Animal and other fibers

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"The fact that leather was the skin of a living animal whose life was sacrificed should make us treat it with a certain respect and fire us with the desire to make of it a permanent memorial by putting all our energy into the work and our mind to back up that energy." Ceceil Francis- Lewis 1928

I propose to explore the creative possibilities of the medium of animal fibers (suede, leather, fur) in the construction of a series of panels using this medium in conjunction with other fibers and the techniques of stitching, quilting and trapunto. The emphasis will be on the expressive nature of animal fibers within the constructs of these techniques and treatments.
THE ROCHESTER INSTITUTE OF TECHNOLOGY
SCHOOL OF AMERICAN CRAFTSMEN

ANIMAL AND OTHER FIBERS

A THESIS SUBMITTED TO
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DEPARTMENT OF WEAVING AND TEXTILE DESIGN

BY
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PREFACE

"The fact that leather was the skin of a living animal whose life was sacrificed should make us treat it with a certain respect and fire us with a desire to make of it a permanent memorial by putting all our energy into the work and our mind to back up that energy."1

Ceceil Francis-Lewis
Leather Craftswoman 1928

It was the purpose of this thesis to explore the creative possibilities of suede through the construction of a series of panels using this medium in conjunction with other fibers and the techniques of stitching and stuffing. The emphasis was on the expressive nature of this animal fiber within the constructs of these two techniques.

It was found during the creation of this body of work that the subject chosen is one of infinite scope. The work completed is viewed as only a beginning to the numberless possibilities that this fiber affords.

I wish to thank Donald Bujnowski and Max Lenderman, my advisors in this project, for their help, guidance, encouragement and criticism of my work. I also thank Renato Bartoli for his patience and critical input. The New England Tanners Club was also of infinite assistance.

Finally, I wish to thank all of the craftsmakers and tanners who have brought leather technology to the point where it is today and all of the animals who have given us this very precious and unique material with which our lives are enriched.
PART I. INTRODUCTION

"Design is an expression of its material."²

Leather, or the natural tissue fiber of animals which has been transformed by tanning into a stable, non-putrescible, flexible sheet material, is a medium that has been little explored by contemporary craftmakers. A luxurious fiber which has had useful and decorative functions since ancient times, leather in its various forms has many of the properties of traditionally used garment fibers as well as some additional qualities that those fibers lack. It possesses all of the expressive potential that a creative mind can draw from it. Its many qualities, properties and forms can endlessly stimulate the imagination, and its limits are only those imposed by a sterile mind.

It is the intention of this work to explore some of the properties of suede, one of the forms of leather, and allow the medium to find an expressive form compatible to itself. Although the hand and mind of the craftmaker is always in evidence, it was not the intention of this craftswoman to impose her identity on the medium. It was rather her intention to point out qualities inherent within it, and allow, through her guidance and manipulation, the material to speak for itself and find its own artistic expression.
PART II. THE HISTORY AND PROPERTIES OF ANIMAL FIBERS

I. LEATHER PRODUCTION AND PRODUCTS THROUGH THE AGES

"The earliest inhabitants of this planet discovered that animal skins were more practical to wear than to eat." 3

A BRIEF HISTORY OF TANNING AND LEATHER OBJECTS

The process of making leather and tanning skins predates recorded history for leather is one of the earliest materials used by mankind. Pictographs of hunters wearing skins date back to 20,000 B.C. Although there are various theories about its origin, not much is known about the methods used by primitive man. The hides and skins of animals were materials used for survival, and the tanning techniques were not well developed. Some believe that flint scrapers were used to remove flesh from the skin, and fruit roots and bark were combined with water to be used as soaking agents causing the chemical change in the fibers that constitutes tanning. Fats and oils were rubbed into the skins to soften them, and the crudely tanned skins were used for clothing, footwear, spear-bindings, and other body coverings. Bags and shields were also made of tanned leather as were tents and boats among the Indians and Eskimos. Decorations of the objects depended upon the degree of sophistication of the people who created them and the importance of the object within tribal life. Objects that played a role within tribal organization, communication, and primitive religious expression such as drums, masks and shields were often highly decorated with meaningful symbolic motifs.
II.b. Egyptian Leather Head Supports, 7th Century B.C.

II.c. Masai Shield from Tanzania
II.c. Roman Leather Bikini, 1st Century A.D.

