The Society of Prehistoric China.

Von
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Vorbemerkung. — Im Jahrgang 1938, S. 90 ff., hat K. A. Wittfogel über die allgemeine Theorie der orientalischen Gesellschaft gehandelt. Die nachfolgende Arbeit ist das erste Kapitel eines Buches, in dem er die Probleme der chinesischen Sozialgeschichte auf Grund seiner in Ostasien durchgeführten Studien im einzelnen darstellt. Das Buch soll in Jahresfrist in der Oxford University Press erscheinen, der wir für die Erlaubnis zum Vorabdruck dieses Teiles zu grossem Dank verpflichtet sind.

M. H.

A. Introductory Remarks.

Socio-economic history deals with the two basic aspects of human existence, man's attitude toward nature and man's attitude toward man. The form and development of industry and the form and development of social organization constitute the center of this kind of historiography.

Chinese society can be traced back by means of written documents to the second millennium B. C. Detailed analysis begins there. Beyond the border of the bone inscriptions of the Shang dynasty no literary records have been discovered so far. Ancestral forms of the Shang writing may conceivably yet be discovered and history in the narrower sense of the term, written history, may in the future be pushed still further into the regions beyond that border-land. But however far the border-region may be extended — there is a huge prehistorical world which because of its very nature will never be illuminated by written records of any kind.

Consequently China's prehistoric time cannot be treated as elaborately as the later periods. Nevertheless it must not be overlooked altogether. Its conditions and changes are indicative of certain tendencies which acquired their full momentum during the historical era. Both epochs clarify each other. Therefore, even if archaeology reveals only the faint outlines of China's prehistoric society, these outlines certainly deserve to be noted and analyzed in order to bring out their general sociological significance.

Man's increasing control over the powers of nature is based upon his increasing capacity for using devices to master them.

Some animals also know how to use tools, but man is the tool-maker kat' exochèn. Science calls the two early stages of human civilization the Old and the New Stone Age, thereby acknowledging the pivotal importance of the realm of tools. The division of prehistory according to this principle by no means fulfills all the requirements of social science, but it properly emphasizes one factor which uncontestedly was of basic significance for the development of early man.

B. Recent Discoveries on Early Chinese History.

The international scientific world has been stirred during the last decades by a series of discoveries in the field of Chinese archaeology. In close cooperation, Western and Chinese scholars have excavated the remains of primitive man („Sinanthropus") and of a highly stratified stone age. While these discoveries were being made, and even earlier, remains of China's earliest historical dynasty, Shang, also attracted attention. These finds are of extraordinary historical importance, because they include written documents of a very instructive character. The Paleolithic and Neolithic remains have to be surveyed for whatever prehistoric information they may convey.

Sinanthropus is only a marginal figure from our point of view. Yet we include a brief report on him, because his existence manifests at least two important facts : the depth of human history on Chinese soil and, perhaps, a certain inner coherence in this history from its earliest beginnings.

C. Primitive Mongol Man.

I. The Finds.

The first prophetic guess about the existence of early pleistocene man in China was made in 1903 by Dr. Max Schlosser at Munich. It concerned a fossil tooth bought from a Chinese druggist by Dr. K. A. Haberer.[1]) Later J. G. Andersson, the great pioneer in Chinese palaeontology and archaeology, drew the attention of his collaborators to the region of Chou K'ou Tien near Peking.

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[1]) F. Weidenreich, The Dentition of Sinanthropus Pekinensis. Palaeontologia Sinica. New Series D. No. 1. Whole Series 101, 1937, p. 111. J. G. Andersson, Essay on the Cenozoic of Northern China. Memoirs of the Geological Survey of China. Ser. A. No. 3, 1923, p. 132. D. Black, Teilhard de Chardin, C. C. Young, and W. C. Pei, Fossil Man in China. Geological Memoirs. Series A. No. 11, 1933, p. 103.

O. Zdansky took up the work and excavated, in 1922, two teeth which, in 1926, were identified as the teeth of a very early type of man.[1])

In 1927, a group of scientists scored the final success. The group, which included Li Chieh, C. C. Young, C. Pei, and B. Bohlin, discovered a „genuine" human tooth, and Dr. Pei in 1929 found a whole skull of what Dr. Davidson Black boldly and correctly defined as Sinanthropus pekinensis or Peking Man.[2]) From that time on discovery followed discovery, until in 1937 the total number of Sinanthropus individuals represented by fragments of bones amounted according to F. Weidenreich to not less than 36 individuals[3]) as compared with four bone fragments of Pithecanthropus and one single skeleton of Neanderthal man.[4])

II. Their Significance.

Physical anthropology was jubilant. G. Elliot Smith called the Sinanthropus fossils „the most valuable and illuminating evidence of man's early history." Here „several individuals were discovered... they provide fuller data than either of their contemporaries in Java and England." Therefore „the work which is being done here on the fossil remains of man really represents a revolution in such studies... we now have a solid foundation of coherent evidence upon which we can build a reliable edifice of knowledge of the earliest man at present known to us."[5])

The importance of the discovery for any general history of mankind needs no elaboration. From the standpoint of Chinese history it suffices to know that Sinanthropus belongs to a very early Palaeolithic period which chronologically is older than the

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[1]) O. Zdansky, Über ein Säugetierknochenlager in Chou-K'ou-Tien, Provinz Chihli. Bulletin of the Geological Survey of China. No. 5, Part I, 1923, p. 83. Teilhard de Chardin and C. C. Young, Preliminary Report on the Chou Kou Tien Fossiliferous Deposits. Bulletin of the Geol. Soc. of China. Vol. 8, No. 3, 1929, p. 173. Weidenreich, Dentition, p. 111.

[2]) Teilhard de Chardin and C. C. Young, Chou Kou Tien Fossiliferous Deposits, l. c., p. 171. D. Black, Tertiary Man in Asia. Bull. Geol. Soc. China. Vol. 5, No. 3/4, 1927, p. 207. Black, The Lower Molar Hominid Tooth from the Chou Kou Tien Deposit. Palaeonthologia Sinica. Series D, Vol. 7, Fasc. 1, 1927, p. 21. W. C. Pei, An Account of the Discovery of an Adult Sinanthropus Skull in the Chou Kou Tien Deposit. Bull. Geol. Soc. China. Vol. 8, No. 3, 1929, p. 204.

[3]) Weidenreich, Dentition, l. c., p. 165.

[4]) Hoernes, Natur- und Urgeschichte des Menschen. Wien und Leipzig 1909, I, pp. 181 and 217.

[5]) G. Elliot Smith, The Ancestry of Man. Bull. Geol. Soc. China. Vol. 9, No. 3, 1930, p. 192.

Neanderthal man.[1]) Professor Weidenreich considers him „much more primitive" than the Neanderthal type.[2]) This places him far back in the dawn of history, between 200.000 and 500.000 years before our time.[3]) „The balance of opinion in recent years strongly favors the larger figures."[4]) N. C. Nelson puts him somewhere between 450.000 and 600.000 years back.[5])

Of special interest from our viewpoint is the fact that the jaw and teeth of Homo pekinensis show peculiarities — a specific swelling of the jaw bones and a shovel shaped form of the teeth — which have been transferred „only to the Mongolian race." Therefore Sinanthropus „must be in closer relation to this race than to the European Neanderthal man on one side and to the Whites and Negroes on the other."[6]) The Sinanthropus jaw is not only similar to the jaw of the Mongol peoples in general, but to modern Chinese man in particular.[7]) Sinanthropus thus cannot be taken as the early ancestor of the recent Chinese exclusively — as he might be if the other Mongol groups lacked the mentioned phenomenon, which they obviously do not —[8]) but the peculiarities may indicate indeed that a certain type of early Mongol man (proto-Mongol man ?) inhabited the Far East and the adjacent Pacific Areas from the earliest up to the most recent times. A general, though vague, coherence of Far Eastern history would thus be established.

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[1]) D. Black, Preliminary Notice of the Discovery of the Adult Sinanthropus Skull at Chou Kou Tien. Bull. Geol. Soc. China. Vol. 8, No. 3, 1929, p. 211. Black, Interim Report on the Skull of Sinanthropus. Bull. Geol. Soc. China. Vol. 9, No. 1, 1930, p. 10. Black, On an Adolescent Skull of Sinanthropus Pekinensis in Comparison with an Adult Skull of the Same Species and with Other Hominid Skulls, Recent and Fossil. Palaeontologia Sinica. Series D, Vol. 7, Fasc. 11, 1930, p. 105. Cf. also Sir Arthur Keith, New Discoveries Relating to the Antiquity of Man. New York 1932, p. 293.

[2]) Weidenreich, The Sinanthropus Population of Choukoutien (Locality 1) with a Preliminary Report on New Discoveries. Bull. Geol. Soc. China. Vol. 14, No. 4, 1935, p. 434.

[3]) E. Haeckel, Entwicklungsgeschichte des Menschen. In Pflugk-Harttung, Weltgeschichte. Vol. Altertum. Berlin 1910, p. 32.

[4]) N. C. Nelson, Geological and Biological Premises. In F. Boas, General Anthropology. Boston, etc., 1938, p. 15.

[5]) N. C. Nelson, Prehistoric Archaeology. In Boas, General Anthropology, p. 175.

[6]) Weidenreich, Population, p. 438.

[7]) l. c., p. 438.

[8]) This seems to be H. G. Creel's interpretation, which, unfortunately, is not supported by the text of Weidenreich's statement. Weidenreich particularly emphasizes the resemblance of the Sinanthropus jaw to that of different types of Mongol people, including the Eskimos, the Siberian races, and the Laps. (Population, p. 437, and p. 439. Cf. H. G. Creel, The Birth of China. New York 1937, p. 41.)

D. Palaeolithic Hunters and Food-gatherers.

I. Natural Environment.

Sinanthropus lived in a natural environment decidedly different from that of North China today. A predominantly warm and damp climate[1]) supported a probably semi-tropical flora[2]) which provided food and shelter for a rich and manifold animal life. Little direct evidence of the flora of the period has come down to us,[3]) but it cannot have been scarce because it made possible the existence of a great variety of hoofed animals (artiodactylae) like the pig, camel (several species), moschus, deer (several species), gazelle, sheep (several species), bison, water-buffalo, and rhinoceros.[4]) Among them the pig, the moschus, and the water-buffalo seem to have been „common" and the rhinoceros „very common" (very common meaning that more than 1.000 individuals have been found). These last two animals together with the hyaena constituted „the bulk of the Chou K'ou Tien fauna."[5])

On them and on other herbivorous animals lived a multifarious world of carnivorae : hyaena (very common), dog and wolf (common), bear, badger, marten, and tiger (occurring more rarely). This means : more than 1.000, between 50 and 100, and from 10 to 50 individuals have been found respectively.[6])

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[1]) Teilhard de Chardin, etc. Fossil Man. l. c., p. 61. J. G. Andersson, Children of the Yellow Earth. London 1934, p. 141.

[2]) One of the very few fossil traces of contemporary plant life discovered at Chou K'ou Tien is the fruit of a small redbud tree, the hackberry (Cercis). This find is rather puzzling because according to Chaney and Daugherty the tree is „a typically temperate species, occupying the forest border under conditions of moderate rainfall." If the find really belongs to this period, then either the berries were introduced from a drier region, or the climate (contrary to the general scholarly opinion) was relatively dry and cool — this at least for a certain interval. The fact that the berry has been found in one single layer only, „about 20 feet above this lowest level of human occupation", makes such a cooler interval theoretically quite possible. (Cf. Ralph W. Chaney and Lyman H. Daugherty, The Occurrence of Cercis Associated with the Remains of Sinanthropus. Bull. Geol. Soc. China. Vol. 12, No. 3, 1933, p. 326, and Chaney, The Food of „Peking Man." Carnegie Institution of Washington. New Service Bulletin, School Edition. Washington 1935. Vol. 3, pp. 197-202.)

[3]) Lately at Locality 12 „half a seed of Celtis of a small size" has been found. The locality is supposed to belong to the Late Pliocene or Villafranchian age. It contains a microfauna and several Carnivorae which continued to exist „all through the Choukoutian fissure deposits since the late Pliocene." (Teilhard de Chardin, The Fossils from Locality 12 of Choukoutien. Palaeontologia Sinica. New Series C, No. 5, 1938, pp. 42 and 45.

[4]) C. C. Young, On the Artiodactyla from the Sinanthropus Site at Chouk'outien. Palaeontologia Sinica. Series C, Vol. 8, Fasc. 2, 1932, p. 94.

[5]) l. c., p. 94.

[6]) W. C. Pei, On the Carnivora from Locality 1 of Choukoutien. Palaeontologia Sinica. Series C, Vol. 8, Fasc. 1, 1934, p. 151.

II. Fire and Primitive Implements.

The swamps, forests, and prairies which by their vegetation directly and indirectly could support animals of that type and quantity could easily harbor primitive man too. Sinanthropus knew the use of fire.[1]) He had „already mastered the technique of the manufacture of crude stone implements."[2]) He knew how to incise, and to cut, i. e. how to use bones. But the flaked stones, the complex and pointed quartz cores and the stone scrapers, which Sinanthropus manufactured,[3]) are the products of a „most primitive... human industry." Its workers „were still largely dependent upon the material used, obeying rather than mastering it."[4])

Thus the technical implements of Sinanthropus were extremely coarse. There were certainly more of them than have survived in the Chou K'ou Tien sites. We may safely assume that primitive wooden tools were used in addition to stone and instead of stone in stoneless regions. The existence of a „very early wood age" is at least highly possible,[5]) and wood implements no doubt continued to accompany the stone tools throughout the Old and New Stone Ages. But even if Sinanthropus used wooden sticks and clubs in addition to his lithic equipment — this equipment was far from efficient.

III. Food Seized, not Produced.

The character of a fossil tooth or jaw may legitimately be used by natural science to reconstruct the physical organism of man. Fossil ashes and implements may be used by social science with equal legitimacy to reconstruct man's economic and social organization.

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[1]) D. Black, Evidence of the Use of Fire by Sinanthropus. Bull. Geol. Soc. China. Vol. 11, No. 2, 1931, p. 108.

[2]) W. C. Pei, Notice of the Discovery of Quartz and Other Stone Artifacts in the Lower Pleistocene Hominid-bearing Sediments of the Choukoutien Cave Deposit. Bull. Geol. Soc. China. Vol. 11, No. 2, 1931, p. 137. Cf. also H. Breuil, Le Feu et l'industrie lithique osseuse en Choukoutien. Bull. vol. 11, No. 2, 1931, pp. 147-149.

