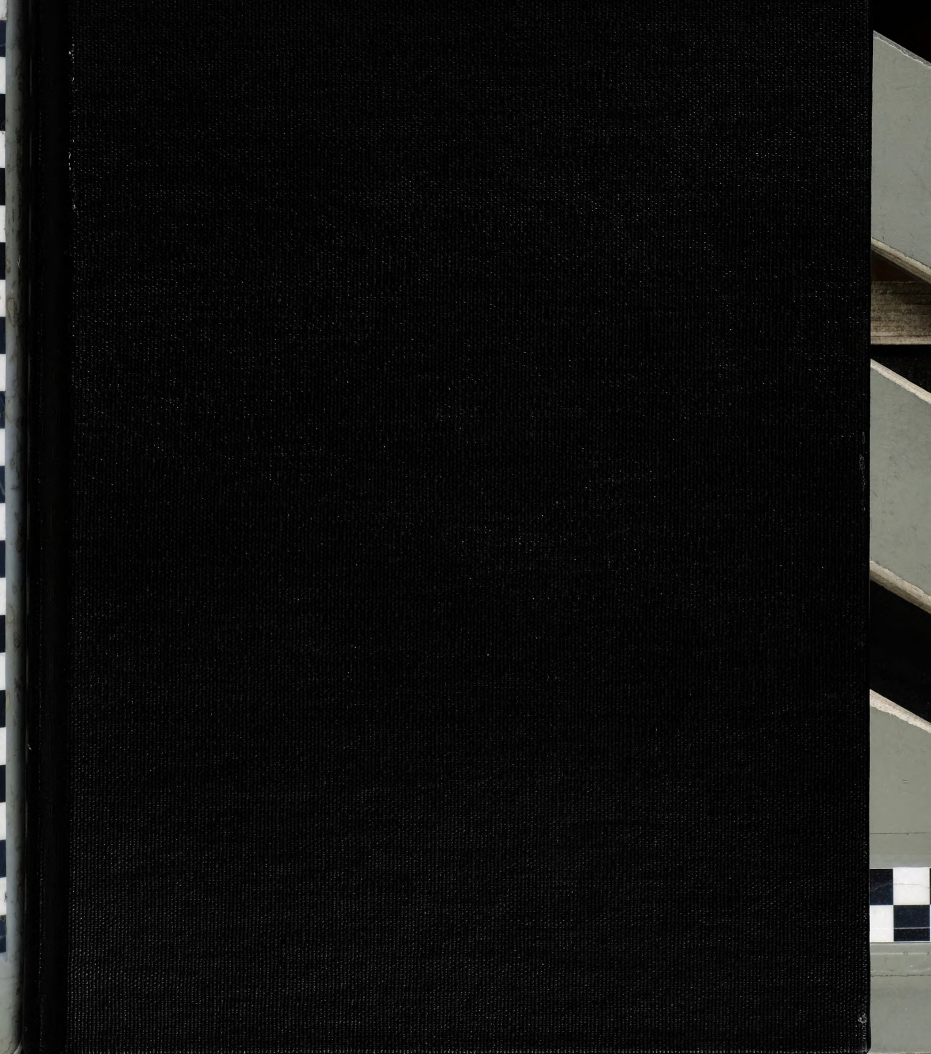




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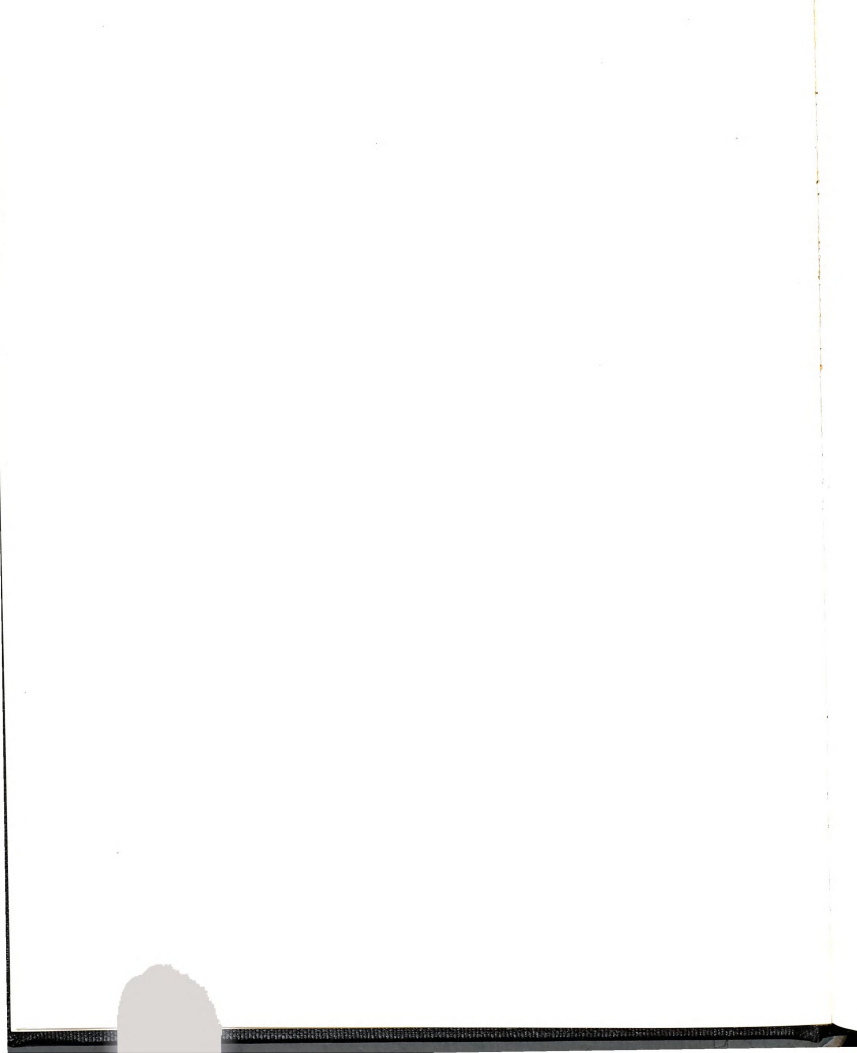
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HMONG PAJ NTAUB: A COMPARISON OF DESIGN MOTIFS,
COLOR, SIZE, AND ORNAMENTAL CONSTRUCTION TECHNIQUES
BETWEEN 1977-1979 AND 1981-1983

By

Annette Hafner-Hoppenworth

A THESIS

Submitted to

Michigan State University

in partial fulfillment of the requirements

for the degree of

MASTER OF ARTS

Department of Human Environment and Design

1989

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ABSTRACT

HMONG PAJ NTAUB: A COMPARISON OF DESIGN MOTIFS, COLOR, SIZE, AND ORNAMENTAL CONSTRUCTION TECHNIQUES BETWEEN 1977-1979 AND 1981-1983

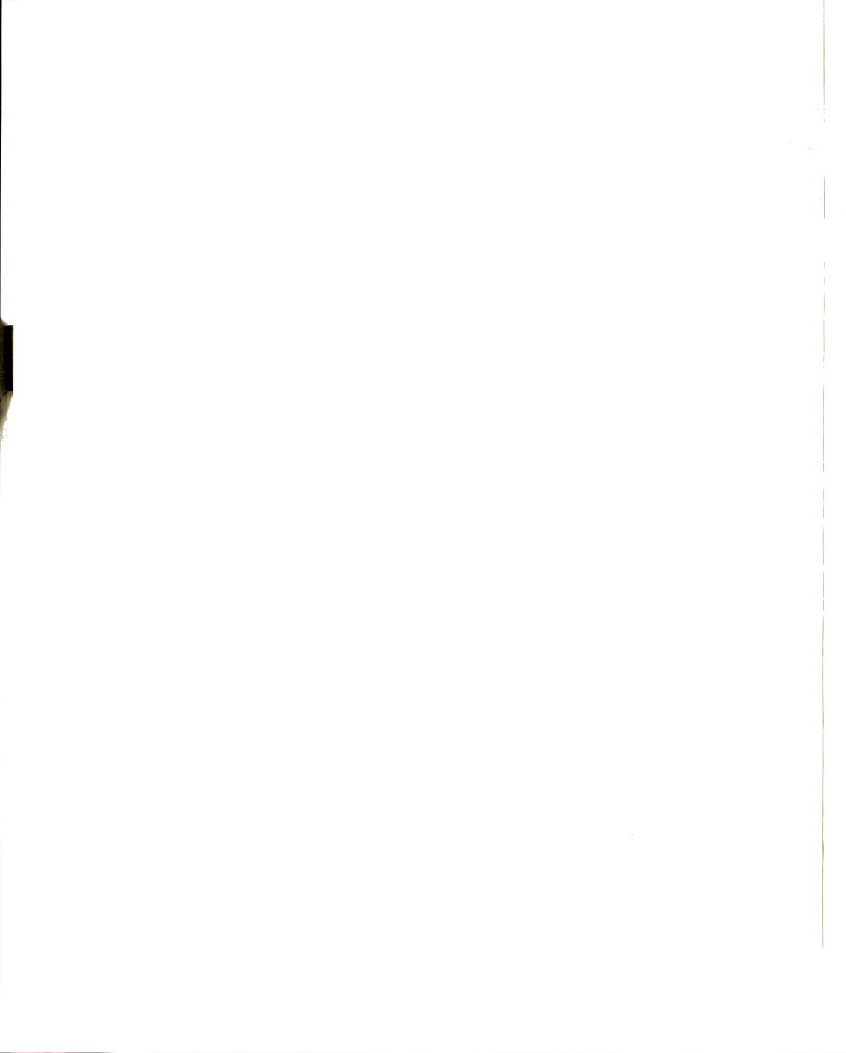
By

Annette Hafner-Hoppenworth

Documentation of the physical attributes of two samples of Hmong paj ntaub was undertaken to determine what changes have occurred, since the Hmong settled in Lansing, Michigan. Evaluation of the pieces, produced for the public, were analyzed and findings interpreted in respect to transcribed interviews with individuals assisting the Hmong.

Analysis of variance, chi-square analysis and the z test showed a statistically significant decrease in the average total size of the paj ntaub and in the average number of borders, number of colors, and ornamental construction techniques used per piece. This may indicate a trend towards decreasing productivity time, thereby increasing output.

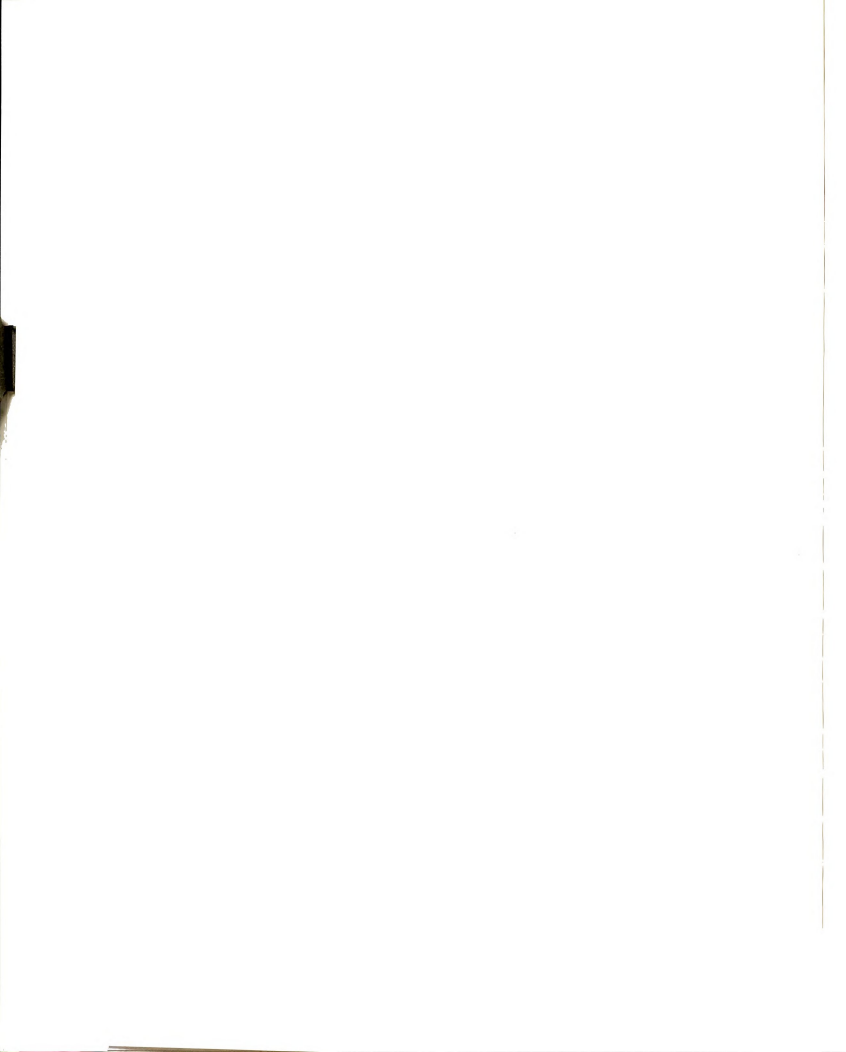
A traditionally accepted set of procedures, on how to produce the paj ntaub, was supported by the absence of statistically significant difference in the number of design motifs, colors, and ratio of borders to center area used per piece and in the choice and properties of colors and ornamental construction techniques between samples.



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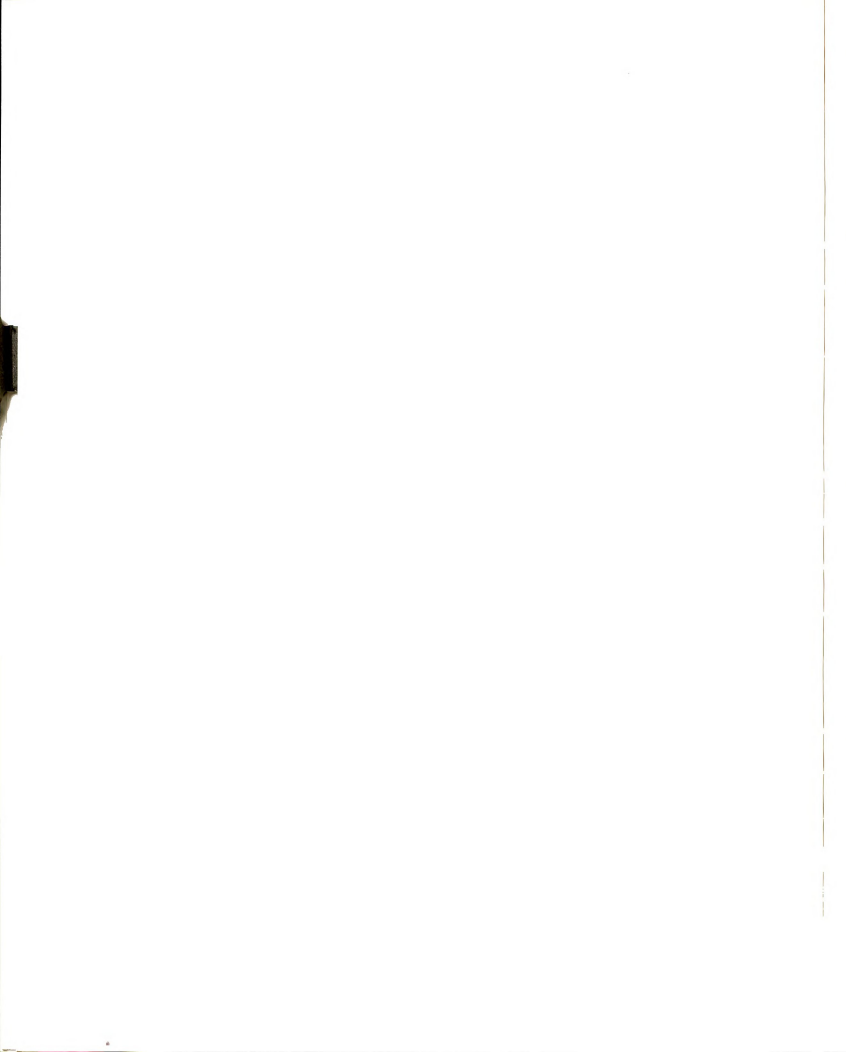
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Dr. C. Kurt Dewhurst	-Committee Member
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Pat Hepp, Catholic Refugee Services	-Consultant
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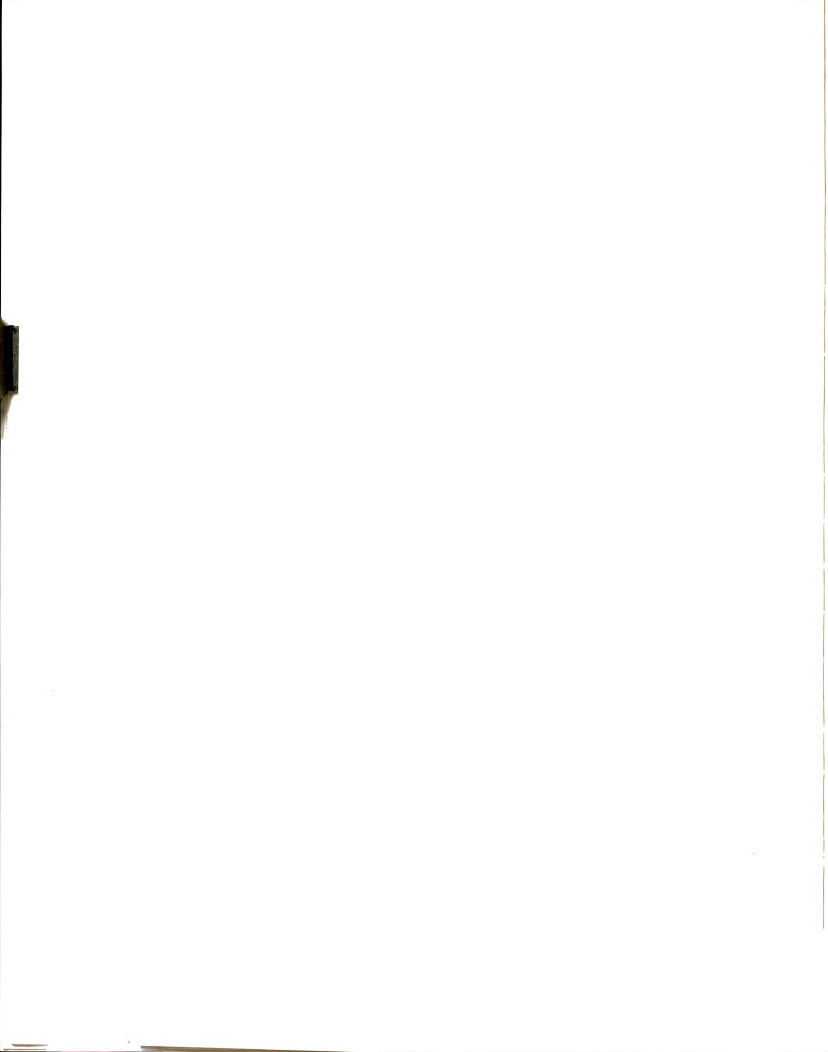
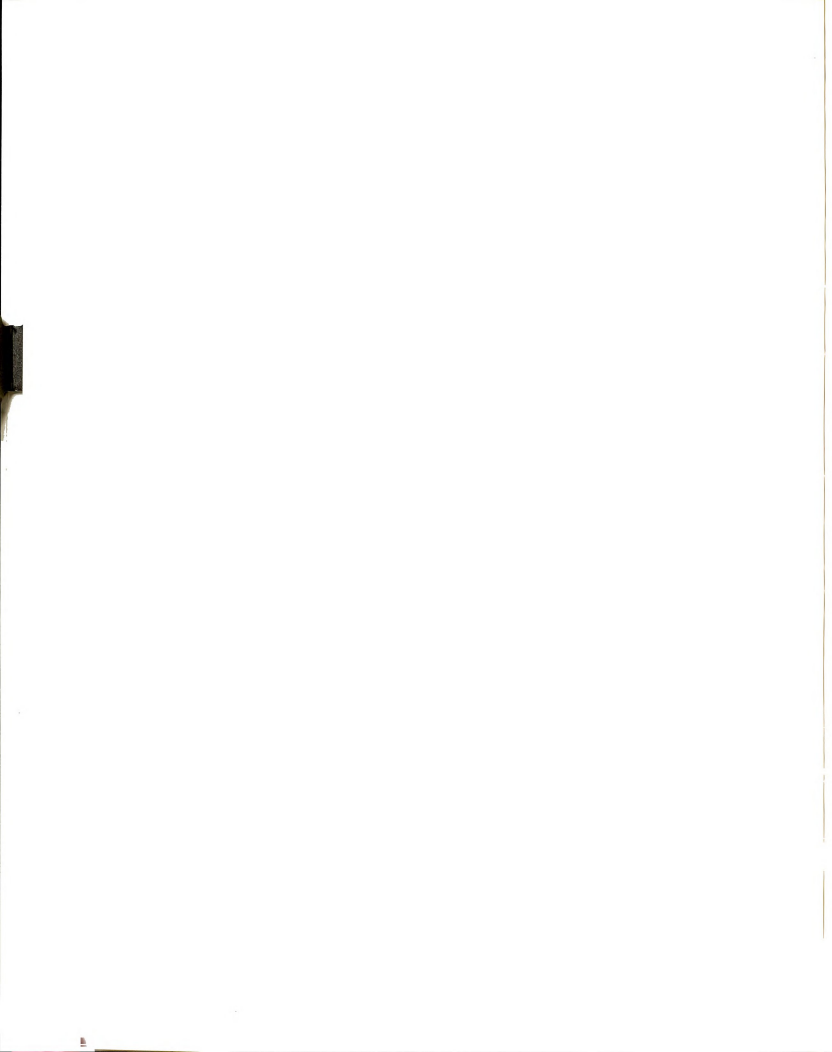
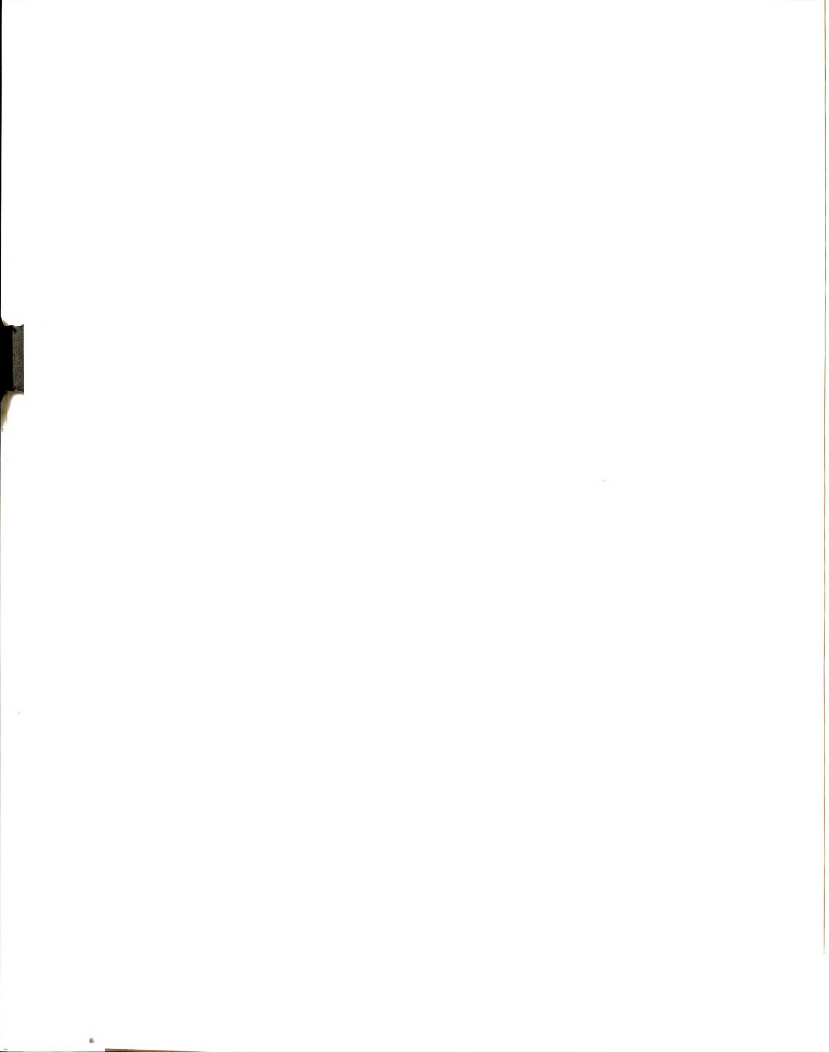


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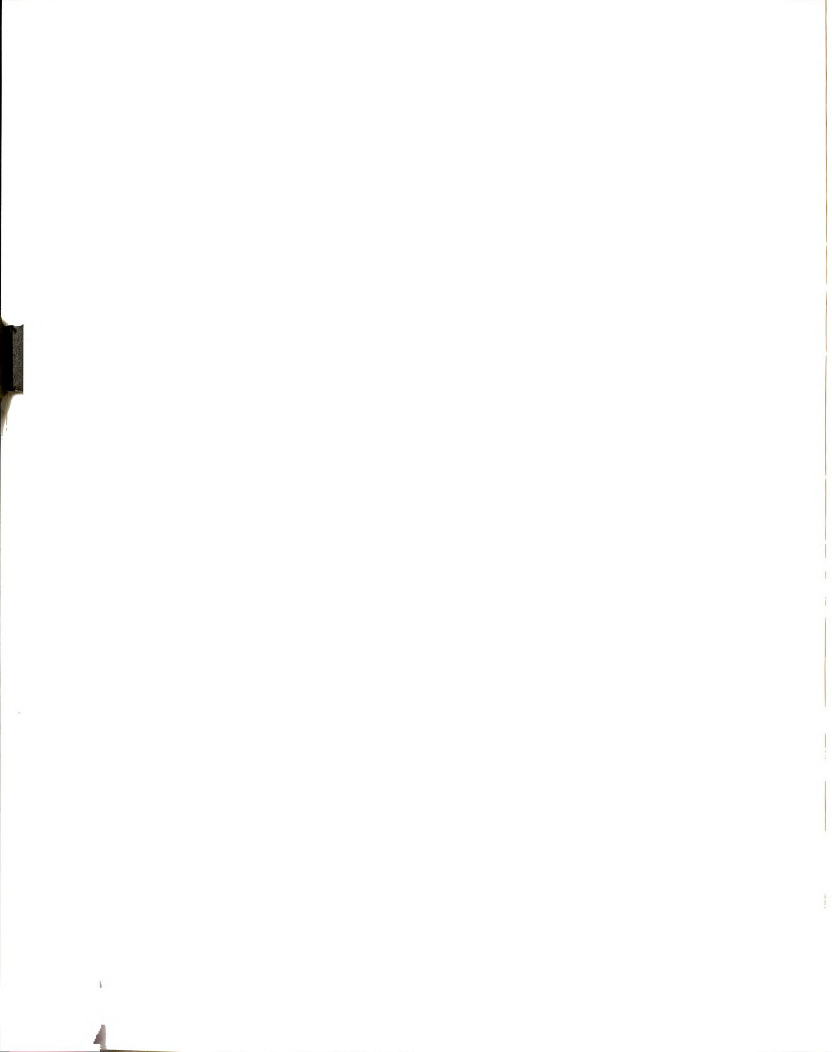
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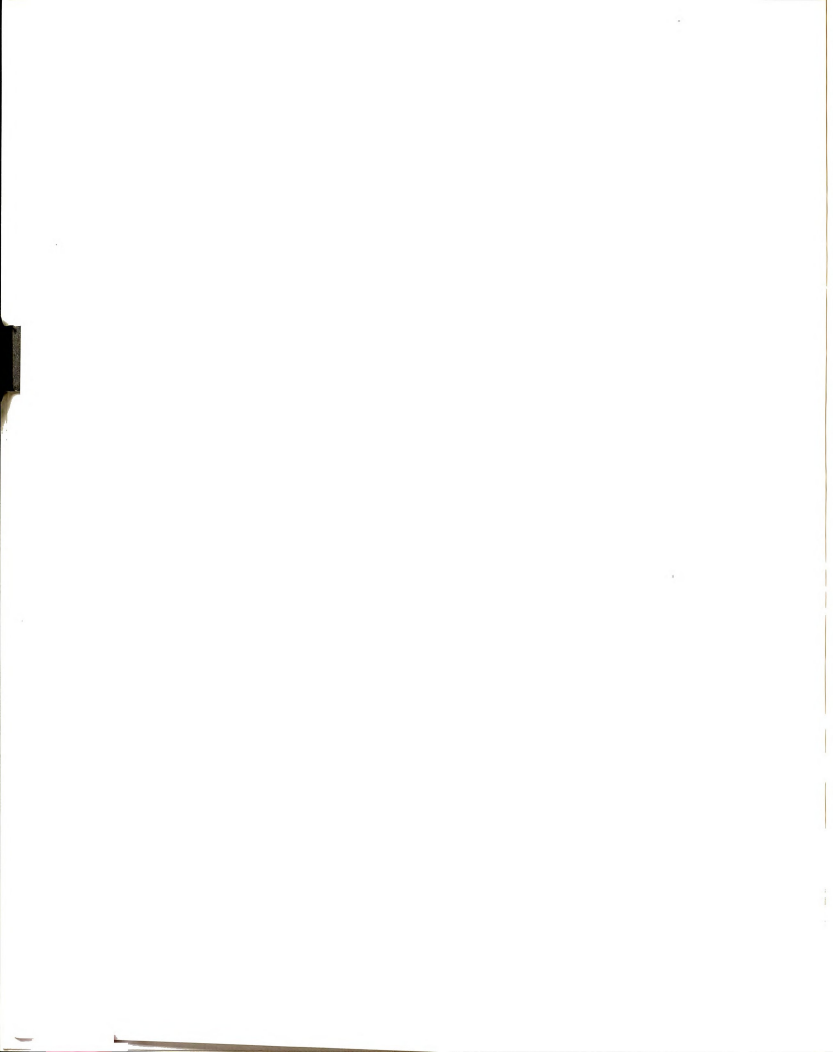
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CHAPTER 1

INTRODUCTION

Justification

The arrival of a unique ethnic group, in the United States, opens a new area for study. Understanding where the group came from, how they endured resettlement, and what their unique cultural differences are can have far-reaching benefits for the subject group, the researcher, and local and national communities. This particular study focuses on the textile art of the Hmong, a relatively new folk group in Lansing, Michigan. Specifically, this study will compare one type of Hmong textile in two time periods.

The Hmong started migrating to the United States in 1975. They have had difficulty resettling because of their many cultural differences, their lack of written language, and the inadequacy of government training programs. A better understanding of the Hmong culture, and the effects of America on the Hmong, could improve adjustment programs and quicken resettlement for Hmong refugees.

Paj ntaub, a highly decorative textile appears to have changed since the Hmong arrived in the United States. Studying the differences between pieces first produced in the Lansing area and pieces made several years after resettlement may be beneficial to the Hmong and the



scientific community.

First, an understanding of how the Hmong react to the intervention of Americans in paj ntaub production may assist in determining how the Hmong will react to various resettlement stimuli. Such insight could eventually lead to resettlement programs better suited to the needs of the Hmong. Second, a study of the paj ntaub may contribute to American appreciation of a Hmong tradition. Third, with production and sales of the paj ntaub now estimated to contribute between \$500 and \$3000 a year to the family income ("Artists...." 1983, p. 4), increased awareness of this cultural folk art could increase Hmong subsistence levels through additional sales. Fourth, a study of the past and present paj ntaub will document the changes for future generations and the information may be useful to museums that have collected paj ntaub.

The procedures used in this study for measuring change in textiles will be of interest to the scientific community. Several similarities exist between textile research in the disciplines of folklore and clothing and textiles. Folklore textiles, however, are usually studied by observation rather than scientific measurement. This study should be of value to folklore specialists because it develops a more precise method for measuring change in folklore textiles.

Review of the Literature

Very little printed material was available on the Hmong until about 1945. Most information published about the Hmong prior to 1965 was based in information obtained from the Chinese and Laotians. For this reason, first hand knowledge of the Hmong is relatively scarce.



Research literature is available on the topics of Hmong history, culture, health, migration patterns, individual communities in the United States, family structure, language, and textiles. However, few studies have dealt specifically with Hmong paj ntaub and most of those available are concerned with marketing. None could be located which documented change in Hmong textiles over time.

This chapter presents a brief history of the Hmong through 1985 as a context for understanding the group. It includes a discussion of resettlement difficulties, a comparison of selected aspects of Hmong and American culture, and a description of the Lansing Hmong Community. Types of paj ntaub and selected marketing studies conclude the chapter.

History of the Hmong

Throughout history the Hmong have been known by several names. The Chinese use the term Miao, meaning "barbarian," to identify this group. In Laos the Hmong called themselves mung or h'mung (Bernatzik, 1978, p. 7). According to Dr. Yang Dao the Hmong prefer Hmong, which means "free men" (Catlin, 1981, p. 5). For the remainder of this study the term Hmong will be used.

China

The Hmong entered China from Mongolia approximately 4,000 years ago (Bernatzik, 1978, p. 31). They originally cultivated the river valleys of the Blue and Yellow Rivers near what is now Shanghai (Armbruster, 1983, p. 8). Pressured by the Chinese, to adopt their way of life, the Hmong fled south (Garrett, 1974, p. 78). The majority of



the Hmong started migrating out of China, into southeast Asia about 150 years ago. According to a 1947 study, however, the Hmong were reported to still occupy parts of south and west China, north China, Indochina, northern Thailand, and northwest Burma (Bernatzik, 1978, p. 38). A 1953 People's Republic of China census listed 2 1/2 million Hmong living in China (Garrett, 1974, p. 86). The minorities in China have undergone political pressure to abandon their culture and accept the Chinese way of life. According to the census report, the Hmong in China have integrated into Chinese society (Garrett, 1974, p. 86). Of the many countries into which the Hmong migrated, Laos is important because of the resulting changes on Hmong culture and their traditional lifestyle.

Laos

The majority of the Hmong moved from China into Laos about 150 years ago. Geographically Laos consists of mountainous regions landlocked by Cambodia, Vietnam, and Thailand (Figure 1). The people of Laos were divided into two major groups--the hill-tribe minorities and lowland Laotians. The Hmong were the largest hill-tribe minority in Laos (Champassak, 1983, p. 15). The Hmong cited two reasons for moving from China to Laos: to escape from hostile neighbors, and to have more land to farm and raise livestock (Barney and Koumarn, 1980, p. 3). Although the Hmong sought a peaceful existence, they found the opposite. They were swept into 70 years of war and conflict that resulted in the division of the Hmong population, resettlement, and the loss of many lives.



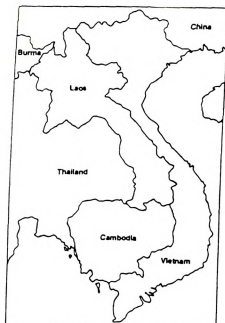


Figure 1. Map of Laos, from Michigan Hmong Arts, 1983.

French Relation. In 1896 the French, ruling Laos at that time, imposed a tax system on the Hmong based on family size and not on income. The Hmong, unable to live with the tax, caused revolts until it was discontinued (Barney and Koumarn, 1980, p. 4). In 1941 the Japanese attempted to gain control of Laos. The Hmong, under the leadership of Touby Lyfoung, joined the French and Laotians to form an army that overtook the Japanese in 1945 (Barney and Koumarn, 1980, p. 5).

American Relations. In 1945 a new leader emerged, and the Hmong population divided. While Touby Lyfoung gained increasing respect with the Royal Lao Government, a new opposition party under the Hmong leader Faydang Lori gained strength. This group, known as Lao Issara, became the Pathet Lao (Barney and Koumarn, 1980, p. 5). The Hmong remained divided in 1953, when the Civil War broke out in Laos. Some 100,000



Hmong fought on the side of the communist-led Pathet Lao. Over 250,000 fought on the side of the pro-Western Royal Lao government under General Vang Pao (Garrett, 1974, p. 83). The Pathet Lao received support from the Soviet Union, China, and North Vietnam. The Royal Lao Hmong were recruited, employed, armed, and led by the United States Central Intelligence Agency, CIA (Garrett, 1974, p. 83). Under the title of the U.S. Secret Army, the Hmong rescued downed pilots, destroyed enemy supplies, and delivered important information to the Americans.

In 1972 a cease-fire agreement between the two parties was signed (Barney and Koumarn, 1980, p. 13). As the communist party took over Laos and announced the intent to create a socialist state, both Hmong and Americans fled the country (Brown and Zasloff, 1976, p. 218). The Pathet Lao could not distinguish between communist and noncommunist Hmong, and so they centered their efforts on the entire Hmong population. With their attention focused on the Hmong, the American forces withdraw from Laos un-noticed (Brown and Zasloff, 1976, p. 219). Simultaneously, all American assistance, food, arms, and guidance ended. Encouraged by Souvanna, leader of the Royal Lao Army, General Vang Pao and many of his top officials also left the country (Barney and Koumarn, 1980, p. 14). The Pathet Lao easily took over Laos in April of 1975 (Barney and Koumarn, 1980, p. 13).

The Hmongs' cooperation with Americans, and their ability to fight, marked them as prime targets for execution by the new government of Laos (Barney and Koumarn, 1980, p. 14). The Hmong were called "tools of the CIA" and "lackeys of American imperialism." A program



entitled "Extinct Destruction Operations" sought to eliminate the Hmong (Santoli, 1983, p. 4). According to the policy, "the fields and houses of any pro-American Hmong villages were to be burned, the animals therein were to be slaughtered, and the people who lived there were to be chased down and killed" (Barney and Koumarn, 1980, p. 15).

The Hmong claim to have left Laos for several reasons. While economic and political freedom played a minor role, the fear of re-education camps and toxic chemical attacks were the major factors (Garrett, 1980, p. 633). "Military specialists and government scientists in the United States, Canada, Great Britain, France, West Germany, Norway, Thailand, Israel, and New Zealand have confirmed the current Soviet use of chemical warfare in Laos" (Santoli, 1983, p. 5). The Hmong experienced a variety of chemical toxins grouped under the general name "yellow and red rain" (Quincy, 1988, p. 195). The results ranged from "incapacitation, stupor and nausea, to choking, neurologic fits and massive hemorrhage causing quick death" (Santoli, 1983, p. 5). Those not directly hit suffered malnutrition and starvation due to chemical contamination of their food supplies.

Between 1975 and 1979 the Pathet Lao gained control of over two-thirds of Laos, forcing the noncommunist Lao and all Hmong minorities to leave (Garrett, 1974, p. 83). The Lao elite fled to France or the United States while the Hmong escaped to refugee camps managed by the United Nations High Commission on Refugees, UNHCR, and the Thai government (Andelman, 1976, p. 54). The Hmong migrated from Laos to Thailand in two major waves. In 1975 over 44,000 persons left Laos; the majority were Hmong. About seven to ten thousand hill-tribe people

migrated each year between 1976 and 1978. The second wave was in 1979 (Champassak, 1983, p. 15).

Many Hmong died in their efforts to leave Laos for Thailand. Pathet Lao soldiers lined the Ho Chi Minh trail to the Mekong River, which separates Laos from Thailand. Those who reached the river may have bought boat passage across the Mekong at night (Bernstein, 1978, p. 64). Many drowned trying to swim or float across. Once the Hmong had crossed the Mekong, they were greeted by Hmong soldiers who escorted them to refugee camps (Garrett, 1980, p. 640).

Thailand

In 1988 there were six refugee camps for hill-tribe peoples in Thailand: Chang Khong, Chang Kham, Sob Tuang, Ban Nam Yao, and Ban Vanai (Quincy, 1988, p. 197). Ban Vanai, with a population of 35,000, has the largest concentration of Hmong in the world (Nichols, 1988, p. 134). A long waiting period existed before admittance into the United States or another of the 35 countries accepting southeast Asian refugees (Garrett, 1980, p. 639). In 1986, more than 10,000 camp residents applied for resettlement (Walker and Moffat, 1988, p. 54). "Initially the U.S. refused to admit the Hmong because, officials claimed, they were not United States employees, a condition of refugee status" (Armbruster, 1983, p. A8). Before refugees could migrate to the U.S., they had to exhibit proof, such as military assignments or payroll receipts, stating that they served on the U.S. side during the Vietnam War. Those Hmong who fought with the communist Pathet Lao are not allowed to resettle in the United States.



Resettlement in the United States

Relocation

The four major countries that have accepted Hmong refugees are France, Australia, Canada, and the United States. The Hmong have experienced greater alienation and cultural adjustment problems in the United States than in the other three countries. According to Haggland (1980) there are three general explanations for the resettlement difference. First, the American public has never understood the Vietnam War. Therefore those involved, both American veterans and refugees, have been alienated. Second, most Americans still believe in the melting-pot myth, that immigrants should "shed their original heritage to become Americans" (Haggland, 1980, p. 26). The cultural traditions of the Hmong are so deeply embedded in their everyday life that a complete transition to American ways would be difficult. Third, the Hmong differed so greatly from previous refugees that appropriate resettlement programs were not available. The Hmong are preliterate; they did not have a written language. The Hmong also have extremely strong kinship ties and as a group are better organized than other refugees (Roth Li, 1981, p. 1).

Sponsorship

The first Hmong to arrive in the United States were sponsored by churches, church groups, or refugee agencies. More recent sponsors include Hmong families bringing relatives to the United States. The general practice in refugee resettlement in the United States is to

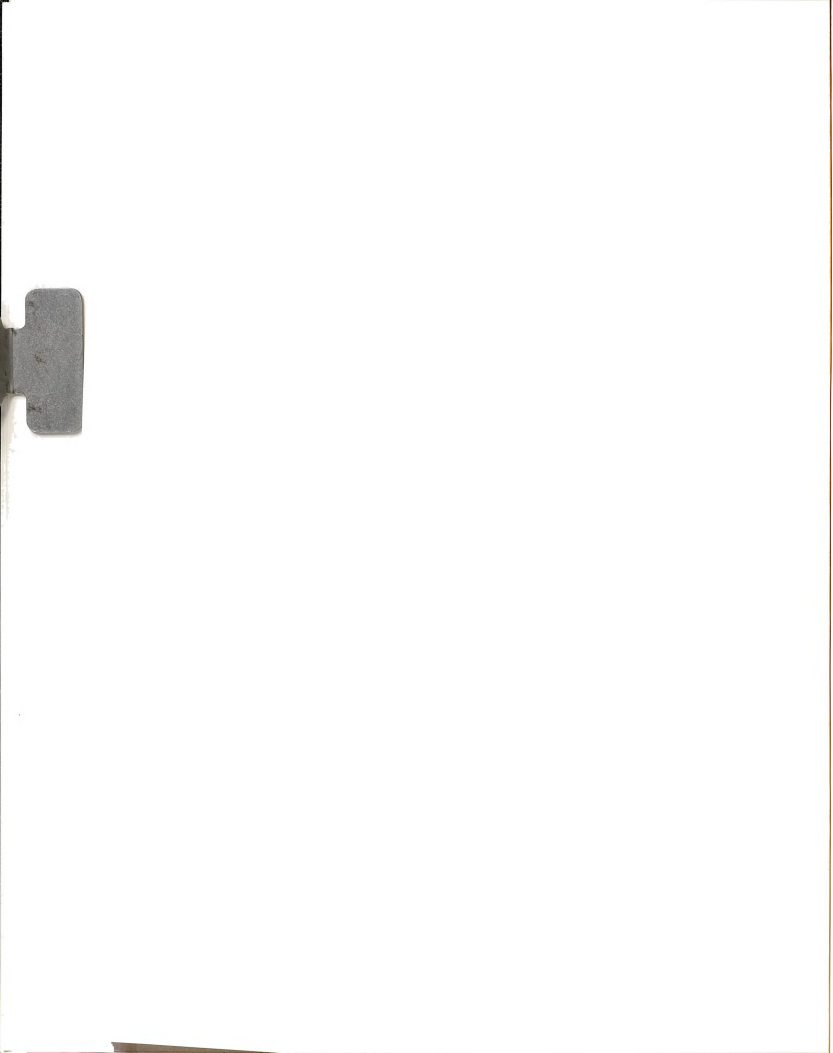


encourage wide dissemination; to make for a quicker adjustment on the premise that isolation from other Hmong encourages adoption of American ways. Kinship ties, variations in welfare payments from state to state, and the availability of job-training opportunities for refugees has encouraged secondary migration among the Hmong (Roth Li, 1981, p. 4).

Remigration causes a great deal of stress between sponsors and refugees as well as creating organizational problems for refugee resettlement agencies and adjustment problems for the Hmong (Roth Li, 1981, p. 4). An analysis of several Hmong communities and their existing resettlement programs suggests that the ideal Hmong population is 500 persons, as represented in Lansing, Michigan. This small number allows kinship ties while permitting resettlement agencies to function (Roth Li, 1981, p. 5).

Cultural Adjustment

Refugee resettlement agencies that encourage participation succeed far better than those that do not. The Hmong are more cooperative when advice comes through their own channels of authority (Roth Li, 1981, p. 7). General Vang Pao organized a mutual assistance association in California called the Lao Family Community. The association organizes social events, provides transportation and translators when necessary, and self-help opportunities (Roth Li, 1981, p. 6). Such programs are necessary to combat the effects of culture shock from the relocation of the Hmong in the United States. The Hmong are often forced to change drastically or to abandon cultural patterns that have solidified their



ethnic group for hundreds of years. The Hmong must learn English, seek employment, alter traditional practices, and acquire general knowledge for everyday living in an urban environment.

A major resettlement difficulty for the Hmong was their inability to speak, read, or write English. English is usually a prerequisite for vocational training. The Hmong have therefore been forced to go on welfare until they can learn enough English to qualify for training. In 1981 the federal government reimbursed the state for three years of refugee assistance per refugee (Roth Li, 1981, p. 21). Optimally, an English-as-a-second-language program combined with vocational training in Hmong would quicken resettlement. For women, literacy instruction often includes survival methods such as time and home management (Roth Li, 1981, p. 11). After a few months women are then able to make emergency telephone calls, give personal information, recognize currency, take a bus, and shop for household items (Mannel, 1982, p. 1).

Limited employment opportunities for their skill level and lack of understanding of the Hmong by potential employers creates another problem. The majority of the Hmong have never worked as employees before. In Laos men worked in agriculture and as soldiers. Farming at high elevations, the Hmong used slash-and-burn agriculture to grow corn, wheat, rice, and opium.

When employed in American businesses, the Hmong suffer from inadequate preparation and separation from other Hmong (Roth Li, 1981, p. 19). Even if properly trained for the job, the Hmong find the employment situation very foreign. They are emotionally unprepared for



the job, and become frustrated by it. They also suffer from psychological distress due to the need for assistance. The Hmong have provided for themselves for hundreds of years. The cultural stigma associated with assistance encourages employment and creates stress in the family (Barney and Koumarn, 1980, p. 11). The Hmong often qualify only for low-income jobs. In order to provide for the Hmong extended family, i.e., wife, children, parents, and possibly the wife and children of deceased brothers, one wage earner may have several positions.