The preservation of leather was developed independently by various cultures, and as time went on tanning grew into a highly developed art. The Hebrews were the first to develop oak bark tanning in which the derivatives of the oak tree when absorbed into the fibers of a pelt preserved the pelt indefinitely.

By 2,500 B.C. the ancient Egyptians recorded in stone tanners at work. At this time there was an expanded demand for leather by the upper classes. It was considered a precious material on a par with gold and was used for very special objects such as sandals for the pharaoh which were adorned with jewels and dyed with kermes.

Later leather again began to play a more functional role and was used for garments, belts, bags, tents and utensils. In Assyria leather vessels were widely used, and by 500 B.C. the Greeks had developed leather making into a well established trade. By this time it was found that the leaves and bark of particular trees, if soaked in water, would produce tanning solutions. Tanners of the time were able to feel, smell, and taste various substances to determine their strength and suitability for tanning.

During the Roman Empire leather became widely used for military purposes, and the caps, breast and back plates of soldiers were designed of a tough moulded leather reinforced with bars and plates of metal. For a period of time, even the Roman currency was based on leather.
At the time of the Arab invasions in the 7th Century A.D., the Moors who had further developed the art of tanning and leatherwork in the Middle East and North Africa, set up leather shops in Spain where cordovan (from Cordova) leather from goat and kid skins and moroccan leather reached world wide acclaim and a very high degree of skill and sophistication. The Arabs brought to Spain the art of tooling which was later imported by the Spaniards to Mexico and is now considered a traditional national craft in that country.

In the 12th Century tanners guilds were organized in England and on the continent to supervise the process. By setting up strict standards, the art of leathemaking was greatly advanced. In the guilds the tanning was done and apprentices were trained. Leather became a basic material throughout Europe. The Church and Court was the major market for leatherwork and parchment became the basis for books.

During the 16th Century with the rise of the affluent merchant class, leather became widely used in the homes of the rich. Furniture was covered with leather, and wall hangings, tapestries, table coverings, and chests were made or covered with highly decorated motifs or richly embossed designs in silver and gold leafed leather. There was a great taste for the ornamental and ostentatious and the luxury and prestige associated with leather made it a very desirable material to own.
In America the Indians had long been using animal fibers for clothing, shelter and ceremonial purposes, and the early settlers quickly adapted their methods for producing buckskins and clothing. The Indian women cleaned the hides with bone scrapers and saturated the skins with grease from the animal's brain and liver for pliability before tanning with roots and bark.

In 1620 Experience Miller established the first charter to practice tanning in the New World in Lynn, Massachusetts. There was a quick growth in the industry, and because of the abundance of forests and animals and the great cost of imported woven goods in America, leather again became a very commonly used item. It became the staple of the shoemaker. Furniture, garments, doorhinges, utensils, harnesses, saddles, buckets, carrying cases and other daily used items were produced from leather.

Early in the 19th Century Sir Humphrey Davey found that tanning agents could be obtained from trees other than oak. They were hemlock, chestnut, mimosa as well as others which were plentiful in America. This led to the discovery of chromium sulfate as a tanning agent and represented the first change in the chemistry of leather tanning in 2000 years. Chrome greatly shortened the process of tanning leather and produced an overall uniformity and greater versatility in its performance characteristics. There followed a manufacturing boom in shoes and other leather products.
Modern tanning methods were further developed as a result of the invention of two simple instruments, the thermometer and the hydrometer, and the process of tanning slowly passed from an art to a science. The thermometer allowed the temperature of solutions to be accurately measured, and the hydrometer helped determine the density or strength of solutions. In recent years the electronic pH meter which determines the acidity or alkalinity of a solution has become another valuable tool to gauge chemical reactions.

