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HISTORICAL OVERVIEW OF TRADITIONAL WEAVING OF UZBEKISTAN

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Abstract:
A loom in the history of mankind was one of the greatest inventions that met people's needs of vital items, such as fabrics for clothing and a variety of woven carpets for home insulation. In the process of historical development of society, skills in technology of weaving and in the device of looms were improved. As a result, woven products, which initially played exceptionally functional role, due to decorative pattern that was applied on it began to acquire an artistic appearance.

Keywords: weaving, clothing

A loom in the history of mankind was one of the greatest inventions that met people's needs of vital items, such as fabrics for clothing and a variety of woven carpets for home insulation. In the process of historical development of society, skills in technology of weaving and in the device of looms were improved. As a result, woven products, which initially played exceptionally functional role, due to decorative pattern that was applied on it began to acquire an artistic appearance. The quality and characteristics of the decor of fabrics and carpets in many respects depended on technological features of looms, which, despite the universality and unity of the principle of interlacing of weft and warp threads, nevertheless, in various regions had their specific characteristics and external shape.

In the historical past (before the beginning of the XX century) the main way of life in the territory of modern Uzbekistan was agricultural (sedentary) and nomadic (cattle-breeding), which largely defined the nature and essence of the traditional aesthetics and culture of the peoples of the region. This differentiation was of particular importance in the forms and types of traditional dwellings and art crafts, where the line of separation of cultures of sedentary and nomadic peoples was most evident. If in the culture of indigenous population prone to sedentary-agricultural and urban lifestyles there is a variety of stationary traditional dwellings of well-established building materials – burnt and mud brick, then for the population with a nomadic way of life, the most common type of housing was a portable dwelling - a yurt, the most adapted for cattle breeding management. Depending on life conditions and everyday life there was also a difference in art crafts. The nomads, whose the main household raw material was sheep and camel wool, made numerous woolen products and fabrics on mobile machines for decorating yurts, clothes and horse or camel attributes. Despite the simplicity of the device of quickly folded narrow-beamed looms and constant movement of nomadic tribes, craftswomen managed to create unique, mostly without pile carpet products with a skillful and original pattern. In the urban culture, looms served primarily for manufacture and production of fabrics mainly from various sorts of cotton and silk threads, which were used to manufacture of household items and traditional clothing. Looms in the city were stationary and, along with horizontal weaving looms for fabrics, vertical machines for nap carpets were also used.

The time of appearance of looms on the territory of ancient Uzbekistan is unknown, but the fact of the existence of weaving manufacture here, confirmed by material evidence, suggests that the appearance of looms in the region goes back to deep antiquity. Production of fabrics from cotton, and, perhaps, silk thread, on the territory of Uzbekistan in ancient times is indirectly testified by archaeological finds in the form of an eye-trap (Fig. 1) made of ivory in the shape of a human hand for unwinding silkworm cocoon threads[1] and images on wall paintings of local characters in colored clothes (Dalvarzintepa in the south of Uzbekistan, ancient Khorezm, etc.).

More accurate information about weaving production in Uzbekistan dates back to the early Middle Ages, i.e. V-VIII centuries AD. Numerous samples of wall paintings found by archaeologists at the excavations of fortifications of that time, such as Balalyktepa, Afrasiab, Varakhsha, and others, as well as Penjakent in Tajikistan, convey scenes of palace receptions, feasts and royal hunting, the characters of which are dressed in richly decorated fabrics[2]. These

[1]Antiquities of Southern Uzbekistan 1991, 301.
[2]Albaum1975, 15-110.

World Bulletin of Social Sciences (WBSS)
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images are indirect evidence that wonderful fabrics were produced her).

Thus, the production of fabrics of high technical and artistic quality existed in Central Asia already in antiquity and the early Middle Ages. This production was highly valued not only in the West, but also in China itself, in the homeland of silk, where these fabrics were also delivered[3].

