dagger-axes with shaft-rings. This discovery has served as valuable evidence for determining the method of using this type of dagger-axe from the scars left by the wooden shaft.⁽⁵⁴⁾ This innovation was not only used on the unsophisticated dagger-axe with shafting-plate, but also on the dagger-axe with curved shafting-plate⁽⁵²⁾ and the dagger-axe with descending edge.⁽⁵³⁾ The dagger-axe with shafting-ring enjoyed a certain prevalence during the late Shang.⁽⁵²⁾

The above-mentioned innovations were all responsible for the flowering of new variations during the late Shang. During the early part of the late Shang, various types such as the dagger-axe with curved insertable shafting-plate, the dagger-axe with lugs and straight shafting-plate, and finally the dagger-axe with straight shafting-plate and shaft-ring for securing the wooden shaft, were popular at one point. Appearing in the latter part of the late Shang was the dagger-axe with descending edge and straight shafting-plate (Figure 16);⁽⁵⁵⁾ this latter was outstandingly effective, to the point that it became the major type of dagger-axe during the Western Chou and after. Perhaps this is an instance of 'survival of the fittest' among inanimate objects.

From the Er-li-t'ou and Erlikang periods continuously until the late Shang, new weapon forms of already existing types, including those of the dagger-axe developed. Late Shang

(Yin-hsü) dagger-axes, have turned up most prolifically in the An-yang area, concentrated in the former center of power of the Shang. Following the trail of the sites of the Shang culture, these weapon types are also found in Shensi, Kansu, Shansi, Shantung, Kiangsi, Hupeh, Szechwan, Kwangsi, and Liaoning.¹³⁶

B. New Weapon Types and Styles: Idiosyncracies and Syntheses of the Central Plains and Regional Styles

The increase in weapon types during the late Shang occurred as well as the dagger-axe. This phenomenon was seen not only in the weapons of the Anyang area, but in the increasingly distinct regional styles. The complex interweavings of exchanges and syntheses between the seat of Shang royal power and regional styles were the catalyst for the abundance of variety in late Shang bronze weapon types, shapes, and styles. This is especially apparent in the dagger-axe with triangular blade, spearhead, *yüeh* ceremonial axe, knife, and sword, as well as the bow-shaped implement. The former three weapon types may be related to the south or southwest in origin, while the latter four may be connected to the style of the north.

1. A Preliminary Discussion of the Relations between An-yang and the South Based on the Dagger-axe, Spearhead, and *Yüeh* Ceremonial Axe.

Of all the varieties of the dagger-axe, only the dagger-axe with triangular blade remains to be discussed. This type is simpler than all the other An-yang dagger-axe types, with only its triangular blade and its flat, square shafting-plate. Also, it has no lugs, descending edges, or shaft-rings. This weapon type has been found at An-yang sites such as tombs # 232 (Figure 17) and 270,¹⁴⁶ as well as others,¹⁵⁷ and was thought at the time to "have originated in the central plains, being passed on to the Pa-shu area (present-day Szechwan), where it developed into a weapon with a strong indigenous flavor."¹⁵⁸ As the number of archaeological finds increases daily, the dagger-axe with triangular blade of the late Shang appears with great frequency in the Ch'eng-ku (Figure 18)¹⁵⁹ and Pa-shu areas (Figure 19).¹⁶⁰ Consequently, this weapon type's place of origin has been shifted to either Ch'eng-ku¹⁶¹ or the Ching-wei area.¹⁶² In brief, "from an An-yang perspective, it was quite possibly an alien arrival";¹⁶³ it persisted, however, in An-yang, filling out the abundance of varieties of dagger-axe of the late Shang center of political power. During the early and middle Western Chou it still appeared in Pao-chi, Shensi, at the tomb site of the state of Yu (虢) (Figure 20),¹⁶⁴ but by the Warring States Period had become the exclusive product of Szechwan. The "Dagger-axe with Triangular Blade" in the collection of the National Palace Museum (Plate 17) may be a product of the early Western Chou.¹⁶⁵

Unlike the dagger-axe with triangular blade, which only existed in small quantities in An-yang, the majority of *yüeh* ceremonial axes and spearheads have been unearthed in An-yang. However, as archaeological evidence is accumulating, the origin seems to be heading to the south, or possibly was merely influenced by the south.

The bronze spearhead is meant to pierce, and must be used with a wooden shaft. According to the traces of wood found on spearheads buried in tombs, the wooden shafts were approximately 1.4 meters long.¹⁶⁴ Although it doesn't appear as frequently as the dagger-axe in tombs of the late Shang in the An-yang region, the number recovered is actually greater than that of dagger-axes. There are also many variants of this weapon type.¹⁶⁵ The two most common ones are those with triangular shapes, as found in tomb # 1004 at Hsi-pei-kang (Figure 21),¹⁶⁴ and those with concave sides.¹⁶⁶ Since central plains tombs of the

Erlikang period have not yet yielded any spearheads, while three have been excavated from the P'an-lung-ch'eng site in Huang-p'i, Hupeh (Figure 22),⁽⁶⁷⁾ these latter provide a link in the chain between the Erlikang and Yin-hsü phases, and the process of changes in between. It is for this reason that some scholars hypothesize that the origin of the spearhead may be related to the south.⁽⁶⁸⁾ The south seems to have had great influence in the formation of many variations on the spearhead during the late Shang.

Similar circumstances surround the bronze ceremonial *yüeh* axe. The bronze ceremonial *yüeh* axe with insertable shafting-plate has been mainly excavated in the An-yang area. In general, its distinguishing characteristics are a concave waist, which widens out towards the blade, causing the blade to arc. There are two shoulders forming the area between the blade and the shafting-plate, each of which is usually pierced with a hole. These, along with the hole on the shafting-plate, were used to secure the wooden shaft. This kind of *yüeh* axe may have already appeared in the central plain by the Erlikang period, in such places as Cheng-chou.⁽⁶⁹⁾ However, in the roughly contemporary south, such as the Huang-p'i and P'an-lung-ch'eng sites in Hupeh (Figure 23), remarkable artistic achievements were already appearing⁽⁶⁹⁾ while the distinguishing features of the *yüeh* axe with shafting-plate had yet to fully emerge in the central plains jade *yüeh* axes of the Er-li-t'ou period. In contrast, in the strong and fertile southern tradition of stone and jade *yüeh* axes, similar *yüeh* axe prototypes can be found (Figure 24).⁽⁷⁰⁾ The basic characteristics of the central plain's bronze *yüeh* axe with insertable shafting-plate unmistakably originate partly in the stone and jade *yüeh* axes of the south.⁽⁷¹⁾

In summary, the spearhead and *yüeh* axe were perfected during the late Shang, and their usage was centered mainly on An-yang. The dagger-axe with triangular blade, while partially indebted to An-yang, owes much to either the south or the southwest. At present a number of scholars have begun to take note of this, although more complete information is needed before a conclusion can be reached.

2. Problems Concerning the Relations between An-yang and the North, from the Viewpoint of the *Yüeh* Axe, Knife, Sword and Bow-shaped Implement

It appears that there were vital influences on An-yang bronze weapons from the south; however, we must look to the relations between An-yang and the areas north of it for the primary cause of the many variants in weapon types during the late Shang. This exchange resulted both in transfers of weapon types, and in some cases, new weapons that were amalgams that borrowed from both sides.

One obvious example of this sort of exchange is the *yüeh* axe. Archaeological evidence exists to prove that the bronze *yüeh* had already appeared by the early Shang. It was most popular during the late Shang and the early Western Chou, after which it lapsed into rarity. The bronze *yüeh* stands out among bronze weapons of the late Shang for the uniqueness and artistic value of its shape and the ornamentation with which it was embellished. It was employed by the upper echelons of the aristocracy and by military leaders, possibly due to its powerful connection to religious rites.⁽⁷²⁾ It appears most often in the An-yang region, and usually in the form of the *yüeh* axe with insertable shafting-plate. *Yüeh* have been excavated from such large and notable tombs as the Fu-hao tomb of Yin-hsü (the "Fu-hao *yüeh*"),⁽⁵⁰⁾ tomb # 269 of Ch'i-chia-chuang-tung at An-yang,⁽⁷²⁾ and the tomb in the south of Ta-ssu-k'ung village (Figure 25).⁽⁷³⁾ The "*Yüeh* Axe with Animal Mask Decor" in the collection of the National Palace Museum (Plate 6) may have come from the same tradition as the *yüeh* axes excavated at these sites. This kind of *yüeh* axe with insertable shafting-plate appears in a definite range of locales, including Shantung, Hopeh, Shensi, and Szechwan.

among others.⁽⁷¹⁾

In the late Shang another method of securing the wooden shaft to the bronze axehead was seen: this was the *yüeh* axe with tubular shaft-ring, which was mostly restricted to the north. There were four separate kinds, depending on the length of the tubular shaft-ring in relation to the width of the blade and shafting-plate.

The first type has an tubular shaft-ring that is shorter than the width of the blade, yet equal to that of the shafting-plate. Of these four new kinds of *yüeh* axe, this first kind with shafting-plate and ring most resembles the *yüeh* axe with insertable shafting-plate. The area of its usage is mainly located in Shansi and northern Shensi, such as Shansi's Ching-chieh village, Ling-shih,⁽⁷⁴⁾ and Shensi's Lao-niu-p'o in Sian (Figure 26).⁽⁷⁵⁾ It has even been found as far off as Ssu-shui in Shantung.⁽⁷⁶⁾

The second type is less similar to the *yüeh* axe with insertable shafting-plate. It has a tubular shaft-ring which is longer than the width of the blade and shafting-plate, and which thus is highly conspicuous. The three *yüeh* axes with tubular shaft-ring in the collection of the National Palace Museum are of this type (Plates 7, 8 & 9). Generally speaking this type of axe is often seen in the north, especially in the north of Shansi, such as Kao-hung, Liu-lin (Figure 27)⁽⁷⁷⁾ and Yi-tie, Shih-lou.⁽⁷⁴⁾ Even as late as the early Western Chou it could still be seen in the north⁽⁷⁸⁾ and northwest.⁽⁷⁹⁾

The third type is even further from the *yüeh* axe with insertable shafting-plate of An-yang. The upper end of the shaft-ring runs even with the upper edge of the blade. The back side of the shaft-ring has a small rounded protuberance. This type presently appears mainly in the north, including Suo Min Hong Qi in Liaoning (Figure 28).⁽⁸⁰⁾

The fourth type is the *yüeh* axe with semi-circular blade, tubular shaft-ring, and seven holes. It is the furthest from the *yüeh* with the insertable shafting-plate of An-yang, though similar in that the edge of the blade ran parallel to the wooden shaft. Examples are few and far between, coming mainly from the north, including one that was excavated at the Huang-chung site in Tsinghai (Figure 29). Speculation is that it dates from the late Shang dynasty⁽⁸¹⁾ or the early Western Chou.⁽⁸²⁾ Similar to this piece in style, and possibly of approximately the same age, is the "*Yüeh* Axe with Semi-circular Blade, Tubular Shaft-ring, and Seven Holes" in the collection of the National Palace Museum (Plate 11). It was published in *Hsi Ch'ing Ku Chien* as a "Wu ch'i axe (舞戚), Chou dynasty".⁽⁸³⁾ It has a tubular shaft-ring that is 18.7 centimeters in length, and a semi-circular blade. The shaft-ring is twice as large in circumference on one end as on the other. This might have been useful for making the wooden shaft more secure. (The present wooden shaft may well be an addition on the part of the Ch'ing imperial palace.) A mark that seems to be the trace of repair work suggests that the top end of the tubular shaft-ring was filled in with bronze during the last few centuries. The major note of interest on this piece is found at the top of the tubular shaft-ring: here there are three bands of decor, between which are rows of round bosses separated by a design of zigzags. At the back of the shaft-ring are three protuberances; if we look carefully along the line in which they run, the seam from the casting is evident. Near the shaft-ring are seven round holes with ridges running around them to connect the blade area with the back side.

In addition, there is a semi-circular *yüeh* axe with tubular shaft-ring and three holes that also came from the north. It is said to have been unearthed at Yu-lin, Shensi (Figure 30). Some attribute it to the late Shang⁽⁸⁴⁾ while others attribute it to the early Western Chou.⁽⁸²⁾ The decor and shape are similar to those of the "*Yüeh* Axe with Tubular Shaft-ring, Three Holes, Swirling Cloud Decor, and a Semi-circular Narrow Blade" in the collection of the National Palace Museum (Plate 10). Similar in decor and shape, these two pieces are likely products of the same period.

This *yüeh* axe with three holes was listed as a "*ch'i* axe with decor of clouds, Chou dynasty" in *Hsi Ch'ing Ku Chien*.⁽⁸³⁾ The tubular shaft-ring is 18.2 centimeters long, and like the other is smaller on the bottom than on the top (the bottom opening is 3.6×2 centimeters, the upper 2.95×1.72 centimeters). Seams are faintly visible where the holes of the shaft-ring were sealed with copper (Figure 31). Seen from the front by X-ray, we know that the tubular shaft-ring is hollow, as the upper and lower decorations appear one on top of the other in the photograph, and in profile (Figure 32) it is black in the middle, this being clear proof that it was once all hollow and evidently could have allowed a wooden shaft to be inserted into it.

The decor is concentrated on the shaft-ring, and is comprised of four bands. The first of these is comprised of round bosses, and the middle two bands are rectangular grooves that were filled in with copper in latter days (Figure 33). This is evident by the very different colors of the rust, and the original bronze. Each of the four bands of decor are separated by three smaller bands, which are alternately embellished with round bosses and zigzags (Figure 40). There is a rattle at the back of the shaft-ring, and on top there is a small ring. There are three round holes on the body of the axe. The blade curls around itself at the ends. These are all characteristics of the northern style.⁽⁸⁵⁾

The four types of *yüeh* axe above are relatives due to the tubular shaft-ring. They employ the wooden shaft in new ways, and possess individual styles contrasting with the *yüeh* axe with insertable shafting-plate of the political center of power, An-yang. Both the *yüeh* axe with insertable shafting-plate and the *yüeh* axe with tubular shaft-ring appear in the Shansi and Shensi areas.⁽⁷¹⁾ The styles of central plains *yüeh* axes and those of the north were exchanged and combined, resulting in many axe variants during the late Shang and early Chou dynasties. The *yüeh* stands out among other bronze weapons of the time for this reason.

This is true of the knife as well. Quite a few variants on the original knife were born in the late Shang from the cultural exchanges between the central plain and the north. A greater number of these variants were the fruits of accumulated years of innovations in the central plain on the prototypes from the Er-li-t'ou period. The knife is defined as having a sharpened edge on one side of the blade area. The knife already existed in the central plain during the Er-li-t'ou period. Basically speaking, there were two types of knife handles. One was for the entire handle to be cast of bronze as well. The other was to cast on a small protrusion, which would be inserted into a handle of a different material. The drawback was that the distinction between blade area and handle was not always clear.⁽⁸⁶⁾ It seems that this distinction was not made clear until the Erlikang period.⁽⁸⁷⁾ By the Yin-hsü period many variants of the knife appeared as the number of functions performed by the knife increased ornamentation was added, and cultural exchanges occurred. The variants include blades that are convex, and those that are concave. Variants of decor on handles includes pommels shaped as rings, rattles, and animal heads.⁽⁸²⁾ As for some of the different functions the knife was capable of performing, it is apparent that not all types were considered weapons. For example, the ineffably paper-thin, small knife with either convex or concave blade and bronze handle may very likely have been a tool.⁽⁸⁸⁾ There are two types of thick, strong, big knives which may have been weapons.

One kind possessed a small bronze handle which was attached to the blade end and wholly inserted into a wooden handle. It had a curved blade area, with a convex sharpened edge, the other edge often decorated with hooked flanges. The blade area was often decorated with designs (Figure 34).⁽⁸⁰⁾ The other type is large with an upper portion that is backward curving. On the edge opposite the sharpened edge, near the pommel, were aligned shaft-rings through which the handle would be fitted (Figure 35).⁽⁸⁹⁾ In other instances a *tang* or shaft-plate would be present on this edge which would be inserted into a cleft in the wooden

handle. This type has been identified as a weapon.⁽⁸⁸⁾ Besides these, there are the small knives with concave sharpened edges and pommels shaped as rings, animal heads, and rattles. They are believed to have been used in hand-to-hand combat.

The aforementioned knife variants appear to exhibit regional differences. The first large knife variant used in conjunction with a wooden handle has been mainly excavated in the area of An-yang, the center of political power.⁽⁹⁰⁾ The last-mentioned small knives with concave sharpened edges and pommels shaped as rings, animal heads, and rattles hail from northern regions. This latter group has been found in scattered areas around Ch'ao-tao-kou in Hopei (Figure 36),⁽⁹¹⁾ Shih-lou in Shansi, and Sui-te and Yen-t'ou villages in Shensi,⁽⁹²⁾ demonstrating its widespread use by the northern peoples. Measuring 28.3cm and considered of northern provenance, the "Curved Knife with Rattle" in the National Palace Museum's collection (Plate 5) is curved from end to end and possesses a blade whose sharpened edge is concave. The rattle is formed from eight strips joined together at the top. At one side is a ring from which the knife can be suspended. A row of zigzag patterns decorates both the flathandle and the two sections on either end of the handle. Appearing both above and below are patterns of small bosses. The area where the blade and handle meet is hook-shaped. While the dull edge of the blade area is thick, the sharpened one is thin.

Despite the differences in form and distribution, these knife variants were involved in cultural exchange. Specimens of the small knives with concave sharpened edges and pommels shaped as animal heads have been excavated in small numbers around Anyang.⁽⁹³⁾ Likewise, the second class of large knives has been excavated in scattered localities in the Shansi and Shensi areas.⁽⁹⁴⁾ In these specimens, the upper portion of the rather long blade is either curved backwards or, more commonly seen, straight. Where the unsharpened blade edge meets the wooden handle is either found shaft-rings or a cleft for attachment with this handle. They are considered indigenous to the northern region.⁽⁹⁵⁾ The "Knife with Shaft-ring and Nipple Decor" in the National Palace Museum (Plate 21), straight-bladed and with a shaft-ring into which the wooden handle is fitted, is most likely of a northern style. However, specimens from the second class of large knives have also been unearthed in the An-yang area, a fact which must be taken into consideration⁽⁹⁶⁾ since they differ only in possessing the curved back upper portions. Unearthed even in Hsin-kan Ta-yang-chou in Kiangsi,⁽⁹⁷⁾ they amply illustrate the results of intercultural contact between the Anyang, northern, and southern cultures.⁽⁹⁸⁾

The only categories not commonly found in An-yang,⁽⁹⁹⁾ yet still found primarily in northern regions, are the daggers (short swords) with curved blades and knives with curved blades. They have been discovered in Ch'ing-lung and Chang-pei counties in Hopei; Shih-lou county Ts'ao-chia-huan yuan village, Liu-lin county Kao-hung village, Pao-te county Lin-che-yu village, and Chi county Cheng-kuan village, all in Shansi; Yen-chuan in Shensi; even reaching Yi-chin-huo-lo-ch'i in Inner Mongolia, and elsewhere.⁽⁹²⁾ The "Dagger with Curved Handle and Rattle" (Plate 4) has a median ridge on the blade area and two sharpened edges. It is 23.4cm in length, with the blade area measuring 13.6cm. This dagger is slightly curved from one end to the other. The pommel is composed of a rattle held inside eight strips which join together at the top. Near one corner of the handle is a ring from which the weapon can be suspended. The decor on the flat handle is ornate, consisting of five bands of design, including zigzags as the main motif, which is highlighted with symmetrical arrangements of small bosses and linear designs. The guard is straight, juts outward, and possesses a median ridge. It should be classed as a northern style dagger. Whether or not this category of daggers found its way into the An-yang culture awaits the clarification to be provided by further finds.

The bow-shaped implement also provides a forum for discussing the question of cultural exchange between the central plain and the north. There are two main types: the body of the

first is gently arched, with the two ends arching up and outwards, arm-like in appearance. The two ends are usually ornamented with rattles or animal-heads, such as the “Bow-shaped Implement with Cicada Decor” in the collection of the National Palace Museum (Plates 12, 13). This type appeared in the late Shang dynasty, by latest reckoning. The majority, at least 26, have been excavated from the An-yang area (Figure 38).¹⁰¹ While they are found in Shensi and Shansi, these do not number significantly.

The second type of bow-shaped implement has a long, flat body, with the two hooks at the ends being less arched. Each end has a rattle, and there are two pairs of rings symmetrically placed on the bottom. The “Bow-shaped Implement with Nipple Decor” in the collection of the National Palace Museum (Plate 15) is an example of this type. It is typical of the bow-shaped implements common to the Minussinsk Basin in southern Siberia (Figure 39).¹⁰⁰

It is the theory of some that this type came about from Shang influence on the Karasuk culture, while others maintain that bow-shaped implements with rattles or animal-head pommels were not native to the tradition of the Shang culture, but rather, that they are reflections of the northern bronze culture.¹⁰² The data presently on hand is insufficient to clear up this problem. However, it is an indisputable fact that there were exchanges between the central plain and the north, while each region retained some of its native characteristics due to differences in geography.

III. Calling on the Past to Shape the Future: from the Western Chou Period to Approximately the Early Spring & Autumn Period (ca. 11th-6th century B.C.)

The years ranging from the Western Chou to the early Spring & Autumn periods saw Chinese bronze weapons develop from the initial stages into what would shape the face of future bronze weapons. During the late Shang period, in particular, the dagger-axe became the most important weapon and many new variations on the basic dagger-axe were created. During this second period, the dagger-axe drew from among these multiple new possibilities, absorbing what was best and inspiring the great changes to come. Also, in an attempt to increase the killing capability of the dagger-axe, enabling it to be used not only for hooking but also for piercing, the halberd was born. The halberd stands out during the third period as the most important weapon type. As for the sword, which was suitable for protection at close ranges, it also progressed during this period, coming eventually to full flower during the following period.

A. The Popularity of the Dagger-axe with Descending Edge

What seems to have occurred during the early Western Chou was a process of elimination involving the many new weapon types that were invented in the late Shang, especially the variations on the dagger-axe. Items which had been so important during the late Shang, such as the dagger-axe with curved shafting-plate and the dagger-axe with shaft-ring, saw a lapse of popularity during the early Chou dynasty. Likewise, the dagger-axe with straight shafting-plate, lugs, and no descending edge gradually decreased in numbers.

Only the dagger-axe with descending edge, conceived in the late Shang as well, flourished in the Western Chou. It may have been that the dagger-axe with shaft-ring separated too easily from the wooden shaft, making it impractical for use. Consequently, because of the slight height difference between the upper lug and blade area to secure the wooden shaft, the dagger-axe with curved shafting-plate and the dagger-axe with lugs and straight shafting-plate were unequal to the dagger-axe with descending edge and lugs, to which the wooden shaft could be attached much more firmly. One particular milestone in the development of the dagger-axe came about in the final years of the late Shang: the blade area was lengthened on the bottom edge, coming to form the descending edge. As the angle of the descending edge shifted, the lug was born 90 degrees to 100 degrees. This change caused the shafting-plate to be proportionately small in relation to the other parts of the dagger-axe, while the cleaving and hooking functions were increased.⁽¹⁰³⁾ This revolution, dating from the final years of the late Shang period, opened up a new future for the dagger-axe; with the advent of the early Western Chou, this type of dagger-axe with its slightly angled descending edge became immensely popular.

The dagger-axe with descending edge of the Western Chou typically had from one to four holes. The "Ch'eng Chou Dagger-axe" (Plate 16) has one hole on the descending edge, as well as upper and lower lugs. On the blade area are faint traces of fiber; possibly the dagger-axe was wrapped in textile when it was buried. On the shafting plate are inscribed the two characters "Ch'eng Chou", which probably indicates this was the product of Ch'eng Chou. Tomb # 42 at the Hsin-ts'un site in Hsun county, Honan has also yielded a Ch'eng Chou dagger-axe (Figure 40).⁽¹⁰⁴⁾ This piece similarly has a short descending edge and one hole. In tomb # 55 of the same site area another dagger-axe with one hole was unearthed, almost identical with the "Ch'eng Chou Dagger-axe", which also dates from the early to the middle periods of the Western Chou. Not long ago, another Ch'eng Chou dagger-axe was excavated from tomb # 1192 at the Liu-li-ho site in Hopeh (Figure 41).⁽¹⁰⁵⁾ In form it is similar to the others. Clearly, more than one Ch'eng Chou dagger-axe was cast, and this type of dagger-axe was used in more than one area.

In brief, the popularity of the dagger-axe with descending edge during the Western Chou was the result of a weeding out from the various types of dagger-axe of late Shang. Once the dagger-axe with descending edge became the chosen type, the future was determined for the shape of the dagger-axe. After this point, changes made mainly involved the angle of the blade and increases in the width of the blade. From the late period of the Western Chou to the early Spring and Autumn period, one change occurred in the blade: the blade had a triangular area at the tip, resembling a *kuei* tablet (Figure 1).⁽¹⁵⁾ However, this new variation still belongs to the category of the dagger-axe with descending edge.

The outstanding characteristics of early Western Chou dagger-axe decoration lies in the placement of the decor on the weapon, as well as the choice of motif. In the late Shang, the major area for decoration on a dagger-axe was the shafting-plate. By the period presently under discussion, the focus had shifted to the blade area and the descending edge. Motifs included *k'uei* dragons, with wide-open mouths and long curling tongues, as seen in the "Dagger-axe with Tongue-spitting *K'uei* Dragon" in plate 18. Another common treatment of the decor was to depict something like an abstracted tiger, as seen the "Dagger-axe with *K'uei* Dragon Decor" in plate 19. The mouths of the animals always face open towards the point of the blade. Similar examples have been excavated at the Pai-ts'ao-p'o site at Ling-t'ai, Kansu, (Figure 42)⁽¹⁰⁶⁾ and at the Hsin-ts'o site at Ling-t'ai, Kansu (Figure 43).⁽¹⁰⁴⁾ This placement and execution of the decor became typical of the Shu style dagger-axe in the later Spring & Autumn to Warring States periods. A search backwards in time for the origin of this type of decor leads us to the dagger-axe with triangular blade of the late Shang.⁽⁵²⁾ Could this be a

style handed down from the peoples of the southwest? Or possibly the fruit of cultural exchange between the southwest and the central plain? This matter awaits further research.

B. Experiments in the Halberd--the Appearance of the Halberd with Spearhead and Dagger-axe Cast in One Piece

A dagger-axe hacks and slices; a spear pierces the flesh. If one could have a weapon that combined these two functions, it would be like adding wings to a tiger or giving a gun to a cobra. Experiments made to increase the lethal capability of weapons brought about a new weapon type: the halberd.

As for the form of the halberd, *Shuo Wen Chieh Tzu* says: "the halberd is a weapon that has several parts." In the "Yeh Shih" section of the "K'ao Kung Ch'i" we find the following passage: "The halberd is one and a half *ts'un* wide. The shafting-plate is three times that, the descending edge is four times that, and the blade area is five times that. There is a 90 degree angle between the blade and descending edge. The spear portion weighs three *lei*." Because the written documentation handed down to us is unillustrated, containing merely verbal descriptions, scholars' interpretations and opinions are many and various. Some suppose the halberd to have been cross-shaped,⁽¹⁰⁷⁾ while others emphasize that the joining of the dagger-axe and spear was with the intention of a piercing function.⁽¹⁰⁸⁾ As archaeological proof daily piles up, many scholars employ new findings to back up their original propositions. As a result, varying opinions concerning the halberd seem to be increasing. There are those who employ the halberd excavated from the Hsin-ts'un site to prove that it is a combination of the spear and the dagger-axe,⁽¹⁰⁹⁾ and others who take the halberd so-inscribed that was found at the tomb of Marquis Yi of Tseng as their standard, noting the differences between the halberd and dagger-axe (such as the relatively long, narrow blade area of the halberd, and that the dagger-axe is a short weapon, while the halberd is a long weapon).⁽¹¹⁰⁾ Yet others use an even broader base of data to revise the definition of earlier scholars, who differentiated the two on the basis of width.⁽¹¹¹⁾ In summary, a comprehensive look at real instances of halberds with inscriptions naming them, and related materials, show that the halberd developed from the dagger axe⁽¹¹²⁾ in the attempt to update and improve it. This innovation, originating in the early Shang, became more apparent during the Western Chou, and by the Spring & Autumn and Warring States periods had become the norm everywhere.

The birth of the one-piece halberd during the Western Chou, with dagger-axe and spear cast in one piece, marked an important experimental stage in the development of the halberd, for though it was not widely adopted, nor used for long, it was a precursor of the innovations to come! Because the experiments had actually begun in the late Shang, the Western Chou period stands out as one which both carried on tradition and shaped the future.

Primitive forms of the halberd were produced in the early Shang. Tomb # 17 at the T'ai-tsi-ts'un site in Kao-ch'eng, Hopeh has yielded a wooden shaft, one end of which is inserted into the shaft-ring of a spear. Underneath this, perpendicular to the spear, is a dagger-axe. (Figure 44)⁽¹¹²⁾ At the time this was produced, weapons combining the halberd and the spear had not yet developed into an organic whole. Experimental casting of halberds in one piece, spear and dagger-axe together, came no later than the early Western Chou, the "Hou Halberd" being one example seen in the collection of the NPM (Plate 20). It is cross-shaped, and taller than it is wide. There is a median ridge on the blade, and a large round hole in the middle, with three small holes on the descending edge for securing the wooden shaft. The character "hou" (侯) is inscribed on the shafting-plate. A Hou halberd of similar shape and

inscription appeared at tomb # 2 at the Hsin-ts'un site in Hsun county (Figure 45),¹⁰⁴ dating from the early to the middle periods of the Western Chou. The tomb at Hsin-ts'un, Hsun county belonged to the state of Wei. Some of the artifacts unearthed from the tombs there are inscribed with inscriptions native to the state of Wei. The "Hou Halberd" may have belonged to the Marquis of Wei. An overall look at the artifacts unearthed at sites in Shensi, Kansu, Honan, Hopeh, and Shantung tells us that not many halberds have been excavated; those that have appeared are mainly concentrated in large to middle-sized tombs, suggesting the halberd as an emblem of rank. In addition, the "Hou Halberd" is light and thin, probably a disadvantage in actual battle. Therefore it seems it may have had more use as an emblem of rank. This is not an isolated example; more have been found at other tombs of the Hsin-ts'un site at Hsun county, Pai-ts'ao-p'o, Ling-t'ai, and other locations.¹⁰⁶ The ritual significance of the halberd in tombs of the Western Chou is worthy of notice; however, this is not to say that the halberd was limited to use as a ritual implement. Some halberds have been found buried together with items for use with chariots and horses, and other weapons, such as at Shantung's pit of horses and chariots at Hsi-an, in Chiao county.¹⁰³ In light of this evidence, it seems that some halberds were meant for actual use in warfare. Possibly it was more difficult to cast the spear and dagger-axe in one piece, cross-shaped. The technology being so difficult, it is no wonder that they were not produced in great numbers. Being cross-shaped might have made the weapon more vulnerable to breakage, and thus less practical for waging war. Following the Western Chou, this type of one-piece halberd became quite rare.¹⁰⁴ Discoveries made concerning the halberd during the Western Chou enabled the Spring & Autumn and Warring States periods to avoid making the same experimental mistakes. An acceptable form was early resolved upon, and the halberd became more popular day by day.

C. The Rising Fame of the Sword

It wasn't until the Eastern Chou that the sword became widespread, with regional variants also becoming more apparent. As for the types of longer swords prevalent on the central plains and the south in the Eastern Chou, although Western Chou examples are quite few, they do seem to have influenced later developments. In addition, the shorter daggers of north China in the Eastern Chou show even more clearly the influence of the Western Chou, illustrating how, in the Western Chou, past tradition was maintained while the future was being shaped.

The bronze dagger (short sword) marks the one unvarying type of northern swords. The Western Chou, in comparison with other epochs, was not one of great importance. Basically, during this period, the old traditions of sword-making were carried on, while a few modifications were made that were to shape the sword of the future. The dagger excavated at Pai-fu Ch'ang-p'ing, Peking serves as a good example of this.⁷⁶ The typical bronze dagger of the north, during the late Shang, characteristically had a straight blade, curved hilt, straight guard, and decor on the pommel the lower end of which was encircled by a ring.¹⁰⁵ The dagger unearthed at Pai-fu Ch'ang-p'ing, Peking has retained the characteristics of the late Shang sword, with the exception of the straightened hilt, which later became representative of the short bronze sword of the north during Eastern Chou times. Thus, we see that the Western Chou was indeed a time when both past traditions were carried on and the way to the future was cleared.

However, the period from the Western Chou to the early Spring & Autumn period saw the birth of the dagger with curved blade and a rounded, high median ridge that ran the length of the blade. (Figure 46)¹⁰⁶ This type became immensely popular, crucial in the

northeast of China during the Spring & Autumn to Warring States periods.

Roughly contemporaneous, there appeared in the central plains the sword with straight blade and rounded, high median ridge that ran the length of the blade. (Figure 47)⁽¹¹⁷⁾ This new type failed to gain wide acceptance in the central plain in later days. At this time, both the central plains and the north had their own type of sword with rounded, high median ridge on the blade area. Despite differences in the shape of the blade and the pommel, the shared median ridge raises the question of whether they arose from the same source, or whether one was influenced by the other. The answer to this question depends on further research.⁽¹¹⁸⁾

The daggers of the north, in the Western Chou period, are quite distinctive in nature from the swords of the central plains and the south. Currently available data shows that the swords and daggers of the central plains and the south in the Eastern Chou originated in the Western Chou. Important sites on the central plains include Ch'i-shan and Chang-chia-p'o (Figure 48), both in Shensi, Ling-t'ai county in Kansu, and the Peking area.⁽¹¹⁹⁾ At these sites there appears a willow leaf-shaped, flat-handled sword without guard, most of which have a hole through the flat handle, which scholars believe functioned as a means to adding a wooden grip.⁽¹²⁰⁾ This may be the prototype for the willow leaf-shaped, flat-handled sword without pommel that was popular on the central plains during the Eastern Chou.⁽¹¹⁸⁾

Yet another type of bronze sword appeared in the southern Wu-Yüeh area. It was characterized by a round pommel, a round handle (sometimes flattened), a guard, and sometimes with a band encircling the handle. The sword found at Ch'ang-hsing, Chekiang, is a prime example.⁽¹²⁰⁾ Similar specimens have been found the late Western Chou / early Spring & Autumn period site at Li-yang, Li-shui in Kiangsu. (Figure 49)⁽¹²¹⁾ This may be the forerunner of the major sword type of the south and central plains during the Eastern Chou.⁽¹¹⁸⁾⁽¹²²⁾

In conclusion, the period covering Western Chou and the first years of the Spring & Autumn period was a crucial time in the development of bronze weapons. From the abundance of variations on the dagger-axe that came forth during the late Shang, the dagger-axe with descending edge was chosen, setting the stage for later, greater developments. Also, in an effort to increase the functional capabilities of the dagger-axe, the halberd was invented, however, this new type did not go beyond the initial, experimental stages. The perfecting of the halberd was left for the next period to complete. Although swords were not very common at this time, the majority found have been in the larger tombs. Some scholars therefore believe that swords were only carried by members of the aristocracy, not having reached the common soldiers. For this reason, we can not say that the sword flourished during this period. Half-hidden hints at cultural interchanges echo in the swords from various regions. In brief, the Western Chou to the early Spring & Autumn periods opened up the way for the next period in the history of bronze weapons, one in which great developments were made.

IV. Great Strides in Weapons Development--the Middle and Late Stages of the Spring & Autumn Period Through the Warring States Period (ca. 5th-3rd century B.C.)

Great strides were made in the development of bronze weapons during the middle and late Spring & Autumn through Warring States periods. Not only did the search for new functional capabilities of the dagger-axe result in many variations of the dagger-axe with

descending edge, but a standard was set for the definitive halberd, which became more commonplace. As for the sword, in every region local variations were spawned, and distribution became more widespread. Experiments were made in the area of technology. Long-range weapons made several important breakthroughs in the area of mechanical functioning, including among others the advent of the crossbow. Finally, weapons of this period were not only functional, but became an arena for artistic expression.

A. The Rise of the Sword

Originally few and far between, during the period here discussed the sword became ubiquitous. Cultural exchanges between the styles of various regions became more obvious, while simultaneously the individuality of various regional styles became more marked.

In the north, the shortsword, or dagger, having evolved beginning in the late Shang, emerged as a distinctive element and became more popular in use. Furthermore, it exhibited distinctive local characteristics. In the northeast, the primary sword type was the short sword with curved blade and high, rounded median ridge. Generally, these had a part that gave the weapon added weight. These are mostly found in present-day Liaoning and Chilin provinces (Figure 50).⁽¹²³⁾ In the northwest, the principal type was the antler-style dagger, with its solid handle and relatively clear-cut guard. On the handle was found either antler-shaped appendages or double bands with geometric designs. Classic examples have been unearthed in the Ordos region of Mongolia and at Huai-lai, Hopeh (Figure 51).⁽¹²⁴⁾ The "Dagger with Double-ringed Pommel" in the National Palace Museum (Plate 40) is of this type.

The outstanding features of the dagger with double-ringed pommel include its shortness, 22 cm in all, blade and hilt being of equal proportions. A wing-shaped guard separates the blade from the hilt. The hilt is decorated with two half circles that face each other. Most noteworthy is the pommel, with its openwork decor of double circles set in opposition. The double circles don't in the least resemble any animals, and there is but a faint hint of antlers. The pommels on some other swords contain animal-style decors that are much more realistic.

This piece is rich with the style of the north. In contrast, the "Dagger with Openwork Decor of Coiled Dragons" (Plate 39) shows marked traces of cultural interflow between the north and the central plain. Although it is over 30 cm long, the hilt is 11 cm, covering more than one third of the entire length. The blade is short, and much emphasis has been placed on the decor of the pommel and hilt. These are clear indications that the making of this sword had very close relations with the northern tradition. However, the coiled dragons in the decor are an element frequently seen on the decor of ritual implements of the central plain, as is the use of openwork made in a two-sided composite mold. A bronze dagger with turquoise inlay on the hilt was unearthed at the Ta-ku-ch'eng site, at Huai-lai in Hopeh (Figure 52).⁽¹²⁵⁾ Dating from the late Spring & Autumn period, it likewise reflects a melding of the northern and central plains styles. This type of dagger has appeared sporadically at Ch'ang-tao, Shantung, at Feng-hsiang in Shensi, and at P'ing-shan in Hopeh; although the theme of the decors are all rooted in the central plains tradition, daggers never really flourished in that region, where the longer sword was popular.

At present many scholars are interested in questions concerning the field of distribution of this type of dagger, so evocative of the style of the north,⁽¹²⁶⁾ and how it is connected to the northern nomads mentioned in historical documents, such as the Tung-hu, Shan-jung, and Hsiung-nu,⁽¹²⁷⁾ as well as to the styles of relics belonging to these different nomad tribes.⁽¹²⁸⁾

In the central plain, made up of present-day Honan, Hopeh, and Shansi (the ancient Eastern Chou states of Chou, Cheng, Chin, Wei and Yan) the sword became increasingly

popular between the Spring & Autumn and Warring States periods. Not only were the swords different from their northern counterparts in length, often reaching 40-50cm, unlike the short (20-30cm) swords (daggers) of the north, but in shape they were even more dissimilar. Swords of the central plain can be basically divided into three categories on the basis of whether or not there was a pommel, the flatness or roundness of the pommel, whether or not there were encircling bands, and the shape of the guard.⁽¹²⁹⁾ One type has a blade area shaped like a willow leaf, and flat handle, the two meeting at right angles. There is no guard, nor are there encircling bands (Figure 53).⁽¹³⁰⁾ The "Sword without Pommel" from the National Palace Museum (Plate 35) is of this category. Examination by X-ray has shown that originally it had no pommel. The jade guard, hilt, and pommel were added to the original bronze in later dynasties. The second type of sword has a round pommel, a round handle which was sometimes rather flat in shape, a narrow guard, and is without encircling bands (Figure 54).⁽¹³⁰⁾ It is represented in this catalogue by the "Sword with Cloud and Thunder Decor" (Plate 33). The third type has a round pommel, encircling bands, and a guard.⁽¹³⁰⁾ The "Sword with Pommel, Two Encircling Bands and Guard" in the National Palace Museum collection (Plate 34) is of this type.

Of the three central plains sword types described above, the latter two were the most important ones in the south.⁽¹³¹⁾ The style of the inscription on the "Sword with Yüeh State Script (奇字劍)" in the collection of the NPM (Plate 36) suggests a provenance in the state of Yüeh (越). It is representative of the second sword type mentioned above, with round pommel, round handle that is somewhat flattened in shape, narrow guard, and lack of encircling bands. The "Prince Kung-wu Sword" found at the Chao-chia ku-tui site at Ts'ai-chia-kang, Huai-nan, Anhui (Figure 56)⁽¹³²⁾ is also of this type. Another example, the "Sword of King Fu Ch'a of Wu" came from tomb # 12 of the Ts'ai-p'o site at Hsiang-yang, also in Anhui.⁽¹³³⁾ As for the third type, characterized by pommel, encircling bands, guard, and round handle, it was also popular in the south. One example is the "Sword Used by King Chou Kou of Yüeh" in the National Palace Museum (Plate 37).⁽¹³⁴⁾ Further examples can be seen in the "King Chou Kou of Yüeh Sword" from T'eng-tien, Chiang-ling in Hupeh,⁽¹³⁵⁾ and the "King Kuang of Wu Sword" from Lu-chiang in Anhui.⁽¹³⁶⁾

Although these latter two types were common in the central plain, they were exceptionally popular in the south. Characteristically they have a round pommel and a guard. They can be traced in origin to the previous period, by such early specimens as the "Ch'ang-hsing Sword" from Chekiang, among others, all of which came principally from the south. Based on this evidence, most scholars lean toward a southern origin for these two sword types.⁽¹³⁷⁾

The south may have been responsible not only for nurturing the development of the sword types popular in the central plain, but also for major breakthroughs in technology. The techniques used for casting swords which combine different metals illustrate this. The "Sword with Yüeh State Script" of the National Palace Museum does as well, having been cast in several pieces. The color and luster of the median ridge, and the two sides of the blade are different. The Conservation Division of the National Palace Museum has examined this sword with a three-dimensional microscope, at a magnification of 40 times the original size. Under this scrutiny, the divisions between the differently colored areas were extremely apparent. Samples were taken from the median ridge, blade and hilt, and analyzed with high-technology equipment to determine the amounts of copper, tin, and other minor elements. The results are seen below:

Percent % Region \ Atomic Element	Cu	Sn	Pb	Zn	Fe	Co	Ni	Ag	Al	Total
Median Ridge	86.50	11.10	0.164	0.528	0.0786	0.0417	0.205	0.0592	0.0125	98.689
Blade	81.25	17.20	0.431	0.448	0.0282	0.0523	0.159	0.0563	0.0114	99.6362
Hilt	74.97	19.20	5.27	0.360	0.0499	0.0370	0.0994	0.0994	0.0162	100.0747

It was proven that the tin content was higher along the edges of the blade, increasing the sharpness of the weapon, while conversely, the copper content was higher along the median ridge. Practically the same findings were made by the Shanghai Museum in the analysis of the sword cast of different metals which is found in their collection.⁽¹³⁸⁾

What kind of techniques were used to bring about swords with different metal contents of blade and median ridge? Following analysis by the Conservation Division of the National Palace Museum, it seems that the end of the median ridge surpasses the guard, and is visibly separate from the blade edges. The Shanghai Museum analysis of their combined-metals sword shows that the median ridge was probably cast first, with the finished piece being inserted into a mold for the blade edges to be cast on. During this casting process, the two ends of the median ridge would have had protrusions added on, in order to facilitate the connection with the blade, preventing them from coming apart.⁽¹³⁹⁾ From this we may see part of the technological prowess needed to create this type of combined-metals sword.

The "Sword with Yüeh State Script" is a reflection of the brave pioneering spirit of the state of Yüeh in sword-casting technology, illustrating the praise for the swords of the states of Wu and Yüeh frequently found in historical documents.⁽¹⁴⁰⁾ The skill of the Yüeh sword-makers in combined-metal casting was not only used for the median ridges and blades of swords, but also in a type of decor consisting of silver squares set into the surface, such as on the "Sword of King Kou Chien of Yüeh" (Figure 59). The artisans of Wu were also capable of using this technique, as we can see in the "Spear of King Fu Ch'a of Wu",⁽¹⁴¹⁾ and in the tomb of the state of Ch'u at Changsha, Hunan.⁽¹⁴²⁾ In truth, "...weapons cast of combined metals have been found in Anhui, Hunan, Hupeh, and Chekiang. Unfortunately they have not been thoroughly published. This type of weapon is prevalent in the middle and lower reaches of the Yangtze River, seemingly for the most part in areas belonging formerly to the Yüeh culture."⁽¹⁴³⁾ It appears that the south was primarily the area where weapons of combined metals were cast.⁽¹⁴⁴⁾ Whether they originated in the state of Yüeh is at present still impossible to determine due to the incompleteness of published materials. However, on the basis of certain specimens currently known, such as the "Sword with Yüeh State Script" in the National Palace Museum and the "Sword of King Kou Chien of Yüeh" and "Spear of King Fu Ch'a of Wu" (which have been excavated), it can be definitely said that both Wu and Yüeh possessed artisans highly skilled at this technique, and that their skill was used to create the weapons of kings.