Tanning today has developed into a high technology, but the utilitarian nature of leather is changing and it is once again becoming a luxury material. The leather supply is no longer large enough to meet the needs of a growing world population, and with the growth of the plastics industry synthetic materials, which are less costly to produce, are replacing items which were formerly made from leather. The cost of leather goods has become prohibitive to many groups of people and leather products are once again becoming a symbol of status and luxury.
CONTEMPORARY EXPRESSIONS IN LEATHER

"The craftsman is the source of those fine things by which the senses are educated and life enriched. The craftsman is the guardian of the highest standard of quality .... his work asserts the absolute priority of the personal in a world of mechanism .... he is more than ever necessary to the health of society." 4

The Crafts in the 60's
Crafts Council of Great Britain

In recent years there has been a surge in the hand production of functional objects by leather craftspeople. Hand tooled belts, bags, hats and sandals are popular items at craft fairs and shops throughout the country. Most of the work is functional, and generally unimaginative. Hand stamping and lacing are the most popular means of execution, closely followed by shading, dyeing and painting in of the stamped and tooled motifs. Many "how to" books have emerged on the booming craft book market, and these are as uninspired as the products they advocate and sell. The leather is not treated as the unique fiber that it is. In clothing it is treated as a woven fiber, and the decorative motifs say nothing about the medium but impose themselves onto its surface unrelated to the fiber or the object they decorate. These imposed designs are usually symmetrical, repetitive, often "cute", and they lack dynamism, thought and interest.

A few craftspeople are breaking through the barrier of stereotype and producing thoughtful, sensitive and imaginative leather objects. In these objects leather is often combined with other media and very interesting forms are achieved.
III.b. Hanging Pot by Keith Klafe.

III.a. Hanging Pot by John Snidercor.

III.c. Match Holder by Joy Lobell.
JOY LOBELL

The work of Joy Lobell has a primitive, totemic quality. She covers boxes and other containers with suede, fur, feathers, and beads. The boxes are often lined with leather. They have a sophisticated American Indian or African air about them and are visually and tactilly stimulating. In her work the leather helps to create the primitive feeling with which she seems to be concerned.

JOHN SNIDECOR - KEITH KLAFS - ROBERT HENION
LARRY JONES - JOHN CEDERQUIST

John Snidecor, Keith Klafs, Robert Henion, Larry Jones, and John Cederquist share a commonality in the unique expressions they have found in using stitched molded leather combined with other materials such as carved wood, ivory, jute, brass and studs. In their functional containers they have evolved unique forms and processes which serve a useful purpose and are also an expression of the material of which they are made. The molding, the rough stitching, the contrasting juxtaposition of wood or metal pieces give the leather a new point of reference and call attention to its leatherness.
IV.a. Collage by Ruben Steinberg.
IV.b. Construction by Megan Lloyd Hill.

IV.c. Fawn Song by Mike Selig.
RUBEN STEINBERG

A few individuals have successfully used leather as a form of pure expression. Among them is Ruben Steinberg who creates collages of leather scraps and other found objects. Due to the scrap nature of his work his forms are narrow and elongated, small and irregular. He counterbalances groups of large forms with groups of small ones, and contrasts light areas with dark ones. He has developed a technique of using these surfaces as a canvas for acrylic wash, and thus he greatly exploits the surface of the tactile quality of the leather and other media with which he combines it. His work has a vital quality derived from the many elements which are incorporated with the natural surface of the suedes and leathers that are used.

MEGAN LLOYD HILL - MIKE SELIG

Two artists who also use leather in a collage treatment and derive from it a common form of expression are Megan Lloyd Hill and Mike Selig. They use earth tone suedes, animal skulls, feathers, beads and other referential material in evoking a feeling of the Old Indian Southwest. The use of leather does not seem to be the primary consideration of their work. The material is used to supplement, enhance and help create the general idea that they share.
V.a. TYVL by Nancy Grossman.
V.b. Collage by Carolyn Montague.

V.c. Sculpture by Carolyn Montague.
NANCY GROSSMAN

Nancy Grossman also uses leather for its evocative and associational value rather than for the material itself. Her black, leathercovered, zippered, studded and spiked heads bring to mind images of Hell's Angels and leather associated sado-masochism. The head pieces have an eerie and brutal quality about them.

CAROLYN MONTAGUE

Carolyn Montague has done a great deal in the exploration of leather as a medium unto itself. Her relief collages are raw and gutsy. She stitches, stretches and nails the leather pieces onto frames and uses the rough edges of the hides to create linear excitement within a tightly controlled design. The pieces are expressive of the medium, yet they are given formal integrity and structure by the artist.

