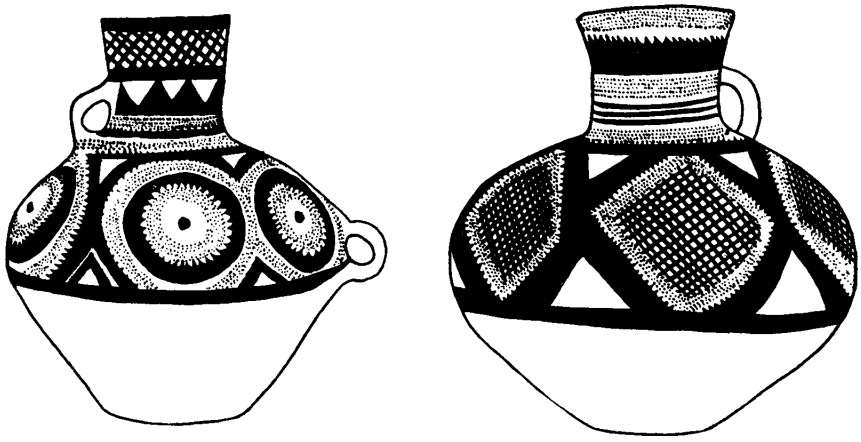

A B

FIGURE 1

TWO PAW-SHAN WARE PAINTED JARS FROM NORTHWEST CHINA, MIDDLE OF THE 3RD MILLENIUM B.C., SHOWING DESIGNS IMITATING APPLIQUÉ WORK.

EARLY TEXTILE PRODUCTION IN CHINA

By PHYLLIS ACKERMAN *

THE cultural history of China is today coming into the third phase through which it has passed since it first engaged the organized efforts of Western scholars about a century ago. Initially, the tendency was to take literally Chinese traditional accounts of their own early developments. A negative reaction followed, largely under the influence of Germanic pseudo-science, "*Methode*," that false research technique which has sterilized so much work in the humanities during the last six or seven decades; for this usually involves, as one of its various fallacies, the assumption that mere rejection can be substituted for criticism, though that should be evaluative and constructive. This typically arrogant device for the evasion of fundamental problems and genuine intellectual methods has been an important factor in the recently completed suicide of the Germanic civilizations. Now at last, as we all too slowly free ourselves from German influences in humanistic studies, the value of Chinese traditions is being increasingly and truly critically reaffirmed.

Outstanding amongst the recoveries incident to this long overdue liberation from Germanic superficialities is the reinstatement by extensive further cultural historical research of the brilliant and basic contribution of L. de Saussure to the history of early Asiatic religion.[1] De Saussure, developing prior work of the famous French sinologist Biot, defined the polaric cult, which the first metallurgists evolved from observations of the constellations circling about Polaris and disseminated as their craft religion, both exoteric or public, and esoteric or secret and usually more or less mystical. Moreover, calculating from the astronomical data, de Saussure estimated that the system was formulated prior to 3,000 B.C. and transmitted to China in the twenty-fifth century B.C. West Asiatic

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archæological material, now rendered comprehensible by means of de Saussure's insights, confirms the former conclusion; the painted pottery found in Kansu and West Honan,[2] dated by internal evidence from the middle to the end of the third millennium B.C., equally confirms de Saussure's understanding and dating of the Chinese branch of the cult, for this, also, with other related archæological material, yields on analysis a consistent complex of polaric elements.

And this mutually substantiated chronology provides, in turn, probable authentication for one of the traditions tenaciously maintained by the Chinese themselves—though for a time likewise subjected to the pseudo-critical negativity of *Methode*—that the silk textile craft was initiated in the middle of the third millennium B.C.; for certain classes of the painted pots show ornament clearly copied from needlework which could have been executed only in a fine, soft material;[3] and as "grass" and bark-fiber cloths are the only other ancient woven materials of Far Eastern Asia—wool not having been used, and cotton not brought in until many centuries later—the indications point almost conclusively to silk.