Despite the fact that in a number of publications many questions about the history of weaving in Central Asia before Islamic time were revealed and solved, some aspects remained unclear. It concerns, for example, the character and design of Sogdian looms, the composition of dyes, the technique of applying of patterned compositions, etc.

Developed weaving of the early Islamic period was based on rich traditions. The term *zandanechi*, which was mentioned in Muslim written sources (Narshahi) in relation to weaving production in Central Asia of the X century, is widely known and meant cotton fabrics. Despite the use of cotton, these fabrics were of such high quality that they were a sought-after item of export. Narshahi, mentioning Zandana village near Bukhara, wrote: "So-called "*zandanechi*", i.e. paper fabrics, are exported from here. They are so named because they are produced in this village. The fabric is good and at the same time it is produced in large quantities. In many villages of Bukhara, the same fabric is woven and called "zandanechi", because inhabitants of this village began to manufacture it the first of all. They export the fabric to all areas: to Iraq, Fars, Kirman, Industan and others. All grandees and kings sew clothes from it and buy it at the same price as brocade"[4].

Among the branches of handicraft industry in Central Asia from the end of the VII century to the beginning of the XIII century, weaving was one of the most popular and widespread types of production. The most important points of production of high-quality silk and cotton fabrics, as well as woolen fabrics in Central Asia during those centuries before the Mongol invasion were Merv, Bukhara and Bukhara oasis, Samarkand, Rabinjan in its district, Kyat in Khorezm, as well as Termez and Chaganian. The major centers of weaving, producing fabrics for export, were such commercial and industrial villages as Zandana, Vardan, Iskidzhkat and Dabusiya, located in the districts of Bukhara and Samarkand[5].

The high level of weaving art in Bukhara and Merv is evidenced by the descriptions of medieval authors mentioning such weaving workshops as *beit at-tiraz*[6]. The range of products of these workshops indicates the presence in them of looms for manufacture of various fabrics and carpets, which, due to their high quality, came in the form of tribute to the Caliph's treasury.

It is known that during this period there is a noticeable strengthening of the role of the Turkic ethnos in all spheres of public life, including the art craft production, where carpet weaving was the leading one, which preserved traditions of nomadic culture. The production of silk and semi-silk fabrics was traditionally the lot of urban handicrafts. Unfortunately, the samples of Mawara an-nahr fabrics and machine tools of the X-XIII centuries are not preserved in the museums of Uzbekistan.

The variety of types of products and ornamentation of weaving products of the XIV-XV centuries can be judged by the images on miniatures created in the cultural centers of the Temurids' empire – Samarkand, Bukhara, Herat, Tabriz, etc. And although in comparison with the previous period, we still have some kind of visual representation of the nature of the decor and forms of woven products, but neither images of weavers working at the machines, nor schematic images of the device of looms have not yet been found in the miniatures of the late Middle Ages.

In the second half of the XIX century, after conquest of Central Asia by Tsarist Russia various kinds of specialists come here, who studied the ethnic culture of the region. There are drawings and sketches of artists and the first photos depicting the traditional life, economy and types of local peoples. In 1865, by order of the Governor-General of Russian Turkestan Konstantin Petrovich von Kaufman, a unique photo album was created, called the "Turkestan Album", which can serve as an important visual source for weaving art of the region. The section "Trade Part" of this photo album contains images of masters preparing yarn, sellers of fabrics and carpets, and what is important for studying this topic – it contains a lot of photos reflecting the image of traditional looms and process of weaving. The complete set of all volumes and parts of this album is stored today only in three collections: in the National Library of Uzbekistan named after A. Navoi in Tashkent, in the Russian State

[3]Bichurin 1950,310.
[4]Narshahi 1897, 23.
[5]Belenitsky, Bentovich, Bolshakov1973, 270-274.
[6]Narshahi 1897, 29.

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 22, May 2023
ISSN: 2749-361X

Library in Moscow and in the Library of the US Congress in Washington.

