

欧亚学刊

第七辑

EURASIAN STUDIES

余太山 李锦绣 主 编

梅维恒(Victor H. Mair) 芮传明 特邀主编



中华书局

欧 亚 学 刊

第七辑

EURASIAN STUDIES

余太山 李锦绣 主 编
梅维恒 (Victor H. Mair) 芮传明 特邀主编

中华书局

图书在版编目(CIP)数据

欧亚学刊.第7辑/余太山,李锦绣主编.—北京:
中华书局,2007.6

ISBN 978-7-101-05414-9

I.欧… II.①余…②李… III.东方学-丛刊
IV.K107.8-55

中国版本图书馆 CIP 数据核字(2007)第 084524 号

名誉顾问:季羨林 唐德刚

总顾问:陈高华

顾问:定宜庄 韩升 华涛 蓝琪 厉声 李勤璞
林梅村 林悟殊 刘欣如 刘迎胜 卢向前 罗丰
马小鹤 牛汝极 潘志平 荣新江 王颀 王邦维
王希隆 王欣 魏存成 徐文堪 于志勇 朱学渊

特邀主编:梅维恒(Victor H. Mair) 芮传明

主编:余太山 李锦绣

副主编:聂静洁

欧亚学刊

Eurasian Studies

第七辑

余太山 李锦绣 主编

责任编辑:李晨光

特邀编辑:聂静洁

*

中华书局出版发行

(北京市丰台区太平桥西里38号100073)

<http://www.zhbc.com.cn>

E-mail: zhbc@zhbc.com.cn

北京未来科学技术研究所有限责任公司印刷厂

*

787×1092毫米 1/16·14 1/4印张·300千字

2007年6月第1版 2007年6月北京第1次印刷

印数1-1000册 定价:33.00元

ISBN 978-7-101-05414-9

谨以此辑纪念翁独健先生(1906—1986)诞辰一百周年

TO THE MEMORY OF PROF. WENG DUJIAN

本学刊出版得到梅维恒教授(Prof. Victor H. Mair)
及中国社会科学院重点学科建设项目经费资助

Eurasian Studies

Vol. 7

Proceedings of the International Conference on Ancient Central Eurasian and Chinese Civilizations Vol. II

Contents

- | | |
|------------------|--|
| Elena E. Kuzmina | Relations of the Andronovans with the Population of Xinjiang and Other Regions of China in the Bronze Age |
| Guo Wu | Preliminary Discussions on the Sandaohaizi |
| Wang Binghua | Phallicism in Xinjiang Archeological Discoveries |
| Chen Ling | The Treasures of Bilgä Khaan and Related Questions |
| Liu Xinru | Hellenistic Remnants in Central Asia Under Islamic Regimes |
| Wang Xin | Al-Sahab Kahfi Mazar of Toyuq: Text and Legend |
| Li Jinxiu | A Discussion on "Western Regions" in the <i>Xirong</i> Section of the Chapter on Frontier Defence in the <i>Tongdian</i> (<i>Cyclopedia of Institutions</i>) |
| Shen Weirong | A Discussion on the Khoto Chinese Manuscripts concerning Tibetan Tantric Buddhism in Tangut-Xia Kingdom and Mongol-Yuan Dynasty |
| Yu Wanli | A Textual Study of the Manuscripts of <i>Zizhi Tongjian Gangmu</i> from Khara-Khoto |
| Chen Sanping | An Etymological Study of the Zhou Kinship Term <i>Kun</i> |
| Frances Wood | Looking at the Past without Prejudice |
| Xu Wenkan | Complementarity of Sinology and Central Eurasian Studies |

《欧亚学刊》第7辑

古代内陆欧亚与中国文化国际学术研讨会论文集(下)

目 录

Relations of the Andronovans with the population of Xinjiang and Other Regions of China in the Bronze Age	Elena E. Kuzmina(1)
三道海子文化初论	郭 物(29)
新疆考古中所见生殖崇拜遗痕	王炳华(60)
突厥毗伽可汗宝藏及相关问题	陈 凌(73)
伊斯兰教时期中亚的希腊文化遗存	刘欣如(87)
艾苏哈卜·凯赫夫麻札与吐峪沟宗教文化	王 欣(95)
《通典·边防·西戎》“西域”部分序说	李锦绣(123)
序说有关西夏、元朝所传藏传密法之汉文文献	
——以黑水城所见汉译藏传佛教仪轨文书为中心	沈卫荣(159)
黑城文书《资治通鉴纲目》残叶考释	虞万里(180)
“昆”考	陈三平(203)
Looking at the Past without Prejudice	Frances Wood(212)
汉学与内陆欧亚研究之互动	徐文堪(215)