[3]) Teilhard de Chardin and W. C. Pei, The Lithic Industry of the Sinanthropus Deposits in Chou Kou Tien. Bull. Vol. 11, No. 4, 1932, pp. 325-345.

[4]) l. c., p. 354.

[5]) Cf. O. Menghin, Weltgeschichte der Steinzeit. Wien 1931, p. 90. Harold Peake, Early Steps in Human Progress. London, no date, p. 38. Hoernes, l. c., II, p. 36. An early Wood Age is assumed for China by Fei Ssŭ in his article China's Prehistoric Society (Chung Kuo shih ch'ieu shê hui. Published in a Chinese translation from the Japanese in Chung Kuo Ching Chi. Vol. 3, No. 3, 1935, p. 1).

Fire centralizes the life of women, who tend toward a more sedate life, not because they are unable to hunt and to fish, but because their care for the children makes them move less freely. Thus the first division of labor takes place. The women prefer to gather food near the fire-place, while the men predominantly, though not exclusively, hunt game and catch fish.[1]) Natural circumstances vary the basic rule widely. Men may share temporarily in the work of food-gathering,[2]) while women may also hunt and fish, especially smaller animals.[3]) But the principle is only variegated, not abolished thereby. Fire and primitive hunting implements urge the two sexes toward the earliest form of division of labor.

Sinanthropus — the man — hunted.[4]) That seems beyond doubt. And the hunt gave him social power. Female industry may have provided roots and seeds and fruits in plenty; but food-gathering decentralizes the work, hunting centralizes it. Even the „low" hunter who hunts small game chiefly — because there is no big game, or because big game is difficult to approach — even the low hunter tends to organize for at least part of his hunt, especially if he does decide to attack one of the bigger animals, such as the rhinoceros.[5]) The predominance of men and a relatively loose character of marriage are fostered by this kind of social grouping.[6])

At such a stage of society, slaves are of no use. War, when it occurs and when it becomes serious — which is not all too frequent —[7]) may assume the shape of a man-hunt combined with cannibalism.[8]) According to F. Weidenreich, the cave population

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[1]) F. Boas, Anthropology. In Encyclopaedia of the Social Sciences. Vol. II, p. 82.

[2]) R. Thurnwald, Repräsentative Lebensbilder von Naturvölkern. Leipzig und Berlin, 1931, p. 88.

[3]) l. c., pp. 42 sq.

[4]) Weidenreich, Population, l. c., p. 459. Fei Ssŭ, China's Prehistoric Society. l. c., p. 5. Ho Ping-sung, Outline of Our Country's Prehistory (Wuo kuo shih ch'ien shih ti lun k'uo. Chi Nan Hsüeh Pao. Vol. I, No. 1, 1936, p. 5 in Chinese).

[5]) Teilhard de Chardin and W. C. Pei, The Lithic Industry. l. c., p. 357.

[6]) L. T. Hobhouse, G. C. Wheeler, and M. Ginsberg, The Material Culture and Social Institutions of Simpler Peoples. London 1915, p. 160. Cf. also K. A. Wittfogel, Wirtschaftsgeschichtliche Grundlagen der Entwicklung der Familienautorität. In Studien über Autorität und Familie. Schriften des Instituts für Sozialforschung. Vol. 5. Paris 1936, p. 484.

[7]) R. Thurnwald, Werden, Wandel und Gestaltung von Staat und Kultur. Berlin und Leipzig 1935, pp. 191 sq. idem, Lebensbilder, p. 87. J. Lips, Government. In Boas, General Anthropology, p. 492. Cf. also John Koty, Die Behandlung der Alten und Kranken bei den Naturvölkern. Stuttgart 1933, p. 348.

[8]) Cannibalism „may reasonably be believed to be a custom which all people have practised." (D. G. Sumner, Folkways. Boston, etc., 1906, p. 329. See also Hoernes, l. c. I, pp. 490 sq. Koty, Die Behandlung, etc., p. 296. L. Frobenius, Weltgeschichte des Krieges. Jena, no date, p. 3.)

of Locality 1 at Chou K'ou Tien amounted to 24 or 25 individuals, of whom 12 were adults, 2 adolescents, and 10 or 11 children; half of them, perhaps less, were females.[1]) The condition of their bone relics — only skulls are preserved, and these suffered heavy fracture — seems to indicate violence, war, head hunting, and possibly cannibalism.[2]) If Weidenreich's assumption is correct, then the women were killed together with the men, the children together with the adults. That expresses well the situation of a hunting society in which the transformation of prisoners into slaves is neither expedient nor customary.

Did the victorious horde live at this cave, or did it use the place only to deposit and devour the precious spoil ? The difference is of little significance. Obviously Sinanthropus himself and not another type of man „was the bearer of the cave culture of Choukoutien, the fire-maker and the manufacturer of the implements, perhaps also the hunter and the cannibal who preyed on people of his own kind."[3])

There is no reason to doubt Sinanthropus' capacity to use fire to prepare food. Even if the cultural strata of Chou K'ou Tien contain many animal bones which have not been touched by fire,[4]) this fact can easily be explained through the rotating character of the cave's occupation, sometimes by men and sometimes by animals. Cave habitations were relatively safe for man, especially when he protected himself by a bar of fire.[5]) But the temporary exhaustion of vegetable and meat supply may from time to time have forced him to migrate, yielding his previous shelter to whatever animals desired to dwell there, especially to scavenging carnivorous animals, attracted by the refuse he had left behind.

Fighting against animals that often were at least equal to him in strength, suffering from diseases which he had no means to fight,[6]) exposed to the rotation of the seasons and to a predomi-

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[1]) Weidenreich, Population, p. 449.

[2]) l. c., p. 454.

[3]) l. c. p. 459. The same conclusion is reached by Andersson, who not only discards the theory of the simultaneous existence of two different hominidae at the same time, but who definitely believes that „the Sinanthropus lived in the cave for long periods," leaving behind „not only his stone implements but also thick deposits of ashes." (Children, p. 124.)

[4]) Fei Ssŭ, China's Prehistoric Society, p. 6.

[5]) Fei Ssŭ, l. c., p. 4. Fire may have been applied to hunt, as it is still nowadays used by primitive tribes either to kill animals of the steppe or to smother cave animals in their dens. (Boas, Invention, in : General Anthropology, p. 254.)

[6]) Traces of diseases among the animals of the Choukoutien period have been discovered by C. C. Young and W. C. Pei. (C. C. Young, Bemerkungen über einige abnormale Formen von Fossilien und den Versteinerungsgrad der Knochenablage-

nantly wet and swampy climate, Sinanthropus must have lived a hard and not very Rousseauic life : early manhood, early and general motherhood, early senility, and early death.[1]) Regular monogamy was a marginal phenomenon ;[2]) organized man was the master of semi-organized woman, who as the uncontested center of propagation and because of the importance of gathered food, yet possibly held a specific „matrilineal" position ;[3]) old men were respected where experience counted for more than physical strength, but only there.[4]) The land and its animals were common property and even movables, if valuable and necessary, were never strict private property in our sense[5]) (because the general and equal access to these things constituted a vital element of the horde's solidarity). Thus Sinanthropus pekinensis who physically already resembled the later Mongol and Chinese man slightly, culturally and mentally still lived in a world which was fundamentally different from historical and even from Neolithic China. This cultural dissimilarity from the later Chinese civilization is as striking as the similarity with the cultures of other primitive hunting societies all over the world.[6])

IV. The Later Old Stone Age.

Traces of later Palaeolithic life have been discovered at several points in North China, including the Ordos region,[7]) Chou K'ou

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rungen von Chou Kou Tien. Bulletin, Vol. 9, No. 2, 1930, p. 186.) Man at that time had scarcely more possibilities of protecting his health than the sick animals which Mr. Young's report mentions, deer, rhinoceros, and hyaena.

[1]) Cf. Ludwik Krzywicky, Primitive Society and Its Vital Statistics. London 1934, pp. 216 sq.

[2]) Hobhouse, etc., l. c., p. 160. Cf. also Wittfogel, Wirtschaftsgeschichtliche Grundlagen, etc., l. c., pp. 494 sq.

[3]) Hobhouse, etc., l. c., p. 153.

[4]) Koty, Die Behandlung, p. 307. Wittfogel, Wirtschaftsgeschichtliche Grundlagen, pp. 487 sq.

[5]) J. Lips, Government. l. c., p. 494.

[6]) The basic similarity of Chinese and Western historical development has recently been strongly stressed by modern Chinese scholars. Cf. Kuo Mo-jo, An Investigation of China's Ancient Society. (Chung Kuo ku tai shê hui yen ch'iu.) Fifth edition. Shanghai 1931, pp. 1 sq. Lü Chên-yü, An Investigation of China's Prehistoric Society. (Shih ch'ien ch'i Chung Kuo shê hui yen ch'iu.) Peiping 1934, p. 1. Both in Chinese. About the psychological significance of this conception see Wittfogel, New Light on Chinese Society. New York 1938, p. 24.

[7]) Teilhard de Chardin and E. Licent, On the Discovery of a Palaeolithic Industry in Northern China. Bull. Geol. Soc. China. Vol. 3, No. 1, 1924, pp. 45 sq. E. Licent, Teilhard de Chardin and Davidson Black, On a Presumably Pleistocene Human Tooth from the Sjara-Osso-Gol (South Eastern Ordos) Deposits. Bull. Vol. 5, No. 3/4, 1927, p. 289.

Tien,[1]) and, perhaps, the region beyond the Yellow River.[2]) A very late Palaeolithic or Mesolithic culture has also been excavated in South China, in Kwangsi and Kwangtung.[3]) This culture throve in a specifically southern environment.[4]) It was possibly connected with the Palaeolithic culture of Indo-China.[5]) Yet in certain basic features it also resembles the North Chinese Palaeolithic to which it is at least a parallel in development.

The stone implements of China's late Palaeolithic occasionally show a small or „microlithic" type caused by „a complete absence of raw material in the shape of rubble, which existed elsewhere."[6]) But generally a larger type of implements prevailed. In the Northern border-zone „regular dwelling-places have been observed with hearths, workshops and kitchen remains..."[7]) Scrapers, blades, large perforated pebbles, drills of a rather heavy type[8]) indicate man's increased mastery over this type of raw material. In the North he hunted the wild ass, rhinoceros, antelope, cattle, and the giant ostrich, all of which lived in an increasingly dry climate.[9]) In the South the remains of deer, buffalo, civet-cat, and monkey have been found together in layers of a „very late Palaeolithic or Mesolithic type."[10]) Man's power over nature grew. The „lower" hunter transformed himself into a „higher" hunter. The productivity, coherence, and power of the male part of society probably increased. The influence of the women shrank and with it

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[1]) Pei, A Preliminary Report on the Late Palaeolithic Cave of Choukoutien. Bull. Vol. 13, No. 3, 1934, p. 328.

[2]) Teilhard de Chardin, etc., On the Discovery of a Palaeolithic Industry. l. c., p. 45. Teilhard de Chardin and C. C. Young, On Some Neolithic (and Possibly Palaeolithic) Finds in Mongolia, Sinkiang, and West China. Bull. Vol. 12, No. 1, 1933, p. 85 and 104. Also N. C. Nelson, Archaeological Reconnaissance in the Yangtze River Gorges. In Roy Chapman Andrews, The New Conquest of Central Asia. Natural History of Central Asia. Vol. 1. New York 1932, p. 600.

[3]) Teilhard de Chardin, C. C. Young, W. C. Pei, and H. C. Chang, On the Cenozoic Formation of Kwangsi and Kwangtung. Bull. Geol. Soc. China. Vol. 14, No. 2, 1935, p. 198.

[4]) l. c., p. 103.

[5]) W. C. Pei, On a Mesolithic (?) Industry of the Caves of Kwangsi. Bull. Vol. 14, No. 3, 1935, p. 408.

[6]) Andersson, Children, p. 152.

[7]) Black, etc., Fossil Man. l. c., p. 138.

[8]) Andersson, Children, p. 150. Teilhard de Chardin and W. C. Pei, New Discoveries in Choukoutien, 1933-1934. Bull. Vol. 13, No. 3, p. 383. Teilhard de Chardin, C. C. Young, etc., On the Cenozoic Formation of Kwangsi and Kwangtung. l. c., p. 198.

[9]) Andersson, Children, p. 149. About the relics of ostrich eggs see also C. C. Young, On the Finds of Fossil Eggs of Struthio Anderssoni Lowe in North China with Remarks on the Egg Remains Found in Shansi, Shensi, and in Choukoutien. Bull. Vol. 12, No. 2, 1933, pp. 145 sq.

[10]) Teilhard de Chardin, etc., On the Cenozoic Formation of Kwangsi and Kwangtung. l. c., p. 198.

perhaps the frequency of regular monogamy as compared with occasional or general polygamy. According to Hobhouse's, Wheeler's and Ginsberg's anthropological study regular monogamy was found among 6 % of higher hunters as compared with 14 % among lower hunters.[1]) These figures are certainly far from exact, and can by no means be mechanically applied to China's prehistoric society. They nevertheless may express the working of certain general causes, which under broadly similar conditions possibly result in effects of a broadly similar nature.

Similar considerations apply to the aged members of primitive society. The lower hunter who mainly gathers food and hunts smaller game depends for his success largely upon experience and skill.[2]) The old men possess both qualifications. They are therefore generally well treated.[3]) With increasing effectiveness of the hunting implements the realm of accessible game expands. The importance of physical strength and the warlike spirit grow equally. Under these circumstances, if no other factors intervene, the weaker members of society are „viewed with contempt." The sick and the invalid are treated with crude negligence, and even with „inhuman brutality."[4]) There is no reason why China's Palaeolithic hunters should have been an exception to this rule. In view of the extremely high position of the old in China's later development its possible reverse in the later Palaeolithic hunting society is not without significance.

The late Stone Age saw extensive migratory movements in other parts of the world. Migration may have brought to Chou K'ou Tien a group of late Palaeolithic people the remains of whom have been discovered not far from the relics of Homo pekinensis.[5]) Their type is said not to be proto-Mongol.[6]) Whether these people were absorbed or killed by the indigenous population necessarily remains uncertain. Yet another fact (if the observation itself proves to be correct)[7]), is not uncertain : that influences passed

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[1]) Hobhouse, etc., l. c., p. 160.

[2]) Thurnwald, Lebensbilder, p. 88.

[3]) Koty, l. c. 301, gives a different interpretation, but fully acknowledges the phenomenon itself.