As a result, dependence on one family member for survival has affected the traditional family hierarchy. In the past, the knowledge needed to live was handed down orally from one generation to the next by elders (Barney and Koumarn, 1980, p. 9). Usually the oldest member of a family, clan, or village received the position of authority (Roth Li, 1981, p. 5). In the United States elders are dependent on their sons who fought with Americans, and are more familiar with American ways. As the youth surpassed their elders in English, a cultural gap appeared. Hmong elders fear that the children cannot adequately compete with American children, and that in their effort to learn American ways Hmong culture will be forgotten (Vang, 1982, p. 4). This change in family hierarchy has also affected the adjustment of elders who are no longer able to provide for their families, or to pass on cultural knowledge to their children and grandchildren. As the Hmong adjust to America, their family structure and cultural patterns are being altered.



Conflicting Customs

As confrontations between American and Hmong traditions arise, the Hmong are forced to resolve conflicts in cultural patterns either by change or compromise. Several cultural traditions have been affected by Hmong life in the United States; marriage rituals, family structure, and medical practices are three of them.

Marriage Rituals. The Hmong traditional marriage rituals are still followed by many. A bride-price and dowry are exchanged between the parents of the bride and groom. The bride-price must be agreed upon between families, and an equal dowry is given to the groom's family. Parents are still responsible for choosing mates for their children. While a boy and girl may suggest marriage to their elders, the final arrangement and consent lies between the parents (Roth Li, 1981, p. 14). The age at which Hmong couples get married has changed. The Hmong elders have exerted pressure for teenagers to wait until their early twenties to get married and this has decreased teenage pregnancy.

Family Structure. Many traditions have changed to comply with American laws and culture. After every war in Hmong history, levite polygamy has been the practice, to care for widows and their children. In the true form of levite, men would marry their brother's widow and adopt his children. In the United States, the illegal practice of polygamy has been replaced by a new form of levite. The wives and families of men who died during the war are taken in and supported by their husband's eldest brother (Garrett, 1980, p. 100).



Medical Practices. Medical issues demonstrate a clear example of conflicting cultures. Hmong health is tied to religion and animistic worship. The Hmong believe the world is inhabited by spirits that need to be honored with rituals and sacrifices (Roth Li, 1981, p. 2). Each Hmong has 32 spirits that at times stray from the body and cause illness. Spirits must be recalled by a shaman (Armbruster, 1983, p. A8). The sick will die if their spirits do not return. The shaman rides off on an imaginary horse to find the spirits. A sacrifice is agreed upon between the shaman and the spirits before they will return. Usually a chicken or pig is chosen for sacrifice, and "spirit money" burned (Garrett, 1980, pp. 87-92). The Hmong feel that if a person is cut-open, the spirits leave the body. This is in direct conflict with Western medical practices. Several misunderstandings have arisen between hospitals and the Hmong.

Two specific medical concerns stand out in connection with the Hmong. One is the evidence of arsenic, lead, and mercury poisons in samples of Hmong folk remedies (Holtan, et. al., 1984, p. 348). In attempts to make traditional herbal cures, the Hmong are purchasing what they believe to be familiar materials.

A more publicized illness is the sudden unexplained death syndrome, SUDS. Between 1977 and 1986, 104 southeast Asians died suddenly, 26 of them were Hmong (Parrish, 1987, p. 47). All but one of them were males between 16 and 63 years of age. Death resulted from cardiac arrhythmia (Garlik, 1983, p. 31). A survey of SUDS cases, collected by the Center for Disease Control, showed that a peak occurred in 1981; reported cases have decreased each year since



(Parrish, 1987, p. 47). The study also outlined the possible causes of SUDS to be: stress, disruption of religious beliefs and health practices, sleep and heart abnormalities, diet, and toxins found in folk remedies (Parrish, 1987, p. 52).

Hmong Paj ntaub

An example of change in material Hmong culture is the paj ntaub. The direct translation for paj ntaub, also spelled pa ndau, is "flower cloth," meaning cloth made pretty like a flower (Zygass, 1986, p. 51). Paj ntaub represents a unique tradition of textile decoration that has been a part of Hmong culture for hundreds of years.

Paj ntaub refers to the process of decorating fabric using one or more of the techniques to be mentioned. Cross-stitch involves sewing small "x's" in a pattern. Traditionally, multi-colored threads were used to produce a design on a black, even-weave fabric (White, 1982, p. 16). Reverse appliqué is created by folding fabric and cutting very fine lines to produce geometric designs similar to paper snowflakes (White, 1982, p. 19). Figure two, sewn by Cha Vang, demonstrates where lines would be cut to create the maze design. The cut edges are then turned under and sewn in place. Plain appliqué involves sewing pieces of fabric onto the textile. Embroidery adds further decoration to the piece. The main embroidery techniques that appear on the paj ntaub are cross-stitch, chain-stitch, running stitch, couching, satin-stitch, and french knots. Batiking, used mostly in the center of baby carriers and for skirts, requires a small pen-like stick holding liquid wax, which creates patterns on the fabric. The piece, when dipped into dye, is



left with a clear design where the wax was applied (Adam, 1974, p. 56). Traditionally motifs are created from memory or by seeing another piece.

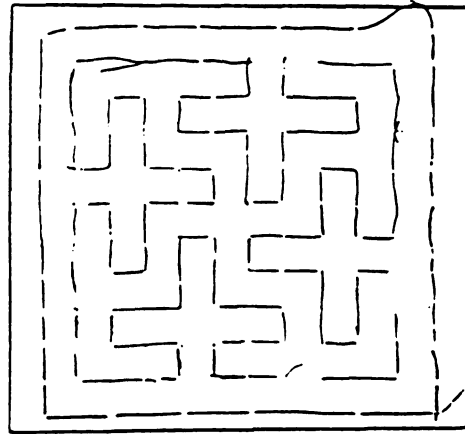


Figure 2. Reverse Appliqué, maze design by Cha Vang, 1982.

History and Folklore

Since the Hmong arrived in the United States the American public has developed an interest in the paj ntaub. This interest has led to the documentation of the history and textile process.

A defined set of rituals and superstitions surround paj ntaub production. A Hmong legend suggests that years ago a written language existed. The Chinese came and threatened to kill anyone who spoke the Hmong language. In the hope of preserving their language, the women embroidered the alphabet onto their skirts, hats, and sashes. Over time these designs changed into untranslatable motifs, and the written language was lost (Hamilton-Merritt, 1980, p. 3).

The production and use of paj ntaub, to some extent, extends into all facets of Hmong life (Cubbs, 1986, p. 21). When a child is born,



the grandmother produces a babycarrier and a hat. The superstition states that spirits attack from the back. So, the child is disguised as a flower by dressing in decorative clothing (Adam, 1974, p. 59). Adults wear the traditional costume at weddings, the New Years celebration, and funerals.

Technique and motif instructions are passed from one generation to the next (White, 1982, p. 5). Girls first learn to sew paj ntaub between three and ten years of age (Yang, 1983; Lee, 1983).

Paj ntaub Variations

While paj ntaub refers to the general category of decorated fabric, four forms of textiles are created by the Hmong. Costume, pictorial pieces, American adaptations, and ornamental pieces are all considered paj ntaub.

Costume. Traditional garb worn by the Hmong is visually different, according to the three major Hmong subgroups: white, blue/green, and striped. The variation among these three groups resulted from the different locations they occupied in Laos. The name White Hmong is derived from the plain white skirts worn by the women. Likewise the Blue/Green Hmong are known by their indigo batik skirts. The Striped Hmong are distinguished by the blue and black stripes on their jacket. (White, 1982, p. 8; Lyman, 1962, p. 35) (Figures 3a, b, c). There are variations in the number and placement of stripes on Striped Hmong jackets.

The Hmong women wear their skirts so that they meet in the front. The opening of the skirt is hidden with an apron. The skirt is made of



material up to 16 feet wide (Adams, 1974, p. 56). Quarter-inch accordion pleats are hand sewn and stored from two months to a year to set the creases. When the traditional costume is worn the stitches are removed; the next day is devoted to replacing them (Vreeland, 1981, p. 15). The skirts reach slightly below the knees. A bright-colored sash goes around the waist. Leggings in the form of cloth bindings are wrapped around the calves (Adam, 1974, p. 54). Modern variations include hose, knee socks, or bare legs.

Both men and women wear long-sleeved jackets with a sailor-like collar. Embroidered and appliquéd designs decorate the collar (White, 1982, p. 13). The White Hmong wear the decorative side of the collar on the inside, the Blue/Green Hmong, on the outside. Legend claims the White Hmong stole the idea from the Blue/Green Hmong and wear theirs on the inside to hide them. The men wear plain black trousers adopted from the Mien tribe (White, 1982, p. 8). During migration of the Hmong to refugee camps in Thailand, and then to the United States, festival clothing appears to have remained the same.

Pictorial Pieces. A new form of Hmong textiles, called pictorial pieces or story clothes, originated in Thai refugee camps. According to Jane Hamilton-Merritt, American assistants encouraged the Hmong to create images of their way of life and traditional rituals. This form is constructed using mainly cross-stitch and chain-stitch. The pictorial pieces are the only form of paj ntaub in which the men participate. In Thailand, the men provide the illustrations, and the women the stitches (Peterson, 1988, p.9). These pieces act as a diary of Hmong life and record the changes in it (Peterson, 1988, p. 9).



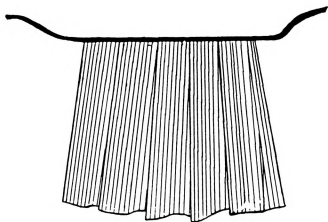


Figure 3a. White Hmong Skirt.



Figure 3b. Blue/Green Hmong Skirt.

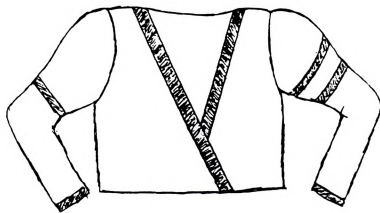


Figure 3c. Striped Hmong Jacket.



American Adaptations. Marketing of paj ntaub by Americans has inspired a new form, aimed at the American consumer. Hmong designs and ornamental construction techniques have been employed to create paj ntaub better suited for American needs. Book-markers, vests, pillow cases, place mats, draperies, gowns, and quilts are all examples of paj ntaub adaptations.

Ornamental Pieces. The paj ntaub form that has received considerable American recognition is that of the ornamental pieces used by the Hmong in traditional rituals and given as gifts. The ornamental pieces are usually square or rectangular in form. They consist of an ornamental center, surrounded by a number of different colored borders.

Marketing

Marketing of the paj ntaub has attracted the most attention from researchers. Two studies have focused on the marketing and goals of Hmong cooperatives in relationship to job employment. The majority of textile enterprises are developed in the hope of generating income, cultural preservation, development of marketable skills, and cross-cultural education ("Artists....," 1983, p. 4). Locations for paj ntaub sales include churches, ethnic festivals, conferences, craft fairs, art galleries, art exhibits, museums, and farmers' markets (Errede, 1982, p. 4).

A survey of cooperatives, administered by Ellen Errede and reported in "Artists, Artifacts and Entrepreneurs," developed a list of criteria that make for success in paj ntaub marketing. When shops that sell paj ntaub are located close together, public awareness is



increased (Errede, 1982, p. 1). There are greater sales when a specific product line is developed, and the quality of each piece is controlled ("Artists....", 1983, p. 6). Paj ntaub sold as art brings a higher price than when sold as a craft. Paj ntaub, sold as art, has been most successful when handled by local art consultants and interior designers (Errede, 1982, pp. 2-3). Businesses have been most helpful by offering display space and donating building supplies, and promotion materials ("Artists....", 1983, p. 7).

Business skills developed by Hmong women in cooperatives have found several other applications. The Hmong group, "Common Threads," of Toledo, Ohio, created designer gowns that were promoted in New York ("Common....", 1982, p. 2). The Textile Art Alliance, Inc., in Minnesota, has developed an interiors company that produces draperies and home interior products for local designers (Errede, 1982, p. 4). Several Hmong have also found positions in the American garment industry ("Artists....", 1983, p. 8). Construction of clothes for premature babies is an area in which the Hmong have excelled. Others have applied their improved English and bookkeeping skills in non-textile-related fields ("Artists....", 1983, p. 8).

Lansing Paj ntaub

The Hmong population of Lansing, Michigan is 500, with about 26 different family names (Hepp, 1983). The Hmong first came to Lansing between 1978 and 1979. The majority of the Hmong now living in Lansing, however, moved here from other parts of the United States (Hepp, 1983).



Marketing. Marketing of the Lansing paj ntaub began in English-as-a-Second-Language, ESL, courses at Lansing Community College. Members of the lower-level English courses brought paj ntaub to class, hoping the teachers would buy and help sell them (Yankee, 1983).

An ESL instructor organized the first sale in Lansing, December 1979 at St. Casimir church (Yankee, 1983). Paj ntaub sales were also organized at the Looking Glass Festival, Cricket Tree Store, Peaceable Kingdom, United Nations Aid Center, Bic Center, the Lansing School System, and the International Center at Michigan State University.

In March of 1982 volunteers through Catholic Refugee Services grouped together to organize one place where pieces could be brought by the Hmong, and checked out by Americans to be taken to sales. Pieces were brought in every Friday, and the Hmong women were paid the last Friday of every month. Inventory quickly jumped from 100 to 1500 items, consisting of not just Lansing paj ntaub but pieces made by relatives in refugee camps in Thailand. Marketing assistance was acquired from Emily Gladhart, who specializes in the sale of ethnic textiles and costumes. Ms. Gladhart became the main organizer, supported by the ESL instructors, and individuals from the Catholic Refugee Service Agency (Gilzow, 1983).

After two years Catholic Refugee Services discontinued selling paj ntaub. The inventory became too large, and the Hmong were not learning marketing skills (Gilzow, 1983). Emily Gladhart chose to manage six women who were strongly interested in selling paj ntaub, as a way of supporting their families, did artistic work, and showed some variation in style (Gladhart, 1983). Marketing skills have been



learned by the Hmong Ms. Gladhart assists. The sale of paj ntaub was approved by the East Lansing Art Fair, a juried sale in 1984-1988.

Documentation Study

This particular research study developed from an earlier project by the Folk Arts Division of the Michigan State University Museum and supported by the National Endowment for the Arts and the Michigan Council for the Arts. Curators of the Folk Arts Division conducted a research project to document the production and use of paj ntaub in Michigan by identifying and interviewing Hmong artists in Lansing and Detroit. The research project resulted in an exhibit, educational programs, and publications that included a motif dictionary and technique glossary written in both English and Hmong (Dewhurst and MacDowell, 1984, pp. 69-71). The researcher assisted with this project.

The MSU Museum exhibit served to research the work of the Hmong and to draw public attention to their rich textiles and unique culture. Sales developing from the MSU Museum exhibit have continued about twice a year at the Museum.

A group of Hmong elders and craftsman, called the Lansing Hmong Craft Community, developed to organize sales and answer Hmong and American questions and concerns. During the Museum project, Hmong elders expressed an interest in preserving paj ntaub for future generations.

This particular research study will develop a means of measuring change in paj ntaub, and will determine whether changes have occurred



in the Lansing area paj ntaub.



CHAPTER 2

STATEMENT OF THE PROBLEM

The Hmong paj ntaub, produced in the Lansing area, was selected for the study in order to combine the writer's areas of interest in clothing and textiles, ethnic history, and folklore. It became apparent, during preparation for the "Michigan Hmong Arts" exhibit, that little research existed on the paj ntaub and that a method for measuring change was needed. Using a sample from the Michigan State University Museum data-base of pieces, collected between 1981 and 1983, the present study made comparisons with a sample of pieces made in Lansing between 1977 and 1979. The base line textiles, 1977-1979, were collected from sponsors, English-as-a-second-language instructors, refugee resettlement agency representatives, and collectors. Differences between the pieces from the two time periods will be discussed in relation to transcribed interviews with sponsors, ESL instructors, refugee resettlement agency representatives, and paj ntaub marketers.

Assumptions

- 1) Both textile samples, 1977-1979 and 1981-1983, are representative of the textiles produced in the Lansing area during their respective time periods.



- 2) The size of both textile samples is proportional to the Hmong population living in Lansing at each represented time.
- 3) Unstructured interviews obtained by the Folk Arts Division, MSU Museum, contained statements on design motifs, color, size, and ornamental construction techniques from persons representing the Human Behavioral Environment.

Objectives

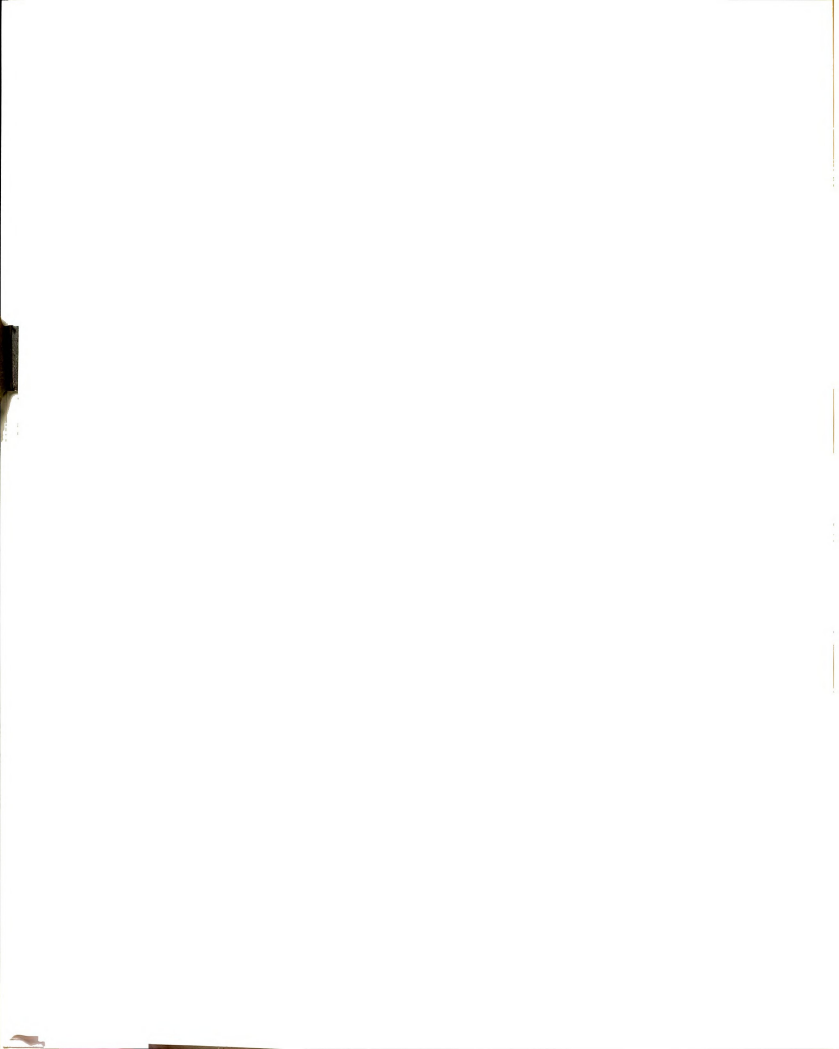
- 1) To relate research models from the fields of folklore and clothing and textiles to the examination of ethnic textiles.
- 2) To establish if changes in design motifs, color, size, and ornamental construction techniques have occurred in the paj ntaub between 1977 and 1983, in Lansing, Michigan.
- 3) To determine if physical changes in the paj ntaub could be related to statements from transcribed interviews with sponsors, ESL instructors, refugee resettlement agency representatives, and paj ntaub marketers.

Hypothesis

- H1) Changes have occurred in the use of design motifs in paj ntaub since the Hmong arrived in Lansing, Michigan from Thailand.
 - H1.1) The choice of design motif(s) changed from 1977-1979 to 1981-1983.
 - H1.2) The frequency with which the design motifs are used per piece has changed from 1977-1979 to 1981-1983.



- H2) The use of color in the paj ntaub fabric borders has changed since the Hmong arrived in Lansing, Michigan from Thailand.
- H2.1) The choice of hues to be used in the paj ntaub borders changed from 1977-1979 to 1981-1983.
- H2.2) The choice of value in paj ntaub border colors changed from 1977-1979 to 1981-1983.
- H2.3) The choice of chroma in paj ntaub border colors changed from 1977-1979 to 1981-1983.
- H2.4) The total number of colors used per piece in the borders has changed from 1977-1979 to 1981-1983.
- H3) Changes in the size of the paj ntaub took place over time from 1977-1979 to 1981-1983.
- H3.1) Changes occurred in the overall size of the pieces from 1977-1979 to 1981-1983.
- H3.2) The average proportions of border area to the overall piece changed from 1977-1979 to 1981-1983.
- H3.3) The number of borders used per piece changed from 1977-1979 to 1981-1983.
- H4) The ornamental construction techniques used in the center of each piece changed from 1977-1979 to 1981-1983.
- H4.1) The choice of ornamental construction technique, i.e., appliqué, reverse appliqué, embroidery, and batik used in the center of each piece changed from 1977-1979 to 1981-1983.
- H4.2) The number of different ornamental construction techniques used per piece changed from 1977-1979 to 1981-1983.



The following research question was developed to guide a review of the transcribed interviews.

Are changes in paj ntaub between 1977-1979 and 1981-1983 a reflection of advice received from individuals interacting with the Hmong?

Theoretical Definitions

Culture: "Patterns of thought and behavior containing variables such as beliefs, values, rules for conduct, and political, economic, and religious attitudes which are passed down from one generation to the next" (Kuper, et. al., 1985, p. 178).

Context: The social, psychological, and physical cues which allow individuals to assign meaning to objects in their culture (Rapoport, 1982, p. 7).

Folk Art: Objects created by humans within a specified context that contain shared meaning by the artist and particular individuals within that environment. Instructions for the creation of folk art are passed orally or by example from one generation to the next (Ben-Amos, 1971, p. 8).

Enculturation: The enforcement of one's cultural values and beliefs onto another, resulting in a transformation of attitudes, values, and behaviors.

Human Environed Unit: An individual or group which holds common values, goals, interests, and shares some sense of common identity.



Natural Environment: The environment formed by nature including space, time, physical, and biological aspects.

Human Behavioral Environment: The psychological, biophysical, and social aspects of human beings external to the human enviroined unit.

Human Constructed Environment: The modification of cultural, physical, and biological aspects of the environment by humans.

Operational Definitions

Hmong: Ethnic minority hill-tribe from southeast Asia. The Hmong in this study represent a White Hmong population in Lansing, Michigan.

Paj ntaub: Textiles decorated with appliqué, reverse appliqué, embroidery, and batik designs produced by the Hmong in Lansing, Michigan. In this study paj ntaub refers to two samples of ornamental pieces, one from 1977-1979, and one from 1981-1983. This study excludes costumes, pictorial pieces, and American adaptations.

Center Block: The area in the middle of the textile, which is surrounded by borders.

Border: Area surrounding the center. Usually numbering more than one.

Design Motifs: Any applied design that decorates the center of the paj ntaub. For the purpose of this study the design motif index, developed by the MSU Museum, was adapted. Motifs not found in the index were added.



Hue: A Munsell Book of Color, 1971, was used to identify hues. The specific Munsell hues are red, yellow-red, yellow, green-yellow, green, blue-green, blue, purple-blue, purple, and red-purple.

Value: The degree of lightness and darkness varying between zero for black, and ten for white.

Chroma: The balance of pigment and gray, on a scale of one for more gray, to sixteen for less gray and more pigment.

Size: Measurements of the overall size of the piece in square centimeters. The proportion of average border area to the overall size was compared between periods.

Ornamental Construction Technique: A frequency record of the decorative techniques, i.e., appliqué, reverse appliqué, embroidery, and batik used in the center block.

Human Environed Unit: The Lansing Hmong community, including the subject groups. The two subject groups were independent, the women who produced the 1977-1979 paj ntaub were different from those who created the 1981-1983 paj ntaub.

Human Behavioral Environment: Statements from transcribed interviews with sponsors, ESL instructors, refugee resettlement agency representatives, and paj ntaub marketers relating specifically to paj ntaub design motifs, color, size, and ornamental construction techniques.

CHAPTER 3

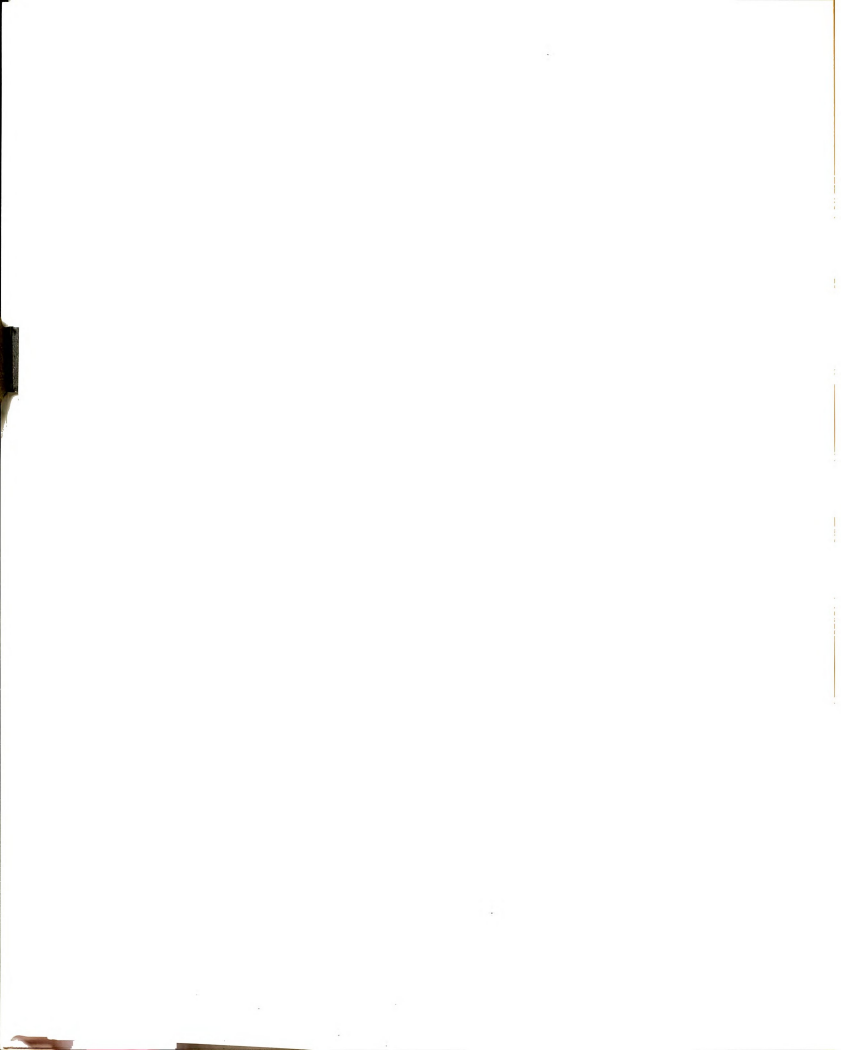
TERMINOLOGY AND MODELS

The focus of this study is Hmong textiles. While the paj ntaub may be considered material culture, it also meets many of the criteria of material folk culture. Therefore, methodologies for studying material culture and material folk culture are of value to this study. Selected elements of Hmong culture and variables of paj ntaub, mentioned in the statement of the problem, will be identified. These variables will also be labeled in terms of the process model for studying artifacts, developed by Fleming, 1974, and the conceptual human ecosystem model developed by Bubolz, Eicher, and Sontag, 1979. Both models emphasize the theory of context, recognizing all elements of culture to be of importance in the interpretation of artifacts.

Terminology

Material Culture

Artifacts are a part of culture. What they are called, and how they are observed, depends on the specific disciplinary approach. The term used by researchers in social science and the humanities is material culture. "Material culture refers to both the subject-matter of the study, material, and to its purpose, the understanding of



culture" (Prown, 1982, p. 2). For example, when studying historic costumes and textiles the researcher is interested in both the identification and classification of the artifact as well as its function in the culture.

The term material incorporates four aspects: style, design, substance, and construction (Prown, 1982, p. 2). Style is a concrete concept referring to the general defining characteristics of an artifact. Design describes the structural and ornamental decoration of an artifact. Designs are often taken from the environment whether physical, social, or psychological. The substance and construction aspects refer to what the artifact is made of and how it is put together.

The substance(s) employed in fabric may reflect physical elements of the culture. Silk, for example, is a natural filament whose production is restricted geographically. Substance, in clothing and textiles, also refers to fabric structure.

Technical identification, in regards to construction, is a primary method for dating historic costumes and textiles. Starting with the needle and thread, to the sewing machine, electric scissors, and the assembly-line; technical advances tell about a community's, intelligence, sophistication, and mechanical capabilities.

Concern with the function of an artifact and its relationships to the community that uses it is also a part of material culture. The artifact may have different functions within and outside of the culture. For example, scarves are worn many different ways in America, and these differ from how they are worn in India. Studies in material



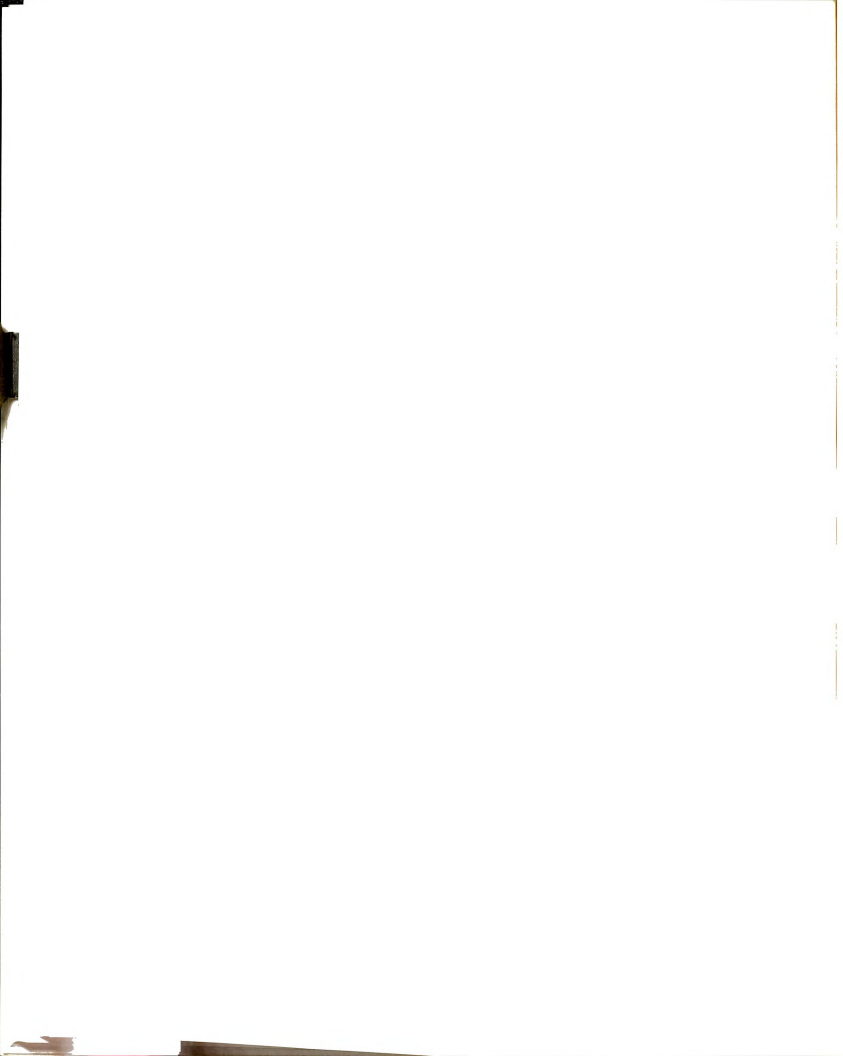
culture seek to explain the relationships that exist between the object, the maker, and the society or culture in which it was produced. In specific, artifacts tell who the society is, what its members believe, and how its members live (Latham, 1966, p. 256). Material culture includes all objects used by a culture.

Material Folk Culture

The area of material culture studied by folklorists is material folk culture. Both material culture and material folk culture are interested in the classification and function of an object. Material folk culture may be distinguished from material culture by the concept of "folk" and the background of the artifact.

The term "folk" can refer to any group of people whatsoever who share at least one common factor (Bauman, 1971, p. 31). It is this aspect that influences the form of the objects. "Folk" is a "group of people who share in common values that have visibly affected their choice of style, technique, and the use of aesthetic forms (Dewhurst and MacDowell, 1978, p. 11).

Another quality which distinguishes material folk culture from material culture is the background of the artifact. "Folklore materials may be qualified in terms of their social context, time, depth, and medium of transmission" (Ben-Amos, 1971, p. 5). A condition of material folk culture is that it not be created from written instruction, but by oral and/or visual direction, from one folk member to another (Ben-Amos, 1971, p. 8). The form of an artifact, for each folk group, remains traditional.



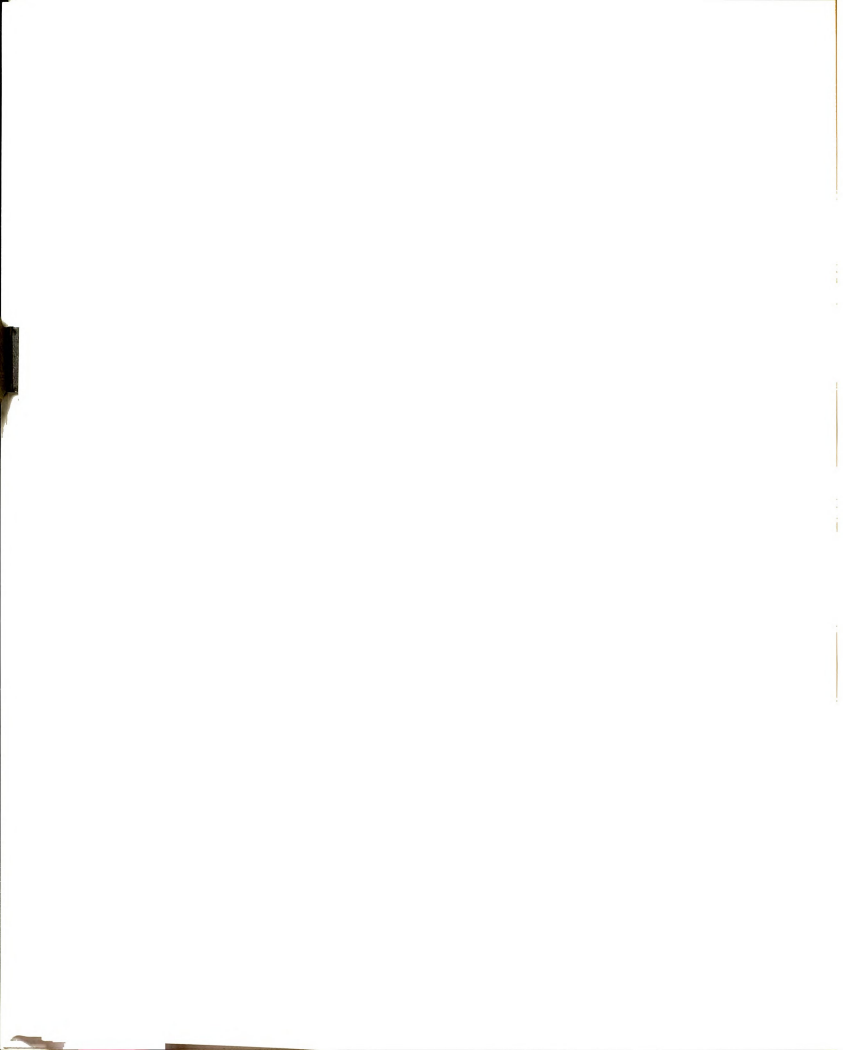
Material folk culture may also be characterized as having a lifespan of its own. There is a tendency for material folk culture to become material culture, i.e., to lose those characteristics that make it material folk culture. For example, when an artifact that has functional meaning to a folk group, such as a decoy, is produced aesthetically for the general public, its definition changes from material folk culture to material culture. There is a trend for material folk culture to become material culture over time (Dewhurst and MacDowell, 1978, p. 9).

Models

When studying an artifact it is important to focus on both the classification and function. Models from both facets of the researchers background, folklore and human ecology, were appropriate for this study. Two models which study material culture are the process model for the study of artifacts, developed by Fleming, 1974, and a conceptual ecosystem model, developed by Bubolz, Eicher, and Sontag, 1979.

The Fleming Model

A model used in several disciplines, including folklore, was proposed by E. McClung Fleming (Figure 4). The model is composed of two parts. The first portion is a classification approach to the basic properties of an artifact. The second area consists of four operations which are applied to the properties (Fleming, 1974, p. 154). The five classifications of an artifact, according to Fleming, are: history,



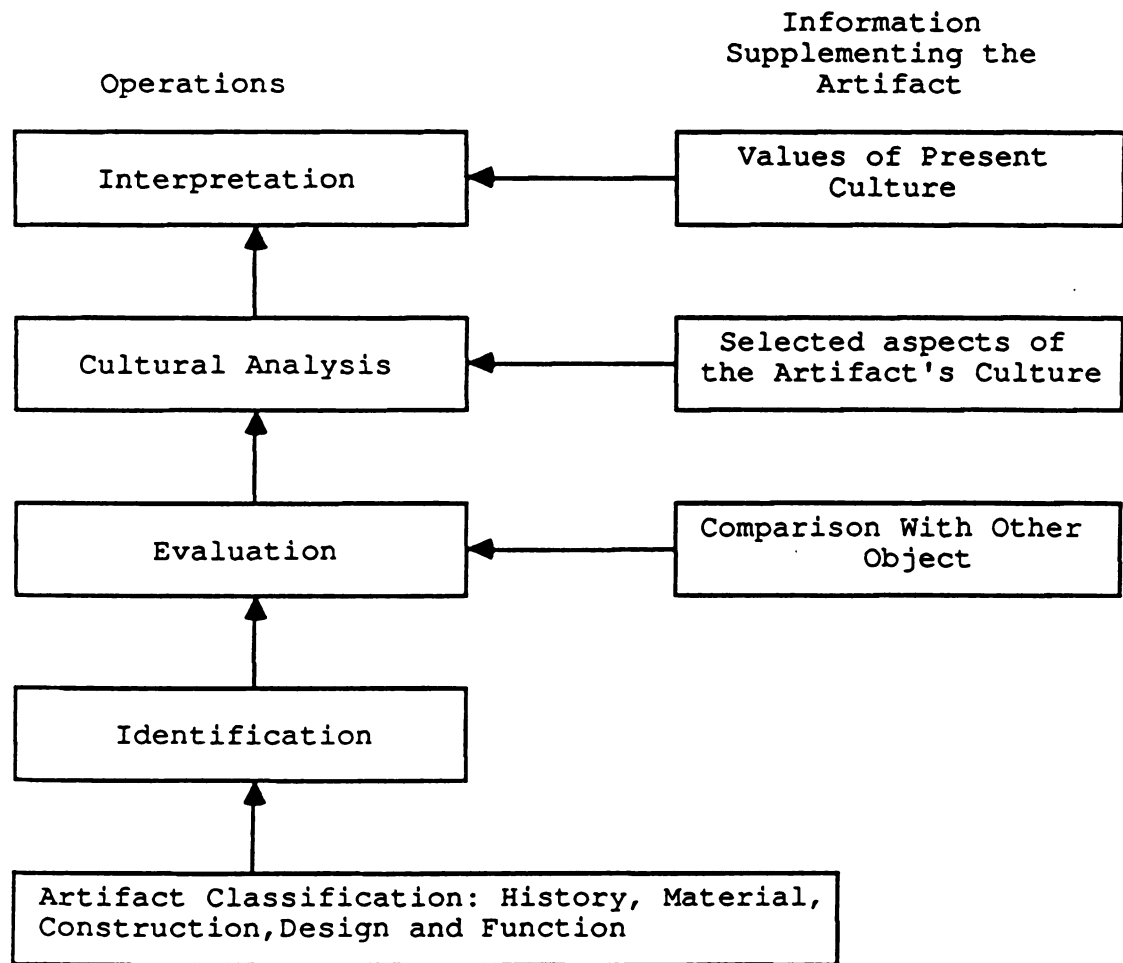


Figure 4. Artifact Study: A Proposed Model, Fleming, 1974.



material, construction, design, and function.

Fleming's first artifact classification deals with identifying the history of the object. History questions include where and when the artifact was made, who it was made for, and why? History is also concerned with what changes have occurred in ownership, condition, and the function of the artifact. The second area, material, is concerned with the chemical and physical composition of the artifact (Fleming, 1974, p. 156). Construction refers to the techniques of reproduction, and the actual workmanship involved. Design recognizes the importance of structure, form, style, ornament, ichnography of the artifact, and its reflection of culture. Function may be divided into two categories, intended and unintended. Intended functions describe what the artifact was designed to do. Unintended functions represent the role of the object in the culture, i.e., unplanned social and psychological ramifications (Fleming, 1974, p. 156). Used in combination, these five characteristics represent the basic properties of the artifact.

The above characteristics undergo the process of identification, evaluation, cultural analysis, and interpretation. Identification may be discussed in three parts: classification, authentication, and description. When classifying an artifact the researcher is interested in its function, material, construction, and subject matter. Authentication relates to a verification and discovery of dates, the location of construction, authorship, and materials (Fleming, 1974, p. 156). The third, description, recognizes the physical attributes, the culture, and social history of the artifact (Fleming, 1974,

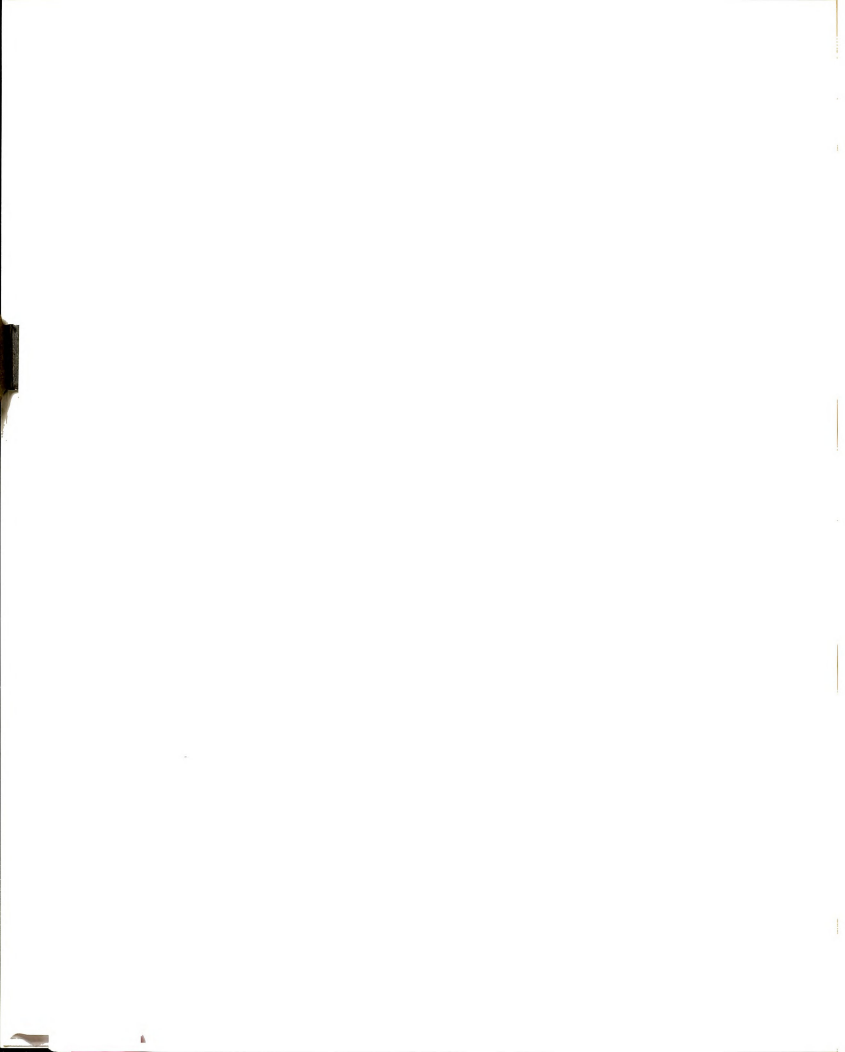


p. 156). Cultural information on the object might also include trade practices, style, condition, and the appraisal value (Montgomery, 1982, pp. 143-152).

The second operation, evaluation, has two parts. Artifacts may require a judgmental evaluation of aesthetic quality, workmanship, appropriate materials, form, style, ornament, and design (Fleming, 1974, p. 157). In order to establish a pattern, a factual comparison between two similar objects is necessary. Second, items should be evaluated on such variables as size, cost, and rarity.

Once an artifact has been identified and evaluated, a cultural analysis should take place. Cultural analysis involves researching the relationships between the artifact and the culture. This is the cultural part of material culture studies. Questions of concern include why it was initially produced, what is its function, and what importance does it have in the community (Fleming, 1974, p. 157)? The artifact, by nature, acts as a vehicle of communication identifying aspects of the community in which it was developed (Fleming, 1974, p. 158). "The purpose in cultural analysis is to isolate characteristics common to the group that enable the researcher to make inferences of a general nature about the society that produced and/or used the body of artifacts" (Fleming, 1974, p. 158). Biographical information on the artist, such as ethnicity, religion, geographical region, occupation, age, and kinship ties will also benefit analysis of the artifact (Bauman, 1971, pp. 35-38).

The relationship between the artifact and the culture is two directional. It is important to understand not only how the artifact



reflects the culture, from which it arises, but also the meaning of the artifact to the culture. These are both questions which serve as interpretation of the artifact (Fleming, 1974, p. 159). Folklorists, studying material folk culture, are concerned with all aspects of Fleming's model to some point, depending on the artifact and folk group under study.

Application of the Study to the Fleming Model

Fleming's ideas of classification and cultural analysis were used in studying Hmong paj ntaub (Figure 5). The variables for this study were classified using the Fleming model. The focus of this study was narrowed to the physical elements of the paj ntaub, therefore, history and function were not studied.

Material refers to what the artifact is made of. In the case of the paj ntaub, what type of fabric is used and what fabric colors are chosen are elements of the material. The pieces used in this study were not owned by the researcher; therefore they could not be taken apart to study fiber content. The choice of fabric colors, used in the borders of each piece, was identified as a variable for this study.

Construction describes how the artifact was put together. The paj ntaub is sewn by hand and decorated using appliqué, reverse appliqué, embroidery, and batik techniques. Ornamental construction techniques decorate the center of each piece, and were considered a variable in this study.