Relations of the Andronovans with the Population of Xinjiang and Other Regions of China in the Bronze Age^[1]

Elena E. Kuzmina

Russian Institute for Cultural Research

It is reasonable to presume that the Andronovo influence stretched as far as China. In the Anyang culture momentous achievements of world civilization—metallurgy, wheeled transport and horse-breeding—are present in their developed form, having had on the Yellow River no preceding development. Pursuant to the ancient tradition created in the epoch of the formation of the Chinese state system, civilization in the interior took shape independently. This traditional autochthonous hypothesis is embraced by most Chinese archaeologists (Cheng Te-k'un 1961; Chang Kwang-Chih 1959; 1965; 1968).

In accordance with another hypothesis put forward by M. Loehr (1949; 1957; 1965) and the outstanding Russian scholar S. V. Kiselev (1960), and accepted by Li Chi (1957), W. Watson (1961), E. Kuzmina (1973), Ping-ti Ho (1975), S. Kuchera (1977), Kryukov, Safronov, Cheboksarov (1970), and Varenov (1983), the formation of Chinese civilization was furthered by the western impulse. In Eurasian Steppe metallurgy, wheeled transport and horse-breeding go back to the fourth millennium B. C., while the celts, spears and single-edged knives of Anyang have prototypes and analogies in the Andronovo and Seima-Turbino complexes.

It has now been established that metal appeared in China in the pre-Anyang epoch on the northern periphery in the cultures of "significant others," i. e., ethnically non-Chinese peoples (J. Prusek 1971; Wu En 1985; Lin Yün 1986). These cultures were systematized by K. Linduff (1994; 1995; 1996; 1997; 1998). In the Qijia culture in Gansu (2500 – 1900 B. C.) were found the oldest barley and wheat, the horse, forged copper awls and rare cast bronze awls, knives, celts, gold rings, a mirror, plaques, and earrings (Debaine-Francfort 1995: 320, fig.

19, 61). In the cultures of Zhukaigou (phases 3, 4, 5) in Inner Mongolia (2000 – 1500 B. C.), Lower Xiajiadian in the northeast of Inner Mongolia and Hebei (2000 – 1600 B. C.); Erlitou (periods 3, 4) in the Central Plain (1750 – 1530 B. C.) (Chang Kwang-Chih 1968) and Yueshi in Shandong (2000 – 1600 B. C.), there are incipient signs of a food-producing economy (the pig and horse) and metallurgy. In China, together with metal, there appeared wheat, barley and sheep, all cultivated in the Near East and spread in the third millennium B. C. into the Steppe, as well as the horse, which was domesticated in the Steppe. This testifies to the food-northwestern impulse. The multiethnic population of Northern China apparently played a pivotal role in the spread in the Central Plain of the food-producing economy, horse-breeding and metallurgy, introduced from the north—the Steppe (Linduff 1994; 1995a; 1997; 1998; Fitzgerald-Huber 1995; 1997).

Relations with the north may have been realized via Xinjiang and along the steppe corridor of Gansu. In the north Xinjiang is connected with Siberia by a pass through the Altai mountains. In the west it is linked by the Tersek Davan Pass with Ferghana and by an easily passable route along the Ili river through the Tian Shan with Semirechye. The ecological conditions of Eastern Turkestan are very diverse: from the north it is circumscribed by the Altai mountains; from the south by the Pamir, Kunlun and Altyn mountains. From west to east Tian Shan separates Dzungaria from the Tarim Basin; most of the territory is occupied by the Taklamakan Desert, but in places the fertile river and lake valleys are suitable for farming and Steppe plots for cattle-breeding (Petrov 1966; 1967). This determined the diversified character of the economic and cultural types of the region. The Afanasyevo culture was the first in Xinjiang to have a food-producing economy. It is represented by the burial grounds of Tuzu near Urumchi and Keremchi in the Altai district (Wang Binghua 1996: 75; Molodin, Alkin 1997). In terms of the funeral rite and its implements, close to the Afanasyevo culture is the Gumugou burial ground, whose exact attribution is impossible in default of pottery (Debaine-Francfort 1988; Mair 1995; Mallory 1995; Mallory Mair, 2000; Kuzmina 1998). The calibrated date of Gumugou is 2030 1815 B. C. The population raised cereals, sheep, goats, cows and Bactrian camels, manufactured fabrics of the European type (Barber 1998), wore the traditional dress of a Steppe inhabitant: a cap, a caftan, trousers and boots, and used forged copper articles. It belonged to the Caucasoid anthropological type (Alexeev 1988; Han Kangxin 1994; 1998; Chikisheva 1994). The Afanasyevo Culture is genetically related to the Pit-grave and, partially, Catacomb cultures (Kiselev 1949; Vadetskaya 1986; Tsyb 1984; Novgorodova 1989). The arrival of the Afanasyevo Culture representatives from the west to Siberi-