Specifically, the Chinese story goes—and Chinese traditional history is very specific—that the silk culture and craft were introduced by Hsi-ling Shih, consort of Hsuan Yuan,[4] known as Huang Ti, the Yellow Emperor. This ruler was the first of the Five Sovereigns and therefore generally accounted in the tradition the first true sovereign of China, though he was preceded by the Three August Ones (Fu-hsi, Nü-kua—or the two together—followed by Chu-jung and Shen-nung), type-figures, part ancient divinities, part culture-heroes.

Huang Ti, whose reign dates are put at 2698-2598 B.C., or by an alternate and more satisfactory calculation at 2491-2448 B.C., is credited with the introduction of various new resources such as carts, and bows and arrows and other innovations consistent with the culture which produced the painted pottery. Furthermore, he is regarded by the Taoists as the founder of their religion,[5] which is a reformed version of the polaric cult. Thus their tradition accords with de Saussure's calculation, and both coincide with the archæological evidence.

One style of this painted pottery, called Pan-shan ware from the center round which the bulk of the examples has been found, is characterized by patterns representing well-evolved needlework, possible only with good-quality textiles. For many of the designs are unmistakably adapted from quite elaborate appliqué-work. The appliqué motives on the textiles used as models had been sewn with parallel rows of running stitch

at some distance in from the edges. These were left free and either pinked or fringed, a skilled means of obviating fraying without involving the clumsy effect unavoidable with a hem (Figure 1).

The utilitarian source of this purely ornamental appliqué is traceable likewise on the pottery, for a considerable series of these painted pottery vessels have been copied from leather bags—bulged by the pressure of liquid contents—made with seams reenforced by laying over each a broad panel, stitched at either side and also multiple-stitched above the seam to strengthen and tighten it.[6] That the panels applied for this practical purpose did give rise to the idea of ornamental appliqué is somewhat supported by the circumstance that the cloth appliqué, in turn, affected the leather reenforcing panels, for these also are shown pinked, though there was, of course, no fraying problem with leather.

Other pots show appliqué bands connected with straight faggoting, or appliqués of net, very wide-meshed, edged with pinked or fringed cloth. Still other pots "wear" on their shoulders a "cape" of net, similarly edged and cut in deep-fringed lobes, while actual capes of this same type are likewise shown on pottery busts crudely modeled in the round, and painted, originally used as vessel-covers. The dressmaking skill implied by these fancy garments is also, though less directly, reflected by tiny well-made buttons, chiefly marble, found with some of the pottery;[7] and suitable to such needlework are the comparatively fine bone needles recovered on some sites.

A silk cocoon, excavated with neolithic remains, had been cut in half —some consider deliberately—implying the existence of the industry at the period; but others doubt the evidence.[8]

Other early or primitive instances of appliqué work are more or less significant, in connection with this evidence for its ancient use in China. The Pazyryk material,[9] usually dated somewhere between the fifth and third centuries B.C., includes felt appliqué, with naturalistically shaped feline heads, a convention so sophisticated as to render probable a considerable prior development. A bronze plaque of about this same period, from the Ordos region, in the possession of C. T. Loo and Company [10] (Figure 2), reproduces in its style all-over heavy-cord appliqué (*i.e.*, couching); and the Noin Ula material, datable at the turn into the Christian era, includes a quilted woolen carpet with comparable animal motives executed in this solid couching.[11]

The Ainu, the non-Mongolian people, who have lingered on in Japan —chiefly confined now to Hokkaido—decorate their ceremonial gar-

FIGURE 2

CAST BRONZE PLAQUE FROM THE ORDOS REGION. *c.* 6TH CENTURY B.C. IMITATING CORD APPLIQUÉ (COUCHING). COURTESY OF C. T. LOO & CO.

ments with elaborate abstract motives in appliqué.[12] The materials now used are Japanese, as is probably the cut of the garment, but the style of decoration is distinctive and consistent and seems to be their own. The Ainu economy today corresponds to a very early neolithic phase, pre-agricultural, pre-pottery, with only wood and bark vessels, but with bark-fiber weaving and the domesticated dog. Their religion is a primitive polarism. But whether this economy is a reversion or a retention is ambiguous, for some at least of their number learned to make pottery round the turn of the Christian era and persisted in the craft until a century or so ago.[13]

Finally, Esquimaux trim women's fur garments, especially, with dyed-leather appliqué, sewed with sinews and a bone needle. Their economy is essentially late palæolithic (Magdalenian).

