

There is a delightful legend of how the Canyons were made.


"Coyote went to the People begging then to give him some fire. At first they refused, for he was well known as the mischief maker.. After repeated entreaties, some one said "Oh, give him some." So they gave him some flint stones. He tried and tried but could not make a spark. Finally he became angry and threw the stones on the ground whereupon a great spark was lighted which quickly set fire to the dry brush. It burned and burned into a rushing fire and Coyote ran away. The earth split open from the great heat beneath the fire and finally Water Pourer came to put it out. This started the washing down of the Canyon walls, making them deeper and deeper. Today, when you stand on the rim you can see how the Canyons would all fit back to-gether.

In September of 1958, I made a special trip to Canyon de Chelly, taking with me a young Navaho woman who was then working in Santa Fe, and whom we knew very well. She had never been to the Canyons and was most eager to go, and I thought it delightful to have a Navaho companion. On the way we stopped at Window Rock, and when I found that the Tribal Council in session, I got permission to make some interior photographs of the Council room with the members present. I also made a portrait of Paul Jones who was Chairman at that time.

Proceeding on to Chinle, we put up our tent in the National Monument Camp Grounds and settled down for a stay of several days. One thing I wanted to do was to hire the Jeep and its driver from the Thunderbird Ranch for a trip up Canyon del Muerto. As this was not possible for the following day, we did make arrangements for the day after. So we rearranged our plans, driving up to Many Farms, some forty miles to the north, where Cornell University is conducting a clinic. We spent a busy morning watching the school children as they came in for tests, making numerous pictures, and learning about the interesting work that is being carried out by this University.

At noon we started on our way back to camp. As we were passing a small trading post called the Valley Store, I realized suddenly that this was the old Frazier Trading Post, the end of my long walk in 1930 when Betsy and I ran out of gasoline. We stopped to buy something for lunch and to pass the time of day with the trader. As we started back to the car, a wagon drove up with a man and his wife coming to fill their water barrels. As this was an activity I had not yet photographed, I got out my hand camera, and with Maria as interpreter, asked if I might make the picture I wanted. The man was willing, so I proceeded to make a number of exposures from different angles. Returning to the car, which was on the opposite side of the water tank, we drove off a way until we found a nice spot to stop for our lunch.

Then we returned to the Canyon and drove up on the rim to watch the sunset before returning to our camp. After supper, I got out my changing bag to reload all my exposed film holders and suddenly I could not find the case that contained all my small camera holders as well as extra equipment. We hunted and hunted, ending by taking everything out of the car. It just wasn't there, so I assumed that I must have left it at the Many Farms Clinic. So the next morning we had to postpone our trip up the Canyon and we drove all the way back to Many Farms. The case wasn't there, so we returned to the Valley Store where I now knew I must have left it. Entering the store, we found only one man sitting there talking to the trader who was busy behind his counter. I asked him if such a case had been found, thinking that I must have put it down somewhere and left it there. He said he had not seen it or heard of it. Then the lone customer spoke in Navaho to Maria telling her that he thought a certain young Navaho boy knew something about it. I realized then that it had been stolen, something that had happened to me only once before over the years. I posted a notice saying that it was lost ~~and~~ offering a reward. We returned to our camp to prepare for our trip up the Canyon the following day. I was unhappy over the handicap I would have without the use of my hand camera as all the extra film I had for it was in that case including other accessories and a ~~brand~~ new exposure meter. But of course, I had my large camera, so we set forth early the following morning with the Jeep to ourselves and a nice Navaho driver. The floors of the Canyons are very treacherous with both dry sand and quicksand, and one must be accompanied by someone who knows the safe routes. Our driver, Art, lived up in Canyon del Chelly, and as this was the Canyon we wanted to see, we proceeded on our way, stopping at Art's hogan where he introduced us to his family and showed us a fine rug his mother was weaving.

*  These animals were the common Spanish breed known as the churro.

It was a beautiful fall day and we took our time driving up the Canyon stopping frequently to work or to look at whatever interested us. We passed numerous hogans, for this is the Canyon where many Navaho people live. We went all the way up to Mummy Cave, a cliff dwelling miles from the mouth of the Canyon. But ~~just~~ before we arrived at this spot, we came to a group of hogans and seeing several children running to meet us, Art stopped the car to give them candy we had brought along. In a few minutes two women appeared, one of them approaching Maria saying to her in English "Did you girls find the case you lost yesterday?" I was astonished at this for we must have been about forty ~~miles~~ from the Valley Store. How could this news have reached these people in less than twenty four hours, and how were we recognized? I did not have a camera visible and we were not in my own car. This was a striking instance of how news travels on the reservation and how carefully all strangers are observed.

We had our lunch in the shade of some beautiful pine trees across the Canyon from Mummy Cave, resting a while before starting on our return trip. About half way down the Canyon is a group of hogans, almost a community, called "Standing Cow", so named for an ancient pictograph carved on the face of the canyon wall above one of the hogans. Here we found a busy scene. As we had passed this ^{point} ~~point~~ on our way up the canyon in the morning, no one was visible. Now we found a group of Navaho women and children busily spreading out the season's crop of peaches to dry. They had swept an area clean of loose earth and were placing the halved peaches open side up to dry in the sun. We watched this activity for some time, Maria in continuous conversation with the women and thoroughly enjoying herself. Finally we left driving down the rest of the way as the late afternoon sun threw long shadows across the Canyon floor.

The next morning was Friday, the opening of the Window Rock Fair, so we broke camp and prepared to leave. We stopped at the Trading Post as I wanted to tell Mr. Nelson about the loss of my case in the event that any of the items showed up at his post. I bought some food for lunch and when ^I joined Maria at the car she was talking to two older Navaho People near by. She told me that these people wanted to know if we would take them to Window Rock. I said that we would be glad to but that I wanted to go back to the Valley Store first to see if my case had been found. So we all got in the car, the man riding on our camp beds in the back of the station wagon, the woman in front with Maria and me. Maria was engrossed in conversation and I soon realized that she was telling the woman about my missing case and also about my book, for she soon got it out to show the pictures. Neither of these people spoke any English, so what all the talk was about. I had to guess ~~xxxxxxxxxxxxxxxx~~. There was no one around the store when we got there, so I went inside to speak to the trader. No sign of the case.