Her sculptural pieces eliminate the free expression and rawness of the collages, but they gain another freedom through the third dimension. Her forms are tightly articulated as she stretches and molds the leather over metal armatures. Her preoccupation seems to be with ovoid forms which soar into space as they stretch over the wooden or iron frames. Her sculptures are highly dynamic expressions in leather which speak of the leather first and foremost and explore many of the intricacies and subtleties of the medium.
II. TANNING TODAY

"There is virtually no end to the variety of leathers... available today... recent technological developments... have put new tools into the hands of the tanner. The tanner is a master craftsman who is constantly adapting these technical advances toward creating new and exciting leathers." 5

The art of tanning has developed into a highly technical and controlled science and an endless variety of leathers can be produced for the market today. In view of the multitude of types and varieties of leathers that are available to the consumer, it must not be forgotten that all genuine leathers originate from hides and skins of animals. Leathers made of different animal pelts differ in surface and grain characteristics, and even beneath the surface they possess unique physical properties that are inherent to particular breeds of animals. Tanners use particular types of skins to make leathers for specific purposes. The source of the tanners supply has a direct effect on the leather produced, and each breed of animal produces pelts of a characteristic nature related to the animals internal and external environment. The health of each animal and herd is as important as the climate, type of feed, and particular breed.

Hides and skins are by-products of the meat industry, and most nations produce them for conversion into leather. Large meat producing areas supply large quantities of the tanners raw material and export their surplus, while others import the excess of those nations.
After slaughter at the meat packers the hides of animals are quickly removed to protect the quality of the skins as well as the meat. Both are extremely perishable and the skins must be processed before their trip to the tanneries. The preservation of the hides is called curing, and it provides an environment in which protein destroying organisms cannot function.

An old method of curing is to dry the skins for bacteria cannot grow without moisture. Chemical anti-bacterial agents can also be added, but this process must be highly controlled for when the skins are dried too quickly the fibers may be cracked and damaged, and when they are dried too slowly, decomposition may begin to take place.

A more modern method of curing uses salt as the curing agent and this can be done by wet salting or brine curing. Only well cured skins can produce high quality leather and the procedure requires proper application of many inter-dependent chemical and mechanical operations.

When the cured skins arrive at the tannery they are washed and soaked to remove the salt and other foreign substances and to restore the fibers to a natural shape and condition to prepare them for adsorption of the tanning agents. The hair is loosened and removed with depilatory agents which also loosen the epidermis and remove other skin proteins which lie within the skin substance. The hide is defleshed with a fleshing machine which removes fat and excess flesh clinging to the inside of the skin. These processes are continued until a smooth surfaced hide with a distinct grain pattern is achieved.
Specialized machines clean the hides, smooth the surface, and balance the chemistry of the skins to prepare them for receptivity to tanning agents. After they are thoroughly cleaned and prepared for tanning they are tanned with various chemical agents. The function of any tanning agent is to convert the raw collagen fibers of the hide into a stable form which is not susceptible to rotting. In addition it should improve many of the properties of the substance. The actual chemistry of tanning is very complex, but basically there are two systems used; chrome and vegetable based systems.

The chrome tanning process uses chrome salt solutions which turn the skin into a light blue green. Chrome tanning is the more popular form used today for it can be accomplished in a few hours and produces a leather that has properties that are suitable for a multitude of commercial products. It results in leathers of great flexibility, low wearing abilities, and high resistance to scratching, scuffing, and scarring. It is used on hides that will be made into shoe uppers and garments. It can also, however, be put through a vegetable tanning process to give it the additional qualities of that process.

Vegetable tanning uses tree bark and extracts together with other chemicals. Originally tannin or tannic acid from trees was the sole agent for this process which requires weeks of soaking of the skins. Today the vegetable extracts are combined with other chemicals to speed up the tanning period to produce rich, lightweight and flexible leathers. Most shoe soles, luggage, upholstery leathers and industrial belts are made from vegetable tanned cattle hides. The process produces a firm, durable and water resistant leather.
In the tanning, various processes give the hide a variety of leather finishes such as smooth, grained, suede, patent and lustre. Suede is made by buffing the flesh side of the leather to raise a soft nap. To make it even finer the entire grain on the smooth side is buffed off. Both sole leather and the softest glove leather can come from the same animal. The tanning technique is what makes each finished hide different.

After tanning the hides are split into layers of thicknesses which are required for the leather's end use. The thickness of hides varies greatly and this variability must be eliminated. The hides are fed through a machine which splits the thickness of the skin and yields a grain portion of uniform thickness and a flesh layer called a split. The split can further be divided, and although it does not have a grain, it can be used in the making of sueded types of leathers.