a, Tuva and Mongolia is viewed as the first wave of the migration of the Indo-Europeans——Tocharians——eastward (Semenov 1993), the creators of Gumugou being also numbered among them (Jettmar 1985; Mallory 1995; 1998; Mallory Mair, 2000; Pulleyblank 1996; Renfrew 1998; Kuzmina 1998).

Northern Chinese peoples may have received from the Afanasyevo tribes, who came from the west, metal, wheat and barley, the carriage and the wheel, the sheep and the horse. All these terms were borrowed into the Chinese language from the Indo-European proto-language via Tocharian (Pulleyblank 1996: 1 24). It is likely that the rites of domestic animal sacrifice, familiar in the European Steppes from the fourth millennium B. C., were also adopted. In Siberia the Afanasyevo Culture was succeeded by the Andronovo Culture of the Fedorovo type, which came from Eastern Kazakhstan. In the Fedorovo burial grounds reminders of the Afanasyevo ceramic tradition can be distinctly traced, but genetically these ethnoses differ. As already mentioned, at the early stage of Novy Kumak Andronovo tribes organized large-scale metallurgical production. The history of Andronovo metallurgy is closely associated with that of Turbino Seima, studied by E. Chernykh and S. Kuzminykh (1989). Turbino Seima bronzes are an assortment of types, comprising celts, adzes, double-edged knives (daggers), single-edged knives, often with a figured handle, spears, including those with a socketed shaft, hooks, and bracelets. Turbino Seima bronzes are distinguished by the use of stannous bronze and the casting of thin-walled celts, chisels and spears with a blind all-metal socket. The invention of a strong bronze alloy, which enabled the production of implements with a cast socket, was a momentous innovation of the epoch. The abundant cassiterite deposits of Eastern Kazakhstan served as the source of tin.

Turbino Seima bronzes form part of the complexes of entirely different cultures that are connected by a system of rivers. From Eastern Kazakhstan, where a great number of chance findings are concentrated, tin and bronze came by the Irtysh River eastward to the Altai along the Ob (Elunino, Tsygankova Sopka) and to the north of the Altai along the Irtysh's tributary Om (Rostovka, Sopka 2, Omskii Klad), and also by the Irtysh to the north where the Ob and the Irtysh converge with the basin of the Uralian rivers. From there metal would find its way to the Kama (Turbino) and further to the Volga (Seima). This "tin" road preceded the Great Silk Road which would connect Asia and Europe. What is the origin of the Turbino Seima bronzes? E. Chernykh and S. Kuzminykh (1989: 259 – 261 270) dated them to the 16th century B. C. and presumed that the complex formed in Siberia as a result of the interaction between the culture of the Baikal's hunters and fishermen and that of the Altai's horse-breeders and metallurgists. A clan of armed

nomad metallurgists would carry out distant raids on horseback and spread their products in the west. V. Bochkarev (1986) established wide European systems of bronzes and determined the chronological sequence of the complexes: Turbino Sejma Rostovka and Samus' IV, Turbino being synchronized with the Abashevo culture. O. Kuz'mina (2000: 65 - 134) confirmed the relationship between the metallurgy of the European Abashevo culture and Turbino and demonstrated that many types of the early Andronovo metal from Sintashta developed traditions of Abashevo metalworking (adzes, double-edged and single-edged knives, spears, shafted arrows, hooks, bracelets). This bears out the role of the European traditions for the metalworking of Turbino Abashevo Sintashta. However, there is a group of bronzes of eastern origin in Seima (Chernykh 1970: 155 - 173). In Sintashta two articles of stannous bronze alloyed with lead (Pb) and antimony (Sb) were found, which points to their being exported from Eastern Kazakhstan (Zaikova 2000). It is probable that from there come Turbino's single-edged knife with a representation of an argali and Seima's with a pair of horses (Bader 1964: 115 - 123, fig. 113; 1970: fig. 52).