Getting back into the car, I started to turn around to head for the Fair, inwardly bemoaning the loss of much valuable equipment as well as the exposed negatives of Chairman Paul Jones and the Tribal Council. The woman spoke to Maria asking me "to go around that hill where it would be quiet". I couldn't imagine what she wanted but I have never failed to follow such a lead. We drove three or four miles to a place out of view of the highway, with not even a hogan in sight. Then she asked me to stop. She got out of the car asking us to join her. She told Maria to put a rug down on the ground and asked me to get out a case like the one I lost. I still couldn't imagine what this was all about, but I said nothing and followed directions. Maria told me to kneel down beside the woman. Then to my complete surprise she began a hand trembling ceremony over me. Hand tremblers are ²diviners, ~~DIAGNOSTICIANS~~, and they are also sought out by the Navaho People to find lost articles.

I could see Maria in wide eyed wonder as the woman proceeded with the ritual, as I watched the shadow of the trembling hand and arm in front of me and listened to the encantation. This lasted about fifteen minutes. Then the woman spoke to Maria telling her that three boys had taken the case from my car. I was not to worry as nothing would be hurt. I was to come back to the store in four days, that two boys would bring it back. I thanked the hand trembler for her services and made a shall donation. Then we all decided that it was lunch time, so we made some sandwiches and had our lunch right there.

We drove on to Window Rock and as we approach~~ed~~^{ed}, Maria told me that our new friends wanted to go on in to Gallup. As there was something about the car that needed fixing, I decided that we might just as well go on in to town and spend the night there. So we parted with these two, some 125 miles from the Valley Store. We never saw them again.

Saturday morning we returned to Window Rock and the Fair^h where we spent an interesting and busy day. Sunday, I took Maria back to Gallup to put her on the bus for she had to return to her job the next morning. There was other work I had intended to do in the Shiprock area, but instead of taking the direct road north, I decided to go the long way around. So I returned alone to Chinle, spending the night there. Monday morning, the fourth day, I went on to the Valley Store. The trader said he did not have the case, but that two boys had just been there asking if that case had been found. I thought that they were probably seeing if the coast was clear, so I left the reward money and postage with the trader, and knowing that they would recognize my car, I thought the best thing to do was to go on my way. A few days after I reached home, the case was returned, its contents complete and unharmed.

This was a most interesting

experience, leaving many unanswered questions. I know that the Hand Trembler and her husband had spoken to no one but Maria and me from the time they got into the car at Chinle, until we left them in Gallup. There are many accounts of lost articles being found by hand tremblers. That there are Navaho People who have extra sensory perception has been noted many times by a number of people. Was my experience one of these? I wish I knew the answer.

155 } James in Canyon
156 }
157 } all sp. in Canyon
158 } - Canyon & Chely
159 } Coln Haffette
160 } Back James
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The raising of sheep, the spinning of wool, the weaving of textiles, are age-old activities in most parts of the world where fabrics of great variety and use have been produced during many centuries. When the Spanish Conquistadores first came to the American Southwest in 1540, they brought with them the first sheep ever seen by the Indian inhabitants. To the surprise of the invaders they found cotton garments woven by Pueblo Indians, made on a well perfected looms of Indian origin. In later years archaeologists were to find scraps of woven cotton fabrics buried in prehistoric ruins whose dates go back to the fifth century A.D.

These first sheep brought by Coronado were used chiefly ^{as} for food, for his marching army, so that eventually they were consumed. Later, when Don Juan de Oñate came up the Rio Grande Valley to colonize New Mexico, he also brought sheep for domestic use.* The Pueblo Indians soon learned the use of wool, and as production of sheep spread, the western Pueblo Indians of the Zuni and Hopi villages soon were weaving woolen garments.

At the time of the great rebellion of 1680 when all the Pueblo People united to drive the Spanish from their land, some groups, fearing the return of the Spanish soldiers, took refuge in Old Navaholand. In this region archaeologists, those intrepid investigators of ancient human habitation, found remains of Pueblo dwellings in close proximity to those of Navaho origin, indicating an association of the two Indian cultures. As the Navaho moved westward in the early 1700s, they encountered the Hopi in Canyon de Chelly and at the villages farther west. Possibly the Navaho learned the art of weaving from some of the Pueblo groups with whom they came in contact, or perhaps they brought this knowledge with them when they came to the Southwest.

In his book Navaho Weaving, the noted authority Charles Avery Amsden gives a clear picture of this association between Pueblo and Navaho, and the development relating to weaving that followed. The Navaho, so quick to adapt a craft or technique from others, soon developed a style and character of their own in the creation of their products. One interesting difference between the two groups is that among the Pueblos Indians, it was ^{by} and still is, the men who weave, while among the Navaho it has always been the women, with a few rare exceptions. Navaho weavers commenced their weaving with wool, and they soon excelled in the craft, producing blankets of unique ^{ly} and beautiful design and color. Navaho weavers have never changed in their use of their upright loom, nor have they made any change in its construction. The Spanish settlers in the Rio Grande Valley brought with them from Europe the knowledge of the treadle loom which they built of native wood, ~~teaching the Pueblo people how to use it~~, but the Navaho have steadfastly continued to use the upright aboriginal invention.

While the earliest examples of Navaho weaving have long since disappeared, there are early references to this craft contained in letters from a number of Spanish writers. These ^{remarks} ~~writings~~, together with their chronological dates are interesting indeed. ^{one} ~~the~~ early letter of 1780 says, "The Navahos, who although of Apache kinship, have a fixed home, sow, raise herds, and weave their blankets and clothes of wool---". The same Spaniard, Teodoro de Croix, fifteen years later refers to the Navaho "The Navaho Nation has 700 families, more or less, with 4 or 5 persons to each one, in its five divisions of San Mateo, Zebilleta, Chuska, Chilli with one thousand men at arms: five hundred tame horses, six hundred mares with their corresponding stallions and young; seven hundred black

x Navaho Blankets
Chas. A. Amsden p. 120

ewes, forty cows with bulls and calves, all looked after with the greatest care and diligence for their increase..." Another writer of the same year, 1795, "...they work their wool with more delicacy and taste than the Spaniards. Men as well as women go decently clothed, and their captains are rarely without silver jewelry." *
 In 1799 an officer of the Spanish Royal Engineers wrote, " The Navahos have manufacture of serge blankets and other coarse cloths which more than suffice for the consumption of their own people, and they they go to the Province of New Mexico with their surplus and the exchange their goods for such others as they have not, or for implements they need." In 1812 Pedro Pinos, who went as a delegate to the Spanish Parliament, wrote of the Navaho, " Their woolen fabrics are the most valuable in our province and in Sonora and Chihuahua as well." **

The picture evoked by these quotations shows that within the thirty-two years between 1780 and 1812, Navaho weavers, through their imagination, versatility and increasing skill, gained weaving supremacy in the Southwest.