Design identifies the size, style, and ornamentation of the artifact. Elements of design in the paj ntaub are the choice and



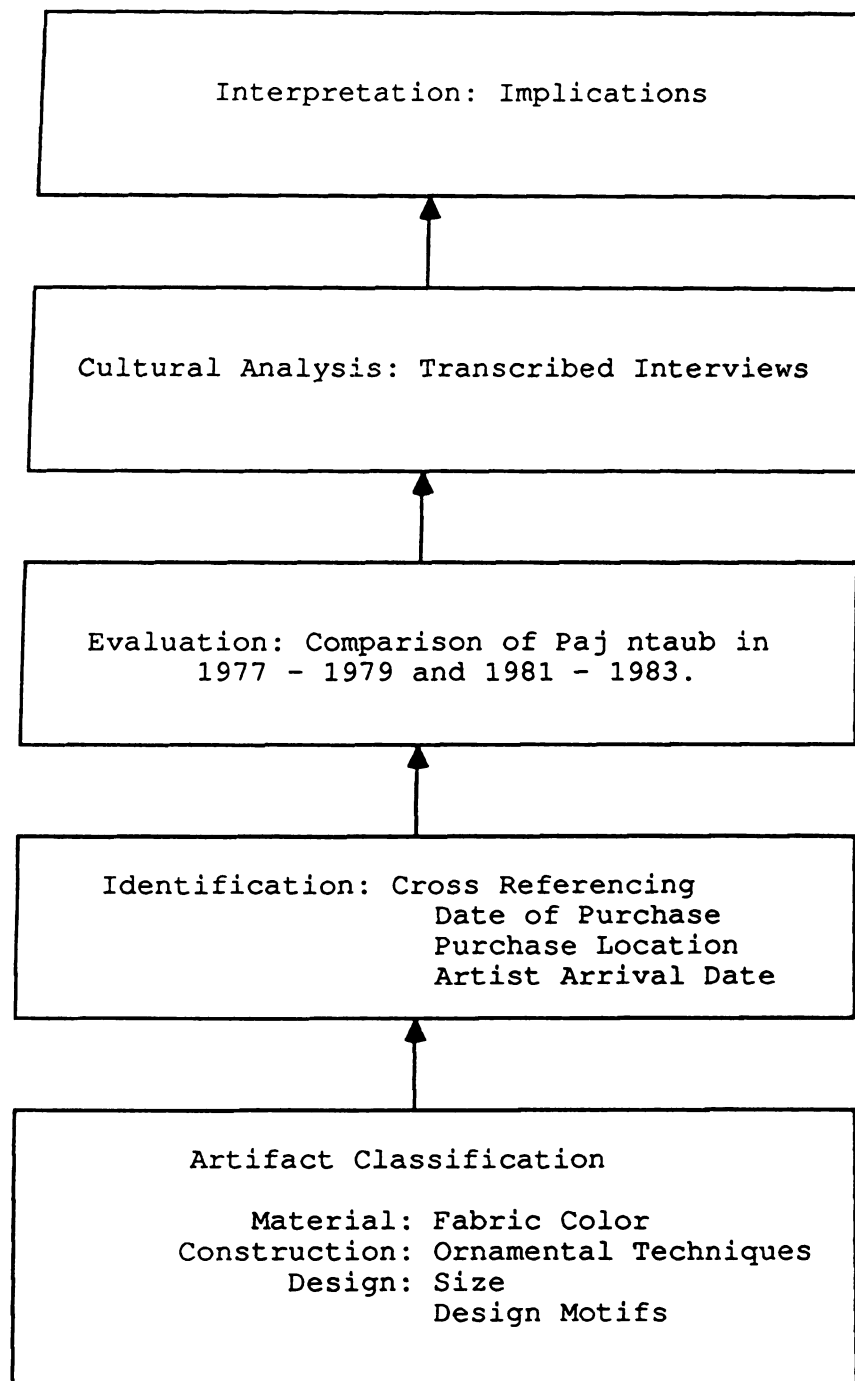
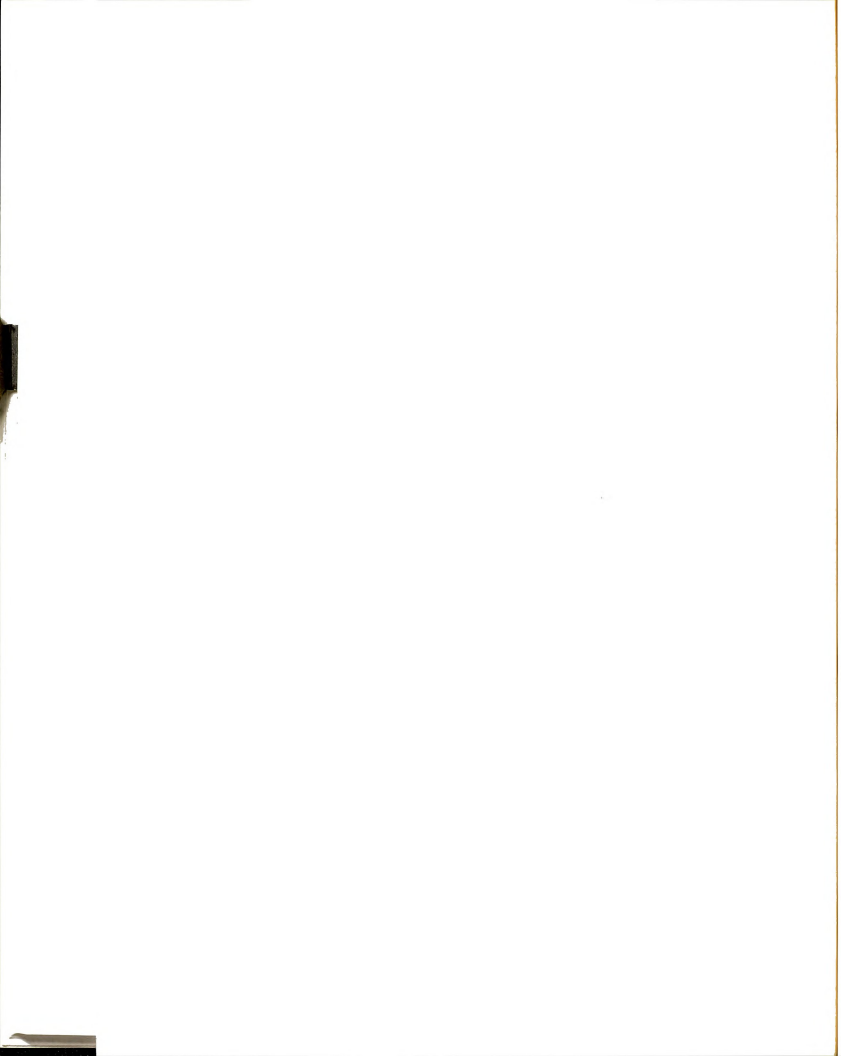


Figure 5. Application of the Study to the Fleming Model.



frequency of size, and design motifs.

The five classifications of an artifact are viewed by four "principles": identification, evaluation, cultural analysis, and interpretation. Identification refers to the authentication of the artifact. The dates for the paj ntaub, in this study, were verified by cross-referencing the dates of purchase, production locations, and arrival dates of the artists. The evaluation of paj ntaub is a factual comparison of two samples. Paj ntaub created in Lansing, at two different time periods, were compared based on the choice and frequency of design motifs, color, size, and ornamental construction techniques.

The cultural analysis looks at the evaluation and describes it in terms of the culture. While hypotheses regarding cultural analysis were not specifically tested in this study, transcribed interviews with sponsors, ESL instructors, refugee resettlement agency representatives, paj ntaub marketers, and the Hmong helped in the analysis of the findings. The interpretation refers to the implications of the findings for researchers in folklore and clothing and textiles, the paj ntaub producers, and local and national Hmong communities.

The Human Ecosystem Model

The human ecosystem model provides a common set of terms and concepts which may be used with a variety of disciplinary and theoretical approaches (Andrews, Bubolz, and Paolucci, 1980, p. 43). The human ecosystem model focuses on three variables, the individual or a specific group referred to as the human environed unit, the environment, and the interaction that takes place between these two

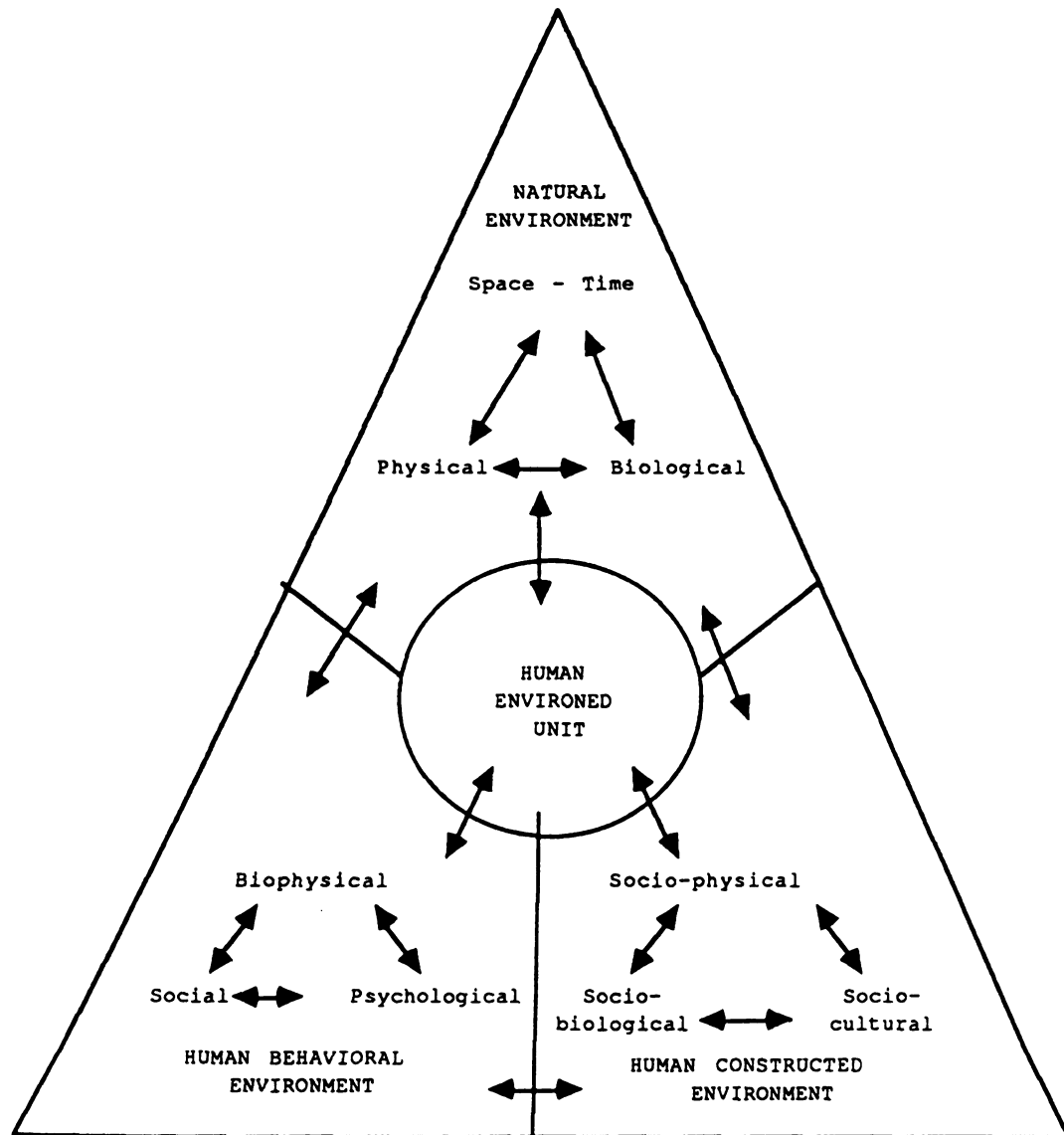


Figure 6. Human Ecosystem Model, Bubolz, Eicher, and Sontag, 1979.



(Bubolz, Eicher, and Sontag, 1979, p. 29) (Figure 6). The human enviroined unit, HEU, consists of individuals who share common values, goals, resources, and knowledge.

The environment represents the "...sum total of the physical, biological, social, economic, political, aesthetic, and structural surroundings for organism" (Bubolz, et. al., 1979, p. 29). The environment is divided into three conceptually distinct, but interacting environments: the natural, human constructed, and human behavioral.

Natural Environment

The natural environment, NE, has three interacting components: space-time, physical, and biological. Space is the area in which events occur. Time is the "continuous duration of events which occur and are sequentially related to one another, as in the past, present, and future" (Bubolz, et. al., 1979, p. 29). The physical aspect of the natural environment includes factors such as atmosphere, climate, soil, water, minerals, and topographical features. The biological part includes plants, animals, and microorganism (Bubolz, et. al., 1979, p. 29).

Human Behavioral Environment

The human behavioral environment, HBE, includes the human as an environment, in particular the biophysical, psychological, and social aspects of human behavior. "The social component includes interacting persons and groups, and short and long term relationships" (Bubolz, et.



al., 1979, p. 30). These individuals form relationships and act as role models for the human envired unit. The human behavioral environment presents goals, values, knowledge, and behaviors for acceptance by the human envired unit. The human behavioral environment may also consist of individuals from the same or different cultures.

Human Constructed Environment

The human constructed environment, HCE, consists of "modifications made by humans to the natural environment's physical and biological components and other social and cultural constructions" (Bubolz, et. al., 1979, p. 29). Three components are included in the human constructed environment: socio-cultural, socio-physical, and socio-biological.

The socio-cultural part consists of cultural patterns such as technology, language, laws, values, aesthetic standards, and social institutions such as economic, religion, family, education, and health. It is these socio-cultural patterns that define the group traditions and provide the basis for communication, order, and coordination of human activities (Bubolz, et. al., 1979, p. 29).

The socio-physical component represents human alterations of the natural environment and constructed objects. Examples of the constructed objects include buildings, paintings, clothing, and textiles (Bubolz, et. al., 1979, p. 29).

"The socio-biological component is that part of the environment which includes human alterations of plants and animal species and

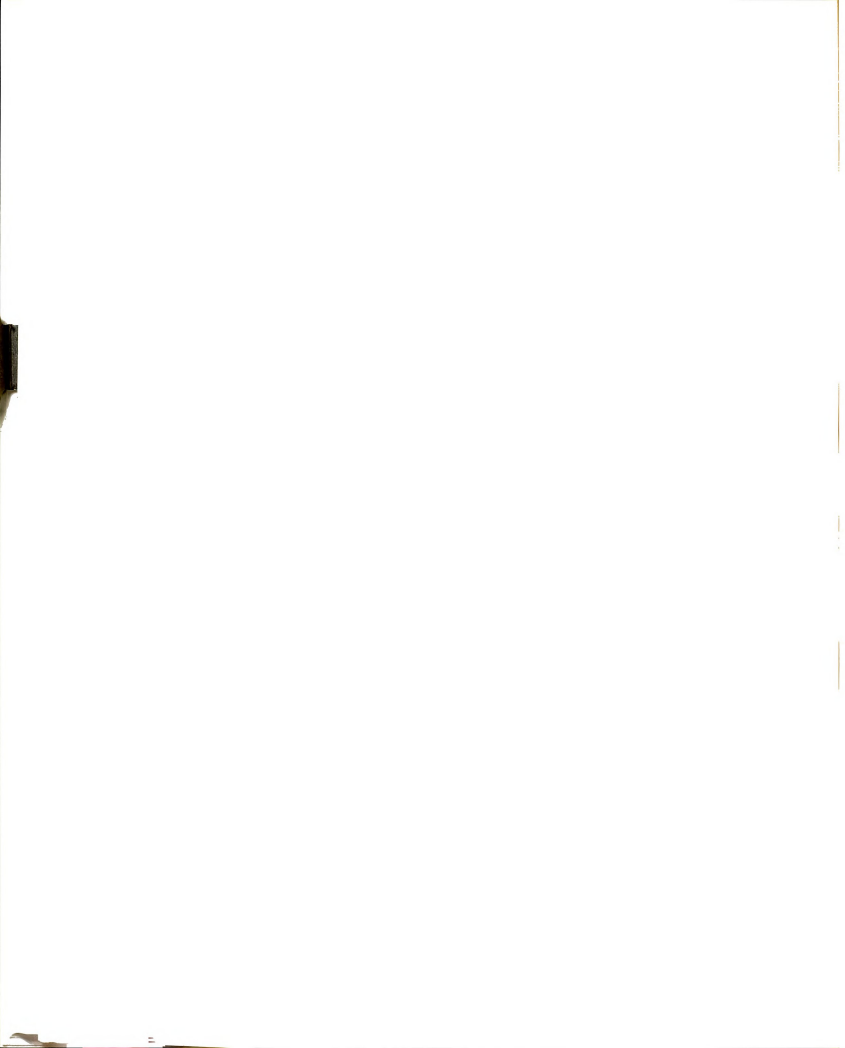


microorganisms" (Bubolz, et. al., 1979, p. 29). The human constructed environment is a product of human's intellectual and social capabilities, and his adaptation of the material environment to meet physical, biological, social, and psychological needs and desires.

Ecological Perspective

The human ecosystem model is based on the concept of wholeness, as "segments of the family system or the environment changes, the state of equilibrium of the ecosystem will be disrupted, calling for counterbalancing or elaborating change" (Andrew, et. al., 1980, p. 36). The human envired unit may be considered a cybernetic system. The human envired unit uses information, in the form of symbols, signs, and messages, when reacting to environmental changes and adjusting their behavior (Andrew, et. al., 1980, p. 35). The human envired unit is constantly changing and experiencing periods of growth and stability. The environment provides the resources necessary for life and constitutes the life support system (Bubolz and Paolucci, 1976, p. 3). In summary "humans are part of the total life system and cannot be considered apart from all other living species in nature" (Bubolz and Paolucci, 1976, p. 2).

The human ecosystem model may be viewed from both a macro and micro approach. From a holistic point of view, all relationships with the human envired unit should be evaluated, versus a singular cause-effect relationship (Bubolz, et. al., 1979, p. 1). From a macro approach, the human ecosystem model draws attention to the various systems which impact on the human envired unit, and how these



contribute to developmental goals (Andrews, et. al., 1980, p. 31). The human ecosystem model provides a framework for a comprehensive study.

The human ecosystem model may also be used in micro studies. The third component, of the human ecosystem model, is the organization derived from patterns of transactions between the human envired unit and three environments (Andrews, et. al., 1980, p. 33). The micro approach recognizes an in-depth study of a few interactions, determining the amount and type of influence specific environments have on the human envired unit. Environments may be influenced either by nature or human derived rules (Bubolz and Paolucci, 1976, p. 4). "Environments are both real, or material and abstract. Material in the sense of matter-energy flow; abstract in the form of communication: information, signs, and concepts" (Bubolz and Paolucci, 1976, p. 3). The human envired unit interacts with the environment forming linkages which facilitate the flow of information, goods, and services (Andrews, et. al., 1980, p. 34). The human envired unit acts to circulate, transform, and store energy, matter, and information through biological, physical, and social processes (Bubolz, et. al., 1979, p. 28).

The human ecosystem model functions well as a micro system. One study, which identified the family as the human envired unit, viewed information flow as input and its effect as output.

Experiments which demonstrate how the family structure itself changes with the inclusion of new inputs such as changes in role expectations, activity patterns, or resources, aid in monitoring the appropriateness of such inputs and in providing feedback to the family to help the members mediate those changes to best serve their own interests (Andrews, et. al., 1980, p. 45).



High levels of energy are needed for adaptive and creative behavior to enable a system to cope with changing environments and rules (Andrews, et. al., 1980, p. 34).

Through the basic process of consumption and socialization in the family utilizing inputs from both the real and abstract environments energy, goods, services, information, etc., the human beings in the family are also transformed and can be considered as output in the form of human capital for other systems in the environment (Bubolz and Paolucci, 1976, p. 4).

Application of the Study to the Human Ecosystem Model

Material culture studies recognize the importance of both the artifact and the culture from which it developed. An ecological perspective is advantageous to material cultural studies because it helps identify the relationships that exist between the artifact, the individual in the community, and the many elements of the environment. This particular study is a micro approach to viewing the physical changes in paj ntaub between two time periods (Figure 7).

The relationships researched, in this study, may be observed in the human ecosystem model. The subjects for this study, referred to as the human envired unit, were independent groups of Hmong women who produced paj ntaub in Lansing between 1977-1979 and 1981-1983. The Hmong community in Lansing, Michigan was also considered part of the human envired unit.

The natural environment is identified for this study as Lansing, Michigan during 1977-1979 and 1981-1983. In this study the natural environment is considered a constant, except for the variable of time, which is represented by the two samples.



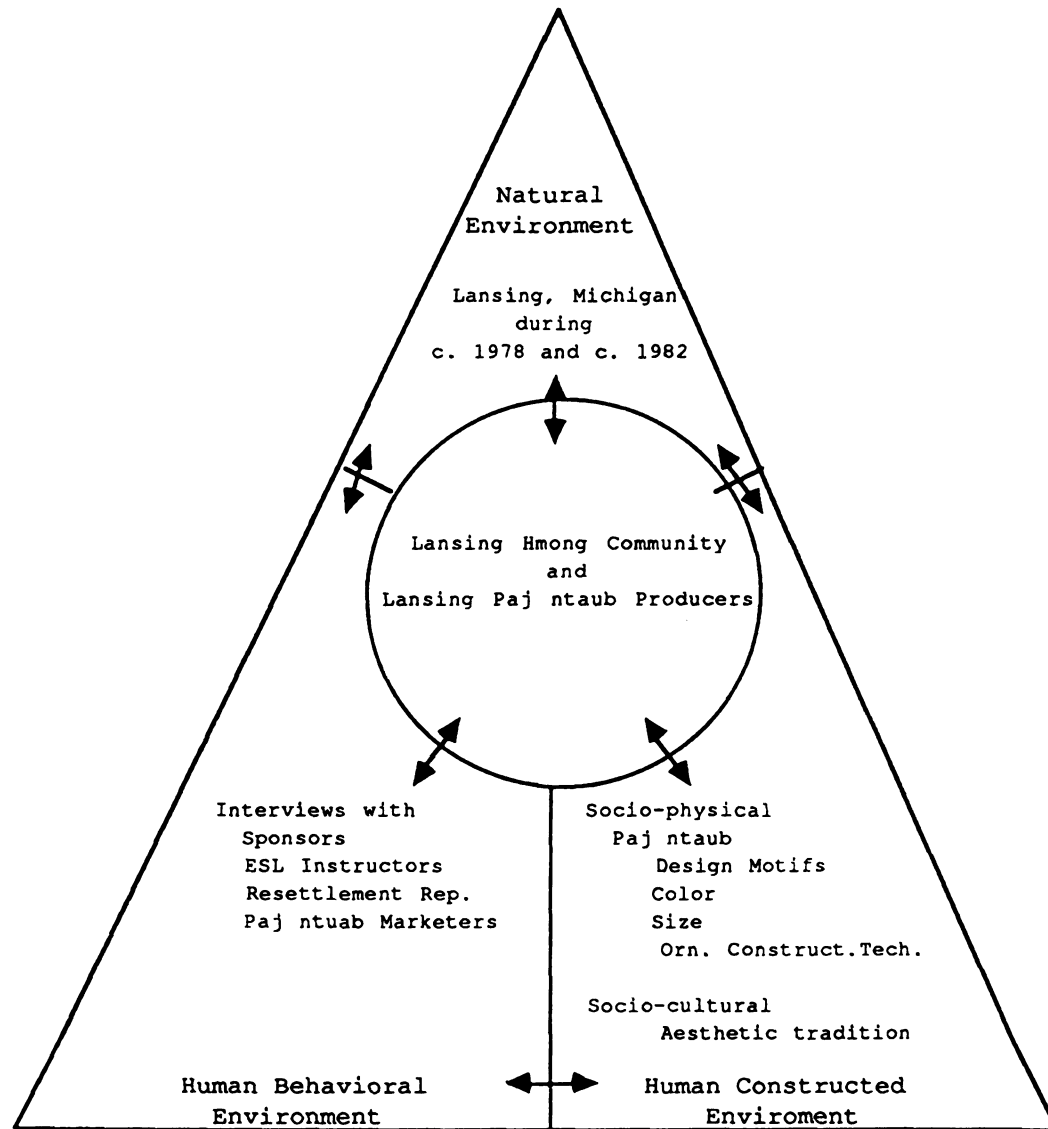
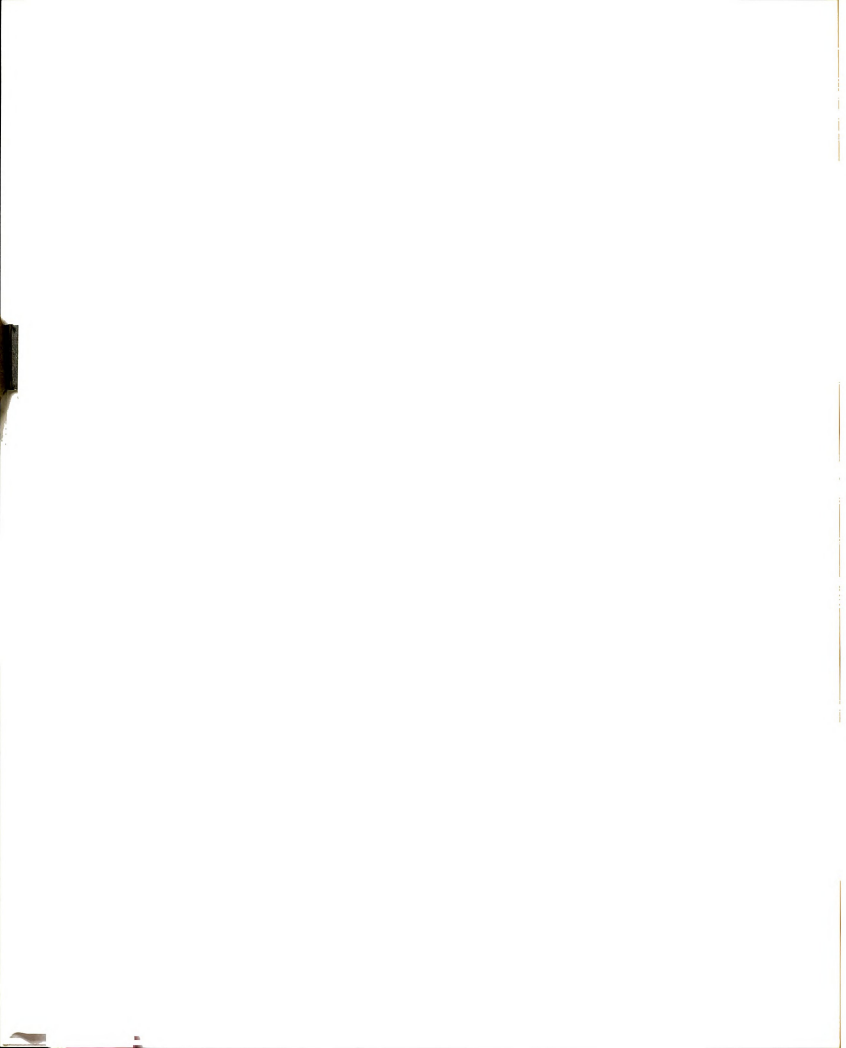


Figure 7. Application of the Study to the Human Ecosystem Model.



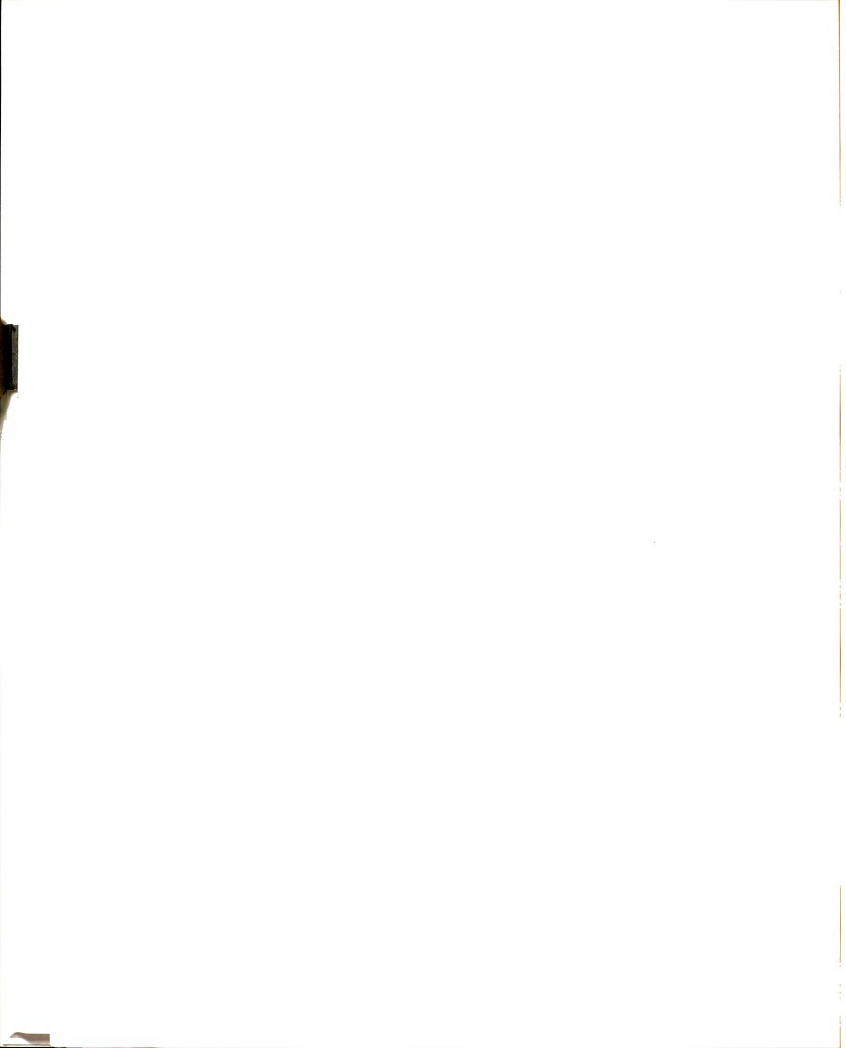
The social and psychological elements of the human behavioral environment were observed in transcribed interviews with sponsors, ESL instructors, refugee resettlement agency representatives, and paj ntaub marketers. Statements made by the individuals assisting the Hmong, relating to the variables being studied, were identified.

The human constructed environment is represented in the study by both the socio-cultural and socio-physical elements. The variables chosen for study are part of the socio-physical object, i.e., ornamental paj ntaub: design motifs, color, size, and ornamental construction techniques. The socio-cultural component represented existing traditional aesthetics of the Hmong.

An integral part of the human ecosystem model is the interaction that takes place between the environments and the human envired unit. Changes in the paj ntaub, made by Hmong women at two different time periods, will be discussed in relation to statements from transcribed interviews made by individuals representing the human behavioral environment.

This study utilizes elements of an ecological perspective. An accurate interpretation of artifacts, involves a full understanding of the various elements of the culture being studied. By observing Hmong culture several relationships were identified.

It may be generalized that human beings exist in relation to their environments. The environment in which we live constantly introduces input which must be evaluated. The Hmong are new citizens in the United States. They are confronted by new information every day. What information they choose to accept, and what they choose to disregard,



has an effect on their lives.

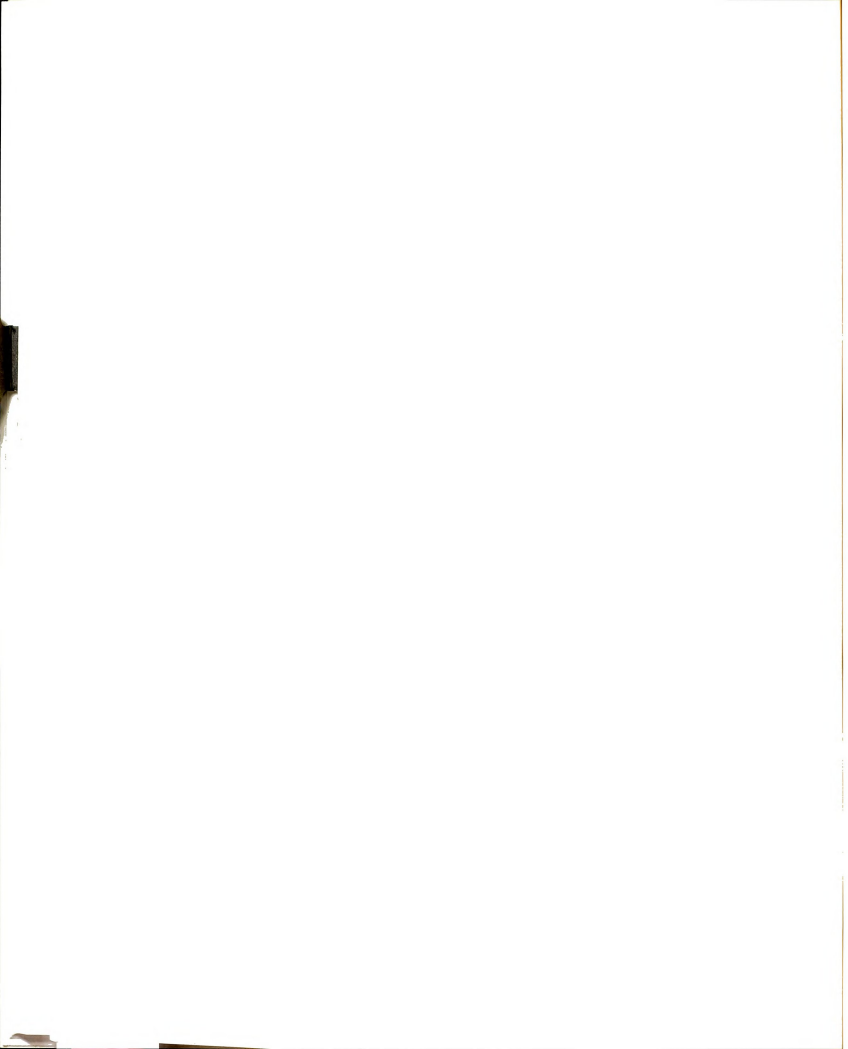
Recognition of these multiple and compounding influences and relationships can aid in predicting the nature of the family and the environment's capacity to produce and integrate change that has a positive, intentional outcome (Andrews, et. al., 1980, p. 45).

Individuals, representing the human behavioral environment, interacted socially with the Hmong forming short and long term relationships. Psychologically, they possess American values, aesthetic preferences, and marketing beliefs. What effect this relationship has had on the Hmong may be viewed by studying changes in the paj ntaub --a major focus of American attention.

Comparison of Models

A comparison between Fleming's model and the human ecosystem model showed several similarities. The definition of a folk group is similar to the human envired unit. A folk group, as defined by Bauman, is any group which shares at least one common factor (Bauman, 1971, p. 31). The definition of the human envired unit is more restrictive, indicating a sharing of values, goals, resources, and knowledge.

Fleming's model and the human ecosystem model recognize the importance of wholeness. Only when all elements of a culture are identified and understood can the interpretation be accurate. Fleming's model studies artifacts by classifying the elements of the object and understanding their function and meaning within the environment that uses it, however, the elements of the environment are not specified. The human ecosystem model specifically identifies



categories that differentiate types of environments and all aspects of the culture.

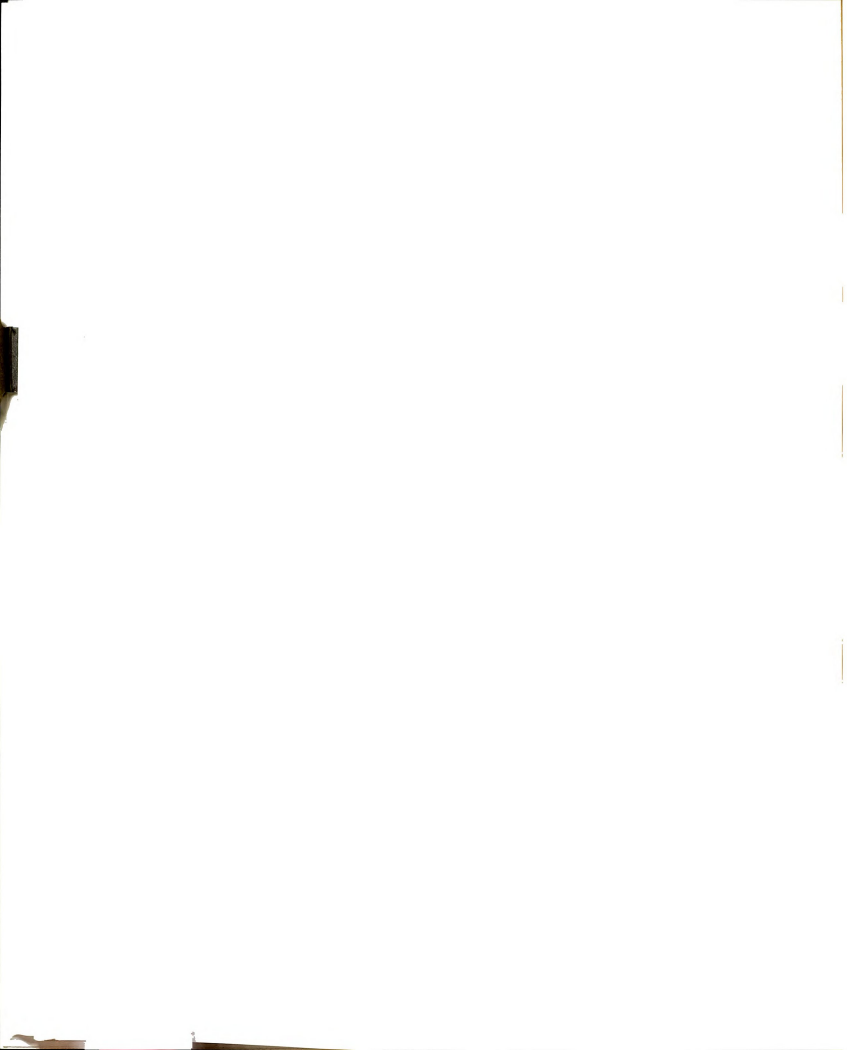
The difference between each model lies in its type. Fleming's model may be considered a process model. It identifies a series of steps used in analyzing artifacts. The human ecosystem model is a conceptual model. It recognizes interrelationships between the environment and the human envired unit. This allows the researcher to classify his/her study and determine relevant relationships.

In regard to the study of artifacts, both models emphasize the concern with context. The theory of context claims that objects must be studied in relation to their makers, the individuals who use the object, and the culture from which it arises (Bronner, 1984, p. 172). "Although folk art can be treated apart from its cultural context, in order to maximize understanding of the object one should investigate more fully the context in which the creator works" (Dewhurst and MacDowell, 1978, p. 7).

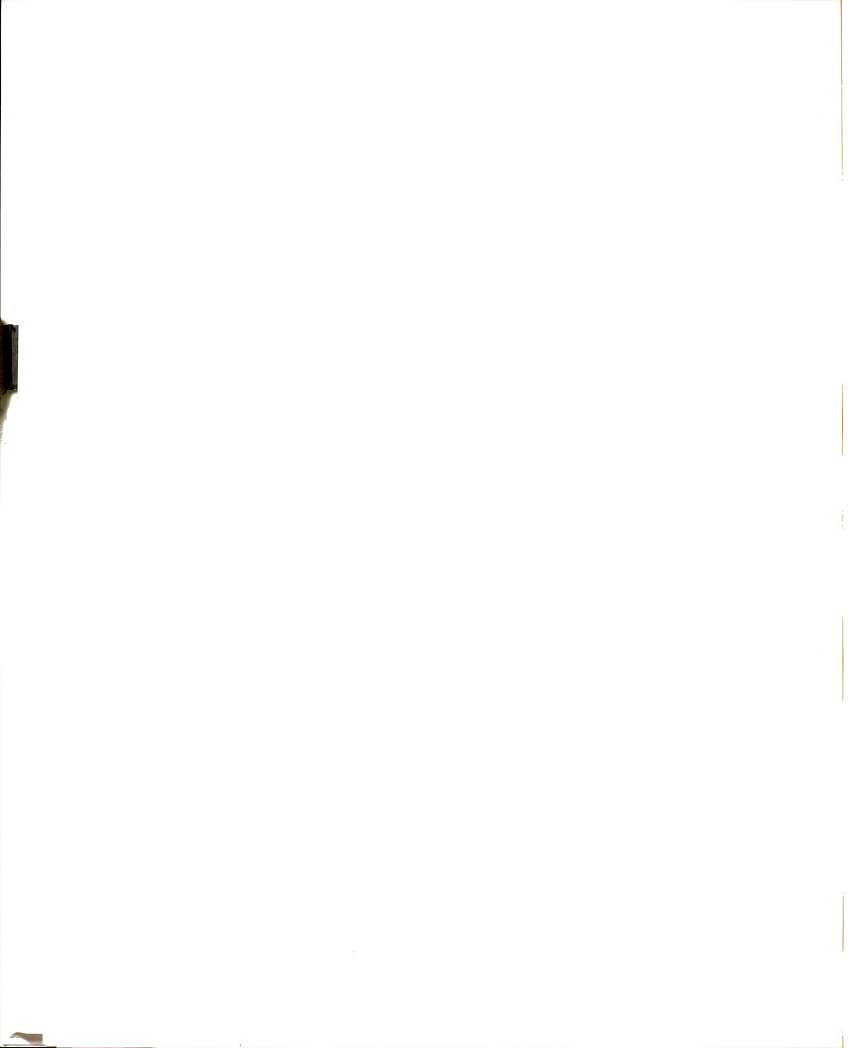
Objects may also communicate culture through form, color, size, complexity, and the ingenuity of designs (Latham, 1966, p. 206). Objects cannot be accurately interpreted if the researcher does not view the object from the same perspective as the artist and individuals who use the artifact.

Theoretical Statement

For the purpose of this study the following theoretical statement was developed. When any refugee group migrates to a new culture and geographic area, its material culture will be expected to change, as



its beliefs, values, and aesthetic standards change as a consequence of responding to new information.



CHAPTER 4

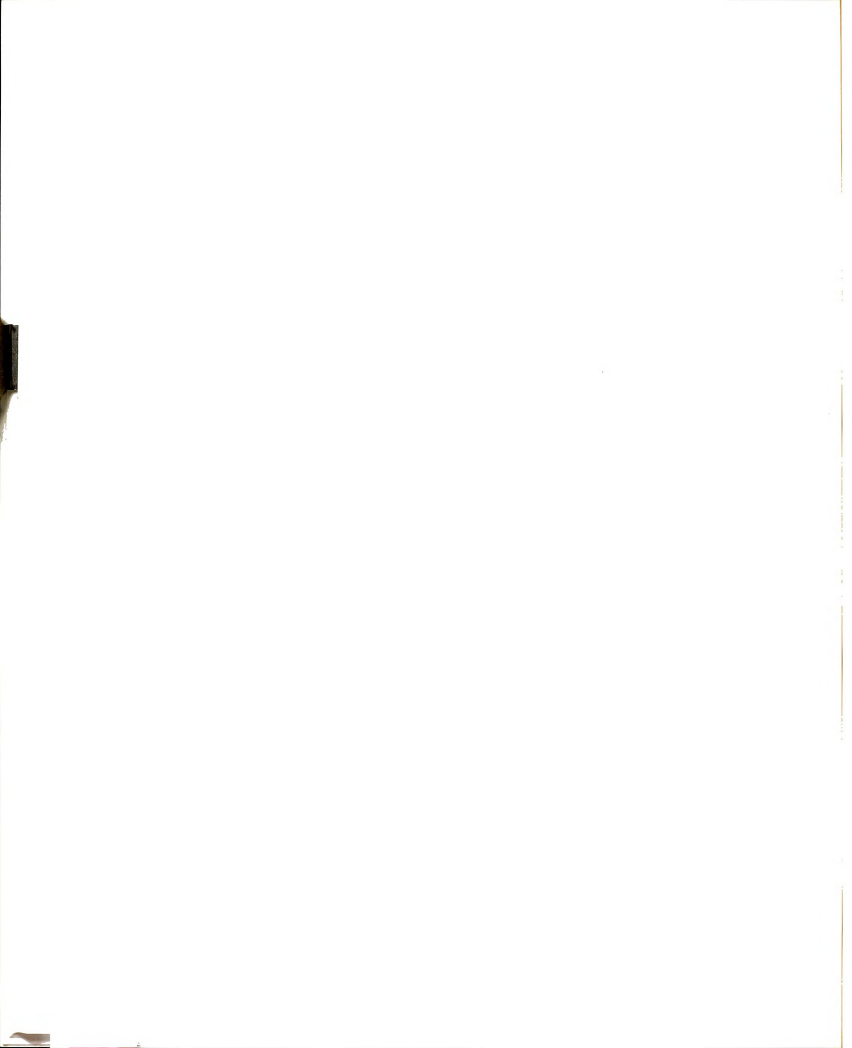
PROCEDURES

Sample

This chapter describes the procedures used in selecting the ornamental pieces from each period, and the selection of a color analysis system. A discussion of how the variables were measured is followed by a description of the analysis procedures.