[4]) Koty, l. c., p. 307. See also Wittfogel, Die wirtschaftsgeschichtlichen Grundlagen, p. 491.

[5]) Pei, A Preliminary Report, etc., p. 328.

[6]) Creel, The Birth of China, p. 42. „These late Palaeolithic people... are not Mongolian in physical type, but rather resemble the Palaeolithic Europeans. Weidenreich suggests that they may have been a tribe of wanderers, on their way to the sea."

[7]) Careful comparison with various racial groups of present mankind has recently led Dr. Weidenreich to „the conclusion that the three skulls of our collection (of

between the Eastern and the Western parts of the Old World through very early migratory movements.

E. The Dawn of an Agricultural Society : China's Neolithic.

Early history, Eastern as well as Western, does not come down to us as a coherent whole. Sinanthropus is separated by a wide gap from the „Ordos man." Ordos man again is separated by a similarly big gap from the representatives of a later New Stone Age as discovered in North China.

Climate and soil underwent heavy changes when — at some time during the later Palaeolithic — the damp and warm climate of the early cave days came to an end. While Europe yielded to the impact of a series of long-lasting glacial attacks, North China's former swamps turned into dry and barren lands. Under steppe-desert conditions less and less favorable to human existence,[1]) loess, the „loose" yellow soil, was deposited by wind over what has since become North China.[2]) Then slowly, at the end of the „loessic" period, humidity increased again, and new rivers began to saw their beds into the new yellow surface.[3]) It may be that man had to withdraw completely when steppe and desert prevailed. It may be that he survived at least in some oases which have not yet been discovered and excavated.[4]) This much seems to be certain : wherever traces of China's New Stone Age have been found, they show a human culture far advanced beyond the late Palaeolithic hunting society. Many individual children of that old society must have perished during the vast loessic interlude. But, according to the facts of physical anthropology mentioned above, obviously some survived. It was these survivors who passed on the torch of human civilization in North China.

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remains from the Upper Cave W.) represent three different types, one skull resembling the Ainu, the second Melanesian and certain primitive Amerindians, and the third Eskimo or certain pre-Columbian Texas Indians." (Peiping Union Medical College. Weekly Calendar, 16 November 1938, vol. XXX, No. 11, p. 63.) However valid the details of this extremely precise guess may eventually prove to be — it seems at least to be certain that the group in question really belonged to a tribe of wanderers and were not a part of the local proto-Chinese population.

[1]) C. W. Bishop, The Neolithic Age in Northern China. Antiquity 1933, p. 390. Andersson, Children, p. 142.

[2]) F. v. Richthofen, China. I. Berlin 1877, pp. 56 sq., 74 sq., 113 sq.

[3]) Andersson, Children, p. 143.

[4]) Nelson, Archaeological Reconnaissance. l. c., p. 600.

I. Centers of Neolithic Life.

The new Neolithic world covered a vast area. Neolithic sites have been discovered so far in the Northern provinces Honan,[1]) Shansi,[2]) Shantung,[3]) Kansu,[4]) and Shensi ;[5]) in the Western provinces Szechuan[6]) and Yünnan ;[7]) and in the border regions of Manchuria,[8]) Mongolia,[9]) Sinkiang,[10]) Annam,[11]) etc. Dr. Wu concentrates his analysis upon North China, including Manchuria, selecting „only the well explored and accurately described sites. "[12]) Of the regions enumerated, those within China are of particular interest, because they constitute the basis of China's historical

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1) J. G. Andersson, An Early Chinese Culture. Bull. Geol. Survey of China. No. 5, Part 1, 1923. Liang Ssŭ-yung, Notes on the Excavations at Hou Kang (Hou Kang fa chüeh hsiao chi). Academia Sinica, Preliminary Reports of Excavations at Anyang. Vol. IV, 1933. Chinese. Idem, Hsiao T'un, Lung Shan, and Yang Shao (Hsiao T'un, Lung Shan yü Yang Shao). Academia Sinica. Studies Presented to Ts'ai Yuan P'ei on His Sixty-fifth Birthday. Part II. Peiping 1935. Chinese. Li Chi, Hsiao T'un and Yang Shao (Hsiao T'un yü Yang Shao). Preliminary Reports of Excavations at Anyang. II, 1929. Chinese. Idem, Report on the most recent excavations in Anyang and general view of the work done during the six excavations (An Yang tsui chin fa chüeh pao kao chi liu tz'ŭ kung tso tsung ku chi). Preliminary Reports. IV, 1933. Chinese. C. C. Young and W. C. Pei, On a collection of Yangshao Cultural Remains from Menchihhsien, Honan. Bull. Geol. Soc. China. Vol. 13, No. 2, 1934.

2) Ssŭ-Yung Liang, New Stone Age Pottery from the Prehistoric Site at Hsi-yin Tsun, Shansi, China. Memoirs of the American Anthropological Association. No. 37, 1930.

3) Chinese Archaeological Reports, No. 1. (Chung Kuo k'ao ku pao kao chi chih i.) Ch'eng Tzu Yai. Nanking 1934. Chinese.

4) J. G. Andersson, Preliminary Report on Archaeological Research in Kansu. Memoirs. Geol. Survey. China. Series A, No. 5, 1925.

5) G. D. Wu, Prehistoric Pottery in China. London 1938, pp. 84 sq.

6) N. C. Nelson, Archaeological Reconnaissance in the Yangtze River Gorges. l. c. Gordon T. Bowles, A Preliminary Report of Archaeological Investigations on the Sino-Tibetian Border of Szechwan. Bull. Geol. Soc. China. Vol. 13, No. 1, 1933.

7) Walter Granger, A Reconnaissance in Yünnan. In Roy Chapman Andrews, The New Conquest, etc., pp. 529 sq.

8) J. G. Andersson, The Cave-Deposit of Sha Kuo T'un in Fengtien. Palaeontologia Sinica. Series D, Vol. 1, 1923. A. S. Lukashkin Harbin, New Data on Neolithic Culture in Northern Manchuria. Also Teilhard de Chardin, Some Observations on the Archaeological Material collected by Mr. Lukashkin near Tsitsihar. Both : Bull. Geol. Soc. China. Vol. 11, No. 2, 1931.

9) E. Licent et P. Teilhard de Chardin, Note sur deux instruments agricoles du Néolitique de Chine. L'Anthropologie. Vol. 35, 1925. Liang Ssŭ-yung, Neolithic Finds in the Province of Jêhê (Je Ho Ch'a Pu Kan Miao, etc.). Academia Sinica. T'ien Yeh k'ao ku pao kao. Shanghai 1936, pp. 1 sq. Chinese. Cf. also Roy Chapman Andrews, l. c., pp. 265 sq.

10) Teilhard de Chardin and C. C. Young, On Some Neolithic... Finds in Mongolia, Sinkiang, and West China, l. c.

11) Ssŭ-Yung Liang, New Stone Age Pottery, l. c., p. 67.

12) Wu, Prehistoric Pottery in China, p. 151.

development. Nevertheless the border regions also deserve attention. Certain features of China's Neolithic and post-Neolithic history are fully understandable only if the interaction between the North Chinese cultural regions and the border world can be subjected to at least an elementary explanation.

Every attempt at a sociological analysis has to be undertaken with great reserve. Many new sites have been discovered recently and still more may be found in the future. As the number of known facts increases it is to be expected that interpretation of them will become both wider and more precise. Even the fullest archaeological records, however, can never reflect the early forms of life completely, because not all these forms have left behind traces that were able to survive.

Yet nihilistic skepticism remains unjustified in spite of all this. Scientific progress always depends upon at least a temporary acceptance of the facts as they are known at a given moment. Even if later finds heavily modify the earlier analysis, it is only through the earlier analysis that we pave the road for higher forms of research and insight.

II. The Chronological Order.

China's Neolithic civilization comprises a wide variety of elements ranging from relatively primitive forms to quite subtle and refined ones. Knowledge of their chronological order would furnish us with a key to the understanding of their inner relation. From the standpoint of economic investigation a coherent picture of the implements of work used during the Neolithic age would be most helpful. Unfortunately, for reasons connected with the sociological background of traditional archaeology, primitive economics has not received as much attention as primitive art.

The history of mankind is a history neither of pots nor of kings. It is the history of the people in its totality. But pots as well as kings may be indicative of the economic or political situation of the period in which they flourished. Historiography is therefore not only entitled, but even obliged, to pay attention to both of them. In the case of Chinese Neolithic pottery, which is perhaps „the finest to be found in any part of the world during the Stone Age, "[1]) such a study becomes particularly attractive. If we remain aware of the limits and possible dangers of this type of approach, it may become extremely productive; but the results obtained by

[1]) Andersson, Children, p. 331.

a study of pottery, however successful, must always be checked by comparison with other cultural phenomena.

Most scholars have included an analysis of stone, bone, and shell implements in their study of Neolithic civilization. But a central position has been generally conceded to the investigation of the character of pottery, especially as far as its color and manufacture are concerned. Among the colors the most important are red, black, grey,[1]) and — in a limited way — brown and white.[2]) The vessels were made either by hand, or the pottery-wheel, or by an intermediate device, the turn-table.[3]) The „beating" process, when used generally and not merely sporadically, also bears a chronological significance.[4])

„Red" pottery ware may be painted with white or black colors,[5]) and the red, like the black or grey colors, may vary considerably in tone.[6]) The presence or absence of red, black, or grey pottery nevertheless seems to be characteristic of specific types of pottery and to be associated with the presence or absence of other kinds of material production as well.

Does any definite order prevail among the different classes of painted pottery? The question is easily answered for the grey ware as distinguished from the red and black pottery. The „Grey Pottery" (to use that formula from now on) obviously succeeded the two other groups, thus establishing a „final grey stage" in the three regions of a variegated pottery style, namely, (1) Shantung, (2) Shansi-Shensi-Kansu and (3) Honan; and — „to a certain extent" — Manchuria. In the first named region, Shantung, the pottery went through only two stages of color, black and grey. In the second (Western) region also there were two stages, but these were red and grey. In Honan and Manchuria „the color passed through three steps, red first, then black, and finally grey."[7]) Dr. Wu's statement is the result of a painstaking analysis in which Wu himself and his colleague Liang Ssŭ-yung played a prominent part.

Where all these three colors have been found, there, geologically speaking, the Black Pottery lies above the Red and below the Grey.[8]) The Black Pottery continues and develops the style of

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[1]) Wu, l. c., p. 126.
[2]) l. c., p. 126, and 154-156.
[3]) l. c., p. 135.
[4]) l. c., p. 132.
[5]) l. c., p. 126.
[6]) l. c., pp. 126-128.
[7]) l. c., p. 128.
[8]) Liang, Hou Kang, l. c., p. 615.

the Red Pottery complex to which it is „closely connected,"[1] whereas the finest features of the Black Pottery world had not yet been developed in the Red Pottery culture.[2]

The analysis of color is confirmed by the analysis of manufacture. The Red Pottery is to a great extent hand-made, the rest is made by means of the turn-table.[3] The Black Pottery is wheel-made.[4] The Grey Pottery (embracing the first historical period, Shang) shows continued use of the wheel. Simultaneously beaten ware becomes common, which „however, originated in the prehistoric period."[5] If any doubt should still be left, it is dispersed by the appearance in the Black Pottery sites of cultural elements completely alien to the earlier Red Pottery culture. These include bones of domestic animals, bronze implements, city walls, and oracle bones. Manifestly a new cultural stage had here been reached. The Shantung cultures of Black Pottery certainly followed the Red Pottery of Honan and Kansu. They probably existed simultaneously with and began perhaps slightly before the Black Pottery cultures of these two regions.

Towards the West the influence of the Black Pottery diminishes rapidly. The black earthenware of Hsi Yin (Shansi) is already imbedded in a predominantly Red Pottery complex.[6] Kansu presents a quite puzzling picture : a most beautiful Red Pottery,[7] no black ware,[8] and no traces of the pottery-wheel.[9] Kansu has therefore strongly attracted the attention of modern archaeologists. Andersson dated the oldest Neolithic cultures of Kansu very early, earlier than the famous Honan center of Red Pottery, Yang Shao.[10] Liang, after careful re-examination of the facts, accepts as possibly pre-Yang Shao one Kansu site, Ch'i Chia, but puts the other Kansu sites much later than Andersson did, inserting between Yang Shao and Ch'i Chia another newly discovered Honan site, Hou Kang.[11] The Ch'i Chia site contains „practically no painted ceramics." Its pottery is „extraordinarily fine and

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[1]) Liang, Hsiao T'un etc., l. c., 560.
[2]) Liang, l. c., p. 561.
[3]) Wu, l. c., p. 154.
[4]) l. c., pp. 152 and 153.
[5]) l. c., p. 132.
[6]) Liang, New Stone Age. l. c., pp. 11 sq. Wu, l. c., p. 167.
[7]) N. Palmgren, Kansu Mortuary Urns of the Pan Shan and Ma Chang Groups. Palaeontologia Sinica. Series D, Vol. 3, Fasc. 1, 1934.
[8]) Wu, l. c., p. 135.
[9]) Wu, l. c., pp. 89, 91, 101, 104, 107.
[10]) Andersson, Preliminary Report. l. c., p. 3.
[11]) Liang, Hsiao T'un, p. 564.

peculiar."[1]) Because of the former fact Andersson considers it a „predecessor of the Yang Shao age."[2]) Dr. Wu in his recent provocative analysis radically challenges Andersson's position. Because of the highly advanced methods of painting applied in Kansu, and because of the special burial urns (ming ch'i) found at P'an Shan (Kansu) he dates most of the Kansu sites as belonging to the second historical dynasty, Chou.[3]) For Ch'i Chia he claims the existence of some trace of (black) painted ware, but he agrees that it is either „much earlier than Pan Shan" or „... an independent culture."[4]) He concludes by assuming that the Ch'i Chia remains constitute the „remains of a local culture which has been influenced by the Chinese."[5]) In his attempt at a general chronology he puts it after the Black Pottery culture of Lung Shan (Shantung) and Hou Kang II (Honan).[6])

The discussion of the relative (and absolute) age of the Kansu sites is not purely „academic". It has extraordinary consequences for the problems of the origin of China's Neolithic culture. If the Red Pottery came to China from Western and Central Asia, as most scholars believe and as not even Dr. Wu contests, then Kansu seems to be its natural gate of entry into Northern China. The extraordinarily high quality of the Kansu Red Pottery may of course be the result of a late endogenous development, but if reasons of style do not exclude this possibility, it may equally well have been the product of an outside influence, which achieved its finest results where it expressed itself still fresh and unbroken. But if Kansu served as the great vestibule for the Red Pottery, then its position during the next period seems surprising. Metal has been found in the later Red Pottery sites of Kansu, but in small quantities only, and cattle apparently were of slight importance. If therefore Kansu was not the gate way for the Western pottery technique, i. e. if Dr. Wu is correct in dating the Kansu sites very late, then another problem arises. Either no such „gate" existed at all and China's Red Pottery originated in a completely endogenous manner, or else there was a non-Kansu gate through which the Red Pottery entered. In the second case as in the first the hills and terraces of Honan may well have been the starting point for what in due course became China's Red Pottery age.