This allows one to propound a working hypothesis for the formation of Turbino Sejma bronzes as a result of the interaction between the population of Eastern Europe (above all, Abashevo and, partially, Catacomb tribes) and early Andronovo tribes of the Fedorovo type in Eastern Kazakhstan. These bronzes have already been found in the Kanai burial ground which preserves the eneolithic traditions, and the early Marinino stage of the Fedorovo type has been established (Tkacheva 1997: 12). The acceptance of the calibrated C^{14} dates of the Abashevo (Kuz'mina O. 2000) and early Andronovo monuments of the Novy Kumak stage makes one assign Turbino to an earlier time and date it to the turn of the third-second millennium B. C. It may be presumed that it was the early Andronovo tribes of Siberia and Eastern Kazakhstan that were instrumental in the appearance in China, in the northern contact zone, of tin and of bronze articles, stone and clay molds, the technique of casting celts and spears with a hidden socket, as well as types of the adze, the single-edged knife and the ring-headed dagger in Erlitou in Henan (Linduff 1994: fig. 3, 18) and the dagger from Zhukaigou, phase 5 (Linduff 1997: fig. 6 bottom). The type of twisted-buttt daggers with animal figures on the handle was widely developed in China (Lin Yün 1986: fig. 49, 17; Linduff 1996a: fig. 9; Chzhun Suk Be 2000: fig. 2, 1 - 6). China's socketed spears are analogous with Andronovo spears, which go back to the Abashevo Turbino prototypes (Loehr 1956; Varenov 1987; 1989). The pitchfork-shaped spear with a hook from Shenna in Qinghai (Wagner 2001) resembles the spears from Rostovka and from the Altai (Chernykh, Kuzminykh 1989: fig. 29, 30).

Having received the initial western impulse, Chinese metallurgists began to develop their own production. In the 14th – 13th centuries B. C. on the Yenisei, Andronovo Fedorovo tribes were ousted by the newly arrived tribes of the Karasuk culture. In Eastern Kazakhstan and Semirechye the development of the Andronovo culture was still under way. In the 13th or 12th to 9th centuries B. C., pottery made with an applied roller and many types of metal articles, common from the Danube to the Altai, spread here, and the activity of the metallurgical centres of Semirechye and Ferghana intensified. Relations with Xinjiang stepped up. Xinjiang's monuments are diverse, and they include: agricultural tepe, cattle-breeders' sites, burial grounds, hoards and chance findings (Jettmar 1985; 1992; 1996; Alkin 1987; Antonova 1988; Debaine-Francfort 1988; Kuchera 1988; Havrin 1992; Kuzmina 1996a, b; 1998; 2000; Zadneprovsky 1992; 1993; 1994; 1995; 1997; Semenov 1993; Molodin, Alkin 1997; Molodin 1998; Shui Tao 1998; Ke Peng 1998; Mei, Shell 1998; 1999; Mallory Mair, 2000). Of particular importance are the works of Debaine-Francfort and Mei and Shell. Xinjiang's population belonged to different anthropological types, including Pamiro Ferghan (Andronovo) (Han Kangxin 1998). The monuments and pottery are diverse and attempts to establish their local and chronological classification (Chen, Hiebert 1995; An Zhimin 1998) are so far unconvincing (Komissarov 1997). There are Andronovo monuments in Xinjiang: in the Sazi burial ground in Tuoli on the border with Eastern Kazakhstan burial mounds with stone and earthen banks were discovered and a Fedorovo vessel was found (Mei, Shell 1999: 573, fig. 3: 1); in the burial ground and at the settlement of Tacheng (Chuguchak), Andronovo pottery with stamped geometrical ornamentation in the shape of a herringbone, triangles and zigzags was found. A large jug decorated with herringbone and a small jug ornamented with nail impressions (Mu Shunying 1996: 27, fig. 14), analogous to the vessels of Eastern Kazakhstan, were published. An adze, a pair of earrings, beads and a copper ingot were also found there. At the agricultural settlement-tepe of Xintala in the Tarim Basin (the radiocarbon date is 1700 – 1300 B. C.), two archaeological layers were discovered. In the lower one painted pottery was found together with vessels with comb-shaped geometrical ornament, a stone mold for casting the awl, and an awl and a knife; and on the surface a celt and a socketed arrow were found (Debaine-Francfort 1998: 16; Mei, Shell 1998: fig. 3: 1; 1999: fig. 7).