A later picture is given by Charles Bent in 1846. "Navaho war and hunting parties might be found anywhere from the Coconino Plateau in Arizona to the buffalo plains of West Texas. They rarely ventured as far north as the Arkansas (river) and so were little seen at Bent's Fort. They did, however, go often to Taos to trade, many of their woven blankets finding their way into the Bent, St. Vrain and Company store, and ending up finally at the Fort as trade goods valued by the Plains Indians." ***

* Navaho Weaving Charles Avery Amsden.
 ** Navaho Weaving, Charles Avery Amsden.
 *** Indian Traders, Frank McNitt.

R24

The crimped wool from such breeds as the Rambouillet ~~maxxixixix~~ is very difficult to spin by hand, and where it has been used is apt to produce lumpy strands.

A must

THE PROCESS

The wool

The sheep that have been produced by the Navaho People ever since 1869, are small, are resistant to the desert heat, ^{and} sudden changes in ^eweather, ^{can} survive cold winters, and can exist on a minimum of food and water. Consequently the fleeces from these sheep are light, ^{but} ~~and~~ they are also comparatively free from grease. The staple of the wool is long and wavy, and particularly suited to Navaho methods ^{hand} of spinning.

Quaint - Under the adverse conditions of raising sheep on most of the reservation, where the flocks range over great distances in order to find enough to eat, heavier breeds, like the Merino or Rambouillet have difficulty in surviving. The character of the wool from the old ~~type~~ Navaho sheep compared with that from these heavier breeds, has been one of the major factors in the controversy over introducing the newer strains. * The traders and the sheep and wool buyers want heavier meat producing animals and heavier fleeces, but the Navaho women who largely control ^{the} sheep, ^{preferred} ~~want~~ their old stock which produces the best wool ^{hand} for spinning.

While only 10% of the wool crop is used for spinning, and 40% for sale to the wool buyer, still that 10% by the time it has been transformed into ~~a~~ fine rug^s brings^s a greater return than the wool that is sold. There are some areas on the reservation where the heavier breeds are being raised to-day, but little of this wool is used for weaving.

Many goats are also raised by the Navaho. They like the meat to ~~eat~~ just as well as mutton, and goat hair (mohair)

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is also used in weaving. More difficult to spin, it nevertheless produces fine yarn, and rugs made of mohair bring a premium.

In Santa Fe, in 1860, there were a number of German merchants who imported from Germany the fine vegetal dyed Saxony yarn with intent to sell it to the weavers of the Rio Grande Valley. It is believed by some authorities that some of this wool reached Navaho weavers possibly while they were in exile at Fort Sumner. Having little or no wool of their own production, they may well have commenced using this soft three-ply yarn if it became available to them at that time.

There are in existence, mostly in museums, a number of extremely handsome and rare blankets woven by Navaho women between the years 1860-1880, all made of this fine Saxony yarn. Following this period, American made Germantown yarn made its appearance at some of the trading posts on the reservation. Heavier than the Saxony yarn, four-ply instead of three, it was used to some extent during the decade that followed, and with this yarn, cotton warp was first used. The cost of the Germantown yarn was a deterrent to the weavers, who in general, preferred to continue ^{to spinning} ~~to spin~~ their own wool, and in addition, the traders objected to the use of the cotton warp.

Shearing

In early times, sheep were shorn with the use of any piece of thin metal that could be honed to as sharp an edge as possible on a stone. But when metal shears were first brought to the trading posts, the Navaho were quick to use them. The shorn wool is ^{sorted} carefully, separating the longest hairs to use as warp, removing the shortest to be sold as wool, and saving the remainder for spinning weft threads. Burrs and other matter sticking to the wool are carefully removed.

Washing

Usually only greasy wool is washed. Using the pounded roots

of the yucca plant for soap (still preferred by most weavers), and making a rich lather with it in a pan or a tub, the mixture is poured over the wool as it lies on a slanting board or rock, repeating until all the dirt, sand and grease have been removed. The wool is then spread out in the sun to dry, and finally stored in sacks ready for use.

66666ng

When the weaver is ready to card her wool, she first loosens it by hand, then combs it between carding tools until the hairs ^{held} lie all in one direction. The old cards consisted of burrs in place by strips of leather mounted on small boards with handles at one side. These were replaced when metal cards of American manufacture were procurable at the trading posts. When a weaver wants to produce good grey color, she mixes wool from black sheep with that from white as she cards the wool. This method makes the finest grey used in many rugs, particularly those from the Two Grey Hills area.

Spinning

The Navaho still use the same type of spindle they learned to make from their Pueblo teachers. Since the American occupation of the Southwest, traders and others have tried to introduce the spinning wheel, but the Navaho women have always rejected it, preferring to use the ^{ir}spindles of ancient origin. Wool is spun twice, occasionally more, ~~and~~ until the desired fineness of thread is achieved, through~~g~~ the process of twisting and pulling the loose fibres until firm, strong thread is produced.

Dyeing

Using a wide variety of native plants, the Navaho produce dyes of many colors and shades. The wool from black sheep is never a true black as it tends to a brownish tinge. Good black dye is made from a mixture of twigs and leaves of sumac boiled four or five hours, and then added to a mixture of powdered native yellow ochre and an ^{ab}equal amount of piñon gum, stirred together over a fire until a black liquid is formed which dries to a fine black powder. The tannic acid of the sumac acts as a mordant to produce a rich, permanent black. Indigo, on the other hand, was imported in lumps by the early traders and was used extensively until the end of the 1890s. The indigo, tied in a cloth was suspended in a large jar of urine which acted as a mordant. Occasionally, some of this dye is still made. The wool was placed in the jar and left until the desired depth of color was obtained. The mordant used with most native plants is an impure alum found in limited quantities in certain regions on the reservation, while certain plants require moss or lichen as a mordant.

Aniline dyes, perfected in 1856-57. came onto the market from the first factory in 1864, and were in general use by 1870. They reached the Navaho traders about 1880 when Mr. B.F. Hyatt, trader at Fort Defiance, taught the weavers how to use them. C.N. Cotton, originally a partner of Lorenzo Hubbell, succeeded in obtaining dyes packaged ready for use, including a mordant, and these, under the trade name of Diamond Dyes, were soon available at most trading posts, and were used to dye both native ahnd-spun wool and the Germantown yarn.

The Loom

The structure of the loom is both simple and practical. It consists of two parts; the weaving frame and the stationary upright poles and cross beams which hold the weaving frame while in use. Looms are made of native^{wood}; poles of a desired height being set into the ground with top and bottom cross beams. Usually the top cross beam is held in place by natural crotches at the top of the upright poles, while the lower beam is securely tied at the bottom of the loom frame. These cross beams support the weaving frame after the warp has been strung to it.