Selection of 1981-1983 Textiles

The 1981-1983 textile sample consisted of pieces purchased by curators of the Folk Arts Division, of the Michigan State University Museum, from Hmong artists, family members, and from organizations and individuals who were attempting to assist the Hmong in the marketing of textiles. Four criteria were used by the curators for the selection of pieces to purchase. First, in order to attain a representative sample from the artists in Lansing, who were selling pieces through Catholic Refugee Services, one or more pieces from each artist were purchased. Secondly, pieces were selected to represent a wide variety of design motifs, and construction methods. Third, in situations where the artist had a large quantity of work for sale, the curators purchased pieces based on their selection of the technical and aesthetic quality

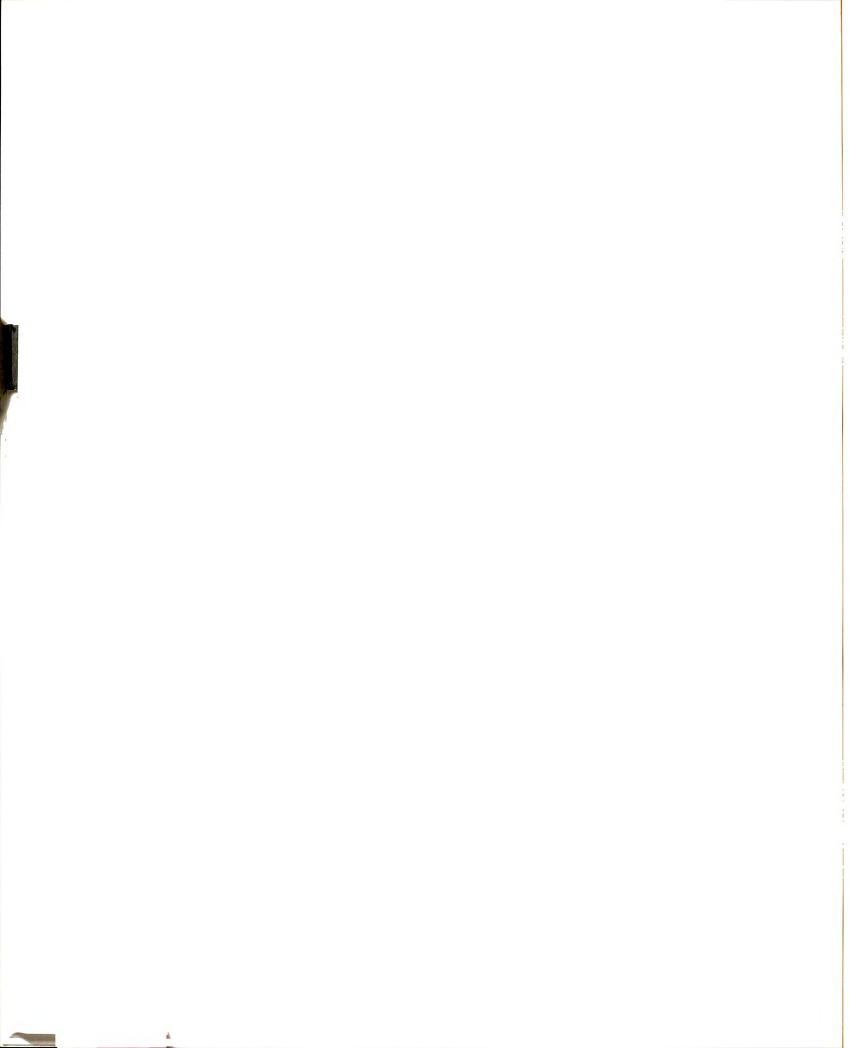


of the pieces. Finally, pieces which had functional meaning to both Hmong and non-Hmong were chosen.

A majority of the pieces were made in Lansing, however, a few were purchased in Detroit. While the Lansing area Hmong are primarily White Hmong, the Detroit Hmong community consists of mainly Blue/Green Hmong. Pieces were collected, by the Museum, from a total of 42 women in Lansing and Detroit. Paj ntaub artists were identified by elders of the Hmong community, Catholic Refugee Services staff members, and other Hmong artists. A total of 77 pieces were collected by the museum during this period.

When cataloguing the museum collection, this researcher compared Catholic Refugee Services inventory lists with the arrival dates of the artists and the museum purchasing dates. When a date could be narrowed down to a three year period a circa date, representing the three years was given, i.e., pieces produced between 1981 and 1983 were given the date of c. 1982. A specific date was assigned to pieces when they were purchased directly from the artist and production was recent. When little or no information about the date was given, no date was assigned.

From the above data base of 77 pieces a sample for the present study was selected. The following criteria were used to exclude pieces from the sample: 1) all pieces which could not be dated, 2) all pieces not produced in Lansing, 3) pieces which were not produced for American buyers such as costume pieces, i.e., skirts, purses, belts, etc., and 4) all pieces which were designed based on American ideas such as pictorial pieces, pillow cases, sun-glass holders, place mats, and

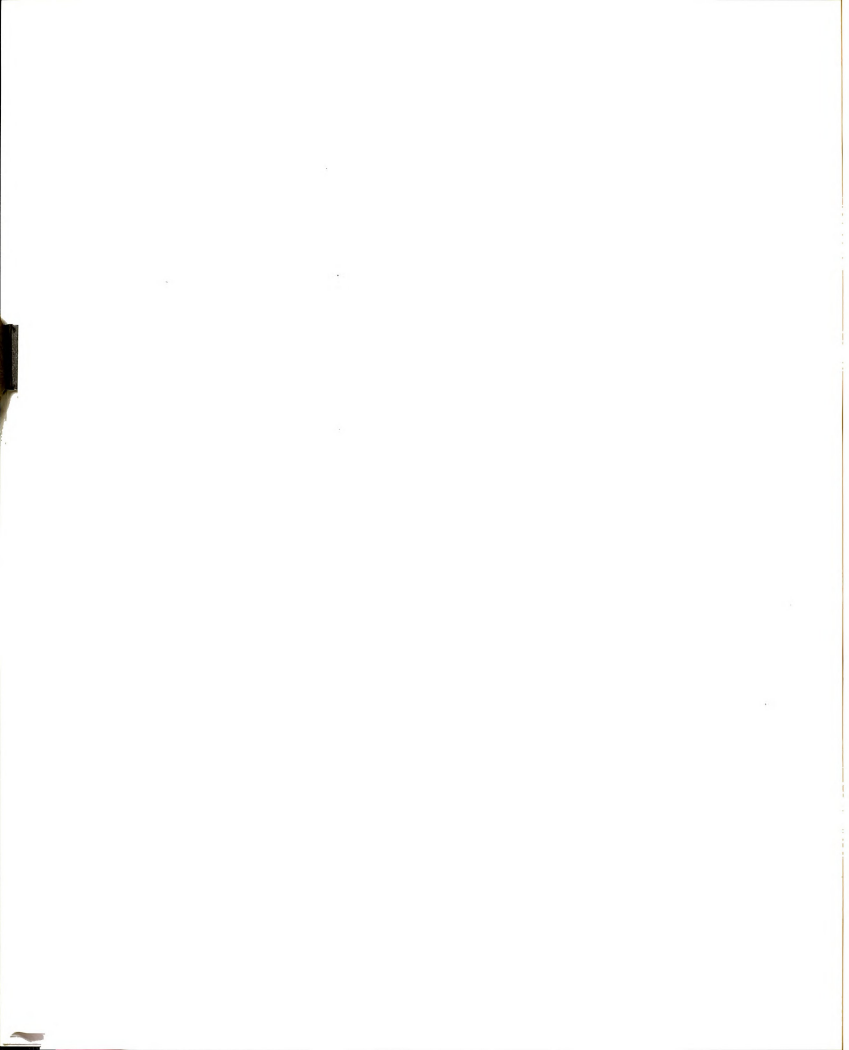


vests.

Thirty-six pieces were excluded, leaving a sample of 41: 2 pieces, c. 1981, 35 pieces, c. 1982, and 4 pieces, c. 1983. It was felt that enough pieces were not available from each time period to show yearly change, therefore it was decided to eliminate the c. 1981 and c. 1983 pieces from the sample rather than combine them with the c. 1982 pieces. All 35 pieces dated c. 1982 were examined (Figure 8). It should be noted that piece number B 26 appeared to resemble a pictorial piece versus an ornamental piece. A comparison of the characteristics of each determined it was an ornamental piece for the following reasons: it was constructed by cross-stitch versus satin or chain stitch, and it illustrated one image while the pictorial pieces tell a story.

Selection of 1977-1979 Textiles

The base-line textiles consisted of the first paj ntaub made in Lansing, which could be located. The names of sponsors and English-as-a-second-language instructors were obtained from Catholic Refugee Services. These, along with names collected by the MSU Museum, were contacted by mail. Cards were sent to 20 people believed to have owned pieces made in Lansing between 1977 and 1979 (Appendix A). Questions concerning the artists, date purchased or made, place purchased, and additional sources were included on the card. Sixteen cards were returned. From these sixteen individuals, ten either did not own paj ntaub, owned pieces from a later period, or owned costume pieces. Contact with the four non-respondents was attempted; three had moved



A31



A24



A18



A16



A32



A14



Figure 8. Textile Sample, c. 1982.

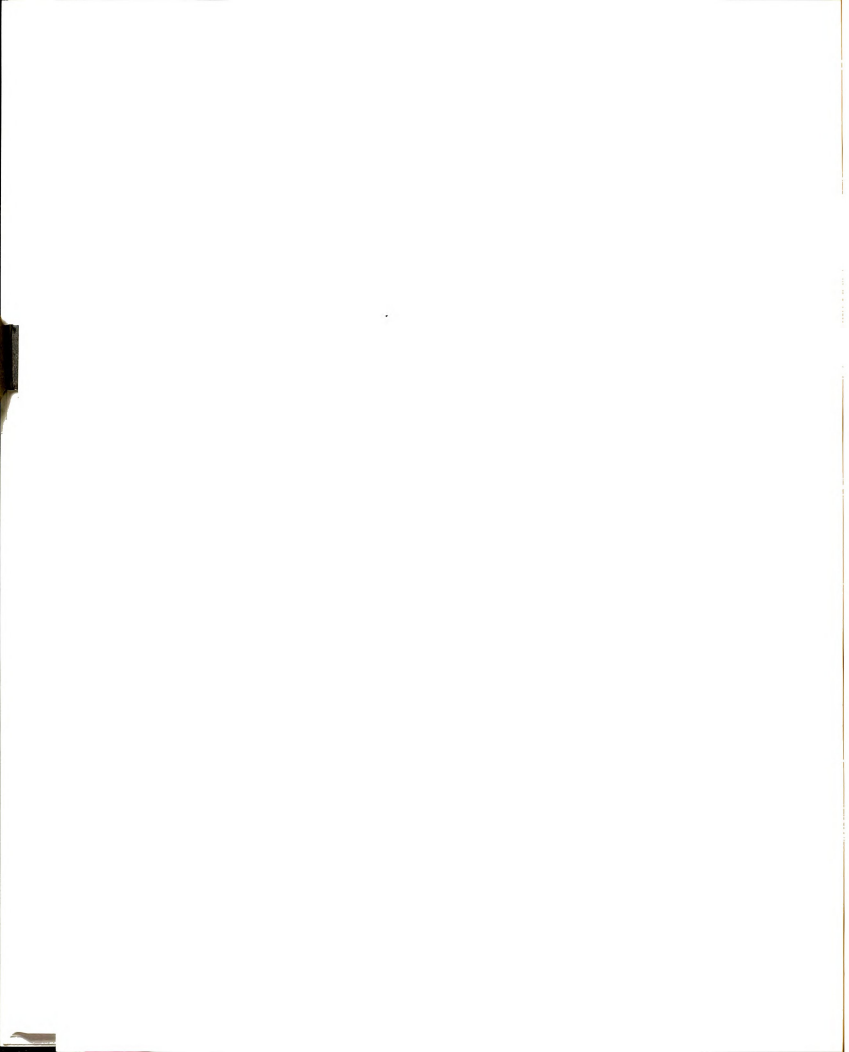


Figure 8 (cont'd.).

A32



A30



A33



A17



A6



A28



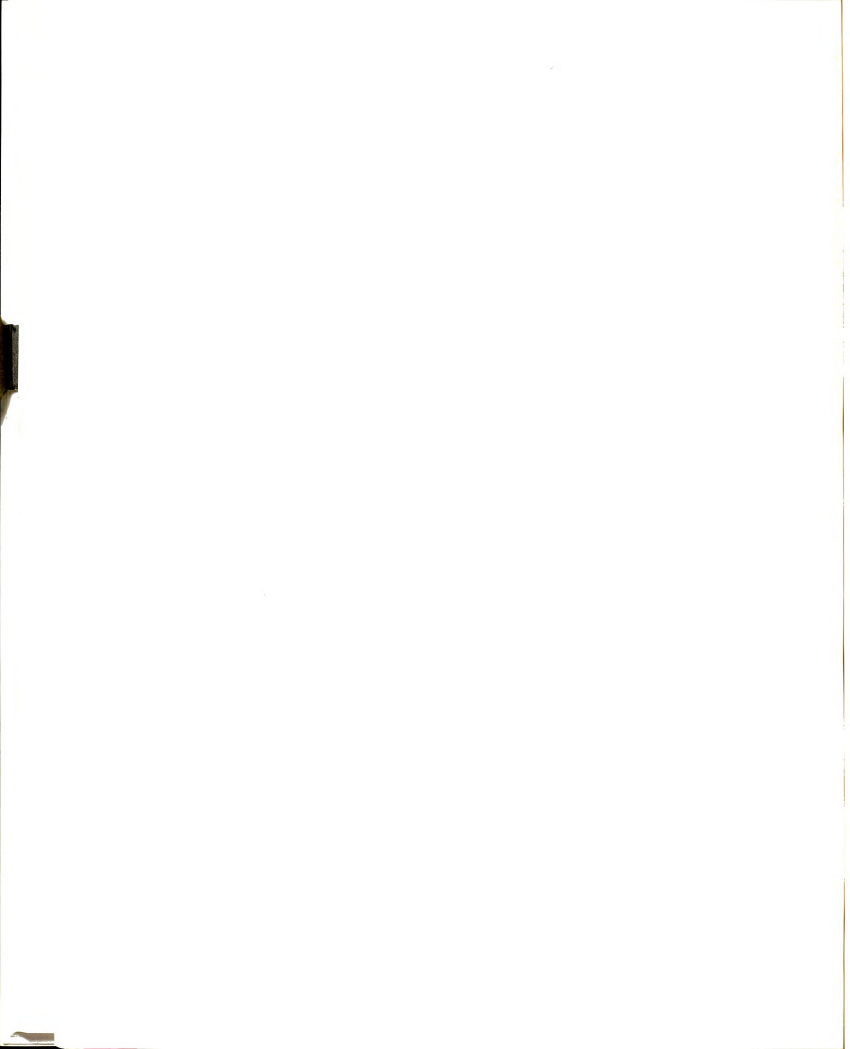


Figure 8 (cont'd.).

A13



A1



A2





Figure 8 (cont'd.).

A19



A35



A3





Figure 8 (cont'd.).

A25



A7



A23



A12



A15



A24





Figure 8 (cont'd.).

A11



A27





Figure 8 (cont'd.).

A5



A20





Figure 8 (cont'd.).

A8



A9



A4





Figure 8 (cont'd.).

A10



A22



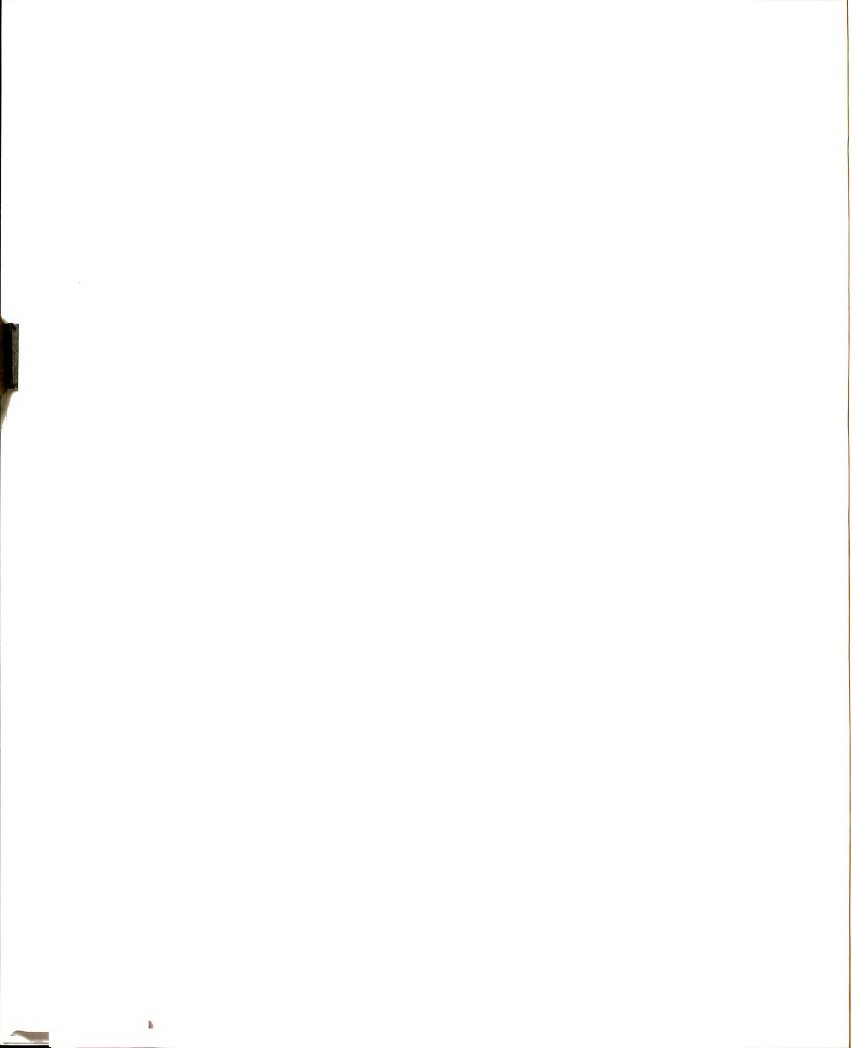


Figure 8 (cont'd.).

A21



A29





out of the area and one was deceased.

A follow-up letter was sent to the six persons who indicated they owned paj ntaub made in Lansing between 1977 and 1979. The researcher asked to borrow their pieces for the study. Permission to use and photograph paj ntaub was obtained by all individuals who owned pieces. Final arrangements were made by phone to pick-up the pieces. The date of each piece was validated by comparing the purchase date to the arrival date, obtained from Catholic Refugee Services. Pieces that could not be dated were dropped from the study. Contacts for additional pieces, received from the postcard questionnaire resulted in finding one new source and 2 more pieces. A total of 18 pieces were located, 1 piece was eliminated from the sample due to a questionable date, leaving a base line sample of 17 pieces (Figure 9). One piece of the paj ntaub could not be photographed.

Determination of Color Measurement System

Color was recorded using Munsell's Color Notation. Three versions for the Munsell Color measurement were considered for use in this study. These included a 1986 Student Munsell packet, a 1971 Munsell Book of Color, and a 1978 edition of the ISCC-NBS Centroid Color Standards. The student packet was rejected for use because a Munsell company representative, in a phone interview, stated that each chip could vary between grade A, being unsatisfactory and grade AAA, rating fair. The varying grades allow student packets to be sold at an economic price.



B1



B2



B3



B4



B5



B6



Figure 9. Textile Samples, c. 1978.

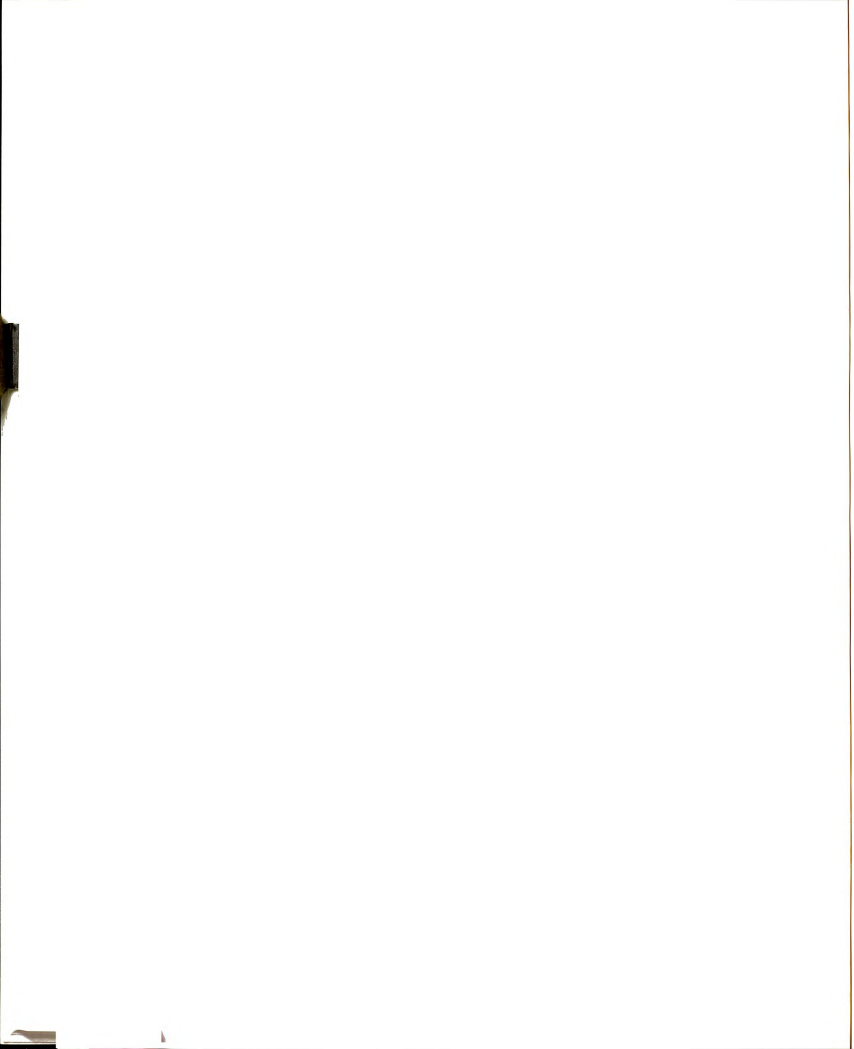


Figure 9 (cont'd.).

B10



B11



B12



B13



B8

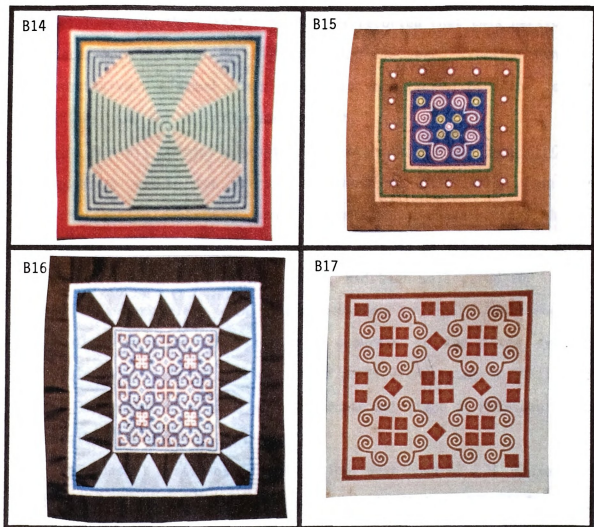


B9





Figure 9 (cont'd.).





While the 1978 ISCC-NBS color packet had never been used and had been well stored, the director of Munsell reported that this particular set fades quickly, and is only valid for one year. Another Munsell representative, claimed this set was developed to show color variations, and not for color measurement.

The Munsell company guarantees the standard Munsell Book of Color for accuracy up to ten years. However, the chairperson from the Macbeth Lighting department remarked, in a phone conversation, that a well maintained chart may be accurate for as long as twenty-five years. The standard book, used in this study, had been well cared for, i.e., stored in a dark place with limited exposure to light, and though 15 years old, was considered the most accurate of the three systems available for use in this study. This particular system is still used by the Department of Food Science and Human Nutrition at Michigan State University.

The Munsell System of Color Notation, developed by A.H. Munsell in 1915, identifies color in terms of three attributes: hue, value, and chroma. The hue, H, notation describes a color's relationship to five principal hues and five intermediate hues: red, yellow-red, yellow, green-yellow, green, blue-green, blue, purple-blue, purple, and red-purple. The value, V, of a color indicates the degree of lightness or darkness in relation to a neutral grey scale. The value scale ranges from zero, representing black, and ten representing white. The chroma, C, measurement describes the balance of pigment and gray. The amount of gray changes as the saturation of color increases, ranging from one, more gray, to sixteen more pigment. The Munsell notation system is



written in a symbolic fraction form: $H \ V/C$. Each whole number represents equal intervals.

Data Collection

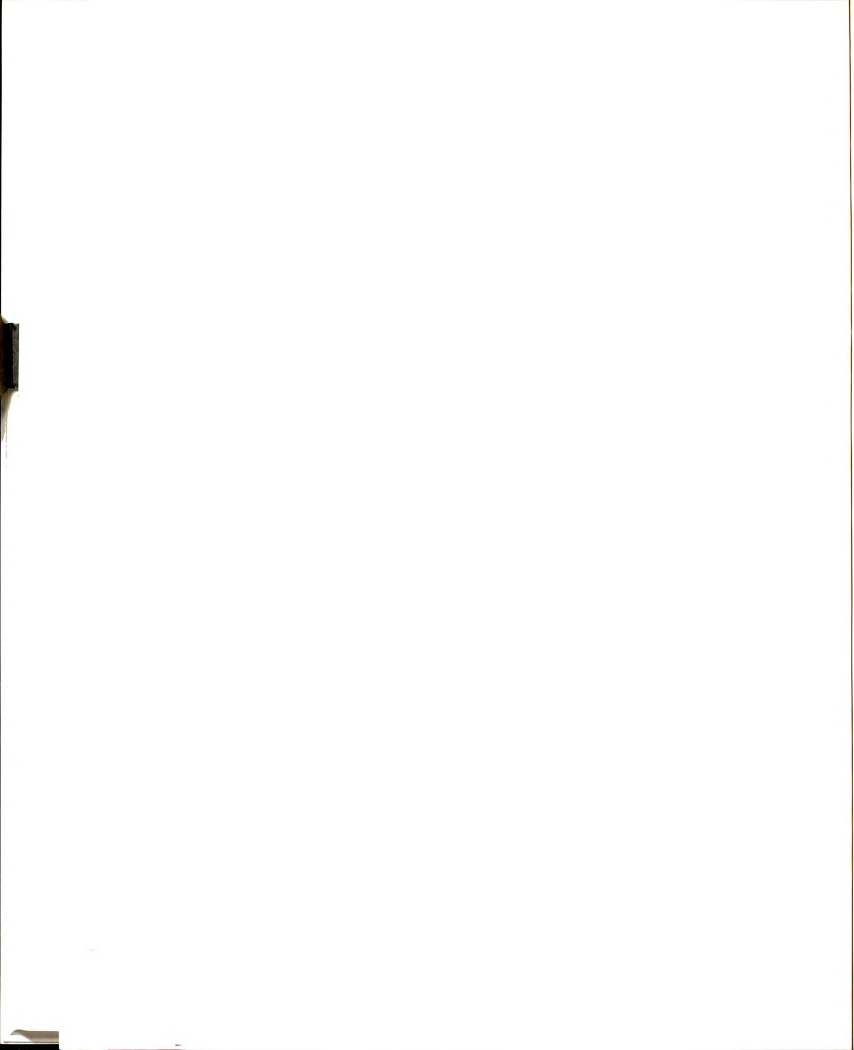
Design Motif

Using a design motif index, constructed by the MSU Museum, Folk Arts Division, a numerically labeled motif chart was developed for this study (Figure 10). When the design motifs did not appear in the index, it was drawn and given the next available number. Designs were matched according to general shape. When the design motifs appeared as variations, they were considered a different design. A chart containing the design motif number in rows, and the piece number in columns, provided a data recording system (Appendix C).

Color

The procedure for measuring color was consistent with ASTM D1729-82 "Standard Practice For Visual Evaluation Of Color Difference Of Opaque Material" ("ASTM....," 1988, p. 640). Color measurement was made using the Munsell Book of Color, 1971. The borders of each piece were examined, and the specific Munsell Color Notation, i.e., hue, value, and chroma recorded (Appendix D).

The Macbeth Spectralight with viewing booth, model #SPL-75 was used to create standard lighting for each piece. Color measurements were taken between 8:00 PM, 9:00 PM daylight savings time, and 12:00 AM to prevent natural sunlight from interfering with the standardized scientific lighting. The blinds were drawn and all lights were turned



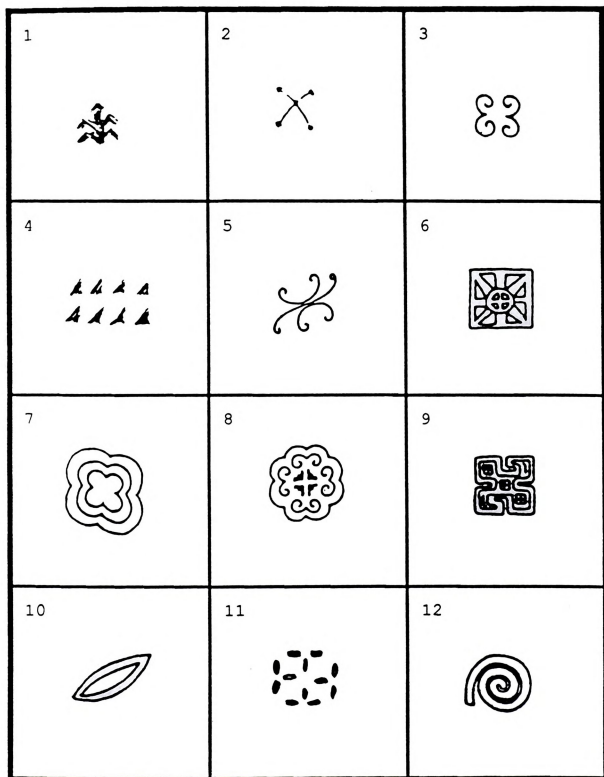


Figure 10. Design Motif Index.

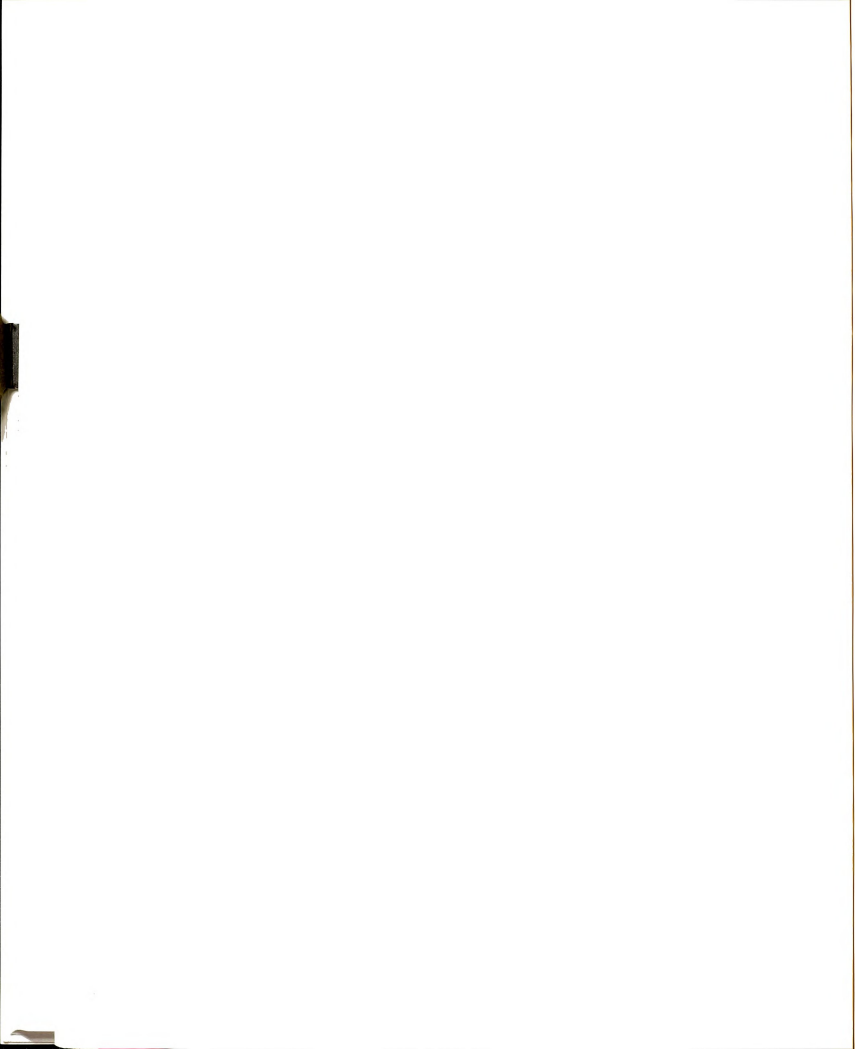
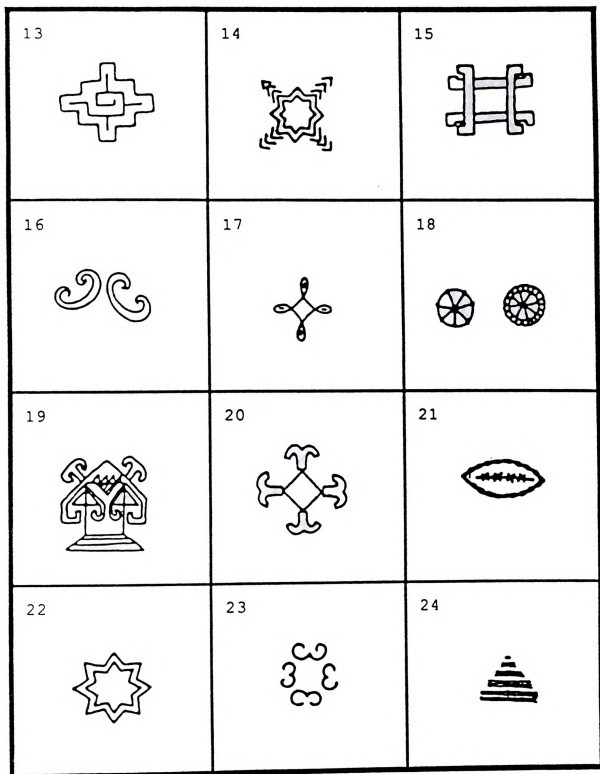


Figure 10 (cont'd).



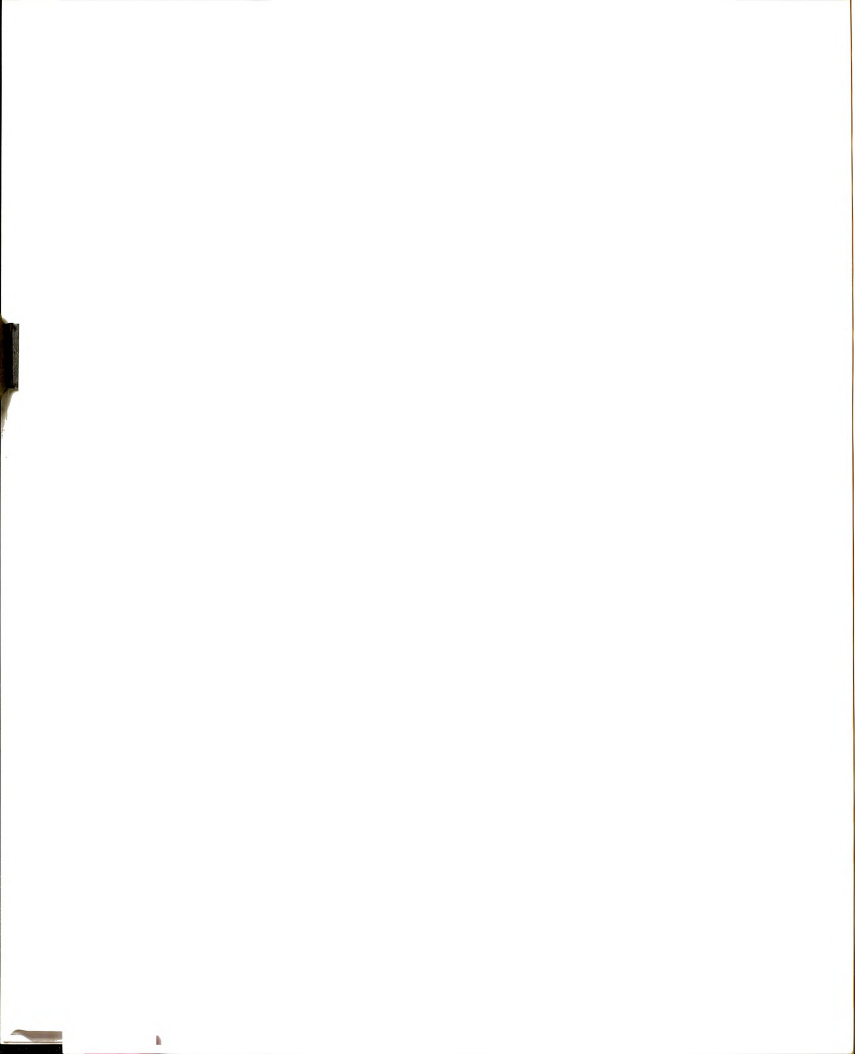


Figure 10 (cont'd).

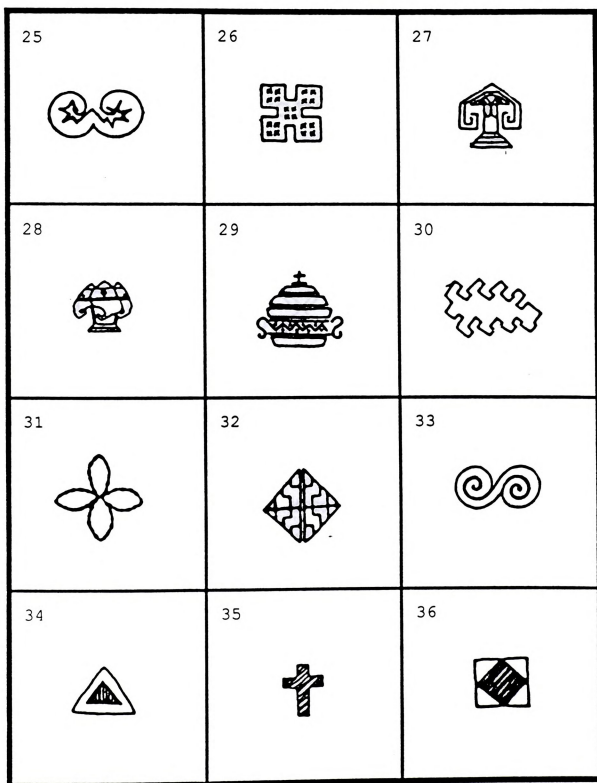
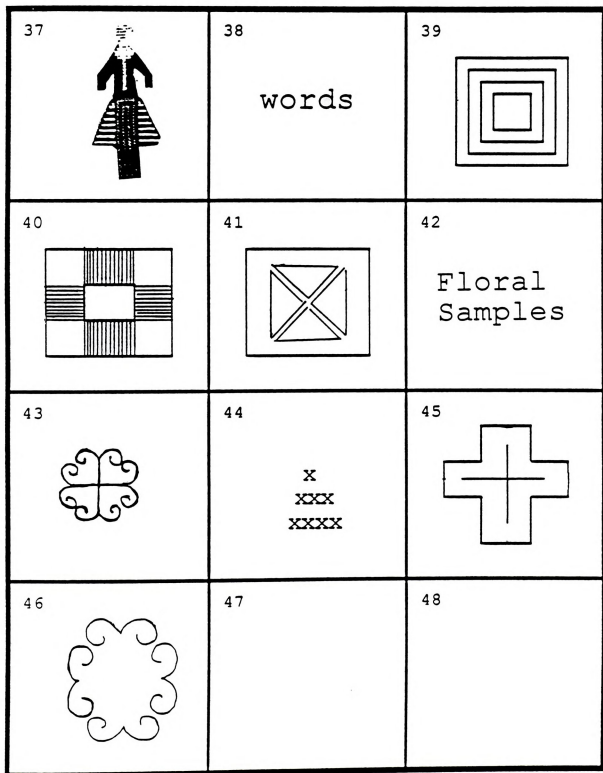




Figure 10 (cont'd).





off. The colors were measured using artificial North Sky daylight source, with a correlated temperature of 7500 K plus an ultraviolet light source. Since the lights produced heat, the auto-transformer was adjusted before each measurement was taken. The textiles were illuminated by diffused lighting at zero degrees and viewed at a 45 degree angle, using a triangular ruler, to achieve the most accurate view (Figure 11). The use of diffused lighting eliminates all reflectivity.

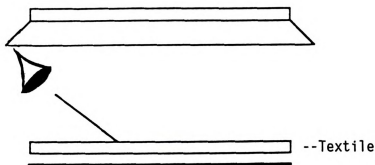


Figure 11. Geometry of zero degree illumination and 45 degree viewing.

Each piece of paj ntaub was centered in the spectralight. All of the cards with hue tiles resembling the specific border being measured, were chosen to be compared to the sample. According to procedures, specified in the Munsell Book Of Color, three masks were provided: a white mask was used for colors having a value of 7-9, grey for values 4-6, and black for values 1-3. Each mask had four holes cut in the center, exposing the four chips closest to the color of the fabric. If the value of a specific hue required a different colored mask, i.e., the hue fell between the values of 3 and 4 or 6 and 7, the appropriate

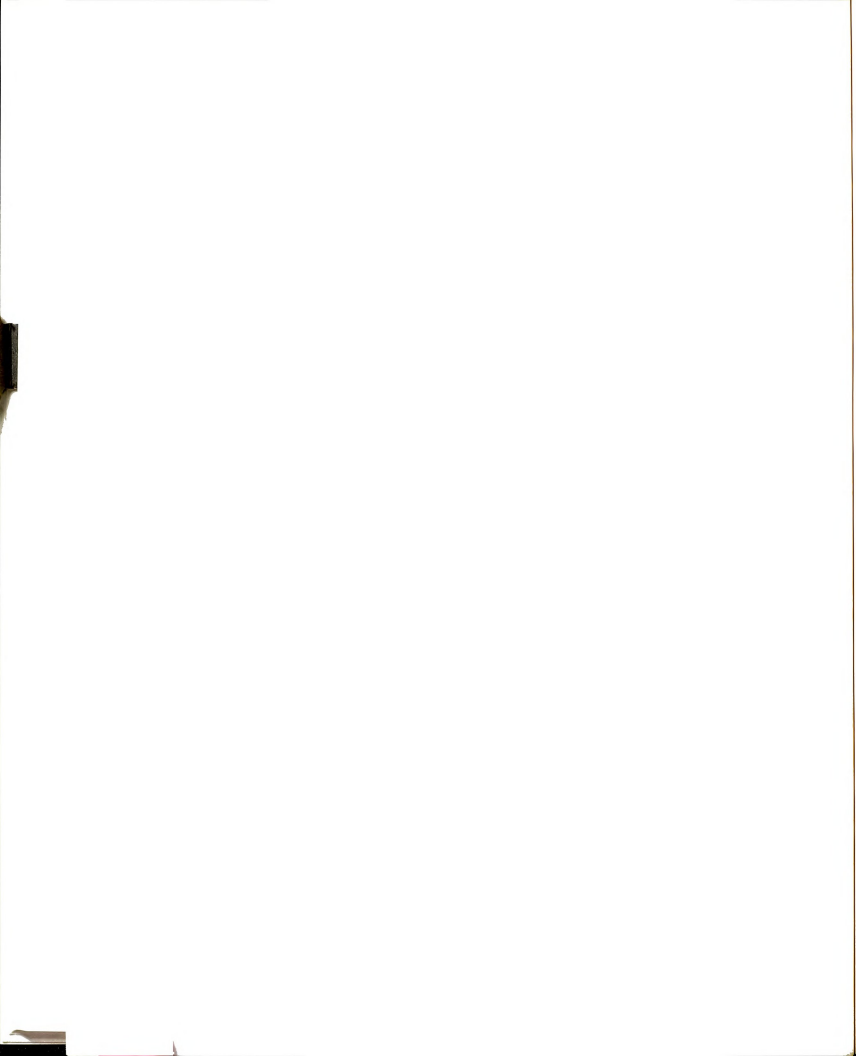


masks were alternated. The card of hue tiles, with the appropriate mask on top, was placed next to the material border, with the mask on top, and a triangular ruler was placed in the center. Looking down the edge of the triangle at a 45 degree angle, chips from each color card were alternated, until a match was made for each border. The number of the matching hue card, value and chroma were recorded, i.e., 2.5R 5/10.

To increase reliability, two viewers independently judged the Munsell color closest to each border fabric. If the same color was used twice or more in one piece, based on the consensus of both reviewers, it was only measured once. If the two observers recorded a different answer, the two viewpoints were discussed. A high degree of agreement existed between the two raters. Out of 258 borders, there were nine disagreements. In one instance an agreement could not be reached, and the average of the two color notations on each scale was recorded. Of the eight other disagreements, viewer one changed her measurement to viewer two's five times, the opposite occurred three times. In the rare event, when both researchers agreed that a color chip did not exist for a particular fabric color, the phrase "not available", NA, was recorded.

Size

The area of all borders and center section were measured in square centimeter. The borders were measured in rectangles to avoid double counting corners. Borders were numbered from the outside, starting with 1, to the inside (Figure 12).



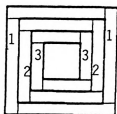


Figure 12. Border Numbering System.

Because pieces were not evenly square, several measurements were required. If the width of a border was greater than two centimeters, then two length measurements were taken. This progression continued by increasing one additional measurement with each centimeter increase in the width direction. Three width measurements were taken for each border rectangle, one on each end and one in the middle. The average of the measurements in the width direction and the average in the length direction were multiplied to determine the area of each border rectangle. The area of all four sides were added together, then divided by the overall area and multiplied by 100 to arrive at the percentage of border to the overall piece.

The areas of the center square and the overall piece were respectively calculated by multiplying the average of three width measurements with the average of three length measurements. The percentage of the center area to the overall piece was acquired by dividing the center area by the overall area and multiplying by 100.

Percentages were recorded to the nearest tenth position. A variance of $\pm 5\%$ in the total area was acceptable, given the uneven size of the pieces and rounding the decimal points up. A data summary sheet was developed to record the dimensions in cm^2 of the overall



sheet was developed to record the dimensions in cm^2 of the overall piece, and the calculations of each border and the center area in percentages (Appendix E).

Ornamental Construction Technique

Observation of the ornamental construction techniques used in the center of the piece were recorded (Appendix F). The different techniques used included: appliqué, reverse appliqué, embroidery, and batik. Embroidery was further divided into chain-stitch, cross-stitch, and other.

Representatives of the Human Behavioral Environment

Interviews with Lansing area sponsors, ESL instructors, refugee resettlement agency representatives, and paj ntaub marketers were conducted by Marsha MacDowell, curator of the Folk Arts Division of the MSU Museum, along with either Kurt Dewhurst, Director of the MSU Museum, or Yvonne Lockwood, Folklife Specialist. Questions were aimed at discovering each person's relationship to the Hmong, involvement in the marketing of the paj ntaub, and type of assistance they had given the Hmong. Interviews were also conducted with Hmong women who produced paj ntaub. The researcher participated in all but one of these interviews.

A questionnaire, developed by the Folk Arts Division, was used to collect information during the interviews. This initial study received clearance from the University Committee in Research Involving Human Subjects. This committee serves to insure that the rights of human



future publications and educational research was granted. Research release forms were collected from all of the individuals interviewed (Appendix B).

The Museum survey focused on folklore identification, i.e., the textile production process, when and from whom did the artist learn the trade, and characteristics of the artist and the paj ntaub (Appendix B). When interviewing the Hmong, care was taken to insure either a child who could speak English or a Hmong translator was present, if the interviewee could not speak English.

For the present study, the transcribed interviews contained statements which could possibly be considered influences on the human enviroined unit. They represent the human behavioral environment in the human ecosystem model.

The typed transcripts from the interviews were read in their entirety. All statements relating to the variables were recorded and identified by the name of the interviewee. Comments were discussed in relation to the appropriate hypothesis.