Metal articles of the Andronovo type were found at other monuments of Xinjiang. In the Qizilchoqa burial ground of the Wupu group (Hami) (C¹⁴ date is 1350 – 1000 B. C.) a chisel, a socketed arrow, a mirror with a handle and beads sewn on boots were found (Debaine-Francfort 1988: 18 – 19; II: 5). In Yanbulaks (Qumul group) (C¹⁴ date is 1110 – 525 B. C.) 76 burial

grounds were excavated and 94 bronze articles were found: single-edged knives, socketed arrows, awls, rounded plaques with punson ornament (flat and with an eyelet). A celt and a ring-headed knife were found at the Lanzhouwan settlement of the Nanwan group (C^{14} date is 1385 ± 75 B. C.). A celt, knives, an arrow, an awl, a mirror with a central projection, earrings and beads were found in the Nanwan grave (C^{14} date is 1050 B. C.). At the Qaraqocho settlement in Turfan (C^{14} date is 945 - 100 B. C.), a sickle and awls were found. In the burial grounds of Wupu and Lafuqiao (hapchoq, 1165 - 890 B. C.) bronze single-edged knives and adorations were found (Wang Binghua 1996: 77).

In the burial grounds of Wubao and Lafuqiao (1165 890 B. C.), bronze single-edged knives and ornaments were found (Wang Binghua 1996: 77).

Chance findings are also known in Eastern Turkestan. A celt and an arrow or javelin were discovered in Krorän by Sven Hedin (Bergman 1935: Table XVI 1, 7). An asymmetrical celt was found in Xinjiang, and a celt-spade and an adze with a ledge in Urumchi (Debaine-Francfort 1988: figs. 9, 3, 5). In the area of Tacheng and Tuoli (Mei, Shell 1999: 573, fig. 4) two axes, four sickles, an adze, a celt, a celt-shovel, a chisel and a spear were found, some of the articles being made of bronze containing 2 - 10% tin. In the Tian Shan near Jili an adze was found; in Jining, a chopper-sickle; in Nilike, a celt; in Xinguan, a chisel. In Jimusa'er and Qitai two axes were found; in Hami, a celt and a sickle; in Kuisu in Balikun, another axe; in Chagimale in Huayuan near Hami, an arrow and two knives; one ring-headed and one with a deer's head.

The hoard found in Agharsin (Gongliu) in Toqqtara is very interesting. It was discovered in 1975 at a depth of 1 meter (Debaine-Francfort 1989: 200, fig. 20, Table 11, 5, 6; Ke Peng 1998: fig. 16; Wang and Cheng 1989: 95, 96). The complex was found in the vicinity of graves with stone slabs. It contained a vessel of red baked clay and 12 bronze articles: three axes with hanging butt-ends, three sickles, five chisels and a celt-hammer. An Zhimin (1998, photo 25) includes three more adzes. Originally, the hoard was attributed to the Warring Kingdoms period, to the developed Iron Age (Wang Binghua 1989: 200). C. Debaine-Francfort (1989: 200) pointed out the possibility of synchronizing it with the Andronovo culture, but she attributed it to the Saka epoch. Ke Peng (1998: 580) referred it to Andronovo and dated these findings to 1500 - 1000 B. C. I assigned the hoard to the Andronovo Culture and dated it to the 13th - 11th centuries B. C. (Kuzmina 1994: 241). The comparison of Xinjiang's bronze artifacts with those of Andronovo allows us to specify their chronology and origin.

Thus, metallurgy in China emerged as early as the turn of the third-second millennium B. C.

under the influence of the Eurasian Steppe. It was mediated by the ethnically non-Chinese tribes of China's northern periphery ("significant others" according to K. Linduff 1996b), but, initially, by the Afanasyevo Culture tribes and then the Turbino Seima and Andronovo. The technology of making the bronze alloy, the use of gold and the casting of spears and celts with a hidden socket in a two-part mold, all were borrowed. Particularly active were the relations of Semirechye, Ferghana and Eastern Kazakhstan with Xinjiang, where the Andronovo population settled and where all the specific types of implements of the Semirechye metallurgical center were in general use.