When a weaver has determined the size of the rug or blanket she will make, she first prepares the warp. A warping frame is made of four poles, two long ones, cut some twelve to eighteen inches longer than the rug to be woven. On top of these poles she places two shorter cross pieces, sometimes broomsticks, tying each corner very securely, care being taken that all sides are parallel and the measurements accurate. She then raises this frame a little, above the ground on low supports, just high enough so that a wound ball of warp thread will pass beneath the cross sticks. Tying one end of the warp thread at the top (usually the upper left hand corner), the ball is then passed over and under the lower

stick, then up over, and down ^{he} under ^{and} to top stick, thereby creating the cross of threads, continuing until the sufficient number of threads have been wound. The winding of the warp is most carefully done, the weaver making certain that the threads are straight, the tension even, and that there are no twists or crossed threads. She ties the last thread at the diagonal of the first tie.

Next she adds the end cords. These consist of two-or-three-ply twisted strands of weft threads which have been measured twice the width of the rug. These are twined with each other as the edging is woven in and out of alternate warp threads, keeping the spacing and tension even, for both the top and bottom edges. Next comes the preserving of the cross formed at the center of the warp by the over and under winding of the warp threads. She places a small reed (the length of the rug width) on each side of the cross, tying them to hold this cross in place. The four poles of the warping frame are then removed, leaving a mass of warp threads, but in which the cross is preserved by the reeds, and the top and bottom ^{end cords} ~~edges~~ holding the ends of the warp in place. The ^{end cords} ~~edges~~ are then tied to the weaving frame cross bars, by weft threads which wind around the bars holding the edges ^e securely to it. The creation of the firm top and bottom edges is one of the perfections of Navaho technique. When the rug is finished it is removed from the loom simply by untying the edges from the loom cross bars. Sometimes this winding thread, which holds the edges in place on the loom, is placed between every two warp threads, sometimes three or six, depending on the size, and whether the rug will be woven of coarse or fine material. The bottom cross piece of the weaving frame is then tied to the bottom cross beam of the loom, and the top piece is laced to the top cross beam by a rope, using

large loops by which the tension of the weaving frame can be adjusted. Again great care is used to see that all cross peices are parallel.

The next procedure is the tying in of the heddles to form one or more of the sheds through which the weft is passed. The heddles are tied to every other warp thread for a plain weave (p. 178), or to combinations of threads for any other weaving pattern the weaver chooses. Sometimes several heddles are used, as in the diamond twill or herring-bone weaves (p. 180).

Yarn for the side edge cords are then tied to the lower beam, and loosely tied to the top beam (p. 180). If the warp threads are light in color, the edge cords are usually made of weft color threads, made in the same way as the top and bottom edge cords. The loom is now set to commence weaving the rug. Everything about the loom has been made of simple native material, and is completely functional.

Weaving

The simple tools use in weaving number only two, to comb and the batten, though every weaver will have several sizes of each. The comb is made of a hard wood into which tines have been cut, like a fork, perhaps three inches in length, with a handle carved out at the opposite end. The comb is used first to beat down the weft as it is passed through the shed. The batten also made of hard wood, is a slightly curved piece about thirty inches long and three wide, though smaller skes are also used. One shed is formed by the shed rod (the long upper stick in the picutre, p. 178) just above the heddle); the other shed is formed by the heddles. The batten is inserted in the shed and then turned edgewise to make the opening wide enough for the insertion of the weft to be passed through.

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to be passed through. A true shuttle has never been used by the Navaho, for they insert the weft with their fingers (p.) except when weaving plain long stripes, then a small stick is used, around which weft thread has been wound. As so many of the designs require only a few inches of color at a time, the nimble fingers of the weavers seem adequate. As weaving is done in a sitting position, many weavers do not complete a whole line at a time when this would require moving, so they will weave several inches from one position before moving over to complete the line. After the weft has been passed through the shed, the comb is first used to press down the weft, then the batten, also to press down over a longer area. The degree of firmness struck with both comb and batten, determines the tightness of the weave.

The variety of weaves attained by the Navaho weavers are many, from plain weave to tapestry weave, the diagonal and diamond twill, and the rare two-faced weave which has a different design on each side; also the wedge weave, unique to the Navaho weavers. Added to the variety of weaves, are the variations of color and pattern, giving the weaver an extensive choice.

Most of the designs are carried in the weaver's mind. She does not use a diagram or drawing, or counting of threads. The exceptions are some of the very intricate patterns of tapestry sand-painting rugs, or some of the classical designs. Then the weaver makes a sketch in the sand. This carrying of a design mentally is a remarkable feat, for every weaver has many interruptions, and sometimes may be away from the loom for days at a time, yet she knows at just what stage of the design she left when she was called away. A retentive mind and skillful hands enable her to resume quickly her interrupted task.

*Please turn page
have been re-written*

THE BLANKETS

From the beginning of Navaho weaving, blankets and mantas were made for clothing. Blankets ^{were} worn by both men and women, and mantas, consisting of two oblong pieces, fastened at the shoulders and tied about the waist with a woven sash or belt, were the dress of Navaho women for many years. Surplus blankets, as the chroniclers ~~have~~ told us, were made for the trade. The great period, the classic period, of Navaho weaving was from approximately 1840 to the end of the nineteenth century. From the earliest part of the classic period, possibly even before, Spanish traders brought a fabric to trade to the Indians known as Bayeta. This cloth was imported from England to Spain, thence to New Mexico, and while it was called by the Spanish name, it was in reality English Manchester cloth. Red color predominated, a special shade of red which took the fancy of the Navaho weavers, who after careful scrutiny, unraveled it, re-spun and re-wove it into the intricate patterns of these early blankets. Many of the finest known examples contain the beautiful Bayeta merged into the textile along with the native handspun wool. Many serapes and blankets of this period were so firmly woven that they were waterproof. They were in great demand and highly prized.

From about 1890 until the early years of this century, Navaho weaving deteriorated. The weavers commenced making coarser fabrics largely for sale to the tourist trade as floor rugs. To a considerable extent the traders were responsible for this change. With this making of rugs rather than blankets, borders were introduced with patterns of very different character from the fine

by the Navaho, as they insert the weft with their fingers or, when weaving plain long stripes, a small stick is used, around which weft thread has been wound. But as so many of the designs require only a few inches of a given color at a time^s, the nimble fingers of the weavers seem very adequate. As weaving is done in a sitting position, many weavers do not complete a whole line at a time when this would require moving, so they will ~~will~~ weave several inches from the position before moving on to complete the line. The shed ~~is~~^s changed with the shed rod and the healds.

The variety of weaves attained by the Navaho are many. From simple basket weave, to the diagonal and ^a ~~diamond~~ twills, and the rare two faced blanket which has a different design on each side. Add to this, the variations of color and pattern and the weavers choice is great.