An iron sword type with bronze handle emerged in the areas of Szechwan and Yunnan during period from the late Warring States Period to the Han Dynasty. Both the bronze hilt and scabbard exhibit decor specific to this area (Plate 42).

B. The Zenith of the Dagger-axe and the Halberd

As the functions of the dagger-axe were strengthened, so did the styles increase in number: one improvement was the extension of the sharpened edge of the blade to include the

hafting-plate. The "Dagger-axe with Sharpened Shafting-plate and Long Descending Edge" (Plate 29) is one such example. A dagger-axe excavated at the Pei-hsin-pao tomb site in Huai-lai, Hopeh, has a shafting-plate with two sharpened edges.⁽¹²⁴⁾ Another dagger-axe, found at tomb # 44 at Yan-hsia-tu, Yi county, Hopeh, has a shafting-plate with three sharpened edges (Figure 60).⁽¹⁴⁵⁾ Others have thorn-shaped protuberances on the blade and descending edge, such as the "Dagger-axe of King Hsi of Yen" and "Dagger-axe of King Chih of Yen" found at site # 23 of Yan-hsia-tu, Yi county, Hopeh, which have two thorn-shaped protuberances on the descending edge.⁽¹⁴⁶⁾ These served to strengthen the hooking and piercing functions. In other cases, the shape of the shafting-plate changed, with a sickle-shape appearing on the end of the shafting-plate. One example of this is the dagger-axe excavated from tomb # 1, T'ien-hsing-kuan, Chiang-ling, Hupeh (Figure 61).⁽¹⁴⁷⁾ Another variation had a hook on the tail end of the shafting-plate, as on the dagger-axe found at the Luan-p'ing site in Hopeh.⁽¹⁴⁸⁾ Also worth mentioning are the Pa/Shu dagger-axes of the modern-day Szechwan region, which stand out particularly for their strongly-defined highly idiosyncratic regional flavor. The Pa/Shu dagger-axes were developed on the base of the dagger-axe with triangular blade of the late Shang and early Western Chou periods. The shafting plate was the point of focus, while the blade area was basically symmetrical, and curved in an effort to lengthen the sharpened edge of the blade.⁽¹⁴⁹⁾

Similar to the dagger-axe, the halberd became highly ubiquitous during the third period as its functional capabilities were increased. After the experiments of the previous period, the halberd with spearhead and dagger-axe cast together became something of a rarity. In its place came the halberd made of separately cast dagger-axe and spearhead. Archaeological evidence from this period shows dagger-axes and spears appearing together. The halberds found at the tombs of the state of Ch'u, (Yu-t'ai-shan, Chiang-ling, in Hupeh) could be used to pierce one's enemy in a forward-thrusting motion, while the blade of the dagger-axe portion could be used with a side-swiping motion. The lower edge of the blade would have been useful for hooking and cleaving.⁽¹⁵⁰⁾ The increase in functions also caused an increase in the variations on the halberd's appearance. For instance, the blade of the halberd came to project upwards, and the angle between the blade area and descending edge grew from 90 degrees to closer to 100 degrees, and then further to 110 degrees. The originally broad, straight blade became narrower and curved. As a result, the point of the blade grew sharper. This new, deeply curved blade ended in a long arc, resulting in a blade that was almost circular. These changes in the basic form itself strengthened the hooking and cleaving functions along the lower edge of the halberd's blade. These changes were in reaction to the improvements in the ability of the leather armor to protect the neck, shoulders, and hands.⁽¹⁵¹⁾ From the tomb of the Marquis Yi of Tseng at Sui county in Hupeh was found a halberd with multiple dagger-axes (Figure 62). Attached to its wooden shaft are three dagger-axes and one spearhead. The top dagger-axe is equipped with a shafting-plate, which the other two are without. The halberd measures 300-343 centimeters in length. Scholars surmise it may have been intended for use by charioteers. As a single dagger-axe is sufficient for chariot-to-chariot combat, it is believed the remaining two on this particular halberd were used by the soldier standing to the right of the driver, to fend off infantry.⁽¹⁵²⁾

C. The Rise of the Crossbow

The Warring States period saw the arrival of the crossbow in the arena of human weapons and warfare, marking a revolution in the field of long-range weapons. Prior to this, warriors had to rely on the strength of their arms in bending a bow to shoot at far-off

targets. However with the new development one merely had to place the bowstring on the crossbow notch, and to poise the arrow into a groove. The combined pent-up forces could be kept waiting for the ideal moment (Figure 63), extending the amount of time the archer had for aiming. At the perfect moment, a wall of arrows would simultaneously burst forth. The potential of the long-range weapon had been at last fully taken advantage of. In the *Shih Chi* ("Sun-tzu Wu Ch'i Lie-chuan" chapter) there is an account of the battle at Ma-ling between the states of Ch'i and Wei. "The great multitudes of crossbows on the Ch'i side were simultaneously let go, and the ranks of the Wei army fell into utter disorder." Clearly, the crossbow exercised a definite degree of intimidation on the battlefield. Warring States period sites far and wide have unearthed crossbows from Hunan, Chiangsu, and southwestern Szechwan in southern China, to Honan, Hopeh, and Shantung in the north.¹⁵³ Evidently the crossbow was widely used by all the states during the Warring States period. The area of Hunan stands out among them for the great number of crossbows that have been unearthed there. This may be an expression of the superiority of crossbow craftsmanship in the state of Ch'u at that time.¹⁵⁴ The crossbow excavated at Saopa-t'ang in the southern suburbs of Changsha city, Hunan has two grooves, over which is a sight, a *hsuan tao* for drawing the bow, and a bolt. The peculiar thing about this piece is that it has such an early date that it has no bronze chassis. To use it, the bowstring was pulled to the sight, the grooves pointing upwards to keep the bowstring immobile. The front groove was long and narrow placed horizontally. On the bottom of the crossbow was a semi-circular, flat piece of wood and a small wooden pole which made it easier to grasp the weapon, and also functioned to keep from moving the sight after the bowstring had been pulled taut.

The crossbow (Plate 45) in the National Palace Museum dates from the Western Han. It closely resembles the one unearthed at the Western Han tomb of King Ching of Chung-shan, at Man-ch'eng, Hopeh (Figure 64).¹⁵⁵ These bows are more sophisticated than those from the Warring States period, with a bronze chassis that enabled the mechanism to bear greater amounts of stress, strengthening the bow and increasing its range.

D. The Pinnacle of Artistry in Weapons

Starting with the middle stage of the Spring & Autumn period, a new artistic spirit appeared in the forms, inscriptions, and decorations of bronze weapons. This was true not only of weapons from the central plains, but also those from the north, the south, and the southwest. Strong regional differences can be seen, making this a remarkable page in the history of artistry in bronze weapons.

From the Western Chou onwards, the dagger-axe with descending edge became the standard for all dagger-axes, developing further during the third period. With the method for securing a wooden shaft fixed and settled upon, the artistic nature of the dagger-axe was developed in the wake of competitive casting between the various feudal states and frequent warfare.

The shafting-plate was the principal place for decor on the dagger-axe with insertable shafting-plate that was so prevalent in the central plains and the south. Such was the tradition from the late Shang dynasty on. However, with the passing of the middle stage of the Spring & Autumn period, innovations were seen in the method and subject of ornamentation. The "Dagger-axe with Openwork Decor of Coiled Dragons" (Plate 39) uses a motif that was popular for bronze ritual vessels and placed it on the shafting-plate, brought out in openwork. Then there are the dagger-axes of the south which used inlays of goldwire, among others, to execute designs, such as the *k'uei* dragon on the "Dagger-axe Used by Marquis Ch'

an (?) of Ts'ai" (Plate 25). A different decor appears on the "Dagger-axe Used by Prince Ts'ung of Ts'ai" (Plate 26), and yet another on a dagger-axe found at the Marquis Yi of Tseng tomb in Sui county, Hupeh.

The burgeoning of artistic expression on the dagger-axe was especially apparent in the southwest. During the Warring States period, in the Szechwan area, tradition was broken with. The central plains standard that had existed from the late Shang on, where the shafting-plate was the principal area of decoration, gave way to a focus on the blade area. As the blade area was larger than the shafting-plate, the amount of ornament possible also increased (Figure 65).⁽¹⁵⁶⁾ The tiger decor had an especially strong regional flavor (Figure 66).⁽¹⁵⁷⁾ Decoration was considered important on the weapons of the southwest, not only for the dagger-axe but equally for the spear and sword.⁽¹⁴³⁾ The "Spearhead with Cloud-thunder and Animal-mask Decor" in the National Palace Museum (Plate 44) is rich with the style of the southwest.

Attempts were also made in three-dimensional ornament, mainly on the dagger-axe with shaft-ring which was already a rare sight at this time. Possibly because the wooden shaft was inserted into the shaft-ring, making it possible for the descending edge and shafting-plate to be free for decoration which had been impossible in the more common dagger-axe with straight shafting-plate which had to reserve room for the wooden shaft. The "Dagger-axe with Bird and Shaft Cap" (Plate 30) and the "Dagger-axe with Beast and Bird Decor" (Plate 31) are examples of the above.

Although the bird on the "Dagger-axe with Bird and Shaft Cap" is badly corroded, one can still see the faint traces of inlaid gold wires. A rare find is the remnant of the wooden shaft which is inside the shaft-ring. There is a shaft-ring on the ferrule, into which the wooden shaft was inserted before being stuck in the ground. This piece is with the ferrule that came with it, the remnants of the wooden shaft, and the vividly life-like three-dimensional bird decor in gold.

The "Dagger-axe with Shaft-ring and Beast and Bird Decor" is embellished with a three-dimensional decor of a bird and a beast intertwined, between the descending edge and the shafting-plate. Seemingly, this is no longer a weapon, but a work of art. Decors similar in execution and form appear on the dagger-axe unearthed at tomb # 2719 at the Chung-chou-lu site, Loyang, Honan⁽¹⁵⁸⁾ as well as on the dagger-axe from Chiu-sheng-ts'un, T'ai-yuan, Shansi (Figure 67).⁽¹⁵⁹⁾ The "Hsuan Min Dagger-axe" (Plate 32) may have had a decor of three different animals intertwined. Unfortunately a thick coat of corrosion has covered the exquisite openwork carving.

Weapons with similarly executed decors are not common. An axe with shaft-ring and bird-shaped pommel was uncovered at the Fen-shui-ling site at Ch'ang-chih, Shansi.⁽¹⁶⁰⁾ The bird's beak is formed by the blade, while the back of its head has a strange creature, with downward-curving horns, from whose mouth the shafting-plate protrudes. The entire weapon has become part of the decoration, from blade to shafting-plate. The strangeness of this weapon has led scholars to conclude that it was a product of the peoples of the north.

As for the sword, the northern swords had as their main area of decor the hilt and the pommel. The hilt was commonly decorated with the typical northern interlocking-rings pattern, double ring pattern, rope pattern, rope of pearls pattern, sawtooth pattern,⁽¹⁶¹⁾ as well as the snake, dragon, bird, and others.⁽¹⁶²⁾ The "Dagger with Double-ringed Pommel" in the National Palace Museum is decorated with the interlocking-rings pattern. Pommels were often decorated with animal heads, double rings, or animal-horn shapes, all characteristic of the northern style (Figure 68).

By contrast, the styles of the central plain and southwest typically placed the main decor on the guard of the sword. The inlay techniques common on bronze ritual vessels were also

employed on swords, as on the "Sword with Turquoise Inlay on Guard" in the National Palace Museum (Plate 38). The inlay on the "Sword with Yüeh State Script" (Plate 36) may have fallen off. Notable are some of the swords that were made in Wu and Yüeh for the use of kings. Their decoration extends along the blade area, and was made by casting with a variety of metals. For example, in 1965 at the Wang-shan site in Chiang-ling, Hupeh, a sword of King Kou Chien was excavated. It is truly a sword worthy of a thousand years' repute (Figure 59). On the blade is a veiled decor of diamond-shapes, while on the guard are inlays of blue glass and turquoise, in a brilliant interplay of colors. At the time of excavation, it was found encased in a black lacquer wooden scabbard, with silken cords still binding the handle. On the blade, near the guard, is an inscription reading "The Sword Used by King Kou Chien of Yüeh". Research has shown that this sword was created by first casting the main portion, leaving concavities in the shapes of diamonds. The alloy for this was of 77.62% copper, 20.5% silver and 0.25% lead, and was golden in color. The alloy for filling the grooves which outline the diamond shapes was 47% silver or less, 31.27% or less of copper and 11.8% or less of lead, making for a light silver color. This was one of the methods for creating composite-alloy swords of this time.⁽¹⁶³⁾

The different styles of inscriptions on weapons lent an artistic air to their virility and obduracy. This is especially true of the "bird script" that was so popular in the south.

From the middle stage of the Spring & Autumn period through to the Warring States, the trend was for regional styles to be expressed on the bronze ritual vessels of the major states.⁽¹⁶⁴⁾ Moreover, the written language moved from a unification in the structure of characters, as well as the style of execution,⁽¹⁶⁵⁾ to a situation where different regional styles appeared.⁽¹⁶⁶⁾ From having been purely functional, the written language began placing an emphasis on both rhyming and the aesthetic, decorative nature of the written character. In the east and the south written characters tended to become longer and narrower, especially in the states of Ch'i, Hsu (徐), Hsu (許),⁽¹⁶⁷⁾ Ch'u, Ts'ai, Wu, and Yüeh.⁽¹⁶⁸⁾ In this period, when an aesthetic consciousness concerning the appearance of written characters developed, the bird script was one where the characters were works of art in themselves. They mainly appear on bronze weapons and musical instruments, mostly on the former. The bird script was most common to the states of Yüeh, Wu, Ch'u, Ts'ai, and Sung.⁽¹⁶⁹⁾

The bird script that often appears on bronze weapons takes either birds or insects as a theme, melding them into the elongated structure of the character themselves. The results are sensitive to aesthetics, and come in a multitude of forms, not exceeding thirteen.⁽¹⁷⁰⁾ Some include the bird as a morphologically important part of the character, such as the "ts'ai" character on the "Sword of Marquis Ch'an of Ts'ai" in Figure 69.⁽¹⁷¹⁾ Others insert a bird to the left of the character, such as on the "Dagger-axe Used by Marquis Ch'an (?) of Ts'ai" in Plate 26. Yet another treatment was to place a pair of birds on the top of the entire character, as on the "Sword Used by King Chou Kou of Yüeh" in Plate 37.

During the Spring & Autumn, and Warring States periods, while the bird script was one big difference separating the northern states of Yan and Chin and the western state of Ch'in from the various states in the south, even among the southern states there were regional variations (although the bird scripts were all "bird script" and mutually decipherable). The four weapons from the states of Ts'ai and Yüeh in the collection of the National Palace Museum are good examples of this. These four can be seen in Plate 26 ("Dagger-axe Used by Marquis Ch'an (?) of Ts'ai"), Plate 25 ("Dagger-axe of Prince Ts'ung of Ts'ai"), Plate 36 ("Sword with Yüeh State Script"), and Plate 37 ("Sword Used by King Chou Kou of Yüeh").

The major period of development for the bird script occurred during the middle of the sixth century B.C. to the end of the fifth century B.C., lasting approximately one hundred

and fifty years.¹⁶⁹ The four weapons mentioned above all date from the final half of the fifth century B.C. They exhibit the particular styles of the bird script of the two states Ts'ai and Yüeh, as well one of the important stages in the development of the bird script. The inspiration for the bird script that was special to Ts'ai seems to have come from the items cast for the Marquis of Ts'ai. The Ts'ai bird script adapted the straight, elongated style of the inscriptions on weapons of Ts'ai, blending this with shapes that were a cross between dragons and birds. In general, idiosyncrasies were based on decorative elements. In Ts'ai it was common practice to place the amalgam dragon-bird figures to the left of the character. This may be a characteristic of Ts'ai, and was most often seen during the reign of the Marquis Ch'an in Ts'ai. The "Dagger-axe of Marquis Ch'an (?) of Ts'ai" in the National Palace Museum is a reflection of precisely this trend. The definitive characteristics of the "Dagger-axe of Marquis Ch'an (?) of Ts'ai" appear on other products of the Marquis Ch'an of Ts'ai's reign, such as on the inscriptions of the three Marquis Ch'an of Ts'ai swords that were unearthed at the Chao-chia-ku-tui tomb at Ts'ai-chia-kang, Huai-nan, in Anhui.¹⁷¹

In contrast, the "Dagger-axe Used by Prince Ts'ung of Ts'ai" employed a different method of decoration. The elegantly long and beautifully rounded characters were emphasized by such techniques as making certain vertical strokes curved, usually in the middle of the character or at the last stroke. For example, the character 子, which curls in the middle and at the end. The final curve is especially strong, and resembles a person kneeling. A similar writing style can be seen on the "Kuo Dagger-axe of the Prince of Ts'ai" and "Chia Dagger-axe of the Prince of Ts'ai".¹⁷² It is especially apparent on the "Dagger-axe of King An Chang of Ch'u" (Figure 70). Generally this latter piece is believed to date from the reign of King Hui of Ch'u (488-430 B.C.).¹⁶⁷

In summary, the similarities and differences between the bird script of the weapons of Ts'ai, and the state of Ch'u are well worth further exploration.

The bird script of Yüeh is notable for embellishments such as "𠂇", "𠂈", and realistic depictions of birds with pointed beaks. During the Ch'i Pei-ku period (B.C. 458-448), the script became more linear and geometric, resulting in the "insect script" that is particular to Yüeh. This can be seen on the "Sword with Yüeh State script" in the National Palace Museum (Plate 36) and the Shanghai Museum (Figure 71). During the Chou-kou period (B.C. 458-441), the written characters became more pictorial and ornamental, as seen in the "Sword Used by King Chou Kou of Yüeh" (Plate 37) in the National Place Museum, the Shanghai Museum, Peking's Palace Museum (Figure 72),¹⁶⁶ and the one found at the T'eng-tien site in Chiang-ling, Hupeh.¹⁷⁴ Both these types of sword inscriptions represent the style of Yüeh. The different, idiosyncratic styles of Ts'ai and Yüeh demonstrate the major trends in the development of the bird script during the final half of the fifth century B.C.

Concluding Remarks

In the about one thousand and five hundred years of the Shang and Chou dynasties, bronze weapons underwent three major stages of development. Great changes were seen in types and functions of weapons, likely the effects of prior changes in the organization of

armies, battle strategies, and relations between the center of power in China and the outlying areas in all directions.

From the third stage of the Er-li-t'ou period to the late Shang, a period of approximately six hundred years, bronze weapons entered the first stage of their development. Especially during the late Shang, the number of weapon types increased, as well as the variations on any particular weapon. The amount of archaeological findings from this period is also markedly greater. This, seemingly, is in accordance with the gradual but great increase in the scale of armies during the late Shang. The oracle bone script, inscriptions on bronzes, ancient writings, and circumstances at archaeological sites all have yielded information on the scale of late Shang armies. Military divinations often recorded instances of three to five thousand having been drafted (*teng* 登).⁽¹⁷⁵⁾ During the Shang dynasty, the measure word for army was *shih* (師).⁽¹⁷⁶⁾ Although presently the exact number of soldiers in an army has not been determined,⁽¹⁷⁷⁾ the numbers could not have been scant, as evidenced by the oracle bones, as well as in the passages below: (from the "Chou Pen Chi" section of the *Shih Chi*) "King Chou dispatched 700,000 men to arrest King Wu." and (from "Lun-wei", *Lu-shih Ch'un-ch'iu*) "(When) King T'ang of Yin employed seventy good chariots, and six thousand soldiers who will fight to the end." In short, as armies of considerable size grew up in the late Shang, the amount of weapons needed to supply them also increased considerably. An outstanding example among archaeological sites is tomb # 1004 at Hsi-pei-kang, which even after withstanding centuries of plundering, yielded to archaeologists a total of 731 spears, 72 dagger-axes, and 141 suits of bronze armor.

The oracle bone inscriptions and other ancient writings deal mainly with relations between the Shang kingdom and its neighboring areas.⁽¹⁷⁸⁾ The military campaigns appear especially frequently in the oracle bone writing.⁽¹⁷⁹⁾ This ought to be understood as a hint of another facet of the amount of weapons needed by the late Shang armies. These campaigns may have not only influenced the increase in quantity demanded, but also the very nature of the weapons. The area of Yin-hsü is thus representative, as here there was both a growth in weapon types and styles in the late Shang. As for the areas outside the Shang center of power, the bronze weapons coming from the south, north, northwest, and southwest exhibit especially marked regional idiosyncrasies, and allow the examination of the two-way influences between Yin-hsü and the other regions.

The bronze dagger-axe, *yüeh* axe, and spearhead owe a certain amount to the south of China both for their origins and for their subsequent development. The "Yin Wu" poem from the "Shang Sung" section of the *Book of Odes* has a passage reading: "The forces of Yin are valiant and powerful. They attacked the Stat of Ch'u." (Ch'u was located south of the Shang). The oracle scripts contain another passage asking whether Ch'ueh was safe in the south or not. Clearly, there were close relations between the Shang kingdom and the south. In recent years a Shang dynasty tomb has been discovered at Tayang-chou, Hsin-kan, in Kiangsi.⁽¹⁸⁰⁾ This discovery has raised a number of questions concerning the origin and development of some types of bronze weapons. Firstly, among the finds were dagger-axes with descending edges (Figure 73). This type of dagger-axe probably appeared at An-yang sites in the third and fourth periods. Secondly, there were also halberds with both portions cast as one piece (Figure 74); the spearhead portion hooks downward. It is general consent that the related one-piece halberd dates from no earlier than the early Western Chou.⁽¹⁸¹⁾ However, the latter was primarily used to directly pierce the opponent. Thirdly, there were found both the socketed *yüeh* axe (Figure 75), and *yüeh* axes with insertable shafting-plates (Figure 76). The *yüeh* axe with insertable shafting-plate is the major type in Yin-hsü. Ordinarily, the socketed *yüeh* axe, with convex profile and curved blade, was commonly seen in the late Shang Dynasty. For both of these types of *yüeh* axe to have been found together

at the Hsin-kan tomb raises questions well worth further investigation, after more data has been gathered. Fourthly, daggers and unusual types of swords appeared at the site. The typical swords of north and south are markedly different, the general opinion being that the sword type of the south appeared in the early Western Chou. However, the shape of the Hsin-kan dagger differs from that of the late Shang northern sword. If scholars have been correct in dating the tomb at Hsin-kan to the early or middle period of Yin-hsü, then the role of the south, and its significance, in the development of Shang bronze weapons will have to be thoroughly re-evaluated.

The dagger-axe with triangular blade is an especially apparent example of the inter-relations between the Shang kingdom and the southwest. It has been responsible for sparking the interest of scholars in the late Shang state of Shu. This includes speculations on the origin of the Shu-style dagger-axe and the relations between the Shang and Shu.⁽¹⁸²⁾ In 1986 twenty dagger-axes were found at the sacrificial altarsite # 2 at San-hsing-tui in Kuang-han, Szechwan. The two edges of the blades had sawteeth rather than knife-like sharpened edges.⁽¹⁸³⁾ These dagger-axes have a strong regional flavor. It is interesting that they do not in the least resemble the dagger-axe with triangular blade that was so popular in the Shu area during the Warring States period.

The specialties of the north and the northwest during the late Shang were the sword with animal-head or rattle pommels. The knife with animal-head pommel, among others, were products of interaction with Yin-hsu. Scholars postulate that the cultures of the north and the northwest are the "Tu Fang" (土方) and "Kung Fang" (古) mentioned in the oracle bones,⁽¹⁸⁴⁾ or, possibly, it is the "Kuei Fang" (鬼方) mentioned in the "Chi Chi" chapter of the *Yi Ching* (易經).⁽¹⁸⁵⁾

In brief, the first stage in the development of bronze weapons is a mirror of the complicated interweavings of cultural and other exchanges between Yin-hsü and the areas surrounding.

During the approximately four to five hundred years from the early Western Chou to the early Spring & Autumn period, bronze weapons experienced the second stage of their development. Unlike the first and third stages, this epoch lacks clear characteristics that define it as a stage in its own right. In spite of this, it had a definite impact in opening up the path for the new elements of the third stage. In other words, the outline of the changes that occurred during the third stage was already visible during the second stage.

The major weapon of the central plain--the dagger-axe--saw innovations that led to a secure fastening of a longer wooden shaft. The type which became the norm, the dagger-axe with descending edge, enabled a relatively longer wooden shaft to be attached. The shaft of 60 centimeters or so of the late Shang gave way to a shaft of 80 centimeters or more in the early Western Chou.⁽¹⁸⁶⁾ The dagger-axes that have been found with remnants of wooden shafts attached were not in the company of chariots--it would seem this was a weapon for infantry. It seems probable that if used on a chariot, the wooden shaft would have to be longer. There is a Spring & Autumn period site at tomb # 1, Liu-ch'eng-ch'iao, Ch'ang-sha,⁽¹⁸⁷⁾ in which were found only three dagger-axes with bamboo shafts of 90-140 centimeters. The other dagger-axes all had shafts of over three meters in length. These are all dagger-axes with descending edges that are relatively long. The existence of these suggests that during the early Chou, the newly-developed dagger-axe with descending edge was used with a wooden shaft not only by infantrymen, but possibly also by charioteers. Because these latter would have demanded that the wooden shaft be very secure, the increasing importance of chariot warfare could have been a factor in these new developments.

As chariot warfare increased in importance from the Western Chou on, the consequent influences on innovations in bronze weapons are well worth noting. Late Shang sites have

turned up quite a number of chariots, some of which have appeared in the company of bronze weapons.¹⁸⁸ The majority of scholars agree that during the late Shang there were already chariots in use, and that fighting units of infantry and chariots had already been formed.¹⁸⁹ In the oracle bone writings there is the following passage: "Military chariots with three people on the right, left, and middle, and three hundred people (accompanying)." However, the actual size of the chariot fighting units in relation to the rest of the army must be considered. From the Western Chou onwards, chariot warfare would seem to have increased in importance. The size of a particular army's chariot fighting unit was used as a measure of the entire army's size in several instances, such as on bronze inscriptions and in written documents. For example: (from the *Yu Ting*) "Leading one hundred of the Duke's military chariots, one thousand infantrymen...", and (from the "Chou Pen Chi" section of the *Shih Chi*) "The Jung armies had three hundred battle chariots, and three thousand valiant soldiers." Among the weapons found with chariots are not only the arrows and other long-range weapons popular in the late Shang, but also such long weapons as the dagger-axe and the halberd.¹⁹⁰ These two types of long weapons, the dagger-axe and the halberd, became the two most important weapon types during the years from the early Western Chou to the early Spring & Autumn period. In contrast, in short weapons, only the slightest beginnings were seen in the dagger. This fact may be related to the importance of the chariot in warfare at that time.¹⁸⁷ As for the sword, it held greater importance in the third stage, wherein it developed and improved. This may also be an indicator of the nature of warfare during that stage.

The universal presence of the sword probably dates from the middle of the Spring & Autumn period or later. The whole of bronze weapons entered their third stage of development at the same time. These changes are very closely related to certain external conditions in society at that time. Changes in the nature of warfare during the middle and late stages of the Spring & Autumn period included the appearance of independent fighting units of infantry men and cavalry. The weapons and equipment of the soldiers followed suit by changing as well. The sword, suited to both infantry and cavalry, consequently appeared at this time, and was given great importance.

On the threshold between the Spring & Autumn and Warring States periods, the bronze sword became increasingly common--this was related to changes in the nature and organization of the armies. Following the middle and late stages of the Spring & Autumn period, while chariots were still in use by the feudal states, they gradually decreased in importance in contrast to the newly formed independent infantry divisions and cavalry. In the days when chariots formed the backbone of the entire army, infantry already existed. However, these had acted as appendages of the chariot, and were not decisive factors in victory or defeat. The rising importance of the infantry can be seen in the increase in their numbers in proportion to the rest of the army: to one chariot, there were three armored charioteers and seventy-two infantrymen. Another reason was that infantry units were capable of waging war on their own. Consequently, with the advent of the Warring States period, the infantry units became the mainstay of the threefold armies, in order to coordinate with the new cavalry units. These threefold armies were comprised of chariots, cavalry units, and infantry units. Not surprisingly, the sword grew in importance at this time, as it was well-suited to the purposes of both cavalry and infantry in close combat. In the previous period, it would seem that the sword had been used exclusively by fighting members of the aristocracy. By this later period it had reached the level of the common soldier. The new importance of the sword during the period in question must surely be related to the changes seen in the organization of the armies.¹⁹¹

The development of the sword took place mainly in the south. While the armies of the

central plains were still relying on chariots, different ways of waging war were cropping up in the southern states of Ch'u, Wu, and Yüeh, due to the different environmental conditions there. The south is a land of rivers and swamps, with plentiful land and abundant forests. The chariots used on the northern plains were clearly unsuited for such terrain. For this reason, infantry formed the backbone of the armies of Wu and Yüeh, and their weapon of choice was the sword, which consequently flourished and developed. The ancient legend of the Wu-Yüeh area, the *Spring & Autumn Annals of Wu and Yüeh* (吳越春秋) contains a chapter entitled: "The Biography of Ho Lu." This is a story of the casting of the Kan-chiang and Mo-yeh swords. The "King of Yüeh" swords in our possession today are masterpieces passed on to us from this famed "land of knives and swords."

The sword, then, owes its rise during the transition from the Spring & Autumn period to the Warring States period to the new focus on infantry and cavalry. In the nineteenth year of the reign of King Wu-ling of Chao (307 B.C.) great changes were made in the nature of armies--the battle dress and horseback archery of the northern "barbarians" were adopted in order to make a stand against the nomadic Lin-hu and Lou-tun peoples of the north. However, only seven or eight years later, the cavalry only occupied just eight percent of the total army. In the armies of the other feudal states, they constituted a mere one percent of the total. In the Warring States period, cavalry were used in pursuing and attacking the enemy, while chariots were used for defense. For both besieging cities and field warfare, soldiers were arranged in square formations. It wasn't until the last that hand-to-hand combat was engaged in. Generally, long-range weapons such as the crossbow were joined by such long weapons as the dagger-axe and the halberd in troop-to-troop combat. In other words, the rise of the sword did not mean the overshadowing of the dagger-axe and halberd. Rather, the sword joined their ranks, increasing the variety of weapon types available in war. This triad forms the third period of the development of bronze weapons, the golden age, in which the dagger-axe and halberd continued to hold key positions. The decor from a bronze ritual vessel of the Warring States period which is reproduced in Figure 5 illustrates how war was then carried out, with soldiers wielding dagger-axes, halberds, and swords.

The scale of wars during the Spring & Autumn and Warring States period grew tremendously, as is recorded in historical writings.⁽¹⁸⁶⁾ As wars increased both in frequency and size, bronze weapons became more efficient. Variations on their shapes increased, and artistic attributes reached a pinnacle, depending on the penchants of different kings and marquises. This era saw unending, uncountable battles. Under the sounds of clanging metal and the glint of parrying swords battles were carried out from atop chariots, on horseback, and on foot, both on land and in the water. There relentless struggles for power, with states rising to ascendancy and again disappearing to dust. By the early Spring & Autumn period, mankind had discovered a new kind of metal--iron. Silently appearing on the stage of history, the first weapons were cast, resulting in blades with a new, invincible sharpness. From the Han dynasty onwards, the advance of iron weapons could no longer be held back. Bronze weapons, ruling over a thousand years of China's history, gradually gave up their place on the stage of history as the struggles among the various feudal states ended.

Addendum

As we were going to press, a Spring and Autumn period tomb in Shensi province at Pao-chi city, Yi-men village (tomb # 2) was published, containing a gold-handled iron dagger, the overall form and handle decor of which are closely similar to the "Dagger with Handle in Openwork, Decor of Coiled Dragons" (plate 39) in this catalogue. The author of the report has dated the tomb on the basis of its contents to the early phase of the late Spring and Autumn period. See "Baoji Shi Yimen Cun Er Hao Chun Qiu Mu Fajue Jianbao," WENWU, 1993, no. 10, pp. 1-14.

NOTES

* The Wade Giles system of romanization has been adopted in principle where no translated citation was readily available. However, in instances where mainland authors have been cited, the pinyin system has been employed. References to the citations of mainland authors and ready translated citations have appeared in both systems.

- (1) Kuo Li Ku Kung Chung Yang Po Wu Yuan Lian Ho Kuan Li Chu, *Ku Kung Tung Ch'i Tu Lu*, simplified index on p. 6 of part 1, p. 305, simplified index p. 33.
- (2) A bronze knife unearthed in Lin-chia Village, Tung-hsiang Co., Kansu, hails from the Machiapang Culture (ca. 3700-3000 B.C.); the remnants of a bronze knife unearthed in Chiang-p'ing of Lien-ch'eng Village, Yung-teng Co., Kansu hails from the Ma-ch'ang Culture (ca. 2300-3000 B.C.); The Kansu Provincial Museum (Kansu Wenwu K'aoku Kungtso 30 Nian), p. 141; the bronze knife excavated at the site of Huang-niang-niang-t'ai in Wuwei Co., Kansu Province hails from the Ch'i-chia Culture (ca. 3700-2000 B.C.) (The Kansu Provincial Museum, "Excavations of the Fourth Season (1975) at the Site of Huang-niang-niang-t'ai in Wuwei Co., Kansu Province, *Kaogu Xuebao*, 1978, no. 4, p. 435. The first two of the aforementioned knives were discovered upon chemical analysis to be composed of bronze; while the remaining one was discovered to be of copper. Archaeometallurgy Group (BUIST) of Iron and Steel Technology, Beijing University, "A Preliminary Study of Early Chinese Copper and Bronze Artefacts," *Kaogu Xuebao*, 1981, no. 3, p. 294-9.
- (3) Cheng Yao-t'ien, "K'ao Kung Chi Ch'uang Wu Hsiao Chi," *T'ung Yi Lu*; Ma Heng, "Ke Chi Chih Yen Chiu," *Fan Chiang Chai Chin Shih Ts'ung Kao*, vol. 5; Kuo Mo-jo, "Shuo Chi," *Yin Chou Ch'ing T'ung Ch'i Ming Wen Yan Chiu*.
- (4) Xiao Menglong, "A Study of Bronze Weapons of the Wu State," *Kaogu Xuebao*, 1991, no. 2, p. 141-165; He Gang, "A Preliminary Study of the Bronze Swords from the Regions of the Baiyue Ethnic Groups of the Pre-Qin Times," *Kaogu*, 1991, no. 3, p. 252-62; Zhai Defang, "On the Grouping of the Bronze Daggers from Northern Regions of China," *Kaogu Xuebao*, 1988:3, p. 277-298.
- (5) Li Boqian, "Zhong Yuan Di Qu Dong Chou Tong Jian Yuan Yuan Shi Tan," *Wenwu*, 1982, no. 1, pp. 44-7.; Lin Yun, "Shang Wen Hua Qing Tong Qi Yu Bei Fang Di Qu Qing Tong Qi Guan Xi Zhi Zai Yan Jiu," edited by Su Bing-qi, *Kao Gu Xue Wen Hua Lun Ji*, pp. 129-55.
- (6) Yang Hong, *Zhong Guo Gu Bing Qi Lun Cong*, 1980, Wen Wu Press.
- (7) Chen Pei-fen, "The Composition of the Ancient Chinese Bronze Weapons, Mirrors and Its Casting Methods," *The Bulletin of The Shanghai Museum*, 1981, no. 1, p. 143-50; W.T. Chase and Ursula Martius Franklin, "Early Chinese black mirrors, and pattern-etched weapons," *Ars Orientalis*, vol. XI, pp. 215-58.
- (8) Ma Zhaozeng and Han Rubin, "Study of Chemical Treatment on Surface of Ancient Copper-Bronze Articles in China," *Chemistry*, 1988, no. 8, p. 59-61.
- (9) Chou Wei, *Chung Kuo Ping Ch'i Shih Kao*, 1957; Hayashi Minao, *Chugoku in Shu Jidai No Buki*, 1972, Tokyo; Cheng Dong et al., *Ancient Chinese Weapons--a Collection of Pictures*, 1990.

- (10) "Liang Zhou Kao Gu You Yi Zhong Da Cheng Guo: Guo Guo Mu Di Zai Du Chu Tu Da Liang Zhen Kuei Wen Wu," *Zhongguo Wenwu Bao*, 1992:1 6; "Guo Guo Mu Di Fa Jue You Huo Zhong Da Fa Xian," *Zhongguo Wenwu Bao*, 1992. 2. 2.
- (11) Umehara, Seiji *Selected Ancient Treasures Found At An-Yang Yin Sites*, plates 14-28, 1940, Tokyo; B. Karlgren, "Some weapons and tools of the Yin Dynasty," *Bulletin of the Museum of Far Eastern Antiquities* 17 (1945) pp. 101-144; Hayashi Minao, op. cit.
- (12) Li Chi, "Chi Hsiao T'un Chu T'u Chih Ch'ing T'ung Ch'i, Chung P'ien, Feng Jen Ch'i;" "Yu Pei Chu T'u Ch'ing T'ung Kuo Ping Fen Lei T'u Chieh," *Li Chi K'ao Ku Hsueh Lun Wen Chi*, part I, pp. 333-394; pp. 415-440.
- (13) Kuo Pao-chun, "The Bronze Weapons of the Yin and Chou Dynasties," *Kaogu*, 1961, no. 2, p. 111.
- (14) Ma Cheng-yuan, *Zhong Guo Qing Tong Qi*, p. 44.
- (15) *The Cemetery of the State of Kuo at Shang Ts'un Ling*, edited by the Inst. of Arch. Academia Sinica, p. 28.
- (16) The Anyang Archaeological Team, IA, CASS, "Excavation of the Yin Tombs in the Western Section of Yin-hsu, 1969-1977," *Kaogu Xuebao*, 1979, no. 1, p. 81.
- (17) *Excavation of Yinxu 1958-1961*, The Inst. Archaeology, CASS, p. 249.
- (18) *Shan Biao Zhen Yu Liu Li Ge*, Inst. of Arch. Academia Sinica, p. 20.
- (19) Kao Ch'uhsun, *Hou Chia Chuang*, HpkM 1004, p. 35.
- (20) The Feng Xi Archaeological Team, IA, CASS, "Excavation of Jing Shu's Burial, Tomb M170 at Zhangjiapo, Chang'an, Shaanxi," *Kaogu*, 1990, no. 6, p. 504-10.
- (21) *Tomb of Marquis Yi of State Zeng* (part I), The Museum of Hubei Province, p. 253.
- (22) Jingzhou Museum, Hubei Province, "The Chu State Tombs at Yutaishan at Jingling, 1984, p. 83.
- (23) Cheng Yao-t'ien, Ma Heng, Kuo Mo-ruo, op. cit. Kuo Pao-chun, *Chun Hsien Hsin Ts'un*, p. 43; Kuo Pao-chun, "Further Remarks on Ko and Chi," *Bulletin of The Institute of History and Philology Academia Sinica*, 1935, vol. 5, part 3, pp. 313-26; Guo Dewei "Rediscovery on Ge and Ji," *Kaogu*, 1984, no. 12, p. 1108-1113; Yang Hong, "Zhong Guo Gu Dai De Ji," *Zhong Guo Gu Bing Qi Lun Cong*, pp. 155-6; Li Jianmin and Wu Jia'an, "The Bronze GE Dagger-axe of Ancient China," *Kaoguxue Jikan*, 1991, no. 7, p. 126-9.
- (24) Anhui Provincial Archaeological Team, "A Spring and Autumn Period Tomb at Julidun, Shucheng, Anhui," *Kaogu Xuebao*, 1982, no. 2, p. 233.
- (25) The Joint Archaeological Team at Liulihe from IA, CASS and the Institute of Beijing Municipality, "Excavation of Big Tomb 1193 at Liulihe, Beijing," *Kaogu*, 1990, no. 1, p. 28.
- (26) Li Jianmin, op. cit., p. 128.
- (27) Hubei Provincial Museum et al., *The Sword of Gou Jian, King of Yue State and Teh Spear of Fu Chai, King of Wu State*, 1984.
- (28) Hebei Provincial Museum et al., *Hebei Chu Tu Wen Wu Shuan Ji*, p. 141.
- (29) The Hunan Provincial Museum, "Changsha Liu Cheng Chiao Yi Hao Mu," *Kaogu Xuebao*, 1972, no. 1, p. 64.
- (30) Li Hsiao Ting, *Chia Ku Wen Tzu Chi Shih*, vol. 12, p. 3795.
- (31) Rong Geng, *Jin Wen Bian*, p. 799, 804.
- (32) CPAM, Hopeh Province, "Excavation of the Tombs of the State of Cheng Shan in the Warring States Period at Pingshanxian, Hebei Province," *Wen Wu*, 1979, No. 1, p. 4.
- (33) Wang Fu, *Hsuan Ho Po Ku T'u*, vol. 26, pp. 49-50.
- (34) Ch'ing Kao Ts'ung, *Hsi Ch'ing Ku Chien*, vol. 37, p. 5.
- (35) Chen Meng-chia, *Hai Wai Chung Kuo T'ung Ch'i T'u Lu*, p. 77.

- (36) Fan Yong. "The Bronze Axe and Yue of Ancient Southwestern China," *Kaogu Xuebao*, 1989, no. 2, p. 161.
- (37) Yang Xizhang. "The Bronze Yue-axe of the Shang Dynasty," *Archaeological Researches in China: a Collection of Papers in The Commemoration of The Fiftieth Year of Professor Xia Nai's Work in Archaeology*, p. 135. Yüeh-axe were used for both excutions and battle. This essey, however, only discuss their use in warfare.
- (38) Cheng Dong, *Ancient Chinese Weapons--a Collection of Pictures*, p. 58.
- (39) Li Hsiao-t'ing, op. cit., no. 4, p. 1513; Jung Geng, op. cit.
- (40) Shih Chang-ju. "Hsiao T'un Yin Tai Te Cheng T'ao Ping Ch'i," *Bulletin of the Institute of History and Philology Academia Sinica*, 1950, vol. 22, pp. 18-25.
- (41) T'ang Lan. "Studies on the Use of the 'Bow Shaped Bronze Object'," *Kaogu*, 1973, no. 3, p. 178-179.
- (42) Lin Yun, op. cit.; edited by Su Bingqi, *Kao Gu Xue Wen Hua Lun Ji*, pp. 144-54.
- (43) Sun Ji, "Shi Lun 'Gung Xing Qi' De Yong Tu He Ding Ming," p. 42.
- (44) Chen Fang-mei. "Tsai Lun Ku Kung So Ts'ang Shang Mo Chou Chu De Yi Hsing Ping Ch'i--Chien Lun Yin Xu Wen Hua Kuan Hsi Wen T'i." (unpublished as of this printing)
- (45) The Erh-Li-t'ou Archaeological Team, IAAS, "The Bronzes and Jades Recently Discovered at Erh-li-t'ou in Yan-shih Co., Honan," *Kaogu*, 1976, no. 4, p. 259-263.
- (46) The Anyang Archaeological Team. IA, CASS, op. cit., 1979 (1), p. 91-97
- (47) Some believe that the bronze dagger-axe *ge* has its origins in the stone *ge*. Although stone dagger-axes have been unearthed in Fukien and elsewhere, their dating remains a subject of controversy. Although the idea that the stone dagger-axe came from the Neolithic Age was once put forth, it is still largely believed to have been influenced by the bronze counterpart (Zeng Fan, "A Study of the Prehistoric Remains Discovered in Fujian Province," *Kaogu Xuebao*, 1980, (3), p. 263-284; Zeng Fan, "Guan Yu Fujian Yu Zhongyuan Shang Chou Wen Hua De Guan Xi Wen Ti--Chu Tu De Shi Ge Tan Qi," *Zhong Guo Kao Gu Xue Hui Di Si Ci Nian Hui Lun Wen Ji*, 1983, p. 146. Some believe the bronze dagger-axe *ge* to have its origins in the Neolithic stone sickle. Yang Xizhang, "Some Problems Related to the Bronze Daggers and Spears of the Shang Dynasty," *Kaogu Yu Wenwu*, 1986, (3), p. 65.
- (48) Shih Changju, *Hsiao-T'ung Book 1. The Discovery and Excavation of the Site, part II. Yinhsu Mu Tsang Chih 5. Ping Ch'u Mu Tsang*, pp. 88-9.
- (49) Wang Lin, "Joint Casting of Metal and Non-metal in the Shang Dynasty as Seen in Several Bronze Weapons with Jade Handles," *Kaogu*, 1987, no. 4, p. 363-4.
- (50) *Tomb of Lady Hao at Yin Xu in Anyang*, p 106 The Inst. of Arch, CASS.
- (51) "Excavations of the Remains of the Yin Dynasty at Cheng-chow, Honan," *Kaogu Xuebao*, 1957, no. 1, p. 71.
- (52) Chen Fang-Mei. "The Palace Museum Collection of Alien-Style Weapons from the Late Yin to Early Chou Dynasties and Inter-cultural Relations in Early China. Bronze Weapons of the Shang and Chou Dynasties, Part II, *Proceedings of The International Colloquium on Chinese Art History*," 1991, *Antiquities, Part I*, pp. 257-306.
- (53) The Anyang Archaeological Team, IA, CASS, op. cit., *Kaogu Xuebao*, 1979 (1), p. 91.
- (54) Kao Ch'uhsun, *Hou Chia Chuang, HpkM 1004*, p. 35.
- (55) Yang Xizhang, op. cit., p. 65; Chen Zhi Da, "Yinxu Wu Qi Gai Shu," *Qing Zhu Su Bing Qi Kao Gu 55 Nian Lun Wen Ji*, 1980, p. 328; Li Xueqin, "Dagger-axes with Lots of Holes in the Late Shang and Early Zhou Dynasty," *Relics & Museology*, 1991, no. 6, p. 3-5.