Other innovations of Chinese civilization were horse-breeding and wheeled transport. Horse bones are represented in the metalliferous cultures of the early second millennium B. C. (Qijia, Siba and Longshan) (Linduff 2000). But their share is negligible and there are no domestication data (Linduff 2000). Judging by the depictions (Linduff 2000: fig. 1, 2) and, particularly, graphs denoting the horse in Chinese oracle-bone inscriptions, it was the wild Przewalsky horse (Mair 1998). Its range in the historical epoch embraced the whole of the Eurasian Steppe, including Mongolia. The Przewalsky horse is untamable. Since the number of chromosomes of the domestic and Przewalsky horses is different, the latter could not be the ancestor of the former. The domestic horse may have originated from the tarpan in the Ponto-Caspian Steppes, where, by the fourth-third millennium B. C. its cult had already emerged and its representations in art and its ritual sacrifice had appeared. In Southern Siberia the domestic horse is familiar in the Afanasyevo culture, but in the first stage it was used only as food (Bökönyi 1995; Kuzmina 2000; Linduff 2000).

The Afanasyevo Culture was probably also familiar with the use of vehicles that had solid wheels made up of three parts assembled by hammerwork, with a protruding hub. Draught animals were a pair of bulls or oxen (Leontiev 1980: 65; Vadetskaya 1986; Gryaznov 1999). The similarity in construction of the Old World carriages and wheels in the late fourth to mid-third millennium B. C. gave birth to the hypothesis that they had a monocentric origin in the Near East (Childe 1954; Piggott 1969; 1983; Littauer, Crowel 1979). This type of transport is also familiar in the Andronovo Culture. The appearance of the carriage in China is evidenced by its representations in petroglyphs in Xinjiang and Inner Mongolia (Cheremisina, Borisova 1999; *Ancient Art*) and the finding of a wheel from the cemetery of Kezierqueqia (Qizilchoqa) near Qumul (Hami) in Xinjiang, dating to 1350 – 1000 B. C. (Mallory Mair, 2000: 142, 143, 324, 325; fig. 64). Horse bones were found in Xinjiang at sites of the latter half of the second to the early first millennium

B. C. : Shirenzi, Lanzhouwanzi, Nanwan, Wupu, Kezierqueqia (Debaine-Francfort 1988: 18 – 21; Jettmar 1992), and cheek-pieces of the Steppe type were found in Shirenzi and Nanwan.

The most important innovation of the first quarter of the second millennium B. C. was the spread of light fighting chariots with two spoked wheels, harnessed to a pair of horses. The oldest findings of chariots and horses in warriors' graves are familiar in the Urals and on the Volga (Gening 1979; Kuzmina 1994; 2001), and in representations in Anatolia and Syria (Littauer, Crowel 1979; Moorey 1986). Having emerged in the epoch of the formation of the Andronovo Culture at the monuments of Sintashta and Petrovka, chariots dominated in the Steppes in the third quarter of the second millennium B. C. in the Timber-grave (Srubna) and Andronovo cultures, which is recorded by cheek-pieces, representations on vessels and in petroglyphs. The representations of chariots in Xinjiang (Chermisin, Borisova 1999: 129 – 134, pl. I; II) are analogous with the Andronovo chariots of Kazakhstan and Semirechye and are executed not in the Near Eastern manner, in profile, but in the Eurasian, one *en face* (Littauer 1977; Novozhenov 1994), which indisputably corroborates their northwestern steppes origin in China.

It is interesting that the graph denoting the chariot in oracle-bone inscriptions (Shaughnessy 1988: fig. 4) resembles the pattern in petroglyphs of Central Asia (Novgorodova 1981). Chariots proper were discovered in the 1930s at the imperial cemetery of the Shang dynasty and near the palace in the capital of the Yin kingdom in Anyang, and later in its neighbourhood near Beijing, in Xiaotun, Dasikong, Baijiafen, Xibeigang, and also in Liujiache, etc. (*Kaogu Xuebao* 1947 #2; 1955 #5; 1979 #1; *Kaogu* 1961 #2; 1972 #4; 1977 #1; 1987 ##5, 12; 1998 #9; *Wenwu* 1977 #5; Cheng Te-k'un 1960: 71, 260, pl. XVIII c; XXV d, map 1; Watson 1961: 64, pl. 48; Dewall 1964: 124 – 127; Ping-ti Ho 1975: 354 – 357; Li Chi 1977: 113 – 115, fig. 19; Kuchera 1977: 133 – 140, 173, figs. 64 – 67; Kozhin 1977; Kryukov et al. 1978; Varenov 1980: 164 169; Shaughnessy 1988: 191 194; Linduff 2000). Of particular interest is the tomb of the royal Fu Hao, who was a consort of the king Wu Ding (circa 1200 B. C.). The tomb is situated in Xiaotun at the imperial cemetery in Anyang (Henan Chutu 1981: 147, 148: figs. 136, 181; Linduff 1994: 418; So, Bunker 1995: 36). Alongside a set of Chinese articles, including those with inscriptions, the complex comprises a twisted-butt knife, a bronze mirror of the Andronovo type, jade rings and bracelets resembling Seima types, stone figurines of people and horses, comparable with Andronovo plastic art. These articles are probably of northern origin. In the complexes of Anyang two types of items can be singled out: one, local articles, including those with emperors' names; two, imported pieces of northern origin: Andronovo temple-rings of the Fedorovo