Most of the designs are carried ^l on the weavers' mind. She does not use a diagram or drawing or counting of threads. The exceptions are some of the very intricate patterns of sand painting rugs, or some of the early classical designs. Then the weaver makes a sketch in the sand. This is a remarkable feat, for the weavers have many interruptions, and are sometimes away from the loom for days at a time, yet they know at just what stage of the design they left when called away. Skillful hands and ^a ~~tentative~~ ^{enables her to} minds ~~quickly~~ ^{quickly} resume an interrupted task.

*If possible
add half page of
color weaving*

These three pictures show ~~xxxxxy~~

These three pictures show clearly to process of weaving. The shed stick at the top of the warp, then three ~~haddle sticks~~ sticks. then the battens, one turned on edge to spread the warp, the other flat, showing insertion in the warp. ~~At~~ ^{above} upper right a stick is being used as a shuttle, at lower left, the usual hand method. Upper left is a ~~double weave~~ diamond twill, on right, a herring bone weave. This also shows the top and side edge cords.

Five major weaves of the Navaho.

Top, wedge weave, unique to the Navaho. left center, herringbone saddle blanket; center, two faced small blanket with a different pattern on each side; right center, diamond twill saddle blanket, (there are several different kinds of twills); bottom, a fine classic period blanket woven with bayeta.

The art of silversmithing among the Navaho commenced in earnest soon after the return from Fort Sumner, though there may well have been earlier efforts. That a few individuals knew the craft of blacksmithing before the exile is recorded in Richard Van Volkenberg's "History of the Navaho People". He attributes this knowledge to Captain Henry L. Dodge, the first civil agent to live in the Navaho country, though there may well have been ~~some~~ previous knowledge of the craft. Captain Dodge was a veteran of the Washington Expedition of 1849, and he both understood and sympathized with the Navaho. Following his appointment in 1853, Captain Dodge built a house on the Eastern slope of the Chuska Mountains not far from Sheep Springs, commencing his work with a Congressional appropriation of \$5000. One of the first things he did was to bring a blacksmith, George Carter, an ex-soldier, to teach smithing to the Navaho in his area. He also brought a Mexican silversmith. But Captain Dodge's career was of short duration for he was killed from ambush by the Chiracauhua Apaches south of Zuni in 1856 while on a hunting trip with a group of Navaho Chiefs.

It is probable that the Navaho had worked in metal even in the 18th century, and that inability to obtain silver may well have been the reason that they did not work in this medium at an earlier date. While there are a number of references of Navaho people wearing silver jewelry prior to the exile, it was probably made by Spanish, Mexican or even Pueblo people. The Spanish brought silver ornaments to New Mexico where the Navaho doubtless saw them, and they may have purchased, traded for or even stolen some of these. Many of the designs later adopted by the Navaho were of Spanish origin such as the so called Squash Blossom, which in reality is the pomegranate blossom ~~långg~~ used by the Spanish in Europe fashioned for buttons of brass or silver, and in iron for ornaments for spurs.

One of the first Navaho to ply the blacksmith's trade was Atsidi Sani, who became known as a maker of bridle bits and knife blades. In his authoritative book THE NAVAHO AND PUEBLO SILVERSMITHS, John Adair tells of Atsidi Sani learning the silversmith's art from Nakai Tsosi, a Mexican craftsman who lived near Mount Taylor.

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As There seems to be no record of any silver work by the Navaho prior to the exile to Fort Sumner, it must have been after their return in 1868 that practi^cse of the art commenced. That it spread rapidly is evident from all the early records of the period between 1870 and 1880, for by the time that Dr. Washington Mathews^t was stationed at Fort Wingate at the latter date, there were a good many proficient craftsmen. Dr. Mathews^t employed two Navaho silver-smiths whom he established near his residence where he might observe them at their work, and he left for posterity a detailed account of the art as practi^csed by these two men. Some fifty years later, Father Berard Haile also left a similar record of his findings over a wider area, for he had been making this study as well as many others during his long years on the reservation.

The fine work of the early Navaho smiths was produced with the simplest of equipment, and though during the following decades new tools were added to the smiths work bench, the technique is basically the same.

THE FORGE

The forge was a square structure of stones and adobe mud, built to a convenient height with the rear slightly elevated. Air tubes were made of two pieces of wood, grooved and fitted to-gether and lined both inside and out with adobe. The smith sat crosslegged on the floor of his hogan or wherever he had his forge. In later years benches or chairs ^{were} ~~are~~ used to give a more comfortable sitting position for long hours of work.

BELLOWS

The bellows was made of sheepskin in the form of a sack about eighteen inches in diameter. Held distended by three or more hoops of willow twigs. One end of the

bellows was firmly secured to a nozzle and fitted into one of the tubes leading to the forge. The other end was closed by tacking the sheepskin to a round disk of wood containing a leather valve in the center. The bellows had two handles of different lengths, the longer projected downward, resting on the ground, the upper worked the bellows. As the number of silversmiths increased, traders stocked commercial bellows in their posts.

ANVILS

The very earliest anvils were simply hard stones. Later ⁱⁿ ~~pieces~~ of iron such as parts of plows, or wagons were used. After the coming of the railroad, pieces of rails were used and still are used by many smiths. An anvil was fastened to the top of a large log cut to the right height for comfortable work.

CRUCIBLES

~~A~~ The early crucibles for melting silver were made of clay and baked hard in a fire. They were about three or four inches in diameter and had an outward curved rim and one or more spouts. These were not very durable and were replaced by commercial crucibles when these these became available. Some smiths have found that cup shaped ~~pieces~~ of prehistoric pottery from a ruin, served the purpose and were more durable than any.

MOLDS

Some molds are made of ingots for casting a bar of silver to be worked into a bracelet or other ornament. Molds for making casts are incised in a soft stone, preferably pieces of volcanic tuff, a very light pumice-like stone which is found in several places on the reservation. All molds for casting are greased with mutton

tallow. Molds for beads are cut into iron or hard wood, smooth surfaced, so that the silver coin or sheet can be pounded into the depression making a ^{spherical} spherical half or a bead. Later two of these are soldered together to make the round bead.

*The incised pieces of ^U taff for casts are cut to approximately the right size and shape and the surface perfectly smoothed. A cover piece is then fitted to each mold making as tight a fit as possible. Grooves are cut at one end of the incised piece to permit the entry of the molten ^L silver, while two ^{or more} other grooves are cut for air passages,

SMELTING FUEL

Charcoal has always been used for smelting fuel. It is prepared during the summer months by making a large fire of pinon or juniper branches. After the flames have died down and only glowing embers remain, the coals are smothered with earth and allowed to cool.