- (56) Shi Changju, *Hsiao T'un, Book 1 The Discovery and the Excavation of the Site, part II. Yinhsu Mu Tsang Chih 3, Yi Ch'u Mu Tsang.*
- (57) Guo Baojun, "1950 Yinxu Fa Jue Bao Gao," *Kaogu Xuebao*, 1951 (5), plate 24, 1; Ma Dezhi et al., "1953 Anyang Da Si Kong Cun Fa Jue Bao Gao," *Kaogu Xuebao*, 1955 (9), plate 11:3.
- (58) Tong Enzheng, "Bronze Dagger-Axes (Ge) in Southwestern China," *Kaogu Xuebao*, 1979, no. 4, p. 445.
- (59) Tang Jinya and others, "Bronzes of the Shang Dynasty Unearthed at Chenggu in Shaanxi," *Kaogu*, 1980, no. 3, p. 212; Cheng Xuehua et al., "Some Yin and Chou Bronzes Unearthed or Acquired in Shensi Province in Recent Years," *Wenwu*, 1966, no. 1, p. 2.
- (60) Feng Hanji, "Bronzes Unearthed in Penxian County, Sichuan Province," *Wenwu*, 1980, no. 12, p. 38; Wang Jia You, "Ji Szechuan Peng Xian Zhu Wa Jieh Chu Tu De Tong Qi," *Wenwu*, 1961, no. 11, p. 28-31.
- (61) Li Boqian, "The Copperware Collection Discovered in Chenggu County and Its Relationship with the Early Shu Culture," *Kaogu Yu Wenwu*, 1983, no. 2, p. 70; Lu Liangcheng et al., *Yu State Cemeteries in Baoji*, p. 431-3.
- (62) Zhai Wei, Huang Wei, "Shi Lun Wu Hu Shu Shi Ge De Ji Ge Wen Ti," *Kaogu*, 1989:3, p. 254-5.
- (63) Yang Xizhang, op. cit., p. 65.
- (64) Ma Dezhi, op. cit., *Kaogu Xuebao*, 1955 (9), p. 51.
- (65) Chen Zhida, op. cit., *Qing Chu Shu Bing Qi Kao Gu 55 Nien Lun Wen Ji*, p. 392.
- (66) *Excavation of Yinxu*, Figure 189.
- (67) The Hupei Provincial Museum, "Report on the 1963 Excavation of a Shang Dynasty Site at the Ancient City of P'anlung in Huangp'i County, Hupei Province," *Wen Wu*, 1976, no. 1, Plate 5:10; The Hupei Provincial Museum, "The Shang Dynasty Bronzes of the Erh Li Kang Period Unearthed at the Ancient City of P'anlung in Huangp'i County," Hupei Prov., *Wen Wu*, 1976, no. 2, p. 26.
- (68) Liao Yongmin, "Zhengchou Shi Fa Xian De Yi Chu Shang Dai Ju Zhu Yu Zhu Zao Tong Qi Yi Zhi Jien Jieh," *Wenwu*, 1957, no. 6, p. 73-4.
- (69) See footnote 67 for Hubei Huangpo Longpancheng. However, in recent times, a *yueh* axe from Xingan in Jiangxi has been unearthed. Its decor and workmanship are exceptional. This group can possibly be dated to the Er-li-t'ou period, a lower limit on the dating being still a subject of controversy. Jiangxi Provincial Institute of Cultural Relics and Archaeology, Museum of County of Xingan, "Excavation of the Shang Tomb at Dayangzhou in Xingan, Jiangxi," *Wen Wu*, 1991, no. 10, p. 1-23.
- (70) Fu Xianguo, "On the Stone Axe-yue of Neolithic China," *Kaogu*, 1985, no. 9, p. 820-832; Wang Renxiang, "Some Questions Concerning Two-Shouldered Stone Tools in Neolithic China," *Southern Ethnology & Archaeology*, 1987 (1), p. 21-36; The Nanjing museum, "Excavation of the Sidun Site at Changzhou in Jiangsu in 1983," *Kaogu*, 1984, no. 2, p. 109-129.
- (71) Chen Fang-mei, "Shang Chou Ch'ing T'ung Fu Yueh Shih Lun--Yi Shu Shih T'an So De Hsin Ch'ang Shih Shang Chou Ch'ing T'ung Ping Ch'i Yen Chiu Chih San" (unpublished at the time of this printing).
- (72) Archaeological Team, Anyang City, "Excavation of Tomb 269 East of Qijiazhuang Within the Yin Ruins," *Kaogu Xuebao*, 1991, no. 3, plate 5:5.
- (73) The Anyang Archaeological Team from IA, CASS, "Excavation of Two Yin Graves at Dasikongcunnandi, Anyang in 1986," *Kaogu*, 1989, no. 7, p. 592.

- (74) Includes Jing Jieh Cun in Lingshi Co., Shanxi (Dai Zunde, "Shanxi Ling Shi Xian Jing Jieh Cun Shang Dai Mu He Qing Tong Qi," *Wen Wu Zi Liao Cong Kan*, no. 3(1980), p. 48, figure 4); Shi Lou Yi Dieh Huei Ping ("Shanxi Shi Lo Yi Dieh Huei Ping Fa Xian Shang Dai Bing Qi," *Wenwu*, 1974, no. 2, p. 69); Yang Jia Mao in Zhong Jiao Co., Shaanxi (Zong Yu et al., "Shan Bei Fa Xian Shang Chou Qing Tong Qi," *Kaogu*, 1988, no. 10, p. 956, figure 2, 3).
- (75) Bao Quan, "Relics of the Early Shang Dynasty Uncovered at Laoniupo near Xi'an," *Kaogu Yu Wenwu*, 1981, no. 2, p. 17, Plate 9:2.
- (76) Zhao Zongshiu, "Shantung Si Shui Fa Shien Shang Dai Qing Tong Qi," *Kaogu*, 1988, no. 3, p. 284, figure 3.
- (77) Yang Shaoshun, "Some Bronzes of the Shang-Zhou Period Unearthed at Liulin in Shanxi," *Kaogu*, 1981, no. 3, p. 211-2.
- (78) CPAM, City of Peking, "The Western Chou Wooden-Chambered Tombs at Pai-fu in Ch'ang-p'ing, Peking," *Kaogu*, 1976, no. 4, p. 250.
- (79) Lu Liancheng and Hu Zhisheng, *Yu State Cemeteries in Baoji*, p. 115, plate 50:1, plate 26:1.
- (80) Cultural Centre of K'e-tso County and others: The Shang and Chou Bronzes Unearthed at San-wan-tzu Village in K'e-tso Co., Liaoning Province, *Wen Wu*, 1977, no. 12, p. 28.
- (81) Zhong Guo Mei Shu Quan Ji Bian Ji Wei Yuan Hui, *Zhong Guo Mei Shu Quan Ji*, no. 4, *Gong Yi Mei Shu Qing Tong Qi, Part I*, p. 33.
- (82) Ma Cheng-yuan, *Zhong Guo Qing Tong Qi*, 1988, pp. 65-8.
- (83) Ch'ing Kao Ts'ung, op. cit.
- (84) *Zhong Guo Mei Shu Quan Ji*, vol. 4, p. 32; CPAM, City of Peking, new Shang and Chou bronzes collected by the City of Peking, *Wen Wu Zi Liao Zong Kan*, 1978, no. 2, pp. 818-20.
- (85) This style of *yüeh* with a semi-circular blade and tubular socket is of unique form and has not yet been found in Yinxu. It differs markedly from the *yüeh* found there and is also not found in the northern areas. However, one similar specimen was unearthed in Qinghai, another is reputed to have been unearthed in Shaanxi, suggesting a northern style. Other similarly styled specimens provide further support for this view. A *yüeh* with three lashing holes unearthed in Chunhua County in Shaansi Province (Yao Shengmin, "Bronzes of Shang and Zhou Dynasties Unearthed in Chunhua County in Shaanxi Province," *Kaogu Yu Wenwu*, 1986, no. 5, p. 13), although smaller, its semi-circular blade, three lashing holes, tubular socket, and ornamentation, and rectangular depression at the top of the socket are all similar to the two *yüeh*'s in the NPM's collection. Authorities have dated this tomb to the late Shang or early Western Chou Dynasty. Furthermore, a late Shang bronze knife unearthed in Wei Jia Ho, Qi Shan, in Shaanxi Province (Shaanxi Kao Gu Yan Jiu Suo et al., *Bronzes of Shang and Zhou Dynasties Unearthed in Shaanxi Province*, Vol. I, plate 14), possesses upward curling spirals on the blade. The four holes on the blade also are characteristic to this piece and link it with the three-holed *yüeh*. The decor on the late Shang *yüeh* unearthed in Lu Zhai Cun, Fu Feng, Shaanxi Province and that on the late Shang *yüeh* from Lao-niu-po Tomb 41 in Xian takes the form of raised lines and shows similarities with the *yüeh* with seven lashing holes in the NPM's collection. Also, an unusually shaped *ge* dagger-axe unearthed at Tomb No. 2 in Bai Fu, Chang Ping, Peking, is composed of a tubular socket and a semi-circular shafting plate. Archaeology Speciality, History Department, The Northwest University: Excavation of the Shang Dynasty Cemetery at Laoniupo in Xi'an, *Wen Wu*, 1988, no. 6, p. 12;

- CPAM, City of Peking, op. cit., *Kaogu*, 1976, p. 250, plate 3:1) Its constitution is very similar to the two *yüeh*'s in the NPM collection from Chunhua. In summary, it appears that *yüeh* styles similar to the NPM's *yueh*'s with tubular sockets and semi-circular blades and other weapon styles despite not being widespread in the north during the late Shang and early Chou periods, were still present.
- (86) The Erlitou Archaeological Team, IA, CASS, "Excavation of a Shang Site at Erlitou in Yanshi, Henan in Autumn 1980," *Kaogu*, 1983, no. 3, p. 204, figure 10:8.
 - (87) Li Weiming, "Jian Lun Shang Dai Qing Tong Dao," *Zhong Yuan Wen Wu*, 1988, no. 2, pp. 42-7.
 - (88) Kao Ch'uhsun, "Bronze Knives in the Knife-ax Burials at the Yin-Shang Sites, Anyang," *Bulletin of The Institute of History and Philology Academia Sinica*, 1967, vol. 37, pp. 355-381.
 - (89) The Anyang Archaeological Team, IA, CASS, "Excavation of Tomb No. 1713 in the Western District of Yinxi, Anyang," *Kaogu*, 1986, no. 8, plate 4:2.
 - (90) The first type of large knife is seen in Plate 65 and elsewhere in *Excavation of Yinxi*, The Institute Archaeology, CASS.
 - (91) The Archaeological Team, Bureau of Culture, Hopei Province, "The Early Warring States Bronzes Unearthed At Ts'ao Tao Kou, Ch'ing Lung Co., Hopei," *Kaogu*, 1962, no. 12, p. 644.
 - (92) Yang Shaoshun, "Shang Dynasty Bronzes Unearthed in Chujiaju and Caojiayuan in Shilou, Shanxi Province," *Wen Wu*, 1981, no. 8, p. 51-3; Yang Shaoshun, "Some Bronzes of the Shang-Zhou Period Unearthed at Liulin in Shanxi," *Kaogu*, 1981, no. 3, p. 211; Wu Zhenlu, "Baode Xian Xin Fa Xian De Yin Dai Qing Tong Qi," *Wenwu*, 1972, no. 4, pp. 62-6; Tian Guangjin et al., *a Study of Ordos Bronzeware*, p. 2; Guo Yong, "Shi Lou Hou Jia Gou Fa Shien Shang Dai Qing Tong Qi," *Wenwu*, 1962, no. 4, 5, p. 33, 34, figure 4; Shanxi Institute of Archaeology and Cultural Centre of Lingshi County, "The Shang Dynasty Tombs at Jingjiecun in Lingshi," Shanxi, *Wen Wu*, 1986, no. 11, p. 4; Qi Tiengu, "Shaanxi Zu Chang Xian Chu Tu De Shang Dai Tong Qi," *Kaogu Yu Wenwu*, 1989, no. 5, p. 140, figure 1:2; Hei Guang, Zhu Jieyuan, "Shaanxi Suide Yentoucun Fa Xien Yi Pi Jiao Cang Shang Dai Tong Qi," *Wenwu*, 1975, no. 2, pp. 82-7.
 - (93) Shi Changju, *Hsiao T'un, Book 1, The Discovery and Excavation of the Site, part II, Pei Tsu Mu Tsang Shang*, pp. 126-141; Kao Ch'u-hsun, op. cit., 1967, plate 2:1, 2, plate 7:2; The Anyang Archaeological Team, IA, CASS, op. cit., 1986, p. 709; Yang Yubin and Jia E, *The Unearthed Bronzes of Shang-Zhou Dynasty in Henan Province*, part. 1, plate 291; Henan Wen Hua Ju Wen Wu Gong Zuo Dui, "1958 Cun Henan Anyang Shi Da Si Kong Cun Ying Dai Mu Zang Fa Jue Jien Bao," *Kaogu Tongxun*, 1958 (10), p. 56).
 - (94) As in Shilou in Shanxi ("Shanxi Shilou Xin Zheng Ji De Ji Jien Shang Dai Qing Tong Qi," *Wenwu*, 1976, no. 2, p. 94); Shi Lou Yi Dieh ("Shanxi Shi Lou Yi Dieh Fa Shien Shang Dai Tong Qi," *Kaogu*, 1972, no. 4, p. 30); Ho Lan Jia Gou in Suide Co., Shaanxi (The Museum of Suide County, "Bronzes Unearthed at Suide, Shaanxi," *Kaoguxue Jikan* No. 2, 1982, p. 41; Laoniupo in Xi'an (Bao Quan, op. cit., p. 17); Qi Shan Wei Jia Ho (*Bronzes of Shang and Chou Dynasties Unearthed in Shaanxi Province*, plate 14) and in Chun Hua (Yao Shengmin, op. cit., pp. 13-19).
 - (95) Li Xueqin, "Shang Qing Tong Qi Duei Xi Tu De Ying Xiang," *Yindu Journal*, 1987:3 collected in *Li Xueqin Ji*, pp. 122-133, 1989, Harbin; Liu Yiman, "Bronze Knives from the Yin Ruins," *Kaogu*, 1993, no. 2, p. 159.
 - (96) The second kind of large knife can be found in Xi-bei-gang Tomb 1335, ten pieces in

- total (I am indebted to the Institute of History and Philology, Academia Sinica for this information) combined with Guo Baojun's nine pieces from Tomb 1355 (Guo Baojun, op. cit., *Kaogu*, 1961, p. 111); two pieces from Tomb No. 1713 in Yinxu (Yang Xichang, Yang Baocheng, op. cit., 1986, p. 703-712); six pieces from the Guozhuang Tomb at Anyang (Anyang Municipal Archaeological Team, "A Yin Tomb discovered North of Guozhuang Village," Anyang, *Kaogu*, 1991, No 10, p. 907) two pieces from Tomb 160 north of Gvojiashuang Village (Anyang Archaeological Team, *Kaogu*, 1991, no. 5, p. 390-1); two pieces from Tomb 269 east of Qijiazhuang (Anyang Archaeological Team, *Kao Ku Xuebao*, 1991, no. 3, p. 343).
- (97) Jiangxi Provincial Institute of Cultural Relics and Archaeology, Museum of County of Xingan, "Excavation of the Shang Tomb at Dayangzhou in Xingan, Jiangxi," *Wen Wu*, 1991, no. 10, p. 12.
- (98) Li Xueqin, "Problems Related to the Shang Tomb at Dayangzhou in Xingan," *Wen Wu*, 1991, no. 10, p. 36.
- (99) Karlgren's article concerning Shang Dynasty weapons and implements features on plate 32, serial no. 182 (8) two short swords that are reputed to have been unearthed in Anyang, and specimen no. 182 also bears the characteristic patina. (B. Karlgren, "Some weapons and tools of the Yin Dynasty," *Bulletin of The Museum of Far Eastern Antiquities*, 17 (1945) pp. 111-2.) raises the possibility of the bronze dagger being found in Anyang.
- (100) Lin Yun, "Shang Wen Hua Qing Tong Qi Yu Bei Fang Di Qu Qing Tong Qi Guan Xi Zhi Zai Yen Jiu," edited by Su Bing-qi, *Kao Gu Xue Wen Hua Lun Ji*, pp. 191-195; Chen Fang-mei, op. cit., *Antiques*, pp. 275-306.
- (101) Chen Fang-mei, "Tsai Lun Ku Kong So Tsang De Shang Mo Chou Ch'u De Yi Hsing Ping Ch'i--Chien Lun Yin Hsu Yu Pei Fang Wen Hua Kuan Hsi Wen T'i." (unpublished as of this printing)
- (102) Lin Yun, op. cit., p. 144; "C.B. Ji Xie Lie Fu Tong Xun Yuan Shi Zai Beijing Suo Zuo De Xue Shu Bao Gao," *Kaogu*, 1960, no. 2, p. 53.
- (103) Hayashi Minao, op. cit. p. 31.
- (104) Guo Baojun, *Chun Hsien Hsin Ts'un*, p. 40-1
- (105) The Joint Archaeological Team at Liulihe from IA, CASS, and the Institute of Beijing Municipality, op. cit., 1990, no. 1, pp. 20-31.
- (106) The Archaeological Team of Kansu Province Museum, "The Western Chou Tombs at P'ai-ts'ao-p'o on Ling-t'ai County, Kansu Province," *Kaogu Xuebao*, 1977, no. 2, p. 113, 115.
- (107) Cheng Yao-t'ien, "Yeh Shih Wei Ke Chi K'ao," *Ch'uang Wu Shiao Chi*, section, *K'ao Kung Chi* chapter of the *T'ung Yi Lu*.
- (108) Kuo Mo-jo, "Shuo Chi," *Yin Chou Ch'ing T'ung Ch'i Ming Wen Yen Chiu*.
- (109) Kuo Pao-chun, op. cit., 1935, pp. 313-26
- (110) Guo Dewei, op. cit., *Kaogu*, 1984 (12), pp. 208-1112.
- (111) Li Jianmin, op. cit., 1991, no. 7, p. 129
- (112) Hopei Provincial Museum et al., *Gao Cheng Tai Xi Shang Dai Yi Zhi*, p. 32.
- (113) CPAM, Changwei District, Shantung Province, "Report on the Trial Excavation at the Site of Hsian in Chiaohsien, Shantung Province," *Wen Wu*, 1977, no. 4, p. 67; The Liuliho Archaeological Team of IAAS, CPAM of the City of Peking and the Bureau of Culture, Fangshan Co., "Excavation of the Western Chou Tombs of Immolated Slaves at Liuliho in Fangshan Co.," *Kaogu*, 1974, no. 5, p. 315.
- (114) The above discussion of issues relating to the categorization of the Western Chou halberd is based upon the penetrating research of Professor Yang Hong into these

- topics, "Zhong Guo Gu Dai De Ji," *Zhong Guo Gu Bing Qi Lun Cong*, pp. 152-162 (1985).
- (115) Wu En, "Notes on the Bronze Daggers of Northern China," *Kaogu*, 1978, no. 5, pp. 325-6.
- (116) CPAM, Jouda League, Liaoning Province and the Northeast Archaeological Team, IAAS, "Excavation of a Stone Chamber Tomb at Nan-shan-keng in Ning Ch'eng County," *Kaogu Xuebao*, 1973, no. 2, p. 32-3.
- (117) *The Cemetery of The State of Kuo at Shang Ts'un Ling*, edited by The Inst. of Arch. Academia Sinica, M1052 Plate 35:1, M1705 Plate 46:6; *Luo Yang Zhong Zhou Lu*, M2415:1 Plate 46:1.
- (118) Li Boqian, op. cit., *Wen Wu*, 1982, no. 1, pp. 44-8.
- (119) The Archaeological Team of Kansu Province Museum, The Western Chou Tombs at Pai-Ts'ao-p'o in Ting-t'ai County, Kansu Province, *Kaogu Xuebao*, 1977, no. 2, p. 114-5; Shensi Provincial Museum and the Cultural Centre of Ling-tai Co., "Excavations of the Western and Eastern Chou Tombs at Ling-tai Co., Kansu Province;" *Excavations at Feng Hsi* (1955-1957), The Inst. of Arch., Academia Sinica, p. 118-9; Shaanxi Provincial Museum et al., "Shaanxi Qi Shan Li Cun Fu Jin Chou Yi Zhi De Diao Cha He Shi Jueh," *Wen Wu Zi Liao Cong Kan*, no. 2 (1978), p. 29; The Fengxi Archaeological Team, IA, CASS, "Excavation of M 183 Catacomb of the Western Chou Dynasty at Zhangjiapo, Chang'an, Shanxi," *Kaogu*, 1989, no. 6, pp. 524-9.
- (120) Xia Xingnan, "Zhejiang Changxing Chu Tu Wu Jian Shang Chou Tong Qi," *Wen Wu*, 1979, no. 11, p. 712; Xia Xingnan, "Bronze Swords of the Wu, Yue and Chu States of the Chou Dynasty discovered at Changxing, Zhejiangm," *Kaogu*, 1989, no. 1, pp. 1-9.
- (121) Liu Ho Hui, "Jin Man Kao," *Wen Wu Ji Kan*, 1981, no. 3, p. 291; Feng Puren, "Wu Guo Qing Tong Bing Qi Chu Tan," *Zhong Guo Kao Gu Xue Hui Di Si Ci Nian Hui Lun Wen Ji*, 1983, p. 139; Ye Yu Qi, "Jiangsu Wu Xian Chu Tu Yi Pi Chou Dai Qing Tong Jian," *Kaogu*, 1986, no. 4, pp. 372-4.
- (122) Xiao Menglong, op. cit., p. 4
- (123) The Former Palace Museum of Shenyang and CPAM, City of Shenyang, "Excavation of Two Bronze Age Tombs at Cheng-chia-wa-tzu in Shenyang," *Kaogu Xuebao*, 1975, no. 1, pp. 141-155; The Liaoning Provincial Museum, "Excavation of the Tombs Containing Bronze Daggers at Sanguandian, Linyuan, Liaoning," *Kaogu*, 1985, no. 2, 125-130; Jilin Wenwu Guan Li Wei Yuan Hui, "Jilin Huaide Taqingshan Fa Xian Qing Tong Duan Jian," *Kaogu*, 1974, no. 4, p. 276.
- (124) T'ien Kuang-chin, "The Hsiung Nu Tombs at T'ao-hung-pa-la," *Kaogu Xuebao*, 1976, no. 1, p. 131-143; Tian Guangjin et al., *a Study of Ordos Bronzeware*, plate 26, 27.; The Hopei Bureau of Culture Archaeological Team, "Excavation of the Warring States Tomb at Pei-hsin-pao, Huai-lai Co., Hopei Province," *Kaogu*, 1966, no. 5, p. 231.
- (125) Hebei Province, CPAM, *Hebei Chu Tu Wen Wu Xuan Ji*, figure 96.
- (126) In dividing bronze daggers into different categories for study, Zhai De-fang distinguishes a category of daggers with handles bearing sockets or shaft-rings. (Zhai De-fang, op. cit., p. 282)
- (127) ".....using this to attack the Shan-jung tribe in the north and the Kingdom of Chu in the south." *Shih Chi*, Hsiungnu Lieh Chuan.
- (128) Lin Yun, "Bronze Swords of the Northeastern Type in Ancient China," *Kaogu Xuebao*, 1980, no. 2, p. 139; Zhang Xiyong, "On the Antennary-handled Sword from the North and Northeast of China," *Kaogu*, 1984, no. 8, pp. 749-751; Zhai Defang, op. cit., 1988, pp. 394-7.

- (129) Dr. Li Boqian divides Eastern Chou swords into four types (op. cit., *Wenwu*, 1982, no. 1, p. 44), but places the sword type with raised median ridge in category one defined in this book. Furthermore, although this type appears in the central plains, it was not commonly found. For this reason, use of Lin Shou-tsin's classification into three types has been maintained. (Lin Shou-tsin, "Bronze Daggers and Swords of the Eastern Chou," *Kaogu Xuebao*, 1962, no. 2, p. 75)
- (130) *Luo Yang Zhong Zhou Lu*. Inst. of Arch., Academia Sinica, M2737 Plate 59:7; M2717, Plate 67:1; M2729 Plate 58:9.
- (131) Xiao Menglong, op. cit., pp. 150-1; He Gang, op. cit., 1991, p. 252-262.
- (132) The Archaeological Team, Bureau of Culture, Anhui Province, "The Warring States Tombs at Chao Chia Ku Tui, Ts'ai Chia Kang Village, City of Huainan, Anhui Province," *Kaogu*, 1963, no. 4, p. 204, plate 4:9 (2. 18. 6).
- (133) The Worker-Peasant Archaeological Training Class of Hsiangyang Prefecture, "Hupeh Province Bronze Sword of Fu-ch'ai, the King of Wu, and other relics excavated from the Tomb no. 12 at Ts'ai-p'o in Hsiangyang, Hupeh Province," *Wen Wu*, 1976, no. 11, p. 65, Plate 4:1.
- (134) Information pertaining to the inscriptions and country of provenance of the two swords of the King of Yüeh can be found in my article, "Ku Kung Te Ts'ai Kuo Ke Yu Yüeh Wang Chien--Shang Chou Ch'ing T'ung Ping Ch'i Yen Chiu Chih Ssu," (unpublished at the time of this publication)
- (135) The Chinchow Museum, "Excavation of the Warring States Tomb No. 1 at T'eng-tien in Chiangling County, Hupeh Province," *Wen Wu*, 1973, no. 9, Plate 2:1.
- (136) Ma Daokuo, "Anhui Lujiang Fa Xian Wu Wang Guang Jian," *Wen Wu*, 1986, no. 2, p. 64.
- (137) Li Boqian, op. cit., p. 44; Xiao Menglong, op. cit., pp. 150-1; He Gang, op. cit., 1991, p. 252-262.
- (138) Chen Pei-fen, op. cit., p. 147.
- (139) My sincerest thanks to Mr. Hua Jueming for his information obtained through correspondence.
- (140) *Chou Li*, K'ao Kung Chi: "The swords of Wu and Yüeh when moved to other places loses its fine capabilities as a result of changes in climate and soil. . . .The copper and tin of Wu and Yüeh are beautiful indeed." *Chuang Tzu*, K'o Yi: "Those who have the swords of Wu and Yüeh hide them, dare not use them, and value them greatly." *Ch'u Ts'u*, Kuo Shang: "Bearing a ge from Wu and clad in armor." *Chan Kuo Ts'e*, Chao Ts'e San records the words of Chao She: "When one tries the sword from Wu on flesh, one finds it rips through a cow or horse; when tried on metallic substances, it cleaves a bowl; after striking a column, three pieces result; it nearly pulverizes a stone." *Lu Shih Ch'un Ch'iu*, Shih Chun Lan, Hsing Lun: ".....and then he was killed at Yu Shan using a Wu knife."
- (141) Hubei Provincial Museum, *The Sword of Gou Jian, King of Yue State, and The Spear of Fu Chai, King of Wu State*, p. 13 (1984) Hong Kong.
- (142) The Provincial Museum of Hunan, "The Ch'u Tombs of Changsha," *Kaogu Xuebao*, 1959, no. 1, pp. 50-51, Plates 9:4, 5. Plates 10:1, 3, 5, 6, 9, 8.
- (143) My sincerest thanks to Mr. Ma Chengyuan, Director of the Shanghai Museum for his information obtained through correspondence.
- (144) Use of more than one material in fabrication is also seen in bronze mirrors, which apparently hail primarily from southern China (The Provincial Museum of Hunan, op. cit., plate 6:1) and the southwest (The Szechuan Provincial Museum and the Chungking Museum, "Excavation of the Warring States Earthen Shaft Tombs at

- Fu-ling, Szechuan Province." *Wen Wu*, 1974, no. 5, p. 75, figure 27 and thereabouts).
- (145) CPAM, Hopei Province. "Excavation of Tomb No. 44 at Yen-hsia-tu in Yi-hsien, Hopei Province," *Kaogu*, 1975, no. 4, p. 234, plate 10.
- (146) CPAM, Hebei Province. "Bronze Dagger-axes Unearthed in the Site No. 23 at Yanxiadu," *Wen Wu*, 1982, no. 8, pp. 44-5, figure 5:12.
- (147) Jingzhou District Museum, Hubei Province. "The Tianxingguan Tomb No. 1 of Ancient Chu State in Jiangling," *Kaogu Xuebao*, 1981, no. 1, plate 15:8, the author refers to it as a "ji ge".
- (148) Hebei Wen Wu Yen Jiou Suo, "Luan Ping Xian Hu Shi Ha Pao Shan Shan Rong Mu Di De Fa Xian," *Wen Wu Zi Liao Cong Kan*, 1983, no. 7, p. 73, figure 16. Li Jianmin, op. cit., *Kao Gu Xue Ju Kan*, 1991 (7), p. 118.
- (149) Liu Ying, "Ba Shu Bing Qi Ji Qi Wen Shi Fu Hao," *Wen Wu Zi Liao Cong Kan*, 1983, no. 7, pp. 14-5.
- (150) Jingzhou Museum, Hubei Province, op. cit., 1984, p. 82.
- (151) Yang Hong, "Zhong Guo Gu Dai De Ji," *Zhong Guo Bing Qi Lun Cong*, p. 17.
- (152) Sun Ji, "You Ren Che Hui Yu Duo Ge Ji," *Wen Wu*, 1980, no. 12, p. 84.
- (153) Gao Zhixi, "Ji Changsha, Changde Chu Tu Nu Ji De Zhan Guo Mu--Jien Tan You Guan Nu Ji, Gong Shi De Ji Ge Wen Ti," *Wen Wu*, 1964, no. 6, p. 33-45; Museum of the City of Zhenjiang, "Jiangsu Wujin Menghezhan Guo Mu," *Kaogu*, 1984, no. 2, p. 136; The Szechuan Provincial Museum and the Chungking Museum, "Excavation of the Warring States Earthen Shaft Tombs at Fu-ling, Szechuan Province," *Wen Wu*, 1974, no. 5, p. 63, 71; The Loyang Museum, "The Chariot Pit Found at Chung-chou-lu, Loyang," *Kaogu*, 1974, no. 3, p. 171-8. CPAM, Hopei Province, op. cit., 1975, plate 5:4; Shandong Kao Gu Yan Jiou Suo, *The Ancient Qufu City of the Kingdom of Lu*, 1982, p. 155.
- (154) Yang Hong, "Gong He Nu," *Zhong Guo Bing Qi Lun Cong*, p. 206
- (155) Institute of Arch. Academia Sinica, *Excavations of The Han Tombs at Man-Cheng*, p. 86.
- (156) "Jingmen Chu Tu De Yi Jian Tong Ge," *Wen Wu*, 1963, no. 1, p. 64.
- (157) Cheng Dong, *Ancient Chinese Weapons--a Collection of Pictures*, figure 4-163.
- (158) Institute of Arch. Academia Sinica, *Luo Yang Zhong Zhou Lu*, plate 74:12.
- (159) Shanxi Institute of Archaeology and CPAM, City of Taiyuan, "Excavation of the Spring and Autumn Period Tomb No. 251 and Pit of Figures of Horses and Chariots at Jinshengcun in Taiyuan," *Wen Wu*, 1989, no. 9, p. 74.
- (160) Zhong Guo Mei Shu Quan Ji Bian Ji Wei Yuan Hui, *Zhong Guo Mei Shu Quan Ji*, Gong Yi Mei Shu Bian, no. 5, "Qing Tong Qi," part II, p. 66.
- (161) Zheng Shaozong: A Study of the Date and Shape of the Bronze Dagger in Northern China. *Wen Wu*, 1984, no. 2, p. 48.
- (162) Tian Guangjin, *a Study of Ordos Bronzeware*, pp. 38-9.
- (163) Ma Cheng-yuan, *Zhong Guo Qing Tong Qi*, 1988, p. 523.
- (164) Li Xueqin, *Dong Chou Yu Qin Dai Wen Ming*. (1983).
- (165) Hsu Shen, *Shuo Wen Chieh Tzu*, preface.
- (166) Kuo Mo-jo's view of the evolution of vessel inscriptions in *Ch'ing T'ung Shih Tai*, pp. 317-8.
- (167) Jung Keng, *The Bronzes of Shang and Chou*, p. 87.
- (168) Lin Su-ch'ing, "The Decorative Styles of Written Characters Used During the Warring States Period," *Bulletin of The Institute of History and Philology Academia Sinica*, 1990, vol. 61, part I, p. 30.
- (169) Rong Geng, "Niao Shu Kao," *Journal of Sun Yatsen Univ.* 1964 (1) (Social Sciences

ed.).

- (170) Ma Guochuan, "Niao Chong Shu Lun Gao," *Gu Wen Zi Yen Jiu*, 1983, no. 10, pp. 39-67.
- (171) The Archaeological Team, Bureau of Culture, Anhui Province, op. cit., 1963 (4), p. 204-212.
- (172) Ma Cheng-yuan, *Shang Chou Qing Tong Qi Ming Wen Shuan*, Vol 4, p. 601, 602, 560.
- (173) Yu Xing-wu, *Shuang Jian Yi Gu Qi Wu Tu Lu*, p. 45 (top); Rong Geng, op. cit., p. 75; Ma Cheng-yuan, op. cit., p. 657.
- (174) Museum of the Jingzhou, "Excavation of Tomb No. 1 in Tengdian, Jiangling, Hubei," *Wen Wu*, 1973, no. 9, p. 819.
- (175) ".....When three thousand are assembled, one sounds the attack.....", ".....When five thousand are assembled....." (Lo Chen-yu, *Yinhsu Shu Ch'i Ch'ien Pian*, 6. 34. 2; 7. 15. 4)
- (176) "At ting you (time), the king commands three armies, one on the left, right, and center." (Kuo Mo-juo, *Yin Ch'i Ts'ui Pian*, 597; Yang Sheng-nan, "Lue Lun Shang Dai De Jun Dui," by Hu Hou-Hsüan, etc., *Jia Gu Tan Shi Lu*, p. 341.
- (177) Kaizuka shigeki, *Kyoto Daigaku Jinbun Kagaku Kenkyujo shozo Kokotsu moji*, Kyoto University, Institute of Humanistic Science 1960. Kuo Mo-juo, *Chung Kuo Shih Kao*, vol. 1, p. 211.
- (178) Chen Meng-jia, *Yinxu Bu Zhong Shu*, pp. 319-321.
- (179) Wang Guei-min points out that in the *Jia Gu Wen Ho Ji* are 1715 oracle bones from the Wu-ding period relating to "Warfare." This groups represents approximately ten percent of the total number of oracle bones numbering about twenty thousand pieces. *Shang Chou Zhi Du Kao Xin*, p. 205.
- (180) Jiangxi Provincial Institute of Cultural Relics and Archaeology, Museum of Xingan, "Excavation of the Shang Tomb at Dayangzhou in Xingan, Jiangxi," *Wen Wu*, 1991, no. 10, pp. 1-23.
- (181) The above two points are similar to those expressed by Peng Shifan and other scholars in discussing the dating of the tomb at Dayangzhou in Xingan ("Inquiring into the Dates of the Tomb of the Shang Dynasty at Dayangzhou in Xingan," *Wen Wu*, 1991, no. 10, p. 30).
- (182) Li Boqian, op. cit., *Kaogu Yu Wenwu*, 1986, no. 3, p. 70; Zhai Wei, et al., op. cit., *Kaogu*, 1989, no. 3, p. 254-5.
- (183) CPAM, Sichuan, Archaeological Institute of Sichuan, Cultural Bureau and CPAM of Guangshan City, "Excavation of the Sacrificial Pit No. 2 at the Sanxingdui Site in Guanghan," *Wen Wu*, 1989, no. 5, p. 13.
- (184) Tsou Heng (*Xia Shang Zhou Kao Gu Lun Wen Ji*, p. 281) and Li Boqian ("Affiliation of Bronze Culture in Shanxi and Shaanxi Plateau in View of the Discovery of Shang Tombs in Jingjie in Lingshi," *Journal of Peking University* (Phil. and Social Sciences), 1988 no. 2, p. 27) both feel that the T'u Fang and Kung Fang were situated around the Shi-lou area of Shanxi Province. However, Lin Hsiao-an feels that they lie in the Ordos region of the Yellow River. ("Yin Wu Ding Chen Shu Zheng Fa Yu Xing Ji Kao," *Jia Gu Wen Yu Yin Shang Shi*, vol. 2, p. 262.
- (185) Wang Kuo-wei, "Kuei Fang K'un Yi Hsien Yun K'ao," *Kuan T'ang Chi Lin*, vol. 13, pp. 583-605; Chen Meng-chia, *Yinxu Bu Ci Zhong Shu*, p. 275; Zhang Yachu, "Yinxu Ducheng Yu Shanxi Fangguo Kao Lue," *Gu Wen Zi Yen Jiu*, no. 10 (1983), p. 400.
- (186) The Fengxi Archaeological Team, IA, CASS, op. cit. 1990:6, p. 504-510.
- (187) The Provincial Museum of Hunan, 1972, op. cit., pp. 64-5.

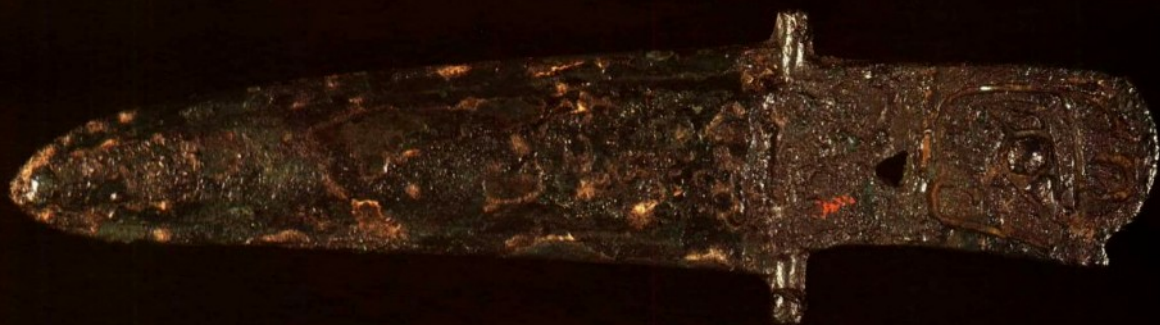
- (188) Yang Hong, "Zhan Che Yu Che Zhan," *Zhong Guo Gu Bing Qi Lun Cong*, p. 80.
- (189) Shih Chang-ju, "Burials Discovered in Section C of the Excavated Areas of Hsiao-t'un," *Bulletin of The Institute of History and Philology Academia Sinica*, vol. 23, p. 447-487; Chen Zhi-Da, op. cit.
- (190) CPAM, Changwei District, Shantung Province, "Report on the Trial Excavation at the Site of Hsian in Chiaohsien, Shantung Province," *Wen Wu*, 1977, no. 4, p. 67.
- (191) Tu Cheng-sheng, "*Pien Hu Ch'i Min--Chuan Tung Cheng Chih She Hui Chieh Kou Chih Hsing Cheng*," pp. 51-92.
- (192) "The infantry of Ch'in numbered over a million with a thousand war chariots and ten thousand cavalymen." (*Chan Kuo Tse*, Ch'u I); "The infantry, green-turbaned soldiers, and fen chi of Wei each numbered two hundred thousand, servants one hundred thousand, war chariots six hundred, and cavalymen five thousand" (*Shih Chi*, Su Ch'in Lieh Chuan). "The armored soldiers of Yen numbered one hundred thousand, war chariots seven hundred, and calvarymen six thousand" (*Chan Kuo Tse*, Yen I).