In the middle of the XX century, there were numerous studies of ethnographers and art historians, which, along with characteristics of various types of crafts of the Central Asian peoples, provided information about technological processes of production of carpets and fabrics, as well as description of looms. In this regard works by B. Karmysheva in Tajikistan and Uzbekistan and O. Sukhareva in Uzbekistan are of special interest. An important source for studying of carpet weaving and technological processes in Central Asia is a fundamental research made by G. Moshkova[7]. Thanks to this research, we can learn the technology of weaving and the design of looms in Uzbekistan. For example, characterizing the production of fabrics in various ethnic groups of Tajiks and Uzbeks in the southern regions of Tajikistan and Uzbekistan, B. Karmysheva notes that *"...* semi-nomadic Uzbek tribes (both early and late) were characterized by weaving from wool and only on hand-made machines. Even rather thin fabrics used for sewing of clothes, blankets, tablecloths and various small items, as well as nap carpets and paper and silk fabrics that were found as an exception, were made only on the specified manual machines. In cases when the production of cotton fabrics on a foot machine was encountered among the Uzbek tribes, this indicated a significant subsidence of this group and it's mixing with a sedentary population. ... production of fabrics in the settled population – the Tadzhiks and Uzbeks-Chagatais, is characterized first of all by the weaving process on a horizontal foot machine with pedals, and on a machine of the same type, but more primitive device, they weaved also woolen fabrics for clothing. As for production of coarse woolen fabrics and bedding, in this case they used a narrow beamed horizontal hand-held machine of the same type as that widely used among the nomadic and semi-nomadic populations of Central Asia[8].

The loom for production of paper and silk products in Bukhara in the late XIX - early XX centuries was described in detail in the work by O. Sukhareva: "The loom for paper and silk fabrics was rather complex device, consisting of several separate, accordingly operating parts. The opening of shed by simply pressing pedals and the invention of a free-flying shuttle were great technical achievements in mechanization of weaving process. During the work on such machine its working mechanism was set in motion by hands or feet; the shed was opened by pressing the pedal, the weft was fixed movably installed in a special frame with a reed, the fabric was wound on the beam at its turns with a stick, acting as a lever, a well-polished bone shuttle was easily forwarded through the shed. Masters were able to prepare and load into the machine the warp for one or two hundred meters of fabric. However, even on such machine, it was impossible to weave the fabric in the form of a whole piece, since the beam, mounted on low pegs and almost lying on the weaver's lap, could not hold the fabric more than half the clothing. Therefore, the fabric was cut out from the machine in separate pieces on the material; two such pieces (*dzhura*) constituted one unit (one clothes - *yak libos*)"[9] (Fig. 4, a, b)

In the early XX century in Bukhara, a machine of the usual type for Central Asia was used to produce almost all fabrics. Its construction consisted of healds (*gula*) lowered by the pedal, which number was determined by the type of fabric, reed (*tet*) fixed in a movable wooden frame (*dastag*) and beam (*navard*). The machine was installed on pegs or logs dug into the ground, slightly above ground level; footboards (*pomishol*) fell into a pit (*chakhcha*), on the edges of which a plate was laid, which served as a seat for the weaver. The Bukhara machine was differed from machines of this type with the weighted reed frame, which was filled by lead for this purpose. This was necessary because particularly dense fabrics were produced in Bukhara, which made it difficult to fix the weft.

The nature of weaving was defined by the number of healds and alternation of warp threads. Double-sided fabrics of simple plain interlacing (*alocha, bekasab, adras*) were woven on two healds, with two pedals; more dense fabric *kanaus*, although had the same interlacing of threads, was woven on four healds, but connected in pairs with two pedals. The most difficult was the weaving of velvet. It had two-lane warp, one for the nap, silk, ornamented by dressing in the pattern abr, the other - one-color, made of untwisted silk (*homak-bershum*) or cotton, holding the weft. There were two beams too: a silk beam was attached to one of them (*pesh-navard*), which, passing through the heald device, went up to the ceiling, onto the coils of blocks (*gharghara*), as in weaving of all other fabrics; but here the warp had to be stretched weakly, so a small load (1-3 kg) was

[7]Moshkova1970.
[8]Karmysheva1979, 251-264.
[9]Sukhareva1962,141.