type made of gold alien to China, socketed two-bladed arrows and spears atypical of China, and single-edged knives with a zoomorphic handle.

Beside the graves of the kings and elite there were discovered the che-maken pits (literally, “a pit with a chariot and horses”). Their date is 1250 – 1100 B. C. They contain weapons, a chariot whose wheels are placed into segmentary grooves, analogous to those of Sintashta, and two horses, laid, as in Sintashta, on their sides in parallel to each other. A quadriga was found only once (Xiaotun M 20). Chariots with four horses were typical of the succeeding Zhou dynasty (Komissarov 1980; Shaughnessy 1988; Linduff 2000). Sometimes a charioteer or a groom was buried to accompany the deceased in the afterlife. Cheek-pieces are rectangular, with a central orifice, made of bronze (a Chinese innovation). The harness, as in Andronovo, has a nose-strap. In contrast to the Near Eastern wheels, the Chinese ones are multispoked, like those of Andronovo. Other peculiarities construction of one of the Chinese chariots are also similar to Andronovo, as well as one can judge by petroglyphs. This points to the Steppe origin of chariots in China (Dewall 1964; Kozhin 1969; 1977; 1988; Li Chi 1977; Kuzmina 1973 a; 1977; Piggott 1978; 1983; Varenov 1980; Komissarov 1980; Shaughnessy 1988; Linduff 2000; Mallory Mair, 2000). Northern tribes served as mediators in their transfer to Anyang. This is borne out by ritual oracle-bone inscriptions, which tell about the capture by the Shang army of rich booty in northern and western China: chariots, horses and weapons (Ping-ti Ho 1975: 225, 356 – 357; Shaughnessy 1988: 214, 233; Linduff 2000).

Apparently, together with the horse and chariot, Yin China adopted the art of training horses, along with their name and the religious and mythological conceptions associated with them. The word for “horse” (ma), is an old Eurasian migrational term (Polivanov 1968; Pulleyblank 1966: 11, 12); the name of the chariot stems from the proto-Indo-European “wheel” and came to Shang China via either Tocharian or early Iranian (Pulleyblank 1966: 30; Lubotsky 1998; Bauer 1994; Mallory Mair, 2000: 126). The cult of the chariot and horse, with the rite of its sacrifice, particularly at the funeral of a king or member of the military elite, is characteristic of the Indo-Iranians, and archaeologically it is attested in the Andronovo Culture. Chinese myths about the connection of the emperor with the winged heavenly horses, which rendered him immortal, about the horse coming out of water, the thunder chariot and the sun chariot used by the solar god for traveling over the earth, all arise from the Indo-European and, particularly, Indo-Iranian equivalents (Bussagli 1955: 17 – 22; Waley 1955; Dewall 1964: 121; YuanKe 1965: 176 – 177; Pulleyblank 1966: 32; Kuzmina 1974: 83, 84; 1977: 45). The names of fanciful horses—grif-

fins—were adopted from the Tocharians or, more likely, Indo-Iranians (Izushi 1930: 346-387; Waley 1955), while the images themselves were incarnated by the Iranian peoples in Scythian animal art, and in folklore they have survived till the present time (Kuzmina 1977).

Thus, the analysis of the relations between the Andronovo culture and Shang China enables the following conclusions to be drawn: 1. cultural relations between the Steppe and the Central Plain were established in the second millennium B. C.; at that time sections of the tracks of the future Great Silk Road were built, along which metal, the horse, and the chariot reached the Celestial empire; 2. since cultural borrowings were reflected in the Chinese language in the words adopted from Indo-European, first and foremost, Indo-Iranian, this serves as an important—and independent—argument in favour of recognizing the Andronovans as Indo-Iranians. 3. the established relations allow one to refine the Andronovo chronology by synchronizing it with the Chinese.