The dyeing of the leather also takes place in the tannery. Leather dyeing is an art in its own right for there are many factors with which to contend which are not present in the coloring of other substances. Each skin has a built in variability which takes the form of different pigmentation and other grain characteristics. The tanner cannot blend or rearrange his fibers as can a cotton dyer or papermaker, and therefore he must tan and retan the leather in such a uniform manner in order to minimize any factors that could lead to uneven dyeing.
Another factor that he must consider is penetration or the depth to which the coloring matter enters into the leather. Dyestuffs vary in their ability to penetrate. Coloring is accomplished with aniline type dyestuffs which combine with the skin fibers to form an insoluble compound which becomes part of the skin itself. There are hundreds of dyestuffs and auxiliary products available to the tanner, and they possess widely differing characteristics which produce a myriad of shades of color. The most commonly used are acid dyes, metal-lized dyes, direct dyes, and basic dyes.

After coloring, a process of fatliquoring takes place and restores the oils which were lost during tanning and dyeing. The leather is then finally dried, stretched on frames and placed in warm air circulating rooms to dry. Additional finishing includes conditioning, buffing, coating, and several other specialized processes to bring out the best qualities of the particular skin.

Finally the skins are measured to determine the area of square footage using a planimeter. The finished leather is also graded for temper, uniformity of color, thickness and the extent of any defects which appear in its surface. The most perfect leather commands the highest price and is ultimately cut into the finest product.

After a process which takes at least a month of pains-taking care the tanner is ready to ship the product to the various manufacturers and other consumers and producers of leather goods.
III. EIGHT EXPERIMENTAL PANELS EXPLORING SOME OF THE ASPECTS OF SUEDE

"The leather surface that makes up the form itself is also the decorative means." 6

Leathers that are finished by buffing the flesh side to produce a nap are distinguished from other leathers and termed suede. They are the most luxurious and sumptuous of the leather products, and this thesis work by the author, Anna V.A. Polesny, was to explore some of their unique properties. The material was approached from six distinct vantage points, and a response to each one was recorded. Although the thought processes involved were not linear, the ideas did evolve from one another and are contingent upon each other. In the presentation of these ideas the impersonal form of third person singular is used in an effort to objectify experience. The point of the work was to define some of the expressive qualities of the suede itself, not to present the feelings and emotions of the author.
VI. Animal Fiber I, hand laced and stuffed suede.
ANIMAL FIBERS I: AN HISTORICAL-TRADITIONAL APPROACH

The first piece is a totally exploratory one. It began in a playful experimental manner with the manipulation of leather pieces, glueing, lacing and stuffing in order to gain a feeling for and from the suede itself. The technique of lacing is the oldest approach to leathers and has been used throughout history. It was chosen specifically as a traditional hand method of leatherwork.

As the piece evolved, new ideas evolved with it:
1) Stuffed pocket like sections (pouches) brought the piece into three dimensional relief.
2) Lacing became a design element as well as a structural necessity.
3) Quilting helped achieve low relief and enhance the softness of the material.

Without an initial design imposed upon it, the piece began to grow into a highly tactile surface with value changes giving it vertical stripe-like divisions.

From the initial unplanned manipulative activity as well as the experience of visiting leather shops in many countries where skins and hides hang layer upon layer as they are draped on their shelves came the design consideration that pervades this work. The idea of layers seems compatible with the idea of skins and hides, and it became the basic theme of the body of work. The patchwork result that this produced enhanced the colors and textures and gave the surface a strong tactile quality which was desirable.
After the initial exploratory work, it became necessary to continue the exploration with brush and paint. The linear division and patchwork idea was retained, and the basic palette was limited to muted colors as suede, even when dyed to brilliant hues, does not retain bright colors indefinitely. Numerous paintings were made using each brush stroke to suggest an individual suede plane. These paintings in turn suggested other techniques which were compatible with and could enrich the expression of the basic suede.

As these ideas evolved it became evident that the available suede supply would have to be dyed to the colors that were appropriate for the pieces. Through much experimentation with direct dyes overdyeing suedses, the colors that were required were achieved. The dyeing had to be strictly controlled as not enough dye achieved little color change, too much produced colors that rubbed off the surface of the fabric, too much heat caused shrinkage of the fiber and made it hard and un-pliable, and too low a temperature produced weak, superficial dyeing that did not penetrate the fabric and gave unstable colors.