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[1]) Andersson, Children, p. 262.
[2]) l. c., p. 334.
[3]) Wu, l. c., p. 168 and 169.
[4]) l. c., p. 104.
[5]) l. c., p. 105.
[6]) l. c., p. 170.

Before combining the results of these and similar considerations into a tentative chronological table, one more problem has to be touched upon, that of a pre-Red Pottery stage of China's Neolithic period. Andersson, as mentioned, contemplates the possibility of an early Neolithic stage in China, where hunting and fishing „in suitable regions" was accompanied by „a primitive hoe culture."[1]) The production of a not yet painted pottery, according to the Swedish archaeologist, may have begun at a period „somewhat older than the great Yang Shao sites in Kansu."[2]) This period would mark the end of the earlier phase of China's Neolithic. Finds in Manchuria and Mongolia point to the possible existence of such an early pre-Red Pottery stage.[3]) Recent excavations by Mr. Liang Ssŭ-yung reveal the existence of a later Neolithic development[4]) where French archaeologists apparently found a very early site, at Lin Hsi. Mr. Liang's report unfortunately does not specify the relation of the new discoveries to the older ones, which may or may not constitute a part of the recently opened up site. Dr. Bishop in his classic study of the Neolithic Age in Northern China feels very certain „that a long time elapsed between its (the New Stone Age's) commencement and the appearance of pottery of the polychrome class." He bases his view particularly upon the finds of the higher and older Northwestern river-terraces, where Neolithic remains occur „without painted pottery, while the latter appears on the lower and younger terraces."[5]) If Bishop's statement is correct, then Dr. Wu's chronological table needs to be enlarged by the addition of an early phase of a not yet painted pottery, which preceeded the red or „painted" pottery.

Dr. Wu's chronology is the latest and most elaborate synthesis attempted in the field. Coming from one of China's leading archaeologists, the man who discovered the famous Black Pottery site of Lung Shan and who took part in many other discoveries,

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[1]) Andersson, Preliminary Report. l. c., p. 50.

[2]) Andersson, Children, p. 234. Cf. also H. G. Creel, Studies in Early Chinese Culture. Baltimore 1937, p. 201.

[3]) According to Teilhard de Chardin the pottery of Tsitsihar — like his finds at Lin Hsi — is „hand-made." The pottery does not show the color of the „more advanced Yang Shao culture" with its „refined red and black (? W.) colored pottery." (De Chardin, Some Observations. l. c., p. 183.) The same author, in his earlier report on Lin Hsi calls the Lin Hsi pottery „coarse" and not made by wheel, „non tournée" (Note sur deux instruments, etc., l. c., p. 64) while in his commentary on Tsitsihar the „crude, coarse-grained, hand-made" pottery of that place is called „black." The descriptions thus partly contradict each other. The solution must be left to a new investigation by an archaeological expert.

[4]) Liang, Neolithic Finds. l. c., pp. 11 sq.

[5]) Bishop, The Neolithic Age. l. c., p. 403.

Dr. Wu's conception certainly deserves to be taken as the starting point of any further attempt.

The site of Yang Shao obviously is not typical of China's Red Pottery as a whole. Red Pottery sites older than Yang Shao have now been found, and Yang Shao itself may properly be divided into an earlier phase (I) and a later one (II). The facts have been indicated by Chinese archaeologists before Dr. Wu, but Wu was the first to make practical use of them. The results of his classification are shown in our table. We have not inserted the names of the numerous individual sites which the recent archaeological literature mentions. These names are of great significance for special studies, but in the frame of a general social and economic history they may properly be reduced to a minimum. Kansu is given with a question mark. If Andersson is correct, the earliest Kansu sites will have to be shifted high up either into the „Plain Pottery" group or at least into the group which succeeds it. The meaning of the geographical sequence will be discussed later. The data themselves are taken from the different archaeological studies and presented in the sequence which Dr. Wu finally assigned to them.

The relative chronology offered here is bound to undergo corrections and modifications according to the advance of scientific analysis and new work in the field. Still more open to critical debate is of necessity the attempt at an absolute chronology which we have added in the last column of this table. Here problems of international archaeological research in general blend with questions of research in China in particular. Each detail is open to further discussion, but we have included the absolute dating too though with all due reservations, because, in our opinion, the reader is entitled to learn what leading archaeologists like Andersson, Menghin, Arne, Bishop, and Liang Ssŭ-yung assume to be the approximate dates of the periods in question.

If the Chinese New Stone Age „dates back at least three or four millennia before the dawn of history in that country,"[1]) and if history dawned in China during the later half of the second millennium B. C., then we may tentatively put the earliest pre-Red Pottery Neolithic of China somewhere into the fifth or fourth millennium B. C. The beginning of the Red Pottery Age was formerly dated by Andersson about 3500 B. C.[2]) Later the Swedish scholar has „estimated the age of the Yang Shao period, on the basis of somewhat uncertain comparisons with the Near East, at about 3000 B. C." Andersson respectfully mentions

[1]) Bishop, l. c., p. 403.
[2]) Andersson, Preliminary Report. l. c., p. 3.

Menghin's tentative date (about 2000 B. C.);[1]) he postpones his final decision till the time „when the whole of our prehistoric material has been described in detail."[2]) The views of Arne, Bishop, and Liang swing between Andersson's and Menghin's dates. Arne puts the „Honan" pottery before 2500, perhaps „very near to 3000,"[3]) whereas Bishop dates its introduction „towards the close of the third millennium B. C. or at all events during its latter half."[4]) Liang, in 1930, dated the Yang Shao culture between 2500 and 2000 B. C.[5]) After further discoveries, especially that of Hou Kang in Honan, he sets the date for Yang Shao at 2600-2300 and that for Hou Kang at 2900-2600,[6]) thus positing the existence of an early Red Pottery period prior to Yang Shao. The date of the Black Pottery period, Lung Shan I, has been inserted according to simple historical reasoning. This period lies somewhere between the „pure" Red Pottery Age, i. e. before the Black Pottery appeared in Honan and Manchuria on one side, and the beginning of the historical Shang dynasty on the other. The approximate date of the period is determined thereby.

These are the data for the tentative table of China's early pottery culture, according to modern archaeological research here presented.

Phases of early pottery in China.

Phase	Specific color	Specific form of manufacture	Region of appearance	Absolute chronology
Plain Pottery	Not „painted"	Hand-made	Northern border regions	5.000-4.000 (?)
Pre-Yang Shao Pottery	Red „painted"	Made by hand or by turn-table	Honan*)	Within the third millennium
Yang Shao I and after	Red „painted"	Made by hand or by turn-table	Honan and Shansi, then Shantung and Manchuria*)	
			Kansu ?	
Lung Shan I	Black (and Red)	Wheel-made	The whole Great Plain*)	First half of the second millennium, beginnings perhaps earlier.
Yin Hsü (Shang)	Grey	Wheel-made, beaten ware becomes general	The whole of Northern China and part of Central China*)	Second half of the second millennium.

*) Wu, Prehistoric Pottery, p. 171 and 155 sq.

[1]) Menghin, Steinzeit, p. 81.
[2]) Andersson, Children, p. 333.
[3]) T. A. Arne, Painted Stone Age Pottery from the Province of Honan, China. Palaeontologia Sinica. Series D, Vol. 1, Fasc. 2, 1925, p. 32.
[4]) Bishop, l. c., p. 404.
[5]) Liang, New Stone Age Pottery. l. c., p. 75.
[6]) Liang, Hsia-T'un, etc. l. c., pp. 563 sq.

III. A New Natural Stage.

A crude geographical determinism requires crude geographical changes for its interpretation of historical development. Actually the natural factor influences human history in a highly intricate manner which is far beyond all forms of „geopolitical" conceptions.[1]) This, of course, does not prevent the geographical factor from occasionally acting in a most direct way, especially at the lower stages of economic development. Even then the effect differs widely according to the historical stage reached by man previously. But on that basis the geographical influence very clearly exists. To overlook it would be as incorrect as to overemphasize it.

At the beginning of China's Neolithic Age the loess plain, which had originated during the Pleistocene, was in a state of progressive decay. The young rivers washed the debris of yellow soil off the receding banks and carried them eastward.[2]) The lighter deposits when transported down to the mouths of the water-courses assumed the shape of alluvial lowlands,[3]) while the heavier material sank down midway, blocking the rivers, and causing floods and swamps. Finally perhaps the rivers found new courses. The old swamps partly dried off and partly continued to exist, in some form or another. To be sure, there were the old highlands, the pre-loessic mountains of Shantung and of sections of Shansi and Honan. Over their feet the recent loess plain had spread. And now along the broadening river-beds and beyond the mouth of the „loess-rivers" the new alluvial lowlands originated, fertile most of them,[4]) swampy a good portion of them, a landscape which far from being finished was just beginning to prepare itself for its future function : to serve as the stage of one of the great spectacles in the history of mankind.

We do not know exactly where „Mongol man" lived during the time of the loessic interlude. But wherever he may have passed that period, in some oases within the dry loess region at the fringe of what later became China, he now certainly spread out over a territory which gradually grew more and more habitable. He may have wandered throughout the Central and Southern regions of China too — we have till now little information about that —

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[1]) Wittfogel, Die natürlichen Ursachen der Wirtschaftsgeschichte. Archiv für Sozialwissenschaft und Sozialpolitik. Vol. 67, No. 4, 1932, pp. 482 sq.

[2]) W. H. Wong, Sediments of North China Rivers. Bulletin, Vol. 10. Grabau Anniversary, 1931, pp. 265 sq.

[3]) Richthofen, China, Vol. I, p. 57.

[4]) Wittfogel, Wirtschaft und Gesellschaft Chinas, Vol. I. Leipzig 1931, pp. 56 sq.

but obviously the Northern lands furnished certain definite advantages for a post-Palaeolithic cultural development.

The warmer and more abundant regions along the Yangtze created a kind of „jungleland"[1]) in which it was easy to exist but difficult to advance. Here the flourishing vegetation of the big forests provided the means for primitive man's subsistence in relative plenty. At the same time it threw substantial obstacles in the way of a higher agricultural development. Life in the Northern regions perhaps lacked the natural advantages of an almost tropical climate. On the other hand it offered one definite advantage. Loess by its very nature does not promote the growth of heavy forests.[2]) It therefore facilitates agriculture, which is simultaneously encouraged by the innate fertility of the loess soil.[3]) Cultivation originates, and stone is polished now. The hunting and fishing stage is not without fixed dwelling-centers,[4]) and the early Neolithic culture is by no means fully settled. But an enormous step in advance toward an at least temporary sedentary life certainly is reached when agriculture begins. The flaking and chipping of stone have a long history of Palaeolithic progress.[5]) But the procedure of polishing and grinding requires a degree of sedentary life which is guaranteed only under the conditions of agriculture.[6]) Under these conditions new forms of division of labor become desirable and possible. The changing style of production reacts on the means of working and fighting and strongly affects their character.

IV. A New Technical Equipment.

What then was the technical equipment of China's Neolithic man ? How did he put his new mode of life into practice ?

Neolithic man used pick-axes[7]) and other axes perhaps to

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[1]) Bishop has thus translated very suitably the Chinese word „Ching," a name later used for the middle Yangtze basin. (C. W. Bishop, The Beginnings of North and South in China. Pacific Affairs, Vol. 7, No. 3, 1934, p. 318.)

[2]) The phenomenon as such has been noticed by several scholars. (See Wittfogel, Wirtschaft und Gesellschaft Chinas, p. 36, note 86.) Its possible connection with the development of Chinese civilization has only recently become the object of scientific discussion. Cf. Wittfogel, l. c., p. 35. Bishop, North and South, p. 303.

[3]) Richthofen, China, Vol. I, p. 70.

[4]) R. H. Lowie, Subsistence. In Boas, General Anthropology. l. c., p. 290.

[5]) Boas, Invention. l. c., p. 252. M. C. Buckitt, Our Early Ancestors. Cambridge 1926, p. 67.

[6]) Buckitt, l. c., pp. 151 sq.

[7]) Li Chi, Hsiao T'un, p. 339. Liang, Jê Ho, p. 45. Teilhard de Chardin, etc. On Some Neolithic ... Finds. l. c., p. 89.

break loose and to cut his stone material. He manufactured drillers and mallets[1]) for boring it. Kilns,[2]) the turn-table and the wheel[3]) enabled him to produce his famous pottery during the later part of the Neolithic Age. With these and similar tools he flaked and polished, he chipped, scraped, perforated and moulded and „threw"[4]) the different elements of his raw material.

For the purpose of the hunt he generally made axes, adzes, and knives.[5]) In certain regions (especially in Honan and Shansi) he used arrow-heads made of bone and stone.[6]) He manufactured stone and clay balls,[7]) the smaller ones possibly as missiles for an early pellet bow. The larger specimens „may have been sling stones."[8]) Bone harpoons[9]) suggest fishing as do net-sinkers made of grooved stone.[10]) The hunting implements certainly were used also for the fight against other men. Of a more specialized character apparently was another class of implements. Large and small hoes and spade-like utensils, according to archeological opinion, both served the purpose of the basic „industry" of the period, agriculture.[11])

Millet probably constituted the main crop. „The common species, Panicum miliaceum, has been found on the Chinese Neolithic sites."[12]) Rollers and grinding stones[13]) were used to pulverize them. Another grass-seed, Setaria lutescens,[14]) may not have been cultivated but just harvested.[15]) If a specimen of sorghum vulgare really belongs to the site where it was found, then Kaoliang existed in China much earlier than is generally believed.[16]) Rice has been found, according to Bishop, in a Kansu site,[17]) according to

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[1]) Liang, Jê Ho, pp. 30 sq.
[2]) T. A. Arne, Painted Stone Age Pottery. l. c., p. 9.
[3]) Wu, l. c., p. 135.
[4]) B. Laufer, The Beginning of Porcelain in China. Field Museum of Natural History. Publication 192. Anthropological Series, Vol. XV, No. 2. Chicago 1917, p. 154.
[5]) Liang, Jê Ho, pp. 38 and 56.
[6]) C. C. Young and W. C. Pei, On a Collection of Yangshao Cultural Remains, etc. l. c., p. 313 sq.
[7]) Li Chi, Hsiao T'un, p. 340.
[8]) Bishop, The Neolithic Age. l. c., p. 397.
[9]) Teilhard de Chardin, Some Observations. l. c., p. 192.
[10]) Bishop, l. c., p. 397.
[11]) Andersson, An Early Chinese Culture. l. c., p. 26. Teilhard de Chardin, Some Observations. l. c., p. 193. Liang, Jê Ho, pp. 45 and 56.
[12]) Bishop, l. c., p. 397.
[13]) Liang, Jê Ho, pp. 46 sq. Teilhard de Chardin, Some Observations. l. c., p. 183. Andrews, The New Conquest, p. 369.
[14]) Bishop, l. c., p. 395.
[15]) Lips, Government. l. c., p. 502.
[16]) Bishop, l. c., p. 396.
[17]) l. c., p. 396.