彩色圖版

Plates





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 內厚〇·五五 穿徑〇·八公分 重三七四·二公克

Plate 1. Dagger-axe with lugs and straight shafting-plate

Late Shang

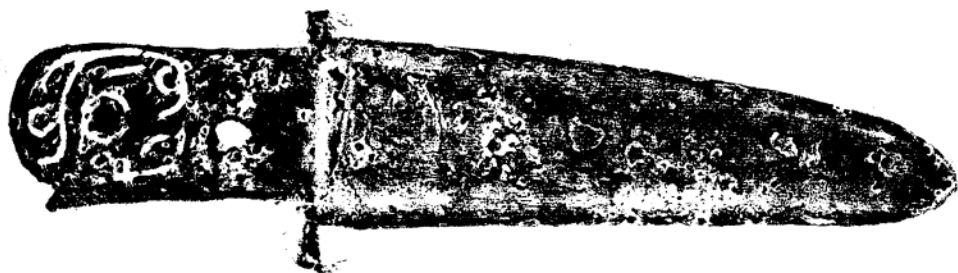
Overall l: 25.9cm Blade l: 17cm Tang l: 8cm

Max. blade w: 5.4cm Max. blade th: 0.8cm

Dist. from upper lug to lower one: 7.2cm

Tang w: 4.4cm Tang th: 0.55cm

Lashing hole dia: 0.8cm Wt: 374.2g





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Plate 2. Dagger-axe with shaft-ring and triangular blade

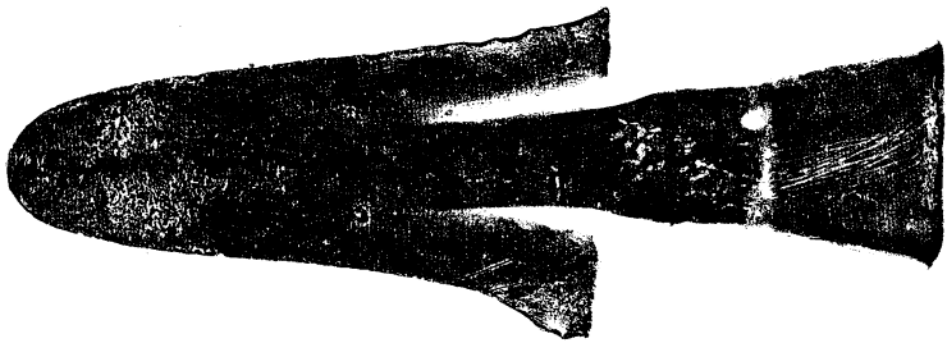
Late Shang

Overall l: 19.5cm Blade l: 12.5cm Tang l: 3.9cm

Max. blade w: 7cm Max. tang w: 5cm

Shafting-ring inner dia: 2.61-2.1cm

Wt: 266.55g





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全長二四·五 銅內長一〇·九 玉援長約一三·六
 銅內寬〇·四五公分 上下欄高六·二
 玉援厚〇·二 玉援最寬四·四五
 銅內厚〇·四五公分 重一七〇·二〇公克

Plate 3. Dagger-axe with curved bronze shafting-plate and jade blade

Late Shang

Overall l: 24.5cm Bronze shafting-plate: 10.9cm

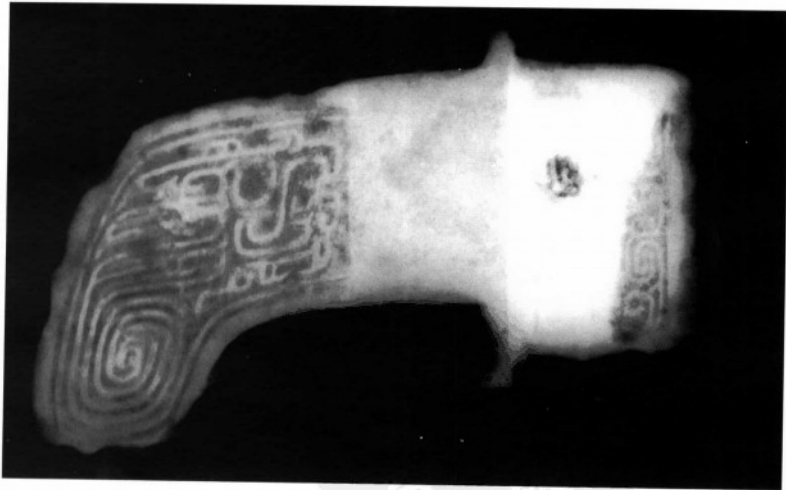
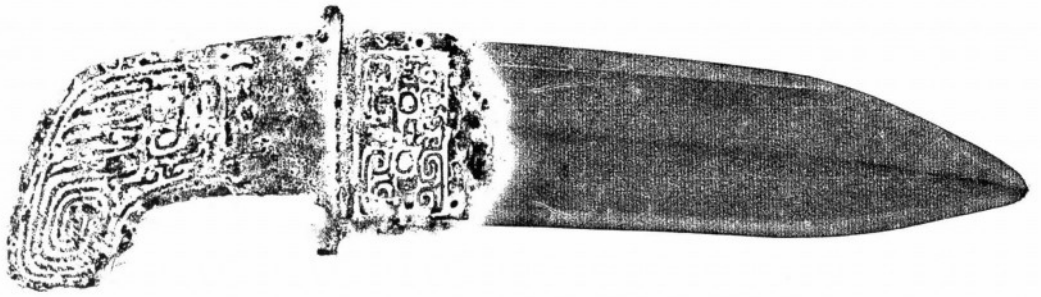
Jade blade l: (approx.) 13.6cm

Shafting-plate w: 0.45cm

Upper and lower lug h: 6.2cm Blade w: 0.2cm

Max. blade w: 4.45cm Shafting-plate th: 0.45cm

Wt: 170.20g



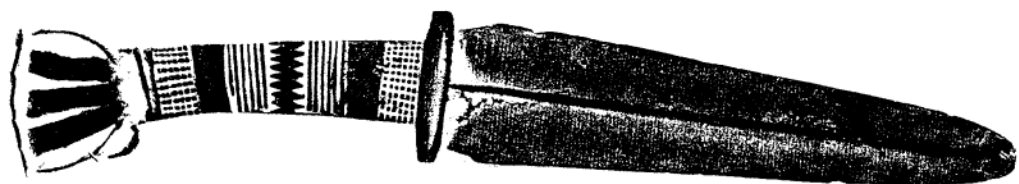
銅內上有穿 (X光透視)



圖版肆 曲柄鈴首短劍 麗七七五1 商後期

全長二三·四 刃長一三·六 柄長九·七
援最寬三·三 柄寬一·九 格寬三·六公分
重一五七·六公克

Plate 4. Dagger with curved handle and rattle
Late Shang
Overall l: 23.4cm Blade l: 13.6cm
Handle l: 9.7cm Max. blade w: 3.3cm
Handle th: 1.9cm Guard th: 3.6cm
Wt: 157.6g





圖版伍 曲背鈴首彎刀 金一二八一5 商後期

全長二八·三 刃長一七·三 柄長十 刃最寬三·二
尖突處寬四·三 刃厚〇·一二 背厚〇·七九
柄厚〇·七二公分 重二九三·二公克

Plate 5. Curved knife with rattle

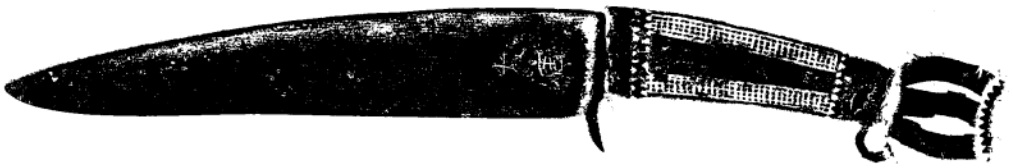
Late Shang

Overall l: 28.3cm Blade l: 17.3cm Handle l: 10cm

Max. blade w: 3.2cm Guard width: 4.3cm

Blade th: 0.12cm Blade back th: 0.79cm

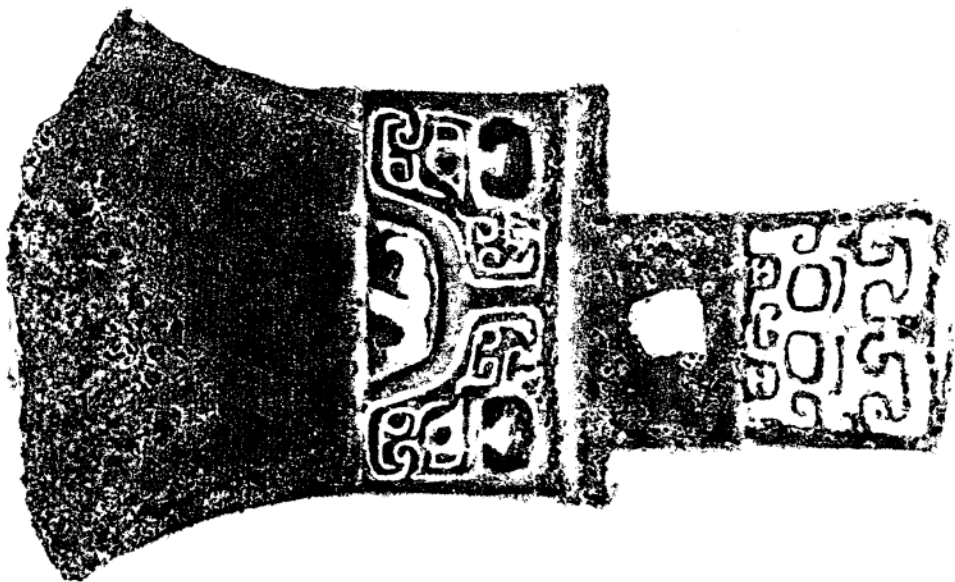
Handle th: 0.72cm Wt: 293.2g





圖版陸 獸面紋鉞 臺購08485 商後期
全長一七·八 刃長一〇·五 內長六 援寬七·六
刃寬一〇·八 內寬四·三公分
重二八三·九三公克

Plate 6. *Yüeh* axe with animal mask decor
Late Shang
Overall l: 17.8cm Blade h: 10.5cm
Tang l: 6cm Blade w : 7.6cm
Blade edge l: 10.8cm
Tang th: 4.3cm
Wt: 283.93g



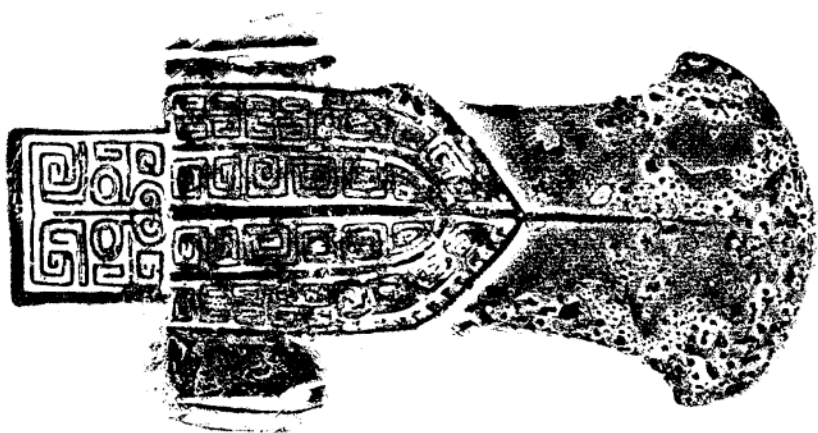
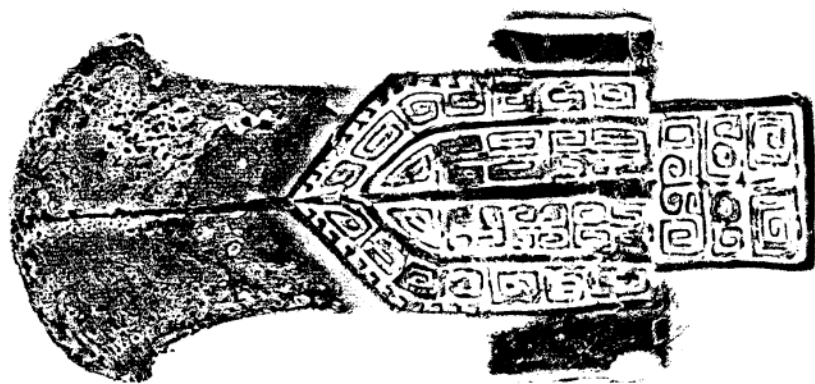


圖版柒 獸面紋管鑿鉞 兩八七二 商末或周初

(木秘與玉飾係後加)

全長一六·五 刃長一二·七 內長三·五
 內寬三·七 鑿高七·四 刃寬七·五
 刃厚〇·三 中脊厚〇·七 內厚〇·五公分
 重(包括木秘與玉飾)九七三·〇三公克

- Plate 7. *Yüeh* axe with tubular shaft-ring and animal mask decor
 Late Shang or early Chou
 Overall l: 16.5cm Blade l: 12.7cm
 Tang l: 3.5cm Tang w: 3.7cm
 Shaft-ring h: 7.4cm Blade w: 7.5cm
 Blade th: 0.3cm Median Ridge th: 0.7cm
 Tang th: 0.5cm Weight (including wooden handle and jade ornament) 973.03g





圖版捌 雲雷紋管銜鉞 崑二二五9 商末或周初

全長一六·七 刃長一三·五 內長三·七 刃寬七·九
 銜高七 內寬七 銜內徑二·六二×一·五 內厚〇·六
 刃厚〇·三 中脊厚〇·八公分 重四六二·九公克

Plate 8. *Yüeh* axe with tubular shaft-ring and cloud and thunder pattern

Late Shang or early Chou

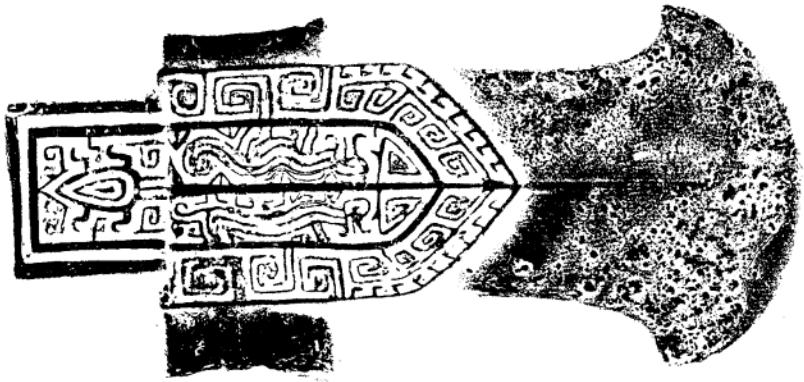
Overall l: 16.7cm Blade l: 13.5cm Tang l: 3.7cm

Blade th: 7.9cm Shaft-ring h: 7cm Tang w: 7cm

Inner dim. of shaft-ring: 2.62×1.5cm

Tang th: 0.6cm Blade th: 0.3cm

Median Ridge th: 0.8cm Wt: 462.9g

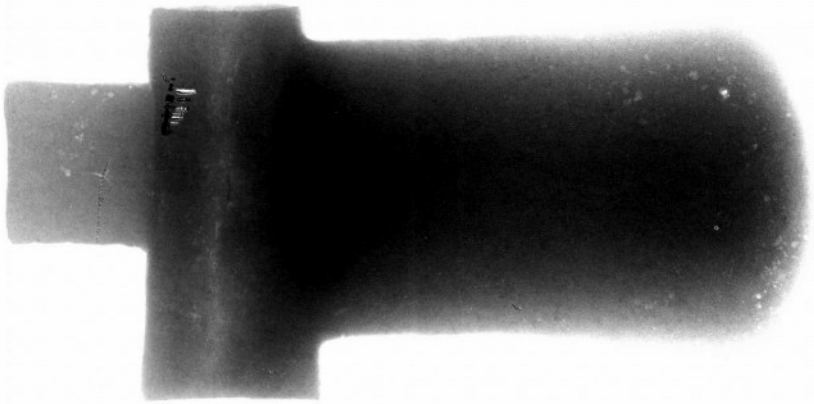




圖版玖 管鑿斧鉞 金一二八一1 商末或周初

全長一七 援長一四 內長三 援寬七·五×六·五
 鑿高八·五 鑿內徑三·六×二·六 內寬三·五公
 分 重五一六·三公克

- Plate 9. *Fu yüeh* axe with tubular shaft-ring
 Late Shang or early Chou
 Vertical l: 17cm Blade h: 14cm Tang l: 3cm
 Blade w. at ends: 7.5, ×6.5cm
 Shaft-ring h: 8.5cm
 Shaft-ring inner dim. 3.6×2.6cm
 Tang w: 3.5cm Wt: 516.3g



銅內上有 (X光透視)





圖版拾

三孔卷雲狹刃半圓形管鑿鉞
兩八七三 商末或周初

管狀鑿高一八·二 通寬一〇·七
刃高二一·二 刃寬七·七
鑿上徑二·九五×一·七二
鑿下徑三·六×二公分
重七〇三·九八公克

Plate 10.

Yüeh axe with tubular shaft-ring,
three holes, swirling cloud decor,
and semi-circular narrow blade
Late Shang or early Chou

Shaft-ring h: 18.2cm

Overall w: 10.7cm

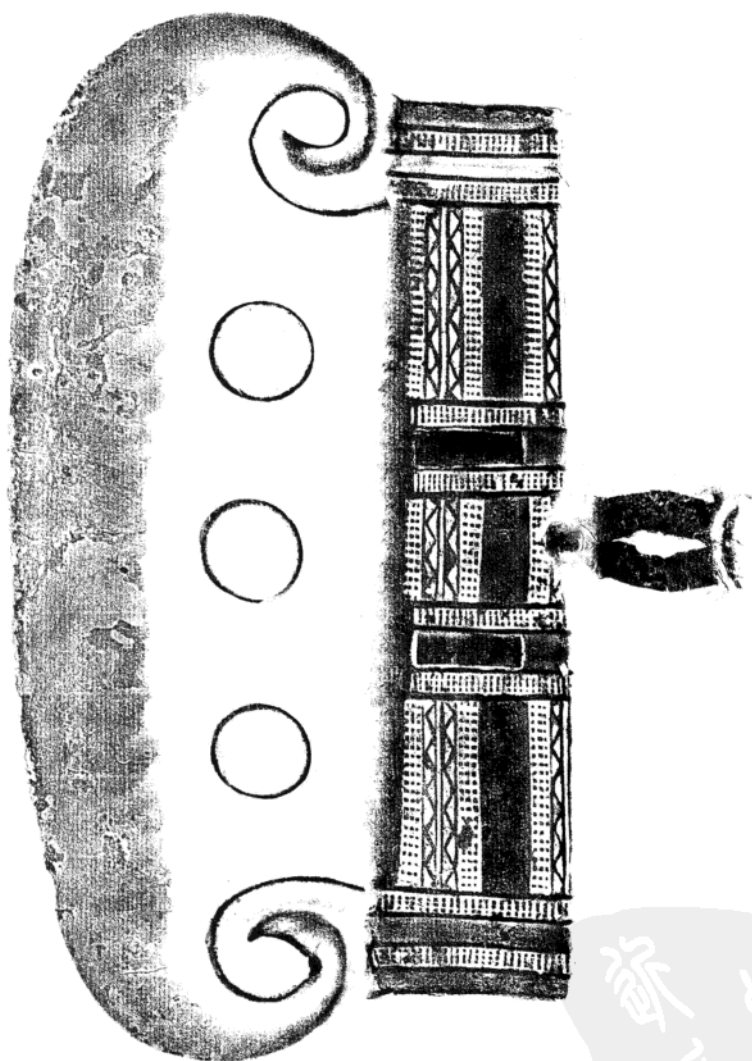
Blade h: 21.2cm

Blade w: 7.7cm

Upper dim. of ring: 2.95×1.72cm

Lower dim. of ring: 3.6×2cm

Wt: 703.98g

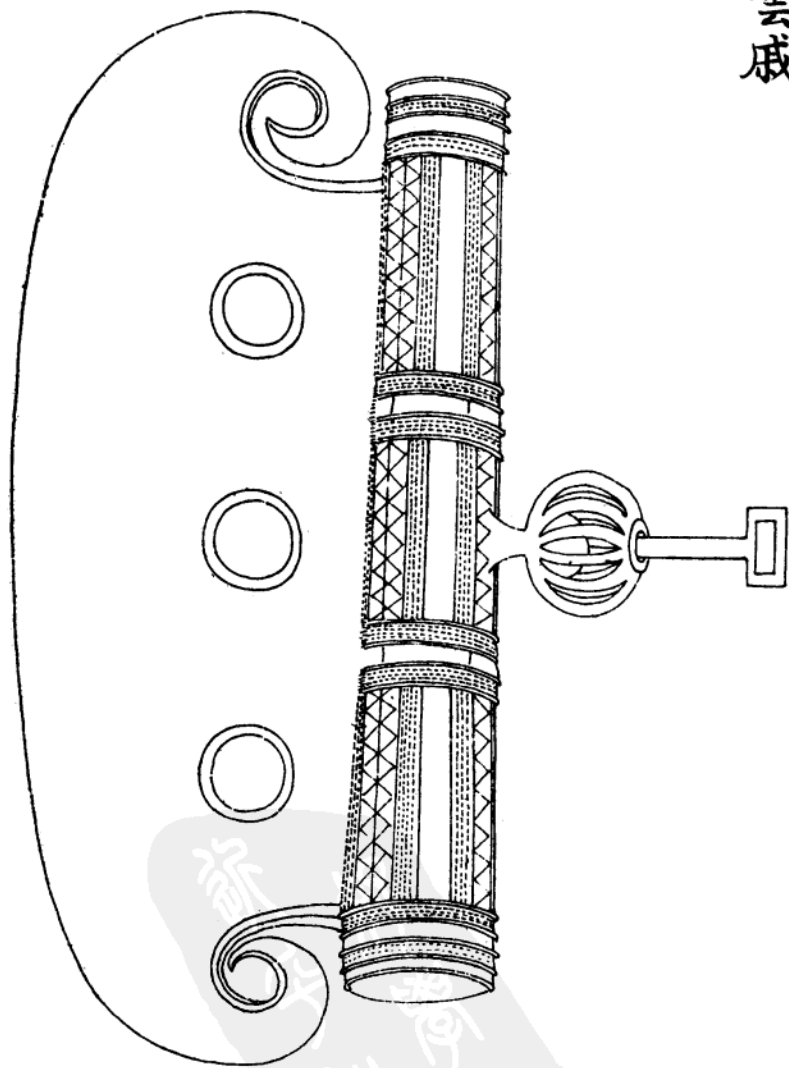


蘇子知
和齋
PDG



下鑿孔口疑爲後世所填補

周片雲戚



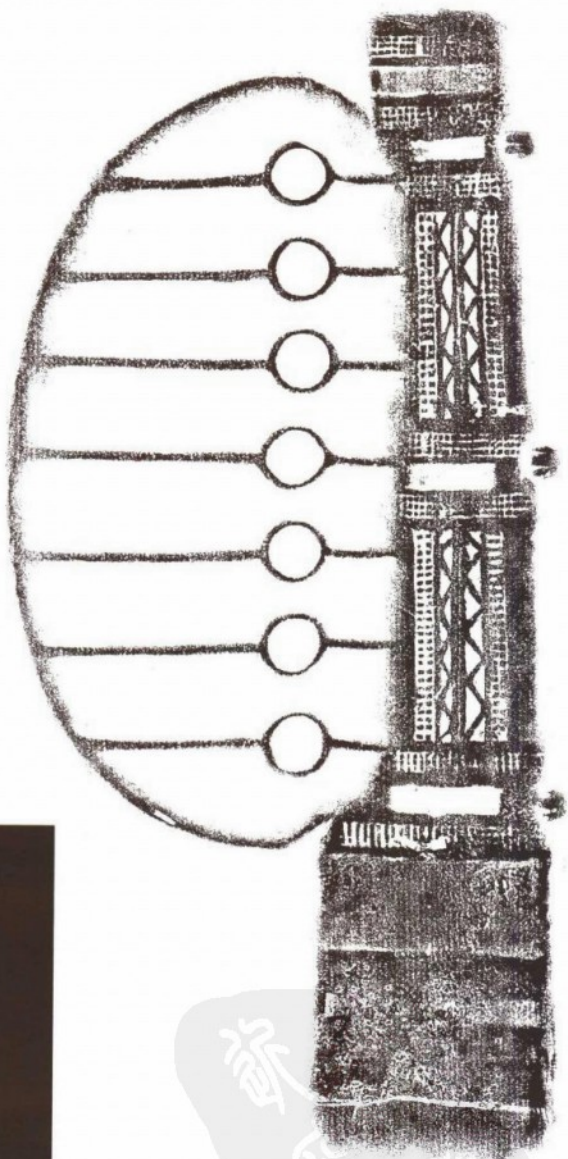
《西清古鑑》卷37·頁12



圖版拾壹 七孔半圓形刃管釜鉞
崑二一九 商末或周初

管狀釜長一八·七 刃長一三·四
全寬九·二 刃最寬六·六
邊刃厚〇·二五 中脊厚〇·四五
釜上徑一·七×〇·九
釜下徑約三·四×一·九五公分
重(包括木秘)七〇二·〇六公克

Plate 11. *Yüeh* axe with semi-circular blade,
tubular shaft-ring, and seven holes
Late Shang or Early Chou
Shaft-ring h: 18.7cm
Blade l: 13.4cm Overall w: 9.2cm
Max. blade w: 6.6cm
Blade edge th: 0.25 Median
Rridge th: 0.45cm
Upper dim. of ring: 1.7×0.9cm
Approx. lower dim. of ring:
3.4×1.95cm Wt(including
wooden handle): 702.06g



(木秘係後加)



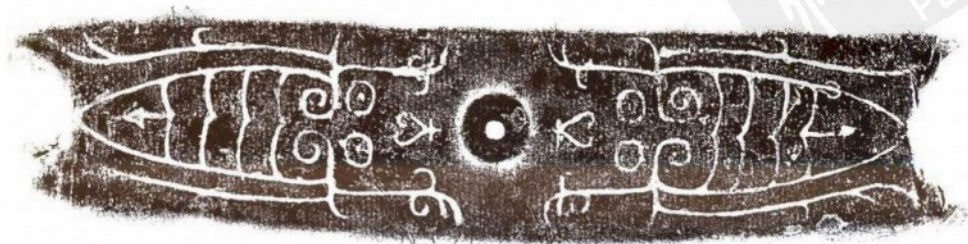
上釜孔口疑係後世填補



圖版拾貳 蟬紋弓形器 J.W.135-31 商末或周初

全長三二·七 身長一九·三 身最寬三·五
臂長七·五及六·三 厚〇·三公分
重四七四·四八公克

Plate 12. Bow-shaped implement with cicada decor
Late Shang or early Chou
Overall l: 32.7cm Body l: 19.3cm
Max. body w: 3.1cm Arm l: 7.5 and 6.3cm
Th: 0.3cm Wt: 474.48g





圖版拾叁 素弓形器 雨八七六 商末或周初

全長三七 身長一九 寬三·一
臂長八·九及九·一 厚〇·二公分
重五一·一·八三公克

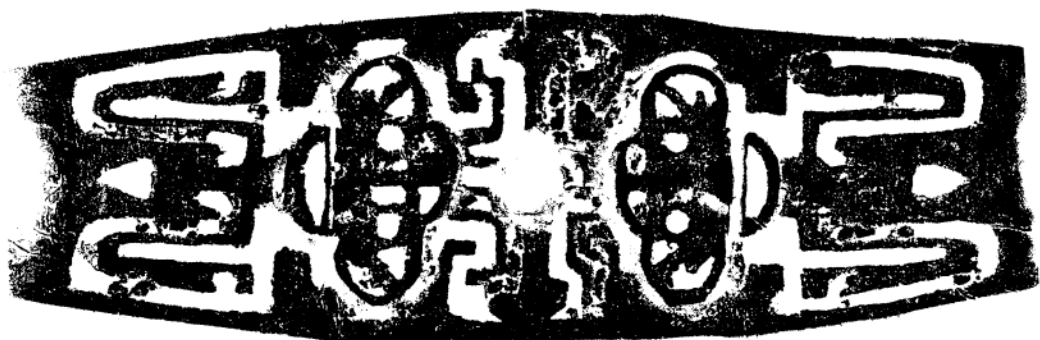
Plate 13. Undecorated bow-shaped implement
Late Shang or early Chou
Overall l: 37cm Body l: 19cm W: 3.1cm
Arm l: 8.9 and 9.1cm Th: 0.2cm Wt: 511.83g





圖版拾肆 人獸紋弓形器 兩一一七六6
商末或周初
全長一九 厚〇·七公分 重六七九·七三公克

Plate 14. Bow-shaped implement with humanoid mask decor
Late Shang or Early Chou
Overall l: 19cm Thick: 0.7cm Wt: 679.73g





圖版拾伍 乳丁紋弓形器

正面

J.W.2050 商末或周初

全長三八·二 臂長一二及一一 身長一六
身寬五 身最厚〇·五公分 重五一〇·八七公克

Plate 15. Bow-shaped implement with nipple decor
Late Shang or Early Chou
Overall l: 38.2cm Arm l: 12 and 11cm
Body l: 16cm Body w: 5cm
Max. body w: 0.5cm Wt: 510.87g





背面





圖版拾陸 成周戈 J.W.144-31

西周早、中期

全長二四·一 援長一八 內長六 內寬三·一
 胡長七 上下欄寬八·八 刃厚〇·二公分
 重二五三·八四公克

Plate 16.

Ch'eng Chou Dagger-axe

Early to Middle Western Chou

Overall l: 24.1cm Blade l: 18cm

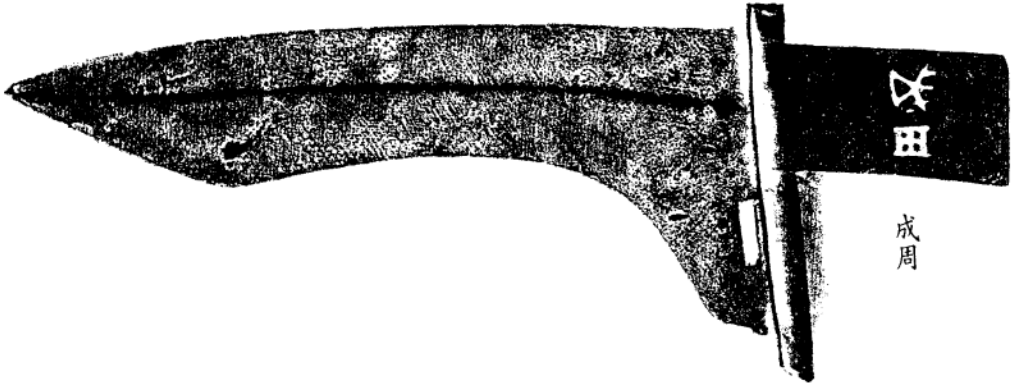
Tang l: 6cm Tang w: 3.1cm

Descending edge l: 7cm

Dist. between upper and lower lugs: 8.8cm

Blade th: 0.2cm Wt: 253.84g

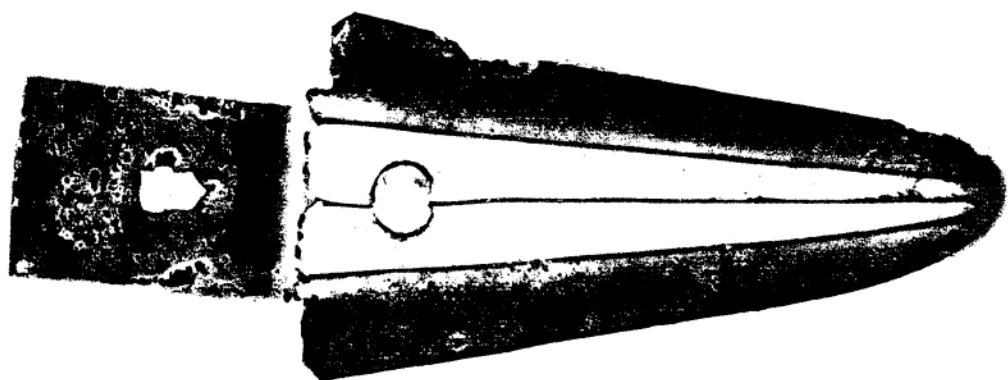






圖版拾柒 三角援無胡有穿戈
 麗七七三 西周早期
 全長一九·六 援長一四·二 內長五·四
 援最寬七·五 援最厚〇·五 內寬四·一
 內厚〇·五 穿(援上)徑一·一
 穿(內上)徑一·四五×〇·七二公分
 重三二九·五二公克

Plate 17. Dagger-axe with triangular blade and lashing hole
 Early Western Chou
 Overall l: 19.6cm Blade l: 14.2cm
 Tang l: 5.4 Blade max. w: 7.5cm
 Blade max. th: 0.5cm
 Tang w: 4.1cm Tang th: 0.5cm
 Dia. of lashing hole above blade: 1.1cm
 Dia. of lashing hole above tang: 1.45×0.72cm
 Wt: 329.52g





圖版拾捌 吐舌夔紋戈 臺購08486
西周早期

全長二一·三 內長五 內寬二·八 欄寬九
胡長五·八公分 重一九〇·七五公克

Plate 18. Dagger-axe with tongue-spitting *k'uei* dragon
Early Western Chou
Overall l: 21.3cm Tang l: 5cm Tang w: 2.8cm
Lug w: 9cm Descending edge l: 5.8cm Wt: 190.75g



PDG

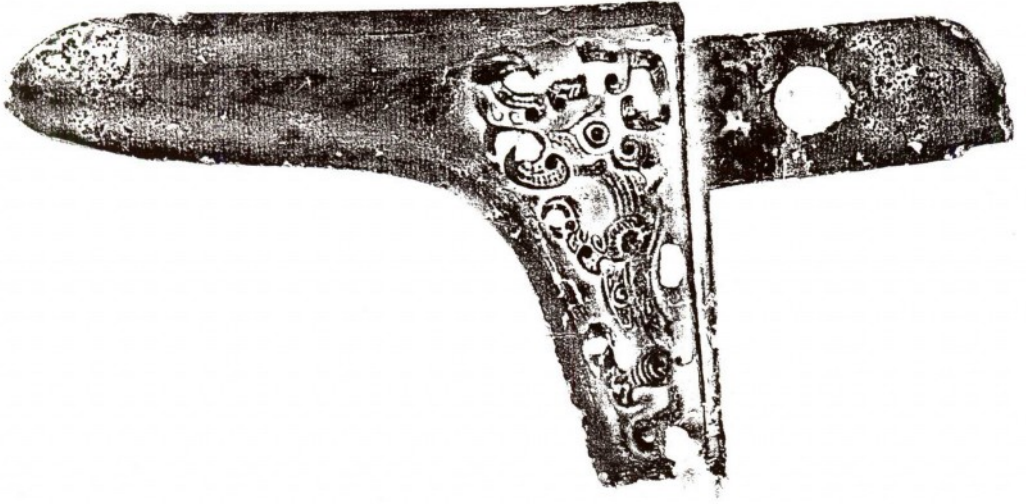


圖版拾玖 夔紋戈 臺購08487 西周早期

全長二〇·五 內長六·五 內寬三
 胡(殘)長九·八 穿徑一·五×一·五公分
 重一九二·〇九公克

Plate 19. Dagger-axe with *k'uei* dragon decor
 Early Western Chou
 Overall l: 20.5cm Tang l: 5cm
 Tang w: 2.8cm Lug w: 9cm
 Descending edge l: 5.8cm
 Wt: 192.09g





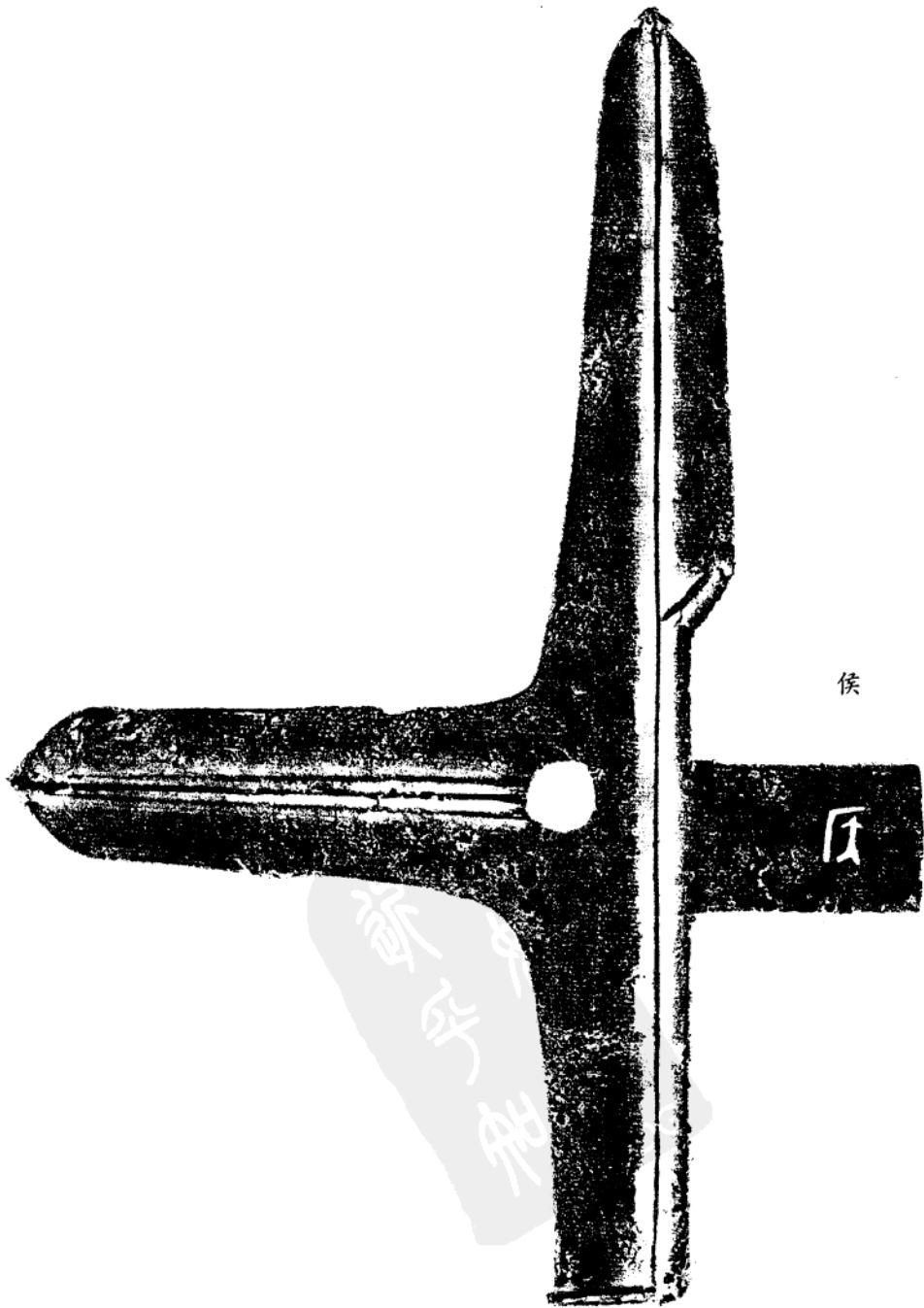
蘇
子
雅
著
PDG



圖版貳拾 侯戟 J.W.142-31
西周早中期

通高二六·八 全長一八·五
刃厚〇·一五 中脊厚〇·四
內厚〇·二五公分
重一三二·四公克

Plate 20. Hou Halberd
Early to middle Western Chou
Overall h: 26.8cm Overall l: 18.5cm
Blade th: 0.15cm
Median Ridge th: 0.4cm
Tang th: 0.25cm Wt.: 132.4g



候

匠

圖版貳壹

乳丁紋有銜刀(一)(二)

鹹二四七11 商末或周初

(一) 全長二七·二 刃寬三×三·五公分

上銜孔外徑三×二

下銜孔外徑四×二·一公分

重四三一·二〇公克

(二) 全長二七·五

刃寬三·一×三·五

上銜孔外徑四×二·八

下銜孔外徑二×三公分

重四四二·五六公克

Plate 21.

Two knives with shaft-ring and nipple decor

Late Shang or Early Chou

I: Overall l: 27.2cm

Blade w: 3 to 3.5cm

Shafting-ring upper dim.: 3×2cm

Shafting-ring lower dim.: 4×2.1cm

Wt: 431.20g

II: Overall l: 27.5cm

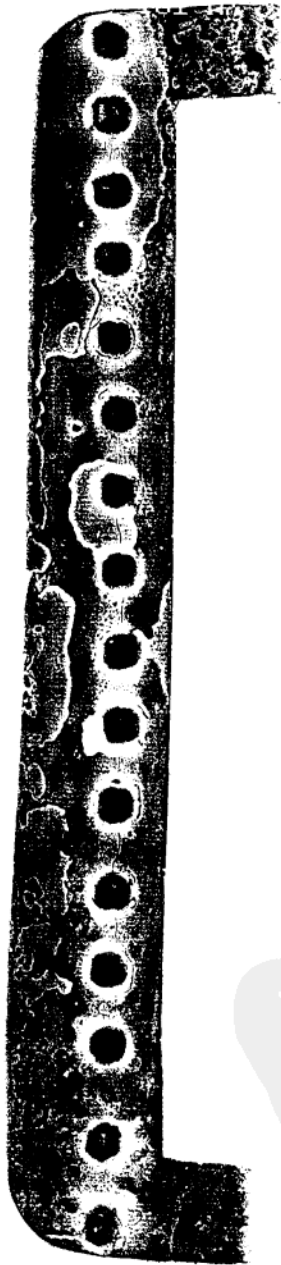
Blade 27.5cm Blade w: 3.1×3.5cm

Shafting-ring upper dim. 4×2.8

Shafting-ring lower dim.: 2×3cm

Wt: 442.56g

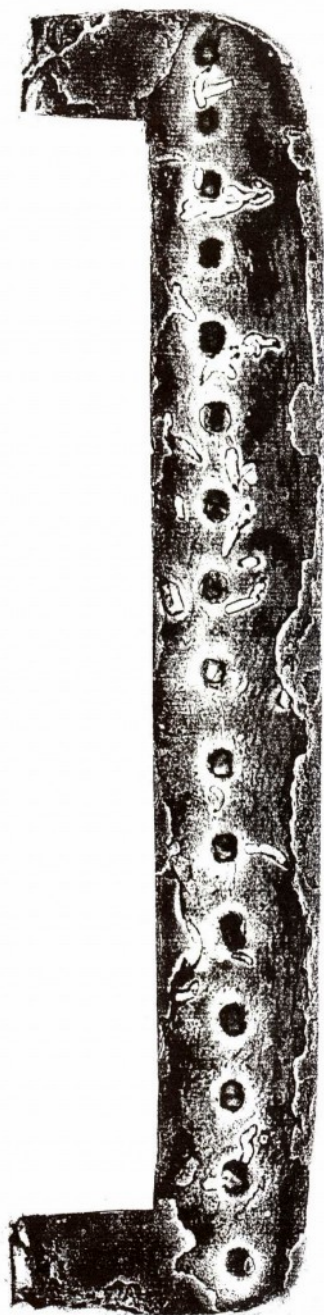








木秘殘痕

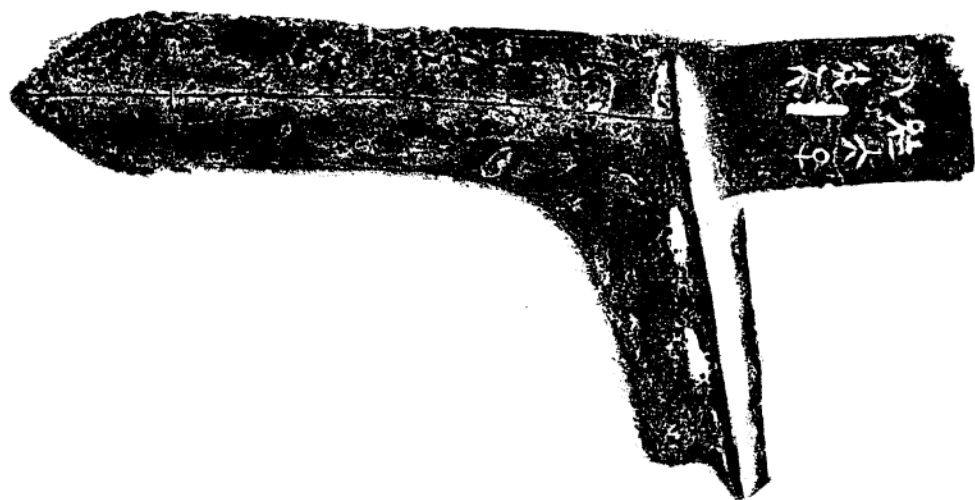




圖版貳貳 三穿戈 臺購08471 春秋中期

全長一九·六 援長一三·九 內長五·七
胡寬八·九 內寬三 援中脊厚〇·七
援刃厚〇·二 內厚〇·四公分 重二五九·九公克

Plate 22. Dagger-axe with three lashing holes
Middle Spring & Autumn Period
Overall l: 19.6cm Blade l: 13.9cm Tang l: 5.7cm
Descending edge w: 8.9cm Tang w: 3cm
Median Ridge th: 0.7cm Blade edge th: 0.2cm
Tang th: 0.4cm Wt: 259.9g



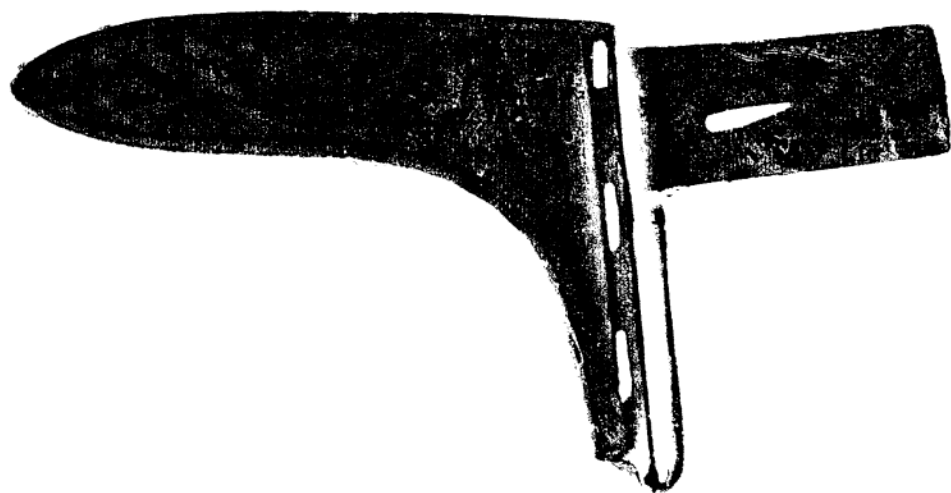


圖版貳叁 三穿戈 麗七八七 春秋晚期

全長一九 援長一一·七 內長七·四 胡寬九·四
內寬二·九 援中脊厚〇·五 援刃厚〇·二 內厚
〇·四公分 重一八〇·九一公克

Plate 23. Dagger-axe with three lashing holes
Late Spring & Autumn Period
Overall l: 19cm Blade l: 11.7cm Tang l: 7.4cm
Descending edge w: 9.4cm Tang w: 2.9cm
Median Ridge th: 0.5cm Blade edge th: 0.2cm
Tang th: 0.4cm Wt: 180.91g

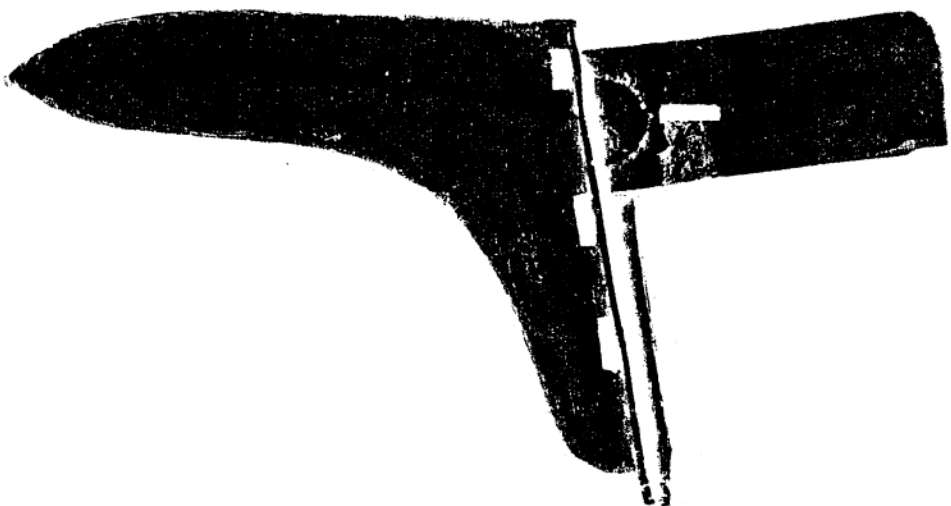






圖版貳肆 三穿戈 金一二八一7 春秋晚期
 全長二一·二 援長一四 內長七·三 內寬三·一
 胡寬一〇 援最厚〇·六 援刃厚〇·二
 內厚〇·三五公分 重二四七·一八公克

Plate 24. Dagger-axe with three lashing holes
 Late Spring & Autumn Period
 Overall l: 21.2cm Blade l: 14cm Tang l: 7.3cm
 Tang w: 3.1cm Descending edge w: 10cm
 Max. blade w: 0.6cm Blade edge th: 0.2cm
 Tang th: 0.35cm Wt: 247.18g



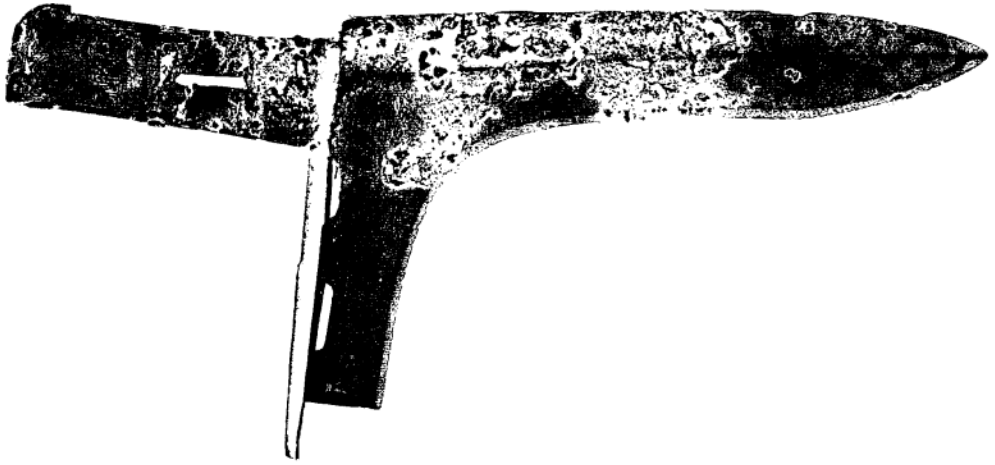


圖版貳伍 蔡侯產(?)之用戈 J.W.106-32
 蔡侯產(?) (西元前471-457)
 通長三一 援長二〇·四 內長一〇·三
 胡長一二·二 內寬三·五 刃厚〇·一
 中脊厚〇·八 內厚〇·四五公分
 重四七五·六三公克


(荆锈前)

Plate 25. Dagger-axe used by Marquis Ch'an (?)
 of Ts'ai (471-457 B.C.)
 Overall l: 31cm Blade l: 20.4cm
 Tang l: 10.3cm Descending edge: 12.2cm
 Tang w: 3.5cm Blade th: 0.1cm
 Median ridge th: 0.8cm Tang th: 0.45cm
 Wt: 475.63g







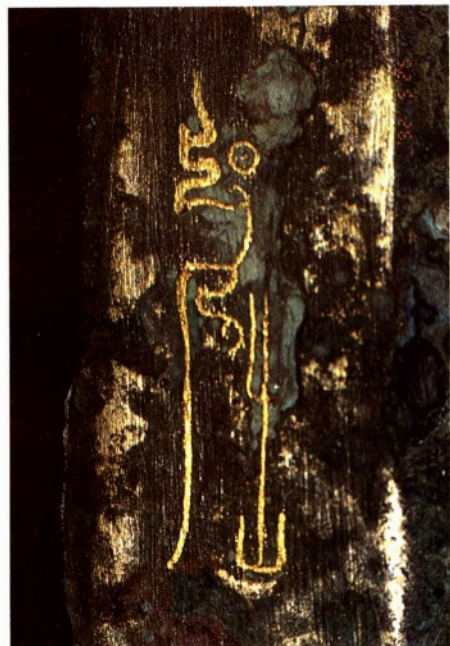


蔡侯產(？)
之用戈

(剝銹後)



蔡



產 (?)



