

Weaving Techniques of White Huipil Material from the Alta Verapaz Area in Guatemala

과테말라 Alta Verapaz 지역의 민속의상 Huipil 재료의
수직기법에 관한 연구

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<CONTENTS>

- I. Introduction
 - II. General Forms and Method of Wearing
 - III. Weaving Equipment and Procedures
 - IV. Basic Weaves for White Huipil Material
 - V. Analysis of Four White Huipil Material
 - VI. Concluding Remarks
- Bibliography

<Abstract>

과테말라의 알타 베라파즈(Alta Verapaz) 지역에서 원주민들의 민속의상의 하나인 Huipil 재료로 생산되는 반투명의 백색 무명 수직물은 독특한 직조기법과 구성을 보이고 있다. 이에 대한 부분적인 연구는 O'neale 과 Osborne 등에 의하여 이루어 졌으며 본고에서는 이들 연구를 기초로 이 지역의 Huipil 재료의 직조과정과 기법에 대하여 고찰하였다.

또한 구체적인 직물구조의 분석은 Iowa 주립대학의 직물소장품중 4점의 이지역 Huipil 재료를 실측하여 이들 각각의 전체적인 구조와 기본적인 직조방법, 그리고 무늬를 형성하는 기법에 대하여 검토하였다.

본 고찰을 통하여 이 지역에서 생산된 Huipil 은 대부분 원시적인 형태의 직조기에 의해 완성되었으며 복잡한 무늬를 짤 경우에도 보조적인 도구는 사용되지 않고 특유의 수직기법에 의해 이루어졌음을 밝혔다. 또한 Huipil 의 바탕은 plain weave, gauze, 또는 brocade 의 변형으로 구성되었으며 바탕과 무늬의 변화는 실의 굵기의 변화로 더욱 강조되어 독특한 효과를 나타내고 있다.

I. Introduction

The huipil is the blouse part of the Indian

woman's costume and its name is believed to be derived from the Aztec "huipill", or according to Sahagun, "uipil or juipil" meaning "covering" (Osborne, 1965. p.103). In its simp-

lest terms, the huipil is a squarish or rectangular garment with an opening in the center for the head. As is well known, the Guatemala Indians, like other American Indians, do not tailor their garments but assemble or create them from square or rectangular fabrics woven to the specific sizes needed.

Among many weaving regions in Guatemala, the Alta Verapaz area which includes Coban, San Pedro Carcha, San Juan Chamejco, Tactic and Tamahu, is known as a place producing unique huipil material which is sheer, semitransparent and elaborately patterned on plain or gauze weave background. Especially white huipil material from this area is strikingly different from others in their techniques.

The following description will be limited to the white huipils of the Alta Verapaz area, according to their form and weaving techniques.

Former studies of O'Neale and Osborne on the textiles from Guatemala give quite scattered information concerning to this special area. As a first step, the written records about the white huipils from the Alta Verapaz area were surveyed in order to understand and appreciate the native skills. Then, four white huipil materials from the collection of the Textile and Clothing Department in Iowa State University, which were believed to be from that area, were examined.

The exact time period of the huipil materials which were analyzed by O'Neale and Osborne was not mentioned clearly, and the examples from the I.S.U. collection either did not have written records about their origin.

II. General Forms and Method of Wearing

Huipils of the Alta Verapaz area were made

of three breadths of rectangular, and vary in ground color. The white huipil usually reserved for "best"; another that is commonly worn has a dark ground (often blue) and is brocaded in white and many colors (Wood, 1966. p.48). White huipils are sheer, semitransparent, and in some, bands of gauze weave alternate with bands of plain, the latter often brocaded. Square neck openings and closed underarm seams are customary, and around the neck line and bottoms of sleeves are embroidered in colored silks. All huipils are short and usually formed into tunics (Wilson, 1979. p.336).

Jaspe (ikat-dyed) skirts with plain stripes in various colors or all blue and white are long and full, and the fullness is pulled in at the waist by cords which serve as a belt when wound around the top of the skirt. The traditional long headdress, tupui (coral serpent) was worn by the older, high-caste married women in Coban area, but is rarely found these days (Osborne, 1965. p.115). Women favor jewelry, especially long necklace of beads, coins, and casted figures of animals, hearts and crosses. The long necklace is called "chachales" in this area (Osborne, 1935. p.25).