Edman, Söderberg, and[1]) Andersson in Honan (Yang Shao).[2]) The problem arising out of this discovery will be discussed in another connection.

No remains of textiles have been found. The delicate material has perished along with the wooden implements while stone and bone survived. But spinning whorls and impressions of textile patterns on Neolithic vessels indicate early knowledge of weaving,[3]) for which the raw material may have been hemp.[4]) Bone needles for sewing were generally used. Bishop also suggests the manufacture of bark-cloth and, against cold weather, of furs.[5]) The existence of scrapers[6]) seems to show that leather and similar materials were worked up. The use of matting and baskets is proved by ornaments impressed on the earthenware.[7])

The purpose of most of these utensils is more or less clear. Manifold may have been the functions of the different types of pottery. But what did the clay and marble figures mean and what the stone and mussel-shell rings ? What finally the maritime shells which have been excavated from a Manchurian site ?[8]) For some of these things, earthenware whistles, phalloi, and birds' heads, a religious purpose has been claimed[9]) with good reason. The function of some of the others must be considered under the aspect of the socio-economic order as a whole.

V. A New Style of Production.

1. Early Agriculture : The Work of Women.

„The most noticeable additions to human progress that we discover in Neolithic times are," according to M. C. Buckitt, „1) the practice of agriculture ; 2) the domestication of animals ; 3) the manufacture of pottery ; 4) the grinding and polishing of

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[1]) G. Edman and E. Söderberg, Auffindung von Reis in einer Tonscherbe aus einer etwa fünftausendjährigen chinesischen Siedlung. Bull., Vol. 8, No. 4, 1929, p. 363.

[2]) Andersson, Children, p. 336.

[3]) Li Chi, Hsiao T'un, p. 340. Andersson, An Early Chinese Civilization, p. 26. Wu, l. c., p. 135.

[4]) Andersson, An Early Chinese Civilization, p. 26. Bishop, l. c., p. 398.

[5]) Bishop, l. c., p. 398.

[6]) Bowles, l. c., p. 129. Granger, Yünnan, p. 539.

[7]) Bishop, l. c., p. 398.

[8]) J. G. Andersson, The Cave-Deposit of Sha Kuo T'un in Fengtien. Palaeontologia Sinica, Series D, Vol. I, Fasc. 1, 1923, p. 33.

[9]) Bishop, l. c., p. 399.

stone tools..."[1]) The Chinese Neolithic culture knew all of these activities.

Agriculture obviously appears in the form of hoe-culture („Hackbau"). Its main object seems to have been millet. Who practised it? Formerly early agriculture, hoe-culture, or primitive „horticulture" was generally ascribed to women.[2]) Recently anthropology has found that among many tribes „with more complex culture" the hoe may also be handled by the men.[3]) But the formula „more complex cultures" indicates the possible solution. The cases of male „horticulture" represent an advanced stage of cultivation, not its earliest phase. The beginnings of agriculture, according to highly critical modern anthropologists, „must be credited to women." At the end of the food-gathering and hunting epoch women „were naturally the first to note the potentialities of seeds dropped by chance, or of shoots planted without definite purpose, and thus inaugurated the era of gardening or farming."[4]) To explain male horticulture among more advanced tribes and people „we must assume, that the gradually increasing dependence on cultivation in some regions decreased the importance of the chase and induced man to take over the activities that formerly constituted the exclusive domain of the other sex."[5])

This statement is of no small significance for the analysis of early Chinese civilization. It not only enables us better to understand China's Neolithic, it also throws light on certain features of Shang and Chou culture which by „classical" tradition have been preserved as queer elements in a basically different Confucian civilization.

Did female labor in China pass through a proto-agricultural stage in which vegetable fruits or seeds were not yet cultivated, but just „harvested"?[6]) The types of plants discovered in Neolithic sites at least do not exclude this possibility. Yet real agriculture does not consist in the mere harvesting of plants. It consists in their reproduction. Only when the experience of gathering and storing fruits (and seeds) leads to a first crude insight into the laws of vegetal growth, only then is a tremendous new power of production discovered. The conscious application of

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[1]) Buckitt, Our Early Ancestors, p. 50.
[2]) R. H. Lowie, Primitive Society. New York 1920, p. 160. Idem, Subsistence, l. c., p. 298.
[3]) Lowie, Subsistence, p. 299.
[4]) l. c., p. 299. Boas, Anthropology, l. c., pp. 92 sq.
[5]) Lowie, Subsistence, p. 300.
[6]) Lips, Government, pp. 502 sq.

this new factor thoroughly changes the economic function and the social status of its discoverers.

The archeological evidence comprises physiological and cultural elements. The validity of the former depends largely on the strength of the latter. Dr. Black emphasizes the strong difference between the male and female skeletons found at the Neolithic site of Yang Shao. He ascribes this phenomenon to a „considerable specialization in the respective work of the two sexes obtained among the Yang Shao people."[1]) Does this specialization really mean agriculture undertaken by women alone ? Shao Kuo T'un presents a less marked sex differentiation. Perhaps there the men took already part in the activities of husbandry ?

The argument is plausible. It is not conclusive. A more basic proof is furnished by two groups of Neolithic implements, the hoe and hand-made pottery. Already the older Neolithic sites of Lin Hsi and Tsitsihar contain both hoes and earthenware vessels made by hand.[2]) Hand-made pottery characterizes the earlier stages of China's New Stone Age. Now hoe-cultivation all but certainly was originally performed by women. Women are also believed to prevail in the sphere of making pre-wheel pottery. B. Laufer has dealt elaborately with the interesting phenomenon. He says : „While ethnologists have clearly recognized that the pottery making of primitive people is essentially a woman's avocation, it has not yet been sufficiently emphasized that the wheel is a man-made invention and that, aside from the mere technical difference of the hand and the wheel processes, there is a fundamental sociological contrast between the two..."[3]) „Wherever the potter's wheel is used it is manipulated by man, not by women..."[4]) On the other hand : „In the stage of hoe-culture or gardening, the occupation of women, the pottery-wheel is absent."[5])

The extraordinary significance of Laufer's statement for China's earlier Neolithic society is obvious. Even if the archaic features of later literary tradition were not as suggestive as they actually are — the archeological finds and their modern anthropological interpretation would speak for themselves : Obviously in China's Neolithic time the production of cereals originally lay in the hands

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[1]) Black, Sha Kuo T'un and the Yang Shao Skeletal Remains. Geological Survey of China, Series D, Vol. 1, Fasc. 3, 1925, p. 98.

[2]) Teilhard de Chardin, Some Observations, p. 193. E. Licent and Teilhard de Chardin, Note sur deux instruments agricoles du Néolithique de Chine. L'Anthropologie, Vol. 35, 1925, pp. 70 sq.

[3]) Laufer, The Beginnings of Porcelain in China. l. c., p. 152.

[4]) l. c., p. 155.

[5]) l. c., p. 159.

of women, while hunting and fishing and, later, cattle-breeding were practised by the male section of society. The care of the pigs may at this stage also have been the woman's duty.[1]) A Chou tradition which will be discussed later seems to indicate an earlier situation in which the wife in some way or another was held responsible for the family's supply of pork.

2. Early Agriculture : the Role of Men.

„In all likelihood...", says Bishop, „the actual sowing and reaping was performed by the women."[2]) This statement seems indeed correct beyond any doubt. What then was the economic function of the men at that time? Primitive agriculture does not consist only of sowing, weeding, and harvesting, however pivotal these tasks may be. The soil is easily exhausted. Fresh land has to be broken up frequently.[3]) Thus the clearing of the soil by fire and by the axe[4]) is a task which has to be undertaken quite often. Like several other auxiliary forms of agricultural work it has to be carried out by those in the Society who are physically the strongest, which means the men.[5]) This probably held true also for China's early loess regions where bush prevailed, not forest. „In all likelihood the work of clearing the ground and preparing it for cultivation was done by the men."[6])

This, however, did not continuously occupy the men's time. With their improved polished implements they certainly continued to hunt, and, wherever possible, to fish. Andersson thinks that during the earlier Neolithic — before the period of Red Pottery — the population of North China probably „consisted mainly of hunters and fishermen who wandered about in small groups in the forest and along the river valleys. The absence of settled villages and the paucity of population would thus give a reasonable explanation of the few and uncertain finds which have been made."[7]) Even when agriculture developed and Yang Shao arose with a much more extended agriculture, men probably still continued to act as „hunters and fishers."[8])

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[1]) Cf. Thurnwald, Lebensbilder, p. 94.
[2]) Bishop, The Neolithic Age, p. 395.
[3]) Lowie, Subsistence, p. 301.
[4]) Cf. H. Schurtz, Urgeschichte der Kultur. Leipzig-Wien 1900, p. 372.
[5]) A. A. Goldenweiser, Early Civilization. New York 1926, pp. 259 and 72. Thurnwald, Lebensbilder, p. 94.
[6]) Bishop, l. c., p. 395.
[7]) Andersson, Children, p. 333.
[8]) Andersson, An Early Chinese Civilization, p. 29.

VI. New Elements in the Social Order.

M. C. Buckitt properly stresses the revolutionizing influence of the new economic conditions on the whole shape and style of Neolithic life. „Instead of small groups of men gaining a precarious livelihood by hunting, we find more or less settled communities growing up. To the hunting people the fear is ever present lest the game should fail to return at its usual time, and lest owing to their inability to store food-stuff for more than a short time, starvation may overcome them; but now we find villages with full granaries able to withstand difficult seasons..." Even if we acknowledge the still insecure character of early agriculture and also the danger of natural calamities affecting the crops, yet there is „in the new village community much more chance of surviving such disasters, and for having a store sufficient to tide over difficult times..."[1])

The way in which agricultural life results in a higher degree of security and stability is obvious. This has a specific effect when one sex, the female, is completely in control of the new advantageous technique. The problem of the women's social position in the hunting and food-gathering society has been widely disputed. That position indeed differs widely according to different empirical circumstances. The productivity and organization of the work undertaken by both sexes are basic factors in deciding their power and prestige in relation to each other.

The productivity of agriculture in comparison with the output of the hunt is apparent. Agriculture did not and in fact could not from the very beginning feed from twenty to thirty times as many people as the hunt, but even if at first it „only" multiplies the food supply a few times, the result is stirring. In China the general rule may have been especially intensified by the relatively high productivity of loess agriculture, on one hand, and by the perhaps rather limited yield of the hunt, in a sparsely wooded highland, on the other. Bishop speaks of a „comparative scarcity of weapons," which he takes as a symptom for the not yet well organized form of warfare at that epoch.[2]) If the observation is correct, it may indicate at the same time the rather limited character of the men's hunting activities. Both factors tend to limit the social and political importance of the men. At the same time they raise the women's status as producers, as members of the village

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[1]) Buckitt, l. c., pp. 50 sq.
[2]) Bishop, l. c., p. 402.

community, as members of the priesthood, and, possibly, even of the public assembly. Later literary records confirm what the archeological evidence suggests as fairly certain : that China's Neolithic people „traced descent through mothers and that women played an active or even a leading part in institutional life."[1])

Under favorable conditions — to be sure : only then — in Neolithic times women may play a prominent (not the leading !) part in their community's institutional life.[2]) The public bodies of an early farming society generally are simple and not autocratic. The central territorial unit may be „the limited area of the village, with the numerous huts of single families, or those of family groups, or a single sib house in the center. The tribes seem to be divided everywhere into such independent villages, headed by a chief who sometimes is loosely dependent upon a higher chief." This chief's power is generally „very slight. Often he has no power over life and death at all."[3]) „Authority is vested in the council of elders," with matriliny „probably originally prevalent in regard to laws of descent and inheritance."[4]) These remarks do not provide a concrete and specific record of China's Neolithic tribal communities, but they outline some main features of that society according to modern anthropological insight.

Property at the lower stage of social history assumes a predominantly communal character. General accessibility to every technical device for every member of the group, even if private property is formally recognized, remains one of the basic conditions of the group's self-preservation. This statement holds true for the hunting and food-gathering stage, where according to a recent statement „the consciousness of personal property in our sense is altogether lacking."[5]) It also holds true for the simpler farming societies in which, at least at the beginning, land as a rule is „common property of the village", even if „movables are privately owned."[6]) The clearing and tilling of the grounds at this stage generally requires group action. The situation, as Menghin claims[7]), possibly includes a peculiar „ownership" position of the women because they monopolize the actual cultivation of land. This, how-

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[1]) l. c., p. 400.
[2]) Lips, Government, p. 516.
[3]) l. c., p. 515.
[4]) l. c., p. 516.
[5]) l. c., p. 494.
[6]) l. c., p. 516. W. Schmidt, Das Eigentum auf den ältesten Stufen der Menschheit. Münster in Westfalen, 1937, p. 315.
[7]) Menghin, Weltgeschichte der Steinzeit, p. 498.

ever, is a question which the analysis of China's Neolithic raises, but does not answer.

The details of early property are intricate. Modern studies have given us a quite elaborate picture of its individualistic and — behind them — collectivistic features.[1]) Details are not relevant here, but one point may be stressed : If China's Neolithic is to be classified as a „normal" Neolithic Age in the terms of general prehistory, then we may safely assume that, however modified by manifold local peculiarities, China's New Stone Age followed the fundamental anthropological pattern also as far as the structure of its property is concerned.