侯



之



用



戈



圖版貳陸 蔡公子從之用戈

(剝銹前)

臺購08488 春秋晚期

全長二五·四 內長七·四 胡長一一 內寬二·七公分
重二六八·八三公克

Plate 26. Dagger-axe used by Prince Ts'ung of Ts'ai
Late Spring & Autumn Period
Overall l: 25.4cm Tang l: 7.4cm
Descending edge: 11cm Tang w: 2.7cm
Wt: 268.83g

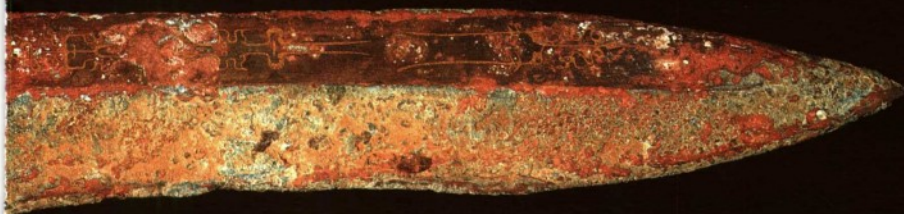


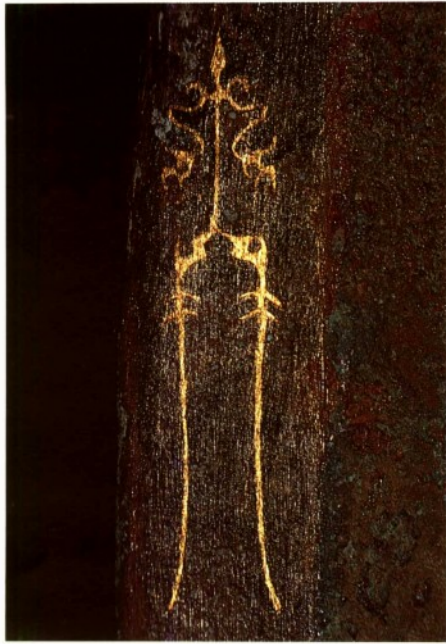


蔡公子從
之用

(剝鏽後)







祭



公



之



用



子



從

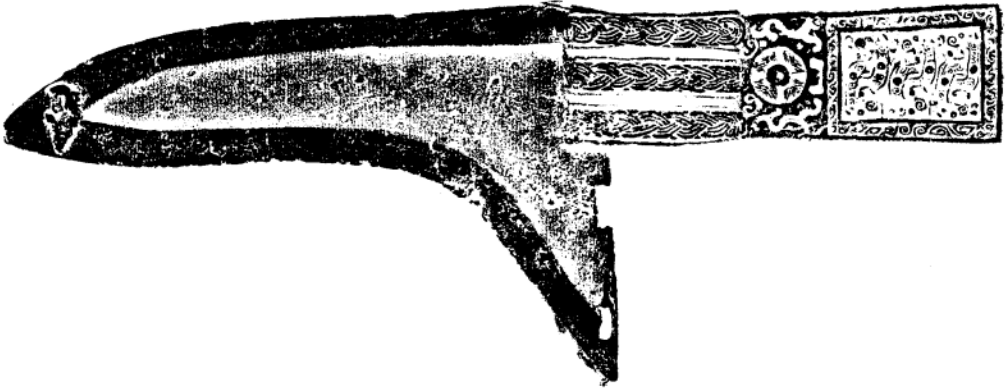


圖版貳柒 綉紋釜內戈 臺購08470 戰國

全長二五 援長一五 內長六·八 胡長九·七
 內寬三·四 釜內徑二·五三×一·五
 援中脊厚〇·四二 援刃厚〇·四公分
 重三〇二·五一公克

Plate 27. Dagger-axe with shaft-ring and rope decor
 Warring States Period
 Overall l: 25cm Blade l: 15cm Tang l: 6.8cm
 Descending edge l: 9.7cm Tang w: 3.4cm
 Shaft-ring inner dim.: 2.53×1.5cm
 Median Ridge th: 0.42cm Blade edge th: 0.4cm
 Wt: 302.51g







圖版貳捌 四穿戈 國贈25296 戰國

全長二·五 援長一四·八 內長一〇
 胡長一二·六 內寬三 刃厚〇·一五
 中脊厚〇·六二 內厚〇·四公分
 重三〇一·〇一公克

Plate 28. Dagger-axe with four lashing holes
 Warring States Period
 Overall l: 2.5cm Blade l: 14.8cm Tang l: 10cm
 Descending edge l: 12.6cm Tang width: 3cm
 Median Ridge th: 0.62 Tang th: 0.4cm
 Wt: 301.01g



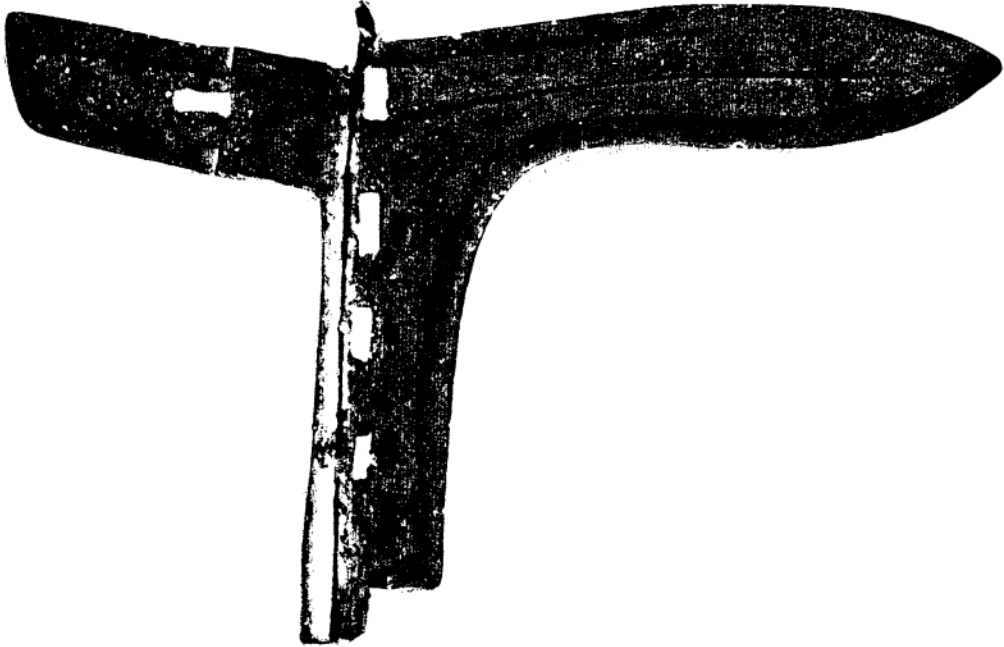


圖版貳玖 長胡內刃戈 金一二八一4
戰國中晚期

全長二五·二 援長一六·二 胡長一四·二
內長八·七 援刃厚〇·一 內刃厚〇·一二
中脊厚〇·五五公分 重三七一·三七公克

- Plate 29. Dagger-axe with sharpened shafting plate and long descending edge
Middle Warring States Period
Overall l: 25.2cm Blade edge: 16.2cm
Descending edge l: 14.2cm Tang l: 8.7
Blade th: 0.1cm Tang th: 0.12cm
Median ridge th: 0.55cm Wt: 371.37g







圖版叁拾 鳥戈與鏹 J.W.105-32
戰國

(一)戈 全長二六·一 援長一七·六
內長六 胡長一一·三 胡寬二·六
內寬三·二 鑿高一四·四
鑿外徑二·五×二·五 刃厚〇·三
中脊厚〇·三五 內厚〇·五公分
重四〇四·六五公克

(二)鏹 全長一二·五
口徑三·二×二·二
底徑二·二×二·一公分
重一五七·四〇公克

Plate 30. Dagger-axe with bird and shaft cap
Warring States Period

- (1) Dagger-axe: Overall l: 26.1cm
Blade l: 17.6cm Tang l: 6cm
Descending edge l: 11.3cm
Its w: 2.6cm Tang w: 3.2cm
Shafting-ring h: 14.4cm
Its outer dia. 2.5×2.5cm
Blade th: 0.3cm
Median Ridge th: 0.35cm
Tang th: 0.5cm Wt: 404.65g
- (2) Stand: Overall l: 12.5cm
Dim. of opening: 3.2×2.2cm
Dim. at base: 2.2×2.1cm
Wt: 157.40g





鐃





圖版叁壹 鳥獸紋釜內戈 臺購08551 戰國
全長一四·五 援長八 管釜高七·一
釜口徑二·二×一·九公分
重二五八·二五公克

Plate 31. Dagger-axe with beast and bird decor
Warring States Period
Dagger-axe l: 14.5cm Blade length: 8cm
Shafting-hole: 2.2×1.9cm Wt: 258.25g











圖版叁貳 玄鏐戈 臺購08603 戰國

全長一四 援長八 援最寬三·五 管鑿高七·五
鑿口徑二·二×一·七公分 重二一〇·五公克

Plate 32. Hsüan Min Dagger-axe

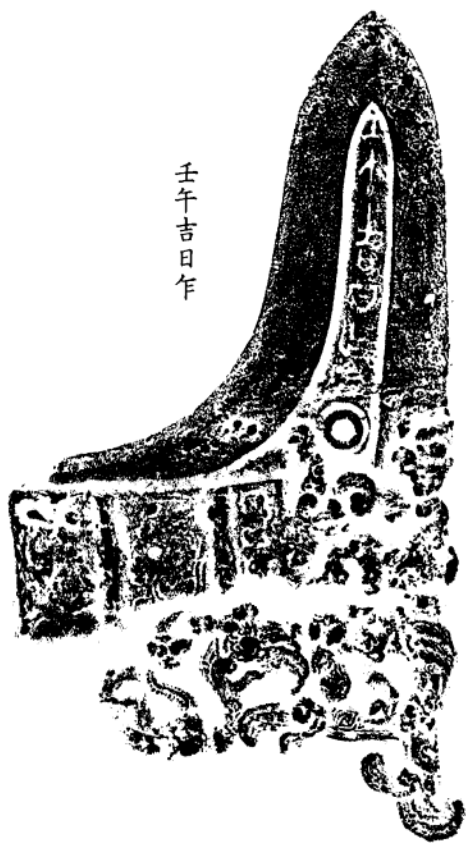
Warring States Period

Overall l: 14cm Blade l: 8cm Max. blade w: 3.5cm

Shafting-hole h: 7.5cm Dim. of opening: 2.2×1.7cm

Wt: 210.5g

壬午吉日乍



元用玄鏐戈(?)





圖版叁叁

雲雷紋劍

臺購08490 戰國

全長四二·一 中脊長三三·九

柄長八·二 格寬四公分

重五五二·四四公克

Plate 33.

Sword with cloud and
thunder decor

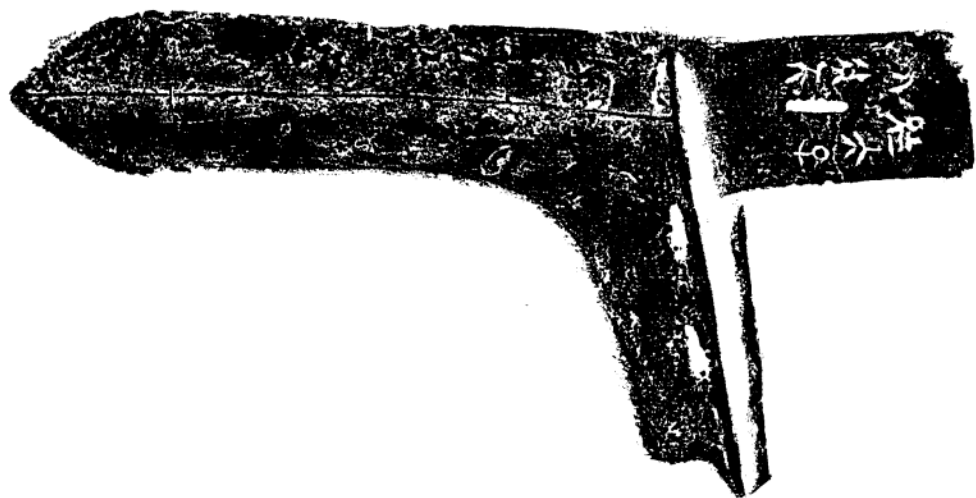
Warring States Period

Overall l: 42.1cm

Blade l: 33.9cm

Handle l: 8.2cm

Guard w: 4cm Wt: 552.44g



(玉劍飾係後加)



圖版叁伍

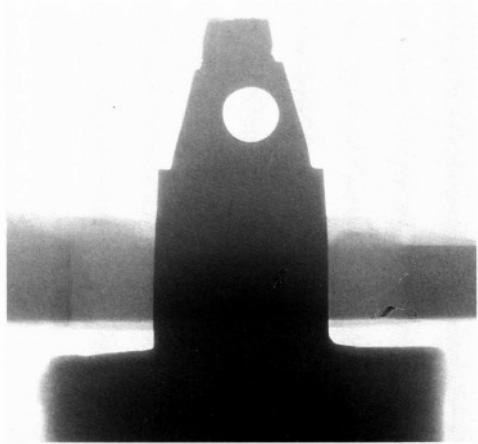
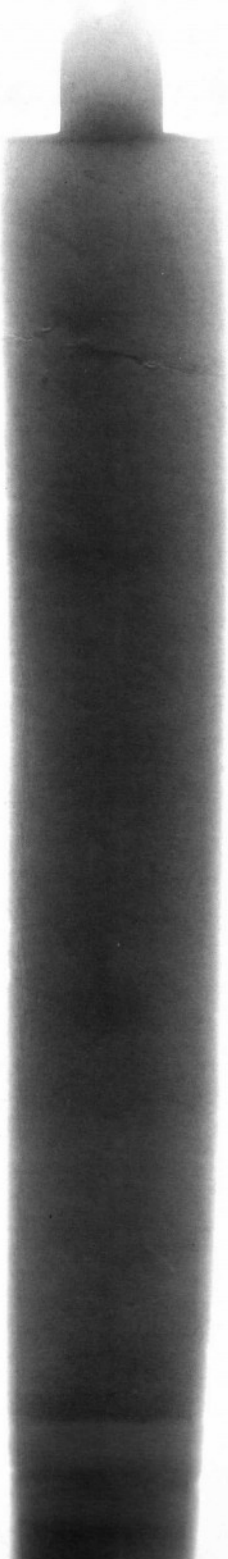
無首劍 雨八七四

春秋晚期—戰國

全長四二·七 釐 最寬四·四
邊刃厚○·二 中脊厚○·九一公分
重(加玉劍飾)四九一·六一公克

Plate 35.

Sword without pommel
Late Spring & Autumn Period
to Warring States Period
Overall l: 42.7cm
Max. blade w: 4.4cm
Blade edge th: 0.2cm
Median Ridge th: 0.91cm
Wt (with jade inclusion): 491.61g

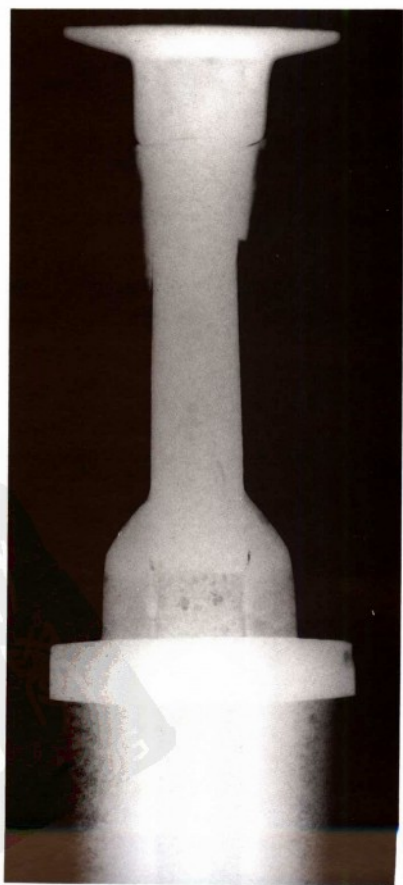


劍柄



鋒

(X光透視)

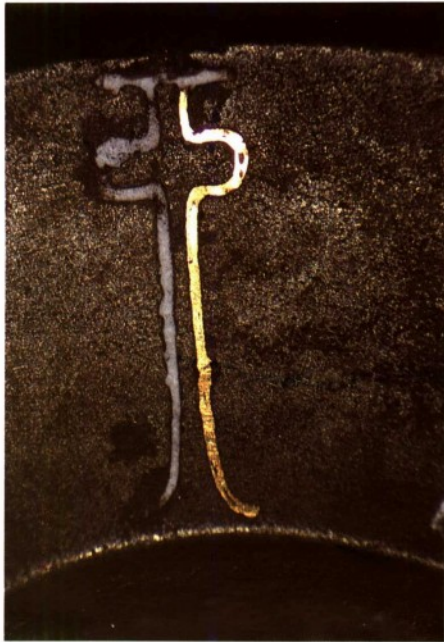


圖版叁陸
「奇字」劍
J.W.108-32
戰國

全長四〇·七
中脊長三〇·二
莖長九·四
格寬四·三
劍首寬四·三公分
重五〇八·二公克

Plate 36.
Sword with
Yueh state script.
Warring States Period
Overall l: 40.7cm
Median Ridge l: 30.2cm
Handle l: 9.4cm
Guard w: 4.3cm
Pommel w: 4.3cm
Wt: 508.2g

(X光透視)



1



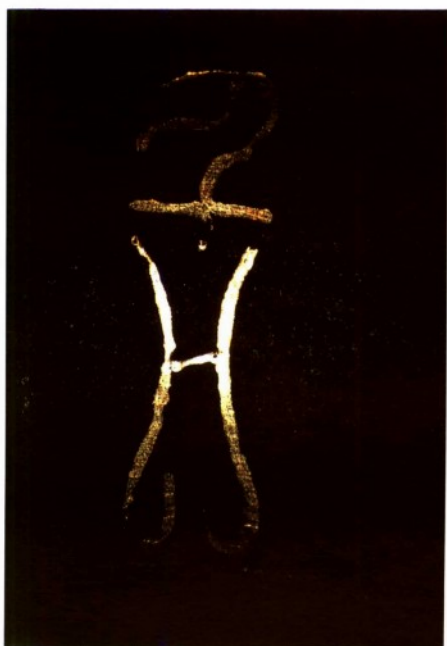
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2



4



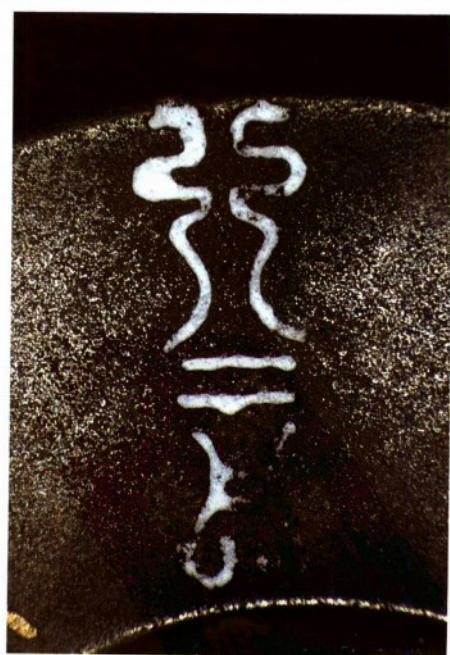
5



7 之



6



8



9



11 劍



10



12



圖版叁柒
越王州勾自作用劍
J.W.107-32
越王州勾
(西元前448-441)

全長四九·五
中脊長三九·五
莖長八·六 格長一
格寬四·九
劍首三·三×三·三公分
重五五四·七公克

Plate 37.
Sword used by
King Chou Kou
(448-441 B.C.) of Yüeh
Overall l: 49.5cm
Median Ridge l: 39.5cm
Handle l: 8.6cm
Guard l: 1cm
Guard w: 4.9
Pommel: 3.3×3.3cm
Wt: 554.7g



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自劍
乍用

州式
勾

王
勾
州





圖版叁捌

鑲嵌松綠石劍

傳江西 戰國

全長六九·一 中脊長五八·三

莖長九·六 格長一·三

格寬五·四

劍首寬四×三·七公分

重一〇八二·三二公克

Plate 38.

Sword with

turquoise inlay on guard

Warring States Period

Overall l: 69.1cm

Median Ridge l: 58cm

Handle l: 9.6 Guard l: 1.3cm

Guard w: 5.4cm

Pommel: 4×3.7cm

Wt: 1082.32g



蘇
氏
書
局
PDG



圖版叁玖

鏤空蟠虺紋柄短劍

台購08427

春秋中晚期—戰國

全長三一·五 中脊長一八·九

葉長一二·五 鏤最寬三

柄寬五·一×二·四×五·六五公分

重二八三·三三公克

Plate 39.

Dagger with openwork

decor of coiled dragons

Middle to late Spring &

Autumn Period

to Warring States Period

Overall l: 31.5cm

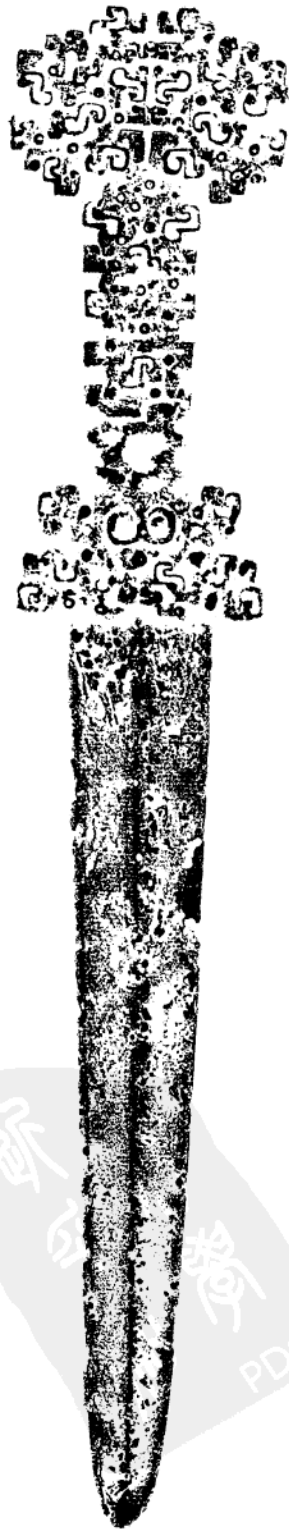
Median Ridge l: 18.9cm

Handle l: 12.5cm

Max. Blade w: 3cm

Handle: 5.1×2.4×6.5cm

Wt: 283.33g



新
学
社
PDG

圖版肆拾

雙環柄首短劍

金一二八一八

春秋晚期—戰國中期

全長二二·一 中脊長一一

格長一·二 莖長九·九

格寬四·八 臚寬二×二·四

莖寬八·四 脊厚〇·四

刃厚〇·一 柄厚〇·七公分

重一三四·五公克

Plate 40.

Dagger with
double-ringed pommel

Late Spring & Autumn Period
to middle of Warring States Period

Overall l: 22.1cm

Median Ridge l: 11cm

Guard l: 1.2cm Handle l: 9.9cm

Guard w: 4.8cm

Blade w: 2×2.4cm

Handle w: 8.4cm

Median ridge th: 0.4cm

Blade th: 0.1cm

Handle th: 0.7cm

Wt: 134.5g



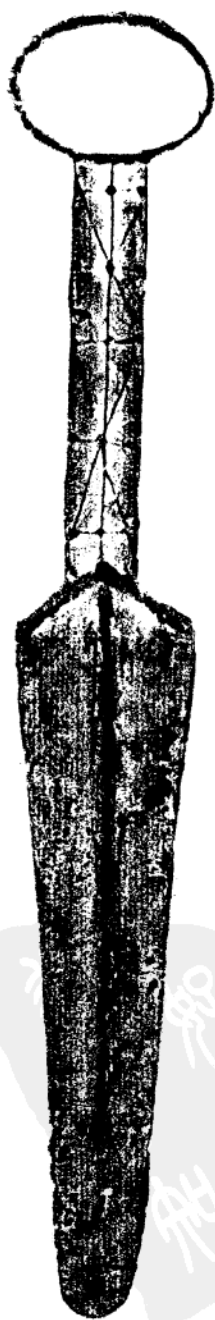


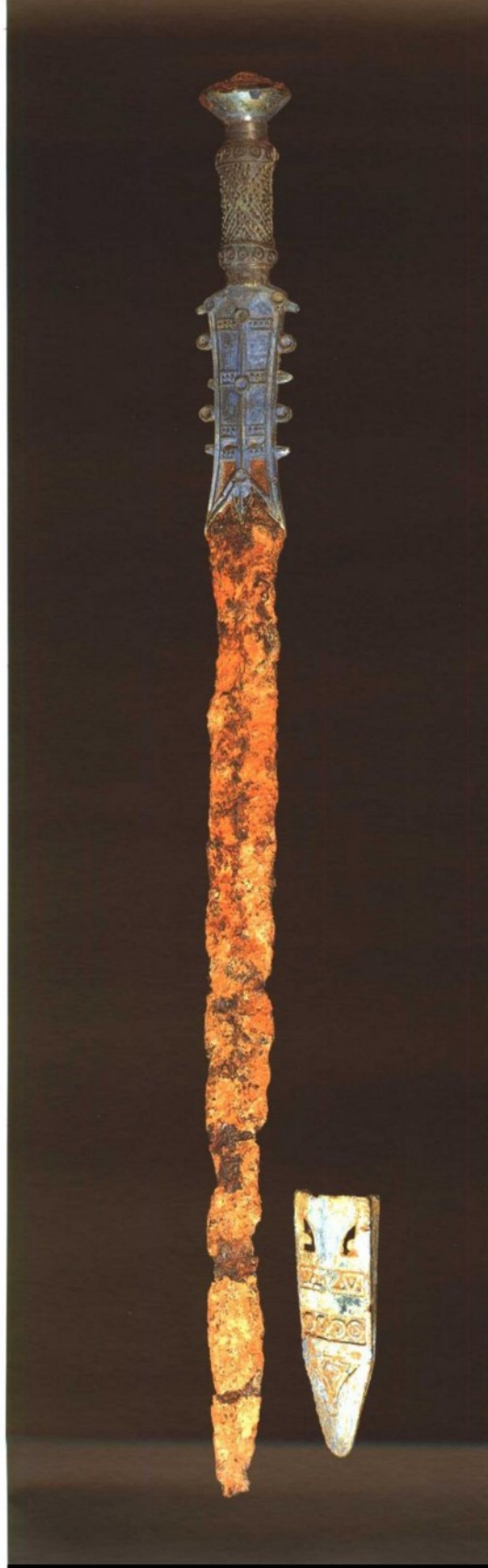
圖版肆壹
環首短劍
麗七七五之二 戰國

全長二二·六 中脊長一二·九
莖長九·七 臘最寬二·九公分
重一〇〇·八公克

Plate 41.
Dagger with ringed pommel
Warring States Period
Overall l: 22.6cm
Median Ridge l: 12.9cm
Handle l: 9.7cm
Max. body w: 2.9cm
Wt: 100.8g







圖版肆貳

鐵刃銅柄劍

臺購08577 戰國—漢

全長五七·八 銅莖長一八·四
劍格寬四·四 劍首寬三·八公分
(劍+鞘)四四七·六九重
(劍)三九三·九
(鞘)五三·七九公克

Plate 42.

Sword with iron blade
and bronze handle
Warring States Period
to Han Dynasty

Overall l: 57.8cm

Handle l: 18.4cm

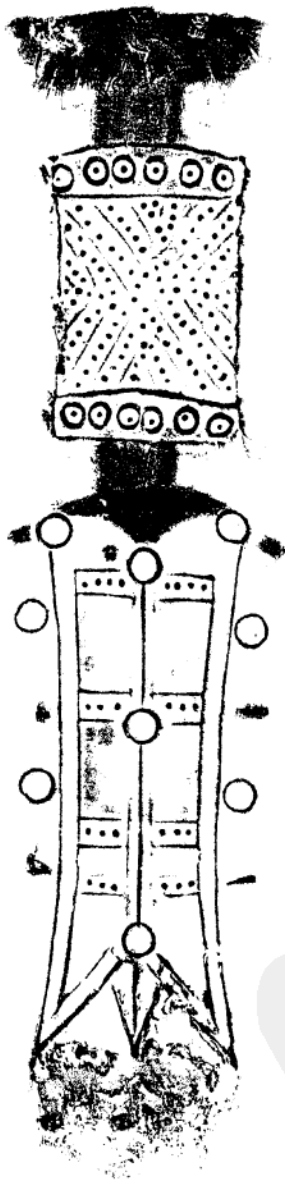
Guard w: 4.4cm

Pommel w: 3.8cm

Sword + Sheath wt.: 447.69g

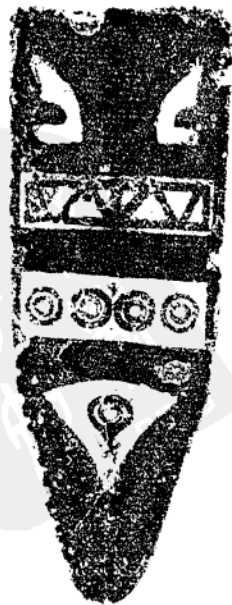
Sword wt.: 393.9g

Sheath wt.: 53.79g



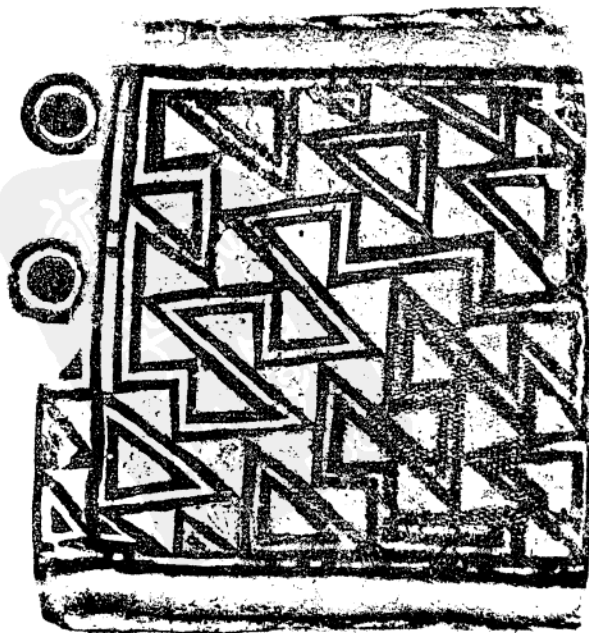
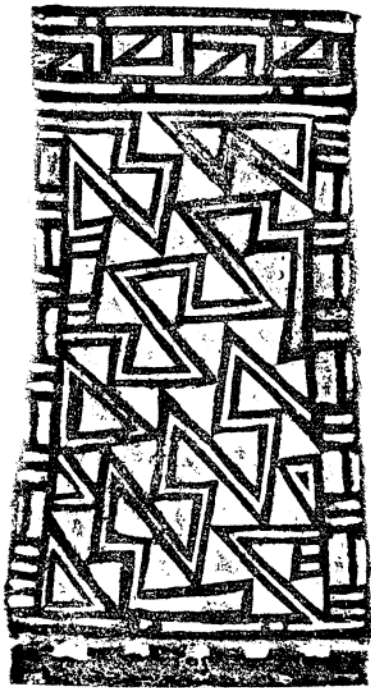
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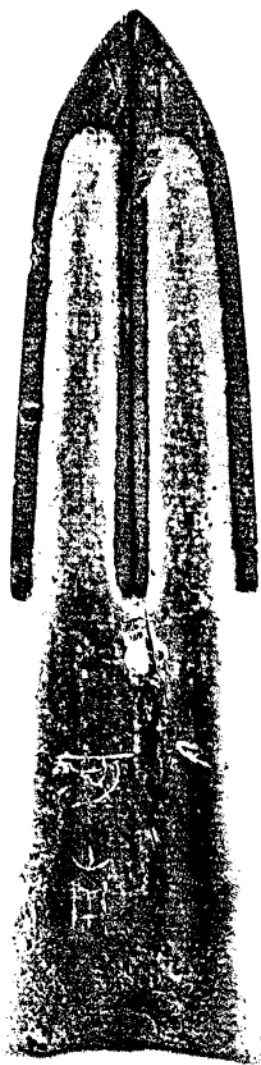
鞘





圖版肆叁
河南矛
J.W.144-31
戰國
全長一二·一
銜長四·五公分
重六九·二公克

Plate 43.
Honan spear
Warring States Period
Overall l: 12.1cm
Shafting-hole l: 4.5cm
Wt: 69.2g



河南





圖版肆肆

獸面雲雷紋矛

臺購08489 戰國

全長二五·五 銜長一六·五

銜口徑二·九×二·二公分

重二五三·八四公克

Plate 44.

Spear with cloud-thunder and
animal-mask decor

Warring States Period

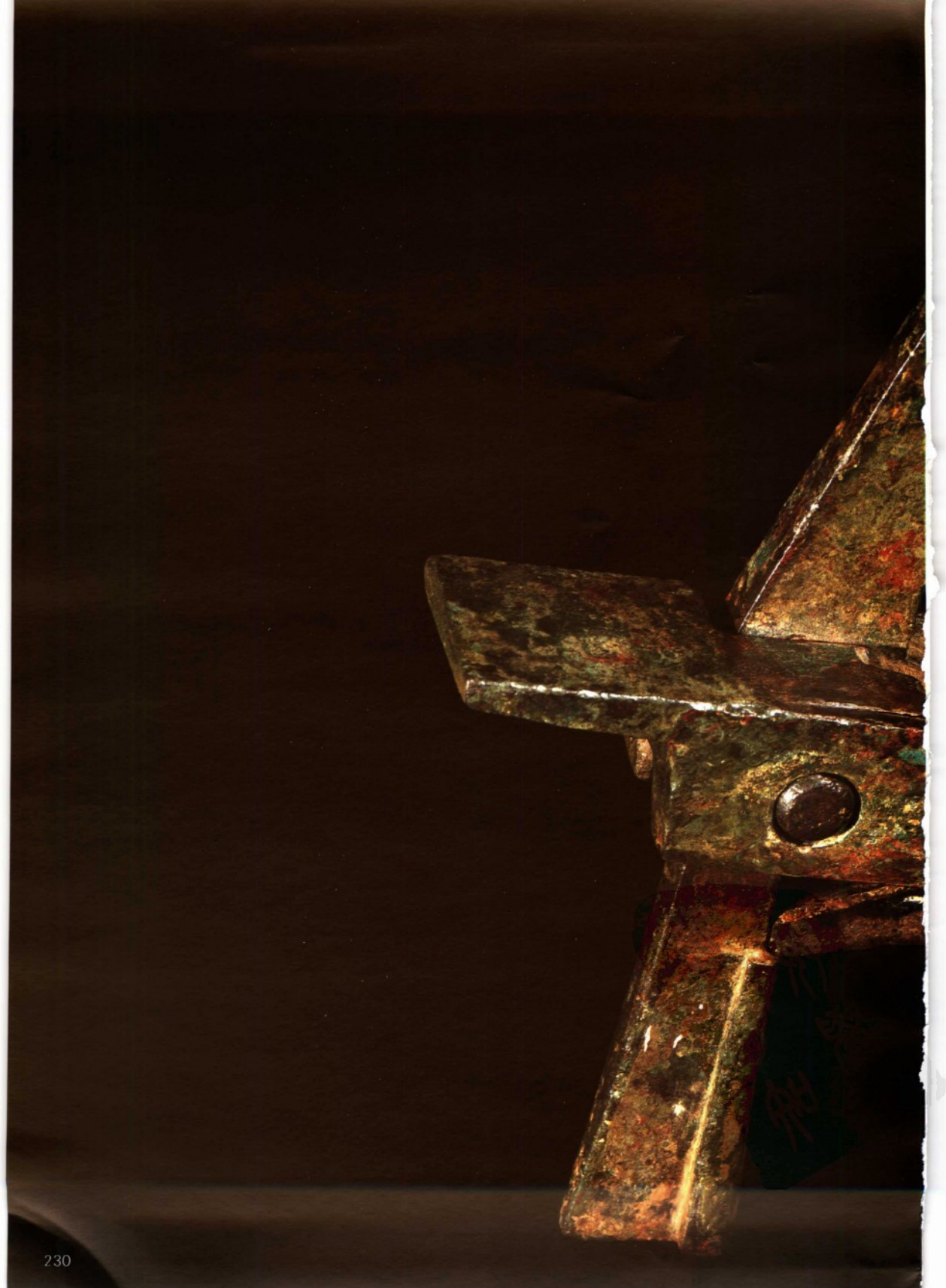
Overall l: 25.5cm


Shafting-hole l: 16.5cm

Dim. at opening: 2.9×2.2cm

Wt: 253.84g







圖版肆伍

弩機 J.W.2849-38 西漢

全長一七·四 望山七×二·七
懸刀二一 牙二·八×〇·八公分
重一一五五·六三公克

Plate 45.