Meanwhile, in the late Shang period (*c.* 1300 B.C.) there are traces, noted by Miss Vivi Sylwan, of silk patch-work.[14] This is technically and æsthetically a poor relation of appliqué, but these indications of the long prior history of appliqué may answer Miss Sylwan's query: "Are there ancient traditions behind the above-mentioned Chinese custom or cult or have the Chinese taken it from their nomadic neighbors and adapted it to their own specific material, silk." Since there are other lines of ideational continuity between the painted pottery and basic elements of Shang culture, there may well have been continuity in the technique of combining small shaped textile pieces to attain a decorative effect, and the nomadic uses of the various forms of this technical conception may well have been collaterally developed.

Numerous spinning whorls are found with this style of painted pottery but these are so heavy that they would have sufficed only to make yarn for coarse cloth; and similar coarse cloth (in addition to matting) is imprinted on many potsherds. Silk, however, was sometimes used by the Chinese of the Shang period, and doubtless earlier, as reeled from the cocoon, unspun;[15] and when spun, as it was also in the Shang times, not whorls, but the twirling stick method was used, and this was so well developed by this time in the Middle East, that the spindle was sometimes made of bronze, beautifully wrought and carefully weighted.[16]

The standardization of the "three kinds of silk" is attributed to the Emperor Yao,[17] whose reign is put at about 2357-2256 B.C., just prior to the Hsia dynasty (2205-1766). These "three kinds of silk" were among the articles which nobles had to bring with them as ceremonial presents for the King in order to gain audience, and they seem to have

been three colors rather than three qualities of silk, in the judgment of later Chinese commentators. If so, the statement probably means that this was when dyeing was introduced; for Chinese religious tradition, very conservative, retains a well-marked memory of that technical event, implying an established silk-craft prior to a knowledge of dyes.[18] The third millennium immigration from the West was not singular, judging from well-marked differences in pottery styles, but at least quaternal and probably sequential. Dyeing had long since been practiced in the West, and a small group of craftsmen included in a population movement would have been sufficient to bring the knowledge to China.

According to the Chinese the Hsia was the first of their dynasties, but this is still pooh-poohed by conventional Western scholars who have not yet become critical of automatic negativisms, despite the fact that they likewise rejected the next, Shang dynasty, until archæological proof brought them embarrassment, though all too little repentance. What purport to be, and could be, specifications of Hsia tribute levies show widespread and varied textile production. For instance,[19] Yu Chow (comprising Honan and the department of Yun-Yang in Hupeh) is said to have sent "hemp, a finer hempen cloth, and coarser hempen cloth . . . fine silken fabrics, and fine floss-silk." From Yung-Chow (the north of Shensi and Kansu) came hair-cloth. This was a backward region. Ts'ing-Chow (T'ae-shan) sent "fine grass-cloth [made of *Dolichos tuberosus* fibers] . . . silk, hemp," while wild tribes brought in "silk from the mountain mulberry," which provided a diet that caused the worms to produce a tough fiber suitable for lute-strings.

Silk production in the late Shang period is documented by finds at An-Yang, the site of the last Shang capital, notably actual silk fibers, and possible references to the material in "oracle-bone" inscriptions,[20] while at least two bronzes have preserved in the surface deterioration traces of five fairly fine textiles in which they had been wrapped.