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 22, May 2023
ISSN: 2749-361X

attached to its end descending to the ground. The second row of the warp was attached to the second beam (*pas-navard*), from which it went to the frame (*sham-das*tak), mounted at a distance of two meters from the heald machine. Heavy weights (two, 10 kg each) were attached to the ends of the warp thrown over the frame, in order to ensure a strong tension of the warp. The machine had six healds and five pedals. Two healds (I and II) held a paper warp and had one common pedal, four healds (III-IV-V-VI), each attached to a separate pedal, were knitted on a silk warp, forming a pile. The order of pedal pressing was as follows: I and II at the same time, then VI-III separately, then I and II at the same time, then all four pedals with a silk warp (III-IV-V-VI) were pressed at once with both feet. After that, a thin bronze rod was inserted into the warp on which a silk warp for the nap rested, and the weaver cut it with a sharp knife or razor (*poku*), which had a small ledge with which the knife caught on a copper rod: this ensured the smoothness of the cut. The warp immediately rose in the form of a pile and was fixed tightly with a weft. Starting to weave, they made a pileless strip (*yakrang, sari-kor*), pressing one after another all pedals.

By the middle of the XIX century hand-made production of various silk and semi-silk fabrics became widespread in Uzbekistan. So in Tashkent at that time worked 1550 craftsmen weavers. In the cities of Fergana Valley –Margilan, Namangan and Kokand handicraft weaving was one of the main industries. So, in 1896 in Margilan, Namangan and Kokand there were up to 600 silk weaving workshops. In 1910, 1,387 silk-weaving handicraft workshops with 3165 workers worked in the Fergana region, including 911 workshops with 2,570 workers in Margilan. In 1903 in Khiva there were up to 40 silk-weaving looms, which produced exclusively semi-silk fabrics. In Samarkand region in 1912 there were 237 silk-weaving workshops, in Bukhara in 1916 – 46, and in Karshi– 19[10].

By the end of the XIX century, the colonization of Turkestan by the Russian Empire had a negative impact on development and economic situation of traditional arts and crafts. Due to influx of factory products from tsarist Russia to Turkestan, the economy of handicraft production, including weaving, was undermined. Products of local craftsmen could not withstand competition with imported factory products. In order to reduce the cost of products and save time, local craftsmen instead of traditional natural dyes began to use new factory materials and raw materials, artificial dyes, which adversely affected the quality of textiles. Another "blow" was dealt by economic and ideological reforms under Soviet rule, when private property was liquidated. As a result, artisans were deprived of the right to independent economic and individual professional activities, and those who tried to still work as before were prosecuted by the tax authorities for illegal entrepreneurship.

By the middle of the XX century, the consequences of this disastrous decision made themselves felt. The traditions of art crafts, passed from generation to generation, began to disappear. Work in artels and cooperatives in the 30-40-ies of the XX century, and in subsequent years in factories and plants producing crafts, turned the masters into ordinary performers. They not only could not dispose of their own products, but also had no right to create freely. The main thing disappeared in the activity; it is creative competition and individual skill, subtle adherence to traditions and thoughtful innovations. For many centuries this was the driving force of the development of traditional crafts. The best traditions of the folk art of the past began to be forgotten. Artificial aniline dyes came to replace vegetable dyes, machine production destroyed the very essence of the centuries-old art of weaving.

With the independence of Uzbekistan, a new page begins in the history of national silk weaving. Uzbek master weavers set themselves the task of reviving the best traditions of Uzbek abra fabrics. Thanks to the efforts made in the early 90-ies of the XX century, recipes of production of vegetable dyes were restored, production technology of many ancient types of fabrics was revived, and the ornamental traditions of silk weaving of the past centuries were creatively enriched. Again in traditional residential neighborhoods - makhallas - workshops for manual production of silk appeared.