Data Analysis

Frequency charts were constructed and hypotheses were tested by chi-square, one-way analysis of variance and a z test for differences in proportions. Statistical significance was based on an alpha level of .05 or less.

Suggestions from advisors and educators, as revealed in the transcribed interviews, are discussed in relation to the physical changes in the paj ntaub between the two time periods.



CHAPTER 5

ANALYSIS AND FINDINGS

This chapter presents the findings and is organized by hypotheses. Analysis of the variables studied, i.e., design motifs, color, size, and ornamental construction techniques, will determine whether changes occurred in the paj ntaub between 1977-1979 and 1981-1983. Analysis of the statements from individuals representing the human behavioral environment resulted in insufficient data to determine the presence of influence. Statements, however, are included in the discussion with each corresponding hypothesis.

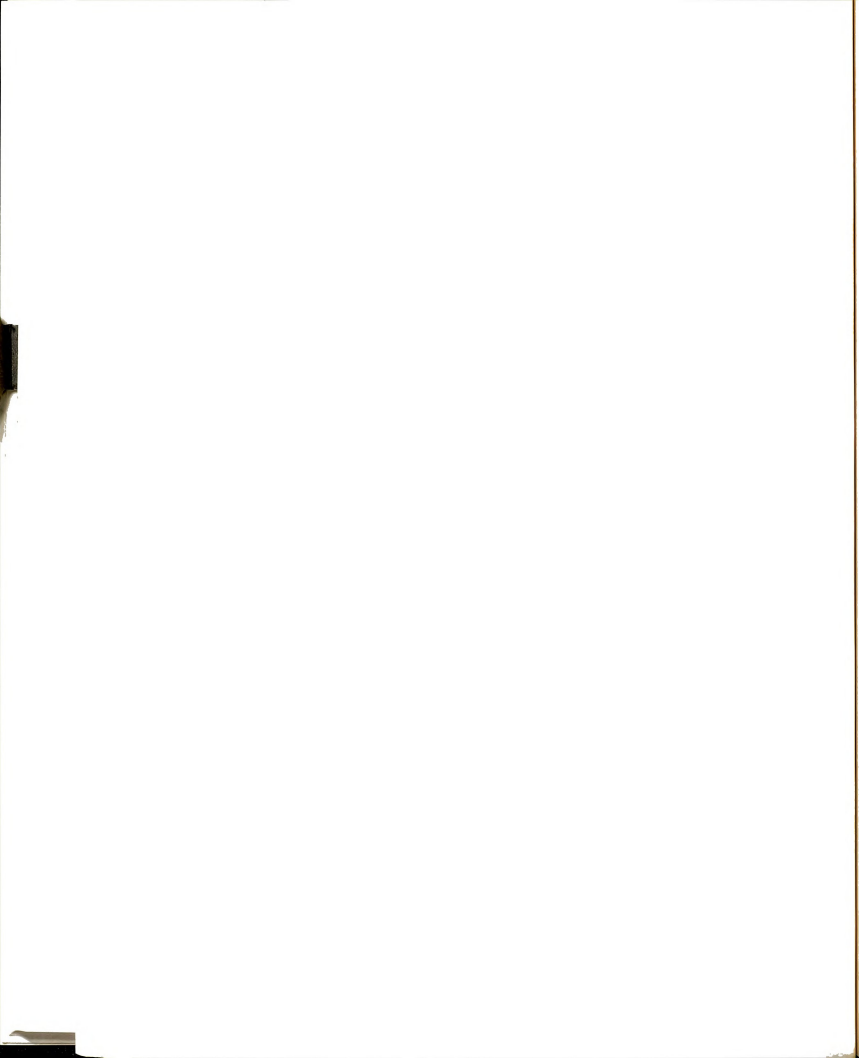
Design Motifs

Hypothesis 1 Changes have occurred in the use of design motifs in paj ntaub since the Hmong arrived in Lansing, Michigan from Thailand.

Design Motif Choice

Hypothesis 1.1 The choice of design motif(s) changed from 1977-1979 to 1981-1983.

Paj ntaub from both time periods was examined and a tally made of each design motif that appeared in the center area of each piece



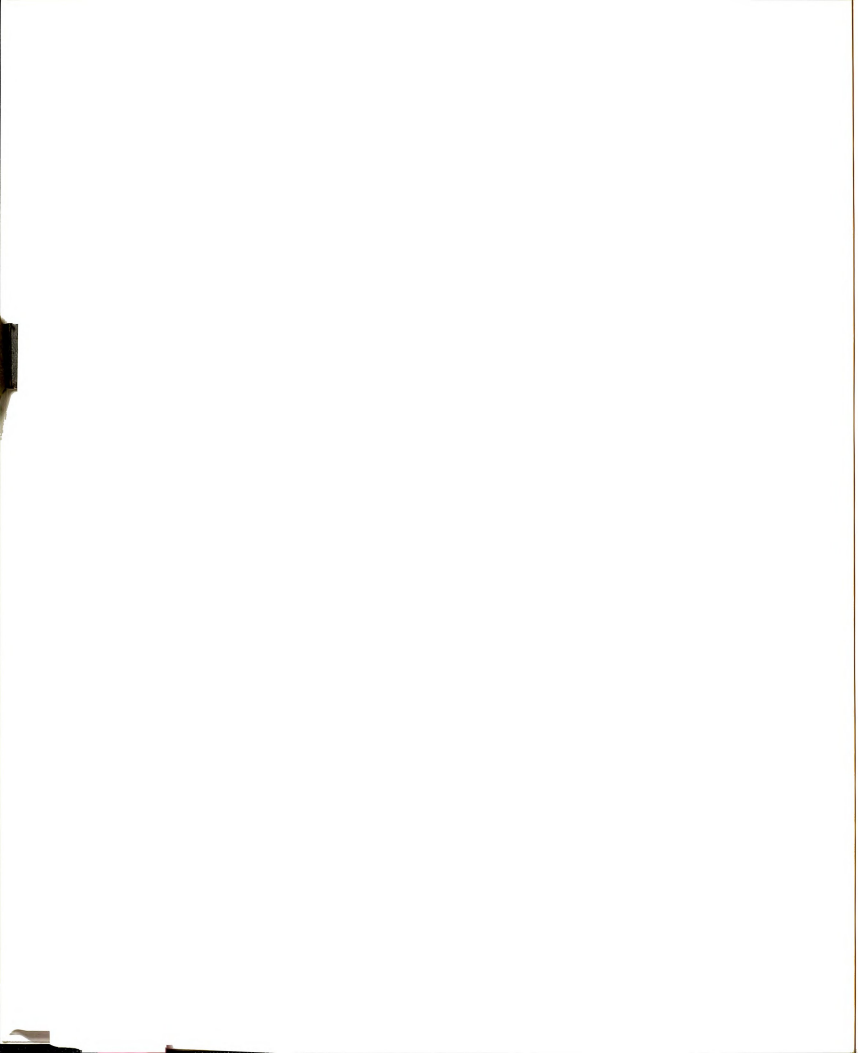
(Appendix C). Figure 13 graphically depicts the frequency of design motifs used in both samples.

The most frequently used design motifs in the c. 1978 sample were numbers 36 and 46; both appeared 16.67% of the time. Design number 36 is constructed by placing appliqué squares on top of each other. The top square is rotated 90 degrees to form a diamond shape on-top-of a square. Its Hmong name is "lub ntaub"; there is not an English translation (Dewhurst and MacDowell, 1984, p. 71). Number 46 is a variation of the snail design, number 3, created using reverse appliqué. The snail design is created many ways as a result of different ornamental construction techniques.

In the c. 1982 sample, design motif number 18 appeared 12.5% of the time. In Hmong, number 18 is called "noob or muag qaib." The English translation is "seed or chicken eye" (Dewhurst and MacDowell, 1984, p. 71). The design is repeated throughout the piece in which it appears. This design looks like a wheel with spokes; it is constructed by either satin and/or chain stitch.

Design motif number 35 appeared in 8.33% of the c. 1982 pieces. This design resembles a cross, created by appliqué. A translation of the Hmong name "tho kev" is "cut a path" (Dewhurst and MacDowell, 1984, p. 71). According to Blia Vue, paj ntaub artist who uses this design, it refers to rice paddies (Vue, 1983).

A comparison between samples highlighted several characteristics. Fifteen of the forty-six designs appeared in both samples, four were limited to the c. 1978 sample, and fifteen new designs were introduced in the c. 1982 sample. Two of the most frequently used designs,



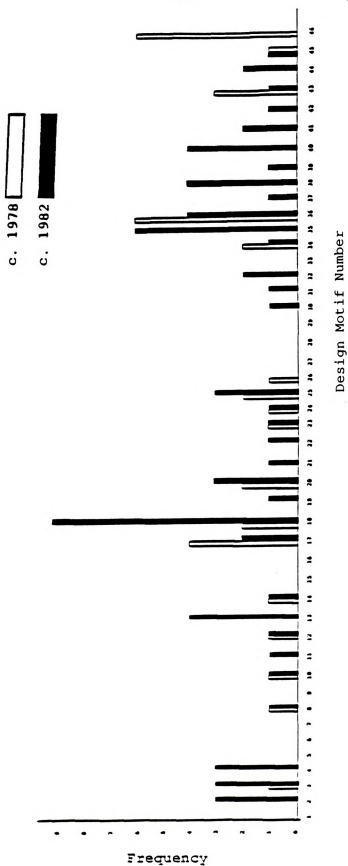
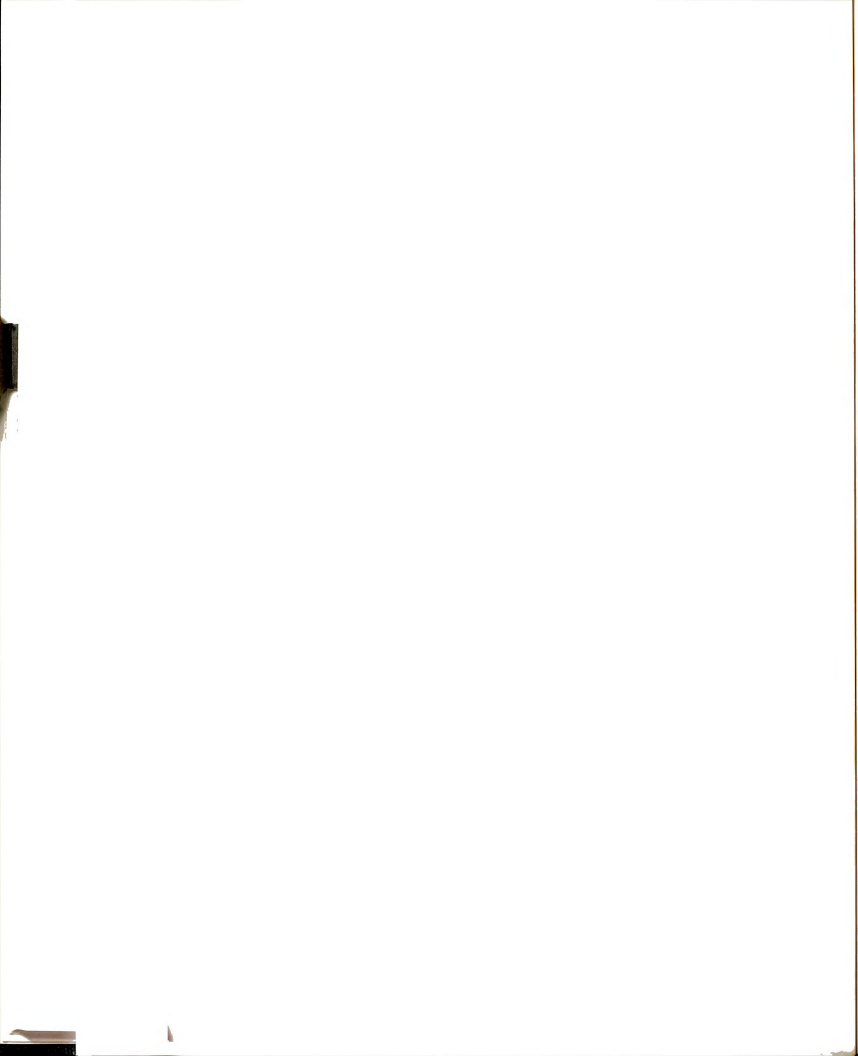


Figure 13. Design Motif Frequency, c. 1978 and c. 1982.



numbers 18 and 36, were included in both samples. This may suggest that there are traditional designs that will continue to be used, while others drop out or are added.

Summary

Some insight into factors that may influence creation and choice of design motifs came from the transcribed interviews. Everyl Yankee, ESL instructor and paj ntaub marketer, explained "we would tell them designs that would sell; they know their pieces so well, they knew what sold. We told them dragons sell like crazy. We liked the maze design, but that never sold" (Yankee, 1983). While paj ntaub marketers may have directed the Hmong towards certain designs; the Hmong also interjected influence. According to Teng Vang, Hmong elder, "designs depend on the person who taught you" (Vang, 1983). Designs are supervised by relatives and ideas come from other paj ntaub producers (Vue, 1983; Vang, 1983).

Design Motif Frequency

Hypothesis 1.2 The frequency with which the design motifs are used per piece has changed from 1977-1979 to 1981-1983.

The average number of design motifs used per piece was calculated and analysis of variance performed (Table 1). In the c. 1978 sample an average of 2.12 designs were used per piece. This figure was compared to the c. 1982 sample average of 2.06 designs per piece. The analysis of variance test indicated the difference observed between the two groups were not statistically significant (Table 1).

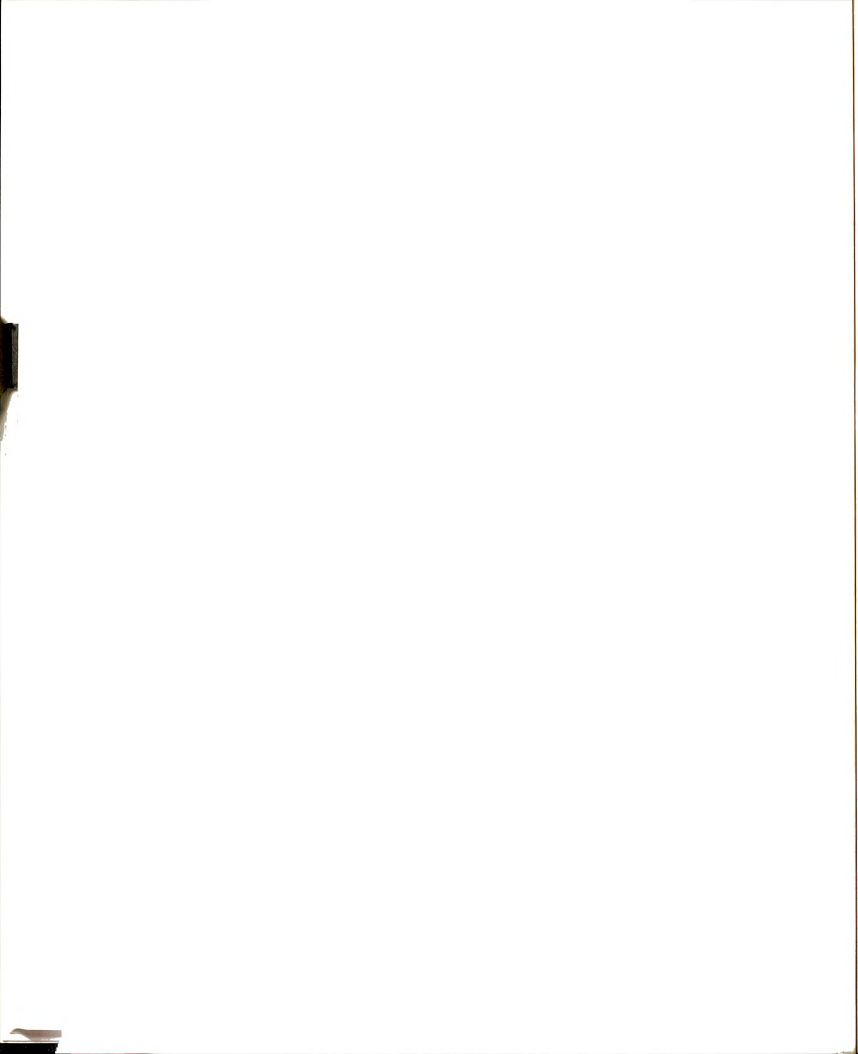


Table 1. Summary of Statistical Test Results.

Hypothesis	c. 1978 $\bar{x}$	c. 1982 $\bar{x}$	F	χ^2	z	df	sign. level
DESIGN MOTIFS							
H1.2-Frequency	2.12	2.06	.065	NA ^a	NA	1,51	.80
COLOR							
H2.1-Hue Choice	NA	NA	NA	6.44	NA	3	.10
H2.2-Value Choice	NA	NA	2.51	NA	NA	1,134	.14
H2.3-Chroma Choice	NA	NA	10.79	NA	NA	1,134	.01
H3.4-Frequency	3.88	3.09	1.80	NA	NA	51	.05
SIZE							
H3.1-Area cm ²	1919.41	1114.28	2.15	NA	NA	51	.05
H3.2-Borders	61.94%	71.12%	1.41	NA	.6619	NA	.50
H3.3-Border Frequency	7.35	4.97	5.86	NA	NA	1,51	.02
ORNAMENT. CONSTR. TECHNIQUES							
H4.1-Choice	NA	NA	NA	8.72	NA	4	.075
H4.2-Frequency	2.06	1.49	2.23	NA	NA	1,51	.05

^aNA = Not Appropriate



Summary

What is considered the acceptable number of design motifs per piece is learned at a young age (Julian, 1982). This aesthetic standard in paj ntaub production appears to remain consistent over time. Although individual variations did exist in design motifs choice, the average number of design motifs used per piece remained relatively constant.

Color

Hypothesis 2 The use of color in the paj ntaub fabric borders has changed since the Hmong arrived in Lansing, Michigan from Thailand.

Hue Choice

Hypothesis 2.1 The choice of hues to be used in the paj ntaub borders changed from 1977-1979 to 1981-1983.

The frequency and percentage of each hue, including the primary and secondary colors, were calculated (Appendix, Table 8). Thirteen hues appeared in both samples. The three most frequently occurring hues for both samples were the primary colors: red, green, and yellow. In the c. 1978 sample red was the hue most frequently used appearing 36% of the time (Table 2). Several of the paj ntaub in the c. 1978 sample contained many variations of red in one piece. Bright pink is a traditional color worn in costumes; this hue appeared in many of the c. 1978 paj ntaub. In the c. 1982 sample, green was the most

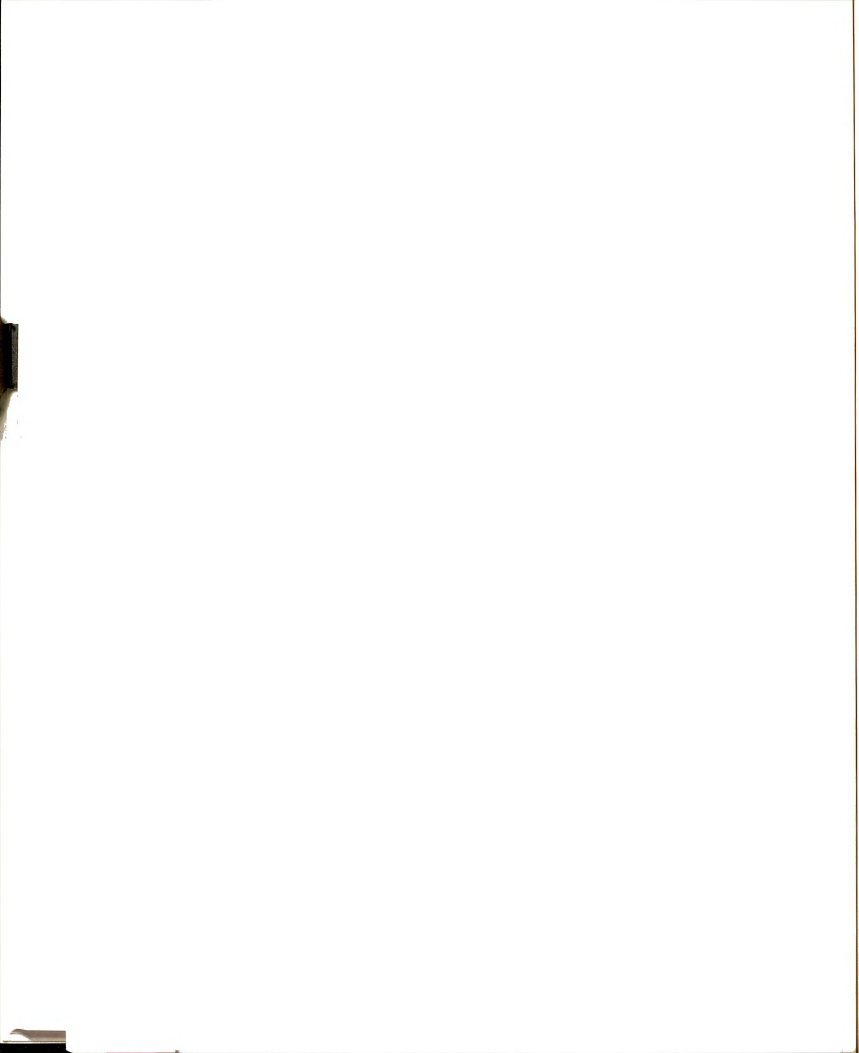
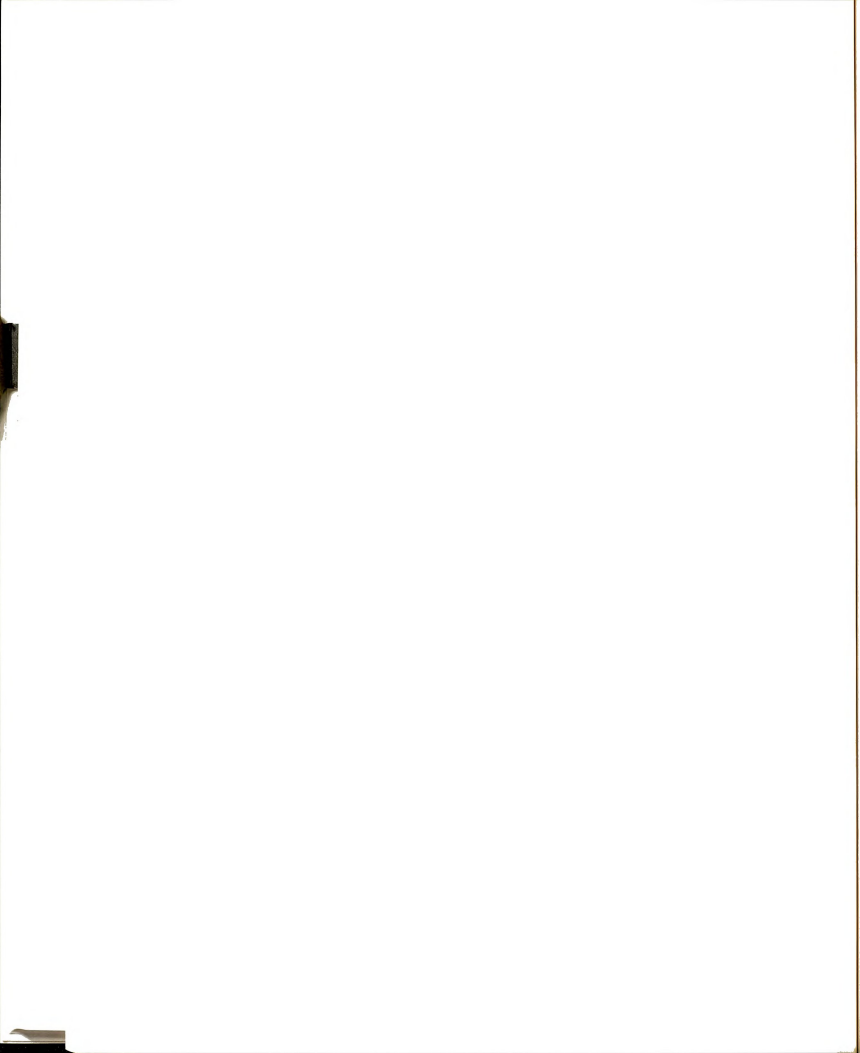


Table 2. Comparison of Hue Frequency, c. 1978 and c. 1982.

Munsell Hue	c. 1978		c. 1982	
	Frequency	Percent	Frequency	Percent
R & RP	18	36.73	20	22.99
Y & YR	15	30.61	18	20.69
G & GY	12	24.49	29	33.33
B & BG	0	0.00	4	4.60
P & PB	4	8.16	16	18.39
TOTAL	49	99.99	87	100

Table 3. Comparison of Value Scale Measurements, c. 1978 and c. 1982.

Munsell Value = x	c. 1978		c. 1982	
	Frequency	Percent	Frequency	Percent
$0.0 \leq x \leq 2.5$	7	14.29	11	12.64
$3.0 \leq x \leq 5.0$	27	55.10	44	50.57
$5.5 \leq x \leq 7.5$	7	14.29	10	11.50
$8.0 \leq x \leq 10.0$	8	16.32	22	25.29
TOTAL	49	100	87	100.01



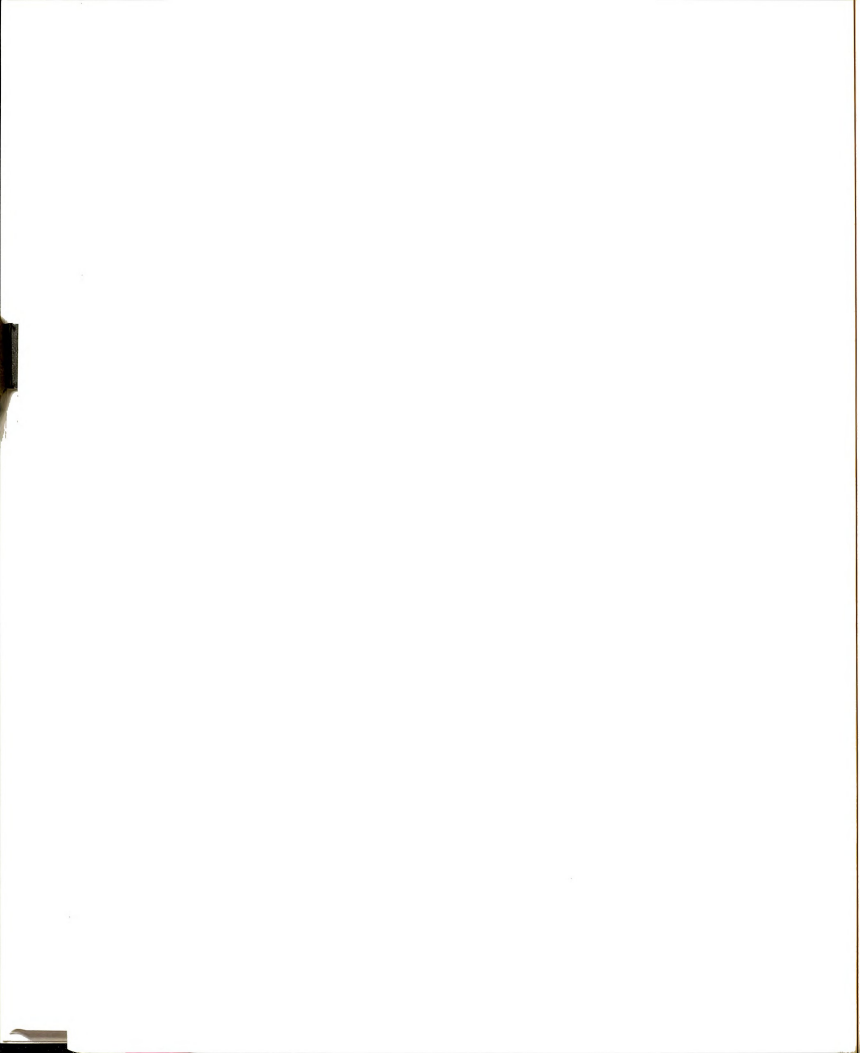
frequently used hue, occurring in 33% of the pieces, and red was the second at 23%. Perhaps the cost of importing this fabric from France or Thailand, and input from marketers created the shift from red to green. One of the sponsors and paj ntaub marketers is quoted as saying, we told the Hmong "Americans aren't going to buy that, maybe a belly dancer will" (Julian, 1982).

Eleven new hues were introduced in the c. 1982 sample, five were hues of red, green, and yellow, six were blue or purple. Two hues were limited to the c. 1978 sample. Chi-square performed on the choice of hues indicated that the differences observed were not statistically significant (Table 1). While there is a variation in which hues were used more often between samples, the same hues appeared in both periods.

Value Choice

Hypothesis 2.2 The choice of color value in paj ntaub borders changed from 1977-1979 to 1981-1983.

In regard to color, the value attribute represents the darkness and lightness of the fabric (Appendix D, Table 9). On the Munsell scale the values ranged from zero to ten. Analysis of variance showed the observed differences to be not statistically significant at $p=.14$. A comparison of the value scale range illustrates the findings; the most common value frequency, in both samples, fell in the range of $3 \leq x \leq 5$ (Table 3). This indicates the use of darker values.



Chroma Choice

Hypothesis 2.3 The choice of chroma in paj ntaub border colors changed from 1977-1979 to 1981-1983.

The amount of pigment, i.e., chroma, describes the vibrancy of the fabric. In the Munsell system chroma ranges from one to sixteen (Table 4). In the c. 1978 sample, all but four of the chroma values were used. In the c. 1982 samples, three chroma values did not appear (Appendix D, Table 10). Analysis of variance showed a statistically significant increase in chroma saturation, $p=.01$, between c. 1978 and c. 1982 (Table 1). Although the modal range in both samples was $9 \leq x \leq 12$, a larger number of the c. 1982 pieces contained hues with more intense chroma levels (Table 4).

Table 4. Comparison of Chroma Scale Measurement, c. 1978 and c. 1982.

Munsell Chroma = x	c. 1978		c. 1982	
	Frequency	Percent	Frequency	Percent
$1 \leq x \leq 4$	7	14.29	20	11.49
$5 \leq x \leq 8$	14	28.57	18	27.59
$9 \leq x \leq 12$	26	53.06	36	41.38
$13 \leq x \leq 16$	2	4.08	17	19.54
TOTAL	49	100	87	100



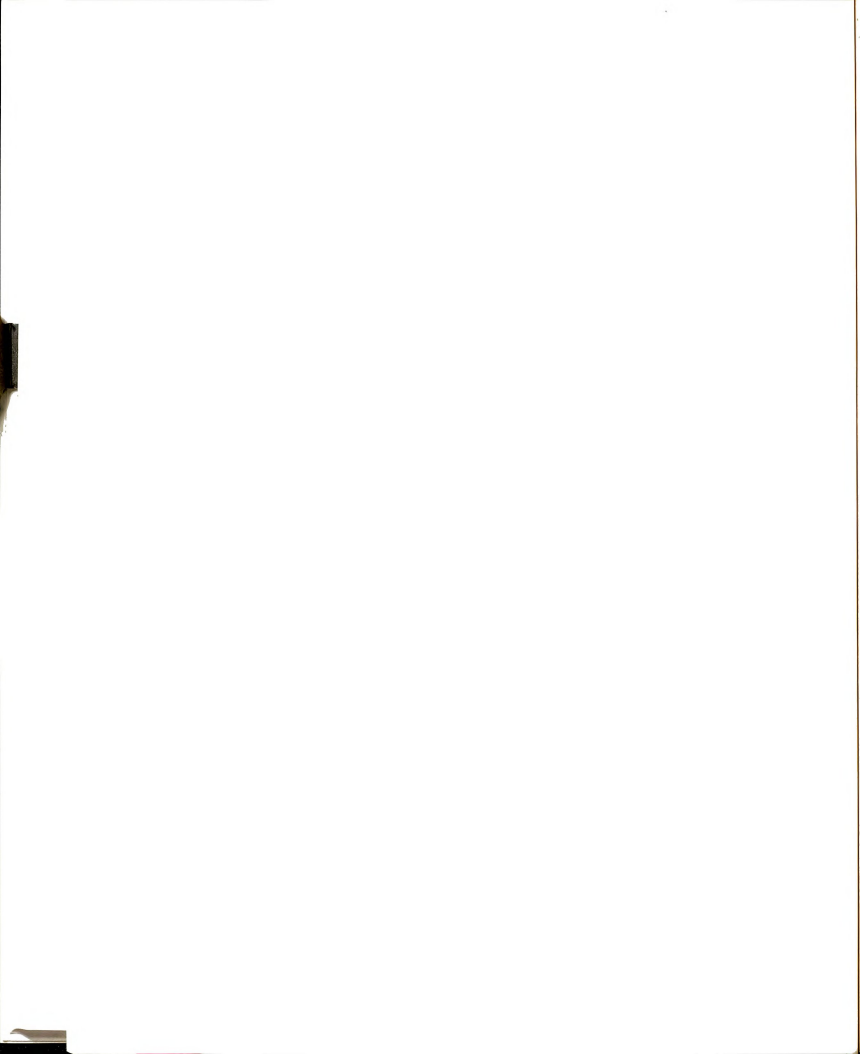
Summary

In regards to the attribute of fabric color the c. 1982 sample appeared to use more hues of green, blue, and purple though the difference was not significant. The c. 1982 sample also contained more highly saturated hues, with a tendency for them to be lighter. Color choice is a variable which is not always controlled by the Hmong. Although sponsors and church groups often collect fabric for the Hmong, they have control over which selections they choose to use. The Hmong tend to shop at the same stores over time, i.e., Jo Ann Fabrics, Meijers, and K-Mart (Her, 1983; Vue, 1983). The Hmong may have also brought fabric with them from refugee camps. According to Sue Julian, "there is a special program, in the refugee camps, that buy cloth in bulk and sell it to the refugees at cost, so they strongly influence color and design" (Julian, 1982).

Color Frequency

Hypothesis 2.4 The total number of colors used per piece in the borders has changed from 1977-1979 to 1981-1983.

The number of colors used in the borders of each piece were tallied. The average number of colors used per piece in the c. 1978 sample was 3.88 compared to 3.09 colors in the c. 1982 sample. The analysis of variance showed the observed differences were not statistically significant, $p=.15$ (Table 1).



Summary

The number of colors used per piece may be an aesthetic standard, taught from generation to generation, that will not change. Sue Julian worked as an ESL instructor and sponsor when the Hmong first came to Lansing. She reported that at that time the Hmong felt "that you needed at least five or six colors for something to be beautiful, less than that just doesn't make it" (Julian, 1982). Nang Vue, and her sister, learned to use many colors from their mother, which is what makes her pieces different (Vue, 1983).

Several combinations were observed in the use of color borders. Colors were repeated in 64.71% of the c. 1978 pieces, and 45.71% of the c. 1982 pieces. This occurred more often in pieces that were large. A large percentage of the pieces included borders in either green/yellow or green/white combinations. This will be further discussed with border dimensions.

Size

Hypothesis 3 Changes in the size of the paj ntaub took place over time from 1977-1979 to 1981-1983.

Area

Hypothesis 3.1 Change occurred in the overall size of the pieces from 1977-1979 to 1981-1983.

The total area of each piece was measured and recorded in square centimeters (Table 5). The average area of pieces in the c. 1978

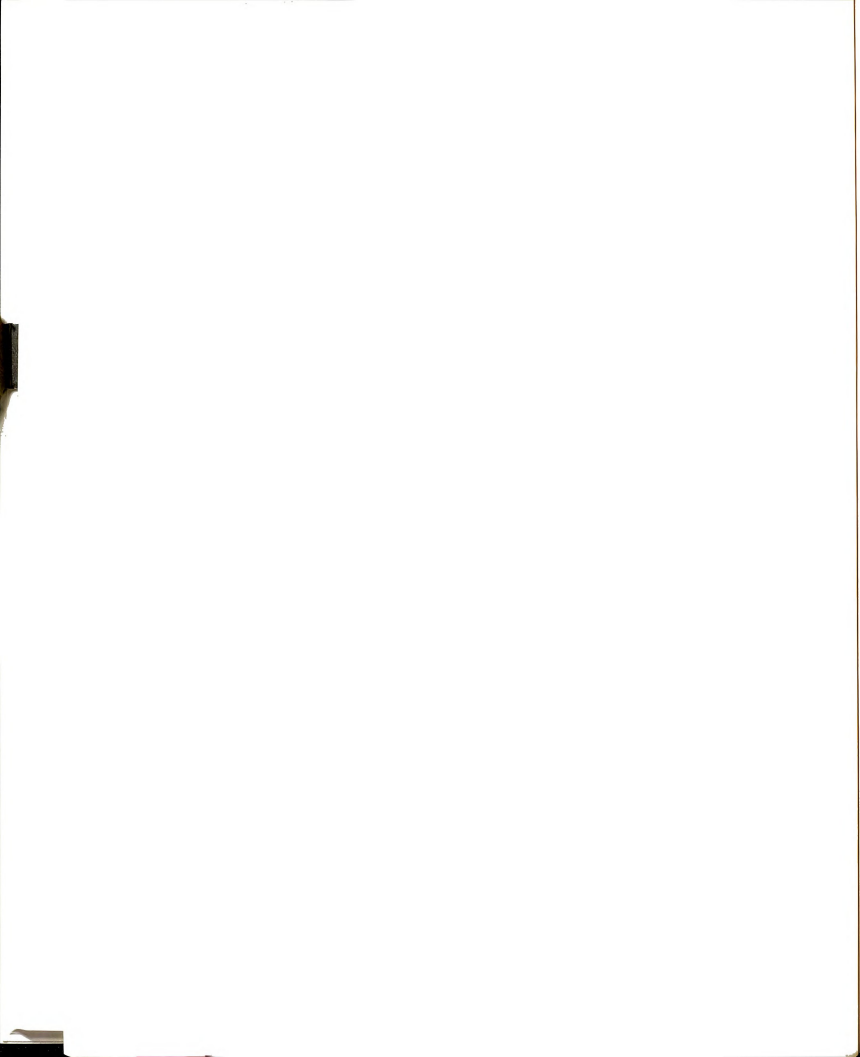
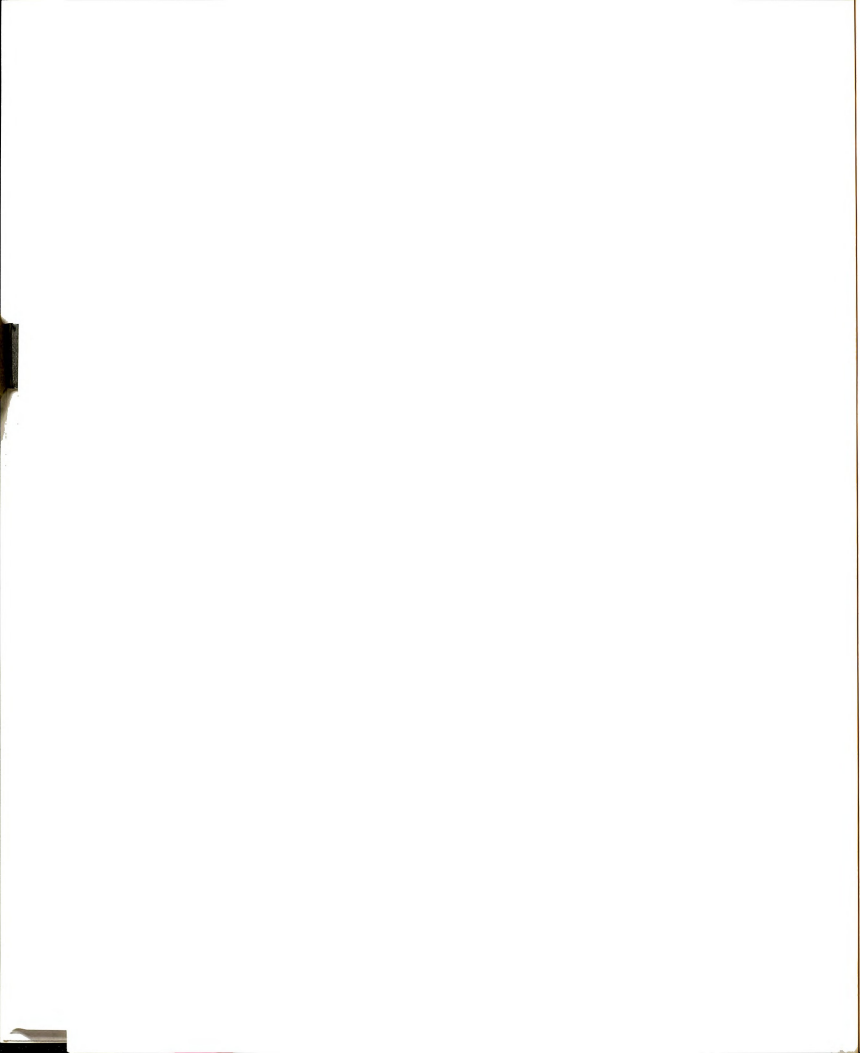


Table 5. Size of the Paj ntaub, c. 1978 and c. 1982.

Piece	% Border	% Center	% Total	Total Area cm ²
<u>c. 1978 Sample</u>				
B3	25.69	71.38	97.07	168.87
B17	33.40	64.82	98.22	1073.78
B11	36.50	60.67	97.17	228.00
B14	38.88	56.56	95.44	1793.06
B13	71.63	24.62	96.25	849.20
B10	72.67	24.11	96.78	305.55
B12	73.14	25.47	98.61	710.20
B8	76.92	21.48	98.40	2723.23
B16	78.70	20.23	98.93	186.31
B4	79.97	20.90	100.87	2485.00
B2	85.77	17.74	103.51	775.00
B15	86.78	13.86	100.64	1743.06
B6	87.00	13.86	100.86	5555.44
B9	88.79	9.39	98.15	5251.04
B7	89.40	10.97	100.37	3540.25
B5	91.05	10.48	101.53	4211.94
B1	92.57	7.24	99.81	1019.00
<u>c. 1982 Sample</u>				
A24	14.09	87.09	101.18	952.25
A33	25.95	72.71	98.66	497.24
A16	29.31	68.88	98.19	572.02
A5	30.28	69.95	100.33	1154.64
A25	31.80	69.63	101.43	184.80
A12	38.19	60.74	98.93	221.53
A26	36.87	62.50	99.37	649.38
A10	42.55	56.18	98.73	1593.38
A32	45.23	50.93	96.16	484.58
A14	46.94	50.93	97.87	526.40
A15	48.19	51.09	99.28	913.25
A34	48.29	50.34	98.63	693.53
A31	51.67	47.67	99.34	454.64
A4	51.94	47.34	99.28	1016.33
A7	54.19	48.50	99.69	198.78
A6	59.24	39.21	98.45	504.90
A20	69.64	30.99	100.63	1421.53
A1	70.30	28.41	98.71	1108.88
A21	72.61	26.37	98.98	1499.18
A2	73.03	26.62	99.66	1600.44
A29	73.30	26.08	99.38	1422.75
A30	73.83	22.84	96.67	418.14
A22	75.85	24.84	100.69	1634.24
A17	76.84	23.33	100.17	431.23
A19	77.19	22.55	99.74	1149.20
A28	78.98	20.08	99.06	973.37
A18	79.17	20.88	100.05	838.08
A23	81.00	19.77	100.77	364.20
A8	84.07	13.14	97.21	1259.18
A35	86.03	13.76	99.79	1113.47
A9	86.16	14.78	100.94	3697.10
A3	87.08	9.39	96.47	2190.17
A13	87.96	12.73	100.69	2609.01
A11	89.68	7.62	97.30	2011.46
A27	90.30	8.78	99.08	2580.07



sample was 1919.41 cm², this was compared to 1114.28 cm² in the c. 1982 sample. Analysis of variance indicated the difference in area of the pieces to be statistically significant at $p=.05$ (Table 1). There was a significant decrease in the total size of the pieces from the c. 1978 to c. 1982.

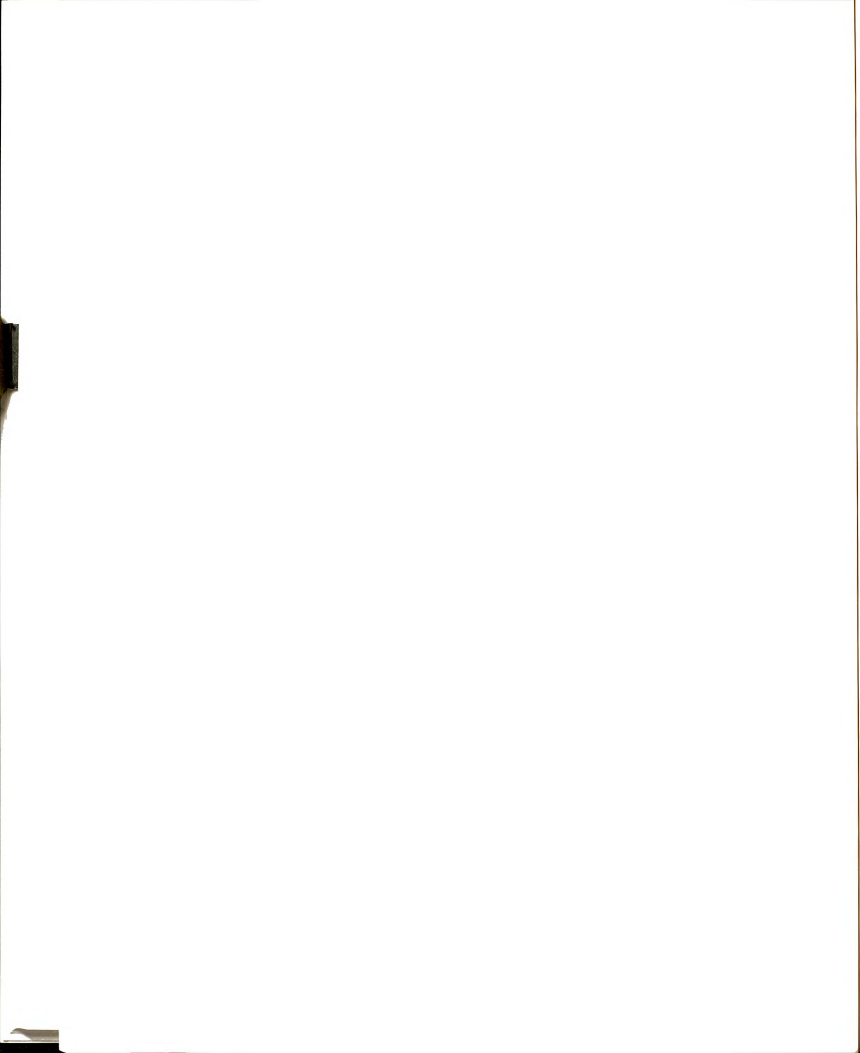
Hypothesis 3.2 The average proportion of border area to the overall piece changed from 1977-1979 to 1981-1983.