According to O'Neale's analysis on 203 huipils from various regions in Guatemala, three types of materials were used: stick loom woven cottons of the dimensions sufficient only for single garments; pattern lengths of cotton woven to standard measurements on treadle looms and draw looms set up for a limited number of huipils; and plain unbleached cotton yardage, most of it factory woven from various sources (O'Neale, 1945. p.109). Among those, 38 huipils from Alta Verapaz area were examined by O'Neale, and it was found that 88 percent of those were woven on stick loom, and 11 percent were factory woven material.

Presumably, the factory woven material was used for embroidered huipils, or it may be figured commercial lawn which resembles the original brocaded huipil material. In this paper, only the hand woven material was chosen to be discussed because of their majority in number and the Indian women weavers technical achievement.

Their average length of Coban area huipils were from 17 to 19 inches, and majority of the garments measured were constructed of breadths providing sleeves nearly elbow length (O'Neale, 1945. p.112).

III. Weaving Equipment and Procedures

1. Equipment

For the women's huipil, weavers use stick loom which is also called the backstrap, primitive, or belt loom. It is consisted of several sticks and released from the two end bars to which the warps were continuously bound. In Guatemala, the most common parts of the stick loom are: 1) the backstrap or broad belt and the cords extending from its ends to, 2) the end bar, close to this last, 3) a second smaller bar which lies loose on the web, then 4) the tenter, 5) the batten or sword, 6) the shuttle, 7) the heddle or heald, 8) the shed roll or

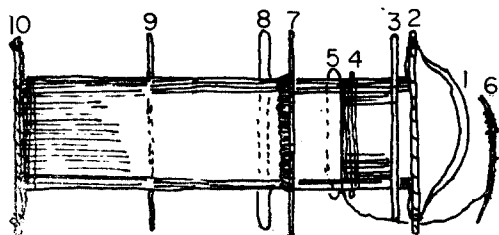


Fig. 1. The woman's stick loom.

shed stick, 9) one or several lease sticks, and 10) the second end bar. There may be subtractions from this initial number of parts among individual weavers and different localities. The women weavers from Coban area seem to use same kind stick loom for thier weavings (O'Neale, 1945. Fig. 76).

Although some weavers do not use a tenter, the weavers in Alta Verapaz area seem to use that for maintaining the width of woven fabric. O'Neale also mentioned about spines which were used as tenter in Tactic region (O'Neale, 1945. p.32).

2. Procedures

A. Warping

Warping is a important procedure for highland weavers, since the desired length and width of the garment are determined during warping process.

According to the observation of O'Neale, the two-stake warping method is followed at San Pedro Carcha, San Juan Chamelco (O'Neale, 1945. p.40). The two-stake method is the simplest one which can obtain the cross part by encircling the two spikes in a figure eight movement (Fig. 2).

The Tactic weavers use four bamboo stakes for their warping. Three stakes are driven into the ground at points about 9 inches from each other and the fourth stake is driven in just opposite to and only a few inches distant from one of the end stakes. The warp yarn is carried over 1, under 2, around 3, under 4, and back to 3, over 2 and under 1, in such a manner as to form a figure-eight cross be-

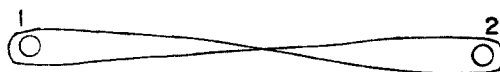


Fig. 2. Two-stake warping method.

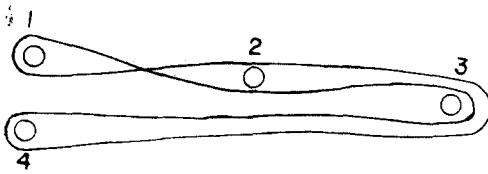


Fig. 3. Four-stake warping method.

tween stakes 1 and 2 (Fig. 3).