Unfortunately, today silk weaving has been revived mostly only in the Fergana Valley. Only in Surkhandarya region, in Baysun, the Center for Handicraft has revived the technology of production of a peculiar cotton fabric "*dzhanda*". Today more than 30 workshops are engaged in silk processing in Margilan. Over a hundred craftsmen put patterns and dye fabrics, about two hundred are involved in the process of pre-preparation of threads, more than a thousand craftsmen and craftswomen are directly involved in weaving. I want to emphasize that the manufacturing technology of silk weaving has not changed much. For weaving silk and semi-silk fabrics,

[10]Domestic industries … 1986, 47-48.

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 22, May 2023
ISSN: 2749-361X

the same machines - *dukon* are used, as in the old days, with minor changes. Machines are now made mainly of pine. Previously walnut wood was used. Production of a loom takes 2-3 days. The process itself is now much simpler, if before all the stages of the assembly of the machine were carried out manually, at the moment some operations are carried out by electric tools. The period of use of looms is about 10 years. They have the same design for all types of fabrics, differing only in the number of healds and size of the frame that determines the width of the fabric. Previously, the rules did not allow a deviation from the accepted width of fabric of 24-30 cm, but today the width reaches 50 cm.

The process of making traditional abra fabrics (*ikat*) is very laborious and involves several main steps:

- receiving threads from silkworm cocoons; (Fig. 2,3)
- washing in a special solution to remove harmful substances;
- winding on the coil;
- distribution of carefully prepared threads for the warp with the length of from 200 to 300 meters on a special machine in small bundles - *libits*. The number of threads in each *libit* (40 or 60) depends on the specific width of the fabric and its density. *Libits* are connected in pairs and wound on the transverse bars of the loom's frame. The distance between the bars is defined by the length of the rapport of the conceived design. It ranges from 1.4 m to 2.25 m. It was performed by master - *davrakash*;
- preparation of warp threads by master – *katchi*
- on the surface formed by the *libits*, the artist –*chizmakash* applies half of the pattern on the vertical axis with a thin stick soaked in soot diluted with water, marking its contours with dashes. Knowing by heart dozens of traditional patterns, the master does not use either sketches or stencils (sketch (Fig. 4) were mainly used for creating new patterns). During applying the pattern on the warp, the master ensures that the distance between the certain color areas is at least 5 cm. Otherwise, the paint will not be able to evenly impregnate the entire layer of the unreserved segment. Breakdown of pattern in color is made according to the principle of gradual dyeing of individual elements of the pattern in different colors, and the details of the pattern are alternately reserved by tying sections of *libits* with thick cotton threads;
- reservation by the master – *abrband* tying individual parts of the *libits* with cotton threads (now mostly sticky tape is used instead of thread) in order to protect against dyeing according to the color of the fabric; (Fig. 5)
- dyeing of yarns. Dyeing is carried out by immersion of prepared *libits* in boiling paint and boiling for several minutes (Fig. 6). When creating a multi-color pattern, the reservation and dyeing of its individual sections is carried out in a strictly certain order. For dyeing yarns, both natural and artificial dyes are used (local — onion peel, "ruyan" (madder), "isparak" (yellow larkspur), "anorpusti" (pomegranate peel), "tuhumak" (flowers of Sophora Japanese), "Gulkhayri" (mallow), imported - indigo and cochineal). In contrast to synthetic, vegetable dyes have greater harmony; they do not have the sharpness inherent in the first. The advantages of vegetable dyes must include a high resistance to fading, which allows to preserve the beauty of the fabric for a long time;
- after all colors are applied and fixed, the warp is freed from dressings and dried, unwinding of paired *libits* is carried out. Master stretches the silk warp, painted in iridescent colors. He painstakingly straightens tangled threads, separates some *libits* from others. The subsequent process consists in "unfolding the pattern", the paired *libits* separate and put on both sides of the vertical, after which, naturally, the full pattern is reproduced. All this process is called *ochdi-kushdi*. Before loading into machine, the warp threads are subjected to additional processing (combing, impregnation with starch, etc.). In the process of reproducing a complete picture and preparing the warp, masters strive to balance the symmetry of its individual parts.