The area of each center block and border, as a percent of the total area was calculated and recorded (Table 5). The average percent of the total area in borders in c. 1978 was 61.94%, compared to 71.12% in c. 1982. The z test for differences in proportions showed this difference to be not statistically significant (Table 1).

Summary

While a statistically significant decrease occurred in the average area of the piece over time, the proportion of border area to the whole between samples remained similar.

The percent area in the center block which is the inverse of the area in the borders, varied considerably within each sample. This variation is related to ornamental construction techniques. The pieces which have one or two borders have a large center ornamented usually in cross-stitch (Table 5). The ratio of average center area to the average area in borders in c. 1978 was 1.66 compared to 2.55 in c. 1982.



Border Frequency

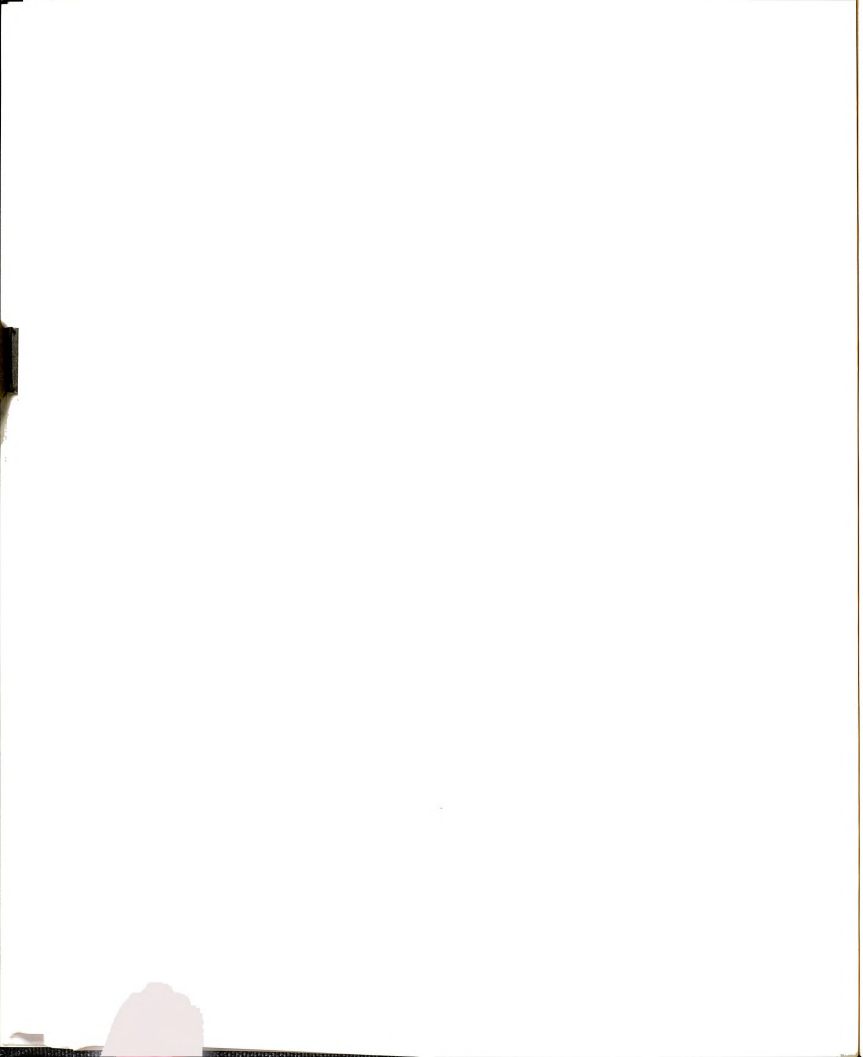
Hypothesis 3.3 The number of borders used per piece changed from 1977-1979 to 1981-1983.

The number of borders per piece were added up and divided by the total number of pieces to arrive at the average number of borders used in each period. In the c. 1978 sample there were an average of 7.35 borders per piece, compared to 4.97 borders per piece in the c. 1982 period. Analysis of variance indicates the differences in the number of borders between the two time periods was statistically significant at $p=.02$ (Table 1). Fewer borders were used in the c.1982 pieces than in the c. 1978 pieces.

Summary

A decrease in the number of borders used along with consistency in the proportion of border area to total area indicated that the size of the borders increased.

Further observation of the border dimensions highlighted a predominant characteristic in the pieces. A majority of the pieces in both samples, 76.46% in c. 1978 and 54.29% in c. 1982, demonstrated a progression of one large and two small borders, repeated. The ordering of borders, by size, corresponds to the color combinations. Several of the larger borders were adjacent to green/yellow or green/white smaller borders. The order in which the colors appeared switched frequently within the piece. Several of the Hmong were asked about this occurrence and whether it had a specific meaning. A quotation from Nang Vue, is typical of the explanations we received, "I think it looks



pretty" (Vue, 1983; Yang, 1983, Vue, 1983).

Ornamental Construction Techniques

Hypothesis 4 The ornamental construction techniques used in the center of each piece changed from 1977-1979 to 1981-1983.

Ornamental Construction Technique Choice

Hypothesis 4.1 The choice of ornamental construction technique, i.e., appliqué, reverse appliqué, embroidery, and batik used in the center of each piece changed from 1977-1979 to 1981-1983.

The type of ornamental construction technique(s) used in the center section of each piece was recorded (Table 6). The ornamental construction techniques include appliqué, reverse appliqué, embroidery, and batik. Embroidery was separated into cross-stitch, chain-stitch, and other. The most frequently used technique in the c. 1978 sample was reverse appliqué, 34.30%, in comparison to cross-stitch, 36.54% in the c. 1982 sample. While not statistically significant chi-square analysis indicated a trend towards using embroidery more than reverse appliqué in the c. 1982 pieces (Table 1).

Summary

While variation existed in the techniques used most frequently, the differences were not statistically significant. Sue Julian was told by the Hmong that the paj ntaub should have a "mixed medium ...

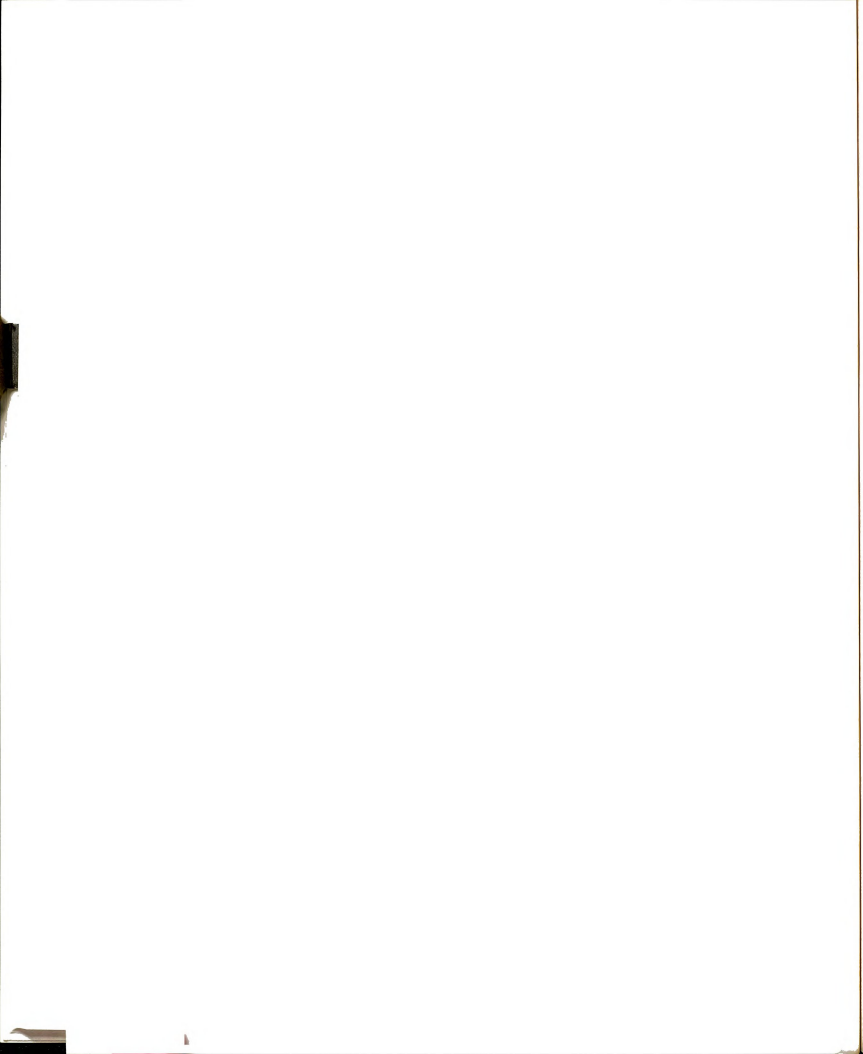


Table 6. Frequency of Ornamental Construction Techniques, c. 1978 and c. 1982.

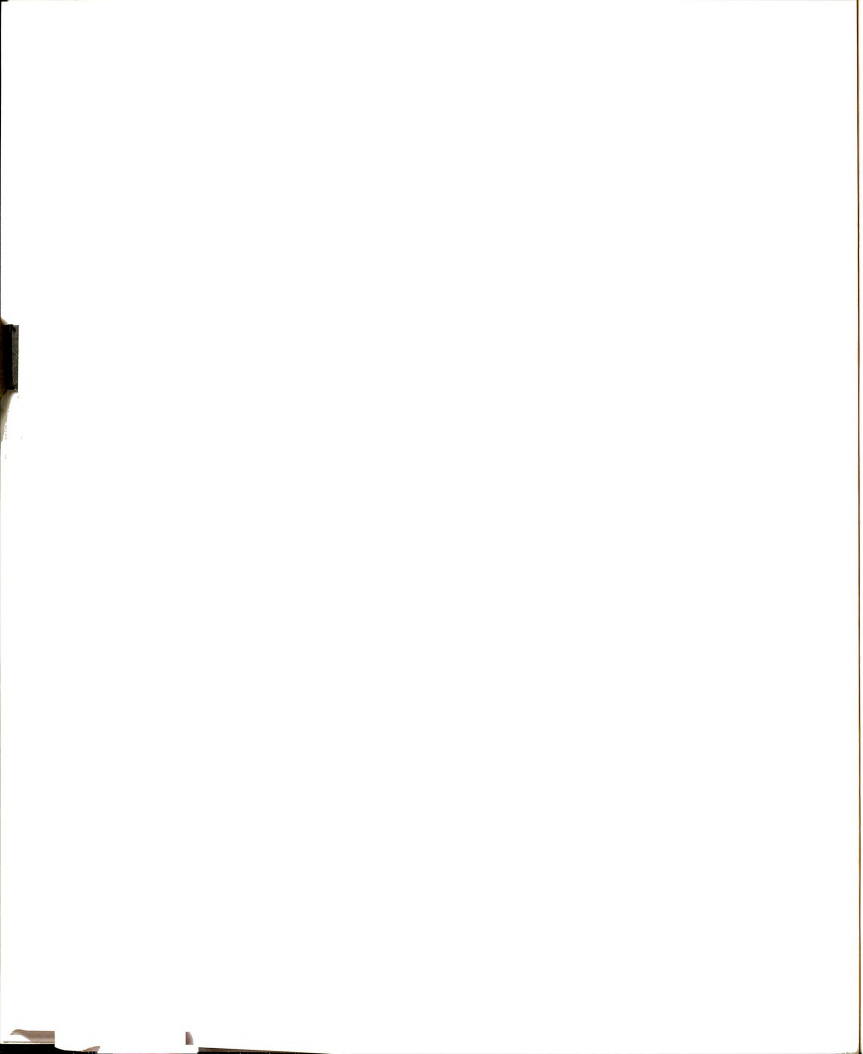
Technique	c. 1978		c. 1982	
	Frequency	Percent	Frequency	Percent
Appliqué	7	20.00	6	11.54
Reverse Appliqué	12	34.30	10	19.23
Embroidery				
Cross-Stitch	4	11.40	19	36.54
Chain-Stitch	7	20.00	7	13.54
Other	5	14.30	10	19.23
Batik	0	0.00	0	0.00
TOTAL	35	100	52	100

some embroidery, some appliqué, some reverse appliqué..." (Julian, 1982).

Ornamental Construction Technique Frequency

Hypothesis 4.2 The number of different ornamental construction techniques used per piece changed from 1977-1979 to 1981-1983.

The average number of techniques used to create the center design was calculated for each sample. A greater variety of techniques were used per piece in the c. 1978 sample, 2.06, compared to 1.49, in the

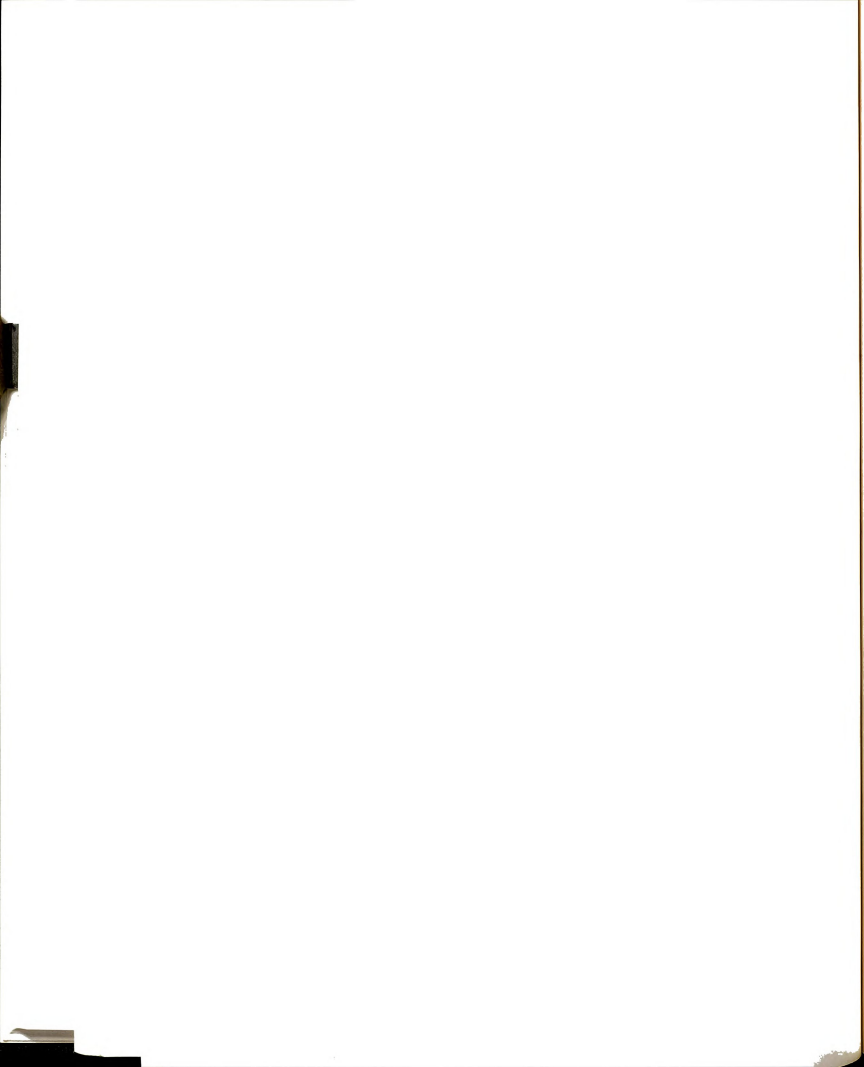


c. 1982 pieces. Analysis of variance showed a statistically significant difference in the number of ornamental construction techniques used per piece at $p=.05$ (Table 1).

Summary

Fewer ornamental construction techniques were used in the c. 1982 sample than in the c. 1978 sample. This indicates a decrease in the complexity of construction over time.

In both samples it was observed that the cross-stitch technique tended to be used alone. The reverse appliqué technique was usually used in combination with one or more different techniques. Batik did not appear in any of the pieces. It may be hypothesized that this technique is only used in costume pieces, baby carriers, and a few adaptations, such as book-markers.



CHAPTER 6

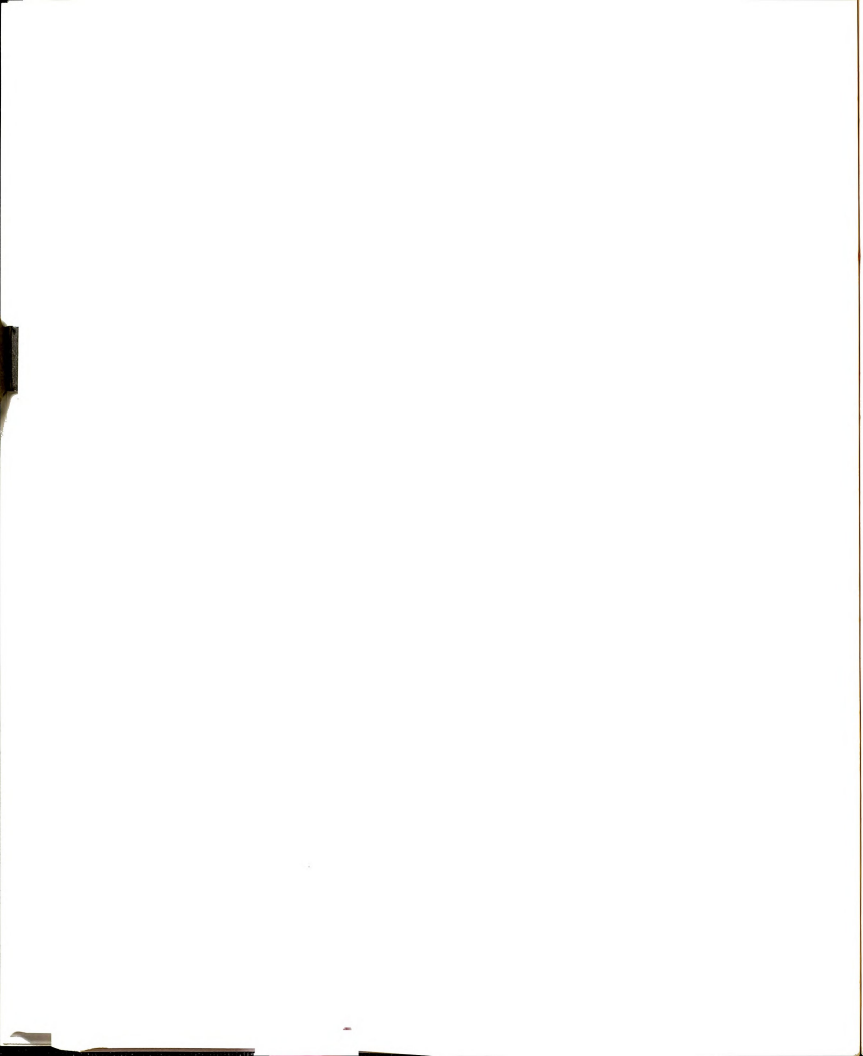
SUMMARY AND CONCLUSION

This chapter includes a summary of the study and a review of the limitations involved in this project. The thesis will conclude with a discussion on the implications of the study and a list of recommendations for further study.

Summary of the Study

This study is an extension of research conducted by the Folk Arts Division, Michigan State University Museum. The Folk Arts Division staff examined paj ntaub production and marketing in Lansing, interviewed 21 Lansing Hmong artists and persons teaching or assisting the Hmong, documented the existence of Hmong in Lansing, and prepared an exhibit and several educational publications. As a graduate assistant on the MSU Museum project, the researcher observed that the lives of the Hmong appeared to be changing. The Hmong themselves expressed concern and apprehension about the changes. This researcher wanted to develop a method of looking at change in the paj ntaub and documenting the changes that occurred.

A summary of Hmong history from China to the United States was provided as background. Recruitment by the United States Central Intelligence Agency to assist the U. S. in the Vietnam war lead to the



migration of the Hmong to Thailand and then the United States.

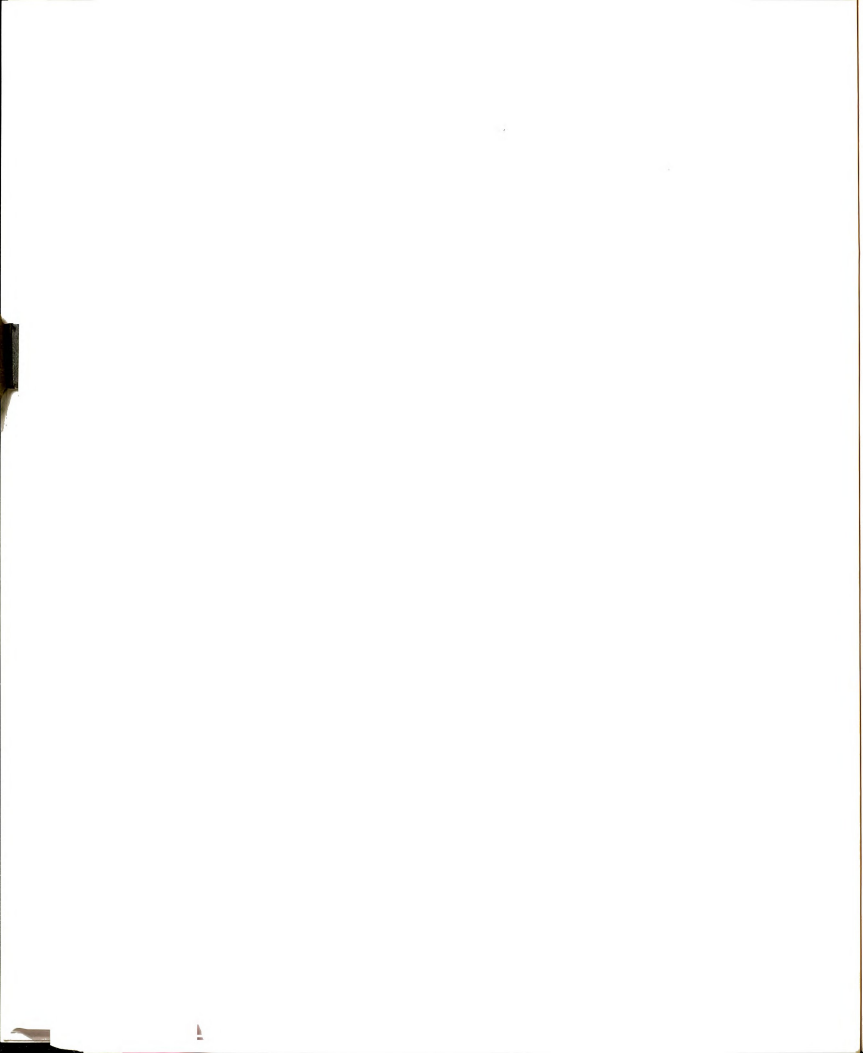
One of the first cultural interests shared between Americans and the Hmong was the paj ntaub, a highly decorative textile. Marketing of the paj ntaub was quickly initiated to assist the Hmong financially. Research into the history of paj ntaub, including the production process and associated folklore indicated it was an important aspect of Hmong culture.

A process model, for the study of artifacts, by E. McClung Fleming, 1974, and the conceptual human ecosystem model, developed by Bubolz, Eicher, and Sontag, 1979, were chosen to assist in identifying and classifying the paj ntaub and cultural relationships associated with it at different time periods.

The samples for the study were paj ntaub made between 1977 and 1979, referred to as c. 1978, and pieces produced between 1981 and 1983, c. 1982. The sample pieces were limited to those produced in Lansing, for which dates could be established. Non-costume or American designed pieces were excluded.

The hypotheses for the study, suggest that changes occurred in each of the paj ntaub variables from c. 1978 to c. 1982. Frequency tables were made of design motifs, ornamental construction techniques, Munsell designations used to classify color, and the measurements made to assess change in size. Statistical significance was determined by analysis of variance, chi-square, and the z tests of differences in proportions.

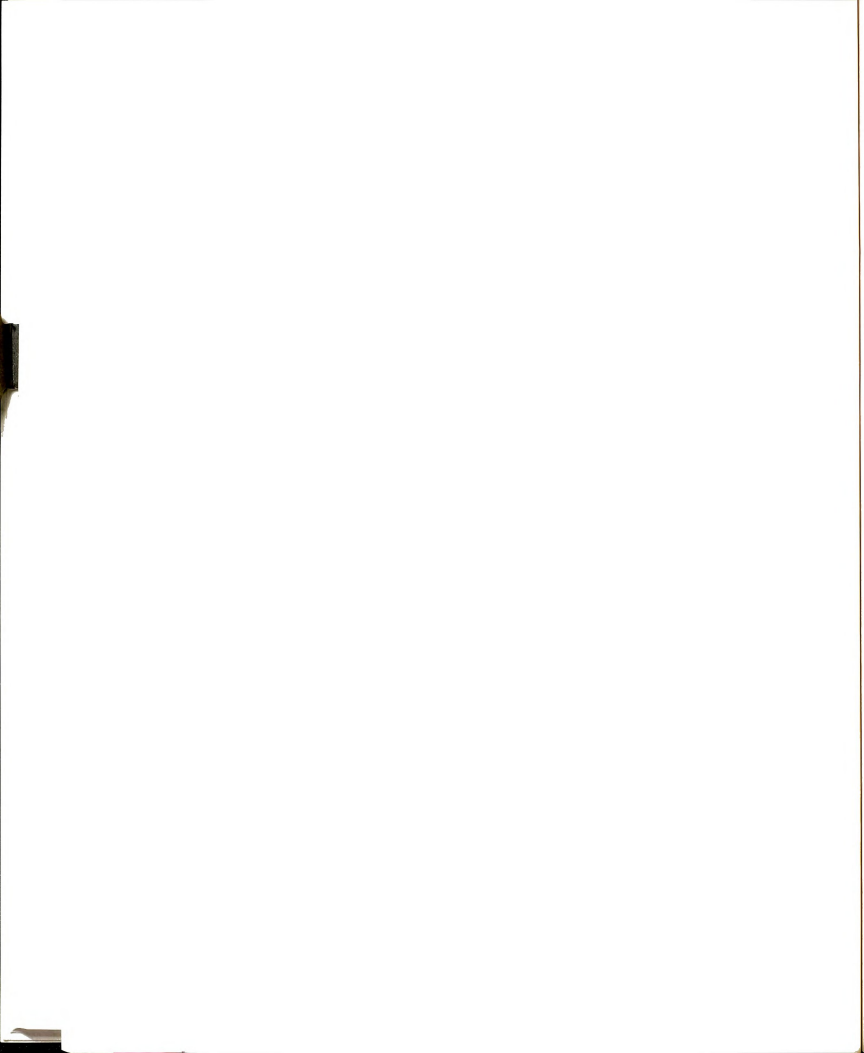
A summary of the findings suggest that the paj ntaub became simplified from c. 1978 to c. 1982. A significant decrease appeared in



the average total size of the paj ntaub, average number of colors, and in the average number of borders and ornamental construction techniques used per piece. A general business practice is to decrease production time thereby increasing output. This may be a carry-over of a trend from Thailand. "For the sake of mass production, the stuff in the camps has all been simplified" (Julian, 1983). An increase in the saturation of the hues, ie., chroma, was also statistically significant. This may indicate an interest in experimenting with newly available materials.

There appears to exist a traditionally accepted set of procedures, shared by the Hmong, on how to produce paj ntaub. It is this quality that suggests the paj ntaub is an example of folk art. This proposition is supported by the fact that there were no statistically significant differences in the number of design motifs and colors used per piece, and a non-significant change in the choice of hues and values, proportion of border area to the whole, and ornamental construction techniques between samples.

While the transcribed interviews contained statements from sponsors, ESL instructors, refugee resettlement agency representatives, and paj ntaub marketers, regarding paj ntaub, the quantity was not enough to represent influence on the Hmong. Many of the interviews also included statements by the Hmong suggesting influence from the above individuals regarding paj ntaub production (Vue, 1983, Vue, 1983).

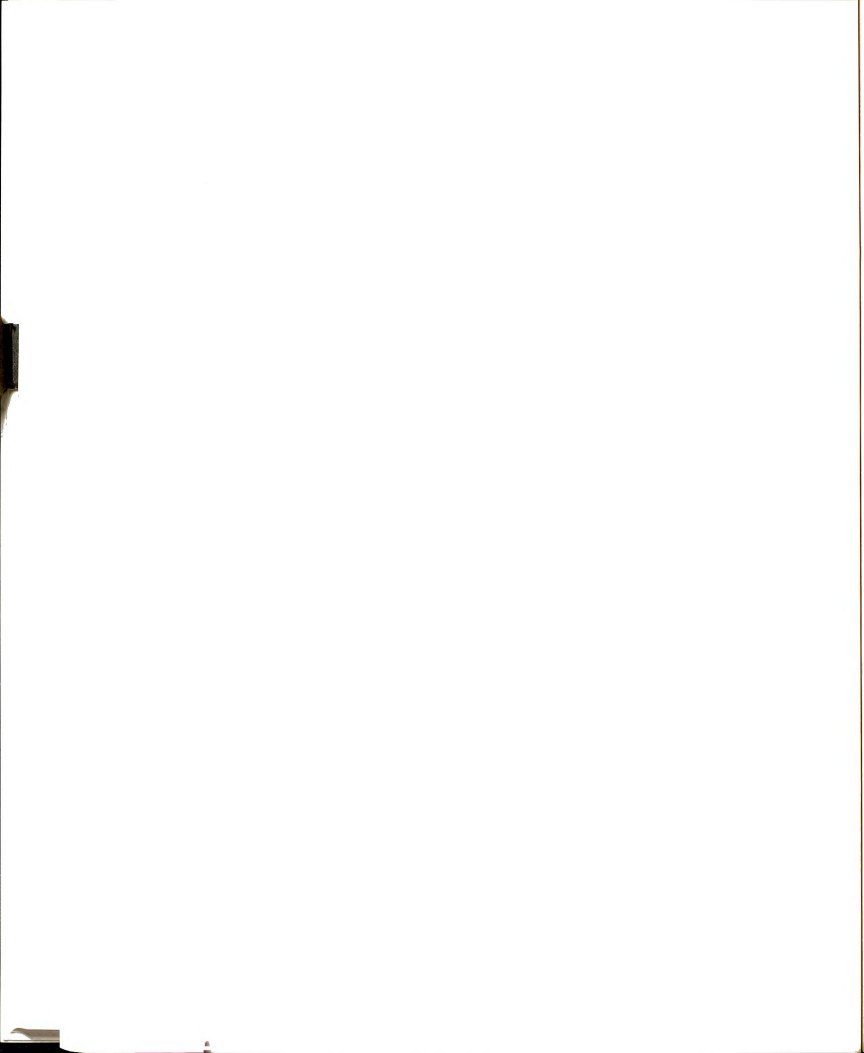


Limitations of the Study

All findings must be weighed in light of the limitations of the study. One limitation was the size of the sample. Resettlement of the Hmong before 1979 was very scarce. For example, there were about 100 Hmong living in Lansing, Michigan in 1979 (Vang, 1983). High army officials, who had a greater knowledge of the situation and higher financial means, were the first to come to the United States, including Lansing. The limited availability of the paj ntaub produced in Lansing from 1977 to 1979 resulted in a very small sample, 17 pieces, compared to 35 pieces from 1981 to 1983. The statistical tests chosen, accounted for unequal samples. While the c. 1978 sample size was smaller the number of Hmong living in Lansing in c. 1978 was also smaller. Therefore the sample size may be somewhat proportional to the Hmong population.

In relation to the sample variables, a few limitations existed. The c. 1982 sample may not represent the frequency of design choice that a random sample would, since a criterion for purchase, by the Museum staff, was to acquire a representative sample of each type of design. A similar criteria may have been used by individuals who purchased pieces in the c. 1978 sample.

Another limitation of the c. 1982 sample is the possibility of pieces produced in Thailand being classified as Lansing-produced pieces. Catholic Refugee Services' inventory of pieces also included pieces from relatives of Lansing Hmong living in Thailand. The Lansing Hmong attached their names to these pieces, and showed little concern as to who the true producer was. The Hmong were shown the pieces

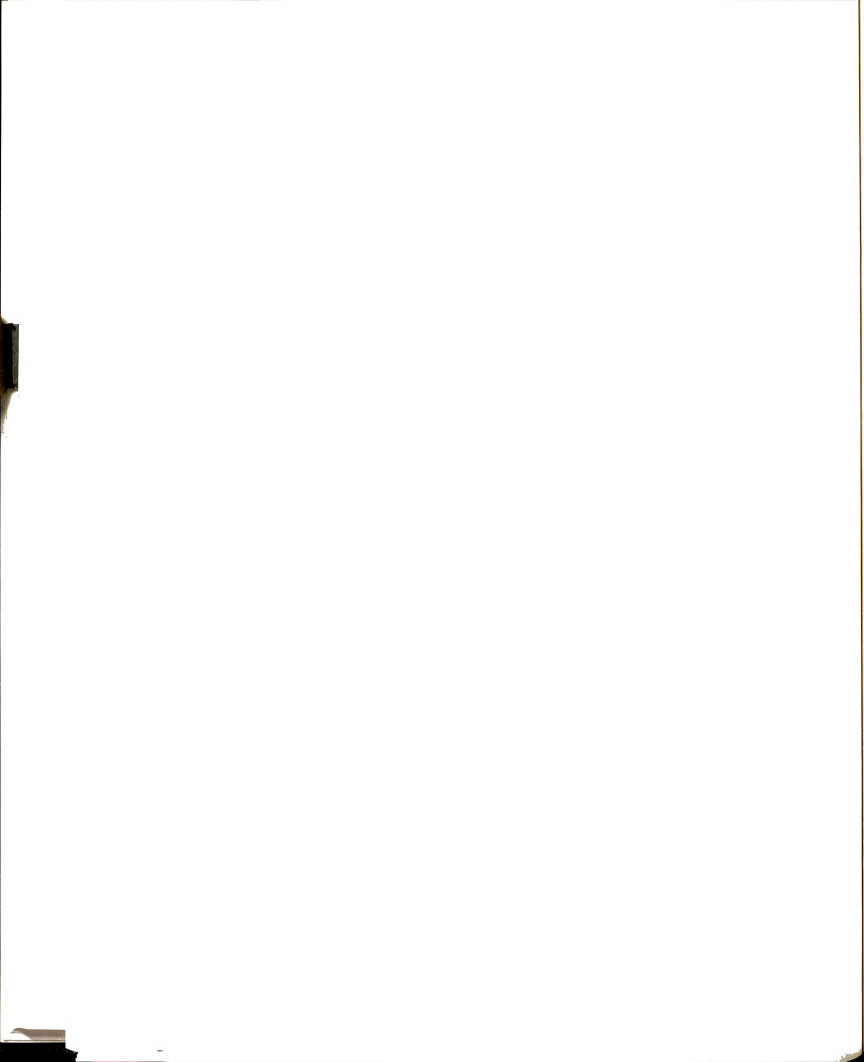


purchased by the Museum during the interviews. They were asked whether the pieces owned were theirs; clear answers were not received.

The conclusions regarding color choice may also be limited. As discussed in the analysis, the Hmong may have received fabric from sponsors and church groups. It is not known whether they used all of the fabrics they received or made selections from it. They may have also brought fabric with them from Thailand. This limitation applied to both samples.

Finally, statements from the transcribed interviews were considered secondary sources, since the interviews were designed for a different study. Questions directly related to this study were not asked. Therefore it was difficult to determine whether the statements were representative of all of the individuals who assisted the Hmong or only comments from individuals who wanted to increase the marketability of the paj ntaub. The theoretical statement suggested that changes may occur as a refugee group accept and deny information presented by their new environment. This study was able to show that changes in the paj ntaub did occur. There were also indications that advice received from assistants and educators influenced the ornamental paj ntaub, however, this study was not able to draw firm conclusions about influences because of insufficient data.

An awareness of the limitations to the study allowed the researcher to more carefully conduct the analysis.



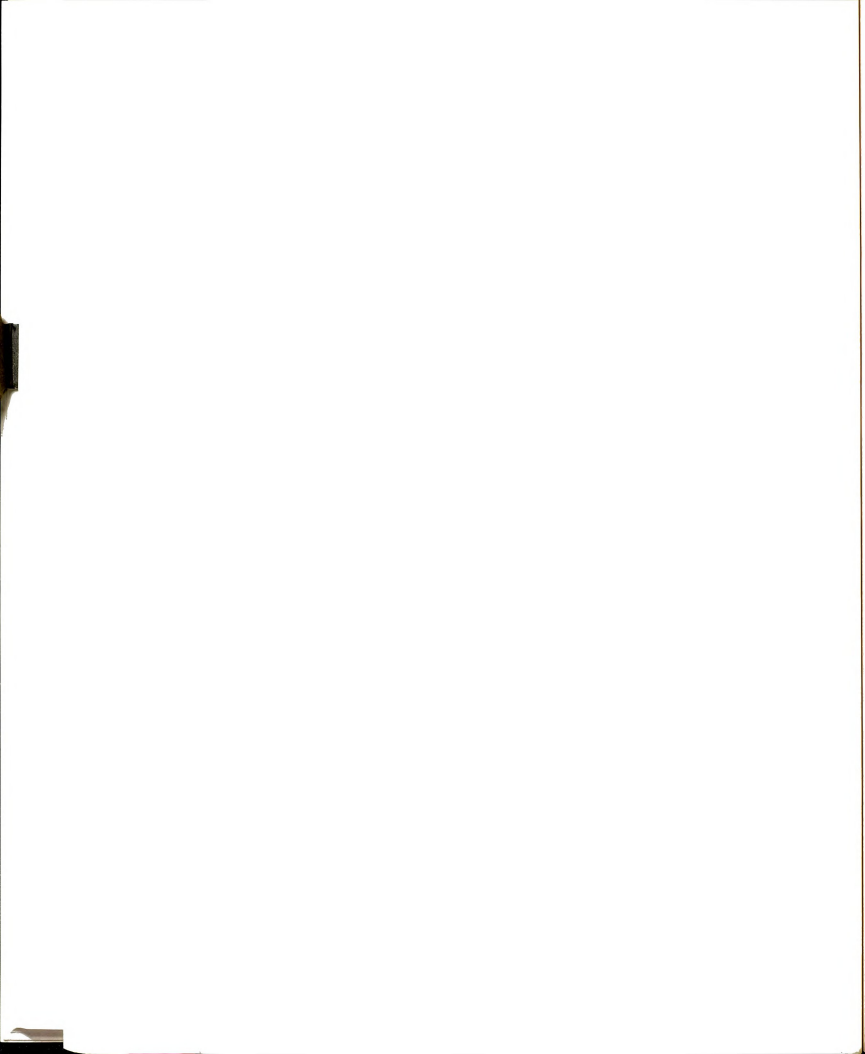
Implications of the Study

The study itself documented how the paj ntaub has changed from c. 1978 to c. 1982. The findings may have several additional implications: for folklore research, policy makers, museum curators, and the Hmong.

Often, when a refugee group tries to adapt to a new culture, emphasis is placed on change versus tradition. The Hmong have experienced many alterations in their move from Laos to the United States. Through interviews with Hmong elders, paj ntaub producers, and from talking with the Hmong youth, it appeared that the Hmong were placing more emphasis on selling the paj ntaub than in noticing how much it was changing. The researcher hoped that by documenting the changes that have occurred, a record would exist for the Hmong and textile researchers who will express interest in what the paj ntaub "was" first like.

The paj ntaub represents a rich cultural illustration of Hmong textile skills. The pieces are artistically appealing through their incorporation of numerous colors, ornamental construction techniques, and design motifs. An increased awareness of the paj ntaub and Hmong culture may create a common artistic bond between Americans and the Hmong. This heightened recognition may then lead to increased sales and appreciation for cultural diversity.

A review of the changes in paj ntaub may reflect how the Hmong respond to American intervention. The findings illustrate the Hmong's interest in self-sufficiency by altering the paj ntaub to be better suited to American tastes. The Hmong demonstrated initiative and hard

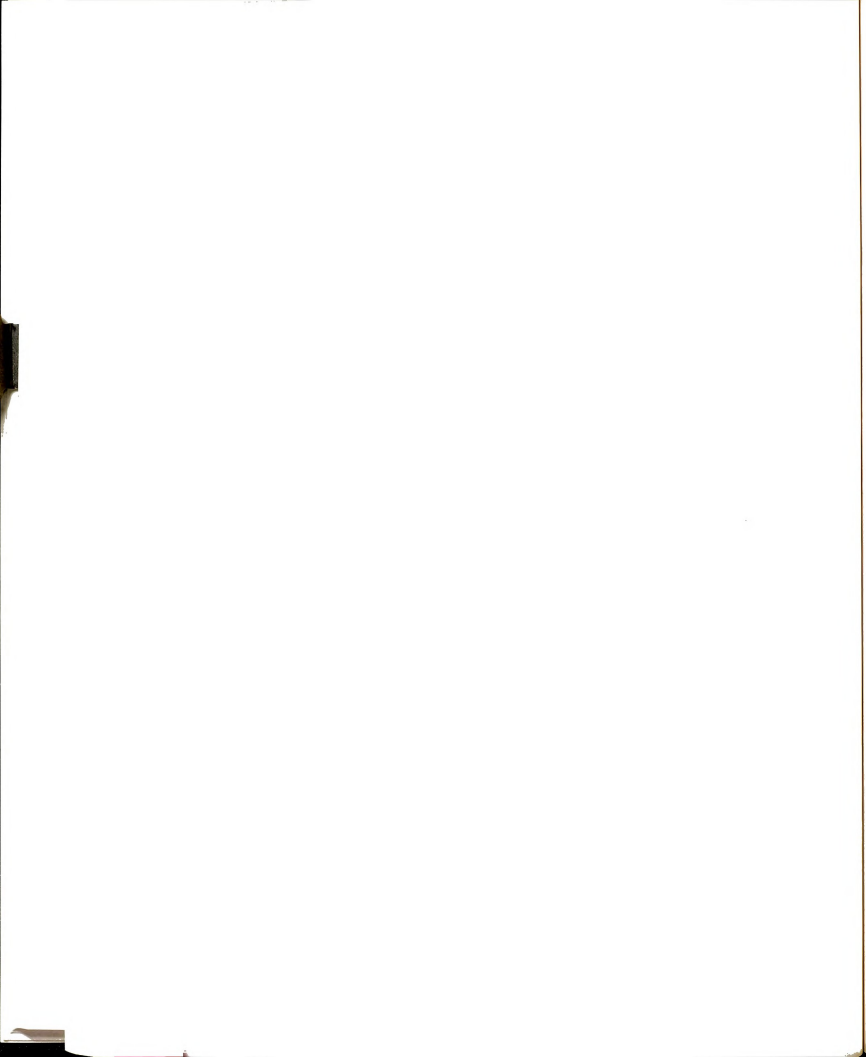


work ethics to produce paj ntaub that Americans would buy. This insight into the Hmong value system could be incorporated into resettlement programs.

Instead of placing the Hmong by themselves in factories which are foreign to them, the Hmong should be placed in farming communities and art centers. These areas represent employment fields with which the Hmong are familiar. Their interest in improvement would make them an asset versus a risk. The self-worth that comes from doing something they know how to do would act as an incentive to settle in one place and lessen second migration.

An understanding of the close family ties within the Hmong culture should be a primary factor in sponsorship and resettlement locations. The Hmong elder system has functioned as the primary directing force for hundreds of years. The American disregarding of this fact resulted in pockets of Hmong who had no one familiar with Hmong ways to lead and assist them in adapting to their new culture. Forming a community centered around Hmong elders would provide the Hmong with support and Americans with easier access to understanding Hmong cultural needs.

The findings in this study illustrate the ability to measure change in ethnic textiles more accurately than is typically done in traditional folklore research. Most folklore research involves documentation of observations. This method also provides a way of measuring change in the paj ntaub in the future. Identification of the decreasing complexity of Hmong paj ntaub also gives museums a method for dating pieces.



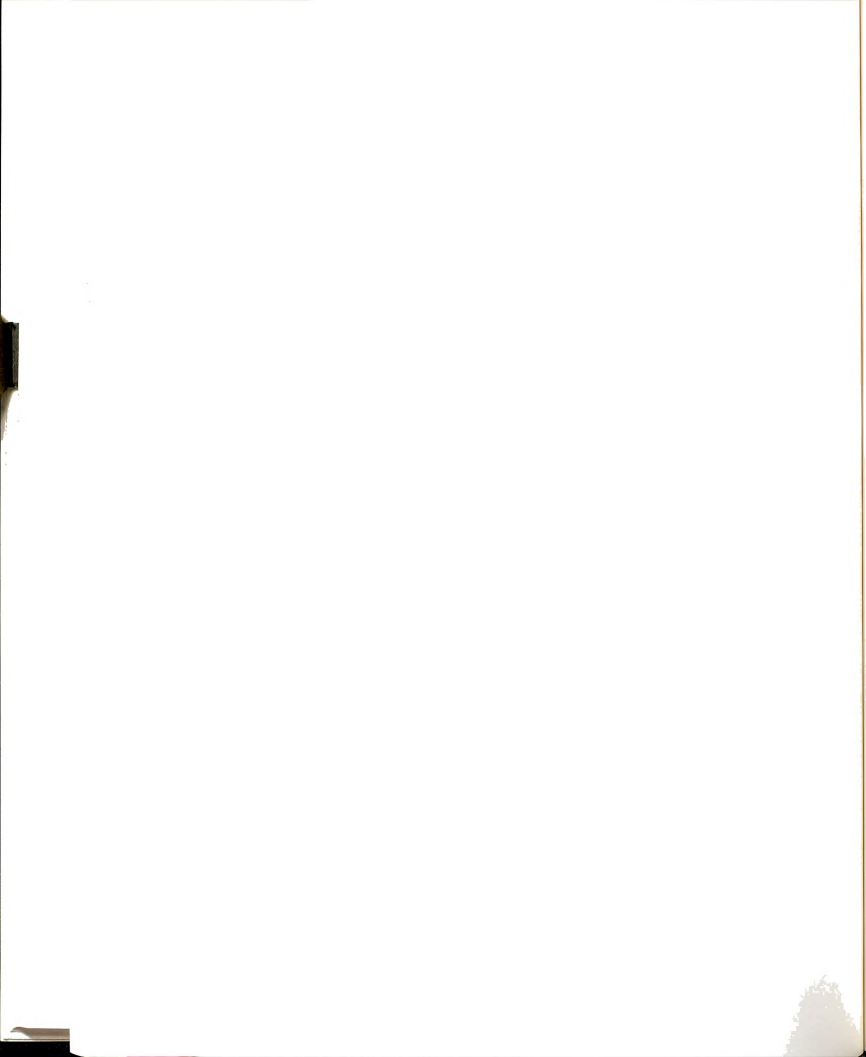
Recommendations for Further Study

The relative newness of the Hmong community to the United States and the comprehensiveness of the study left several areas for further research. The following are related questions which arose during this project.

The Hmong appear to keep strong ties with family members in Thailand. Studying what type of relationship exists between relatives in the U.S. and Thailand, and what effect this has on paj ntaub production and sales could assist in understanding the economic well-being of the Hmong. Specific questions might include: how many relatives in Thailand send their paj ntaub to relatives in America to be sold, how are finances handled, and what percentage of pieces sold are from Thailand?