BLOWPIPE

Orininally the blowpipe was hammered out of a piece of brass or copper wire, bent into a tube with a curved, tapering end. It was used in soldering with a lamp or wick of twisted cotton soaked in tallow. The modern blow torch is a highly priced tool used today by most smiths. Some ingenious individuals have fashioned ^{to} torches from cans by fastening a spout on one side and an opening on the opposite side into which a rubber tube was fastened. Blowing through the tube produced enough pressure to blow the flame out of the spout.

SOLDER

Solder is ^{used with} ~~made from~~ borax, ^{as flux to make it flow better} ~~originally a native kind~~

* OR MORE

NO, THIS USED AS "FLUX" TO MAKE
SOLDER FLOW BETTER

MATERIALS

Some of the ~~very~~ early smiths worked in copper and brass, making rings and bracelets. The first silver to be used was American coin silver, melted and fashioned to the desire of the craftsman. When the United States Government put a stop to the use of coins for this purpose, sometime in the 1880s, the traders soon procured Mexican pesos ~~in~~ ^{silver} their place. The Navaho smiths preferred the pesos ^{for} it had less alloy and was somewhat softer. As the traders began to buy jewelry to sell, they provided silver in one ounce slugs in quality of fineness approximately that of the coins.

STONES

Turquoise first was used in the 1880 period. The traders procured stones from the mines near Santa Fe, and later from mines in Colorado ^{and} in Utah. Sometimes there were stones already cut, sometimes in chunks that must be shaped and polished. Early stones were set in a deep bezels, with the edges coming slightly over the top of the stone^s, holding ~~it~~ ^{them} securely in place. As craftsmen acquired greater skills they were able to set stones in a lower setting. Other kinds of stones also were used, malachite, garnets, cannel coal.

CLEANING

Cleaning used to be done with native alum. ^{Then polished with true rosin.}
The Navaho like their silver well polished. ~~It is~~ ^{Today it is} cleaned by dipping ~~in~~ in a diluted solution of nitric acid, then put in a bowl of water and brushed with a wire brush. It is buffed either by hand or with a buffing pad attached to a grindstone, with the pad well covered with jeweler's rouge.

Coin are hammered by hand, the smith singing as he works, obtaining a rhythm of song & stroke. The most beautiful of the silver ornaments are the hand ^{hammered pieces}

The skill of the Navaho craftsman lies in his ability and judgement in all phases of his work. Sprinkling a little borax on the silver as it melts, reduces the melting point; it must be heated to just the right degree of even moltenness; it must be poured quickly and evenly, or a slight crust forms causing brittleness and later, cracks. There is great skill in using the hammer correctly, striking blows with the edge of the hammer, and blows of even strength. ~~✗~~ The smith must ^{insert} learn to use his dies correctly, placing them exactly and striking the die with just the right amount of force. These are some of the techniques that require time to achieve.

Primarily the Navaho made jewelry for his own adornment and that of his family. It was not long, however, until there was a ready market and a growing demand for his products. Just prior to 1900, the Fred Harvey Company realized this potential market, and began to place orders with traders who had silversmiths in their regions. Soon came a demand for lighter (in weight) pieces at lower cost, so that soon silversmiths were producing two types of jewelry. the old heavy peices for ^{their} fellow Navaho, and light weight cheaper jewelry to sell to the white man.

The traders began to stock better tools for the smiths, dividers, files of many sizes and degrees of fineness, metal worker's saws, and gasoline blow torches. The smith usually made his dies with which he stamped designs on bracelets and other pieces, from all sorts of worn tools, ^{old railroad spikes} old cold chisels bolts and other pieces of scrap. The Navaho never wastes anything, he always seems to find a way to put worn out scraps to use. And seldom does he ever make two pieces alike, there is always a difference, giving his work that unmistakable quality of hand work, and the uniqueness of Navaho design.

The Navaho learns the techniques and methods of his craft from

watching another smith. This is usually a relative, and an apprentice pays for his instruction by helping his teacher as soon as he is able. In rare cases when a man is learning from a non relative, he pays for his apprenticeship in sheep, or cash, or some other way. The Navaho, when he does not have the money to buy the tools he needs, shows great ingenuity and resourcefulness in his ability to fashioning tools he needs from old or other material.

ARTICLES OF JEWELRY

- CONCHAS The round or oval disks made for ornamenting belts and bridles. Sometimes very simple, sometimes ornate with design or turquoise studding.
- BUCKLES Silver buckles for belts and bridles-metal buckles for girths.
- BRIDLES Headstalls mounted with silver bars with various degrees of ornamentation. Conchas are sometimes used at joints with larger bars, sometimes a pendant from the cross piece over the head of the horse.
- KETOHS Long ago the Navaho adopted the use of a leather wrist guard as a protection from the snap of the bow string. Later silver ornaments were added to the guard, or ketho. Some of the very finest of the silversmiths art are kethos. Some are of solid silver, many are beautiful casts, some set with turquoise. To-day they are worn as ornaments and are always worn on dress occasions. As these have never been made for commercial use, they are the finest of the silversmith's art.
- BRACELETS There are many types of bracelets; simple bands of silver one to two inches wide with simple or ornate decoration. Some have mounted turquoise or other stones. Some are narrow bracelets with or without stones. Then there is

narrow bracelets with stamped design; and many types with mounted turquoise. There are cast bracelets with open design and with or without turquoise.

NECKLACES

There are necklaces made of hollow beads for many sizes and shapes, constructed in two pieces and soldered together. Sometimes the so called squash blossom ornaments are strung at intervals between the beads. Many necklaces have pendant Najeh- a design similar to the Arabian hand of Fatma (probably brought to New Mexico by the Spanish). Some early Najeh had two little chiselled hands at the ends to ward off the evil eye. This is doubtless a Navaho adaptation, and one also finds small circles with inset turquoise at the ends. Sometimes this nearly circular design is double. There are many other types of necklaces; strings of turquoise, of shell ground into very fine beads; strings of coral.

RINGS

The earliest rings were plain silver bands, soon some had simple incised designs. The use of turquoise appeared in the early 1880s. Some cast rings are made. Most rings now have insets, usually turquoise, but also malachite and garnets, or cannel coal, occasionally polished petrified wood.

PINS

There are pins of many shapes and designs, both with and without turquoise.

EARRINGS

Several types of earrings are made. Round circular hoops with unfastened silver beads strung on the hoops which move. Flat slightly decorated rings; pendants, narrow cone shaped with spreading flowerlike petals at the ends. The most widely used earrings for men are pieces of turquoise, drilled at one end for the insertion of string to be attached to the ear.

BUTTONS

The variety of buttons is great, both hammered silver as well as cast. There are many sized and many shapes.