Upon completion of the work of the *gulabardor*, the master reeder of the warp threads, the full composition and pattern of the fabric in color is revealed, and the master weaver proceeds to his work (Fig. 7,8). The final stage of the whole process is glossing the fabric by egg white –*kudunglash*. In order to give shine to satin and moire tints to adras, the end of the fabric is wetted in the egg white composition and folded inside the dry part. The master achieves a uniform distribution of the liquid over the surface of the fabric by blowing with a wooden hammer (*kudung*).

In terms of their interlacing, abra fabrics (ikat) are divided into two large groups - set and satin interlacing. Silk – "*shoyi*" and semi-silk – "*adras*" (Fig. 9) belong to the fabrics of the set interlacing. The peculiarity of production of adras fabrics is that the warp is natural silk, and the weft consists of cotton threads. Moreover, the thickness of weft threads is

World Bulletin of Social Sciences (WBSS)
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Vol. 22, May 2023
ISSN: 2749-361X

several times larger than the thickness of silk warp threads, as a result of which the surface of adras fabrics is ribbed. They are woven on 2-4 healded and pedal looms that is why the usual width of the adras varies from 30 to 50 cm. The number of silk threads of the warp of adras fabrics ranges from 3,000 to 4,000. As for the silk fabrics called "*shoyi*", at their production both the warp and the weft are loaded with natural silk threads. They are woven on 2 healded looms that is why they have the same width as adras fabrics – from 38 to 43 cm. But the warp of shoyi fabrics, unlike adras fabrics, is loaded by smaller amount of threads - from 1600 to 2000. At one time each machine produces fabrics with a length of 200 meters. At production of fabrics like satin, the warp is loaded with silk, and the weft with cotton (Fig. 10). But unlike adras fabrics, satin ones are produced not on 2-healded, but on 8 healded machines, thanks to which bright and lively patterns of satin fabrics are viewed only on the front side, and the reverse side has a monochromatic matte surface. The number of silk warp of the fabric varies from 3000 to 4000.

In manufacturing technique of abra fabrics (ikat), ornamentation is built solely on the warp threads before the weaving process, while weft plays a service role, giving to the general color scheme a certain shade. Ornamentation of fabrics consists mainly of 4 groups: vegetable ("*lola*" – tulip, "*darakht*" – tree, "*olma*" – apple, "*tuvakdagul*" – flower in a pot, "*bodom*" – almond, "*nok*" – pear, "*shokh*" – branch, "*bargikaram*" – cabbage leaves, "*anor*" – pomegranate); geometric (circles, rhombuses, squares, zigzag lines, etc.); zoomorphic (patterns of a zoomorphic nature are presented according to the principle "part for whole" – Latin. *pars pro toto*, for example, "*kuchkorshokhi*" – ram horns, "*yulbarsdumi*" – tiger tail, "*kapalak*" – butterfly, "*chayon*" – scorpion and etc.); subject patterns ("*tarok*" – comb, "*uroq*" – sickle, "*kosa-gul*" – bowl pattern, "*nogora*" – drum, "*galvirak*" – sieve, "*kuzacha*" – small jug, "*plane*", "*patnis*" – tay , "*sirga*" – earrings, "*bayrok*" – flag, "*tuvak*" – pot, "*zanzhir*" – chain, "*tumor*" – amulet, "*tanga*" – coin, etc.).

In conclusion, we can say that the historical, ethnographic, and expeditionary materials collected by the author of the article studied in this paper show that weaving with use of looms in Uzbekistan has a history dating back thousands of years. Traditional machine tools and weaving technology, formed and widely used in the late XIX - early XX centuries in such centers of art crafts, as Bukhara, Margilan, Samarkand and others, allowed the Uzbek silk weaving to gain truly world fame. These machines and technologies, revived by modern master weavers of Uzbekistan, again attract interest all over the world and provide a brilliant example of a living and unfading folk tradition.