Crossbow

Western Han

Overall l: 17.4cm

Sight (for aiming): 7×2.7cm

Hanging knife (grip): 21cm

Teeth dim.: 2.8×0.8cm

Wt: 1155.63g

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1981年2期 〈 陝西綏德發現和收藏的商代銅器 〉



附錄(Appendix) :

陳芳妹

故宮所藏
殷至周初的異形兵器及其所反映的
文化關係問題——商周青銅兵器 研究之二

**The Palace Museum Collection of Alien-style Weapons from
the Late Shang to Early Chou Dynasties and Inter-cultural
Relations in Early China
Bronze Weapons of the Shang and Chou Dynasties, Part II**

* 本文係發表於《中華民國建國八十年中國藝術文物討論會論文集 器物上》
頁263- 306. 1992. 故宮



序 研究史的回顧及探索關係問題的新角度

故宮所藏青銅兵器為數雖然不及半百，異形兵器卻超過五分之一。本文僅擇取殷商晚期及西周早期的七件異形青銅兵器來討論，由於它們的風格所反映的複雜的文化關係，使我們進一步觸及殷墟與北方及西南關係的問題。

所謂異形是相對於常態而言，商晚期青銅兵器的常態係根據殷墟出土兵器建立的，殷墟作為晚商的政治中心，它出土的兵器自然比其它地區為多；目前考古資料亦證明這點。同時由於該區的考古挖掘成果比其它地區豐碩，也使我們較易瞭解該區的常態。由常態所形成的時潮，在時間上，往往由商晚期延續到西周早期；在空間上，則以安陽為中心而散佈各地：東到山東，西到四川，南到江西，北方且及鄂爾多斯高原^①等地。本文的異形兵器也是針對以安陽為中心的潮流而言的，這些異樣的器制，在目前安陽一帶所發掘的衆多兵器中，是少數的，或罕見，甚或不見的，但卻是瞭解殷墟青銅兵器文明不可忽視的要素。

我們把異形兵器所涉及的文化關係問題，重點放在討論殷墟的對外關係，有其研究發展史的背景。一九二九年，中國第一次科學性的考古發掘在河南安陽展開，這裡是殷商舊都故址，大量青銅器出土，顯示當時高度的青銅藝術及科技成就，證明殷商晚期中國早已邁進青銅文明的門檻。中國是世界重要的古文明之一^②，中國文明的起源問題遂為學者所關注，他們很自然根據殷墟遺存探索中國的古文明^③。另外有些人，特別是外國的漢學家，喜歡從殷墟以外的文化討論這類的問題。比對文物風格的主要憑藉，集中在青銅兵器的形制及紋飾。

青銅兵器比禮器更可能涉及大區域間相異文化關係的討論，因為第一，青銅兵器能呈現若干青銅禮器所不易說明的層面。歷史的發展顯示，當人類逐漸掌握青銅時，不同地區的古文明皆相繼利用青銅鑄造兵器，但用青銅鑄造禮器，作為統治的象徵，則是中國所獨有的現象。兵器既然是各種文化的普遍因素，它比禮器更適於用來比較，以反映異質文化間可能存在的互動關係。第二，兵器比禮器有較明顯的區域性。由於兵器主要用於作戰，實用性能的要求自然比禮器高，它往往須適應當地的地理特性和文化傳統。但不同區域間透過遷徙、婚嫁、戰爭等因素，又有交流。在區域性與文化交流的互動中，便有跨越不同區域的相關類型存在，它們以不同的性質存在於相異的文化系統中。由於青銅兵器具有上述兩大特質，討論文明起源與傳播的學者，自然關心兵器。二〇年代，「文化傳播論」的學風正在文化人類學家及歷史學家間展開。三〇年代，中國殷墟青銅器科學性的考古發掘震驚於世，在資料尚未來得及發表之前，討論文化關係的文章已經搶先問世。由於部分兵器的紋飾或形制共存於廣大的不同文化區中，使人懷疑起源於同一地區，這個起源地何在？它們傳播何方？也很自然地成為討論的重點。一般說來多集中在北方草原民族與中原的關係上，至於西南山區民族與中原的關係，則在最近一、二十年來才引起注意。

一九三二年，安特生（J.G. Anderson）發現一種特殊的動物紋飾常見於青銅兵器，流行在從太平洋到黑海的歐亞草原上，包括南西伯利亞、蒙古及中、蒙邊界。這種紋

飾是隨著草原民族的遷徙，把兩大文明古國——中國及希臘繫連在一起。由於當時引證的資料大多是採集品，他只指出這種文化的繫連，並未處理起源與傳播問題^④。但不同文明間有雷同因素，已因之引起學界廣泛的注意。再者，他選擇以「鄂爾多斯」風格一詞稱呼這類作風，影響後人對此類風格的理解甚大。

一九三五年，江上波夫與水野清一繼之指出內蒙古、長城地帶的中國北方青銅兵器，乃屬於綏遠青銅文化，與西伯利亞米奴辛斯克（Minusinsk）文化內容相關，但在時間上，這種文化繫連並沒有遠溯到商晚期^⑤。雖然二位學者與安特生一樣，並沒有對起源問題給予肯定的追溯，但「綏遠式」與「鄂爾多斯式」的青銅器二詞，隱含對共通文化現象的不同解釋了。

多位俄國史家則試圖處理起源問題，把常見於兵器的野獸紋起源歸諸於伊朗——米索不達米亞世界，然後傳播到歐亞草原、西伯利亞及華北；另有將源頭溯自西伯利亞的^⑥。漢學家高本漢（B. Karlgren）^③及鄭德坤^⑦則以為可能源自華北。但某些兵器同見於西伯利亞及華北，其源頭問題則被略而不談。

一九五二年，李濟之先生處理小屯出土的鋒刃器，面對著西伯利亞與殷墟共同因子獸首刀，則將其置於小屯、侯家莊出土的各種刀制演變圖譜中，發現與殷墟的刀制及其它器物裝飾等的發展，水乳交融^⑧，因而證明獸首刀是殷墟的本土文化。

一九五六年，羅越（Max Loehr）研究楊寧史舊藏（Werner Jannings Collection）的三代青銅兵器。他捨棄「鄂爾多斯式」、「綏遠式」、甚至「西伯利亞式」等以特定地區為風格名稱的方式，改用「北方風格」（Northern Style）這個「含混而籠統的詞彙」（vague and hybrid），正因為這類作風不僅只出現在鄂爾多斯、或綏遠、或西伯利亞一地而已。同時，「北方風格」也可用來強調它與「殷墟風格」的區別，它的年代可能早於安陽，兵器中的有銜斧等，即屬於北方的作風^⑨。

羅越的看法有其影響力。該書寫成於一九五六年，就在六年前的一九五〇年，河南鄭州二里岡發現商代遺址，有明確的地層關係證明比殷墟早，但遺物以陶器為主^⑩。一九五五年，二里岡出土青銅器^⑪。一九七三年，偃師二里頭正式出土青銅器^⑫，早於晚商的中原青銅文明為羅越所不知，這兩個文化階段皆出土夾內戈^⑬。羅越既以有銜為青銅時代的創制，而殷墟的有銜乃受北方的影響，再轉而影響殷墟本土戈制——夾內戈的產生。羅越的看法在二十年後為俄國史家列、謝、瓦西理耶夫所接受^⑭。

一九七二年，華威廉教授（William Watson）^⑮利用二里崗期的考古資料，為安陽的銜口斧（Socketed axe）及仍不見於二里崗期而見於安陽期的獸首刀、管銜斧（long-bladed axe with shaft-hole）及短劍等，找到其源頭。此「北方地帶」是中國與南西伯利亞區的文化邊陲帶（Cultural frontier），為兩區文化交流的孔道，它包括陝北、晉北、綏遠、內蒙古等地。他凸顯了「北方地帶」在異形兵器的源流及文化關係方面的重要性。

近來中國學者如烏恩^⑯、及林漢^⑰等^⑱，也使用「北方青銅器」的詞彙，視野與意義則更明確。他們整理了近一、二十年來出土的北方式的青銅兵器，包括晉北、陝北、

遼寧、河北、青海、寧夏等地，由於這些資料大部分乃近一、二十年來所發掘，非早期學者所知，在斷代及地緣上更近於殷墟，他們的研究，把殷墟與域外文明關係的認識推進一步。

另一方面，日人高濱秀仍沿用「鄂爾多斯式」的詞彙^⑭。在內蒙古主持發掘的田廣金與郭素新也使用「鄂爾多斯式的青銅器」一詞^⑮，但他們不只沿用舊稱而已，而是從該區的挖掘中，初步認為該式青銅器的起源，是在鄂爾多斯及鄰近地區的土著文化。隨著內蒙古朱開溝遺址的發掘，更加强了他們的看法^⑯。

以上諸家對來源及傳播方向的探索各有看法，根本問題在於斷代。學者討論文化關係最容易關注「起源」與「傳播」問題，全面性的瞭解，則有賴相關的雙方資料。譬如是否具備相當豐富的考古資料、精確的出土地點、及可靠的斷代，或是，研究者對雙方的考古資料是否有對等的把握。客觀上考古資料由少到多，由點到面；雙方考古資料的斷代由粗疏到細緻，由提前到拉後，以及根據的資料或有改變，皆影響學者的結論。再者，主觀上學者對雙方資料的掌握，孰輕孰重，皆使得這個問題由三〇年代至今，雖歷經五、六十年，學者們的結論仍然紛歧。基本上，從目前所累積的資料來看，要下客觀結論的時機仍未成熟。

唯中原與邊區域外文化關係的存在，乃自始至終為學者所承認，隨著新資料的發掘而文化關係問題也呈現出不同的層面。本文如今處理故宮博物院的這批資料，討論其背後所引發的文化關係問題時，也只能在特定時空限制下，作現階段理解而已。這七件兵器，某些形制或裝飾特點，基本上普遍地出現於北方或西南，但也或多或少地見於晚商的安陽，北方與西南的某些文化特質，共同匯集於安陽，安陽與各區的文化關係是值得注意的。以安陽為中心的商晚期殷墟文明，其高度的發展，素來為學者所關注，這個文明體的形成，除了內在自力的發展外，是否有外力因素？殷墟文明除了被動地受影響外，它如何處理外力因素？殷墟文明對外來文化開放和融合的程度如何？我們以為故宮博物院的七件青銅兵器正可以部分反映這個問題。雖然目前我們仍只能謹慎地說安陽與北方及西南共存的是「共同因素」，而不能必然證明它們是安陽的「外來因素」，上述問題的探索，向來學者比較忽視，但對殷墟文明形成的瞭解都相當重要，而這些「共同因素」是否是「外來因素」，也可有進一步的瞭解。這是本文討論重心放在這些問題的原因。

本文把討論的重點集中於安陽，原因之二，是目前考古成果易於導致文化關係結論的不公平性。截至目前為止，安陽的考古成果比其它地方豐碩，安陽的斷代基礎比較堅實，致使其它地區的斷代多依安陽為標準。基於此，討論向來被認為的「核心區」與「邊緣區」的文化關係不免有客觀的限制。一方面，一般認定的「核心區」，可能事實上也是真正的核心區，因為該區所得考古發掘資料最多。另一方面，由於該區被認為「核心區」，因此考古的鋤頭也用力最勤，所以考古工作成果累積得最豐碩，由這地區所形成的斷代標準遂較易建立。相對的，邊緣區往往考古工作累積成果較少，斷代標準只好依循核心區。根據它們與核心區的共同因素來斷代，再進而討論文化關係，甚至涉及起源、傳播或影響等問題，這樣所得的意見也是不免失之公允的。因此，本文的重點，

放在探討共同因素成立的證據，以及安陽對於共同因素的處理方式。

根據目前考古資料，此「共同因素」不只見於安陽，且見於晉北、陝北、河北、鄂爾多斯等地，更北遠及南西伯利亞的卡拉蘇克文化區。早期漢學家囿於當時中國北方考古資料之闕如，直接把殷墟與卡拉蘇克文化繫連起來。近日中國史家傾向於把殷墟的直接繫連放在中國北方，在時空兩方面都比較合理。如果中國史家的瞭解無誤，根據目前的研究狀況，卡拉蘇克的年代問題似乎仍不夠精細，據說有些斷代還須依賴殷墟的標準^⑳。況且，在卡拉蘇克文化中，如常見於兵器的野獸紋曲背彎刀、管釜斧等，到目前為止，似乎尚未找到比殷墟更早的例證^㉑，因此本文不再探討殷墟與卡拉蘇克文化的關係，僅從殷墟與中國北方文明的關係來探討殷墟文明的形成。

再者，殷墟與涇渭、漢中、川西等地在兵器方面的「共同因素」也是透視殷墟兵器文明形成的重要指標，這方面的研究只是近十年來的新課題而已。故宮博物院的一件異形兵器正反映這類問題。晚商時期，青銅文明以殷墟為核心的說法，似乎愈來愈受到挑戰。前幾年四川廣漢^㉒和去年江西新淦^㉓驚人的青銅器的發掘，皆使得研究者再重新思考這個問題。新石器時代以來，中國幾個文化區間形成相互作用圈，形成中早期多元化的文明。國家產生，城市文明興起，進入青銅時代，所謂政治權力核心也漸漸形成，以前累積的考古成果，似乎也證明這同時是青銅文明的核心圈。目前這些問題皆值得再探討。故宮博物院所藏七件異形兵器引發的問題，不過是提供瞭解此「核心圈」的另一角度而已。

壹、殷墟與北方關係的問題

一、鈴首劍與鈴首刀

1. 鈴首劍的風格、斷代與地緣關係問題

故宮博物院收藏有一把【曲柄鈴首短劍】（圖版肆）〔圖1〕^㉔，中脊雙刃，全長23.4公分，刃長只過半，13.6公分。它是屬於短劍系統。與春秋戰國中原所流行的40、50公分的長短劍不同。此劍通體向一側微曲，分成首、莖、格、身四部分。鈴首是由八道放射形鏤孔內置一鈴丸組成。側角有一環扣以利懸掛，扁莖。莖上的紋飾頗受重視，共分成五排：以鋸齒狀花紋為中心，上下各有點狀及弦紋對稱分佈。一字形外凸的格，劍身寬而短，中有柱狀脊。

此鈴首、環扣、扁莖、一字格、柱狀脊的微曲短劍類型，曾分別出土於山西石樓曹家垣〔圖2〕^㉕、柳林高紅〔圖3〕^㉖及保德林遮峪〔圖4〕、吉縣城關〔圖5〕、陝西延川稍道河鄉去頭村^㉗等，且及內蒙古伊金霍洛旗〔圖6〕^㉘。六件出土器中，保德林遮峪出土者且有青銅容器卣、鼎、甗等伴隨出土，它們的風格與殷墟出土者近，因而時代被斷定在商晚期，提供了此【曲柄鈴首短劍】的斷代基礎。

再者，從這類短劍的出土地點看，可能安陽以北的山西、陝西、內蒙一帶，是此類型的主要分佈區（表一）。特別是鈴首裝飾，似乎為山西北部一帶所喜用，因此也見於其它器類：如山西石樓曹家垣出土有鐸形器，上面即飾滿了鈴〔圖7〕；保德林遮峪出土有帶鈴豆、單球鈴、雙球鈴〔圖8〕；山西石樓出土的觚，圈足上飾有鈴^㉙，這些裝

飾手法皆非其它地方所常見，也間接證明了【曲柄鈴首短劍】的作風可能有其地方性。

〔表一〕北方出土商代青銅短劍表

出土地點	全長(公分)	劍柄裝飾	資料來源
山西石樓曹家垣	25.5	鈴首	《文物》1981：8頁50
山西柳林高紅	23.5	鈴首	《考古》1981：3頁222
山西保德林遮峪	32	鈴首	《文物》1972：4頁62
山西古縣城關	29	鈴首	《考古》1985：9頁849
陝西延川稍道河去頭村	25(殘)	鈴首	《考古與文物》1988：4頁104
內蒙古伊金霍洛旗	22.3	鈴首	《鄂爾多斯式青銅器》頁2
河北青龍抄道溝	30.2	羊首	《考古》1982：12頁644
河北張北	33.3(殘)	鹿首	《文物》1984：2，圖版：伍：1

有意思的是在山西北部，也出土如直內戈、釜內戈等〔圖9〕，是安陽常見的戈制〔圖10〕，所共同出土的青銅容器的作風^⑳也有與安陽相近^㉑的。顯然，在晚商，山西北部對安陽的作風並不陌生。相對的，曲柄鈴首短劍類型目前卻尚未見於安陽^㉒。雖然，安陽已系統地挖掘出大量兵器，短劍的傳統似乎尚未建立。而商晚期後，它在中原的發展也頗難尋繹。因此，縱使日後在安陽或有出土，其是否根植於安陽，仍須審慎地研析。

進一步說，【獸首曲柄短劍】與【鈴首曲柄短劍】同屬【曲柄短劍】類型，只是柄首不是裝飾鈴首，而是獸首。這類獸首短劍的出土主要也集中於北方，如河北青龍抄道溝出土有【羊首曲柄短劍】〔圖11〕^㉓，河北張北出土有【鹿首曲柄短劍】^㉔〔圖12〕。值得注意的是，這類獸首曲柄短劍更往北分佈於蒙古及外貝加爾地區，如蒙古南戈壁省伯音塔拉鄉、蘇聯布利亞特蒙古自治共和國科托——克利湖畔、以及外貝加爾赤塔州等，各出土一件。沃里科夫將蒙古、蘇聯外貝加爾出土的這類短劍的時代皆歸屬於卡拉蘇克晚期^㉕。卡拉蘇克文化是蘇聯南西伯利亞米奴斯克盆地青銅時代晚期的一種文化，它的時代，蘇聯考古學家尚無定論^㉖。

一九七二年，H. JI. 契列諾娃的《卡拉蘇克時期遺跡的年代學》一書歸納可斷代的三十三處墓地，有二個碳十四的測定數據，一為距今 2930 ± 60 (980B.C.)，一為 2710 ± 75 (760B.C.)^㉗，可靠年代的絕對數據並不算早。同時，根據熟悉蘇聯考古學的中國考古學家烏恩先生的批評，以為一般把卡拉蘇克文化的年代定在西元前12-8世紀，特別是上限的斷代根據並不充分。一方面，屬於該文化的墓葬大多被盜，可供斷代的標準器不多，另一方面，亦無文字可考，研究者因此根據出土物中與殷墟、西周同類物來推定。再者，裝飾動物紋飾的青銅器，在卡拉蘇克文化的早期墓葬中尚未出現。因此，如果烏恩的批評及瞭解無誤，似乎山西及河北北部出現的獸首或鈴首短劍比南西伯利亞一帶更早。進一步更概化地說，內蒙古自治區伊克昭盟的朱開溝墓1040出土有匕首式環首短劍，長26公分〔圖13〕^㉘，根據共出的陶器、銅戈及相關墓葬，發掘者把時代斷定為二里岡上層，至遲不晚於殷墟一期。如果此斷代無誤，則時代如此早的匕首式青銅短

劍，似乎尚未見於其它地區。那麼就目前的材料來說，鄂爾多斯仍可能為北方青銅短劍的源頭。當然，從數量說，如此早的例證在鄂爾多斯一帶，至今仍只有此一孤例；從形制說，其為直柄直刃，似乎與西周的北方式的青銅短劍的變化較接近^④，若作為曲柄短劍的源頭，在發展序列上，顯得晚商的曲柄短劍是突兀的變化了。我們期盼日後有更多資料來解決。

這類匕首式劍，無論源自鄂爾多斯或其它北部地方，商晚期時它似乎主要見於北方，而為殷墟所罕見，換言之，近體衛身的短劍在眾多的殷墟兵器中似乎不是必須的，這是頗堪玩味的問題。是否因為殷墟已習慣於使用戈這種雙刃兵器呢？有賴更多的資料才能理解了。

總之，故宮博物院收藏的曲柄鈴首短劍時代可斷於商晚期，目前所知安陽青銅兵器對此類型似乎相當陌生，可能與安陽傳統無關。在地緣關係上，這類形制可能與山西北部甚或鄂爾多斯傳統關係較深。這些地方一向被認為是北方草原民族的游牧區，其中問題下文詳論。唯故宮另藏一件同為曲柄鈴首類型，但形制是刀不是劍，這類器制所引起的文化關係問題則更複雜。

2. 鈴首刀的風格、斷代與文化關係問題

故宮博物院收藏有一把【曲背鈴首彎刀】（圖版伍）〔圖14〕^④，全長28.3公分，通體側曲，作弓背曲柄狀，分成首、莖、身三部分。鈴首：由八道放射形鏤孔，內置一鈴丸組成，側角有一環扣，以利懸掛。扁莖，莖前後各有一排鋸齒狀花紋，上下則有點狀花紋。身與莖相接處有鉤狀凸起。身部背厚而刃薄。近鉤狀凸起處的刀刃上有刻款「大吉」二字，疑係後世補刻。器上且貼有布條書寫「古有鸞刀謂刀環，有鈴如鸞聲，此刀形質甚古，誠秦漢以上物也」，可能是早期收藏家的說明。

此背厚刃薄的曲背鈴首彎刀類型，曾出土於河北青龍抄道溝〔圖15〕^④，這是一座以埋藏青銅兵器為主的窖藏，在一九六一年出土時，因其它可資比較的相類材料仍少，報告執筆者斷其時代下限不超過戰國初年。但由於日後同類器出土日增，同類器與晚商的青銅禮器共出，因此目前學者相當一致地把此群器的時代斷為商晚期^④。該窖藏且出土了其它同類的曲背彎刀，同為厚背薄刃，身與莖之間有凸出刃緣的鉤狀凸起，唯刀首不是裝飾鈴首，而是圓環〔圖16〕或獸首〔圖17〕。這類環首或獸首曲背彎刀，不只見於河北其它地方，如懷安獅子口^④、興隆^④等地，且普遍見於北方，如山西石樓褚家峪^④、后蘭家溝^④、靈石旌介村〔圖18〕^④、陝西子長^④及綏德塢頭村〔圖19〕^④（表二）。這些墓葬或窖藏的時代，學者也普遍公認屬商晚期^④。值得注意的是，故宮博物院所藏的鈴首彎刀，刀莖上的點狀花紋及鋸齒紋〔圖20〕，正與河北青龍抄道溝的曲背獸首彎刀〔圖17〕同，這類鈴首彎刀存在於商晚期的北方一帶，似乎是可以肯定的了。

進一步說，這種與鈴首曲背彎刀共存的獸首曲背彎刀，分佈的範圍甚廣，且遠及卡拉蘇克文化區，如：阿巴干一號墓及托巴出諾沃村各出土一件羊首刀〔圖21〕^④，它們的時代約在西元前八至七世紀^④。換言之，這類曲背彎刀正以不同形式的刀首裝飾散佈於中國北方及南西伯利亞草原上。

〔表二〕北方出土商代獸首、環首或鈴首曲背彎刀表

出土地點	全長(公分)	柄長(公分)	劍柄裝飾	資料來源
河北青龍抄道溝	26	13.7	鈴首	《考古》1962：12頁645
河北青龍抄道溝	29.6	10.2	鹿首	《考古》1962：12頁644
河北青龍抄道溝	26.7	10.7	環首	《考古》1962：12頁645
河北青龍抄道溝	24.3	10.8	環首	《考古》1962：12頁645
河北青龍抄道溝	21.5(殘)	10	環首	《考古》1962：12頁645
河北懷安獅子口	22.4	9.5	鹿首	《考古》1988：10頁941
河北興隆	24.5		牛首	《文物》1990：11頁58
山西石樓褚家峪	24.4	10.9	環首	《文物》1981：8頁49
山西石樓 后蘭家溝	32.5		鈴首 柄飾蛇紋	《文物》1962：4、5頁33
山西靈石旌介村	27		獸頭	《文物》1986：11
陝西綏德塢頭村	32		馬頭	《文物》1975：2頁82

有意思的是，這種北方常見的曲背彎刀亦見於殷墟，它以獸首曲背彎刀的型態出現〔圖22〕^{⑤⑤}。這種雷同已經高本漢、羅越及中國、蘇聯的考古學家相繼指出，他們在起源方面的說法雖莫衷一是，在傳播方向上，則除了高本漢及李濟之先生以外，一般大致同意殷墟是被影響者。那麼這種「獸首曲背彎刀」果真從北方傳入殷墟的嗎？若是如此，殷墟對這種「外來因素」的態度將是透視殷墟青銅兵器文明的重要角度，值得我們一一檢視。

中國學者把殷墟與北方的關係，從南西伯利亞轉移到陝北、晉北、河北北部的北方草原，我們以為有其合理性。一方面，這些地方出土的兵器主要是五、六十年代以後的事，高本漢、羅越等學者殊少注意，遂把殷墟與北方的關係直指南西伯利亞，也是可以理解的。另一方面，從地緣關係論，陝北等地緊鄰殷墟，文獻及甲骨文也有少數涉及雙方關係的記載（詳後論）；從時間關係論，陝北等地與殷墟的關係也很相近。因此，本文的討論也以殷墟與陝北等北方草原關係為主，再度檢視「曲背彎刀」在殷墟與北方草原共存的情況，廣義地包括獸首、鈴首或環首，從這類兵器在當地兵器中所佔分量、所出現的時間、形制特點以及出土情況分析起。

首先我們要討論的是「北方影響殷墟」的問題。從共同因素出現於雙方的時間論，目前殷墟所出土的曲背彎刀約計九件：小屯墓20出土三件〔圖23-1、23-2、23-3〕^{⑤⑥}；侯家莊西北崗刀斧葬墓群中，墓1138、1205、1375出土三件〔圖24-1、24-2、24-3〕^{⑤⑦}；殷墟婦好墓一件〔圖22〕；殷墟西區墓1713一件〔圖25〕^{⑤⑧}；以及安陽大司空村墓51一件〔圖26〕^{⑤⑨}（表三）。可見殷墟有曲背彎刀，時間約在殷墟二期至四期^{⑥⑩}。

相對的，北方草原出土有曲背彎刀者，如前所述，見於河北青龍抄道溝、山西石樓褚家峪、后蘭家溝及陝西綏德塢頭村等地。其中后蘭家溝的年代，學者或接受為殷墟一期偏晚或殷墟二期；綏德塢頭村者則屬於三期（表四）^{⑥⑪}。

〔表三〕殷墟出土獸首曲背彎刀表

標本號	墓號	全長	柄長	刀寬	背厚	重量	刀首裝飾	資料來源
R1858	小屯M20	32cm	8.4cm	4.2cm	0.9cm	382.0g	馬首	《小屯》(一)頁126
R1859	小屯M20	31.4cm	8cm	4.4cm		371.5g	牛首	《小屯》(一)頁139
R1857	小屯M20	30.1cm	7.6cm	3.5cm	0.9cm	303.0g	羊首	《小屯》(一)頁140
690	小屯M5	36.2cm				450g	獸首*	《殷墟婦好墓》頁103
	西區M1713	30.5cm	12.2cm		0.75cm			《考古》1986:8頁709
R1961	西北崗M1537	18.2cm				43g		《史語所集刊》37頁368
R9306	西北崗M1693	19.2cm						《史語所集刊》37頁372
R8964	西北崗M1008	17.8cm				38g		《史語所集刊》37頁375
	大司空村M51	32.7cm				46g	牛首	《河南(一)》圖版291

* 報告者以為似龍首，林滙則認為是羊首。

〔表四〕諸家斷代一覽表^①(以山陝一帶曲背彎刀出土的晚商墓葬為限)

	鄒衡	陳志達·鄭振香	張長壽
二里崗至 殷墟一期		長子北關1. 石樓后蘭家溝(偏晚)2.	石樓下莊 石樓后蘭家溝
殷墟二期	忻縣羊圈坡群3. 忻縣牛子坪4. 石樓后蘭家溝5. 石樓賀家坪6. 永和下辛角7. 石樓桃花莊A8.	石樓桃花莊 石樓二郎坡9. 石樓義牒褚家峪10. 石樓永和下辛角 忻縣連寺溝羊圈坡11. 忻縣保德林遮峪 (部份屬三期)	石樓桃花莊 石樓二郎坡
殷墟三期	保德林遮峪12. 石樓義牒13.		綏德瑪頭村 保德林遮峪
殷墟四期	石樓二郎坡 石樓義牒14. 石樓桃花莊B8	靈石旌介15.	*

1. 《文物叢刊資料》3

2. 《文物》1962:4、5

3. 《文物》1974:4

4. 《文物》1972:4

5. 《文物》1962:4

6. 《文物》1959:3

7. 《考古》1977:5

9. 《文物》1958:1

10. 《文物》1981:8

11. 《文物》1972:4

12. 《文物》1972:4

13. 《考古》1972:4

14. 《文物》1974:2

15. 《文物資料叢刊》3

*張長壽僅區分為三

值得注意的是對晉、陝等器群時間的認定，往往根據共出青銅禮器與殷墟相比對而來，雖然后蘭家溝的斷代，有的學者以為是殷墟一期偏晚，但也有認定是二期的。因此據目前資料論，曲背彎刀在雙方出現的時間顯然相近。換言之，從時間因素論，似乎不必然得出「北方影響殷墟」的結論。當然，我們也不能排除下述的可能性：由於雙方接觸頻繁，當一方開始一種新形式時，便很快地影響到另一方，因此，在目前斷代仍不夠嚴謹的階段，我們顯然無法區分孰先孰後。或者雙方同時開始也不無可能。

但就出土的分量說，殷墟的曲背彎刀總數雖然比北方出土者多，但就殷墟本身論，曲背彎刀在其兵器總數中顯然比例太少。安陽常見的典型刀制有二：一為大型凹背凸刃直柄無首刀〔圖27〕，刀長約40或50公分左右者，刀尖上翹，屬短柄式的，非直接可以盈握，而須安裝木柄；一為小型凸背凹刃刀〔圖28〕^{⑥2}，刀長約十幾公分，刀身扁平而薄，柄首呈環狀。就殷墟婦好墓而言，在此未經盜擾的墓葬中，共出土銅刀二十三件，凹背凸刃刀式占十二件，凸背凹刃刀式占十件，獸首曲背彎刀則只有一件^{⑥3}。總之，殷墟挖掘的衆多墓葬，約只有九個墓葬出土曲背彎刀；而在殷墟出土的衆多的銅刀中，曲背彎刀目前也大約九件左右。可見殷墟所出兵器中，曲背彎刀所占的比例顯得微不足道。

再從本土溯源來說，殷墟的兩種通行刀制中，特別是大型的凹背凸刃式直柄無首刀制，據原本土的資料，可上溯自二里岡文化階段〔圖29〕^{⑥4}，相對的曲背彎刀目前仍難溯源。換言之，獸首曲背彎刀在殷墟二期武丁前後出現於殷墟，似乎是突然的變化，而這種突變可能也尚未在殷墟兵器發展的系統中植根，因此數量的比例甚少。相對的，差不多同時或稍前，這種曲背彎刀也在北方草原隨同一些殷墟常見的青銅禮器、兵器戈、以及殷墟所罕見的所謂北方系兵器出土^{⑥5}。根據這些現象，我們可以肯定的是，當時北方與殷墟必然有過相當頻繁的接觸，雙方似乎在某種程度上熟悉彼此的傳統。殷墟對北方傳統作選擇性的吸收也不無可能，獸首曲背彎刀可能即是一例^{⑥6}，故在殷墟所佔分量少，難以溯其源頭。

從目前的資料分析，我們以為獸首曲背彎刀對殷墟而言，「外來因素」比「本土滋生」的可能性大。假若此共同因素即是外來因素，我們進一步想問的是，殷墟對此外來因素的態度如何？從出土情況論，它在殷墟曾為顯赫人物陪葬過。如殷墟婦好墓即出土一把獸首刀，制作精美，全長約32.7公分，是目前所見最長的獸首刀。殷墟西區墓1713也出土一把獸首刀。婦好一般以為是武丁的后妃，叱咤風雲，帶兵出征^{⑥7}。墓1713則為未經盜擾的頗具規模的墓葬，埋葬一主人二殉人，出土有十七件青銅禮器，其中帶銘文的多，且有二把鉞，二件大刀，三十件戈，三十件矛。發掘者根據有鉞等，推測墓主人在殷朝擔任過重要的軍事職務^{⑥8}。此件獸首刀^{⑥9}長30.5公分，出土時雖在二層台上，但發掘者推測它可能原放在槨頂板上，因板朽下陷所致。從這二個例証看，似乎這類獸首刀在殷墟曾引起少數高級將領的注意，或者是他們所重視的戰利品。有的學者甚至根據其制作的精粗及長短，作為反映身份等級制的一項標準^{⑦0}。

獸首曲背彎刀在殷墟的其它小型墓葬中地位也很特殊。三件出土在小屯墓20車墓，與其他兵器成套，可能是車首長、射手、御者等車兵使用的近身衛體武器^⑪。它們的長度分別是32、31.4、30.1公分。唯這種車上三人皆使用獸首刀的情形在殷墟甚罕見。殷墟也出土過其它車馬坑，如大司空村墓175^⑫、殷墟西區墓43^⑬，但並沒有獸首刀。可見獸首曲背彎刀並非殷墟一般車兵常見配備。墓20可能是當時的特例，難道獸首刀是以北人為車兵的特殊配備嗎？

其它三件出土於西北崗的獸首刀也頗特別，它們分別見於西北崗墓1537、1693及1008，這是一種相當特別的刀斧葬^⑭，見於殷代王室墓地中，約有八十座，墓中埋著無頭的人肢體，幾乎完全以銅刀、銅斧、礪石三種為殉葬品，其中三座即埋有獸首刀。有意思的是這三件獸首刀的長度、重量和製作精美的程度，與大型墓葬中所見者頗不相同，它們分別是18.2、19.4、17.8公分，重量不到五十公克。論製作精美的程度，與同一葬群的其它刀制已殊少差異。是否是因為刀斧葬中墓主人身分皆低而致此呢？在八十座墓出土了七一九件刀，多是殷墟常見的扁薄環首刀，何以有三件的厚背獸首刀出於其中？其作工、長度、重量與獸首刀一向的作風不同。是否意味著墓主人是身分較低的北人^⑮？何以同墓中的其它六、七百件刀都不是獸首刀呢？恐怕有待更多資料才能進一步推敲。

總之，假使曲背彎刀是殷墟的外來因素可以成立，殷墟對此外來因素的態度是開放的，但是也有相當程度的選擇性。殷墟對其傳統所陌生甚或不需要的劍制（可能戈制已能滿足雙刃兵器要求），似乎不太有興趣，但是對其傳統經常使用的刀制則樂於增益其多樣性，唯態度也相當保留，以刀首裝飾獸首為主，或制作精美，與地位高至如婦好者共葬；或制作粗糙，與刀斧葬的無頭人肢體共出。其在獸首裝飾上也作了些細微差異的改變，甚至到第四期，其曲背的特質也變直了。但基本上，曲形厚背彎刀在殷墟是罕見的刀制，並沒有取代傳統通行的刀制。

至於故宮的鈴首曲形厚背彎刀基本上屬商晚期，與山西北部類型相近，可能是當地草原民族通用的刀制。這種類型在殷墟是以獸首曲背彎刀型態出現，是為罕見類型。

二、從四件異形鈹談「有銜」的問題

故宮博物院收藏有四件異形鈹：【七孔半圓形刃管銜鈹】（圖版拾）〔圖30〕、【三孔捲雲半圓形狹刃管銜鈹】（圖版拾壹）〔圖31〕及二件【獸面紋有銜鈹】〔圖32，33〕^⑯。四件共同以有銜通相引起有銜問題，但其風格又各有其異，引起不同層次的問題，茲先依其殊相分別論述：

1. 兩件半圓形管銜鈹的風格、斷代與地緣關係

【七孔管半圓形刃銜鈹】風格特殊，西清古鑑作「舞戚」。〔圖34〕。⑰有長達18.7公分的管銜，以及半圓形刃。管銜上小下大，（下銜孔徑約為上銜孔徑的二倍），似乎有利於固定木柅（本器木柅係後世所加）。銜孔孔口疑係後世以銅填補，與原器接合處顯現一環修補痕跡〔圖35〕。此器花紋更富特色，主要集中在管狀銜上：銜上有三道籬狀裝飾，中間飾有二大節點狀紋及鋸齒狀帶紋〔圖36〕。背部各有小突起，三個小突起連線下延，隱約可見范線痕跡。鈹身近管狀銜處有七圓孔，向刃邊及銜孔邊各伸出突起線。

此器形制與花紋特點與青海湟中下西河潘家梁出土的【七孔管釜鉞】〔圖37〕相近，後者的時代或斷為商代後期⁷⁸；或斷為西周早期⁷⁹。本院所藏七孔管釜鉞時代可能也在商末或周初。

本院另外收藏有【三孔捲雲半圓形狹刃管釜鉞】，《西清古鑑》著錄作〈周片雲戚〉〔圖38〕⁸⁰。此件管狀釜亦長達18.2公分，釜徑亦上小下大（釜口下徑3.6×2，釜口上徑2.95×1.72公分），唯上下兩端釜孔可能在日後收藏中為後人所填補。不只上下釜孔與器壁接縫痕跡隱約可見〔圖39〕，經X光透視正面管釜〔圖40〕，知管狀中空，因此上下花紋隱約可見重疊；復經X光側面透視〔圖41〕，見其中間呈現黑色，正是空心的明證，因此知此器原本應是空心的管狀釜，木秘可以穿入。

花紋集中於管狀釜上。釜上有四道箍狀裝飾，上行飾點狀紋，中間有兩道長方形凹槽，亦經後人填補，銹色與器身似不相同。四道箍狀裝飾中間間距三節，各飾點狀及鋸齒帶紋〔圖42〕。釜背中間有銜，上有小繫環，鉞身有三圓孔，刃角外侈反捲。

此鉞與傳陝西榆林出土的【三孔管釜鉞】〔圖43〕⁸¹之形制及花紋相近，其時代或定為商晚期；或定為西周早期⁷⁹。本院三孔鉞的時代宜屬商末或周初。

本院所藏的二件半圓形刃長管釜鉞，形制特殊，目前殷墟尚未見到，與殷墟通見的鉞制甚不相類，亦非北地所常見。但極為相近的例證，一出土於青海，一傳出土於陝北，可能也是屬於北方的作風。我們亦可由其它相類似的例證獲得輔證。陝西淳化出土一【三孔鉞】〔圖44〕⁸²，雖然較小，其半圓刃、三孔、管狀釜以及釜上的長方形凹槽和裝飾，皆與故宮二鉞有近似之處，此墓年代被定為商末或西周初。另外，陝西岐山魏家河出土晚商銅刀〔圖45〕⁸³，刃部作捲雲狀，刃上有四孔，形制特點與故宮三孔鉞有通之處。陝西扶風呂宅村出土一晚商鉞〔圖46〕⁸⁴以及西安老牛坡墓41的晚商鉞〔圖47〕⁸⁵，鉞身有「突起線」裝飾，皆與故宮七孔鉞有共通之處。另外，北京昌平白浮墓二出土一異形戈，戈的內部即為管狀釜與半圓形內組成〔圖48〕⁸⁶，形制與淳化及故宮二鉞相近。總之，似乎與故宮長管釜半圓形鉞相近的鉞制或其它兵器形制，在商末或周初之際，在北方雖非盛行，但也並不陌生。唯對殷墟而言，或許與當地通行的鉞制相差太大，終為殷墟所罕見。

但是故宮所藏的另外兩把鉞與北方及殷墟的關係就更為密切了。

2. 二把短管釜斧形鉞的風格、斷代與地緣關係問題

故宮博物院另外收藏兩把管釜鉞（圖版柒，捌）〔圖32，33〕，管狀釜沒有上述二把（約18公分）長，約只7公分左右（一為7.4公分，一為7公分）。但這二把管釜仍然高出鉞的寬度，鉞身薄刃，刃線近乎垂直，似斧形，但仍些微外張作扇形式鉞⁸⁷。

這種形制的管釜鉞一般較常見於北方，如山西柳林高紅出土一件斧鉞，管狀釜高出刃寬〔圖49〕。山西吉縣城關及山西石樓義牒分別出土一管狀釜鉞〔圖50〕⁸⁸，後者釜的高度達8.5公分，比刃寬8.2公分稍寬，刃身形制近方形。以上三件時代皆被斷為商晚期，可見這類器制在晚商時比較常見於山西北部。至西周早期，北方仍然可見，如北京昌平白浮墓3出土管釜斧鉞〔圖51〕，其釜高8公分，刃寬6公分；又如寶雞強國墓地7及13出土有二把管釜鉞〔圖52〕⁸⁹。

北方的兵器及工具好使用管鋸，我們可以由近管鋸的管鋸斧看出端倪。這些管鋸斧，斧身修長，刃線較直，但其管鋸高出刃寬的特點與管鋸鉞相同。它們散見於陝西岐山王家嘴〔圖53〕、山西石樓曹家垣〔圖54〕、山西保德林遮峪〔圖55〕、河北青龍抄道溝〔圖56〕。

北方斧鉞器制好使用有鋸，我們也可以從第二種鉞制得到證明。這類有鋸鉞與前二型不同，前二型管鋸高度明顯地大於刃寬，這種類型管鋸高度小於刃寬，但與內的高度相當，刃部扇形則較為寬方，唯其為管鋸則一也。這類有鋸直內鉞也以晉、陝北部出土較多，如山西靈石旌介村〔圖57〕^⑩、義牒村〔圖58〕^⑪、柳林高紅〔圖59〕；陝西綏德中角楊峁〔圖60〕^⑫，西安老牛坡〔圖61〕^⑬；甚至還遠及山東泗水〔圖62〕^⑭遼寧興城楊河及新民大紅旗等^⑮。如此看來，北方喜好使用有鋸或管鋸，似乎是已證明的事實。再者，從西元前3000-1000年左右，在波斯，特別是Lulistan一帶也廣泛使用著管鋸斧〔圖63〕^⑯。顯然，有鋸斧出現在波斯一帶比中國北方早。二者間是否有影響關係，目前尚無直接證據可以確認。

相對的，這類有鋸鉞斧及管鋸斧目前似尚未見於殷墟，就連第二種鉞制也罕見於殷墟，這種鉞制雖是有鋸，但刃身近正方形，與殷墟通行鉞制刃身形制相近。由於罕見於殷墟，又與殷墟形制相關，我們懷疑這種有鋸鉞乃是北方與殷墟傳統接觸後，受殷墟影響，但仍保留有鋸特點結果。另一方面，北方不只流行管鋸或有鋸鉞，同時也有殷墟式的夾內鉞〔圖64〕^⑰。再者，北方出土管鋸或有鋸鉞的墓葬，有些也有殷墟式的禮器共出。換言之，北方與殷墟在商晚期時當有活潑的接觸，北方固有其特殊性，但也對殷墟傳統開放，部分受其影響。

另一方面，殷墟在鉞制的發展方面，對北方的態度又如何呢？從目前的資料看，殷墟受中原傳統的影響，似乎比對北方的潮流更有興味。殷墟鉞制以直內式為主，是以木柲夾內而非以鋸納柲，靠著內或刃身上的穿縛繫繩索，以幫助固定木柲〔圖65〕^⑱。根據楊錫璋先生於一九八六年的統計^⑲，殷墟出土的鉞共十三件，鉞制皆為以柲夾內式。這種直內式鉞在中原及南方是有其較久的傳統的，它見於二里岡期的鄭州^⑳等^㉑。雖然目前二里頭遺址尚未見有青銅鉞出土，但二里頭^㉒或更早的新石器時期則有有牙及有內石鉞^㉓，非管鋸的。總之，中原青銅鉞制，以木柲夾內自有其傳統。

唯殷墟對當時北方常用的管鋸或有鋸特點是否無知？我們以為並非如此。河南安陽大司空村墓24出土一管鋸「戈」〔圖66〕^㉔，是目前所知安陽唯一長管鋸兵器。其管鋸高度大於刃寬，為北方常見的一種管鋸兵器，但刃身的特點已非鉞而是戈。其刃端呈「圭」狀，似中原常見的雙刃器戈，而非邊刃器鉞。高曉梅師從形制觀點認為是「長方形具管鋸與戈頭混合體」^㉕。林漢先生則以其無端刃、無邊刃，斷為北方系東群常見的「管內啄」^㉖。無論如何，我們以為殷墟當不會不知長管式的管鋸內式兵器，唯興趣不大而已。

此外，有一批為大家所忽視的資料，卻使得「有鋸問題」益形複雜，便是西北崗刀斧葬中的小型有鋸斧。它們的長度約10.5公分，高度約5公分，管鋸高度約3公分，為刃寬的一半左右，刃身有細線淺浮雕弦紋〔圖67〕^㉗。這類形制日本有鄰館收藏三件，

傳出自安陽^⑩。羅越整理楊寧史收藏目錄也收錄一件，但從其形制簡陋看，他推測此型的時代或早於安陽^⑩。值得注意的是這種類型在西北崗刀斧葬中，數量竟高達七一九件^⑪，且有殷墟斧鉞所罕用的鑿。如此看來，殷墟斧鉞對有鑿或管鑿並不陌生。但是不可忽視的是，殷墟鉞制通行的直內傳統，顯然與北方通行的管鑿或有鑿傳統為兩個系統，難道這群無頭的人肢體是北人嗎？因此它出現在殷墟的情況特殊，雖然數量大，卻又集中在西北崗王室墓地的刀斧葬中，至於其它墓葬則罕見了。但是，我們也不能忽視這類有鑿小斧少見於北方的事實，若歸因於北方人將其傳統移植到殷墟，據目前的資料看來，似仍不易使人信服的。雖然，這群小型有鑿斧使得有鑿的起源問題更複雜，但從目前的資料看，有鑿及直內在鉞制發展中是二個判然分開的系統，但北方的有鑿直內鉞在形制上似受殷墟直內鉞的影響。

3.論「有鑿」問題——從管鑿鉞到有鑿戈

有鑿與直內在鉞制的發展雖然壁壘分明，在戈制上則混涇難分。為了進一步透視有鑿問題所反映的北方及殷墟的關係，我們得檢視殷墟的有鑿戈。有鑿戈成為探討此問題的重要因素，不只因為有鑿鉞與北方關係密切而引發有鑿的問題，更因為就目前資料而言，在殷墟，有鑿戈是新興器類，此突然出現的新質素，與北方又有關連，值得重視。

一般學者公認，雙刃戈是中原發展出來的典型兵器，商晚期時，戈雖然散佈極廣^⑫，但殷墟為其主要發展中心，一般則無異議。由於殷墟的主要兵器是戈，在各類兵器中以戈的數量最大。根據陳志達先生截至一九八六年的統計，約有七百多件^⑬。其形制多樣，一般分成四型：有欄直內戈〔圖68〕^⑭，曲內戈，〔圖69〕^⑮，有胡戈〔圖70〕^⑯以及有鑿戈〔圖74〕^⑰等。但就安裝木秘的方法分，則主要有兩種：以內夾秘及以鑿納秘。雖然有鑿鉞在殷墟戈制中極為罕見，但以鑿納秘的有鑿戈則舉足輕重，尤其可堪注意。

有鑿戈在殷墟的地位極為特殊。從出現的時間論，以秘夾內戈制，在中原可以追溯到二里頭〔圖71〕^⑱及二里岡〔圖72〕^⑲時期。相對的，根據目前的資料說，有鑿戈的出現，在殷墟，則是革命性的變革。它出現在大司空村二期，周初尚存在於中原，此後就罕見了。在殷墟，它帶來新的安裝木秘的方法，但並非取代原有以秘夾內的方法，而是二者並行的。

值得注意的是北方好用有鑿，大多表現在斧鉞類，殷墟則將有鑿應用在其本土常用的戈制中，難道殷墟新興的有鑿戈是受北方的影響嗎？我們擬從殷墟兵器系統透視此一問題。

與有鑿鉞不同，有鑿戈在殷墟形制多樣化，且相當普遍。其形制的變化幾乎與夾內戈可以分庭抗禮，有直內、曲內^⑲及帶胡有鑿戈〔圖73〕^⑳等形制，但仍以直內有鑿戈為主。有鑿戈在殷墟普遍化的程度以西北崗1004大墓最突出，該墓出土的七十二件的戈中，有鑿戈高達七十件〔圖74〕^㉑。有意思的是內上大部分銘鑄「 \downarrow 」字，有些則為重鑄所掩，僅隱約可見。同銘的有鑿戈一件亦見於西北崗墓1001^㉒。可堪注意的是同銘的有鑿戈亦出土於山西石樓褚家峪〔圖75〕^㉓，這是北方系兵器的重要出土地之一。李伯謙先生引用「登人其出伐 \downarrow 師高……」^㉔，以為 \downarrow 族居住地疑即甲骨文中的

「↓自」。

「↓」經郭沫若考證乃帝乙征人方所經路線上之師次，地望約在安陽之東，臨淄之西^⑭，這些帶↓銘有銜戈資料說明了殷墟與北方在有銜問題上關係的密切，但在起源問題上，它們所代表的意義，則有賴更多的資料才能論斷。

雖然有銜戈在殷墟相當普遍地發展，但從目前我們所掌握的殷墟的大部分資料而言，有銜戈似乎未能取代來自傳統的以秘夾內的方法，其普遍的程度也不及後者。再者，從戈制在青銅時代的發展看，以秘夾內的方法，與青銅時代相始終，且一直是中原最普遍的戈制，以銜納秘的戈制則除了晚商及早周較普遍外，其餘皆罕見。茲舉證如下：有銜戈在殷墟普遍的程度是不能與夾內戈分庭抗禮的，以一九三七至四八年在河南安陽小屯出土的十九座墓葬及部份灰坑為例，共計出土三十六件戈，有銜戈僅佔六件^⑮；一九六九至七七年，在河南安陽殷墟西區挖掘的一六六座出土兵器的墓葬中，共計二〇七件戈，有銜戈僅佔二十六件^⑯；殷墟婦好墓計出土九十一件戈，器形可辨者五十件，有銜戈則僅佔二件^⑰；至於其它出土戈的單一墓葬，或不見有銜戈，或者以一至二件為最普遍（表五）。換言之，西北崗1004墓大量出土同銘有銜戈，在殷墟似乎是較特殊的^⑱，基本上，有銜戈在殷墟雖然有其普遍性，終不能與夾內戈抗衡。西周至戰國，戈制在中原一直是主要兵器，其器制變化雖多，但有銜方法終於罕用，甚或棄置，主要的發展仍是木秘夾內戈^⑲。

綜合觀察有銜因素在目前我們所知的殷墟兵制中的表現，外來因素的可能性似乎比本土滋長者為大^⑳。殷墟鉞制罕用有銜，而與北方有銜鉞壁壘分明，加強了有銜是殷墟外來因素的可能性。相對的，殷墟戈制卻採用有銜，雖然不是最普遍的，卻有其不可忽視的普及程度。或許與戈、鉞二類在殷墟兵器系統中，性質有所不同有關吧？

殷墟在鉞制上保留其本色，主要以木秘夾內為主，也許與鉞的特質有關。鉞不太普遍，其在殷墟出土的數量，根據楊錫璋先生截至一九八六年的統計，約計二十二件^㉑。從出土情況、經典及銘文，他以為鉞可能表示墓主是相當高的軍事首領。凡出土青銅鉞的墓，形制都較大，有棺槨葬具，有成套的青銅禮器隨葬，大部分墓葬有人及動物陪葬。此外，凡出土青銅鉞的墓往往有數量較多的青銅武器。《左傳》昭公十五年載「商王賜（文王）弓矢斧鉞，使得征伐，為西伯」；【虢季子白盤】銘云「……賜用鉞，用征蠻方」〔圖76〕^㉒。可見鉞代表著軍事征伐權。鉞與征伐身分關係如此密切，是否致使殷墟的鉞在面對有銜此可能的外來因素時，作本土性的保留呢^㉓？