Buttons with small turquoise insets; plain silver discs, some with incised designs. Coins are often used which have loops soldered on one side. Buttons are used as ornaments of collars, cuffs, blouses, leggings, moccasins; on pouches and narrow leather straps.

UNUSUAL
PIECES.

The Mother-in-law bells are made from quarters hammered to thin bell shapes by pounding a round headed bar into a corresponding recepticle of hard wood or iron. Small clappers are fastened to the inside. A bell is fastened to the end of a short string of beads. These are made for older women who wear them on their belts to notify their sons-in-law of their approach.

The Powder Horn was a gracefully designed recepticle to hold a charge of powder. It had a handle on one end, the whole object being shaped like an elongated letter "S". A small chain was fastened to the center for attachment to a belt. When bullets were available, powder horns were no longer made, and as many were probably melted down to make other articles, they soon became very rare.

Tobacco Canteens were beautiful small containers, seldom made any more, and there are only a few in existence, mostly in Museums and private collections.

A variety of other pieces are being made today for sale to the American public, such as spoons, silver boxes, and a number of other articles.

When the Navaho Arts and Crafts Guild was founded in 1940 under the direction of Rene D'arencourt of the National Indian Arts and Crafts Board, the first manager was John Adair whose keen interest in and knowledge of the products of the Navaho weavers and silversmiths made him the ideal person to commence this activity. Ambrose Roanhorse, one of the most skilled Navaho craftsmen, was his assistant, and together they made a solid beginning for the Guild. Following World War II, when the Guild was re-activated, other managers took Mr. Adair's place, one of whom trained a young Navaho, Ned Hatathli to follow in his footsteps.

In 1951 the Guild was made a Tribal Enterprise, with Ned appointed as the first Navaho Manager. The Guild grew rapidly under Ned's management as more and more craftsmen brought in their products for sale. Housed at first in the old log building at the Fair Grounds, the Tribe had now erected a beautiful new building in the highway approaching Window Rock where fine facilities display great quantities of rugs, jewelry and other items coming from the skilled hands of the Navaho. The total output from the looms and forges on the reservation is great, for in addition to all the many traders both on and off the reservation who handle these products in quantity, the total amount of sales by the Guild alone came to a quarter of a million dollars in 1963.

Ned Hatathli went on to become a member of the Tribal Council in 1955, serving in this capacity until 1960 when he was made director of Tribal resources, the position he now so ably holds.

Away from the reservation, there is a quantity of imitation Navaho jewelry on the market. Any purchaser will do well to go to reliable shops or direct to the Guild at Window Rock, where all items bear the seal of the Arts and Crafts Guild, and all are of unique Navaho design.

Ambrose Roanhorse, whose superb work as a master silversmith, has won him many awards, including a decoration from France, is now teaching at the Vocational School at Fort Wingate, near Gallup, where boys and girls are opportunity to learn all the Navaho Crafts, but other occupations such as carpentry, shoe making, leather work and dressmaking, trades that will equip these students for their future lives.

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Following the Spanish re-occupation of New Mexico in 1692, some Pueblo Indians, principally from Jemez Pueblo, fled into Old Navaholand. During the recent archaeological excavations in this area, evidence ~~came to light~~ ^{was found} of the close proximity of these Pueblo groups to those of the Navaho. During the ensuing century pottery fragments from Navaho sites indicate definite Pueblo influence, as remnants containing red, black and occasionally white designs on pottery had been fired to the high temperature used by the Pueblo People.

Later came utilitarian pieces, some of good size, with thin ^{walls} ~~walls~~ made of crumbly clay with sand for temper. Shaped with the use of corncob scrapers, many had exceptionally beautiful form. These storage jars had pointed bottoms, being held upright by the use of basket rings or set in depressions in the floor. Water bottles were also made of pottery with narrow openings with handles on the sides through which horsehair ropes were inserted. These were flattened on one side for ease in carrying, and some had designs. Legend tells of water bottles being made of the four colors, white, blue, yellow and black for carrying water for ceremonial purposes, gathered from the four sacred mountains. These water bottles are very rare now, for they were replaced by other types of containers as soon as they became available. Bowls of various shapes and sizes, spoons and dippers and dolls, many with finely executed designs were the products of years gone by.

To-day, only cooking jars and drums are made, and there seem to be but a few potters left. These jars, somewhat similar in shape, rounded on the bottom and with a slight flare at the top, some with scalloped edges, are all that can be found of recent manufacture. These pots are made for cooking, for preparing dyes for wool, and some made specially for remedial and ceremonial use. Some of the latter

latter are used as drums with pieces of sheep skin or goatskin stretched over the tops. A new pot is always preferred for a drum and once it has been used for this purpose, it must never again be used for cooking.

In some areas firing is accomplished by digging a pit, building in it a large fire of pinon wood. When this has burned down, the coals are raked to one side, the pots put in usually up side down, then covered with the hot coals and left for from four to seven hours. In other areas, pots are placed on flat stones, then covered with enough juniper (preferably) to insure the fire burning for six hours without replenishing. A few areas have used Spanish ~~or Mexican~~ type ^{outdoor} bake ovens. After a good fire has burned down, the pots are placed in the oven and left for twelve hours. Pottery making among the Navaho in recent years has never approached the superlative quality of that produced by the Pueblo craftsmen. Probably the Navaho have had less use for pottery, for as they became stockmen often moving from place to place, pottery was too easily broken, and too difficult to transport.

Following many inquiries in numerous regions, I finally heard of one potter in the Shonto area. With an English speaking interpreter, we set off to find her. After looking at my pictures and learning what I wanted to do, she asked us to return in two days and she would be ready. As there are a number of taboos connected with pottery making, I was not at all sure what I would be able to accomplish. For instance, no one must watch the gathering and grinding of potsherds (from ancient pueblo sites) which the Navaho potters use for temper to mix with their clay. This had been all prepared and mixed with the clay when we arrived, but our potter did leave the metate (grinding stone) and a few sherds for us to see. May Adson, our potter, was

sitting beneath a shelter as we drove up and greeted us with the usual courtesy. We watched her make four pots, using much the same technique as that of the Pueblo potters, using a water worn stone for smoothing the inside and a peice of corncob as a scraper on the outside.

Before May fired these pots, we had lunch. We had also been watching a daughter prepare the meal which consisted of roasted corn on the cob, boiled mutton, coffee and fry bread, a dough patted into a round flat cake and fried in deep fat. We produced some fresh fruit from our larder and as we ate we listened to much Navaho conversation. Finally after a few silent moments our interpreter turned to me and said, "You two look kind of old, but you sure got good teeth"!