Three of these, all excellently analyzed and reported by Miss Sylwan, are cloth-weaves:[21] a plain, loose, medium fine cloth, with warps to wefts in, roughly, a 4:3 proportion (*i.e.*, *c.* 40, 30 to the cm., respectively), both of unspun silk as reeled from the cocoon; and two reps, one nearly twice as fine as the other and both with an approximate 2:1 warp-weft relation (*i.e.*, to the cm., respectively, *c.* 72:35, *c.* 40:17).

The other two are technically more complex and perhaps somewhat controversial, for they have been claimed as evidence of Far Eastern priority in twill weaving. One (designated as *B-C*, on a late Shang axe-

head [*ch'i*] from An-Yang, in the Stockholm Ostasiatiska Samlingarna), is described as "twill with a mixture of tabby weave. The twill scheme: under 1, over 1, under 1, over 3 threads, corresponds to tabby weave." It is hazardous to challenge such an obviously competent and experienced technical analyst as Miss Sylwan, and unfortunately she gives only a coordinate, not an analytical, graphic weaving scheme, but from this, the photomagnigraph and the verbal description, the fabric certainly seems to be not a twill but an approximately balanced cloth, two-thread warp and weft and extra untwisted (soft, flossy) weft(?), apparently alternating with the main weft(?) and floated over three to pattern—*i.e.*, compound fancy cloth (or if preferred, compound diaper), with the characteristic diaper pattern (accepting Miss Sylwan's somewhat tentative identification) of triple concentric lozenges. This is not a mere terminological difference, but really fundamental, a logical (or to be awkwardly accurate, a technical-logical) distinction. For twill is in conception a system of binding, but this, on the contrary, involves merely a system of floating, for a pattern, not for a structural purpose.

The other piece, reconstructed from traces on another late Shang bronze, an "urn," likewise from An-Yang, similarly is sketched as having the presumed twill weaving only as floats to pattern, in a succession of angles, on a vertical axis but of varying degrees. It is specified that there is no cloth weave, but the character of the remainder of the fabric is not clear, being indicated as uneven floats in the opposite (presumably warp) thread system.

In short, as this evidence now stands, there is still no reason for changing the statement that twill weaving is first found in West Asia, probably Syria, more than a thousand years after this.[22]

When descriptions of the textile industry in China first become available under the Chou dynasty (1122/1049—249 B.C.), production is entirely domestic. It is, however, professional, not only doubtless technically, but also economically, in the sense that it is the central business of the class mainly concerned. This is the peasant woman, for in the classical Chinese economy woven stuffs have been produced not as a branch of artisanry, but as the female aspect of agriculture.

The sex division of labor here is, moreover, complete, and that is characteristic of Chinese thinking; for in their religion is preserved, even into the present, that sharp dichotomy of the cosmic Power into male (originally sky) and female (in the first instance earth) which was the decisive advance of thinking in the neolithic period, incident to the development

of tillage and of animal-domestication, with consequent controlled breeding. This emphatic distinction between the sexes permeated the foundations of their life, and in the rural community involved even, as the work was organized, seasonal separation of domicile; for the fields were apart from the village, and during the intensive cultivation period each year the men moved out to temporary quarters on the land. Consistent with this sharp sex-division of labor, the women, unlike the women of almost every other known early, or early type of culture, did not do field-work.

Textile-fiber cultivation, on the other hand, was provided for in a sufficient plot of land immediately adjacent to each house.[23] There was the mulberry grove for the silk-worms; there, too, hemp was grown; while dolichos plants and trees, from which were obtained fibers for utility cloths, were evidently growing wild in communal lands where the women went to gather them, as they did various other fiber-plants, such as thistles and reeds.

In these early centuries there was evidently no specialized subdivision of work within the craft. We hear of farmers' wives and daughters cutting the fiber-plants or mulberry leaves, steeping and stripping the former, feeding the silkworms, reeling the floss, spinning, dyeing, weaving. There is no sign of departmentalization. The same workers carry through all the processes, and they are all women.