B. Setting-up procedures

After warping yarn, the transfer of the warped skein to the stick loom bars and the insertion of the necessary parts is a tedious job requiring patience. The upper bar of the stick loom is tied with Y-shaped rope to the house rafter or post. Between the upper bar and a temporary lower bar, the warped yarn is stretched. The weaver spreads out the warps on the lower bar and inserts one maguëy string between web, and binds together the string and lower bar. And then she turns the loom end for end and makes a shed for the heddle.

The heddle is a strong, slender stick from which hang cotton thread hoops. After making heddle, the lower warp is spreaded, measured and fastened to the end bar as it had been for the first end. The shed roll and lease stick are put in its place and the whole set of the stick loom is ready for weave.

C. Heading and join

The first woven an inch or two becomes the heading strip, for upon its completion, the weaver turns her loom end for end and begins to weave the whole length. There is a reason for the heading ap the upper end bar: it secures the spacing of the individual warps what will ultimately form the final inches of the weaving for all the period the material may be under construction.

When the weaving has progressed upward

near the heading, the weaver substitutes small tools for the regular ones for decreasing working space. For the last inch or so weavers use spines, pins or darning needles to push into the gap from both the working edge and the heading strip weft yarns which were previously battened down firmly. Joins usually come within a few inches of the end selvedges (O'Neale, 1945. p.49).

IV. Basic Weaves for White Huipil Material

The basic weaving techniques which were used by weavers in Alta Verapaz area were mainly plain weave, gauze weave and brocading. In many cases, the white huipils were plain weave which two elements, warp and weft, interlace in the simple over-one-under-one manner. Their yarn is either single ply or grouped in numbers. In the present connection pairing results either in a variation of the plain weave which might be called a half-or semibasket weave, or in a true two-by-two basket weave (Emery, 1966. p.77).

Corded plain weave which is the result of using together in the shed, a number of single wefts is also practiced by the weavers in San Pedro Carcha, Coban, San Juan Chamelco and Tactic area (O'Neale, 1945. p.57).

Brocading, one of compound weaves, is widely used in the Alta Verapaz area among the weavers to pattern their huipils with various motifs. Brocading is a process or a technique through which ground materials are given added decorations. Technically brocaded cloth is distinguished from embroidery by a difference in the method of its making: brocading is done by the weaver while the cloth is on the loom, while it is under construction; embroidery is done after the cloth is completed

and off the loom.

Weavers in the Alta Verapaz area never use extra pattern stick during their brocading process. Instead, they use the pointed leg of fowl or other small bones to hook the brocading yarns through the short sheds made especially for them (O'Neale, 1945. p.34).

Onlay brocading and two other types are mainly used by weavers on their huipil material. Onlay brocading is the simplest form of brocading, which is also known as inlay and laid-in technique (Emery, 1966. p.141). Since the huipil material is sheer, the onlay yarns contrast to advantage through their greater weight with basic yarns.

The second method of brocading the motifs on huipil material is that the weaver deliberately chose the same warps as binders for the brocading motifs. This method creates a series of vertical lines on the motifs (Atwater, 1946. p.26).

The third method of brocading lines or bands which involves a choice of onlay the odd-numbered warps is used in Coban area, and this method produces a combination onlay and overfloat brocading (Atwater, 1946. p.29).

Gauze weave is also used on the white huipils in San Juan Chamelco, San Pedro Carcha, and Coban area. Despite the common gauze includes all clothes that are firmly or thin, technically the true gauze does not include them.

Osborne mentioned about this gauze weave as follow (1935, p.69): "In Alta Verapaz an amusing case occurs in huipils that have designs of such open-work that they resemble mosquito netting. I attribute this to the time when the Spanish friars went into that region to convert the Indians to their faith. They found many who were nude and the horrified friars promptly cut up some of their precious

mosquito-netting to make huipils for the Indians who are quite adept at any kind of weaving copied them on their looms."

There is some doubt about this comment, because gauze weave is a very old technique which have been played by orientals and aboriginal American weavers. Especially Peruvian weavers were masters in this special weave, and gauze woven textiles are still found in Mexico (Johnson, 1976. p.70). These places are near to Guatemala and it might have been possible to have cultural contact which includes weaving technique. These information support the idea that this gauze weaving technique might have longer history among the weavers in the Alta Verapaz area.