Slaves are of no real use to hunters and food gatherers. Fishermen may occasionally be able to use them.[2]) In an agricultural society slaves can be watched more easily and utilized more productively. Dr. Black, analyzing the skeletons of Yang Shao found much less variety among the men than among the women, a phenomenon which may „possibly be due in part to a lesser racial purity among the latter." This in turn may be caused by the habit of stealing women for use as wives and as slaves.[3]) Thus the origin of slavery as a social institution perhaps coincides with the origin of agricultural life during China's Neolithic Age.

VII. Intertribal Relations.

The „small, self-centered, democratic legal community" of this kind of village society may have included, besides its sibs and its matriarchal tendencies, secret societies,[4]) which somewhat counterbalanced the female influence. Each community may have exercised political power only in the limits of the village, or it may, under marginal circumstances, have extended its influence over several local groups, villages, tribes.[5]) In either case there still existed a vast world of villages, tribes, societies outside its particular realm, a strange world with which the „home" center — as far as it knew them at all — lived either in casual or in close interplay.

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[1]) W. Schmidt, Das Eigentum, pp. 310 sq. Cf. Wittfogel's review of Schmidt's study in Zeitschrift für Sozialforschung, Vol. VII, No. 3, 1938, p. 428.

[2]) G. Landtman, The Origin of the Inequality of the Social Classes. London 1938, p. 230.

[3]) D. Black, Sha Kuo T'un, etc., l. c., p. 98.

[4]) Lips, Government, pp. 516 sq. Lowie, Primitive Society, pp. 303 sq. Thurnwald, Werden, Wandel und Gestaltung von Staat und Kultur. Berlin und Leipzig 1935, p. 56.

[5]) Lips, l. c., p. 518.

Warfare there certainly was. The increasing wealth of the new agricultural order simultaneously increased the tendency of the neighbouring communities to prey upon it.[1]) China's Neolithic sites contain evidence of head-hunting, but Bishop, pointing to the „comparative scarcity of weapons and the absence of fortifications", dismisses the idea of organized warfare as rather unlikely. „In general, warfare must have been of the desultory and haphazard type common among Neolithic populations nearly everywhere."[2])

But hostility is not the only kind of intertribal relation between different communities, tribes, and regions. The „red" Neolithic pottery is found all over North China, Central and Western Asia and even in Eastern Europe.[3]) Intercommunication of a non-military character must have provided the means for the transport of these and other cultural elements. Mussel shells and stone rings have been excavated. Were they really nothing but cult-objects ? Shells and all kinds of ornaments (and domestic animals) have been used by agricultural societies in many parts of the world.[4]) Certain horticultural communities seem to have lived a very self-contained life with little or no exchange by means of commerce.[5]) But in China's case one result of exchange is obvious, the red pottery. Certain objects of a money-like character have been discovered. Barter certainly has played an important part in whatever exchange took place, but nothing excludes the possibility of an embryonic crystallization of means of exchange, of proto-money, in the shape of rare stones, shells, rings and so on.

VIII. The People's Life.

Thus China's Neolithic villages certainly had a style of life quite their own. The men occasionally attended to the task of clearing the fields, and, especially later on, assisted the womenfolk at the most important stages of cultivation and harvest.[6]) But most of their time, when they were not resting or preparing their weapons and tools, they still roved freely through

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[1]) Buckitt, l. c., p. 52.
[2]) Bishop, l. c., p. 402.
[3]) Arne, Painted Stone Age Pottery. l. c., pp. 20 sq.
[4]) E. B. Loeb, The Distribution and Function of Money in Early Societies. In Essays in Anthropology presented to A. L. Kroeber. Berkeley 1936, pp. 156 sq.
[5]) Loeb, l. c., pp. 156, and 161 sq.
[6]) B. Malinowsky, Coral Gardens and Their Magic. London 1935, Vol. I, p. 79. „Finally harvesting is done by men and women together." This phenomenon however may already present a later development beyond an early stage of purely female harvesting.

the hills and along the lowland marshes, hunting, fishing, and — if necessary — fighting. The women worked and sang in large and small groups on the upland millet fields and, perhaps, on some smaller rice-patches at the foot of the loess terraces, dressed simply as far as dress went at all under the burning sun of the summer and early autumn. The half-wild pig needed little care, the dog[1]) next to none. The making of pottery around the loess caves and summer huts filled the women's spare time, but except for occasional visits by representatives of neighbouring tribes, political envoys, and traders, the seasons of sowing, weeding, and harvesting were the community's great events. Then the men rested from weapon-making, from hunt and strife, and the women proudly exposed their hempen raiments, their polished stone pendents and tinkling bracelets. Then magic ceremonies certainly were performed. To impress the spirits of fecundity[2]), earthenware phalloi were spectacularly displayed. Orgiastic dances continued down into the time of Chou[3].) They survived in many parts of Eastern Asia „until recent or even modern times."[4]) They certainly served to prepare the villagers' mood for the seasonal mating and for the religious cults which, accompanied by human sacrifice and occasional cannibalism, probably formed no exception to the „often bloody and cruel" ceremonies performed by Neolithic planting people in general.[5])

After the feast is over the routine of everyday life returns. The ecstatic noise of the nocturnal gathering is replaced again by the playful cries of the village children who — much more numerous than during the hunting age — fill the open spaces around the huts and caves with pleasant serenity. But if the children are many,[6]) diseases are still plentiful[7]), and old age and death still

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[1]) Archeology has shown that besides the pig the dog also certainly goes „back to Neolithic times." (Bishop, l. c., p. 396.) The archaic character of the dog sacrifice which the I Li records (ed. Steele, Vol. I, p. 70 and II, p. 146) is thus confirmed.

[2]) B. Karlgren, Some Fecundity Symbols in Ancient China. Bulletin of the Museum for Far Eastern Antiquities. Stockholm 1930, No. 2, pp. 1 sq.

[3]) M. Granet, La civilisation chinoise. Paris, 1929, p. 192. Idem, Danses et Légendes. Paris, 1926, Vol. I, pp. 222 sq.

[4]) Bishop, l. c., p. 401.

[5]) l. c., p. 400. Cf. also R. Briffault, Fertility Rites. Encyclopedia of the Social Sciences, Vol. VI, p. 191.

[6]) Black, Sha Kuo T'un. l. c., p. 7.

[7]) Krzywicky, Primitive Society and Its Vital Statistics, pp. 177. Krzywicky states here the general principle, according to which after the beginning of agriculture „prolific mothers ceased to be regarded with scorn." But his later data are taken from tropical island societies which according to Müller-Lyer already represent the „preventive" type of development. If agriculture can feed between 20 and

come early. The abundance of children under these conditions is not only a symbol of the society's growing productivity, but also of its relative immaturity.

IX. Cultural Centers and Zones of Contact During China's Neolithic Age.

The socio-economic order which we have tried to sketch spread over a huge territory. Can we perceive in this area any structural differences and any temporary or permanent centers of cultural life? A concrete history or sociology of China's Neolithic life is still impossible; it will perhaps remain so for ever. But a few further facts can be mentioned which may serve as the starting-point of a differentiating analysis.

The geographical distribution of the Red Pottery has generally been considered a feature of outstanding significance. Does this trait not link up China's Neolithic world with the contemporary cultures of Western Asia and even of Eastern Europe? The so-called Red Pottery appeared at about the same time, and indeed somewhat earlier, in Beluchistan (India), at Anau (Turkestan), Susa (Persia), Eridu (Mesopotamia), Tripolje (Russia), and in Bessarabia, Moldavia, Galicia, Bukovina, and Transsylvania.[1])

A similarity between China's Red Pottery and the pottery of these Western centers undoubtedly exists, but the degree of similarity is definitely limited and there are extremely significant modifications. Arne, who admittedly emphasized „especially the resemblance in form and ornaments," warns at the same time that „the dissimilarity ... even in the sphere of pottery should not be underestimated." In his pioneer analysis he stresses the high development of earthenware figures in Southwest Asia and Southeast Europe on one hand and the unique character of the Yang Shao red color on the other.[2]) The relations between certain Honan forms and Western types are of striking irregularity. Honan's small bowl seems to be similar to Anau I and Susa I. Its tall pear-shaped vessels occur again in Southeastern Europe. Similar patterns of decoration have been found mainly in Beluchistan, Mesopotamia, Anau I and Susa I and II.[3]) Some of these features may have a completely independent origin, representing one of the many cases

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50 times as many people as the hunt, then the early agricultural stage has to be an expansive age in the sense of the German sociologist. (F. Müller-Lyer, Die Zähmung der Nornen, Vol. I. München 1918, p. 243. Cf. also pp. 246, 248, 250 sq.)

[1]) Arne, A Painted Stone Age. l. c., pp. 20-29.

[2]) l. c., p. 32.

[3]) l. c.

of what anthropology calls analogous discovery or convergence.[1])

In spite of the disparity indicated by Arne the fact nevertheless remains that certain basic technical features of the manufacture of the Red Pottery occurred throughout the Neolithic world of North China, Western Asia, and South-Eastern Europe. In such a case independent invention seems to be highly unlikely. We have to assume instead some kind of cultural contact between the different regions. A vast international background of China's Red Pottery world thus emerges.

But this background, however vast, may have been confined to the common possession of one or two technical practices. The Red Pottery technique, already widely different in its international aspect, differs widely again inside its Chinese domain. The Chinese Neolithic centers may have been based upon a similar mode of production in general. But their specific characteristics varied distinctly from region to region. The primitive means of communication connected only certain regions closely, while more distant places interacted on each other in an occasional, irregular, and often contradictory manner.

According to Dr. Wu, Honan and Shansi are the oldest centers of China's Red Pottery age. The Red Pottery sites of these two regions show an interesting affinity. The most important material of that time is stone. Now the polished stone implements found in the lower layer of Hou Kang (Honan) resemble very closely the polished stone utensils excavated in Hsi Yin (Shansi)[2]). The same situation exists in the realm of pottery. Mr. Liang, after a careful comparison of the culture of Hsi Yin with that of Yang Shao (Honan) concludes that in the case of unpainted ware as well as in that of painted pottery „there are more points of similarity... than points of difference. We may safely say that both sites have the same ceramic complex and what difference there is must be due to local variation, difference in degree of development, and different outside influence."[3]) Especially striking is the similarity of the arrow-head. The two-edged stone and bone arrow-heads are common to Honan and Shansi, and only to these two regions. According to Li Chi these arrow-heads are found neither in Kansu nor in Manchuria.[4]) Thus archeological experience confirms what the

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[1]) R. U. Sayce, Primitive Arts and Crafts. Cambridge 1933, pp. 255 sq. Clark Wissler, Man and Culture. New York 1923, pp. 105 sq. Also Lowie, Primitive Society, p. 104. Boas, Anthropology, l. c., p. 104.

[2]) Liang, Hou Kang, l. c., p. 624.

[3]) Liang, New Stone Age Pottery. l. c., p. 55.

[4]) Li Chi, Hsia T'un, etc. l. c., p. 339.

geographical and chronological situations lead us to expect : the existence of a special Honan-Shansi center within the general Red Pottery world of China.

From Honan and Shansi to Manchuria and to Kansu the distances are great. Direct communication must have been difficult and slow in the extreme. The abundance of „local" features in the more widely separated regions, on the basis of a common Red Pottery, becomes easily understandable. Sha Kuo T'un, the most famous and perhaps oldest Neolithic site in Manchuria, shows resemblance to Yang Shao[1]), with which it shares „the red wares, painted and fine." But these products, according to Dr. Wu, „make up only a minor proportion of the whole collection," whereas the coarse, incised ware — which Wu calls „native" — forms „a larger proportion."[2]) There is no need to accept Wu's theory of a Manchurian and a „Chinese" type of population during the time of Sha Kuo T'un I. The producers of the coarser „native" wares must have been Neolithic, i. e. agricultural and sedentary, like the makers of the finer „Chinese" pottery. Not only this; they may well have been members of one and the same community, although producing only the simpler utensils, as required for everyday life. But however this may have been, there seems to be no doubt about the strong „local" element which differentiates the Manchurian complex from the centers of Honan and Shansi. The absence of the arrowhead in Manchuria apparently presents another element of divergence which must be taken into account.

Not less remote in distance from Honan and perhaps still more remote because of the difficulties of travel in the loess terrain were the Kansu centers of Neolithic life. The comfortable atmosphere of a study or a library does not offer conditions under which distances of this kind can be measured properly. In the second half of the nineteenth century Richthofen needed nineteen days to travel from Taiyüan in Shans : in Shansi to Sian.[3]) We can imagine how many weeks or months the journey must have lasted when none of the later roads existed and when no unified system of administration and police restrained the countryside. All kinds of agricultural communities and hunting tribes must instead have blocked the way, making direct travel often all but impossible and restricting the cultural „contact" to the slow and indirect process of local diosmosis between village and village, tribe and tribe.

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[1]) Andersson, Preliminary Report. l. c., p. 42.

[2]) Wu, Prehistoric Pottery, p. 113.

[3]) F. von Richthofen, Tagebücher aus China, Vol. II. Berlin 1907, p. 204. According to Richthofen, the journey might have been completed in summer time in 14 to 15 days. „Marco Polo needed 21 days." (l. c.)

If the Ch'i Chia site of Kansu really is older than any of the Honan sites, then, of course, no Honan trait is to be expected there, but possibly some of Ch'i Chia's particular features might have wandered eastward instead. This apparently was not the case. The Ch'i Chia culture is rather „local", as Dr. Wu says, with some „influence by the Chinese..."[1]) i. e. by the Eastern Neolithic centers. These centers therefore ought to have been at least contemporary with Ch'i Chia, if not earlier (as Dr. Wu indeed assumes). Among what he calls „local" elements Wu mentions particularly „the combed ware" belonging „to a culture different from the Chinese, because so far no combed ware has been found either in Honan or Shantung."[2]) This is very remarkable, because the comb-pattern is not an isolated Kansu phenomenon. It also occurred in several parts of Western Asia, e. g. in Eridu.[3]) The absence of the Honan arrow-head together with the existence of the Western comb-ornament in Kansu conveys the impression of a Kansu Neolithic which was strongly influenced from the „West" and as strongly isolated from the Honan-Shansi center of Red Pottery. This impression is intensified by a curious trait in animal decoration which Hsü Chung-shu claims for some later stages of China's Red Pottery sites. In historical Chinese times, during the Shan and Chou dynasties, animals were generally depicted in profile, i. e. quadrupeds with two legs and birds with one.[4]) The Red Pottery world generally seems to lack this type of animal ornaments. According to Mr. Hsü, they have been discovered almost exclusively on the vessels of some late Kansu sites. But instead of presenting the probably contemporary „Chinese" profile style (of two legs or one) the Kansu designs show four and two legs respectively. This style, not familiar to the East, occurs frequently in the regions of Western Asia, the same regions with which, according to Mr. Hsü, the later Kansu sites also share special features of the hui and lei ornamention.[5])

These phenomena, if properly observed, are certainly of no small interest. But far more striking is one double feature : the absence of the pottery-wheel and of Black Pottery in all Kansu sites excavated so far. In a most conservative manner the Aeneolithic population of Kansu continued to produce the red earthenware

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[1]) Wu, l. c., p. 105.
[2]) l. c., p. 104.
[3]) Menghin, Steinzeit, p. 333. Arne, l. c., p. 27, Fig. 60.
[4]) Hsü Chung-shu, New Discussion about Hsiao T'un and Yang Shao (Tsai lun Hsiao T'un yü Yang Shao). Preliminary Reports of Excavations at Anyang, III, 1931, pp. 526 sq. Chinese.
[5]) Hsü, l. c., p. 532.

and to produce it by hand (and turn-table),[1]) while the Eastern regions of North China lavishly applied the wheel and manufactured the fashionable new Black Pottery either together with the Red Pottery or entirely replacing it.