相對的，戈——這最普及化的本土兵器，大小墓皆常見，在面對有銜（可能是外來因素）時，則大膽地吸收、嘗試、求變、融和。當然，殷墟的開放也是有限的，因此有銜戈終究沒能取代本土的夾內戈，在幾近二、三百年歷經晚商及早周的瞭解及嘗試，也許發現此新興的器制，畢竟易於脫秘，終於不再流行。

貳、殷墟與西南關係的問題

一、故宮的三角援戈（圖版拾柒）〔圖77〕^㉔

故宮博物院收藏一把【三角援無胡有穿戈】，與晚商常見的戈制〔圖67-70〕相比

，形制有二點特別的地方：第一，援部寬短，近於等邊三角形，援寬近於援長的二分之一，直內。第二，戈援下無延長的胡，戈與內相接處沒有外突的欄。顯然，爲了固定木秘與戈的關係，這種形制只能依賴「內」部與「援」部的穿孔，並沒有上下欄以輔助。

三角援戈這種特殊的形制，與晚商常見的有胡戈及有欄戈既不相同，有清一代的金石著錄通稱爲「戣」，因爲有一件三角援戈自名爲「戣」〔圖78〕^⑬，學者遂將此字隸定爲「戣」。《尚書》顧命曰：「一人冕執戣，立於東垂，一人冕執置，立於西垂」，可見這種名稱是有典據的。本文以其援爲雙刃，直內，與戈的基本形狀相類，從形制的觀點，當屬於戈制的一種，但又是特殊的戈制，故稱爲戣式戈，或援引一般出土報告，依形制特點，稱爲三角援戈。

爲了進一步瞭解故宮戣式戈的時代列位與可能存在的地緣關係，戣式戈在戈制中的歷史發展是值得注意的，隨著同類出土物的增加，學者對三角援戈的瞭解也在近二、三十年內有極大的轉變，本文基於這些發現和研究提出一點粗淺的看法。

二、三角援戈所引發的文化關係問題——研究史的回顧

一九三〇年左右，河南安陽小屯墓232、270出土了戣式戈，明確出土地點及斷代例證首次公諸於世，它與其它同區出土的戈制有別，考古家已明指其形制之特殊與罕見^⑭。由於當時出土的同類例證太少，此制所代表的文化意義殊難論述。

一九五九年，湖南博物館從廢銅中揀選出【楚公冢戈】〔圖79〕^⑮，形制即爲三角援戈，內上銘鑄「楚公冢秉戈」。高至喜先生以爲與湖南長沙楚墓出土的長胡多穿戈不類，難以在地緣上認定它們是湖南的產品，但就其銘文內容推測可能是西周末年的楚國早期兵器。由於當時對三角援戈仍缺乏全面的瞭解，以爲此制只流行於商至周代，加上【楚公冢戈】的特殊性，致使學者質疑其真實性^⑯。在爭辯中，專門研究四川銅器的馮漢驥先生以蜀地出土的大量兵器爲根據，終於認定三角援戈爲「蜀式戈」^⑰。三角援戈與蜀地的地緣關係得到初步的肯定。

但是，隨著出土地點及例證的增加，戣式戈所引起的時空及文化關係問題，在八〇年代益趨複雜。大體上，三角援戈在戰國時期成爲蜀國戈制的特色，特別當其它各地主要通行有胡多穿戈時，三角援戈獨獨流行於巴蜀地區〔圖80〕^⑱，這種現象，從八〇年代以來更爲考古發掘所證實，而其起源與傳播的問題，遂益加紛紜。

一九七九年，一直注意西南戈制研究的童恩正先生基於河南安陽^⑲、鄭州^⑳、陝西西安^㉑、寶雞^㉒、甘肅靈臺^㉓、山東膠縣^㉔、山西洪趙^㉕等殷末周初墓皆出土有三角援戈，因此推測三角援戈是「發源於中原地區的，不過在傳入巴蜀地區以後，發展成一種帶有地方色彩的武器」^㉖。這種從中原中心論的觀點討論中原與蜀文化關係，在八〇年代以後引起了反思。

李伯謙先生首先把早期蜀文化的源頭轉移到城固器群，位在陝西南部的漢中盆地，三角援戈即爲說明此種關係的重要例證。因爲商晚期時，三角援戈在城固及蜀地二區，皆占極高的份量。城固一帶^㉗，三角援戈佔當地戈制的84%；四川彭縣竹瓦街出土晚商到西周早、中期的兩處窖藏，三角援戈約佔戈制的72%而已^㉘，基於此，李氏推測城固可能是早期蜀文化的來源之一^㉙。

爾後，陝西寶雞強國墓地，此西周早期到中期的墓葬群，出土大量的三角援戈，發掘者盧連成等先生也根據三角援戈整體的出土現象，把蜀文化淵源轉移到城固區^⑬。另一方面，一直在殷墟挖掘的楊錫璋先生在討論殷墟戈制問題時，以為殷墟的三角援戈應該是外來的兵器^⑭。

霍巍等先生更把三角援戈（他稱作【無胡蜀式戈】）的起源問題從城固地區轉到涇渭地區^⑮。總之，八〇、九〇年代以來，學者漸漸把三角援戈的起源問題從殷墟轉開來，注意到涇渭或漢中一帶。

但是，三角援戈與殷墟的關係可以忽視嗎？我們以為探討殷墟文明形成的問題，三角援戈與前述刀與鉞一樣，是不可輕易放過的指標。三角援戈在殷墟戈制發展中的地位更是我們須要檢視的，也是瞭解起源問題的另一角度。目前，我們擬從三方面來討論，從時間上比較三角援戈在殷墟與其它區域的關係，從份量上及出土情況上說明三角援戈在殷墟戈制的角色。

三、殷墟的三角援戈

就目前資料看，三角援戈出現在殷墟的時間不會晚於大司空村一期，安陽小屯三家莊墓1〔圖81〕^⑯，及小屯墓232〔圖82〕^⑰皆有出土，這兩個墓葬的時代一般接受為殷墟早期^⑱。比較三角援戈在其它的三個主要分布區所出現的時間，殷墟並不晚。涇渭區是主要分布區之一，包括藍田懷真坊、黃溝^⑲、岐山賀家村^⑳、醴泉朱家嘴、眉縣小法儀^㉑等。由於這些墓葬出土的禮器作風與殷墟相近，一般斷在商晚期。漢中區是另一主要分佈區，以城固為中心，出土幾批銅器及三角援戈^㉒，其銅容器的作風與殷墟接近，時代也被斷在商晚期，唯這幾群器缺乏確切出土記錄。蜀地是主要分佈區之三，以彭縣竹瓦街^㉓及新繁水觀音^㉔出土者為代表，唯這兩群的時代，學者意見仍然紛歧。根據專門研究蜀式戈的馮漢驥及霍巍等先生，斷於西周中、晚期；相對的，童恩正、李伯謙、楊錫璋、盧連成等先生則傾向於晚商。這種分歧，正暴露出邊緣地區因為累積的出土資料的不夠豐碩，致使斷代根據薄弱，不易形成大家認可的絕對年代的結論^㉕。

不過，無論如何，殷墟的三角援戈，至少在大司空村一期時已經出現是可以確實肯定的，就目前資料說，似乎不致於比其它地區出現得晚，童氏的中原中心論或許是根據這一點吧？

但是就三角援戈在殷墟出土的份量及情況說，中原三角援戈似乎有其「外來」的可能性。根據目前資料統計，三角援戈在殷墟出土的數量約計十一件左右（表五）。相對的，殷墟出土的戈則已高達七、八百件之多^㉖。顯然，三角援戈在殷墟戈制中是微乎其微的。楊錫璋先生提出質疑說，三角援戈若是商人發明，當在文化的中心區有較多的發現才對。

〔表五〕殷墟出土主要兵器一覽表

出土地點	戈					刀			弓形器	矛	盜	資料來源
	三角援 無欄	有欄	有胡	曲內	有銎	鉞	獸頭	其它				
安陽小屯 墓18		2		7								《考古學報》1981:4 頁493
安陽高樓莊 墓8				2				1				《考古》1963:4 頁216
安陽侯家莊 西北崗 墓1004				2	70					731		《侯家莊》(五) 頁145-157
安陽侯家莊 西北崗 墓1001		10		3	1			3			*	《侯家莊》(二) 頁1216-1219
安陽侯家莊 西北崗 墓1003 翻葬坑			6		1							《侯家莊》(四) 頁123-125
安陽侯家莊 西北崗 墓1550		3		1	3							《侯家莊》(五) 頁109-111
安陽小屯 墓164				1				1				《小屯丙》(二) 頁12
安陽小屯 墓20				2				3		2		《小屯丙》(一) 頁395
安陽小屯 238					1			1				《小屯丙》(一) 頁395
安陽小屯 E 16				1	5			3				《小屯丙》(一) 頁395
安陽小屯 H 181								1	1			《小屯丙》(一) 頁395
安陽小屯 墓182		1										《小屯丙》(一) 頁395
安陽小屯 墓183				1								《小屯丙》(一) 頁395
安陽小屯 墓185		1										《小屯丙》(一) 頁395

安陽小屯 墓101		2									《小屯丙》(一) 頁395
安陽小屯 墓137		2									《小屯丙》(一) 頁395
安陽小屯 墓167				1							《小屯丙》(一) 頁395
安陽殷墟 西區墓1713			30			2	1	2		30	《考古》1986:8 頁712
安陽殷墟 西區墓347	1										《考古學報》1979:1 頁128
安陽殷墟 西區墓355	1			2						2	《考古學報》1979:1 頁145
安陽殷墟 西區墓2793	1									1	《考古學報》1979:1 頁145
安陽殷墟 西區墓4	1										《考古學報》1979:1 頁137
安陽殷墟 西區墓372	1										《考古學報》1979:1 頁137
安陽殷墟 西區墓374	1			1				2		1	《考古學報》1979:1 頁137
安陽小屯 墓232	1			5							《小屯丙》(三) 頁43
安陽小屯 墓270	1								1		《小屯丙》(四) 頁1565
安陽小屯 墓331		5		玉 援 1							《小屯丙》(五) 頁151
安陽小屯 墓388		5									《小屯丙》(五) 頁250
安陽小屯 墓333		1									《小屯丙》(五) 頁174
大司空村 南地墓25				6	1						《考古》1989:7 頁592
大司空村 南地墓29				8							《考古》1989:7 頁597
安陽苗圃 北地		*		*							《考古》1989:2 頁133

安陽薛家莊 墓3		玉 1		13														《考古》1989:2 頁133
安陽薛家莊 墓1																		《考古》1988:12 頁1068-71
安陽薛家莊 墓6																		《考古》1988:12 頁1068-71
安陽郭家莊 墓9																		《考古》1988:10 頁880
安陽郭家莊 墓1																	1	《考古》1968:8 頁715
安陽三家莊 墓1																		《考古》1983:2 頁127-8
羅山蟒張墓 1																		《考古》1981:2 頁114
羅山蟒張墓 6																		《考古》1981:2 頁115
殷墟婦好墓																		殷墟婦好墓 頁105-110
武官大墓 E 9																		《考古學報》1951:5 頁35
武官大墓 E 13																		《考古學報》1951:5 頁36
武官大墓 E 1																		《考古學報》1951:5 頁36
武官大墓 W 8																		《考古學報》1951:5 頁36
武官大墓 W 1																		《考古學報》1951:5 頁37
武官大墓 W 12																		《考古學報》1951:5 頁38
武官大墓 N 4																		《考古學報》1951:5 頁38
武官大墓 腰坑																		《考古學報》1951:5 頁38
武官大墓 SPM 3																		《考古學報》1951:5 頁39

武官大墓 SP墓4				1																《考古學報》1951:5 頁39
武官大墓 SP墓8		1		1	1															《考古學報》1951:5 頁51
59武官 墓1		1		1	1															《考古》1979:3 頁224-5
梅園莊 南地墓85				1																援《考古》1991:2 頁139
梅園莊 南地墓90				1																援《考古》1991:2 頁139
梅園莊 南地墓93				1																援《考古》1991:2 頁139
梅園莊 南地墓92			1																	援《考古》1991:2 頁139
梅園莊 南地墓118				1					1											《考古》1991:2 頁140
梅園莊 南地墓128		1(明 器)																		《考古》1991:2 頁140
郭家莊 墓160				18 (?)	100 (?)															《考古》1991:5 頁390-1
戚家莊 東墓269			1	11	1	2			2		1									《考古學報》1991:3 頁325-352
安陽大司空村 墓25				6		1														《考古》1989:7 頁591-7
安陽大司空村 墓29					8															《考古》1989:7 頁591-7

就三角援戈的形制特點論，援部一般寬短，援與內相接處較寬，依賴著援與內的穿孔以及較寬的援底以固定木柶。而殷墟最常見的戈制是曲內戈、有欄直內戈、釜內戈及有胡戈四類，它們的共通形制與三角援戈有別，如援部皆修長，依賴內上的穿、上下欄、下延的胡或管銜等以固定木柶。不只是單純的依賴援與內本身固有的簡單形制而已，而是改變或增益某些部位以輔助固定木柶。似乎，三角援戈與殷墟通常所見的戈制是兩個系統^⑧，就如同前述管銜鉞與夾內鉞在殷墟是二個系統一樣，殷墟對外來「文化因素」的處理似乎有其共通性。

就殷墟所出土的部份三角援戈的紋飾論，與殷墟戈制通行的裝飾手法相比，有其特殊性。一般殷墟的有銜戈或直內戈的裝飾重點主要在「內」上，特別是曲內戈，更在曲內部分盡其裝飾之能事〔圖68〕。但殷墟西區墓279出土的三角援戈〔圖83〕^⑨則不同

，除了「內」部有花紋外，「援」部也是裝飾花紋的重要部位。這種裝飾方法在殷墟戈制中頗罕見，但在四川彭縣竹瓦街以及城固等區的三角援戈中，則較常見〔圖84、85〕。雖然，殷墟墓279三角援戈的花紋不盡與彭城縣竹瓦街及城固者完全雷同，而殷墟所出土的三角援戈也有鑲嵌松綠石〔圖82〕或獸面紋等帶有殷墟風味的裝飾，但這些特徵何嘗不是本土化的結果？相對的，殷墟西區墓279的三角援戈則透露出可能與殷墟以外的傳統有所連繫的蛛絲馬跡。

三角援戈在殷墟墓葬情況也有其特殊性。基本上它存在於小型墓葬中，如殷墟西區墓347、372、374。這些墓葬的陪葬品中，銅製品只有三角援戈一件，其餘均為陶器。三角援戈也存在於陪葬品稍多的墓葬中，如殷墟墓355、279⑯，這些墓葬的青銅陪葬品除三角援戈外，也有禮器如爵、觚等，甚至墓355也隨葬玉器。但報告者根據出土兵器的墓中人骨推測，墓主人可能是生前充當戰士，身份當屬於殷代社會中的平民（或自由民）。三角援戈也有與銅鉞、銅容器及玉玦、璧、環等隨葬品共出，如三家莊墓葬所見⑰，從其陪葬品的排場，墓主人身份也許比西區其它墓者高些，但也只是殉葬一人的小型墓而已。

三角援戈的特殊地位尤其顯現在少數的大型墓葬中。這些大型墓葬即意味著陪葬人較多，陪葬的銅兵器、禮器較多，墓葬的規模較大，甚或有墓道。如小屯墓232，未經盜擾，有九具人骨，一具在棺內（推測為墓主人），八具棺外（推測為陪葬者）。很值得注意的是出土六件銅戈，五件皆是曲內戈，一件則是三角援戈，它們的出土部位尤其引人注目。五件曲內戈皆出土於棺內，唯獨一件三角援戈與西側陪葬人同置於棺外⑱，這種三角援戈與當時最流行的曲內戈同出一墓的例證，似乎透露出二者在當時的地位顯然不同。類似的情況也為另一大型的武官大墓所證實。該墓葬有亞字形墓道，東墓道置有陪葬者十七人，西墓道置陪葬者二十人，東墓道共出銅戈十把，主要為有欄直內戈八把，有鬣戈二把。唯獨三角援戈出土於腰坑口，報告者以為是腰坑守衛者用戈⑲。因此，三角援戈雖然出土於大型墓葬中，其所陪葬者身份顯得有些特別，甚至有些卑微。

總之，從出現的時間論，殷墟出土的三角援戈並不比其它地區晚；但就份量看，其存在殷墟的比例確實太少，若是殷墟土生土長的，必有本土的需求及傳統，何以在大司空村一期辛苦創制了，又沒有在二、三、四期去大力發展呢？而從形制論，三角援戈與殷墟戈制似乎是不同的系統；從花紋論，殷墟三角援戈的裝飾手法也顯示與一般戈制不同的傾向，更從出土情況推認，持用此類戈者地位似乎卑微，不能與本土戈制者相比倫。

四、故宮三角援戈的時代——從三角援戈的發展史論起

青銅戈制最遲在二里頭時期已經出現，二里岡時期，在援部與內部之間出現上下欄，成為戈制的主要發展方向。到商晚期，有欄戈盛行，有胡戈也萌芽，預示了西周時期戈制發展的主要方向，顯示中原戈制發展軌跡，主要在於改變部分形制，使更有效地固定木柶。千年古墓偶得木柶殘痕的長度資料也可以輔證，商晚期時，木柶長度約為六十分公⑳。西周早期時，則有長度八十多公分者㉑。

三角援戈最遲在商晚期的早期階段出現，比之上述中原戈制的主要發展方向中，是特殊的。其形制簡單，無欄無胡，援體較為寬短。由於無欄無胡，主要依賴穿孔固定木

秘與戈，穿孔因此比一般戈制多，常見一戈四孔，分別在內部、援中脊後半、及援與內鄰接處的援部上下兩端。如此牢固木秘的方法，木秘似乎不能太長，學者從西周早、中期寶雞漁國墓地出土大量三角援戈推測，其為短秘戈，因為其出土位置「多放置在棺蓋上，或置於棺內墓主頭側、腹側」，因「木秘太長是不可能帶入棺內的」^⑩。中原適用長秘戈以利車戰，山地丘陵地區的戰爭，車兵有所不便，徒兵交戰，以短秘戈為宜。三角援戈主要出土於山地丘陵區，是有原因的。商晚期時，三角援戈以城固漢中及涇渭一帶為主。西周早、中期、寶雞是主要分佈區。戰國時期，當大部分地區皆使用長胡戈時，三角援戈仍盛行於巴蜀一帶，因此被通稱為「蜀式戈」。

故宮所藏三角援戈，從形制特點論其時代，可能不屬於商晚期。商晚期的三角援戈制，有些內部部位不一定在援部中間，呈現早期階段內與援部位關係的不平衡狀態。一般有四穿，故宮的三角援戈形制更簡化，僅僅內部及援部有穿，援與內相接處的上下兩端稍內凹，可能也利於縛牢木秘。這種三角援戈制，罕見於戰國時期巴蜀的三角援戈，但與寶雞漁國墓地墓七出土者近似〔圖86〕，後者的時代被斷在西周早期。因此，故宮三角援戈的時代宜屬於西周早期。

餘論

以上討論故宮博物院七件兵器的風格，相對於殷周習見的兵器，以其異形，我們推測「外來因素」的可能性很大，它們提供了透視殷墟青銅兵器文明形成的另一角度。殷墟對外來文明的態度是開放的。無論是來自北方的草原民族的，抑或來自西南山區民族的，殷墟皆有其包容性，唯在開放或包容中亦皆有其扶擇和限度。殷墟本土缺乏近體衛身的雙刃短劍傳統，因此對北方較盛行的曲柄獸首或鈴首短劍興趣不大。但殷墟對本土已具備的傳統，則樂於擇取外來因素以增益其多樣性，曲柄獸首或鈴首短刃如故宮所藏者，皆較常見於北方，其成為殷墟多種刀制中的一種，並不普遍。這種刀制曾隨貴為武丁后妃的婦好而葬，但也為西北崗王室墓葬區的刀斧墓葬中的無頭墓主之物。它們有的鑄作精美，刀身變長，以配合墓主的身份；有的製作粗糙，刀體較短，與無頭墓主的身份相符。獸首裝飾多少有點本土化。但並未影響殷墟本土刀制的傳統或風格。它成為殷墟多種刀制中的一種，但並不普遍，也未影響殷墟本土戈制的發展。它似乎用來陪葬地位並不太高而身份有些特殊的甚或可能是來自北方的戰士。殷墟對本土已具備的傳統樂於擇取外來因素以增益其多樣化，於三角援戈也可以獲得佐證。

在可能代表軍事專征權的鉞制上，殷墟對外來因素則維持壁壘分明的態度，堅持本土以秘夾內的基本形制，與北方通行的長短管銜鉞不同。但在一般戰士通用的戈制上也許攸關生命存亡，殷墟在採用新因素上極為活潑而開放，以銜納秘的方法結合本土戈制，被普遍的應用著、實驗著，雖然歷史的發展證明，以秘夾內的本土戈制也在求變中有更大的發展空間，以銜納秘的戈制終於遭致淘汰，變為少數，但殷墟對此新制表現了最大可能的開放程度。

一九三七年迄今五十餘年來，考古家不斷地向世人揭發殷墟青銅文明的實貌，殷墟為商晚期時的重要文明中心，為學者所公認，中原文化核心區的理論無形中也影響了學

者，左右他們詮釋中西青銅文明的許多現象。事實上中國文明自新石器時代以降，地方性的文化區多元而林立，各個文化區向外伸展，相互接觸而交流，形成文化的相互作用圈（Sphere of interaction）^{①⑩}。如山東的大汶口文化演變成山東龍山文化；在長江下游，馬家濱文化之後發展為良渚文化；在黃河中游河谷區，仰韶文化地區經過廟底溝二期，發展成河南、陝西、山西等龍山類型文化^{①⑪}。到了青銅文明的發展階段，特別是商晚期及西周早期，一種分區系統間的不平衡關係趨於明顯，「以商周文化為中心的中原文化的核心地位進一步得到加強」^{①⑫}。中國青銅禮容器以中原為發展中心而向四方傳播，使得中原與地方風格基本上大同小異。中原所孕育的特有兵器形制——戈，也同樣地遠播四方。學者為殷墟玉器探索根源時，也以為不可忽視「中原文化的樞紐作用或中心地位」^{①⑬}。這種由新石器時代的多元卻相互作用的文化區，轉變成商晚期至西周早期的中原核心區，關於其原因及形成過程的探討，皆非本文的主旨。本文僅在中原核心區的說法籠罩下，在一般關心其影響力之餘，也探討其可能接受的影響，故宮所藏的異形兵器即反應這類的問題。近年廣漢三星堆及江西新淦皆出土大量的可能是商晚期的銅器，使得核心區與其它地區的文化關係的了解有更多的可能性，藉著更多資料及研究，也許古代中國各地區文化關係的複雜網絡能逐漸浮現出來。

殷墟與北方及西南文化關係，不只證之於青銅兵器，也證之於古典文獻及甲骨文。殷墟與北方關係的證據主要是獸首或鈴首曲背彎刀，此類型在北方主要分佈在陝北、晉南、冀南及鄂爾多斯一帶，甚至北及西伯利亞草原南部，其中例證較密集於晉南。

從青銅兵器的發展顯示，以車戰為主的中原地帶，和以北方或西北以騎兵為主的草原地帶，以及可能是騎兵或徒兵為主的西部或西南山區，當各有其獨特的器制。唯各方交戈頻繁，相互影響，形成複雜的關係網。本文試圖將故宮的七件異形兵器置放在此關係網中加以理解，並藉此重建此關係網絡。事實上，殷墟與北方及西南的關係亦證之於甲骨文及文獻。

甲骨文辭表明，商代晚期，尤其是武丁時期，殷人與土方及土方關係最深，戰爭也最頻繁而激烈。據統計，甲骨文中征伐土方者有一百多條，征伐土方者高達四百餘條^{①⑭}。貴為婦好者，亦曾被遣派征伐土方。

辛巳卜，爭貞：今^𠄎王^𠄎人，呼婦好伐土方，受^𠄎又？五月。（《甲骨文合集》六四一二）

貞：王呼婦好往伐土方？（《庫方二氏藏甲骨卜辭》二三七）

婦好墓出土獸首曲背彎刀或者與征伐土方有關，因為土方與土方的地望，學者一般認為在殷的西北方^{①⑮}，如卜辭所云：

迄至五日丁酉，允^𠄎來^𠄎自西。止^𠄎告曰：土方征于我東鄙，^𠄎^𠄎二邑；土方亦侵我西鄙田。（《殷墟書契菁華》二）

迄至九日辛卯，允有來^𠄎自北。^𠄎妻^𠄎告曰：土方侵我田，^𠄎十人。（《殷墟書契菁華》五、《卜辭通纂》五一三）

雖然，具體的地望學者看法或有分歧^{①⑯}，但西北方的認定則無二致。本文常提及的鈴首或獸首曲柄刀及劍，以及管鑿斧鉞等，也主要出土自西北一帶。

經典所載殷北方方國者又及鬼方：

高宗伐鬼方，三年克之。（《易》既濟）

鬼方依《史記》五帝本紀索隱，韋昭、應劭、服虔諸說，以為董粥乃是：

匈奴別名也。唐虞已上曰山戎，亦曰熏粥，夏曰淳維，殷曰鬼方，周曰玁狁，漢曰匈奴。

王國維引《古本竹書紀年》稱王季伐西落鬼戎（《後漢書》西羌傳），知其地在岐，以為鬼方的活動地區可能在今陝西北部等地¹⁷⁸，但陳夢家則認為鬼方的活動地望可能在晉南¹⁷⁹。今日學者處理考古資料，對陝晉一帶青銅器所顯示的特別作風，在族屬的蠡測上，也多傾向於鬼方¹⁸⁰，呂智榮則更進一步推測，「商周時的鬼方大體在子午嶺以東的陝北、西晉西北地區，陝晉二地之北的內蒙地區可能是鬼方所及之地¹⁸¹。」如果他的推測無誤，則故宮博物院所藏的鈴首刀、劍及有銜斧、鉞等，其所代表的作風，主要也分佈於此區。而這類作風的或見於殷墟，是否也正反映著殷墟與鬼方的關係呢？

總之，故宮博物院所藏的七件異形兵器中的六件，或許與殷帝國北方及西北方的土方、占方、鬼方等方國有關，這也只是依目前資料的可能的推測而已。本文提出它們與殷墟傳統可能存在的關係，從殷墟考古累積的成果推測，它們對殷墟而言，可能是「外來因素」，而這種異樣的因素，可能與北方或西北方有關。但無可諱言的，我們仍然不能必然下結論，以為中國北方及西北為這些因素的源頭。

我們期望晉北、陝北、內蒙等地有更多科學性的考古挖掘計劃，一方面期望有銘文可以確證族屬的認定問題。另一方面，出土資料累積到與殷墟挖掘成果相當的程度，以探討這些因素在該區是植根於本土？抑或是外來的？當然，同樣的期望南西伯利亞，甚或更遠的歐亞大草原的考古成果可以更豐碩，使「起源」及「傳播」問題可以有個結論。從目前的資料研究，本文也只是「文化關係問題」的一個角度而已。

至於七件兵器中的另一件——三角援戈，由於在戰國時成為四川一帶的特有戈制，而三角援戈在晚商已出現，它同時見於殷墟與漢中、渭水與川西。因此引起學者對晚商時蜀國地望的再探討。

晚商甲骨文有「𠄎」（《鐵雲藏龜》二一七）、「𠄎」（《殷墟書契後編》上九、七）、「𠄎」（《殷墟書契後編》下二七、七），學者¹⁸²皆釋為「蜀」。甲骨文關於殷王征蜀及蜀年收成的問卜云：

□寅卜，殼貞，王登人□正（征）蜀，（《殷墟書契後編》上九、七）貞，蜀不其受年。（《殷墟文字乙編》6422）

辛卯卜，殼貞，至蜀，我又（有）事（使）。（《殷墟卜辭通纂》五四七）可見殷蜀關係甚為密切。蜀對殷王朝或叛或服，至商朝末年，蜀且執干戈隨同武王滅商。《尚書》牧誓說：「庸、蜀、羌、髳、微、盧、彭、濮人」皆從。

然而對蜀國地望的探討則眾說紛紜，或以為是殷西北之敵國¹⁸³；或以為在殷都附近¹⁸⁴；或以為山東泰安、汲上、高苑、有蜀¹⁸⁵；或以為在陝西或四川¹⁸⁶；或以為在成都平原¹⁸⁷；或以為在陝西東南商縣、洛南一帶¹⁸⁸；或以為在漢水流域¹⁸⁹。

大抵如陳槃先生所論武丁時代已有蜀，而其始居之地皆未可知，唯其國嘗經移徙或

分殖，則甚明白^⑧。今三角援戈，主要發現於晚商的漢水流域城固，復又大量見於西周早、中期的寶雞強國墓地（學者以為可能屬氐羌文化），至戰國則主要流行於四川，學者不免要由三角援戈的分布，試圖追索蜀國的蹤跡^⑨，或蜀式戈的來源問題^⑩。殷墟出土的三角援戈，或許也是殷、蜀交際或叛或服的蜘蛛馬跡。

總之，故宮博物院的七件異形兵器反映著殷墟與北方及西南的關係，它們似乎說明著，作為商晚期的古文明核心的殷帝國，對於異文明的包容力及限度，它與異文明有著活潑的接觸，晚商的安陽可能是當時國際都會。核心文明形成的基礎當不只是內力而已。只是它是當時的唯一核心，抑或核心之一，仍然是值得再思索的問題。

注釋：

- ① 山東惠民縣文化館，〈山東惠民縣發現商代青銅器〉，《考古》1974：3，頁208。
王家佑等，〈四川新繁、廣漢古遺址調查記〉，《考古》1958：8，頁27-31。
〈江西新淦發現大型商墓〉，《中國文物報》1990：11：15。
江西省文物考古研究所等，〈江西新淦大洋洲商墓發掘簡報〉《文物》1991：10頁1-23。
上縣文化局文工作隊，安徽潁上縣出土一批商周青銅器，《考古》1984：12，頁1132 3。
田廣金等，《鄂爾多斯式青銅器》，頁2。
- ② Toynbee A. *A study of History*, London, 1934 (1955), vol. 4
- ③ B. Karlgren, Some weapons and tools of the Yin Dynasty. *Bulletin of the museum of Far Eastern Antiquities*. 17 (1945) pp. 101 - 44. Max Loehr, *Chinese Bronze Age Weapons* (1956)，列、謝、瓦西里耶夫（A. D.1976成書），《中國文明的起源問題》。
- ④ J. G. Anderson, Hunting magic in the animal style. *Bulletin of the Museum of Far Eastern Antiquities*. 4 (1932) pp. 222-5.
- ⑤ 江上波夫、水野清一，《內蒙古長城地帶》，頁31。（1935）東方考古學叢刊二種第一冊東亞考古學會。
- ⑥ 參見列、謝、瓦西里耶夫，前引書，頁328-9。
- ⑦ Cheng Te - k'un, Animal Styles in Prehistoric and Shang China, *Bulletin of the Museum of Far Eastern Antiquities* 35 (1963) pp.129-140
- ⑧ 李濟，〈記小屯出土之青銅器 中篇 鋒刃器〉，《中國考古學報》第四冊，頁35。
《李濟考古學論文集》，頁362。
- ⑨ Max Loehr, *Chinese bronze age weapons*. (1956) p. 104
- ⑩ 鄭州市文物工作組，〈鄭州市殷商遺址地層關係介紹〉。《文物參考資料》1954：12，頁86 - 92。
- ⑪ 河南文物工作隊，〈鄭州白家莊商代墓葬發掘簡報〉，《文物參考資料》1955：10，頁24 - 42。

- ⑫ 中國科學院考古研究所二里頭工作隊，〈偃師二里頭遺址新發現的銅器和玉器〉，《考古》1976：4，頁4。
- ⑬ 鄭州市博物館，〈鄭州市銘功路西側的兩側的兩座商代墓〉，《考古》1965：10，圖版參：8。
中國社會科學院考古研究所河南第二工作隊，〈一九八三年秋季河南偃師商城發掘簡報〉，《考古》1984：10，頁875。
- ⑭ 列、謝、瓦西里耶夫，前引書，頁304~5。
- ⑮ William Watson, *Cltural Frontiers in Ancient East Asia* pp. 52-63
- ⑯ 烏恩，〈論我國北方古代動物紋飾的淵源〉，《考古與文物》1984：4，頁46-59。
- ⑰ 林滢，〈商文化青銅器與北方地區青銅器關係之再研究〉，蘇秉琦編，《考古學文化論集》，頁129-155。
- ⑱ 鄭紹宗，〈中國北方青銅短劍的分期及形制研究〉，《文物》1984：2，頁37-49。
翟德芳，〈中國北方地區青銅短劍分群研究〉，《考古學報》1988：3，頁277-298。
- ⑲ 高濱秀，〈オールドス青銅短劍の型式分類〉《東京博物館紀要》(18)(1983)頁95-132。
- ⑳ 田廣金等，前引書，頁2。
- ㉑ 內蒙古文物考古研究所，〈內蒙古朱開溝遺址〉，《考古學報》1988：3，頁301-332。
田廣金等，〈鄂爾多斯式青銅器的淵源〉，《考古學報》1988：8，頁257-60。
- ㉒ H.JI契列諾娃，〈卡拉蘇克時期遺跡的年代學〉(1972)頁39。間接引自烏恩，前引文，《考古與文物》1984：4，頁47。
- ㉓ 烏恩，前引文，《考古與文物》1984：4，頁48。
烏恩，〈中國北方青銅文化與卡拉蘇克文化的關係〉《中國考古學研究》——夏鼐先生考古五十年紀念論文集，二(1986)，頁141。
- ㉔ 四川省文物管理委員會，〈廣漢三星堆遺址二號祀坑發掘簡報〉，《文物》1989：5，頁36-38。
- ㉕ 〈江西新淦發現大型商墓〉，《中國文物報》1990：11：15。
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李學勤，〈發現新淦商墓的重大意義〉，《中國文物報》1990：11：29。
- ㉖ 國立故宮中央博物院聯合管理處編，《故宮銅器圖錄》，上册上編簡目頁六。
- ㉗ 楊紹舜，〈山西石樓褚家裕、曹家垣發現商代銅器〉，《文物》1981：8，頁51-3。
- ㉘ 楊紹舜，〈山西柳林高紅發現商代銅器〉，《考古》1981：3，頁211-2。
- ㉙ 吳振泉，〈保德縣新發現的殷代青銅器〉，《文物》1972：4，頁62-6。
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閻晨飛等，〈陝西延川縣文化館收藏的幾件商代青銅器〉，《考古與文物》1988：

4, 頁103~4

- ③⑩ 田廣金, 前引書, 頁2。
- ③⑪ 謝青山, 楊紹舜, 〈山西呂梁縣石樓鎮又發現銅器〉, 《文物》1960: 7, 頁5。
- ③⑫ 楊紹舜, 前引文, 《文物》1981: 8, 頁51·圖11。
- ③⑬ 李濟, 萬家保, 《古器物研究專刊》(一)圖版壹陸R1039觚, 西北崗墓169。
- ③⑭ 高本漢的殷代的一些兵器及工具一文中國版32, 編號182(8)二把短劍謂出自安陽, 並稱182號有標準的安陽銅銹。(B. Karlgren, *ibid.*, BMFEA.17 (1945) pp. 111-2) 提出安陽也有青銅短劍的可能性, 值得注意。
- ③⑮ 鄭紹宗, 〈河北青龍縣抄道溝發現一批青銅器〉, 《考古》1962: 12, 頁644。
- ③⑯ 鄭紹宗, 前引文, 《文物》1984: 2, 圖版伍: 1。
- ③⑰ B. B. Bonkob, 〈戈壁出土的青銅短劍〉, 《蘇聯考古學》1961: 3間接引自烏恩, 〈關於我國北方的青銅短劍〉, 《考古》1978: 5, 頁331。
- ③⑱ V. A. Gorodov 把卡拉蘇克文化的時代定在1500-1000B. C.; S. A. Teploukhov 則定在約1000B. C.; S. V. Kiselev 則認為是1200-700B.C.
E. Golomshtok, *Anthropological Activities in Soviet Russia*, p. 316 (Gorodov) and 319 (Teploukhov).
S. V. Kiselev, *Drevnyaya istoriya yuzhnoi Sibiri*, pp. 99-105, map. p. 69, 間接引自Max Loehr, *Chinese bronze age weapons*. p. 93 1956 University of Michigan.
- ③⑲ 間接引自烏恩, 〈論我國北方古代動物紋飾的淵源〉, 《考古與文物》1984: 4, 頁47。
- ④⑰ 內蒙古研究所, 〈內蒙古朱開溝遺址〉, 《考古學報》1988: 3, 頁290, 此劍的長度係根據〔圖29〕的線繪圖換算的。
- ④⑱ 一般皆以北方青銅短劍是由商晚期的曲刃演變到西周早期的直刃, (鄭紹宗《文物》1984: 2, 頁48; 烏恩, 《考古》1978: 5, 頁326; 翟德芳, 〈中國北方地區青銅短劍分群研究〉, 《考古學報》1988: 3, 頁278。
- ④⑲ 《故宮銅器圖錄》, 上册上編簡目, 頁六; 清高宗, 《西清古鑑》, 卷三八。
- ④⑳ 鄭紹宗, 前引文《考古》1962: 12, 頁644-5。
- ④㉑ 烏恩, 前引文《考古》1978: 5, 頁325; 林澐, 前引文, 頁133; 鄭紹宗, 《文物》1984: 2, 頁43-5。
- ④㉒ 劉建忠, 〈河北懷安獅子口發現商代鹿首刀〉《考古》1988: 10, 頁94。
- ④㉓ 王峰, 〈河北興隆縣發現商周青銅器窖藏〉《文物》1990: 10, 頁98。
- ④㉔ 楊紹舜, 〈山西石樓褚家峪、曹家垣發現商代銅器〉, 《文物》1981: 8, 頁49-51。
- ④㉕ 郭勇, 〈石樓后蘭家溝發現商代青銅器簡報〉, 《文物》1962: 4, 頁33、34、圖4。
- ④㉖ 山西省考古研究所, 〈山西靈石旌介村商墓〉。《文物》1986: 11, 頁4。
- ④㉗ 齊天谷, 〈陝西子長縣出土商代銅器〉, 《考古與文物》1989: 5, 頁14, 圖1, 2。
- ④㉘ 黑光、朱捷元, 〈陝綏德塢頭村發現一批窖藏商代銅器〉《文物》1975: 2, 頁82

- ⑤② 烏恩，前引文，《考古》1978：5，頁82-7。
鄭振香、陳志達，《殷墟青銅器》（1985），66-7。
鄒衡，《夏商考古論文集》，（1980），頁274-6。
林滢，前引文，《考古學文化論集》（1987），頁133。
- ⑤③ 間接引自烏恩，〈論我國北方古代動紋飾的淵源〉，《考古與文物》1984：4，頁47，圖1。
- ⑤④ H. rI. 契列諾娃，〈卡拉蘇克時期遺跡的年代學〉（1972）頁39，間接引自烏恩，前引文，《考古與文物》1984：4，頁58，注⑫。
- ⑤⑤ 中國社會科學院考古研究所編著，《殷墟婦好墓》，頁101。
- ⑤⑥ 石璋如，《小屯一，遺址的發現與發掘，丙編，北組墓葬上》文中簡稱《小屯》（一），頁126-141。
- ⑤⑦ 高去尋，〈刀斧葬中的銅刀〉，《中央研究院歷史語言研究所集刊》37（1967）圖版貳：1、2，圖版柒：2。
- ⑤⑧ 中國社會科學院考古研究所安陽工作隊，〈安陽殷墟兩區一七一三號墓的發掘〉《考古》1986：8，頁709。
- ⑤⑨ 楊育彬、賈巖，《河南出土商周青銅器》（一），圖版291。
河南省文化局文物工作隊，〈1958春河南安陽市大司空村殷代墓葬發掘簡報〉，《考古通訊》1958：10，頁56。
- ⑥⑩ 殷墟婦好墓年代，一般接受為殷墟二期（《殷墟婦好墓》頁224-8。
〈殷墟五號墓座談記要〉，《考古》1977：5，頁341：2，頁164-5。
- ⑥⑪ （表四）各家斷代係根據：
鄒衡，《夏商周考古論文集》，頁274-5
陳志達，鄭振香，《殷墟青銅器》，頁66-7
張長壽，殷墟青銅容器《考古學報》1979：3，頁20-9。
- ⑥⑫ 關於殷墟刀制請參考：
李濟，〈記小屯出土之青銅器 中篇 鋒刃器〉，頁359-361，《中國考古學報》第四期，1952。
陳振中，〈我國古代的青銅刀〉，《考古》1985：頁73~8。
李維明，〈簡論商代青銅刀〉（《中原文物》1988：2，頁42-47）等文皆有專論。
- ⑥⑬ 《殷墟婦好墓》，頁101-2。
- ⑥⑭ 凹背孤刃直柄無首刀見於下述出土地點：
河南省文化局文物工作隊第一隊，〈鄭州商代遺址的發掘〉，《考古學報》1957：1，59，圖版5：8。
《河南出土商周青銅器》（一），圖版97。
河南省文物研究所，〈鄭州北二七路新發現座商墓〉，《文物》1983：3，頁74，圖3：4。

直背凹刃環首刀據李維明提及新鄭望京樓亦出土一件〈簡論商代青銅刀〉，《中原文物》981：6，頁556）唯查此報告，報導甚簡，並未提及，或許此類型在商早期已出，但似乎不太普遍。其所代表的文化意義有待進一步研究。

- ⑥5 林澐，〈商文化青銅器與北方地區青銅器關係之再研究〉，《考古學文化論集》頁29-155。
- ⑥6 李濟之先生在其小屯候家莊各式小銅刀形態演變圖譜中，以為「獸首曲背彎刀」由殷墟刀制發展出來，乃基於當時就「殷墟而論殷墟」的說法。
李濟，前引文，頁397。
- ⑥7 嚴一萍，〈婦好列傳〉，《中國文字》第三期，頁1-103。
- ⑥8 楊錫璋，楊寶成，〈安陽殷墟西區一七一三號墓的發掘〉，《考古》1986：8，頁712。
- ⑥9 此件獸首刀年代已是殷墟第四期了，其形制也一改曲背的特點而成直背了。
- ⑦0 李維明，前引文，《中原文物》1988：2，頁47。
- ⑦1 石璋如，〈小屯殷代的成套兵器〉，《中央研究院歷史語言研究所集刊》22（1950）頁19-77。
- ⑦2 馬德志，〈一九五三年安陽大司空村發掘報告〉，《考古學報》1955(9)，頁63-6。
- ⑦3 楊寶成，楊錫璋，〈1969-1977年殷墟西區墓葬發掘報告〉，《考古學報》1979：1，頁57-61。
楊錫璋，劉一曼，〈安陽郭家莊西南殷代車馬坑〉，《考古》1988：10，頁882-83。
- ⑦4 高去尋，前引文，《中央研究院歷史語言研究所集刊》37（1967），頁39。
- ⑦5 體質人類學家研究西北崗殷代人頭骨，根據頭骨測量上或形態上的差異，推測屬非同種系的人群，楊希枚〈河南安陽殷墟墓葬中人體骨骼的整理和研究〉《中央研究院歷史語言研究所集刊》，42：2（1970）。
- ⑦6 《故宮銅器圖錄》，上冊，上編，簡目頁6。
- ⑦7 清高宗編，《西清古鑑》卷37，頁6。
- ⑦8 中國美術全集編集委員會，《中國美術全集》工藝美術編4、青銅器（上）頁33。
- ⑦9 馬承源，《中國青銅器》（1988）頁65-8。
- ⑧0 清高宗編，《西清古鑑》，卷37，頁12。
- ⑧1 《中國美術全集》4，頁32。
北京市文物管理處，〈北京市新徵集的商周青銅器〉，《文物資料叢刊》（1978）2，頁88-120。
- ⑧2 姚生民，〈陝西淳化縣出土的商周青銅器〉，《考古與文物》1986：5，頁13。
- ⑧3 陝西省考古研究所等，《陝西出土商周青銅器》（一）（簡稱〔陝一〕）圖版一四
- ⑧4 〈陝西出土商周青銅器〉（一）圖版四九。
- ⑧5 劉土峨等，〈西安老牛坡商代墓地的發掘〉，《文物》1988：6，頁12。
- ⑧6 北京市文物管理處，〈北京地區又一重要考古收穫——昌平白浮西周木槨墓的新啓示〉《考古》1976：4，頁250 圖版參：1。