The clear division but interrelation of the two phases of domestic rural labor—textile production and agriculture—is epitomized in an astronomical myth still popular and repeatedly told by Chinese poets, especially in the T'ang period, of the Spinning Maiden and the Herd Boy.[24] Shih Nü, the Weaver Girl, today patron-goddess of women weavers and needle-workers, invoked by them to improve their skill, is Vega. Shên-hsien-t'ung, the Herdsman, her husband or lover, is Aquila. They are separated by the river of the Milky Way which she can cross (on a bridge of magpie wings) only one night a year: the seventh of the seventh moon.

The King, with his courtiers, and the Queen, with her ladies, ceremonially performed the same labors as their rustic subjects. This had a dual purpose: it accorded with the idea that the Sovereign, and through him his consort, represented a concentration of the cosmic Power, and by symbolically plowing a dedicated field, and raising silk,[25] respectively, they imparted that Power to these activities, thus assuring to them, throughout their domain, prosperity. But in the second place, they also set, thereby, examples for their people.

As the peasants paid taxes in grain, so their women paid it in lengths of stuffs. For the rest, each household was supposed to consume its own output, in both food and clothing products. Consistent with this, the textile arts were not by any means confined to the peasant class, but were the business of women on up through the social hierarchy. Thus, a girl of the official class, the Chinese aristocracy, in Kiangsi province in the late Han period (196-220) describes her education:

> "At thirteen I learnt to weave silk,
> "At fourteen I learnt to make clothes.
> "At fifteen I could play the flat harp," etc.[26]

And an account from the *Lî Kî* undoubtedly refers to a considerably earlier period: "A girl at the age of ten ceased to go out (from the women's apartments). Her governess taught her (the arts of) pleasing speech and manners, to be docile and obedient, to handle the hempen fibers, to deal with the cocoons, to weave silks and form fillets, to learn (all) women's work, how to furnish garments. . . ." [27]

But though thus a domestic usufacture, the craft was subject to some governmental regulations. Thus it was forbidden to cut indigo plants before they had reached a certain stage of maturity.[28]

The system, moreover, was already being compromised in the later Chou centuries. By the eighth century B.C. silk was being sold, for an *Ode* of that period recounts a girl's unfortunate marriage with a lad whom she had met when he came by her parents' home peddling silk.[29] And Chuang Chou (third century B.C.) tells of a man of Sung whose family had "for generations made the bleaching of silk their business." [30] The indication here of craft inheritance (common throughout Asia) as a tendency, though apparently not a prescription, also is interesting.

The disruption of both strict usufacture and of female domestic specialization was probably coincident with the development of merchandising, for a trading middle-class first begins to be evident in the late Chou period. In the Han period (206 B.C.-220 A.D.) commerce grew to such proportions that the Government became alarmed at the concurrent diminution in food supplies, and undertook to discourage trade. The merchant class was officially socially discredited, and sumptuary laws appear. But international channels had opened up, especially for textile products. Silk and silk stuffs were crossing the desert to Iran en route to Syria and

Rome. Profit spoke louder than derogation, and while domestic usufacture in this craft has not yet ceased in China, and women still work at it, bulk production has for centuries sustained professional male guilds which have in turn given way, during the last decades, in large part to Western industrialization.

NOTES FOR EARLY TEXTILE PRODUCTION IN CHINA

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20. Creel, *loc. cit.*

21. Sylwan, *op. cit.,* pp. 119-126.

22. It is, however, curious that, in reaffirming this, W. R. Pfister and Miss Louisa Bellinger (*in* The Excavations at Dura-Europos, Final Report IV, Part II, The Textiles, New Haven, 1945, pp. 2, 3) did not take any account of Miss Sylwan's work.

23. *e.g.,* Mencius III, 4; VII, 21: Lin, *op. cit.,* pp. 749-750, 756-7, 765.

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27. Lî Kî, X. II. 36: Legge, *op. cit., S.B.E.,* XXVII, p. 479.

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