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World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 22, May 2023
ISSN: 2749-361X

Fig.1. The ancient eye-trap of cocoon thread. Ivory,bronze.Khalchayan. The beginning of Christian era (Photos – AlexsandrShepelin)

Fig. 2.Process of unwinding of silk from a cocoon. The woman unwinds silk thread from a cocoon from the right side, the second woman reels up on a big spindle - charkh. Margilan, 1931 (The photo is kindly presented by Fund of photographic materials of the Samarkand Museum Reserve. No. 2514)

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 22, May 2023
ISSN: 2749-361X

Fig. 3.Process of unwinding of silk from a cocoon.Silk-weaving factory "Yodgorlik".(Margilan 2017: photo by NabiUtarbekov).

Fig. 4.Sketch of abra fabrics (ikat) made by color pencils. The author is TurgunboyMirzaahmedov (died in 2006); sketch of the pattern "BargiKaram" (cabbage leaves);

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 22, May 2023
ISSN: 2749-361X

Fig. 5. Master abbrband at the process of reservation of the warp threads - libits. (Margilan, 1931, courtesy of the Photography Foundation of the Samarkand Museum-Reserve, No. 2610).

Fig. 6.The process of dyeing silk threads. Master abrbandRasulzhonMirzaahmedov and his son are dyeing the warp threads in indigo. Handicraft Development Center (Margilan 2017: photo by NabiUtarbekov).

World Bulletin of Social Sciences (WBSS)
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Vol. 22, May 2023
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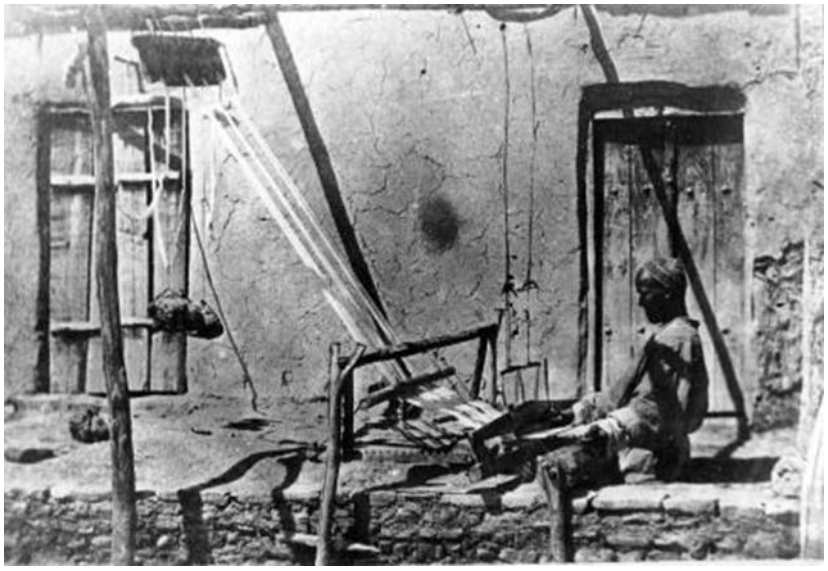

Fig. 7.The process of weaving of alacha fabric. (beginning of the XX century, courtesy of the National Library of Uzbekistan named after A. Navoi).

Fig. 8.The process of weaving of silk fabric - shoyi. Handicraft Development Center (Margilan 2017: photo by NabiUtarbekov).

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 22, May 2023
ISSN: 2749-361X

Fig. 9. Half silk fabrics - adras woven by Margilan weaver RasuljonMirzaakhmedov; a - adras with the pattern "syrga" (earring), 2014; b - adras with the pattern "tumor" (amulet), 2013 (Margilan 2017: photo by NabiUtarbekov).

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 22, May 2023
ISSN: 2749-361X

Fig. 10. Semi-silk fabrics - atlas woven by Margilan weaver RasuljonMirzaakhmedov specially for the Oscar de la Renta collection, 2004 (Margilan 2017: photo by NabiUtarbekov).