The axes: Three axes have been recovered in the hoards at Agharsin in Xinjiang (blade fragments); in Tacheng, in Tuoli; in the east in Jimsar, in China in Balikun. They belong to a specific Andronovo type. Axes are also found in southern Siberia. The main findings are concentrated in eastern Kazakhstan, Ferghana, and Semirechye, as well as in the treasures of Shamshi, Sukuluk, Issyk-Kul', Alexeevskii, and Tuksib. (Chernikov 1960: 161; Kuzmina 1966: 11-14, Table II; 1994, fig. 43a; Kozhomberdyev, Kuzmina 1980, Avanesova 1978, 1991: 14, fig. 13) The axes of this type developed on the basis of Eastern European and early Andronovo lop-butted types. They are characterized by an angular cross-section of the blade, a shaft-hole, framed with a lug at the bottom, and patterns in relief on the butt. In early samples the comb patterns on the handle were not very prominent. The ax from Jimsar belongs to this type. In late samples the comb is clearly marked, an ornament in the shape of a spruce or a net sometimes is next to the butt. Such ornament is present on the axes from Agharsin, Tacheng, Alexeevskii, Sukuluk, Kirghizia, and one kept at the University of Bishkek. There is a cross on an axe from the Altai and from She-monaiha (Frolov 1996: figs. 1, 2), and notching on the axes from Urganova. (Kiryushin, Ivanov 1996: fig. 2)

The date of origin of the type is indicated by the following: treasure complexes, the discovery of a stone mold for axes in settlement # 16 in Kairakkum, two axes and ceramics with roller applications in the settlements of Bes-Tube. (Litvinskii 1962: 12, 213, Table 36) Identical ceramics were found with an ax in the settlement of Krestyanskoe IV in the Altai. From this region also come axes and sickles of the Sosnovaya Maza type in Timofeevskoe, and a sickle that has Europe-

an parallels from Mayorovskoe. (Ivanov, Isaev 1999: 83, fig. 1) The lower date of the Andronovo type axes is determined by the finding of a bronze model of an ax with an oval socket, reinforced with a raised-border evolving into a comb, in a cremated burial in the Staryi Tartas IV burial ground belonging to the Fedorovo Yenisei type (Molodin and others 1998: 294 - 299, fig. 2 b). The complex of the grave with a richly ornamented square Fedorovo vessel and horse bones defines the date of the ax as no later than the 14th century B. C. This evidence places the date between the 14th, or more likely the 13th, and the 9th centuries B. C. It is possible that the type of the ax from the Baicaoopo grave that belongs to Western Zhou was created under the influence of Andronovo axes. (Lin Yün 1986: fig. 55.3) This type is remarkable for having a straight butt, but like the Andronovo ones, a comb, an oval shaft-hole and a six-angled blade. The origin date of the Chinese sample does not contradict the chronology of Andronovo types.

The adze: In Xinjiang three adzes make up part of the Agharsin treasure, another three were found in Tacheng, and one was found to the east, in Urumchi. Adzes with a fortif were known in Siberia and northern Kazakhstan. The major discoveries are concentrated in the Altai, eastern Kazakhstan, especially in Semirechye in the Shamshi, Sukuluk, Sadovoe, Alexeevskii, Tuyuk treasures. (Chernikov 1960: 164, Table LXIV. 9, LXVII. 5; LXXVII. 3, 4; Kuzmina 1966: 18 - 20, Table III. 9, 10, 14 - 17; 1994: fig. 43a, b) The date of the type is 13th - 9th centuries B. C. The dating was made on the basis of the following archaeological evidence: the hoard complexes and discoveries in Sary Ozek, where adzes were found with the sickles of the Sosnovaya Maza type; in the settlements of Malokrasnoyarka, Eastern Kazakhstan, Stepnyak, and others in northern Kazakhstan (Chernikov 1960: 82; S. Zdanovich 1979: 12), where there are adzes and ceramics decorated with applied roller design.

Adze with a fortif and a socket: A unique sample of this type was found in Xinjiang in Xinyuan. The tool without a doubt is a distant analogue to the single-cast adzes with a fortif and represents the local development of the type. A tool from Regar in Tajikistan is a distant analogue of the above-mentioned sample. (Kuzmina 1966: 23, Table IV .7)

Flat socketed chisel: Three chisels were part of the Agharsin treasure in Xinjiang. One of them was found in Tacheng; another was found in the east, in the Qizilchoqa settlement (Kit-sirhodzha). The chisels have a round socket with a lug and a flat blade. The type is distributed