While research has been conducted on paj ntaub marketing and on the family system, studies relating these two have not. Questions of concern include: where do the profits from paj ntaub sales go, who is responsible for financial organization in the family, and what percentage of family income is a result of paj ntaub sales?

Several of the Hmong commented that when they first learned to create paj ntaub their mothers would sew part of the pieces and let their daughters sew the easier parts. This question of apprenticeship has several areas of interest: what kind of relationship exists between mother and daughter from an apprenticeship position through old age; are there specific paj ntaub responsibilities acquainted with different ages? One might also ask if this trend extends to friends within the Hmong community: does a working relationship exist between



friends to produce paj ntaub, and if so, who accepts credit for the piece?

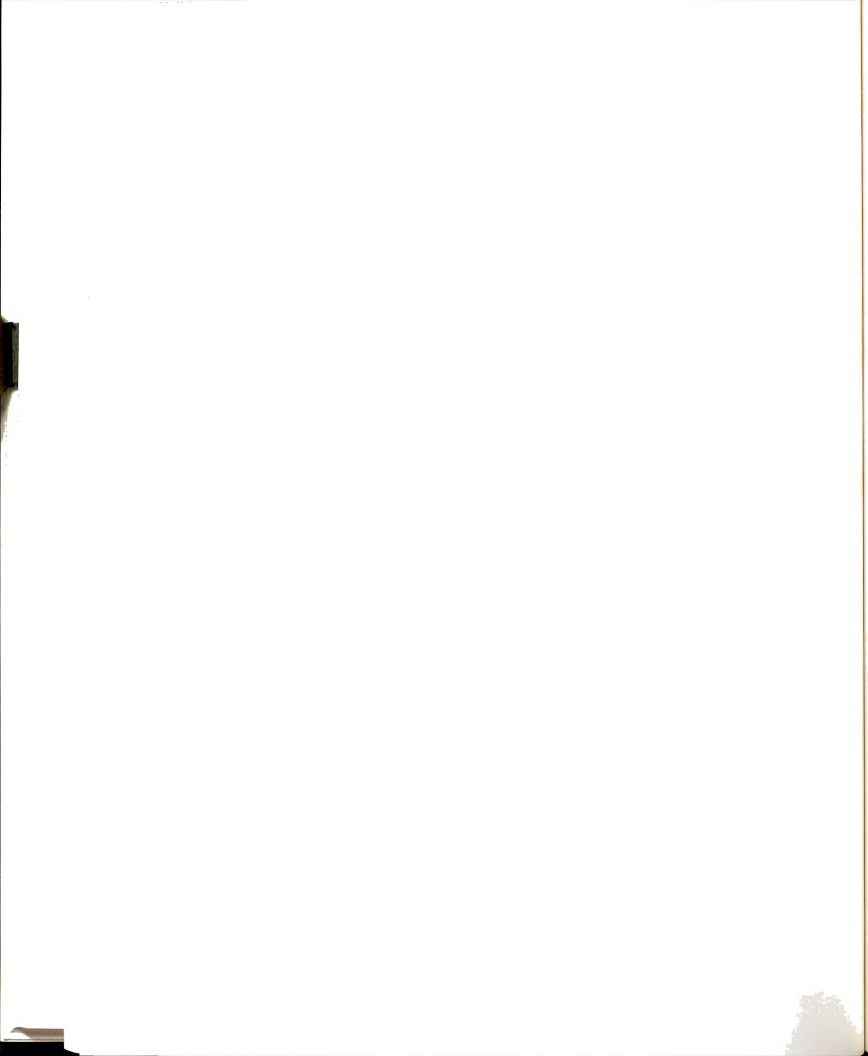
Several comparisons between locations would prove interesting. For example, how does the paj ntaub made in a small town compare to paj ntaub made in a highly industrial community? A comparison between marketing histories and styles between two areas in the United States would identify environmental variations.

One of the ESL instructors remarked that he could not understand why the men do not get involved in the marketing of the paj ntaub (Gilzow, 1983). What effect do the men have on paj ntaub production and sales? Do the men critique design and control change? Are the men responsible for marketing and the women responsible for production? The Hmong are primarily patrilineal. Does the popularity of the paj ntaub threaten or influence this family hierarchy?

Aids in the refugee camps are credited with the development of pictorial paj ntaub to illustrate traditional cultural events. What degree of influence on the other versions of paj ntaub comes from Americans in the Thailand refugee camps compared to the Americans in the United States?

The paj ntaub have been said to look like molas. It would be interesting to study the similarities between paj ntaub, American quilts, and other ethnic textiles. Do similar attitudes exist between Hmong paj ntaub producers and American quilters, or between the public and the different types of textiles?

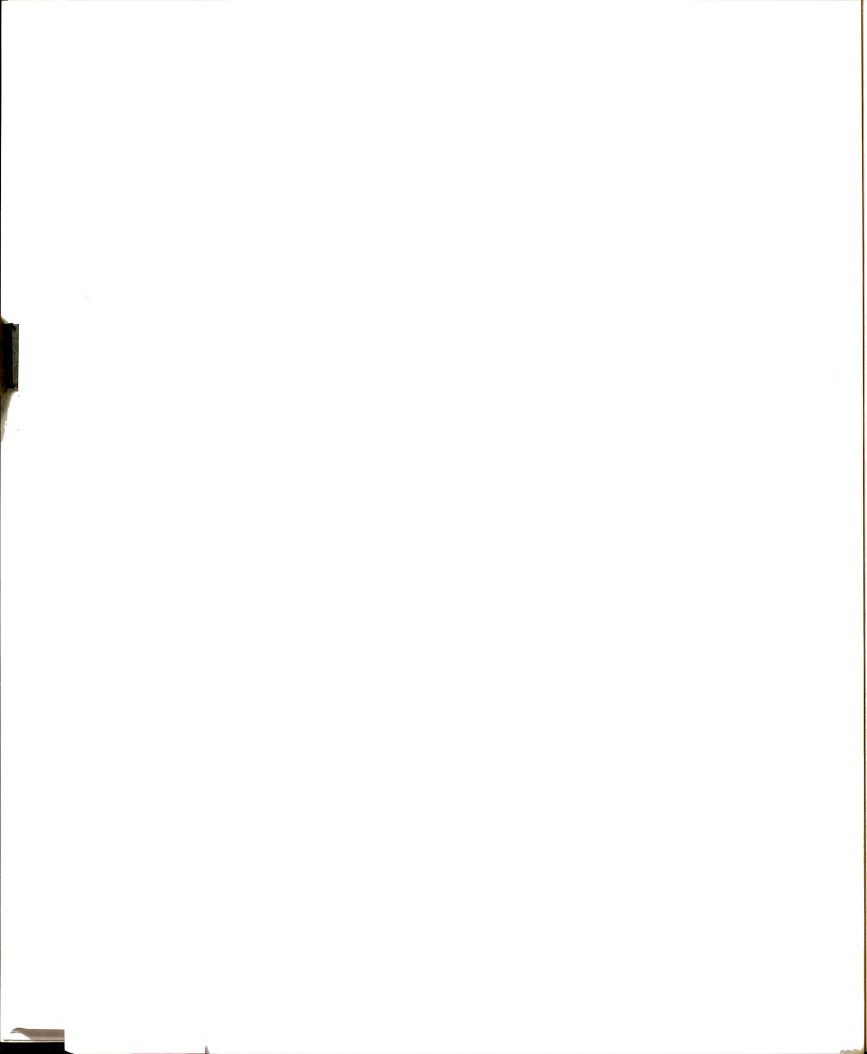
Each of the paj ntaub variations have individual functions, both intended and unintended. What are these functions, how do they compare



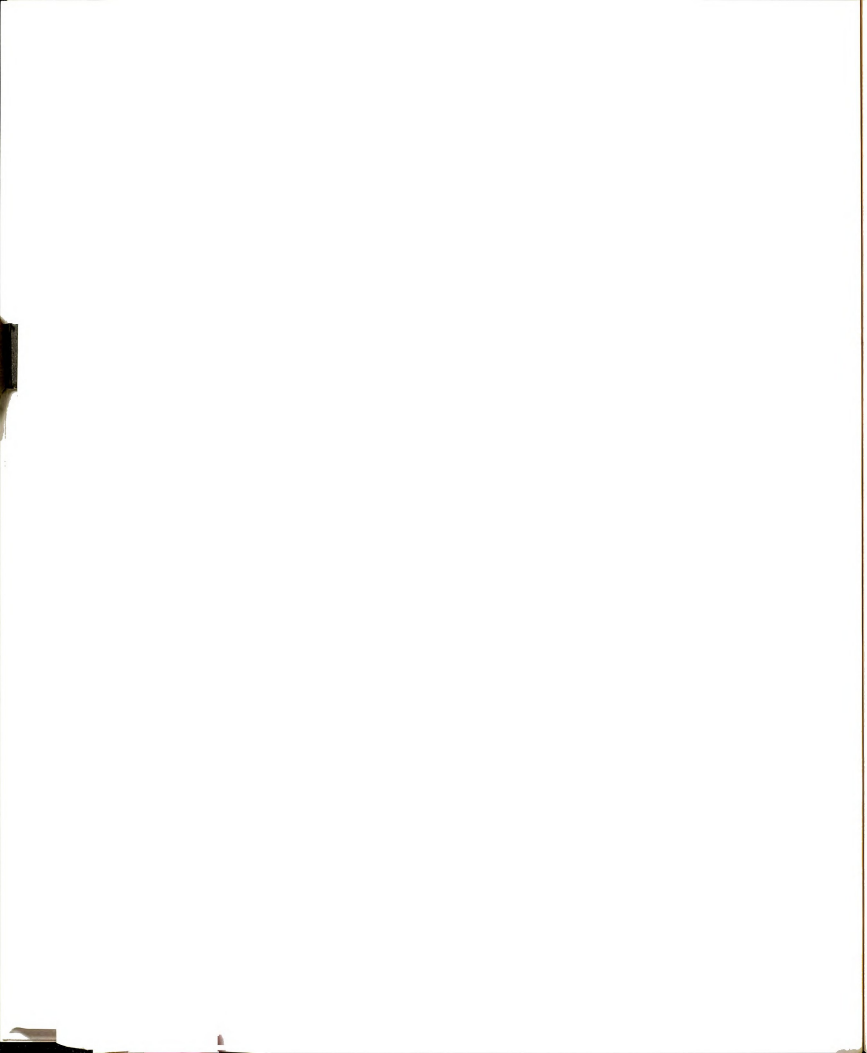
and what changes have occurred? Answers to these questions would be useful in determining whether the paj ntaub are as important to the Hmong culture as they once were.

A final area directly related to this study is the question of folk art recognition. Since the ornamental paj ntaub are now produced for American tastes versus the Hmong community, is it still considered folk art? Is there a new separation between paj ntaub as folk art and popular art? If so, when did the change take place and what influenced it?

The areas available for research on Hmong paj ntaub are limitless.



APPENDICES



APPENDIX A

CORRESPONDENCE



MICHIGAN STATE UNIVERSITY

COLLEGE OF HUMAN ECOLOGY
DEPARTMENT OF HUMAN ENVIRONMENT AND DESIGN

EAST LANSING • MICHIGAN • 48824-1030

Annette Hafner
204 Human Ecology
Michigan State University
East Lansing, MI. 48824

Date

Name

Address

City, State, Zip

Dear (Name):

I am a Graduate Student in Clothing and Textiles at Michigan State University. My Master's thesis will be on Hmong textiles. My experience assisting in the preparation of the "Michigan Hmong Arts" exhibit at the MSU Museum has made me aware of the need to better understand the Hmong culture.

In order to do this study I must determine if there are enough pieces in existence from the first Hmong arrivals in Lansing. If you own or know of someone that owns Hmong pieces constructed between 1976 and 1979 I would appreciate your help. I have enclosed a self addressed stamped postcard for your convenience. I would sincerely appreciate your completion of the questionnaire and return by (date).

I would like to compare pieces owned by the MSU Museum to pieces first produced in the Lansing area. I want to examine the artifacts, studying the materials, construction and design. Also, I would like to photograph them. This study would document any changes that have taken place in the Hmong pieces since the Hmong arrived in the Lansing area. I hope you will assist me in this project.

Annette Hafner
HED Graduate Student

enclosure



Figure 14. Postcard Response.

Name: _____ Phone: _____

1. Do you own pieces made in Lansing between 1976 and 1979?
(Yes) _____, (No) _____, (How many) _____.
2. If you own pieces, do you know who the artist's are?
(Yes) _____, (No) _____, (Some) _____.
3. How did you receive your piece(s)?
(Gift) _____, (Purchased) _____, (Where ?) _____.
4. Would you allow examination and photographing of these pieces for a master's thesis?
(Yes) _____, (No) _____.
5. Do you know of someone else who owns pieces from this period made in the Lansing area?
(Yes) _____, (No) _____.

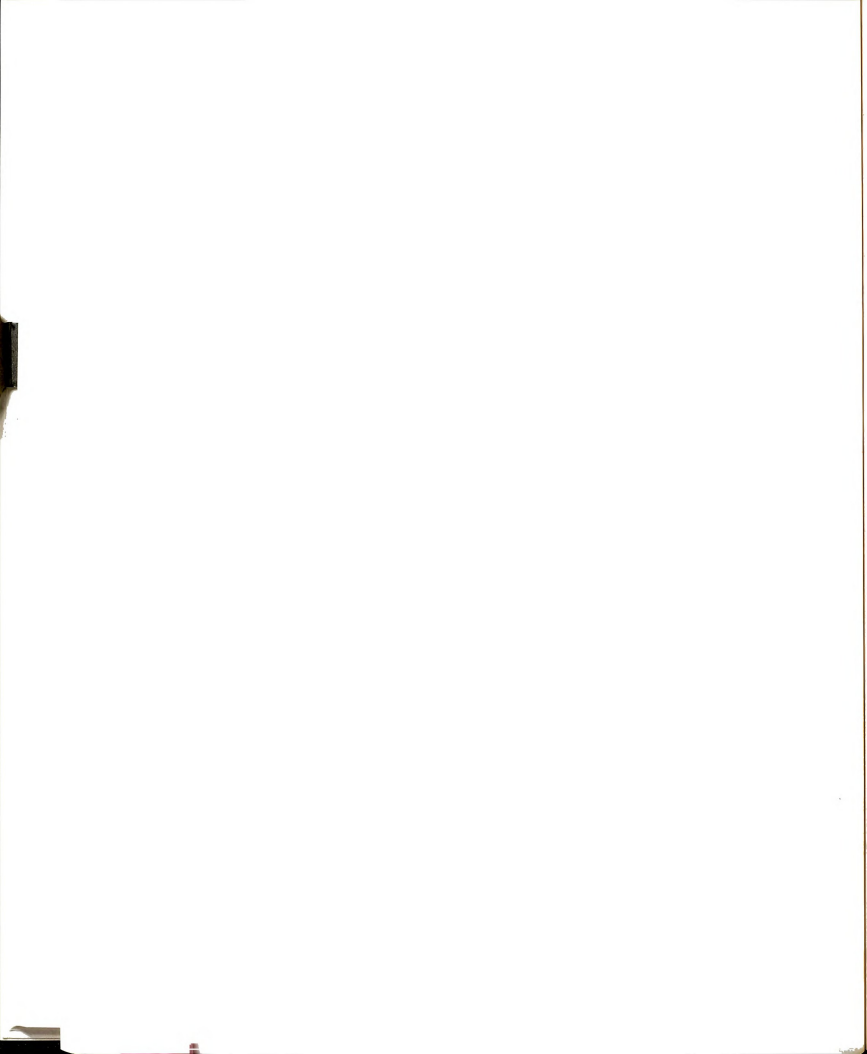
Signature: _____

Address: _____

Phone: _____

Thank you for your help!

Annette Hafner



Dr. Ann C. Slocum
204 Human Ecology
Michigan State University
East Lansing, MI. 48824

Date

Name

Address

City, State, Zip Code

Dear (Name):

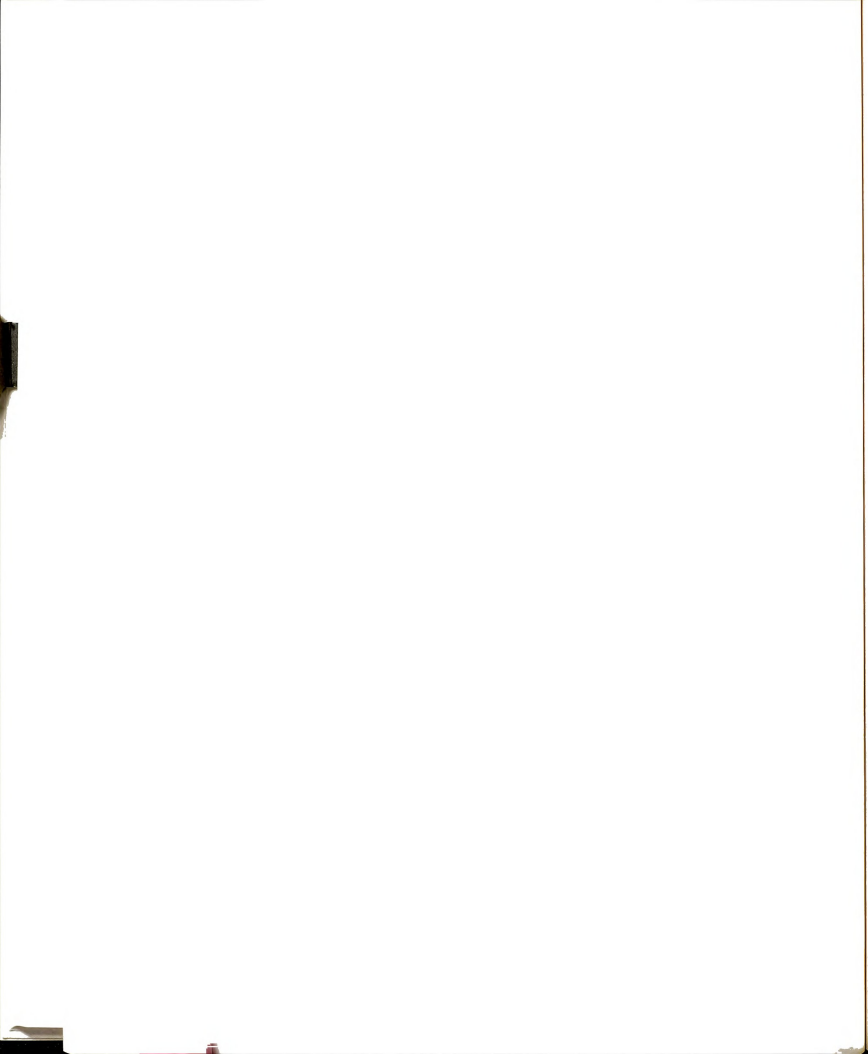
I am writing to you on behalf of Annette Hafner, Graduate Assistant, MSU Human Ecology. Annette is gathering information on the first Hmong pieces produced in the Lansing area to compare with the MSU Museum collection. We would appreciate your response on the enclosed postcard regarding any Hmong pieces you might own. Later we may wish to ask you a few questions about the pieces and photograph them.

Annette has previously worked at the MSU Museum, Folk Arts Division, where she was involved in research and interviews in preparation of the Museum's "Michigan Hmong Arts" exhibit in 1983. For the past year she has worked as Acting Curator of our Human Environment and Design Historic Collection. She has been very conscientious in assuring proper handling and storage techniques. For these reasons, I feel confident that if you were to allow Annette to view your collection she would handle the pieces with the utmost professional care as she has handled our own. Thank you very much.

Sincerely yours,

Ann C. Slocum
Associate Professor

enclosure



Annette Hafner
204 Human Ecology
Michigan State University
East Lansing, MI. 48824

Date

Name
Address
City, State, Zip Code

Dear (Name):

I would like to thank you for responding so quickly to the initial request for information on 1976-1979 Hmong paj ntaub, November 1985.

I am happy to report that the procedures for my study have been finalized and approved. I would like to use the piece(s) you indicated owning in my research. I wish to borrow your piece(s) on July 14 and return them on July 18, 1986. I will be contacting you by phone between July 11-14. Please let me assure you I will take very good care of your piece(s).

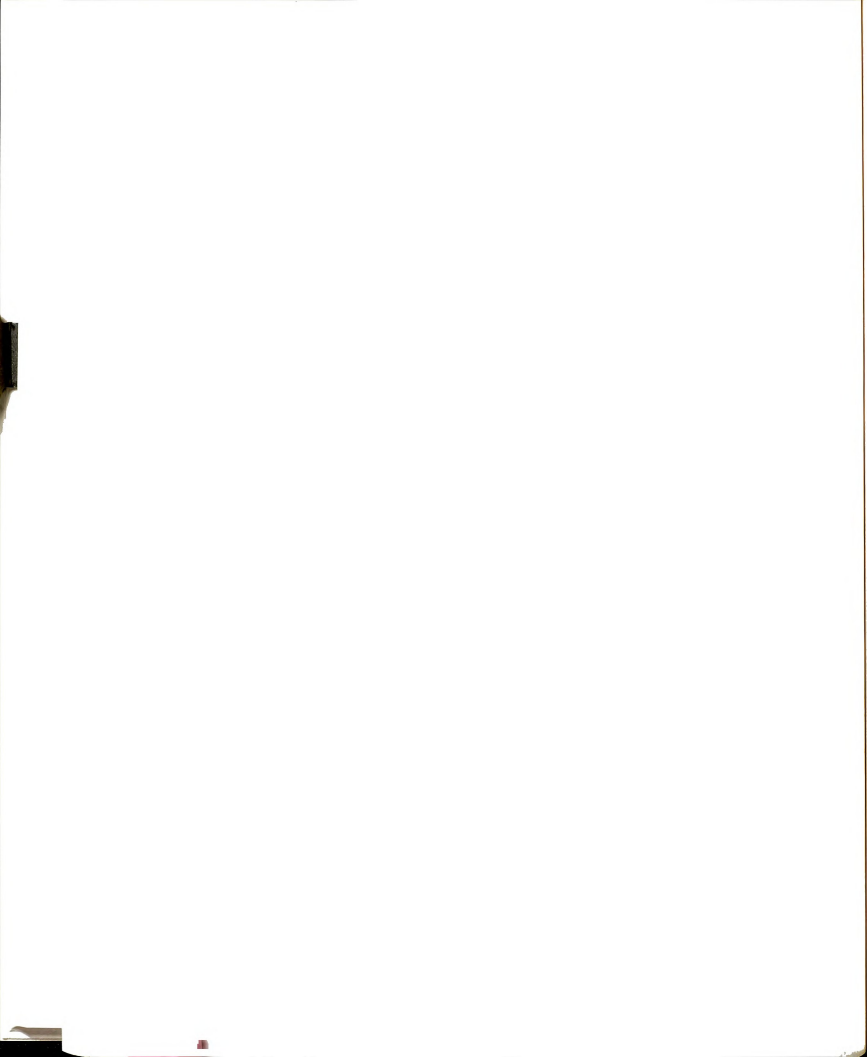
Each piece will be reviewed under controlled lighting for the specific Munsell colors used, each border and center measured for proportions and design motifs and ornamental stitches described. I will also be recording your piece(s) on film.

I would like permission to publish your name and photograph(s) of your pieces in my thesis and future research journals.

If you have any additional questions please feel free to address them to either myself or Dr. Ann Slocum, my major advisor, 355-7712, department office.

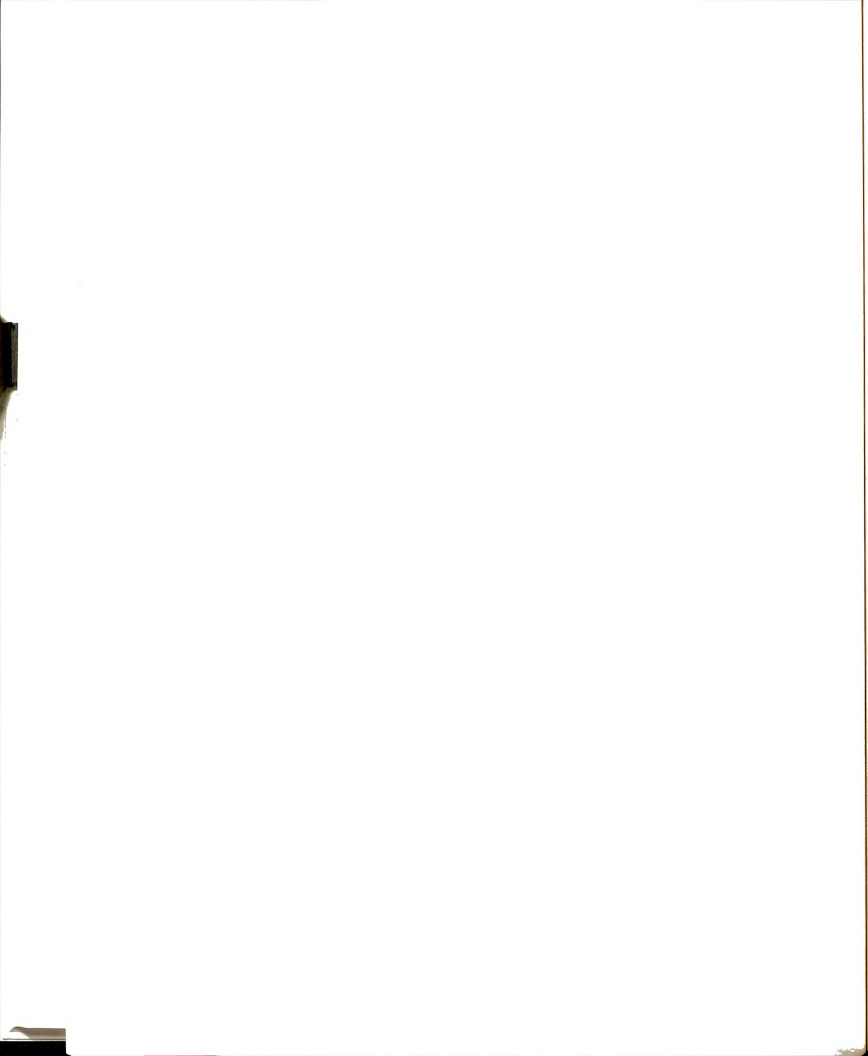
Thank you again for your help and assistance in my thesis project.

Annette Hafner
Graduate Student
Human Environment and Design
College of Human Ecology



APPENDIX B

QUESTIONNAIRES



SURVEY QUESTIONNAIRE
FIELDWORK DATA SHEET (FORM C)
MSU MUSEUM

Number _____

NAME OF COLLECTOR: _____
 PERMANENT ADDRESS: _____
 DATE: _____ AGE: _____ SEX: _____
 DATE, TIME AND PLACE OF THE INTERVIEW: _____

NAME OF INFORMANT: _____
 PERMANENT ADDRESS: _____
 DATE: _____ AGE: _____ PHONE: _____
 OTHER'S PRESENT AT INTERVIEW: _____ SEX: _____
 INFORMANT'S PLACE OF BIRTH: _____
 PLACES OF RESIDENCE AND LENGTH AT TIME IN EACH PLACE: _____

PARENTS NAMES: _____
 NATIONALITY/ETHNIC ORIGIN: _____
 LANGUAGE SPOKEN OTHER THAN ENGLISH: _____
 YEARS OF FORMAL EDUCATION: _____
 OCCUPATION (TYPES OF JOBS HELD): _____
 TRAVEL EXPERIENCE: _____
 COMMUNITY AND RELIGIOUS ACTIVITIES: _____
 SPECIAL INTERESTS (INCLUDING HOBBIES): _____
 MARITAL STATUS: _____
 SIBLINGS AND THEIR ADDRESSES: _____

RELATION OF INFORMANT TO COLLECTOR: _____
 GENRES COLLECTED FROM INFORMANT: _____
 OTHER RELEVANT DATA: _____

THE OBJECT-MAKING PROCESS

HOW OLD WAS HE/SHE WHEN HE/SHE BEGAN HIS/HER ARTISTIC WORK? _____

HOW DID HE/SHE LEARN TO MAKE THE OBJECT _____

DID HE/SHE HAVE ANY FORMAL TRAINING OR RELATED TRAINING? _____

WHEN DID HE/SHE BEGIN MAKING THE OBJECTS? _____

DOES HE/SHE KNOW OF OTHER INDIVIDUALS WHO DO SIMILAR WORK? _____

IF SO, WHAT ARE THEIR NAMES? _____

DOES HE/SHE EVER WORK WITH OTHER INDIVIDUALS OR HAVE THE ASSISTANCE OF OTHERS? _____

WHEN DID HE/SHE RECEIVE THE FIRST RECOGNITION OF HER/HER WORK? BY WHOM?
 DID IT INFLUENCE HIS/HER WORK? _____

ARE THERE ANY PARTICULAR ASPECTS OF HIS/HER WORK THAT HE/SHE LIKED MORE
 THAN OTHERS? FAVORITE SUBJECTS? _____



THE MAKER'S ATTITUDE TOWARD THEIR WORK
WHAT DOES HIS/HER WORK MEAN TO THE MAKER? _____

WHY DOES HE/SHE CREATE THE OBJECT? _____

DOES HE/SHE LIKE HIS/HER REGULAR JOB? _____

DID ANY LIFE EXPERIENCES (COMMUNITY, RELIGION OR TRAVEL) INFLUENCE
HIS/HER OBJECT MAKING? _____

DOES HE/SHE LIKE TO SHARE HIS/HER WORK WITH OTHERS? _____

WHAT WAS THE ATTITUDE OF FRIENDS AND RELATIVES TOWARDS HIS/HER OBJECT
MAKING? _____

DOES HE/SHE CONSIDER HIMSELF/HERSELF AN ARTIST? WHAT IS AN ARTIST? _____

ADDITIONAL DOCUMENTATION

IS THERE A PHOTOGRAPH OF THE INFORMANT THAT CAN BE BORROWED SO A COPY
CAN BE MADE? _____

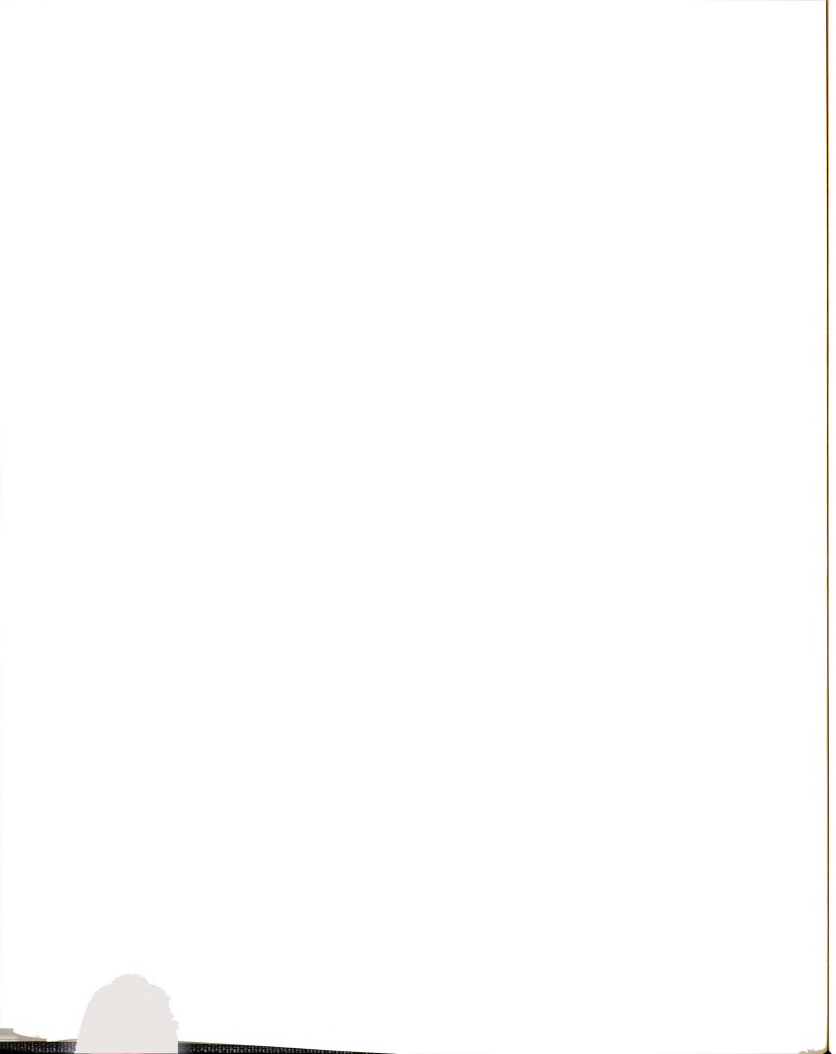
DOES THE MAKER KEEP A DIARY OR JOURNAL? _____

DOES THE MAKER SELL ANY OF HIS/HER WORK OR GIVE ANY TO OTHER PEOPLE?
IF SO, TO WHAT PEOPLE? _____

ARE THERE ANY INDIVIDUALS WHO WOULD BE ABLE TO PROVIDE INFORMATION ON
THE MAKER OR PROCESS OF OBJECT MAKING? IT SO, PLEASE LIST NAME,
ADDRESS AND PHONE NUMBER. _____

HAS THE MAKER'S WORK EVEN BEEN FEATURED IN A NEWSPAPER OR OTHER
PUBLICATION? IF SO, WHAT PAPERS OR PUBLICATIONS? _____

PLEASE USE THE REMAINING SPACE AND BACK OF THIS PAGE TO ELABORATE ON
ANY OF THE PREVIOUS RESPONSES. ANY ADDITIONAL INFORMATION THAT
PROVIDES SOME INSIGHT INTO THE MAKER'S PERSONALITY, DISPOSITION AND
GENERAL VALUES WOULD BE WELCOME.



FOLK ART DIVISION RESEARCH RELEASE

MSU MUSEUM

FORM 2

I hereby authorize _____ (representing the Folk Arts Division of the MSU Museum) to record on film, tape or otherwise, my name, likeness and performance and to use and to authorize others to use such recordings or film for educational television and radio broadcasting over stations throughout the work, for audio-visual purposes and for general educational purposes in perpetuity. You may also use my name, likeness and biography publicizing and promoting such broadcasts and other such uses. I also warrant and represent that all materials furnished and used by me is my own original material or material for which I have full authority to use for such purposes. I reserve the right to withdraw from this project at any time and I understand that I will have the opportunity to edit the interview before future use.

Signed: _____ Witnessed: _____

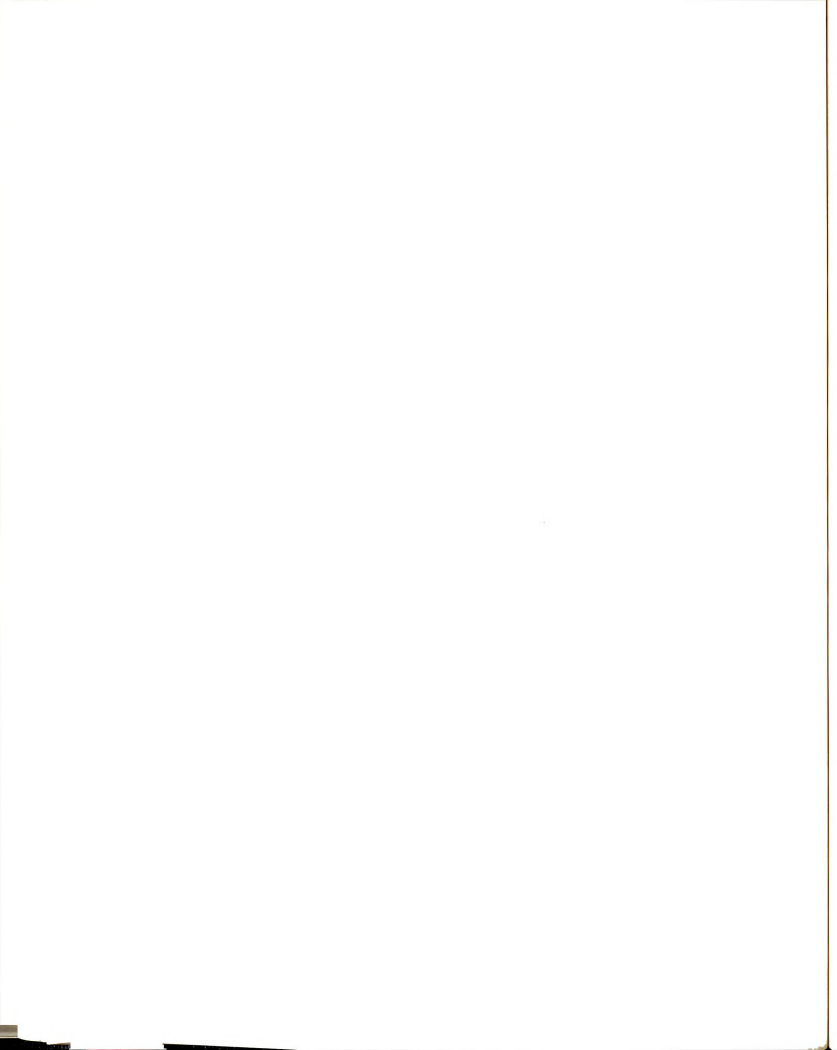
Signed: _____ Witnessed: _____

Signed: _____

Signed: _____

Signed: _____

Signed: _____ Date: _____



APPENDIX C

DESIGN MOTIFS

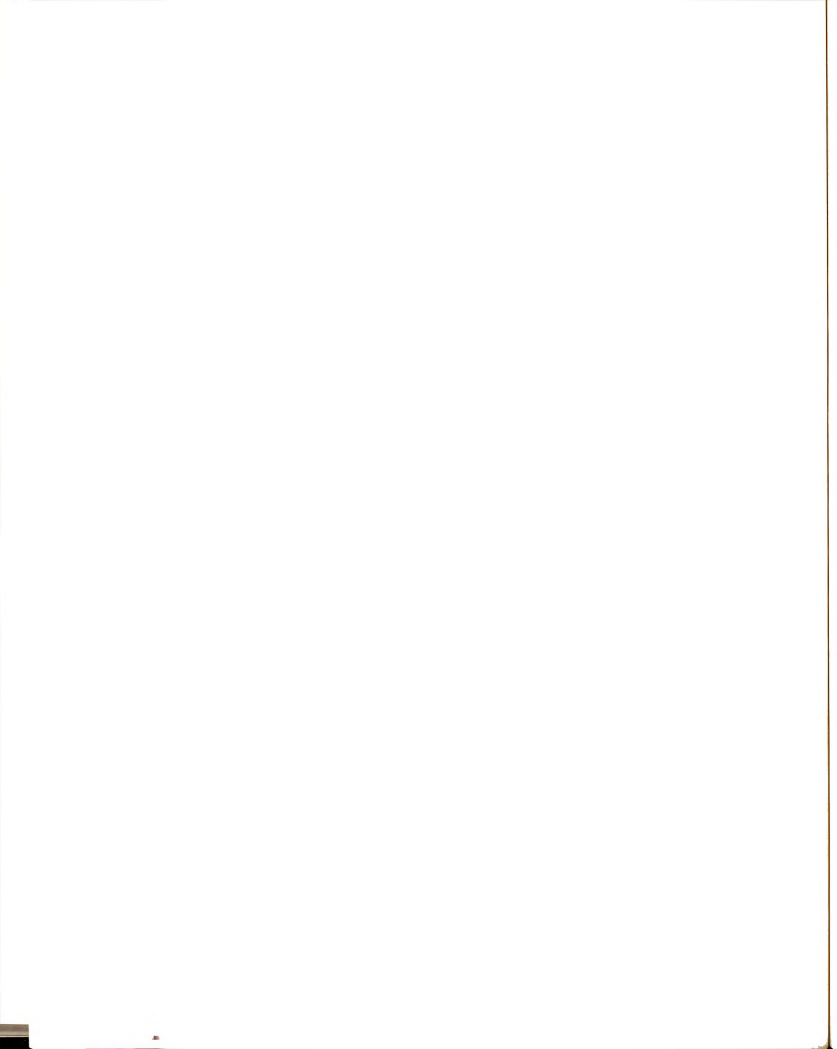


Figure 15. Design Motif, Data Collection Sheet.

[illegible]

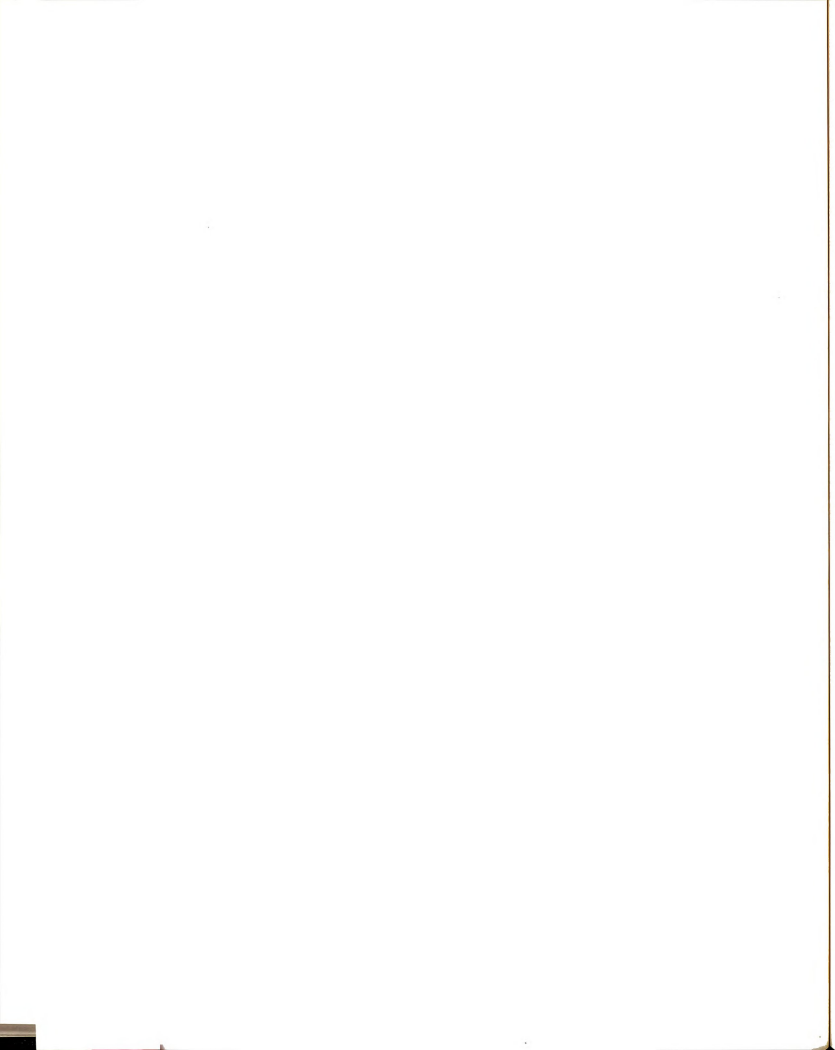
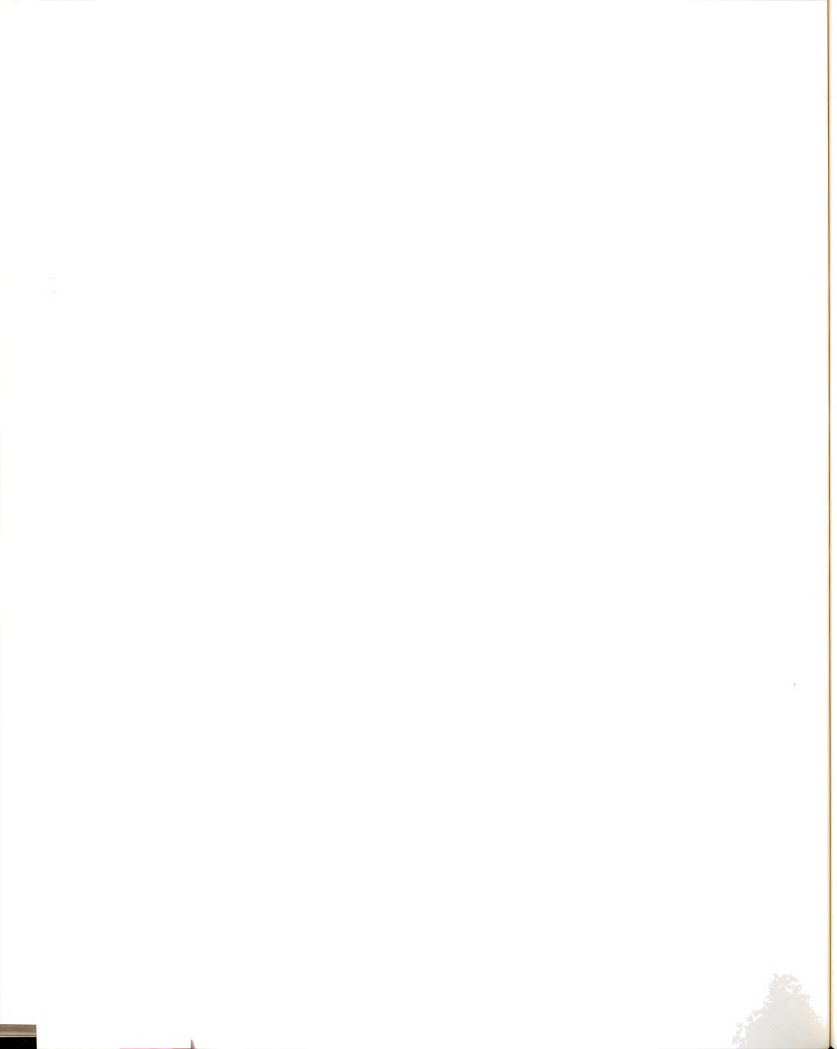


Table 7. Comparison of the Design Motif Frequency, c. 1978 and c. 1982.