On their huipil material, plain gauze and fancy gauze were used in combination with plain and brocaded bands. Either single ply or paired yarn was used in their warp and weft.

At San Pedro Carcha the stick loom was used in all its parts for plain gauze weave. The heddle loops encircle the even-numbered warps just as they do for the most simple plain weaving but with some difference: instead of drawing up warp 2 between warps 1 and 3 (counting from the right), the heddle loops draw up warp 2 between 3 and 5; warp 4 comes up between 5 and 7, so forth. That is when the heddle is raised, all the even-numbered yarns are drawn to the left of their adjacent odd-numbered neighbors. Then the sword is inserted, the shed formed, and a pick of weft put through to secure the cross. But on the next pick, when the shed roll is brought forward, all the evens are forced back to their original positions, and they are secured by weft (O'Neale, 1945. Fig. 19i).

The fancy gauze was used in combination with plain and brocaded bands in the Coban

area. These fancy gauzes involve groups of warps, each of which consists of a number of yarns working together as a neighboring groups, and then reunites to form the original group (O'Neale, 1945. Fig. 117c).

The main parts of the white huipils were woven with various techniques which were mentioned above, but the headings of them were woven with plain weave without exception.

V. Analysis of Four White Huipil Materials

From the mount of Guatemalan textiles which belong to the collection of the Textiles and Clothing Department at Iowa State University, four white huipil materials from the Alta Verapaz area were identified. Since they did not have records about their origin, the identification was followed by the basic information from former literature studies. All examples were preserved in fairly good condi-

tion, and there was little difficulties in handling them.

The ground weave of Fig. 4 was plain weave and brocaded with grouped yarn (4 strands). Center piece was brocaded in different order from each side pannels.

Birds in profile, dots and stars were brocaded in bands. By close observation these motifs were not brocaded in the same way: dots and birds were brocaded in every other weft be-

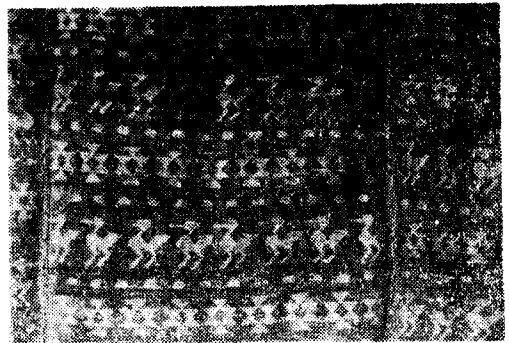


Fig. 5. Detail of Fig. 4.

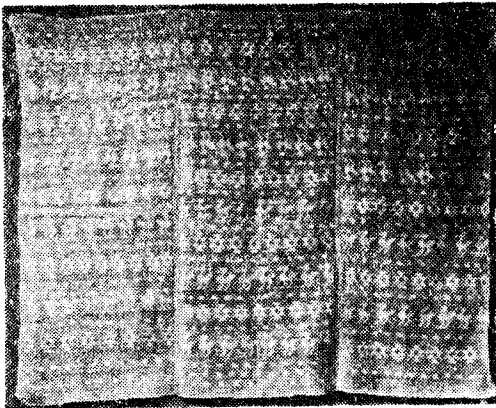


Fig. 4. White huipil material. Plain weave ground with brocade, Width: $41\frac{1}{2}$ inches, Length: 34 inches
Count: 25×24 .
I.S.U. Textiles and Clothing Dept.
1852.

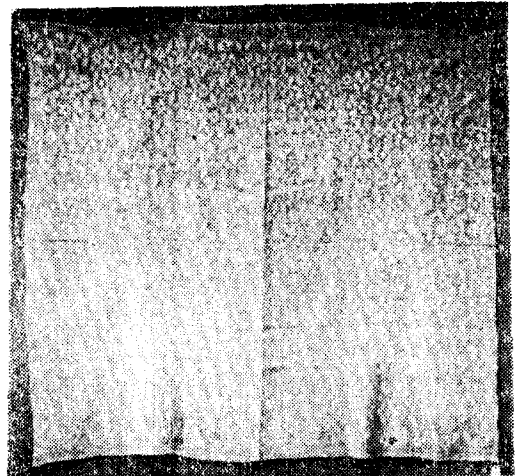


Table 6. White huipil material. Plain weave ground with brocade.
Width: 39 inches, Length: 37 inches.
Count: 29×26 .
I.S.U. Textiles and Clothing Dept.
0006.

tween plain tabby, and the stars were done with every weft. The sizes of the motifs are not same (motifs at the end of the lines are apparently smaller than others), and intervals of each motifs are also irregular.