- ⑧7 鄭玄注《尚書顧命》“一人冕執鉞”以大小區別斧與鉞，以為“鉞，大斧也”。孔穎達踵繼之，疏《左傳·昭公十五年》“鉞鉞矩鬯”以為“俱斧也，蓋鉞大而斧小。”
- 近人郭寶鈞以為鉞的功用與斧近似（殷周的青銅武器），《考古》1961：2，頁114。范勇專論西南地區青銅斧鉞，從形制上給予明確區分（〈我國西南地區的青銅斧鉞〉，《考古學報》1989：2，頁162），但文中仍常斧鉞連稱。可見某些類型上斧鉞難以強分。本文圖30，31即是，因泛稱斧形鉞。
- ⑧8 楊紹舜，〈山西石樓義牒又發現商代銅器〉，《文物資料叢刊》（1979）3，頁22。
閻金鑄，〈山西吉縣出土商代青銅器〉，《考古》1985：9，頁849。
盧連成 胡智生，寶雞強國墓地（簡稱〔強國〕）（1988）頁115圖版五〇：1，二六：1。
- ⑧9 戴尊德，〈山西靈石縣旌介村商代墓和青銅器〉，《文物資料叢刊》2（1980），頁48，圖4。
- ⑨0 〈山西石樓義牒會坪發現商代兵器〉，《文物》1974：2，頁69。
- ⑨1 吳蘭，宗宇，〈陝西發現商周銅器〉，《考古》1988：10，頁956，圖2，3。
- ⑨2 保全，〈西安老牛坡出土商周早期文物〉，《考古與文物》1981：2，頁17，圖版9：2。
- ⑨3 趙宗秀，〈山東泗水發現商代青銅器〉，《考古》1988：3，頁284，圖3。
- ⑨4 〈遼寧喀左縣山灣子出土殷周青銅器〉，《文物》1977：12，頁28。
〈遼寧興城縣楊河發現青銅器〉，《考古》1978：6，頁387。
- ⑨5 P. R. S Moorey, *Catalogue of ancient Persian bronzes in the Ashmolean Museum*. p. 39 Oxford 1972
- ⑨6 山西省文管會，〈山西石樓縣二郎坡出土商周銅器〉，《文物》1958：1，頁36。
陝西西安老牛坡墓41也出土夾內鉞。（《文物》1988：6，頁12，圖19。
- ⑨8 《殷墟婦好墓》，頁105。
- ⑨9 楊錫璋分析殷墟鉞制有多種變化，其刃寬常大於內寬。其刃身雖有方斧形、長斧形或亞腰形等，其內與刃身相接處或有欄，或無欄，但以無欄為主。唯殷墟鉞制雖多，其為有內鉞則一也。（楊錫璋，〈商代的青銅鉞〉，《中國考古學研究》頁128-38）
- ⑩0 二里岡時期的青銅鉞不多，鄭州紫金山五號房基發現一殘件，只有鉞身而無內，（廖永民，〈鄭州市發現的一處商代居住與鑄造銅器遺址簡介〉，《文物》1957：6，頁74）
- ⑩1 湖北黃陂盤龍城出土二件夾內鉞，（湖北省博物館，〈盤龍城商代二里岡期的青銅器〉，《文物》1976：2，頁27-33。
- ⑩2 偃師縣文化館，〈二里頭遺址出土的銅器和玉器〉，《考古》1978：4，頁27。
- ⑩3 玉石鉞的「內」部甚短，有穿但不具釜狀，石頭鑽鑿穿孔並非易事，推測這些工具或禮兵器若真使用，可能須利用木杵夾器以圓穿繫縛繩索的方式。參見張明華

- ，前引文，《考古》1989：7，頁633。
- 傅憲國，〈試論中國新石器時代的石鉞〉，《考古》1985：9，頁820。
- ⑩⁴ 馬得志，〈一九五三年安陽大司空村發掘報告〉，《考古學報》1955(9)頁50。
- ⑩⁵ 高去尋，〈殷代的一面銅鏡及其相關之問題〉，《中央研究院歷史語言研究所集刊》29下(1958)，頁716。
- ⑩⁶ 林滢，前引文，頁142。
- ⑩⁷ 感謝中央研究院歷史語言研究所高曉梅師提示，並惠允目驗。
- ⑩⁸ 梅原末治，《河南安陽遺寶》，圖版18：5-7。
- ⑩⁹ Max Loehr, *Chinese bronze Age Weapons* p.131.
安陽博物館也藏有二件管銎斧，其中一件〔圖二：10〕與此形制類似，據說是歷年來徵集的殷墟遺物。楊新平，〈安陽市博物館所的一批商代青銅武器〉，《中原文物》1985：2，頁102。
- ⑩¹⁰ 高去尋，〈刀斧葬中的銅刀〉，《中央研究院歷史語言研究所集刊》三七(1967)頁355。
參考注①。
- ⑩¹¹ 陳志達，〈殷墟武器概述〉，《慶祝蘇秉琦考古五十五年論文集》(1989)頁326。
- ⑩¹² 梁思永未完稿，高去尋輯補《侯家莊第二本1001大墓》頁316。
- ⑩¹³ 石璋如《小屯內編北組墓葬》上，頁122。
- ⑩¹⁵ 楊錫璋，前引文，《考古學報》1979：1，頁91，圖六六：3。
- ⑩¹⁶ 楊錫璋，前引文，《考古學報》1979：1，頁88，圖六四：5。
- ⑩¹⁷ 中國社會科學院考古研究所二里頭工作隊，〈偃師二里頭遺址新發現的銅器和玉器〉，《考古》1976：4，頁260。
- ⑩¹⁸ 《河南出土商周青銅器》(一)圖版一九。
- ⑩¹⁹ 李濟，〈記小屯出土之青銅器〉，中篇《李濟考古學論文集》上册，圖版二七：57。
- ⑩²⁰ 楊錫璋，〈1969-1977年殷墟西區墓葬發掘報告〉，《考古學報》1979：1，頁91。
- ⑩²¹ 梁思永未完稿，高去尋輯補，《侯家莊第五本1004號大墓》，頁155。
- ⑩²² 梁思永未完稿，高去尋輯補，《侯家莊第二本1001號大墓》，頁155。
安陽博物館亦徵集一件帶♣銘的戈，《中原文物》1985：2，頁102。
- ⑩²³ 楊紹舜，前引文，《文物》1981：8，頁49。
- ⑩²⁴ 郭沫若，《卜辭通纂》，頁581。
- ⑩²⁵ 李伯謙，〈從靈石旌介商墓的發現看晉陝高原青銅文化的歸屬〉，《北京大學學報》(哲學社會科學版)1988：2，頁26。
- ⑩²⁶ 李濟，前引文，頁336。
- ⑩²⁷ 楊錫璋，前引文，《考古學報》1979：1，頁88。
- ⑩²⁸ 《殷墟婦好墓》，頁107-8。
- ⑩²⁹ 近日安陽郭家莊墓160出土118件銅戈，除幾件為曲內戈外，餘皆為銎內戈(楊錫

璋等，〈安陽郭家莊160號墓〉，《考古》1991：5，圖三九〇）。這也是以盞內戈爲主的墓葬。

⑩ 林巳奈夫，《中國殷周時代の武器》，（1972），頁14-72。

馬承源：《中國青銅器》，頁44-54。

⑪ 林漢：也有近似的看法，前引文，頁135。

⑫ 楊錫璋，楊寶成，〈商代的青銅鉞〉，《中國考古學研究——夏鼐先生考古五十年紀念論文集》（1986）頁135。

此外，一九八四年，安陽戚家莊墓269出土了二件鉞（安陽市博物館，〈殷墟戚家莊269號墓發掘簡報〉《中原文物》1986：3，頁12，圖版一：6）。

一九八六年，安陽大司空村南地墓25，出土一件鉞（谷飛，〈1986年安陽大司空村南地的兩座殷墟〉，《考古》1989：7，頁571-3）。

近日（一九九〇年十一月）在安陽郭家莊出土三件鉞（〈殷墟發掘——商代貴族墓〉《中國文物報》1991：1：20。

中國社會科學院考古研究所安陽工作隊，〈安陽郭家莊160號墓〉《考古》1991：5頁390-1。

除了郭家莊出土的三件尚不知形制外，其餘皆屬夾內鉞。

⑬ 劉體智《小校經閣金石文字拓本》卷9頁82。

⑭ 殷墟婦好墓出土有管狀銚鏃（《殷墟婦好墓》圖版七六：1.2.3.再再顯示殷墟對有銚、管銚的瞭解及應用，它們的形制與北方有銚斧鉞不同，也與殷墟夾內鉞不同），報告定名爲鏃，以別於鉞，是極合理的。

⑮ 《故宮銅器圖錄》上册上編 簡目頁六。

⑯ 《小校經閣金石文字拓本》，卷10，頁92。

⑰ 石璋如《小屯丙編（三）南組墓葬》頁四三。

⑱ 高至喜，【楚公冢戈】《文物》，1959：12，頁60。

⑲ 于省吾，姚孝遂，【楚公冢戈】辨偽，《文物》1960：3，頁85。

⑳ 馮漢驥，關於「楚公冢」戈的真偽並略論四川「巴蜀」時期的兵器，《文物》1961：11，頁32-4。

㉑ 四川省博物館等，〈四川新都戰國木槨墓〉《文物》1981：6，頁9。

㉒ 郭寶鈞，〈1950年殷墟發掘報告〉，《中國考古學報》1951（5）圖版二四，1。

馬得志等，〈一九五三年安陽大司空村發掘報告〉，《考古學報》1955（9）圖版十一：3。

㉓ 河南省文化局文物工作隊，〈鄭州商代遺址的發掘〉，《考古學報》1957：1，圖版五：9。

㉔ 中國科學院考古研究所，〈濶西發掘報告〉圖版六七：3。

㉕ 蘇秉琦，《門雞臺溝東區墓葬》，頁242，圖一〇〇，7。

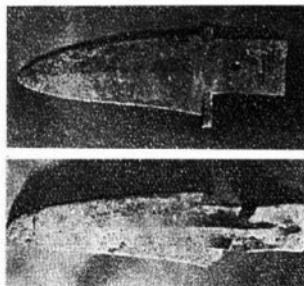
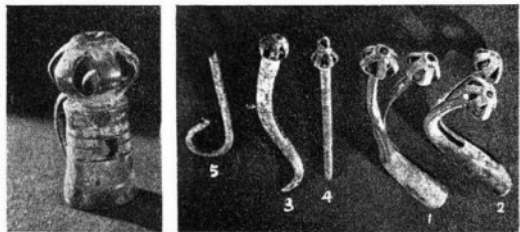
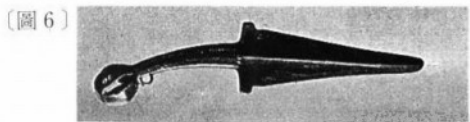
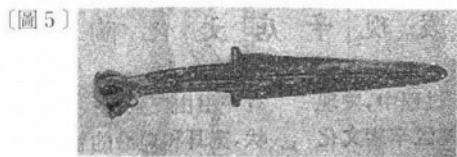
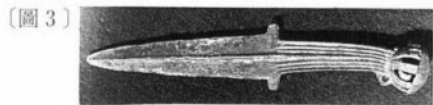
㉖ 甘肅省博物館文物隊，〈甘肅靈臺白草坡西周墓〉，《考古學報》1977：2，圖一〇，1。

- ⑭ 山東省昌濰地區文物管理組，〈膠縣西庵遺址調查試掘簡報〉，《文物》1977：4，圖六，1。
- ⑮ 解希恭，〈山西洪趙永凝東堡出土的銅器〉，《文物》1977：4，圖六，1。
- ⑯ 童恩正，〈我國西南地區青銅戈的研究〉，《考古學報》1979：4，頁445。
- ⑰ 唐金裕等，〈陝西省城固縣出土殷商銅器整理簡報〉，《考古》1980：3，頁212；程學華等，〈陝西省城固、寶雞、藍田出土和收集的青銅器〉，《文物》1966：1，頁二。
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- ㉖ 李伯謙，前引文，《考古與文物》1983：2，頁68-70；楊錫璋，前引文，《考古與文物》1986：3，頁70。
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附記：本文“商晚期”即本書正文的“商後期”





〔圖1〕曲柄鈴首短劍(麗七七五1) 商晚期
全長23.4 刃長13.6公分
國立故宮博物院

〔圖2〕曲柄鈴首短劍 山西石樓曹家垣
商晚期 全長25.5 刃長14公分(《文物》一九八一:一,頁五一,圖十三)

〔圖3〕曲柄鈴首短劍 山西柳林高紅 商晚期
全長23.5 刃長12.5公分(《考古》一九八一:三,圖版伍:1)

〔圖4〕曲柄鈴首短劍 山西保德林遮峪
商晚期 全長32 刃長20公分(《文物》一九七二:四,圖版陸:5)

〔圖5〕曲柄鈴首短劍 山西吉縣城關 商晚期
全長29公分(《考古》一九八五:九,頁八四九,圖二:2)

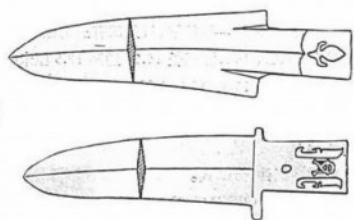
〔圖6〕曲柄鈴首短劍 內蒙古伊金霍洛旗
商晚期 全長22.3公分(《鄂爾多斯式青銅器》圖版二六:1)

〔圖7〕鐸形器 山西石樓曹家垣 商晚期
高29 柄長11公分(《文物》一九八一:八,頁五二,圖19)

〔圖8〕單球鈴(左)與雙球鈴(右)山西保德林遮峪
商晚期 (左)長8 (右)長16.1公分(《文物》一九七二:四,封底,圖3、5)

〔圖9〕直內戈(上)與釜內戈(下) 山西石樓曹家垣
商晚期 (上)長21.5 (下)長24.5公分(《文物》一九八一:八,頁五二,圖24)

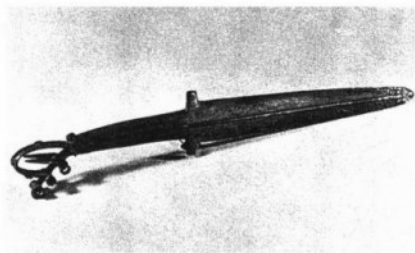
〔圖10〕



〔圖11〕



〔圖12〕



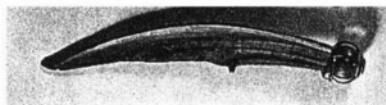
〔圖13〕



〔圖14〕



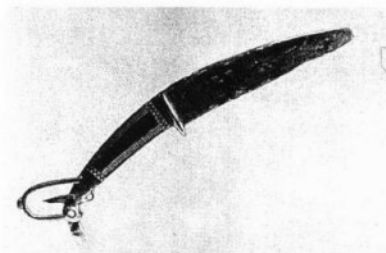
〔圖15〕



〔圖16〕



〔圖17〕



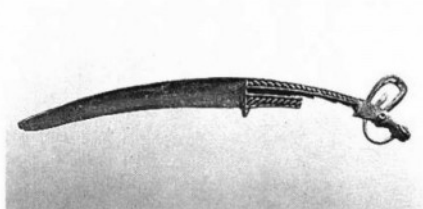
〔圖18〕



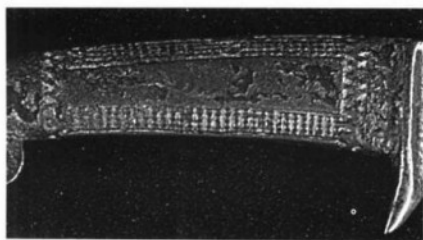
- 〔圖10〕 釜內戈與直內戈 河南安陽殷墟西區
商晚期(上)墓928長25.3(下)墓692:14
長23.8公分 《考古學報》一九七九:
一,頁八八,圖六四:8、6)
- 〔圖11〕 羊首曲柄短劍 河北青龍抄道溝
商晚期 全長30.2 刃長18.6公分 (
《考古》一九六二:十二,圖版伍:1)
- 〔圖12〕 鹿首曲柄短劍 河北張北 商晚期
全長32.8 公分 《河北省出土文物選
集》87)
- 〔圖13〕 短劍 內蒙古朱開溝墓 1040 二里
岡上層 一般墟一期 長26公分 《考古
學報》一九八八:三,圖版捌:3)

- 〔圖14〕 鈴首曲背彎刀(金一二八一5) 商晚期
全長28.3公分 國立故宮博物院
- 〔圖15〕 鈴首曲背彎刀 河北青龍抄道溝
商晚期 長26公分 《河北省出土文物
選集》82)
- 〔圖16〕 環首曲背彎刀 河北青龍抄道溝
商晚期 全長21.5 刃長11.5公分
《河北省出土文物選集》82)
- 〔圖17〕 獸首曲背彎刀 河北青龍抄道溝
商晚期 全長29.6 刃長15.9公分
《河北省出土文物選集》83)
- 〔圖18〕 獸首曲背彎刀 山西靈石旌介村墓 2
商晚期 全長27.5公分 《文物》一九
八六:十一,圖版肆:4)

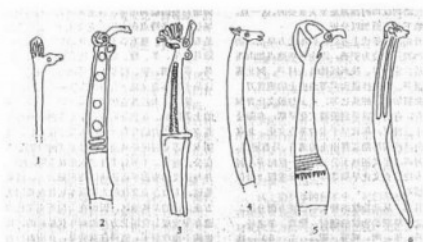
〔圖19〕



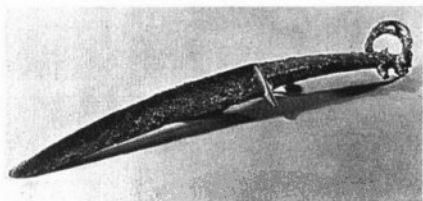
〔圖20〕



〔圖21〕



〔圖22〕



〔圖23-1〕



〔圖23-2〕



〔圖23-3〕



〔圖24-1〕



〔圖24-2〕



〔圖24-3〕



〔圖25〕



〔圖26〕

〔圖19〕獸首曲背彎刀 陝西綏德馬頭村
商晚期 全長32公分 (《陝一》圖版九〇)

〔圖20〕鈴首曲背彎刀柄部花紋裝飾 (金一二八—一五)

〔圖21〕卡拉蘇克文化的獸首曲背彎刀 (《考古與文物》一九八四：四，頁四七，圖一)

〔圖22〕獸首曲背彎刀(690) 河南安陽殷墟五號墓 商晚期 全長36.2公分 (《殷墟婦好墓》圖版六六：1)

〔圖23-1〕獸首曲背彎刀(R1858)河南安陽小屯墓20 商晚期 長32公分 (小屯丙編一下壹叁伍：1)

〔圖23-2〕獸首曲背彎刀(R1859)河南安陽小屯墓20 商晚期 長31.4 (小屯丙編一下壹叁伍：2)

〔圖23-3〕獸首曲背彎刀 河南安陽小屯墓20 商晚期 長30.1 (小屯丙編一下壹叁伍：3)

〔圖24-1〕獸首曲背彎刀 河南安陽西北崗墓1693(R9306：6) 商晚期 長18.05公分 (《史語所集刊》37圖版貳1)

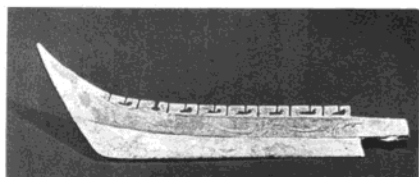
〔圖24-2〕獸首曲背彎刀 河南安陽西北崗墓1008(R8964) 商晚期 長17.8公分 (《史語所集刊》37圖版貳2)

〔圖24-3〕獸首曲背彎刀 河南安陽西北崗墓1612(R9175：9) 商晚期 長19.56公分 (《史語所集刊》37圖版柒2)

〔圖25〕獸首刀 河南安陽殷墟西區墓1713 商晚期 長30.5公分 (《考古》一九八六：八，圖七5)

〔圖26〕獸首曲背彎刀 河南安陽大司空村墓51 商晚期 長32.7公分 (《河》圖版291)

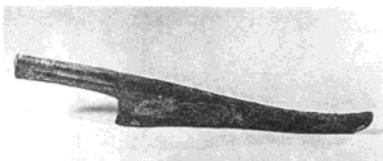
〔圖27〕



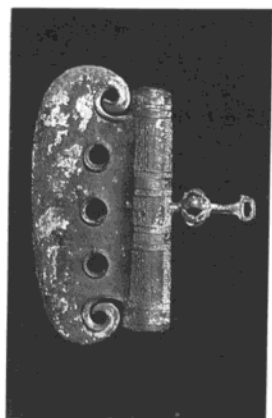
〔圖28〕



〔圖29〕



〔圖30〕



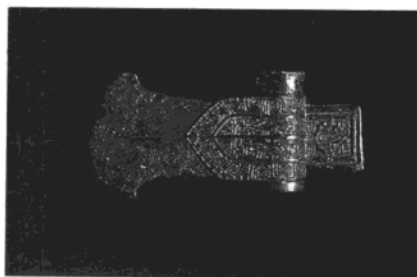
〔圖31〕



〔圖32〕



〔圖33〕



〔圖27〕凹背凸刃直柄無首刀(1169) 河南安陽
殷墟 5 號墓 商晚期 長45.7公分 (《
殷墟婦好墓》圖版六五: 1)

〔圖28〕凸背凹刃刀 河南安陽殷墟婦好墓
商晚期 長13.8公分 (《河南》(一)圖版
一七七: 上)

〔圖29〕凹背凸刃直柄無首刀 河南新鄭望京樓
商早期 長27.5公分 (《河南》(一)圖版
九七)

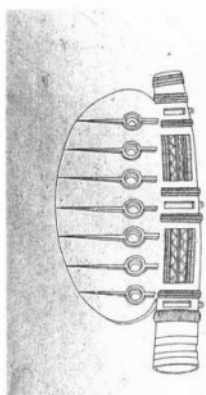
〔圖30〕三孔卷雲狹刃管鑿鉞(雨八七二)
商末或周初 刃高21.2公分
國立故宮博物院

〔圖31〕七孔管鑿鉞(崑二一九) 商末或周初
刃高13.4公分 國立故宮博物院

〔圖32〕獸面紋有鑿鉞(崑二五九) 商晚期
器長16.7公分 國立故宮博物院

〔圖33〕獸面紋有鑿鉞(雨八七二) 商晚期
全長16.5公分 國立故宮博物院

〔圖34〕

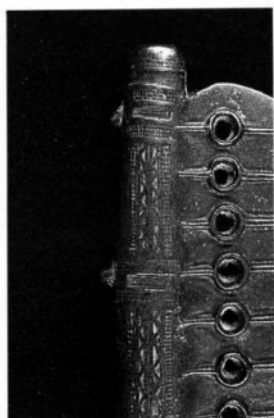


井成二

〔圖35〕



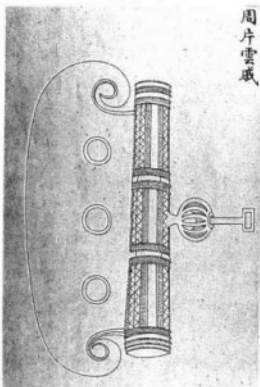
〔圖36〕



〔圖37〕



〔圖38〕

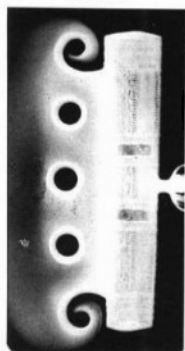


周片雲戚

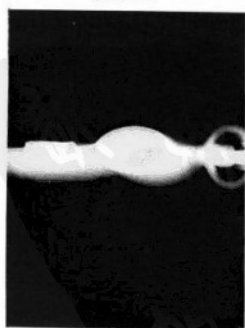
〔圖39〕



〔圖40〕



〔圖41〕



〔圖34〕周舞戚 《西清古鑑》卷三七頁六

〔圖35〕七孔管鉞上鑿孔口修補痕迹

〔圖36〕七孔管鑿鉞鑿上花紋

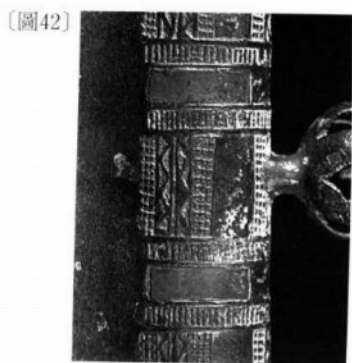
〔圖37〕七孔管鑿鉞 青海區中下西河潘家梁
長16 寬8公分 《中國美術全集》四
圖版九八

〔圖38〕「周片雲戚」 《西清古鑑》卷三七，頁
一二

〔圖39〕三孔鉞管鑿孔經後人填補

〔圖40〕三孔鉞X光透視

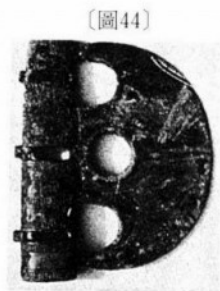
〔圖41〕三孔鉞X光側面透視



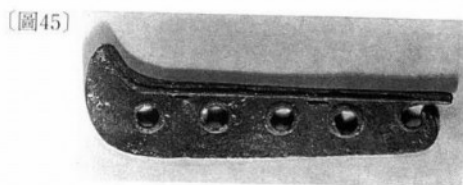
〔圖42〕



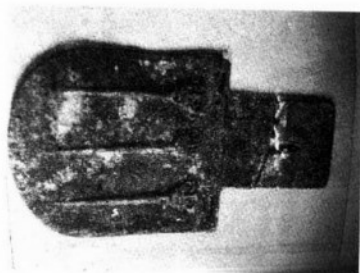
〔圖43〕



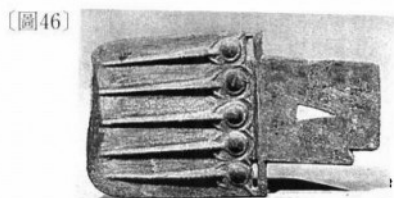
〔圖44〕



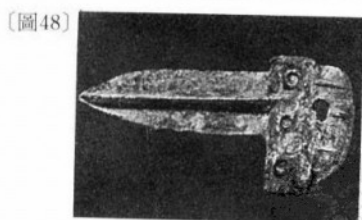
〔圖45〕



〔圖47〕



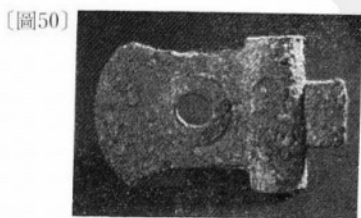
〔圖46〕



〔圖48〕



〔圖49〕



〔圖50〕

〔圖42〕三孔管釜蓋裝飾及長方形凹槽經後人填補

〔圖43〕三孔管釜鉞 傳陝西榆林 商末或周初 長18 寬14公分 《中國美術全集》四圖版九一

〔圖44〕鉞 陝西淳化黑豆嘴墓二 商末周初 長17公分 《考古與文物》一九八六：五，頁十三，圖一9

〔圖45〕刀 陝西岐山魏家河 商晚期 長32.5公分 《陝一》圖版一四

〔圖46〕鉞 陝西擇風呂宅 商晚期 長19公分 《陝一》圖版四九

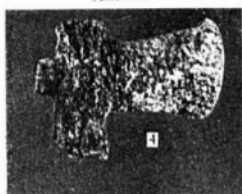
〔圖47〕鉞 陝西西安老牛坡墓四一 商晚期 長19公分 《文物》一九八八：六，頁十二

〔圖48〕「戈」 北京昌平百浮墓二(2:20) 西周早期 長19.8公分 《考古》一九七六：四，頁五〇

〔圖49〕斧鉞 山西柳林高紅 商晚期 身長7 刃寬4.8公分 《考古》一九八一：三，圖版肆：1

〔圖50〕管釜斧鉞 山西石樓義縣 商晚期 釜高8.5 刃寬8.2公分 《文物資料叢刊》三，頁二〇二圖二

〔圖51〕



〔圖52〕



〔圖53〕



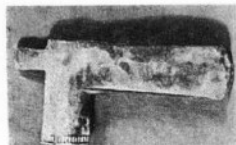
〔圖54〕



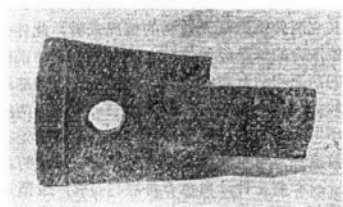
〔圖55〕



〔圖56〕



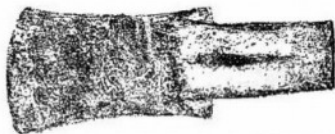
〔圖57〕



〔圖58〕



〔圖60〕



〔圖59〕



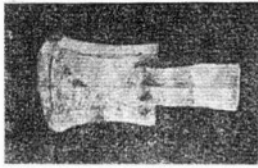
〔圖61〕



- 〔圖51〕管鑿斧鉞 北京昌平白浮基3
西周早期 釜高8 刃寬6公分
《考古》一九七六：四，圖版卷：4）
- 〔圖52〕管鑿斧鉞 陝西寶雞強國墓7 西周早期
《強國》圖版五〇：1）
- 〔圖53〕管鑿斧鉞 陝西岐山王家嘴 商晚期
長10.5公分 《陝一》圖版十三）
- 〔圖54〕管鑿斧鉞 山西石樓曹家垣 商晚期
釜長18.7公分 《文物》一九八一：八，頁五二
- 〔圖55〕管鑿斧鉞 山西保德林遮峪 商晚期
長(右)16.8 (左)17公分
《文物》一九七二：四，封底1）
- 〔圖56〕管鑿斧鉞 河北青龍抄道溝 商晚期
長12.5公分 《考古》一九六二：十二，圖版伍：2）

- 〔圖57〕釜內鉞 山西靈石介村墓3 商晚期
長16.5公分 《文物資料叢刊》3頁48，圖四）
- 〔圖58〕釜內鉞 山西石樓義勝會坪 商晚期
長17.8公分 《文物》一九七四：二，頁六九）
- 〔圖59〕釜內鉞 山西柳林高紅 商晚期
全長15.7公分 《考古》一九八一：三，圖版肆：2）
- 〔圖60〕釜內鉞 陝西綏德中角楊崩 商晚期
長18公分 《考古》一九八八：十，頁九五六，圖二3）
- 〔圖61〕釜內鉞 陝西西安老牛坡 商晚期
長19.4公分 《考古與文物》一九八一：二，圖版玖：2）

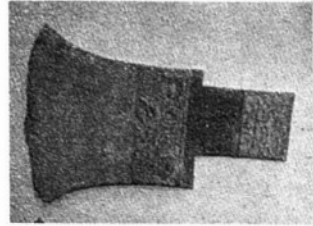
〔圖62〕



〔圖63〕



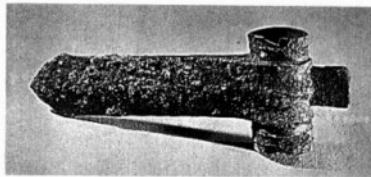
〔圖64〕



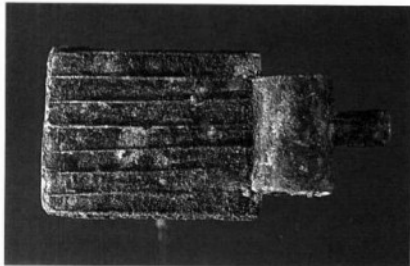
〔圖65〕



〔圖66〕



〔圖67〕



〔圖68〕



〔圖69〕



〔圖70〕



〔圖62〕蓋內鉞 山東泗水 商晚期 長16公分
 (《考古》一九八八：三，頁二八四，圖3)

〔圖63〕管釜斧 Arthur M. Sackler收藏
 西元前二千年

〔圖64〕鉞 山西石樓二郎坡 長16.8公分
 (《文物》一九五八：一，頁三七)

〔圖65〕婦好鉞(799) 河南安陽小屯5號墓
 商晚期 長39.5公分 (《殷墟婦好墓》彩一三：1)

〔圖66〕「斧」 河南安陽大司空村墓24 商晚期
 通長17.3公分 (《河南》(一)圖版二九二)

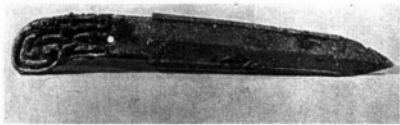
〔圖67〕斧 河南安陽侯家莊西北崗墓1717 (R
 91853) 商晚期 長10.5 高5公分

〔圖68〕有欄直內戈(R6819)河南安陽西北崗墓
 一〇〇一 商晚期 長22.5公分
 (《侯家莊》二，貳肆捌：5)

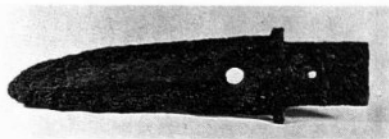
〔圖69〕曲內戈(R2097) 河南安陽小屯墓20
 商晚期 長27.1公分 (《小屯》丙一
 下壹叁叁：1)

〔圖70〕帶胡戈 河南安陽殷墟西區墓698
 商晚期 長28.3公分 (《河南》(一)圖版
 二三〇)

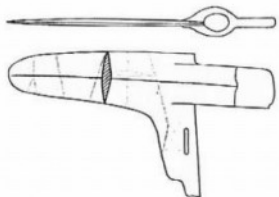
〔圖71〕



〔圖72〕



〔圖73〕



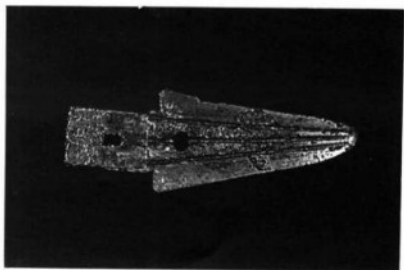
〔圖74〕



〔圖75〕



〔圖77〕



〔圖76〕



〔圖78〕



〔圖71〕曲內戈 河南偃師二里頭(K3:2)

二里頭時期 (《河(一)》圖版四)

〔圖72〕直內戈 河南鄭州白家莊墓7 商早期

長29.3公分 (《河(一)》圖版一九)

有銹曲內戈

〔圖73〕帶胡有銹戈 河南殷墟西區墓697

商晚期 長21.3公分 (《考古學報》一

九九七:一,頁九一,圖六六:2)

〔圖74〕有銹戈(R6774) 河南安陽西北崗墓

1004 商晚期 全長24.1公分(侯家莊

五壹叁陸:2)

〔圖75〕戈 山西石樓褚家峪 商晚期 長24.5

公分 (《文物》一九八一:八,頁五二)

〔圖76〕虢季子白盤銘 (《小校經閣金石文字

拓本》卷九,頁八二)

〔圖77〕三角援戈(麗七七三) 商晚期 長19.6

公分 國立故宮博物院

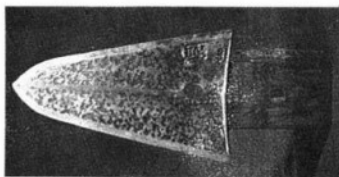
〔圖78〕三角援戈自名為「戣」 (《小校經閣金

石文字拓本》卷十頁九二下)

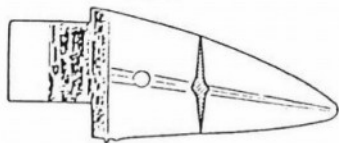
〔圖79〕



〔圖80〕



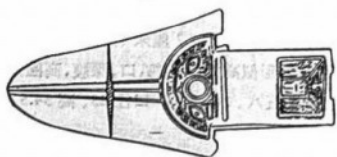
〔圖81〕



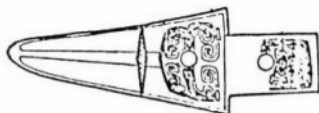
〔圖82〕



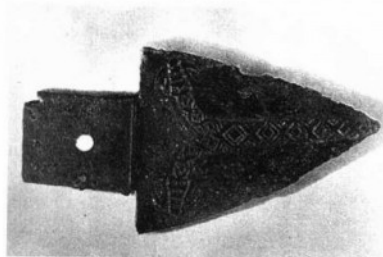
〔圖83〕



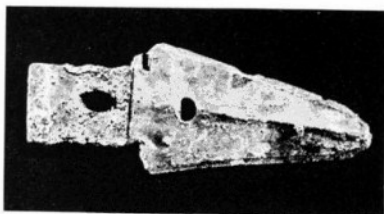
〔圖84〕



〔圖85〕



〔圖86〕



〔圖79〕楚公冢戈 西周晚期 通長 21.3公分
(《中國美術全集》四, 圖版二三九)

〔圖80〕三角援戈 四川新都 戰國 (《文物》
一九八一: 六, 圖版伍, 4 右)

〔圖81〕三角援戈 河南安陽三家莊墓1 長21
公分 (《考古》一九八三: 二, 頁一二
八, 圖三: 2)

〔圖82〕三角援戈 河南安陽小屯墓232(R2108
) 商晚期 長24公分 (小屯丙編白
內區墓葬 叁零)

〔圖83〕三角援戈 河南安陽殷墟西區墓279
商晚期 長21.4公分 (《考古學報》一
九七九: 一, 圖六四: 2)

〔圖84〕三角援戈 四川彭縣竹瓦街 商晚期
(《文物》一九八〇: 十二, 頁三八, 圖
一: 7)

〔圖85〕三角援戈 陝西城固蘇村 商晚期 長
26公分 (《陝(-)》圖版一〇七)

〔圖86〕三角援戈 陝西寶雞漁國墓7 西周早
期 長 18.8公分 (《強國》圖版五〇:
: 4)

ABSTRACT

While there are fewer than fifty bronze weapons in the National Palace Museum, over one fifth of them are considered to be of atypical styles. This article takes these seven anomalous bronze weapons dating from the late Shang to early Western Chou dynasties as its topic of discussion.

The word atypical refers to weapons that do not match the standard, or typical, styles of weapons excavated from the Yin-hsu region, which, as the political center of the late Shang dynasty, naturally produced a greater number of weapons than surrounding areas. These rich archaeological findings in Yin-hsü allow for the categorization of styles, which were established during the late Shang dynasty and continued into and through the early Western Chou. Anyang was the center of development, and from there the weapons styles spread to such places as Shantung in the east, Szechwan in the west, Kiangsi in the south, and the Ordos steppes in the north. From present archaeological data in the Anyang region, these atypical styles are rarely, if ever, found. In contrast, however, they are quite common in places such as northern Shansi, northern Shensi, northern Hopeh, and the Ordos, and even as far north as the southern Siberian Karasuk culture. In addition, some atypical styles are a common denominator between Yin-hsü and various regions in southern Shensi and Szechwan.

Because bronze weapons were common to a greater variety of cultures and regions than were bronze ritual vessels, they are more appropriate for cross-cultural comparisons, as they reflect cultural interaction among separate regions. At the same time, because weapons had to meet high demands for functional capability, they had to be adapted to specific environmental and cultural needs. Nevertheless, through migration, intermarriages, and wars, there was also a measure of intercultural exchange. It is for this reason that scholars often use weapons as an avenue to discussing such things as cultural origins and transmission. From the 1930s onward, scholars in Europe, the Soviet Union, the United States, Japan, and China have all placed great emphasis on the relationship between Yin-hsü and the north. Owing to a deficiency of archaeological data, early sinologists linked the Yin-hsu culture directly with the Karasuk culture. Recent Chinese archaeologists, however, tend to link Yin-hsü with the Chinese north, which appears much more reasonable in terms of both chronology and geography. Along the same line and in an effort at

understanding more about the nucleus of the Yin-hsü bronze civilization, this article examines the development of late Shang and early Chou atypical weapons, as well as Anyang's response to external influences affecting bronze weaponry, through common features shared by weapons of Yin-hsü with weapons of the north and the southwest.

According to archaeological data, daggers of a style similar to that of the NPM 'Dagger with curved hilt and rattle' were popular in the late Shang north, from Inner Mongolia through Shansi, but were rarely used in the Yin-hsü region. What's worth more research are the questions as to why the dagger was virtually nonexistent in the central plains and why the Yin-hsü people chose not to adopt it.

In contrast to this, the Yin-hsü people, already having a tradition of producing knives, adopted external knife styles. The NPM 'Sickle-shaped knife with curved hilt' reflects this phenomenon. Similar in style to the NPM 'Dagger with curved hilt and rattle,' knives such as the NPM 'Sickle-shaped knife with curved hilt and rattle' have been found mostly in northern Hopeh. Similar sickle-shaped knives with animal head or ring hilts have been found mostly in northern areas of Shensi and Shansi, and even further to the north in areas of the Karasuk culture. What is interesting is that this style also appeared in Yin-hsu. In terms of style, Yin-hsü knives of this style are contemporaneous with those of the north; in terms of quantity, these knives stand in the minority in Yin-hsü; and in terms of circumstances at excavation sites, some exquisite knives have been found in very large tombs, while very crude examples were found with decapitated slaves in tool storage pits. From this evidence, it is clear that although the Yin-hsü people accepted and employed this style of knife, it was never extremely popular and only provided variety.

Conversely, the *yüeh*-axe, which was indigenous to the Yin-hsü region, consistently retained its indigenous characteristics despite contrasting styles prevalent in other regions. This rejection of external influences may be related to the *yüeh*-axe's symbolism of rank and its importance in ritual. The four *yüeh*-axes in the National Palace Museum are all examples of the atypical style. This type of *yüeh*-axe is equipped with a shaft-hole and is normally found in areas of the north, from northern Shensi to northern Hopeh. This "ring-hafted" northern type and the "slot-hafted" Yin-hsü type form two sharply contrasting *yüeh*-axe traditions. The shaft-hole apparent on these NPM *yüeh*-axes is one factor that sets them firmly in the "northern style," as it is a common feature of northern pole-arms.

However, the widespread use in Yin-hsü of the 'dagger-axe with shaft-hole' throws doubt on whether the shaft-hole was purely of the Northern style. In looking at overall weapons development of the Yin-hsü region, it seems that although the 'dagger-axe with shaft-hole' was extremely popular, it never supplanted the traditional 'dagger-axe with shaft-plate' and never surpassed it in popularity. Furthermore, in looking at the overall development of Bronze Age dagger-axes, slot-hafting was consistently the favored hafting method in the central plains, while ring-hafting, although somewhat popular during the late Shang and early Chou dynasties, was rarely employed.

In examining this issue from current evidence concerning Yin-hsü weapon types, that the shaft-hole was introduced from the outside appears more likely than it having developed out of the Yin-hsü tradition. The absence of the shaft-hole on Yin-hsü *yüeh*-axes corroborates this proposition. In contrast to the *yüeh*-axe, the dagger-axe, this most common of indigenous weapons, when faced with the external shaft-hole, not only adopted it but experimented with it, adapted it, and finally assimilated it. Of course, there were limits to the Yin-hsü people's open mindedness, and the ring hafted dagger-axe never fully supplanted the original slot-hafted dagger axe. Over the two or three hundred years that the ring-hafted dagger axe was in use, the Yin-hsü people may have discovered that a dagger axe secured in this way had a tendency to become loose and slip off the shaft sooner than one slot-hafted and reinforced by lashing, which eventually led to its falling out of favor.

The NPM 'Dagger-axe with triangular blade' reflects the intercultural relationship between Yin-hsü and the southwest. By the late Shang dynasty, the dagger-axe with triangular blade had already appeared in Chengchow, Yin-hsü, and in and around Chengku in southern Shensi. During the early and middle Chou dynasty, it reappeared at Paochi, also in southern Shensi. By the Warring States period, it had become popular throughout Szechwan, while being rare in other areas. For this last reason, scholars have dubbed it the "Shu style dagger-axe" (Shu referring to Szechwan). Because the dagger axe appeared early on in Yin-hsü, southern Shensi, and Szechwan, three different theories about its origin have arisen. In examining the overall picture from archaeological findings, we see the following: in the terms of chronology, the dagger-axe with triangular blade appeared simultaneously in Yin-hsü and other areas; in terms of quantity, relative to the whole of Yin-hsü weaponry, there is a higher proportion of triangular blade dagger axes in Chengku than in Yin-hsü; in terms of conditions at

excavation sites in Yin-hsu, most have been found in smaller size tombs. This evidence suggests that, unlike the indigenous Yin-hsü dagger-axe, the dagger-axe with triangular blade was introduced to the Yin-hsü region from outside.

From the above discussion of the styles of these seven different weapons, we see that in comparison with indigenous styles, atypical weapons generally appeared in smaller numbers in the late Shang and Chou dynasty central plains. This suggests the possibility of their being of alien origin. Whether in the northern steppes or in the mountains of the southwest, the Yin-hsü people seem to have been quite open-minded in regard to surrounding civilizations, although they did exhibit some restraint and selectivity. The "central plains nucleus" of ancient Chinese culture developed out of the cultural pluralism of the Neolithic age, and the atypical weapons in the National Palace Museum may reflect the openness of this "nucleus" to outside cultural influences. In oracle bones from the late Shang dynasty and ancient documents relating events of the late Shang and early Chou dynasties, the north is usually referred to as T'u Fang, Kuei Fang, or (pronunciation unknown) Fang; the regions of the Southwest were known as the Shu and Pa nations. An understanding of the locations and movements of these peoples should gradually come to light in the wake of continuous archaeological excavations of bronze weaponry, and with more analysis of atypical weapon styles, we will gradually be able to add some pieces to the puzzle of intercultural relationships between Yin-hsü and these peoples.





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彩色图版

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商周青铜兵器发展的主要趋势——商周青铜兵器研究之一

前言

一、青铜兵器的器名、功能与分类

- 甲、长兵
 - 1. 戈
 - 2. 戟
 - 3. 矛
 - 4. 钺
- 乙、短兵
 - 1. 剑
 - 2. 刀
- 丙、远射器
 - 1. 矢镞
 - 2. 弓形器
 - 3. 弩机
- 二、奠定基础（二里头三期至商后期，约西元前十七至十一世纪）
 - 甲、戈制多样性的形成与发展
 - 乙、器类与风格的多样化：中原与地方风格的对垒与融合
 - 1. 安阳与南方、西南关系问题试探：从戈、矛、钺谈起
 - 2. 安阳与北方关系问题：从钺、刀、剑与弓形器论起
- 三、承先启后（西周至春秋早期，约西元前十一至六世纪）
 - 甲、戈制的承先启后：有胡戈的盛行
 - 乙、戟制的尝试：连体戟的出现
 - 丙、剑的兴起
- 四、蓬勃发展（春秋中晚期至战国，约西元前五世纪至三世纪）
 - 甲、剑制的兴盛
 - 乙、戈与戟的极致
 - 丙、弩机的兴起
 - 丁、兵器艺术的高峰

余论