Design Motif Number	c. 1978		c. 1982	
	Frequency	Percent	Frequency	Percent
2	0	0.00	3	4.17
3	1	2.78	3	4.17
4	0	0.00	3	4.17
8	1	2.78	1	1.39
10	1	2.78	1	1.39
12	1	2.78	1	1.39
13	0	0.00	4	5.56
14	1	2.78	1	1.39
17	4	11.11	2	2.78
18	2	5.56	9	12.50
19	0	0.00	1	1.39
20	2	5.56	3	4.17
21	0	0.00	1	1.39
22	0	0.00	1	1.39
23	1	2.78	1	1.39
24	1	2.78	1	1.39
25	2	5.56	3	4.17
26	1	2.78	0	0.00
30	0	0.00	1	1.39
31	0	0.00	2	2.78
32	0	0.00	2	2.78
34	2	5.56	1	1.39
35	0	0.00	6	8.33
36	6	16.67	4	5.56
37	0	0.00	1	1.39
38	0	0.00	4	5.56
39	0	0.00	1	1.39
40	0	0.00	4	5.56
41	0	0.00	2	2.78
42	0	0.00	1	1.39
43	3	8.33	1	1.39
44	0	0.00	2	2.78
45	1	2.78	1	1.39
46	6	16.67	0	0.00
TOTAL	36	100.04	72	100.06



APPENDIX D

COLOR

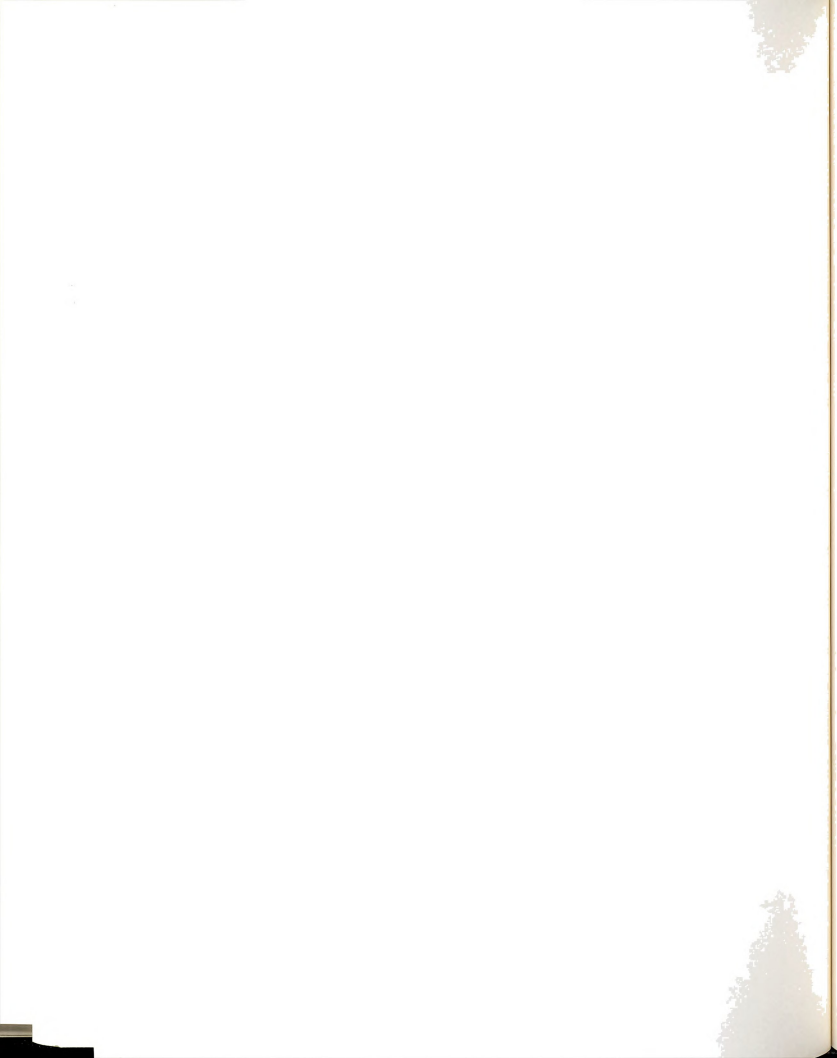


Figure 16. Color Measurement, Data Collection Sheet.

Number _____

Owner _____

Date _____

Border Number	Viewer 1			Viewer 2		
	Hue	Value	Chroma	Hue	Value	Chroma
Border 1						
Border 2						
Border 3						
Border 4						
Border 5						
Border 6						
Border 7						
Border 8						
Border 9						
Border 10						
Border 11						
Border 12						

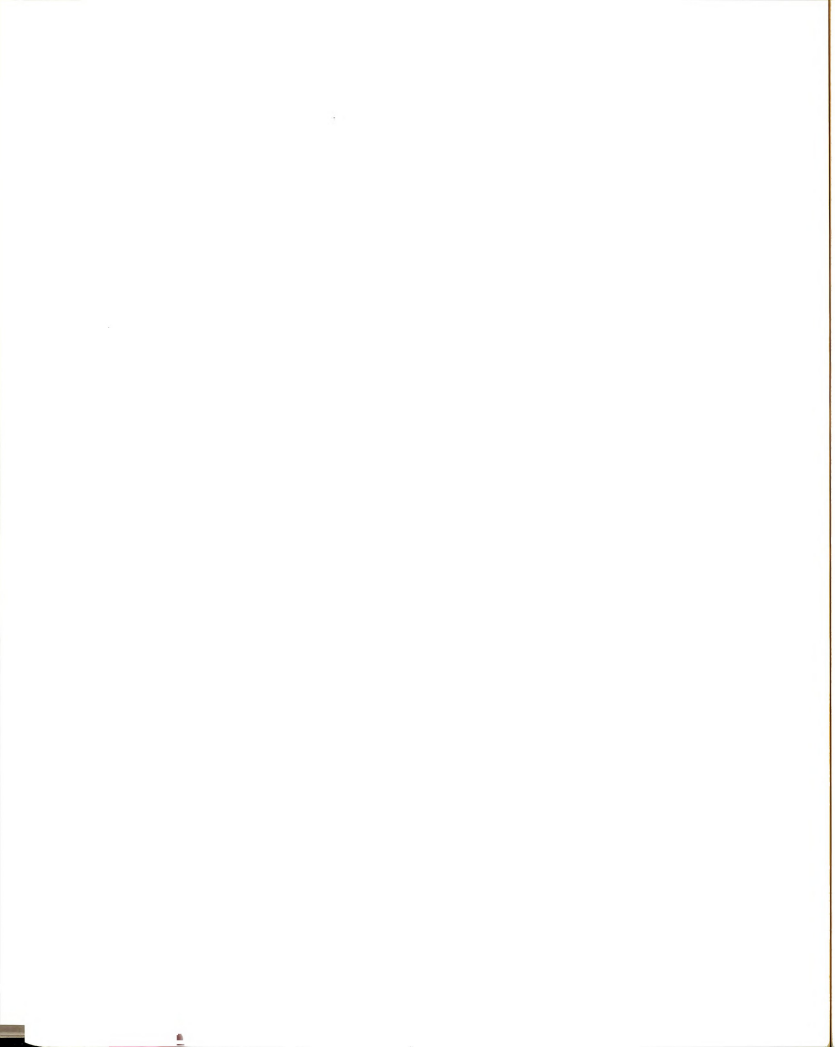


Table 8. Comparison of Hue Choice, c. 1978 and c. 1982.

Munsell		c. 1978		c. 1982	
Hue		Frequency	Percent	Frequency	Percent
R	2.5	0	0.00	2	2.30
R	5.0	5	10.21	1	1.15
R	7.5	10	20.41	13	14.94
R	10.0	2	4.08	1	1.15
YR	2.5	5	10.21	2	2.30
YR	5.0	1	2.04	0	0.00
YR	7.5	0	0.00	2	2.30
Y	2.5	3	6.12	3	3.45
Y	5.0	6	12.25	10	11.49
Y	10.0	0	0.00	1	1.15
GY	2.5	0	0.00	1	1.15
GY	7.5	1	2.04	1	1.15
GY	10.0	2	4.08	3	3.45
G	2.5	2	4.08	17	19.54
G	5.0	3	6.12	2	2.30
G	7.5	0	0.00	2	2.30
G	10.0	4	8.16	1	1.15
BG	2.5	0	0.00	1	1.15
B	10.0	0	0.00	3	3.45
PB	2.5	0	0.00	1	1.15
PB	5.0	2	4.08	3	3.45
PB	7.5	2	4.08	8	9.20
P	2.5	0	0.00	4	4.60
RP	2.5	0	0.00	2	2.30
RP	5.0	0	0.00	1	1.15
RP	10.0	1	2.04	0	0.00
TOTAL		49	100	87	100.02

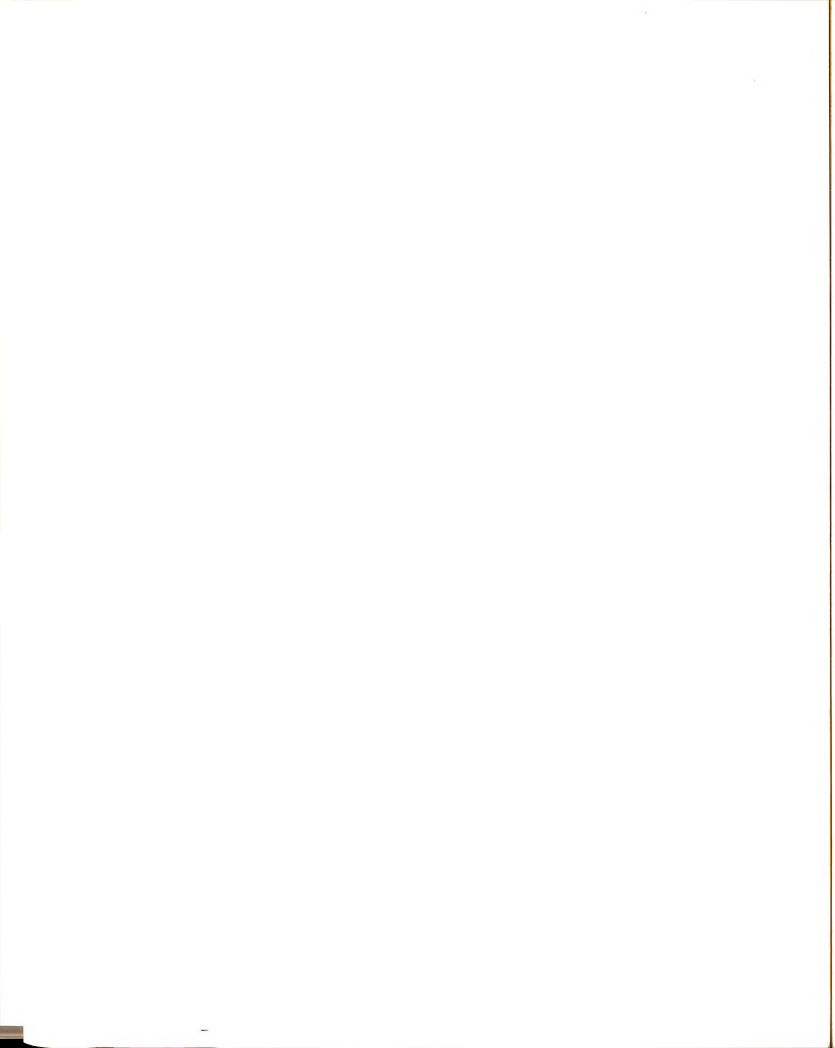


Table 9. Value score for each different value occurring in paj ntaub borders, c. 1978 and c. 1982.

Value	c. 1978		c. 1982	
	Frequency	Percent	Frequency	Percent
0.0	0	0.00	0	0.00
1.0	1	2.04	0	0.00
1.5	0	0.00	0	0.00
2.0	6	12.24	4	4.60
2.5	0	0.00	7	8.05
3.0	11	22.45	9	10.34
3.5	0	0.00	2	2.30
4.0	15	30.61	16	18.39
4.5	0	0.00	14	16.09
5.0	1	2.04	3	3.45
5.5	0	0.00	3	3.45
6.0	4	8.16	2	2.30
6.5	0	0.00	1	1.15
7.0	3	6.12	2	2.30
7.5	0	0.00	2	2.30
8.0	7	14.29	14	16.09
8.5	0	0.00	2	2.30
9.0	1	2.04	4	4.60
9.5	0	0.00	2	2.30
10.0	0	0.00	0	0.00
TOTAL	49	99.99	87	100.01

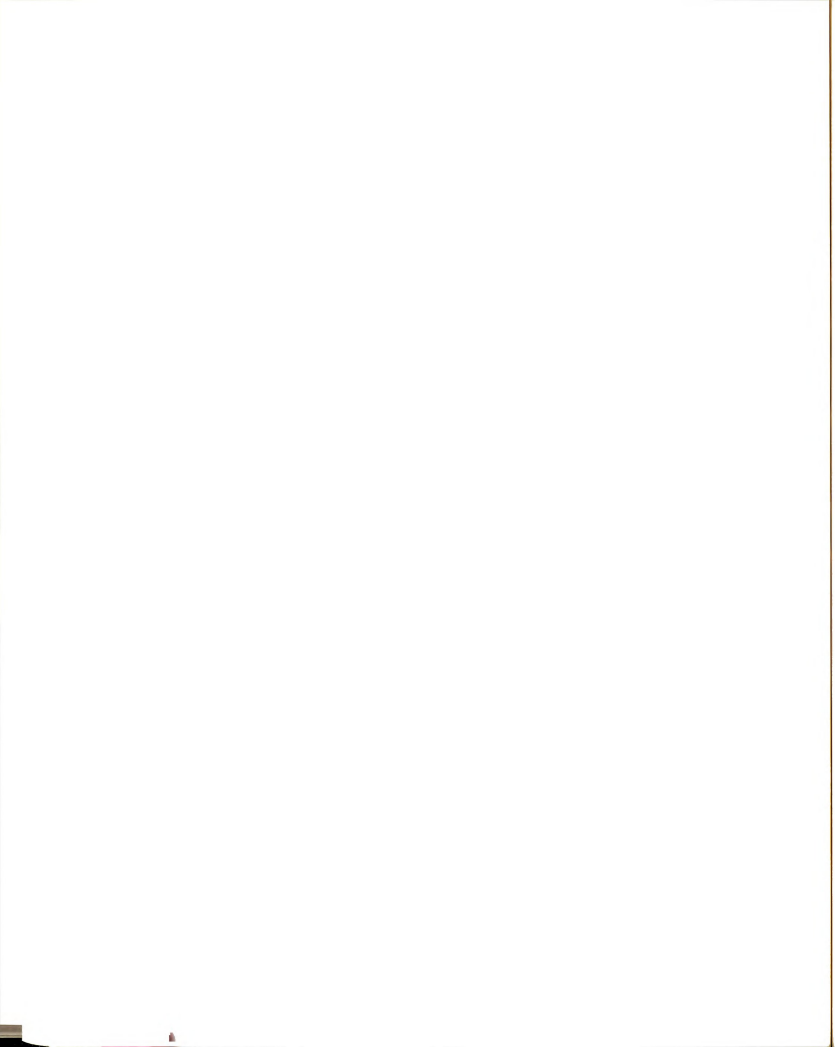
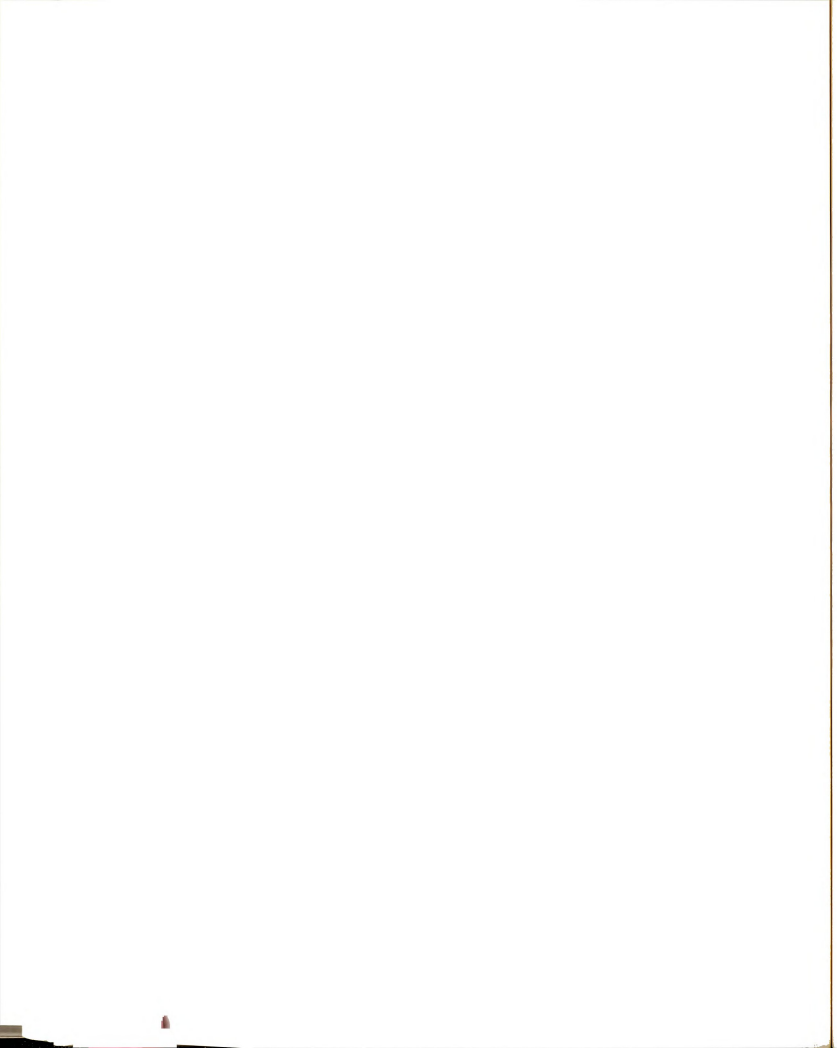


Table 10. Chroma Measurement for each different chroma occurring in paj ntaub borders, c. 1978 and c. 1982.

Chroma	c. 1978		c. 1982	
	Frequency	Percent	Frequency	Percent
1	2	4.08	0	0.00
2	2	4.08	4	4.60
3	3	6.12	1	1.15
4	0	0.00	5	5.75
5	1	2.04	0	0.00
6	4	8.16	2	2.30
7	0	0.00	4	4.60
8	9	18.37	18	20.69
9	4	8.16	8	9.20
10	9	18.37	11	12.64
11	2	4.08	3	3.45
12	11	22.45	14	16.09
13	1	2.04	4	4.60
14	1	2.04	11	12.64
15	0	0.00	0	0.00
16	0	0.00	2	2.30
TOTAL	49	99.99	87	100.01



APPENDIX E

SIZE

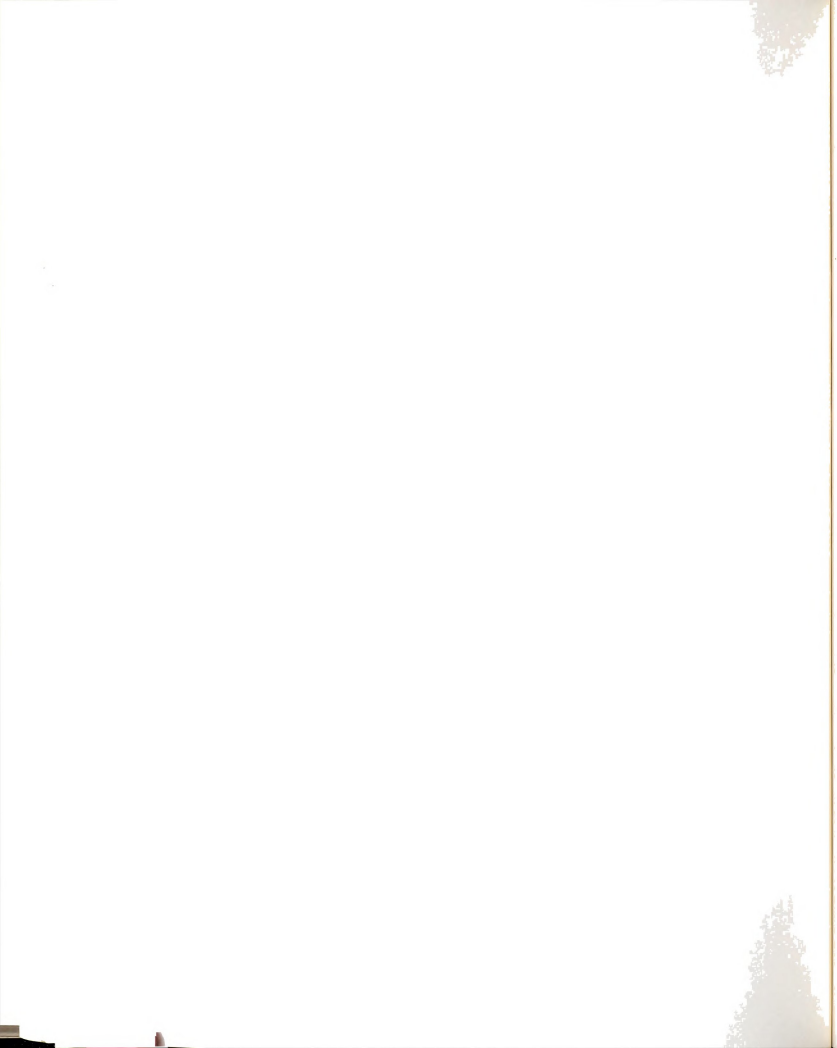
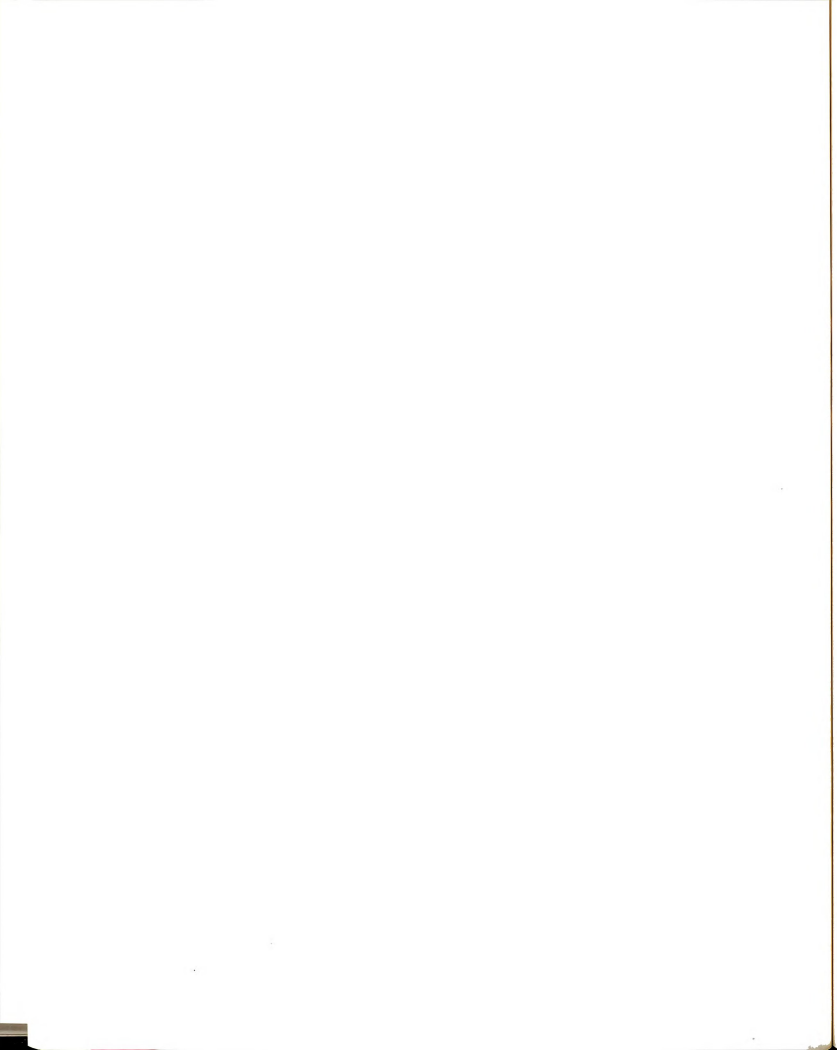


Figure 17. Size Measurement, Data Collection Sheet.

Border	Width	Average	Length	Average	Area
Border 1 Top					
Border 1 Right					
Border 1 Bottom					
Border 1 Left					
Border 2 Top					
Border 2 Right					
Border 2 Bottom					
Border 2 Left					
Border 3 Top					
Border 3 Right					
Border 3 Bottom					
Border 3 Left					
Border 4 Top					
Border 4 Right					
Border 4 Bottom					
Border 4 Left					
Border 5 Top					
Border 5 Right					
Border 5 Bottom					
Border 5 Left					
Border 6 Top					
Border 6 Right					
Border 6 Bottom					
Border 6 Left					
Border 7 Top					
Border 7 Right					
Border 7 Bottom					
Border 7 Left					
Border 8 Top					
Border 8 Right					
Border 8 Bottom					
Border 8 Left					
Border 9 Top					
Border 9 Right					
Border 9 Bottom					
Border 9 Left					
Border 10 Top					
Border 10 Right					
Border 10 Bottom					
Border 10 Left					
Border 11 Top					
Border 11 Right					
Border 11 Bottom					
Border 11 Left					
Border 12 Top					
Border 12 Right					
Border 12 Bottom					
Border 12 Left					
Center					
Overall					



APPENDIX F

ORNAMENTAL CONSTRUCTION TECHNIQUES

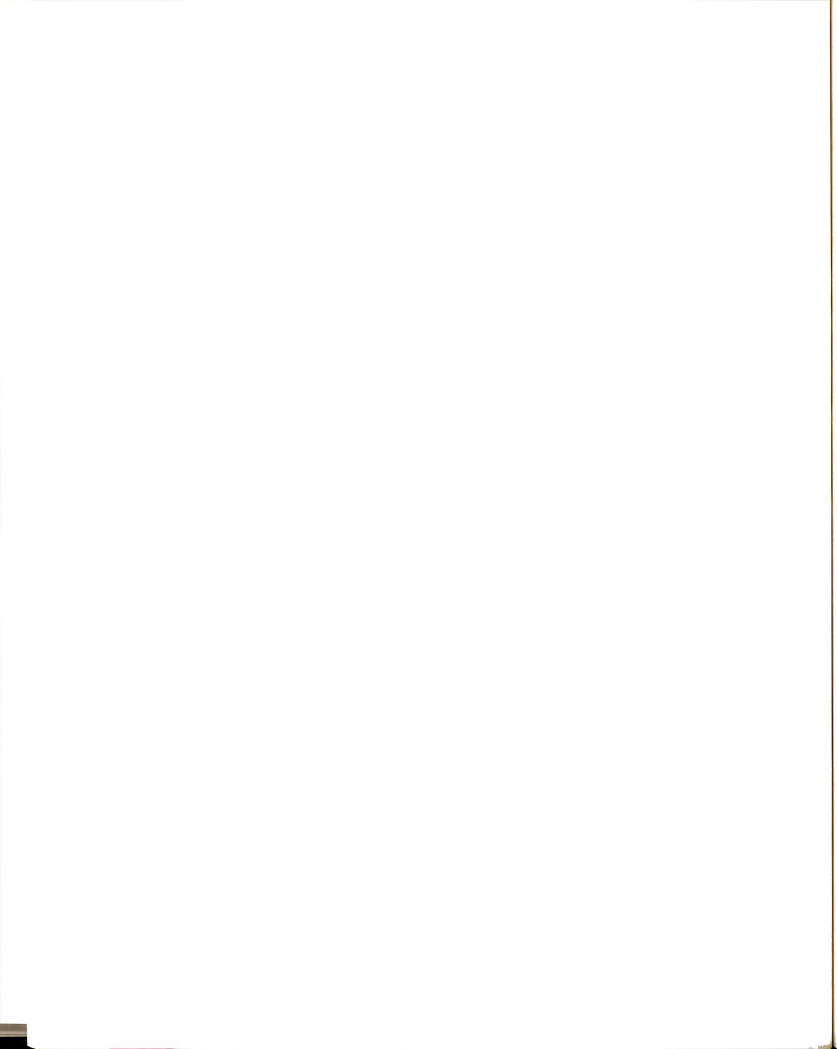
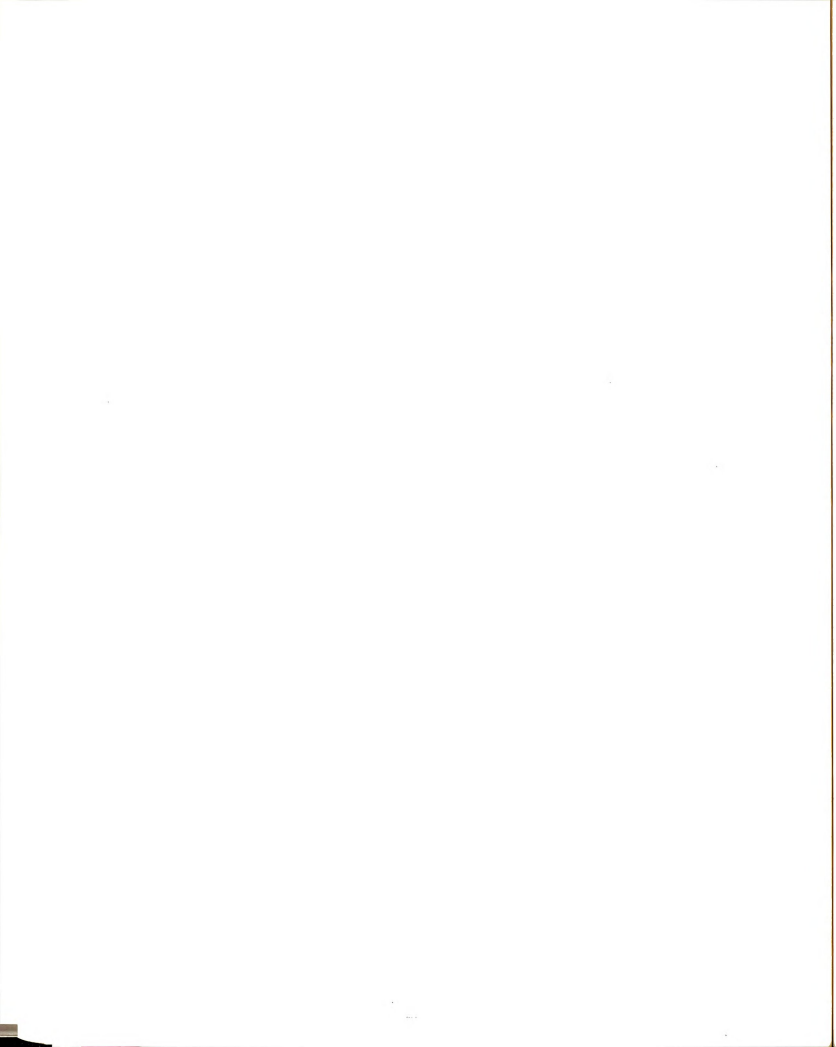
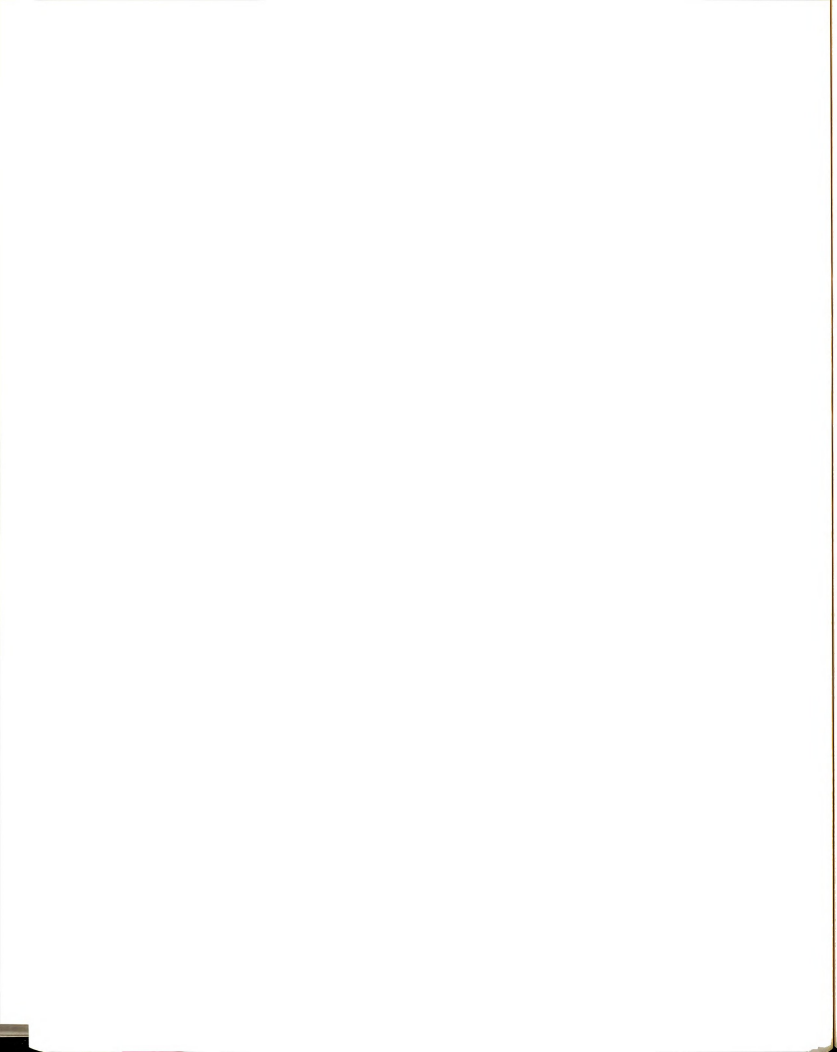


Figure 18. Ornamental Construction Technique, Data Collection Sheet.

[illegible]

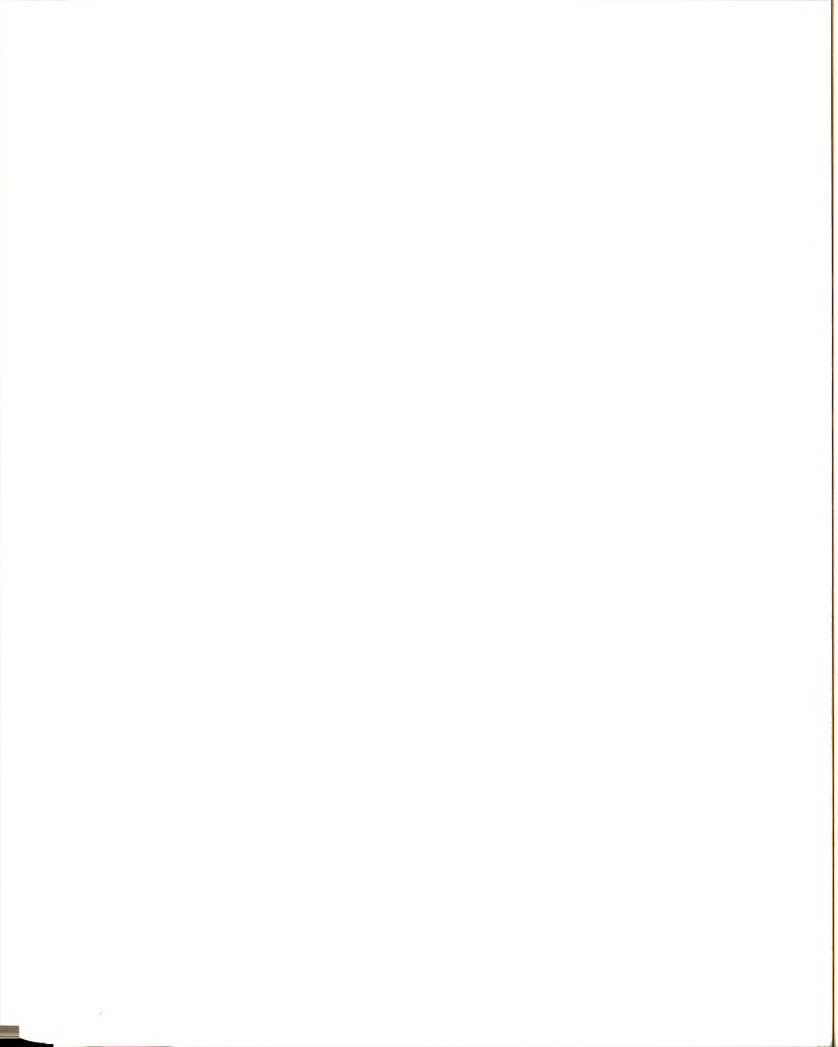


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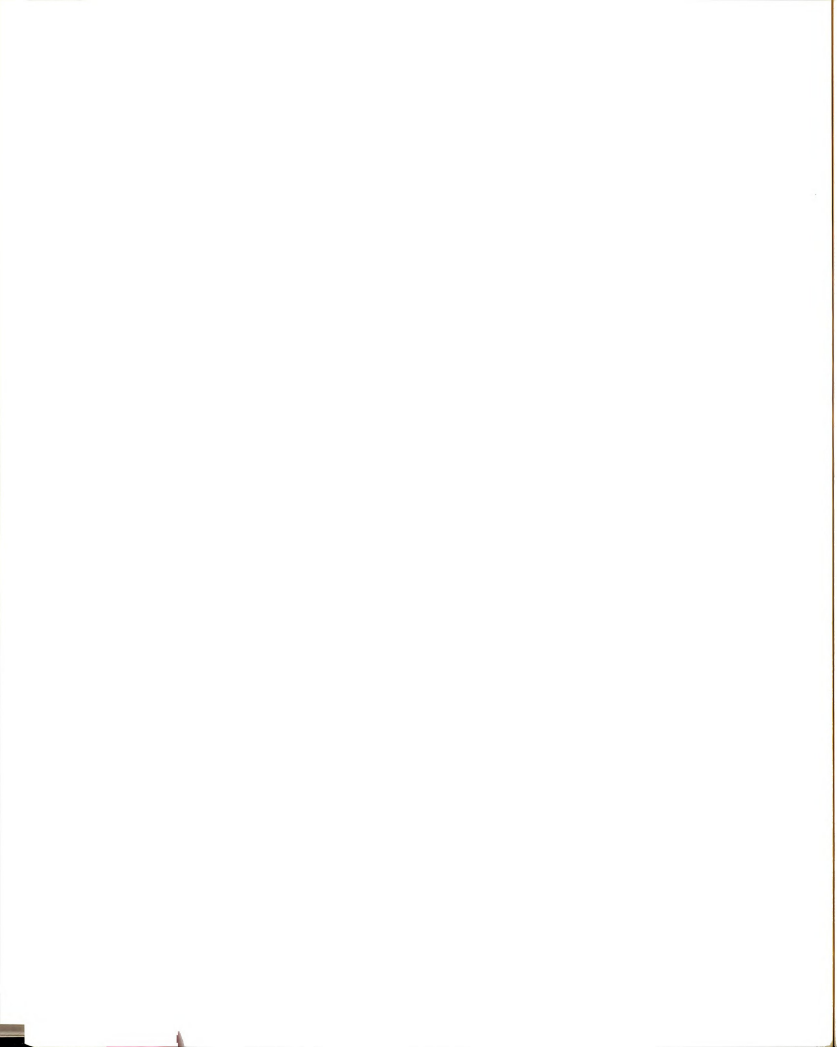


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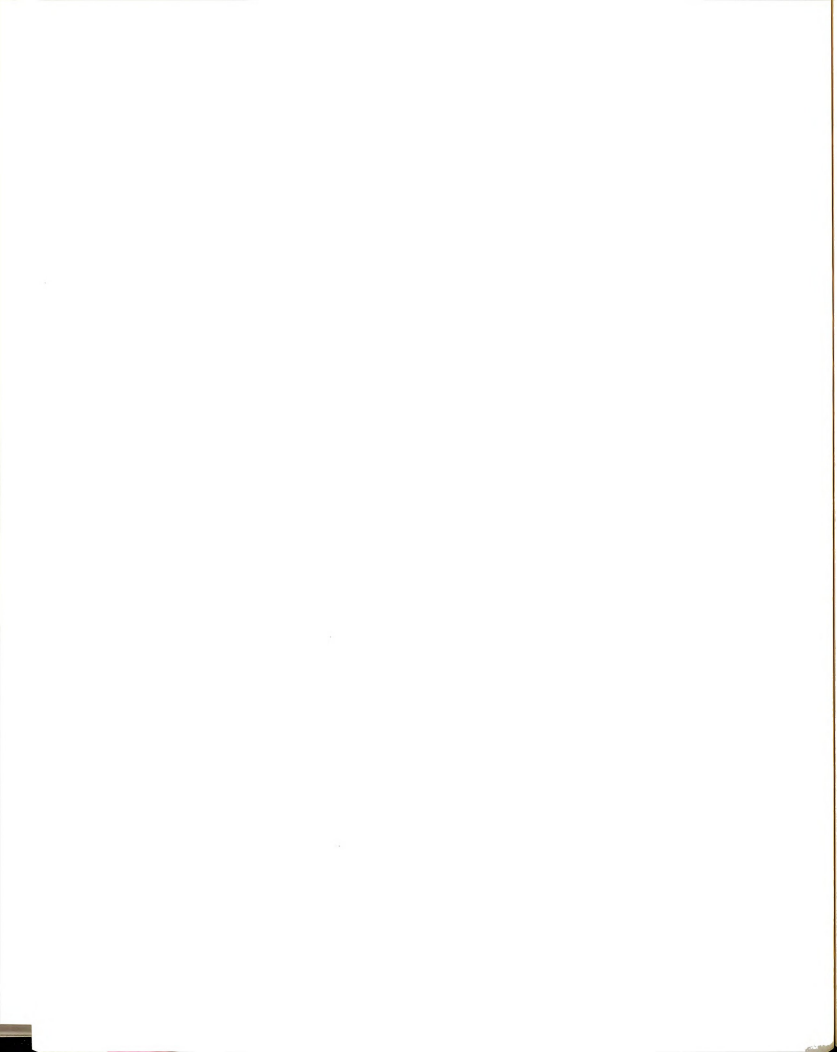
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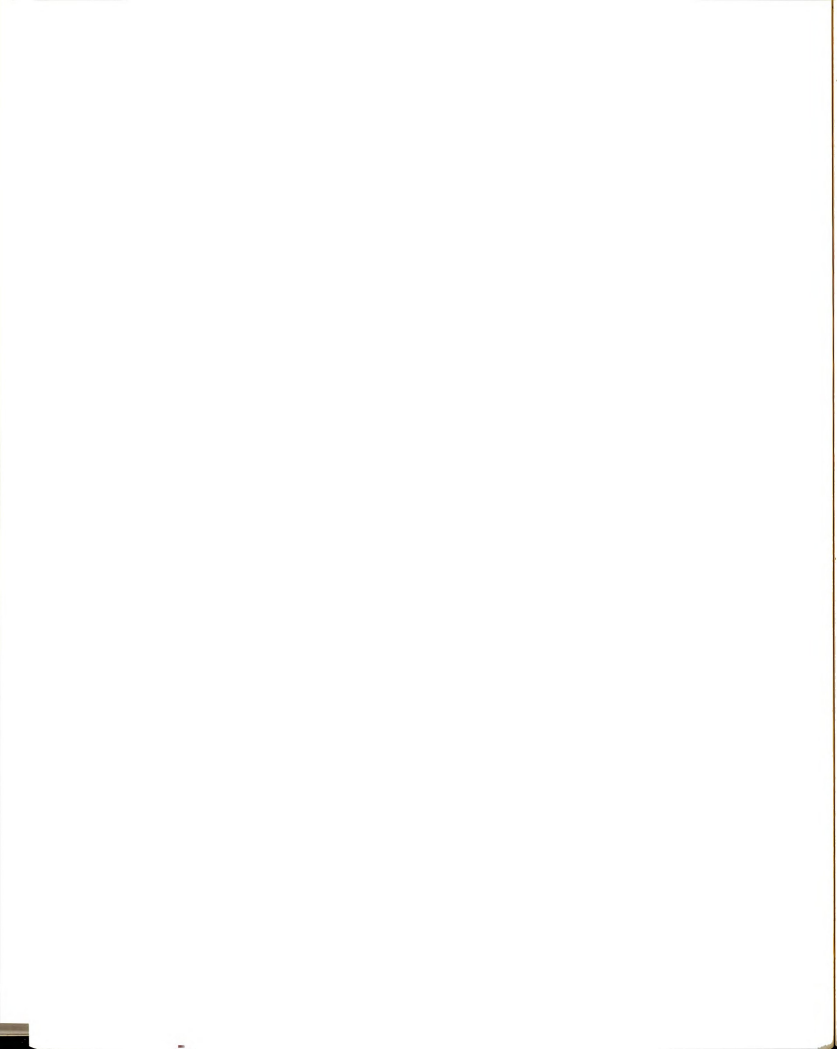
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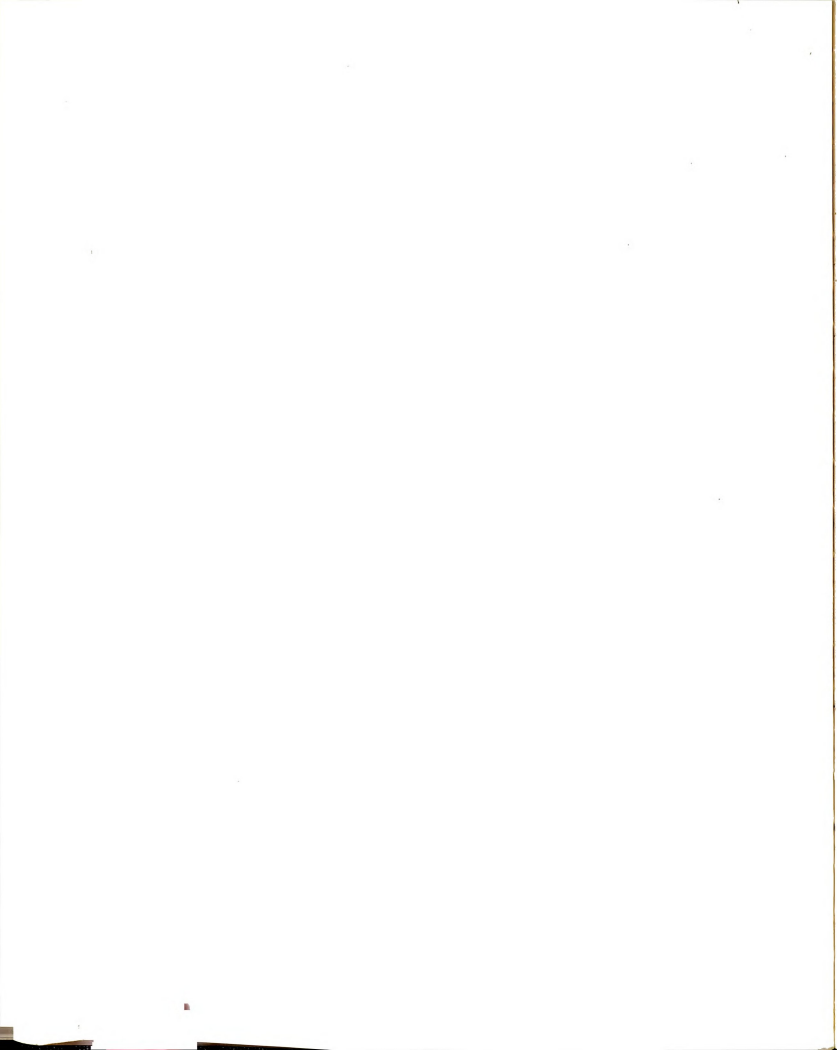


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