Fig. 6 is a quite unusual huipil material because of its all-over pattern instead of bands. The basic construction is same as others that three self-selvedged rectangulars were joined for whole piece.

Brocading yarn (4 strands) passed through every shed with the wefts, and long tails were

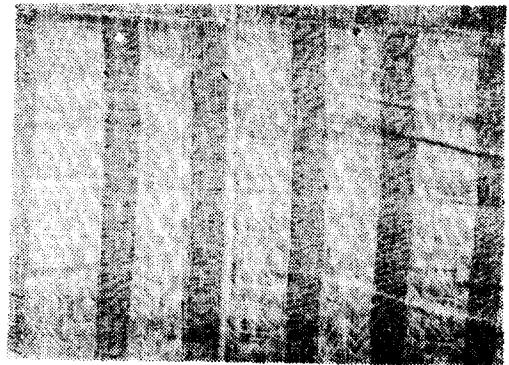


Fig. 9. Detail of Fig. 8.

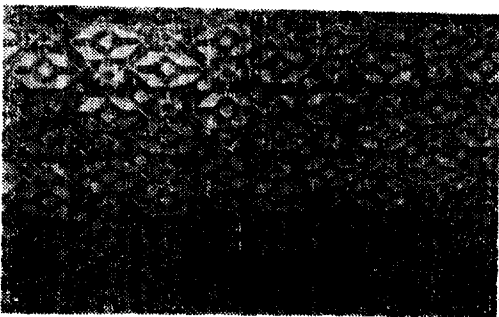


Fig. 7. Detail of Fig. 6.

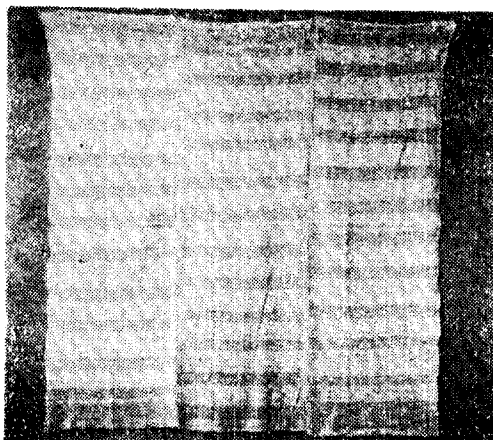


Fig. 8. White huipil material. Gauze and plain weave bands with brocade.
Width: 38 inches, Length: 39 inches.
Count: Plain weave, 28×38.
Gauze weave, 28×21.
I.S.U. Textile and Clothing Dept.
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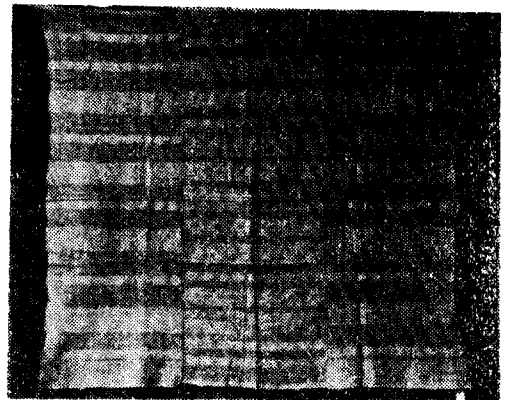


Fig. 10. White huipil material. Gauze and plain weave bands with brocade.
Width: 36 inches, Length: 32 inches.
Count: Plain weave, 23×25 (paired yarn). Gauze weave, 23×15 (paired yarn).
I.S.U. Textiles and Clothing Dept.
0212.

left freely on back side.