The great distance from the wheel-using centers may have constituted one reason for the extraordinary phenomenon, but, as always, the geographical factor has to be considered in the light of the prevailing socio-economic forces. If the hand-made pottery generally indicates the existence of women's agriculture, then the continued use of this technique may express an economic situation in which, for one reason or another, the entrance of men into agriculture together with the use of the pottery-wheel, were somehow retarded or in which, even if men had begun to participate widely in the work of husbandry, the position of women remained unchanged, at least as far as the making of pottery and perhaps even as far as agriculture itself were concerned. Thus, whereas the progressive wheel-using „patriarchal" centers of Honan, Shantung, and Manchuria engaged in the production of the novel Black Pottery, the remote Western world of Kansu continued to make pottery in the traditional way, that is, mostly by hand, preserving the sacred, time-honored „Red" pottery style. If therefore Laufer's hypothesis can be applied to the Neolithic of Kansu and if the Kansu pre-wheel situation is based on female pottery-making and perhaps on continued work of women in the fields (either alone or along with the men), then the conservative technical attitude of Kansu may have been connected with a conservative socio-economic situation, a situation which the late Red Pottery of the western region expressed in the most colorful manner imaginable.

The inner differentiation of China's Neolithic Age is further signalized by another phenomenon, the appearance and distribution of the tripod, the three-legged vessel called „li". This vessel cannot well have been invented in Shantung, because it is older than the Black Pottery culture. But it may have originated somewhere in Honan,[2]) i. e. in a territory which according to Dr. Wu constitutes the cradle of the Red Pottery period of China's Neolithic Age. Even in this „cradle" region the curious vessel first spread only irregularly — no li has been discovered so far in Hsi Yin (Shansi)[3]) — and it was introduced into the Western plateau only „between the end of the Shang-Yin and the early part of the Chou dynasty."[4])

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[1]) Palmgren, Kansu, pp. 1 and 89. Wu, l. c., pp. 91, 101, 104.
[2]) Creel, Studies. l. c., p. 205. Wu, l. c., p. 78.
[3]) Wu, l. c., p. 78.
[4]) l. c., p. 107.

Why the li was used in Yang Shao, and was absent in contemporary Hsi Yin, only 40 miles to the north, is a puzzle which, in our opinion, is formulated but not answered if we call this zone „the very periphery of the early distribution of the li."[1] The arrow-head bridged the gap between the two sites; the li apparently did not. Perhaps the Hsi Yin people could afford to live without the li, not because this vessel was very important, but because, on the contrary, it was rather irrelevant after all, so that, if for some local reasons of social custom or outlook, the form was not popular in Hsi Yin, wares of a different character could easily be substituted for it.[2]

The li-tripod eventually spread all over China and after many changes in material and shape it continues in use till today. This fact together with the other fact that the tripod, at least in its Chinese form, did not spread over other parts of the world, has been taken as an indication of the peculiar character of China's civilization. This conception, even if based upon a thoroughly correct observation of the facts, overemphasizes the significance of the phenomenon in question. Actually the local limitations and the historical duration of a given cultural trait mean as much or as little as the trait itself signifies to the culture of which it is a functional part. If the phenomenon in question is vitally important, like e. g. the form of property, the system of government, or the type of kinship system, then its unchanged continuance becomes extremely significant. But if, on the contrary, the trait is a product which, however, skilfully designed and useful in practice, is only of importance within a limited cultural field, then it merely expresses historical coherence of a rather formal nature. Such a formal historical coherence seems indicated, except by the li-tripod, also by the physical likeness between China's Neolithic people and the country's modern inhabitants.[3] But formal coherence is a vague criterion. The material nature of this coherence must be defined by concrete analysis of a different character.

X. Diffusion not a Substitute for, but a Part of the Process of Inner Development.

What is true for the succession of cultural phases is not less valid for cultural complexes which exist simultaneously. The

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[1]) Creel, Studies, p. 205.
[2]) Wu, l. c., p. 78.
[3]) Black, A Note on the Physical Character of the Prehistoric Kansu Race. Appendix to Andersson, Preliminary Report on Archeological Research in Kansu, l. c., p. 54.

„Western" background of China's Red Pottery culture must not be taken to mean the creation of China's Neolithic culture from without. Under this aspect the discussion of the influence of Western Asiatic influence („diffusion") has occasionally assumed an emotional tone harmful to the argument itself. Only if we understand that genuine diffusion is a selective phenomenon,[1]) can a productive level of discussion be reached. Diffusion may affect a culture in several ways. It may either (1) change a development qualitatively, adding a completely new element, or (2) it may speed up, or (3) enrich, or (4) delay, or (5) destroy the development of the civilization encountered. Cases 4 and 5 generally occur as the outcome of forcible contact, of political subjugation, conquest. Cases 1 to 3 may contain an element of violence, but they predominantly occur peacefully, by the transfer of ideas, of goods, of techniques, and — marginally — of technicians. In all three cases the culture in question accepts the „diffused" elements by means of a selective process, acquiring such features which on its present level appear to be of „functional" value. In cases 2 and 3 the indigenous development is intensified, in case 1 a new element is added, but even the „new" element is added only selectively, namely so far as the changing culture, because of its former development, is capable and ready to accept, to digest, and to assimilate it. The transfer of Flemish weavers to England belongs in categories 2 and 3. English textile production had its own century-old development, which the Flemish newcomers enriched and accelerated, but by no means created.[2]) The introduction of potato, corn, and porcelain to Europe, the introduction of the horse to America fall into the first category. Cases 1 to 3 constitute the main forms of what the term diffusion really covers. In all three cases the cultural contact is part of the culture's inner development, not a substitute for it. Balanced development contains both features. Not the „balanced" existence, but the partial or complete absence of one of the two factors in question requires the special attention of the social scientist.

The possible transfer of certain elements of the Red Pottery technique from Western regions reveals the working of a continent-wide cultural contact during part of the Neolithic Age in huge

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[1]) Lowie, Subsistence. l. c., p. 296. Cf. also Sayce, l. c., p. 181 sq.

[2]) „It is evident that worsted cloth had gained a reputation before the coming of Flemish artisans under Edward III..." Nevertheless the coming of the Dutch and Walloon immigrants was important. They „established a new branch of the woolen industry, the manufacture of the finer fabrics known as the ‚new drapery'." (E. Lipson, The Economic History of England. I. Seventh edition. London 1937, pp. 488 and 494.)

areas of Asia and Europe. If the diffusing centers lay in the West, as seems to have been the case, then China's Neolithic people received the benefit of a cultural diffusion of type 3 and perhaps 1. Their life became enriched by a new feature which they picked up — selected — because at their existing stage of development this feature proved to be useful and digestible for them. For the historian the appearance of Red Pottery becomes a means of establishing a relative and perhaps even a crude absolute chronology for China's early history. In this respect it must be considered highly valuable. From the standpoint of the country's inner history the color of its early pottery remains rather irrelevant. In this respect our attention should turn in quite a different direction. It is the study of the manufacture of the Red Pottery, rather than of its color, which leads to a deeper understanding of the socio-economic development of Neolithic and Aeneolithic China.

F. The Transition from a Primitive to a Stratified Agricultural Society.

I. Men instead of Women as Pottery Makers.

According to the tentative chronology proposed here the fifth and fourth millennia B. C. in North China saw a primitive agricultural society. Cultivation and handmade pottery were managed by women. The first period of Red Pottery is dated by Arne near the beginning and by Bishop close to the end of the third millennium. During this period pottery was still partly made by hand, but at the same time the forerunner of the wheel appeared, the turn-table. In Yang Shao I the technique had advanced to the application of a temperature of 1.300-1.400°, „which, in firing with wood, can be obtained only by a blast... in a good kiln and with a fairly long time of burning."[1])

Who used these kilns and who turned the turn-tables, women or men ? No direct and definite answer, of course, is possible. We are confronted with a situation which Dr. Laufer's theory did not foresee. According to him the appearance of the pottery-wheel „is correlated with man's activity in agriculture, based on the employment of the ox and plough." The pottery-wheel „is directly derived from a chariot-wheel which is likewise due to man's effort."[2])

If this statement is correct, it remains confined in China to

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[1]) Arne, Painted Stone Age Pottery. l. c., p. 10.
[2]) Laufer, The Beginnings of Porcelain in China. l. c., pp. 155 and 159.

the period of Black Pottery in which the domesticated ox and the wheel-cart first appeared; though ploughing with oxen was not practiced until many centuries later. The Red Pottery sites do not contain remains of carts or of big domesticated cattle. Although we do not dare to exclude the possibility of an early participation of men in the work of pottery making, such a participation, if it occurred, was not based upon the facts mentioned by Laufer, and even if the men really began to take part in the making of pottery, no appearance of carts or ploughs justifies us in assuming that men participated widely in the agricultural work of that period.

The situation underwent a profound change during the succeeding Black Pottery age. Now the pottery-wheel in its mature form appeared. It appeared under circumstances which strongly suggest that now, at last, man had learned how to make cart-wheels and also in all probability was beginning to make pottery by means of the „masculine" pottery-wheel.

II. Man enters Agriculture.

This change has often been depicted by modern anthropology. During the earlier period, says Boas, „the whole agricultural work falls to her (the woman's) share while the men are unfamiliar with the raising of plants." This situation generally continues „until some type of labor that in simple countries is performed by man is utilized for the further development of agriculture. This is the case when irrigation or building of terraces is required, or when the help of domesticated animals is required in agricultural work, as in ploughing."[1]) Ploughing in China originated relatively late. Irrigation began earlier. The terracing of fields must have assumed importance very early in the gradually decaying loess plain of North China. Bishop stresses the descent of the Neolithic villages from the higher to the lower terraces of the loess hills. This movement implies a great amount of terracing work which all but certainly required male action.

Combined with the development of terracing work or even preceding it there took place a „lateral"[2]) intensification of agricultural methods which by increasing productivity sooner or later must have caused the men to participate in cultivation. Menghin's „Jungpflanzerische Kulturen" are based upon hoe-culture jointly undertaken by women and by men. The work

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[1]) Boas, Anthropology. l. c., pp. 82 sq.
[2]) Müller-Lyer Die Zähmung der Nornen, pp. 224, and 231 sq.

is still partly carried out collectively. Its productivity increases considerably.[1]) The status of woman thus loses its relatively privileged character. Her new situation varies widely according to the specific type of the general new situation.

III. Rice Irrigation.

Another factor which may urge men to take up cultivation is irrigation. For about fifteen years we have tried to draw attention to the existence and function of this particular factor of China's economic history. Recent discoveries, above all the Shang inscriptions, have modified or made obsolete many details of the original conception. Its substance however has not only not been refuted but has been strongly confirmed. Wong Wen-hao has pointed out the importance of water-works in general during the later period of the Chou dynasty.[2]) Hsü-Chung-shu traces the history of water-works and irrigation much further back. Not only do early Chou bronzes contain passages concerning rice, but — Hsü insists — irrigation devices go back into prehistoric time. They „cannot be limited by historical records."[3])

Hsü's position seems to find support in the Shang inscriptions. Even more interesting is the discovery of rice in two Neolithic sites, in Yang Shao and in Kansu.[4]) Did the climate of that period permit cultivation of rice? And if so, was such cultivation actually undertaken?

The climate may have been slightly warmer than it is today.[5]) That certainly would have facilitated the growing of rice. But even without any additional warmth rice may have been cultivated in some well-sheltered spots. Today not only in Korea and Manchuria but also in North China rice is grown under favorable conditions. The cereal is cultivated in several districts of Hupeh province.[6]) In some regions of the Yang Shao province, Honan, rice fields cover from 60 to 70 % of the cultivated area; they

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[1]) Menghin, Steinzeit, p. 511. Lowie, Subsistence, p. 298.

[2]) Wong Wen-hao, A Commentary on the Historical Development of Irrigation Works in Ancient Times. (Ku tai kuan chiao kung ch'eng fa chan shih ti i chieh.) Academia Sinica. Studies presented to Ts'ai Yüan P'ei on his Sixty-fifth Birthday. Part II. Peiping 1935, pp. 709 sq. (In Chinese.)

[3]) Hsü Chung-chu, The Origin of Irrigation in Ancient China. (Ku tai kuan chiao kung ch'eng yüan ch'i k'ao.) Academia Sinica. Bulletin of the Institute of History and Philology, Vol. 5, Part 2, 1935, p. 260. (Chinese.)

[4]) Cf. notes 146 and 147.

[5]) Bishop, l. c., 390. Creel, The Birth of China, p. 74.

[6]) Chung Kuo ti li hsin chih. (New Chinese Geography.) Shanghai 1935, Part II, p. 123. In Chinese.

produce the local rice supply for the middle and upper classes if not for the whole population.[1]) Rice therefore could have been grown during China's Neolithic age even if it was not warmer at that time than it is now.

Rice may have been introduced from other parts of Asia either just to be consumed or to be reproduced by agriculture. The two possibilities are not mutually exclusive. They may well have been complementary, indeed, the first may have led to the second. As soon as rice was recognized as a delicacy, a grain-growing society sooner or later would try to secure a permanent supply for itself by planting it at the spot. This „spot", of course, could only be rather limited, first perhaps for climatic reasons, and second because of other geographical conditions. The rice fields had to be established at the foot of the loess terraces where the hillsides protected the sensitive plants, while the marshy lowlands provided the necessary amount of humidity.