1. The hand lacing of two suede pieces.
VII. Animal Fiber II, hand dyed, stuffed, machine stitched suede and cotton velveteen space divider.
ANIMAL FIBER II: A TACTILE RESPONSE

The velvety softness of suede produces a sensuous tactile esthetic response to it. One wants to touch and feel the fabric. This response suggested the use of velveteen with suede to enrich this strong tactile quality and give a point of reference to it. And, for even more softness and sumptuousness a pseudo trapunto technique was devised for the piece. It was planned large (5' x 6') to totally involve the senses of the viewer, and the piece grew from a central core of a stuffed pocket to which additional pockets were sewn and then stuffed. As it was constructed the edges were finished on both sides so that the final product has two faces which are the reverse of one another. In view of the two finished surfaces and the size of the work, use as a space divider became a logical conclusion. A lucite rod was chosen as the hanging medium to give contrast to the high tactile quality of the work.

2. a is the initial stuffed pocket. b is sewn to it and stuffed, then c, and finally d which has not yet been stuffed. Two e pattern pieces are waiting to be sewn to the right edge of a, b, and d. The pieces are machine sewn inside out, turned right side out, stuffed and stitched together along the edges.
VIII. Animal Fiber III, naturally dyed hand spun wool tapestry woven with hand laced and stuffed suede.
ANIMAL FIBER III: A PHYSIOLOGICAL CONSIDERATION

It had been an initial consideration of this work to use furs as well as suedes. The idea was deserted when the immense and endless potential of suedes was recognized and the need to limit the scope of the work was accepted. Still, the idea of animal fibers originally bearing fibers of their own persisted and was incorporated into the work in a round-about fashion. Fur was not used, but the technologically manipulated product of fur, wool, would be utilized in the work.

A sheep was sheared, the fleece was washed, dyed and spun, and the wool was woven back into the surface of the piece through a linen warp which used the leather pieces as a loom for the warp threads. The wool was dyed with natural plant dyes because the subtlety and softness of the color they produce seems compatible with the same subtlety and softness of color of suedes.

The tapestry technique brought the fiber's fiber back into the panel and added another tactile element to the surface. The tightly tapestried rough spun wool creates a highly textured fabric which contrasts the softness and the relative smoothness of the suede.

Like the second panel this one is also double faced with suede pouches creating the structural basis of the panel. Some of the pouches are stuffed and add a gentle relief dimension.
IX.a. Animal Fiber IV, hand dyed, machine stitched, stuffed and mounted architectural sculpture.
IX.b,c. Alternate Arrangements of Animal Fiber IV.
IX.d,e. Alternate Arrangement of Animal Fiber IV.
ANIMAL FIBER IV: A FUNCTIONAL CONSIDERATION

Throughout this work stuffing seemed to be a technique that was altogether consistent with the skins. Stuffing enhances their softness and brings out dimensionality. Upon reflection, it is a technique that is very compatible to suede. The fabric almost demands to be stuffed to give back the dead skin its original life form. In life the skin enveloped the flesh and bones of the animal that inhabited it. It was nature's package for the creature inside.

This compulsion to stuff or give form manifested a need to give back to the skin its original function. The fourth piece stresses this enveloping element, and for even more structure, the bones of the work, plywood armatures were made. It stands in high relief and deviates from the fabric surface quality that the others possess. The closed linear design form has evolved into a series of architectural sculptures which work independently, in groups, or in a family of six. They embody the concept of a separate life, a strong individual autonomous existence, which also possesses compatibility with others of the group. The six do not have a standard form of presentation, but may be united or divided in relation to the space they fill.
X. Animal Fiber V, hand dyed, machine stitched and stuffed suede.
ANIMAL FIBER V: SOCIOECONOMIC FACTORS

Leather is one of the most precious natural fibers processed by man. Socially it is considered a prestigious, luxury fiber; economically it is a very costly one. Leather workers try to minimize waste. Patterns are closely cut and scraps are saved for later use or to sell to hobbyists. Unlike woven fibers, leather does not fray, so that even the smallest piece retains all of the characteristics of the original hide.