The basic idea of this brocading motif quite resembles the factory woven lawn, and supposedly the weaver imitated the design of factory woven material for her own hand-woven huipil material (O'Neale, 1945. Fig. 98a).

Fig. 8 shows a very finely woven huipil material. Compared with other pieces, its thread count is quite high. Birds in profile and sitting atop trees, and geometric forms

are its main motifs.

Detailed brocading technique can be divided in two methods in this huipil: large parts of motifs were brocaded in every pick, and narrow lines were brocaded in every other pick.

Headings and joining parts were woven with paired weft, and side selvages were threaded with paired yarn.

The huipil material, Fig. 10 is comparatively small, and has rather opaque surface because of using paired yarn for the warp and weft. The weaver used the same paired yarn for the selvages as the one of ground.

After the observation of each piece, the warp threads of the three breadths from the whole material were counted to find out the weavers concept about the number of threads. Table I shows the differences of each other. Apparently the weavers in this area do not count the warp threads during the warping process.

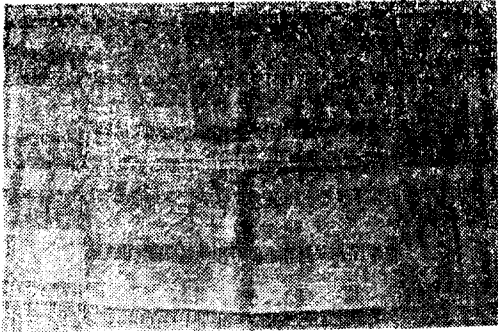


Fig. 11. Detail of Fig. 10.

Table I. Warp counts of each pannels from the four white huipils

Huipils examined	Right side	Center	Left side
Fig. 4	348	342	344
Fig. 6	368	412	378
Fig. 8	360	350	350
Fig. 10	272	268	270

The method of sewing the three breadths in one piece was whipping stitch with paired yarn without exception.

VI. Concluding Remarks

The white huipil material from the Alta Verapaz area is of considerable interest: technically, it is unique. Most of them were woven on primitive stick loom by women with least equipments. The weavers never used pattern sticks or extra heddle for their free standing motifs. Two highly developed techniques, which require a good deal of weaving skill, are represented: gauze weave and various brocading techniques with plain weave.

The weavers were genius in using the yarns of contrasting weights: aesthetically, the multiplied threads for brocading give opaque effect on sheer monochrome ground fabric, and functionally, the paired or grouped yarns for selvages add the supporting strength.

The motifs of the white huipil material were not studied in this paper. The knowledge about their culture, religion, and language should be needed for further understanding and appreciation in that field.

Compared with the tedious, laborious weaving technique, the tailored finishes are simply done: seams are stitched by whipping method with paired yarn.

One thing that was hardly understood was that some of the huipil materials have neck opening spaces which were left from brocaded motifs (O'Neale, 1945. Fig. 99a-d). But the huipils from the I.S.U. collection did not have such marks on them. Supposingly it can be explained by the differences between localities or time periods.

BIBLIOGRAPHY

- Atwater, Mary M. *Guatemala visited*. Basin, Montana, (no publisher), 1946.
- Emery, Irene. *The primary structure of fabrics*. Washington D.C., The textile museum, 1966.
- Johnson, Irmgard Weitlaner. Weft-warp open work techniques in archaeological and contemporary textiles of Mexico. *Textile Museum Journal*, 1976, 4(3), p. 63-72.
- O'Neale, Lila M. *Textiles of Highland Guatemala*. Washington D.C., Carnegie Institution of Washington, 1945.
- Osborne, Lilly de Jongh. *Guatemalan Textiles*. New Orleans, The Tulane University of Louisiana, 1935.
- Osborn, Lilly de Jongh. *Indian Crafts*. Norman, University of Oklahoma Press, 1965.
- Wilson, Kax. *A History of Textiles*. Boulder, Colorado, Westview Press, 1979.
- Wood, Josephine and Osborne, Lilly de Jongh. *Indian Costumes of Guatemala*. Graz, Austria, Akademische Druck-U. Verlagsanstalt, 1965.