A whole series of finds and literary records from the Neolithic finds down to the Chou writings seems to indicate that rice was not only eaten but also produced early. Only the attitude of the Chou Ritual, which has already been mentioned, need be recalled here. In the „Book of Ceremonies" millet is the most sacred crop, but rice is not excluded from the religious rites. A woman offers the rice, just as she offers millet and wheat. Does this magic act perhaps go back to an early period of Neolithic rice cultivation when this grain, like the others, was still exclusively handled by women ? The possibility at least of such a beginning cannot well be denied completely.

IV. Copper and Cattle.

Besides terracing and irrigation Boas further mentions the utilization of domestic animals in agricultural work such as ploughing. When China's written history begins, ploughing with the help of draft animals is not yet practiced, but men work on the fields and domestic animals are bred. Cattle breeding sets in at the same time that metal is first used, during China's Aeneolithicum. Up to „Yang Shao I and after" the domestic animals in China's Neolithic villages consisted only of the pig and the dog. During China's Bronze Age (Shang and earlier Chou) the breeding of sheep, oxen, and horses was highly developed. At some time between the era of the Red Pottery and the period of late Shang the large

[1]) l. c., Part V, p. 162.

herds which the Shang records enumerate must have sprung into existence.

Lung Shan I is a representative site of the first post-Red-Pottery period. Black pottery is found there together with bronze implements, with the pig and dog, and with the remains of animals which the Red Pottery sites do not contain : the horse, sheep and ox.[1]) After the pig and dog the bones of the horse and ox are the most numerous. This fact increases the possibility that both animals were bred there.[2]) The phenomenon is of great interest. From Richthofen until today Western scholars have indulged in the theory of the Western origin of China's higher civilization, namely irrigation, metallurgy, script, money, astronomy, and cattle-breeding.[3]) Rice certainly came from outside. Its early home is Southern Asia. Metal (copper) was used in China's early Aeneolithicum, certainly in Shantung and perhaps in Kansu[4]), that is, if the metal-bearing sites of Kansu are contemporary with Lung Shan I or at least are pre-Shang. In Shang times bronzes are highly developed, but the copper and bronze implements of the preceeding Black Pottery Age are relatively crude, the Kansu forms assuming „geometric shapes of almost childlike simplicity."[5]) Now, if it is possible to trace in a given area „the successive stages through which it (a new trait) has evolved to its fully-developed form, a strong case for its origin in that country will have been made out."[6]) Applied to China this means : If an inner connection between the simpler forms of bronze and copper of the Black Pottery Age and the mature bronzes of late Shang can be proved, or at least reasonably assumed, then the endogenous development of metallurgy becomes highly possible, even if the earliest elements of the technique were introduced from the West.

Before the latest discoveries very brilliant scholars could still voice the opinion that China's Bronze Age appeared from the first as a highly developed one and that it „as an integral complex, reached China by way of the Central Asiatic Steppe belt."[7]) Now recent discoveries show that China's early Aeneolithic age was obviously not yet very highly developed. It certainly did not form

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[1]) Ch'eng Tzŭ Yai, Chung Kuo k'ao ku pao kao chi chih i. (Archeologia Sinica, Vol. 1.) Nanking 1934, p. 91.

[2]) Creel, Studies in Early Chinese Culture. Baltimore 1937, p. 189.

[3]) Richthofen, China, Vol. I, pp. 48 and 427 sq.

[4]) Ch'eng Tzŭ Yai, l. c., p. 89. Cf. Plate LII, piece 6-9. Andersson, Preliminary Report, p. 21.

[5]) Creel, Studies, pp. 232-234.

[6]) Sayce, l. c., pp. 255 sq.

[7]) Bishop, The Beginnings of North and South in China. l. c., p. 307.

an integral complex. The sites of Kansu and Manchuria contain metal, but no big cattle. Cattle have been found so far only in Shantung, not in the Western provinces where introduction from Central Asia would have caused them to appear first, but instead in the most Eastern part of Northern China.

It certainly is still too early to make any definite statement about the roots of China's Bronze Age civilization. But the new discoveries permit us at least to claim that the origin of China's bronze civilization is much more complex and probably also more endogenous than Richthofen and his successors, from their standpoint not without plausibility, had been inclined to assume.

V. Wealth, Power, Social and Political Differentiation.

The Black Pottery Age in its advanced form produced walled cities and bronze weapons, knives and arrow-heads.[1]) The society differentiated itself into town and village. The village, with cattle-breeding and pottery wholly in the men's hands[2]) and cultivation at least partly falling under their control, continued to reduce the position of women, who became more and more overshadowed by the increasingly influential male section of the rural society.

In an early planting order slaves are only of limited use.[3]) After men entered agriculture during the later Neolithic, slaves could be utilized much more advantageously. Besides by inner differentiation — crime, debt[4]) — they are acquired by warfare. They can thus be acquired more easily and more abundantly by means of an increasingly powerful military equipment.

Within the local groups, tribes, and confederacies the clan probably continued to exist and to form the center of property and production.[5]) Comparative anthropology suggests this point which is well supported by China's literary tradition. With stored crops, with cattle and metal, a new type of social differentiation grew. Richer and more powerful groups developed beside poorer and weaker ones.[6]) War, at this level of society, intensified the new differentiation and facilitated the establishment of a closed upper

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[1]) Ch'eng Tzŭ Yai, pp. 27 sq., 89, Plate LII.
[2]) Boas, Anthropology, p. 83.
[3]) Thurnwald, Staat und Kultur. l. c., p. 216.
[4]) Landtman, The Origin of the Inequality of the Social Classes, pp. 232 sq. Thurnwald, Staat und Kultur, p. 208.
[5]) Thurnwald, Werden, Wandel und Gestaltung des Rechtes. Berlin und Leipzig 1934, pp. 36 sq.
[6]) Landtman, l. c., pp. 75 sq. and 288.

group or „society".[1]) Oppenheimer's conception of the state as a product of conquest has recently received more and more criticism. Its validity, when upheld at all, has been limited either to the Old World,[2]) or to a still smaller realm.[3]) The phenomenon of conquest has indeed to be re-interpreted on the basis of what Lowie calls the category of „selection." Conquest leads to the establishment of a stratified society and the political organization of a state only in very definite socio-economic circumstances. Only if the conquered society is capable of supporting an upper stratum, i. e. only if in the old order the economic conditions of a new stratified society have already arisen, can the new order actually take shape. Thus conquest may accelerate the process of differentiation and it obviously does so especially where the agriculture-nomadism relation prevails. But it accelerates only, it does not take the place of inner development.

Planting and cattle-breeding societies in the same area did not occur in America, in the South Seas, and in parts of the Old World. On the other hand, this kind of proximity was of great significance in parts of Africa, Europe and Asia.[4]) Border wars between China's late Neolithic and early Aeneolithic rural communities on one hand and nomadic cattle-breeders on the other doubtless intensified the growing social differentiation of the sedentary planting communities.

But be this as it may, the above defined differentiated development toward the establishment of a proto-state in Aeneolithic North China, even if intensified and accelerated by nomadic conquests, has very little in common with the crude creation of a new social and political order wholly imported in a mechanical way by conquest.

The trend of China's early history may be shown in different aspects. From the standpoint of the development of its socio-economic forces the character of the basic factors of production and their technical and social interplay assume decisive significance. Taking as a basis the foregoing analysis it is possible to arrange into a table the fundamental categories of China's prehistoric economic order.

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[1]) Boas, Anthropology, l. c., p. 88.
[2]) Lips, Government, p. 526.
[3]) Lowie, The Origin of the State. New York 1927, p. 42.
[4]) Wittfogel, Die Theorie der orientalischen Gesellschaft. Zeitschrift für Sozialforschung, Vol. VII, No. 1/2, 1938, pp. 93 sq.

Elements and forms of work		Periods			
		Palaeolithic		Neolithic	Aeneolithic
		Early	Late		
Implements of labor		Besides wood and bone, stone, chipped and flaked	Stronger implements, better worked	Wood, bones, polished stone	Same, plus copper and bronze weapons
Objects of labor		Plants and smaller animals (easier of access)	Plants and bigger animals	Millet, wheat, rice (?), pig	Same, plus horse, ox, sheep, fowl
Treatement of object of labor		Seized (gathered, hunted, fished)	Same, with intensified effect	Reproduced (planted, bred)	Same system, intensified and amplified
Organisation of labor (high + low —)	Men	+ (—)	+	+	+
	Women	— (+)	— (+)	+	(+)
Life gained by*)	Food-gathering	+	+	—	?
	Hunting, fishing	+	+	(+)	—
	Agriculture	none	none	+	+
	Cattle-breeding	none	none	—	+

*) Degree of importance expressed by : +, meaning : highly important;
or : —, meaning : of lesser importance.
Symbol in paranthesis (+) or (—) indicates the restricted character of the symbolized tendency or counter-tendency.

La société préhistorique de la Chine.

Les fouilles effectuées au cours de ces dernières dizaines d'années, ont modifié profondément le tableau qu'on se faisait de la préhistoire chinoise. Au début du xx^{e} siècle, les savants les plus connus pouvaient encore mettre en doute l'existence d'une époque néolithique chinoise — mais depuis lors, l'activité de l'archéologie a mis à jour un vaste matériel et paléolithique et néolithique. Le présent article, extrait du premier volume d'une histoire économique et sociale de la Chine, donne une vue d'ensemble du matériel nouvellement acquis et cherche à le mettre en valeur pour une considération sociologique.

L'homo pekinensis, l'ancien habitant de la Chine paléolithique du Nord connaissait le feu ; il se servait d'instruments et d'armes en pierre travaillée. Aux deux degrés de son évolution de chasseur primitif et de chasseur évolué, correspondent deux degrés de perfection de ces instruments. Il semble bien que les prisonniers aient été tués (et mangés ?) sans distinction d'âge et de sexe. Les chasseurs ne sauraient que faire du travail d'esclave.

Vers la fin de l'époque néolithique chinoise se produisit un épanouissement que la rare perfection de la céramique „rouge" et „noire" indique assez bien. La filiation somatique de l'homo pekinensis et du Chinois des époques ultérieures est probable ; il semble hors de doute que l'homme de l'époque néolithique soit du même type que celui de la Chine historique. Primitivement, l'agriculture (à la houe) était faite par les femmes, qui

en même temps confectionnaient à la main — par la suite au moyen d'une plaque très simple — la céramique „rouge" ; les hommes continuaient à s'occuper de la chasse et de la pêche. Dès lors apparaît, encore qu'assez vaguement, une civilisation démocratique et paysanne, caractérisée probablement par des éléments matriarchaux. Vers l'époque de la céramique „noire" se produit la transition vers l'élevage et à la céramique qui connaît alors le tour de potier — ces deux sortes de travaux incombent aux hommes. L'agriculture se fait plus intense, c'est peut-être ici qu'il convient de supposer les premiers débuts de la construction de terrasses et de l'irrigation. Les esclaves trouvent un emploi, une différenciation sociale se produit, c'est l'origine des villes. La société agraire primitive fait place à un ordre nouveau. Celui-ci s'exprime socialement parlant par une noblesse de clan primitive, politiquement par l'État.

Les découvertes les plus récentes de l'archéologie chinoise apportent de nombreuses preuves pour l'évolution telle qu'elle vient d'être esquissée. L'analyse des mythes archaïques et des contes populaires de la Chine confirme, par la suite, au moyen de l'anthropologie ce que l'étude avait jusqu'ici rendu hautement probable par les méthodes de l'archéologie.

Chinas vorgeschichtliche Gesellschaft.

Die Ausgrabungen der letzten Jahrzehnte haben das Bild der chinesischen Frühgeschichte grundlegend geändert. Während noch zu Anfang des 20. Jahrhunderts führende Gelehrte die Existenz eines chinesischen Neolithikums bezweifelten, hat seither die Tätigkeit der Archäologie sowohl paläolithische wie neolithische Funde in grosser Reichhaltigkeit zutage gefördert. Der vorliegende Aufsatz — Sektion I des ersten Bandes einer Wirtschafts-und Sozialgeschichte Chinas — gibt einen Überblick über das neu gewonnene Material und sucht es sozialwissenschaftlich auszuwerten.

Homo pekinensis, der (früh) altsteinzeitliche Bewohner Nordchinas kannte das Feuer ; er benutzte Werkzeuge und Waffen aus behauenem Stein. Zwei Stufen der Bearbeitung seiner Geräte deuten zwei Stufen seiner ökonomischen Entwicklung an, die des „niederen" und des „höheren" Jägertums. Gefangene scheinen ohne Unterschied von Alter und Geschlecht getötet (und verzehrt ?) worden zu sein. Jäger haben für Sklavenarbeit keine Verwendung.

Reich entwickelt ist Chinas (spätes) Neolithikum, dessen „rote" und „schwarze" Töpferei von seltener Vollkommenheit ist. Der Zusammenhang des homo pekinensis mit den späteren Chinesen ist somatisch wahrscheinlich, die Zugehörigkeit der Bewohner des chinesischen Neolithikums zu dem geschichtlichen Chinesentum scheint ausser Zweifel. Ursprünglich wurde offenbar der Ackerbau (Hackbau) von Frauen betrieben, die zugleich mit der Hand — und später mit einem einfachen Drehrad — die „rote" Töpferei herstellten, während die Männer fortfuhren zu jagen und zu fischen. Das Bild einer primitiven demokratischen Dorfkultur mit vermutlich mutterrechtlichen Zügen wird andeutungsweise sichtbar. Es folgt zur Zeit der „schwarzen" Töpferei der Übergang zur von Männern

betriebenen Viehzucht und zu einer mit der Töpferscheibe von Männern durchgeführten Töpferei. Der Ackerbau wird intensiver, die ersten Anfänge von Terrassenbau und Bewässerung liegen vielleicht hier. Sklaven werden verwendbar, soziale Differenzierung tritt ein. Städte entstehen. Die primitive Agrargesellschaft verwandelt sich in eine Ordnung neuer Art, deren sozialer Ausdruck ein primitiver Clan-Adel, deren politischer Ausdruck der Staat ist.

Die jüngsten Entdeckungen auf dem Gebiete der chinesischen Archäologie erbringen zahlreiche Beweise für einen derartigen Entwicklungsgang. Die Analyse von Chinas archaischen Mythen und Volkserzählungen bestätigt im Fortgang der Untersuchung mit den Mitteln der Anthropologie, was die hier gebotene Darstellung mit den Methoden der Archäologie bereits in hohem Grad wahrscheinlich gemacht hat.