Animal Fiber V evolved from scrap pieces used as scrap. They were machine stitched together to test their characteristics of stress and pull. A topographical surface began to build up as the pieces were fitted together. Due to the natural body and weight of the suede, the relief structure held without support. The initial approach was random in an effort to find out what would happen. Later, as the suede began to give a direction, control was gained over it and a design began to be imposed upon it. Small groupings contrasted large ones; built up areas defined flat planes; stuffed areas heightened relief and the plastic quality of the piece, and unstuffed areas allowed natural folds and flow of the fabric. Contrast was created of the leather as a covering and as a fabric entity unto itself.

The brown color was chosen to deny the depth effects of color value in an effort to bring out the inherent qualities of the material and technique and allow depth to develop despite color considerations.
SUEDE SKETCHES I, II, III: PHYSICAL PROPERTIES

The three final sketches turn to some of the physical properties of the fiber itself. They are no more than ideas for future reference in seeking a direction detached from responsive thinking.

Suedes do not fray; they are stitchable fibers; they can take color from chemical agents and be dyed; due to their thickness and weight the color can penetrate to various depths of the fiber. These were some of the factors considered when the precious scraps were again utilized to create an altogether different and exciting effect which stresses color as its main feature in the buildup of a new textural surface.

Sketch I uses green strips machine stitched onto a green surface. Due to the light penetration of the dye into the fiber, the turquoise core of the hide is evident and creates a subtle linear color change and design. The grain of the nap of the suede creates depth and a low relief surface texture is achieved by using this technique.

Sketches II and III make use of the same technique, but the background is a patchwork of other colors over which suede strips are superimposed. The effect created is very different from the first one as the two layers of color interact with one another.

It would be interesting to pursue this direction with large tapestry like murals and surfaces in which the background colors dance behind the surface textures mixed by the eye as it perceives the color play. It is a technique that could produce extremely rich and interesting coloristic and textural expressions.
IV. CONCLUSION: A NEED FOR FURTHER EXPLORATION

Suede is only one of the end products of animal fibers, and this body of work barely touches the surface of all of the creative potential inherent in the material. It is a medium that not only possesses most of the properties and potentialities of woven fibers, but it also has other properties that those fibers do not have. Its function can be useful, decorative, aesthetic or expressive.

The techniques to which leather can be subjected are endless and have hardly been explored in terms of leather. The ideas which can be imposed upon it are also without limit. The ideas which the fiber itself can stimulate could keep one stimulated for a lifetime. It is a fiber that has been greatly explored technologically, but one which the artist has yet to discover and exploit for all of its creative value.

Leather as an art or craft medium can help tell us about our world and enrich ours by giving us its own.
GLOSSARY

Brine Curing
The process of preserving raw skins and hides with salt saturated water.

Buckskin
A deer or elk skin with the outer grain removed.

Chrome Tanning
The process of preserving leather with chromium salts.

Collagen
The cell structure which gives leather its elasticity.

Cordovan Leather
Sumac tanned horsehide originating in Cordova, Spain.

Curing
The temporary retardation of protein degradation of hides and skins.

Defleshing or Fleshing
The removal of excess fatty tissue from hides and skins.
Also called scudding.

Depilatory Agents
Chemicals which cause the removal of hair from hides and skins.

Embossing
The process of stretching leather sections on the flesh side by rubbing with a tool to achieve a raised relief effect on the grain side.

Epidermis
The outer, nonvascular, nonsensitive layer of skin.

Fatliquoring
The conditioning treatment of leather after tanning and dyeing.

Fleshing
The removal of fatty layers off skins and hides.

Hide
Leather from a large animal such as horse, cow or buffalo.

Leather
The natural tissue fiber of animals which has been transformed by tanning into a stable non-putrescible flexible sheet material.

Moroccan Leather
Sumac tanned goat skin which has been dyed red.
Parchment
Sheet material made from the split skins of sheep which have been exposed to lime, scraped and rubbed smooth. This process does not produce a true leather.

Pelt
An untanned hide or skin with hair intact.

Split
The layer of hide from beneath the top grain.

Stamping
The use of metal dyes to press out a design.

Suede
A type of leather produced by buffing the flesh side of a skin or hide to produce a nap.

Tanning
The irreversible process of introducing chemicals to a pelt to form a bond which preserves the pelt and produces leather.

Temper
The measure of the softness of leather.

Tooling
The mechanical manipulation of leather to create permanent depressions and raise areas of design.
FOOTNOTES


BIBLIOGRAPHY