Lunch over and everything put away, our hostess built up the fire and placed the pots near it. This was in no sense true firing. She turned the pots occasionally to heat them evenly all around.; these were baked rather than fired. Two of the pots we purchased to bring home, but we were sure that because we had witnessed as well as photographed their making, they would never be used, and would be destroyed after we had gone. However, we had had a nice day and had witnessed at least a part of the Navaho process.

When we were packed and ready to leave, May shyly said to us- "We have a new baby in the hogan". Though I had noticed another woman going in and out of the hogan several times during the day, she did not join us nor speak to us. We were taken into the hogan where we found a tiny baby less than twenty four hours old. It was in a small cradle board, sound asleep. Soon the father would make a new permanent cradle board for the addition to the family. We parted good friends and went on our way for we had located a basket maker not too many miles away, whom we were to visit the following day.

While the art of basket making is a minor craft among the Navaho, it is practised with great skill by the few women who still make them. From the time of the return from exile, three types of baskets were made, but in recent years two of these are no longer found, the water bottle and the carrying basket. The water bottle had a long neck and a round base, measuring from twelve to sixteen inches in diameter. It was coated both inside and out with pitch or resin to make it water tight. The carrying basket was a wicker, loosely woven basket with an unfinished edge, used for gathering yucca or cactus fruit or other edible plants. As other types of containers came into the trading posts, these two types quickly disappeared.

From 1868 to the early years of the twentieth century, shallow baskets were made for utilitarian purposes, to eat from, and for holding small objects. Archaeological evidence indicates that graves did contain baskets, though in recent times, they are never buried dead.

During the past fifty years or more, baskets are made exclusively for ceremonial use. They are shallow, perhaps three to four inches deep and twelve to sixteen or eighteen inches wide. The material used is chiefly Sumac, sewn with fine split strips of ^{Sumac}~~yucca~~ leaves. The use of a fine bone awl is used to insert the yucca binding strips. The Sumac twigs, or small branches, are scraped clean and sorted as to size; pieces to be dyed are laid to one side, others will remain the natural color. The same dyes as those used for wool are prepared for the dyeing of ^{the}~~both~~ Sumac and Yucca. Usually only red, indigo and black are used, occasionally yellow.

RED is made from the roots of juniper and mountain mahogany boiled together, then ground, and alder bark is added to the mixture. BLUE is made from the same indigo dye as prepared for dyeing wool.

A native blue is also used, by ^{ing} using a mixture of a blueish clay and ochre, pulverized and ^{moistened} ~~mixed~~ with water.

BLACK is obtained from coal added to boiling sumac leaves, or from a sulphurous rock, slightly roasted with pinon gum or resin.

Added to boiling sumac, this gives a rich, lustrous black.

The basket maker begins by winding a sumac twig around a small stick known as the bottom of the basket. In order that it will be pliable, all material is soaked before using. Sewing is done counter clockwise, with the exception of one rare ceremonial basket which is made clockwise and must be completed in one day. So deft and strong is the sewing that a basket will require only a few minutes soaking to make it water tight.

DESIGNS are limited to geometrical shapes, tiered block designs, sometimes used in a single row, sometimes double with the second inverted. Sometimes a single open unit is used, sometimes bands with no geometric forms. Always there is the "trail" or "path of exit", the "spirit path" a narrow strip where the design does not quite meet, for the Navaho believe that to complete the circle would imprison the spirit of the maker. This is also true of the Pueblo pottery, ~~makers~~ for a similar trail will be found on all decorated pottery. When a basket is nearly complete, the rim is finished in a herring bone, or false braid, technique. ^{Trail?} The final end of the rim is always directly above the spirit path. In ceremonies where a basket is full, the medicine man knows where the spirit path is by finding the end of the rim, and the basket is placed so that the spirit path always faces the east.

There are numerous ritual uses of baskets. They are used as drums by turning them up side down and beating with small drum stocks.

They are used to contain ritual paraphernalia such as prayer sticks, medicine bags, fetishes, and other articles. They are used as containers for ritual baths. They are used as food containers in certain ceremonials. They are used for the corn meal porridge in wedding ceremonies, which has given them the name of wedding baskets. They are used as portions of masks in certain nine night ceremonials. They are used in minor rituals in the home. They are used to contain the sacred corn pollen.

There are many strict taboos in connection with basket making as with all the other crafts. In silver smithing, the craftsman must not make certain pieces of jewelry while his wife is pregnant or some disaster will occur. While a woman is making a basket she must not be touched by anyone. No one may step over the materials being used to make a basket, otherwise the material will break. Should a man make a basket, he will become impotent. Blood must never touch a ceremonial basket. Should this taboo be broken, harm will come not only to the maker, but also to the singer who used it.

Other crafts pursued by the Navaho are many kinds of leather work, both decorated and plain. Saddles, shoes and moccasins, pouches, straps and belts, hobbles,, quirts and ropes. In early times the Navaho became good tanners for they made shields and spears, quivers for their arrows, leather caplike helmets. To whatever craft the Navaho turns ^{his} talents, he will execute it with skill and dexterity.

The art of painting is a comparatively new venture for the Navaho. However, as early as 1901 ~~while~~ Dr. Kenneth Chapman, ~~xxx~~ while working at Chaco Canyon, discovered a Navaho boy making drawings with colored pencils. But it was not until much later that any serious work was done. In 1932, the Santa Fe Indian School commenced a class in painting ~~until~~ the direction of Dorothy Dunn in which several of the now famous Navaho painters had their start. In that same year three Navaho boys made a series of murals in the School dining room under the supervision of Olive Rush, the well known Santa Fe artist, who had great interest in developing the painters' art among both Navaho and Pueblo Indian students.

Such famous painters as Gerald Nailor, who painted the murals in the Tribal Council room at Window Rock, and murals in the Department of Interior in Washington, had his start in Miss Dunn's class. And there were many more: Andrew Tsihnajinnie, Ha-So-De, Quincy Tohoma, and Harrison Begay whose portrait is here as well as one of his fine paintings. Later there were Beatian Yazz, Wade Hadley and others. Today there are many more young Navaho doing excellent work at the new Institute of American Indian Art In Santa Fe.

One interesting aspect of this work by Indian artists, not only Navaho, but many other tribes as well, is their method of work, which is instinctively oriental in approach. Pictures are painted from knowledge and inner vision rather than from a direct approach. There is always an extraordinary sence of design, skilled sure draftsmanship, and the Indian's subtle use of color. Museums all over the this country and in ^{Europe} own examples of Indian painting, many of them by Navaho artists. One can truly say that all ^{American} Indians have artistic potential. The amazing amount of talent that is coming to light at this new Institute ~~of~~ ~~American Indian Art~~, now in its third year, is ample proof of this.