Handbook of North American Indians

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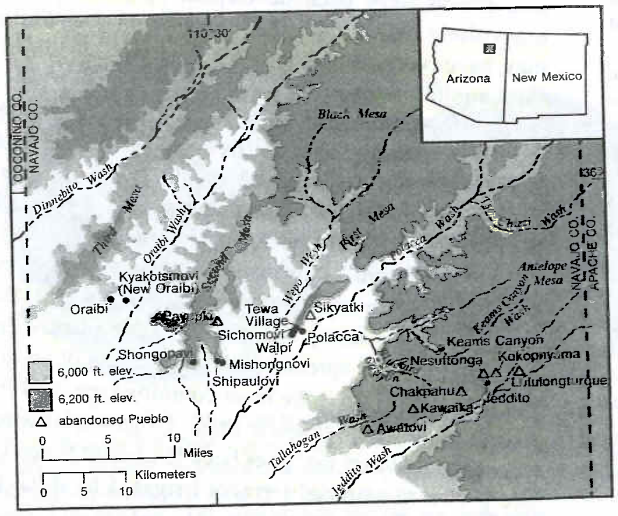
Hopi Prehistory and History to 1850

J.O. BREW

Although most scholars are now prepared to admit that man has probably occupied the region of the Hopi towns for at least 10,000 years, the first identifiable remains date from the early centuries of the Christian era (Euler and Dobyns 1971:1–8). Sites representing the late Basket-maker and early Pueblo phases of the prehistoric culture are to be found throughout the Hopi country (fig. 1), and one of them has been thoroughly excavated (Daifuku 1961). That the villages of 1,500 and 1,600 years ago were occupied by direct ancestors of the modern Hopis is a matter for discussion, but the cultural remains present a clear, uninterrupted, logical development culminating in the life, general technology, architecture, and agricultural and ceremonial practices to be seen on the three Hopi mesas today (Brew 1941).

Until the mid-thirteenth century the major cultural affiliation seems to have been with the villages at the other end of Black Mesa in Marsh Pass and vicinity to the north, the people known as the Kayenta Anasazi. Until that time the Hopi area was characterized by hamlets, small pueblos, and isolated farmsteads. From the middle of the thirteenth century, for 100 years, the population on the Hopi mesas grew and grew as the populous centers in Marsh Pass, the Flagstaff area, and the Little Colorado valley were abandoned, presumably because of drought, with the attendant loss of fields through arroyo cutting, and the increased aggressiveness of the so-called wild tribes—the Navajos, Apaches, and Utes.



514 Fig. 1. Abandoned Pueblos in the Hopi area.

Consequently, during the last half of the thirteenth century and the first half of the fourteenth a striking change is noted not only in the size of sites but also in their contents. Traits previously foreign to the area became integral parts of the culture. Influence from the Little Colorado River valley was particularly noticeable in pottery (W. Smith 1971). The Hopi country became one of the three major centers of Pueblo life during the fourteenth, fifteenth, and sixteenth centuries, along with Zuni-Acoma and the Rio Grande Pueblos.

The influx of immigrant population at that time brought into being sizable towns of 500 to 1,000 people throughout the Hopi country. Scholars have argued as to whether or not the large towns on Antelope Mesa, east of First Mesa, were indeed Hopi. These towns were Awatovi, Kawaika (Kawaika-a), Chakpahu, Nesuftonga, Kokopnyama, and Lululongturque.* They have been called

* The Hopi language is a member of the Uto-Aztecan family; Hopi, Takic, Tubatulabal, and Numic make up the Northern Uto-Aztecan branch of the family (Heath 1977:27), earlier known as Shoshonean (Powell 1891:108–110; Kroeber 1907:97). The differences and correspondences among the various Hopi dialects have not been studied in detail, but it appears that there are at least four major varieties: First Mesa (called Polacca by Whorf 1946:158), Mishongnovi (Whorf's Toreva [tô¹rēva]), Shipaulovi (Whorf's Sipaulovi), and Third Mesa (Whorf's Oraibi). Hopi forms written in italics in the *Handbook* are in the Mishongnovi dialect or, where so labeled, the Third Mesa dialect.

The phonemes of the Mishongnovi dialect, as described by Whorf (1936:1198–1201, 1946:159–161), are as follows: (unaspirated stops) *p, t* (alveolar), *c* (alveolar affricate, [ts^y]), *k* (palatal), *k^w, q* (velar); (preaspirated stops) *^{h}p* (Whorf's 'p), *^{h}t, ^{h}c, ^{h}k, ^{h}k^w, ^{h}q;* (nasals) *m, n, ŋ^y* (Whorf's ɲ), *ŋ^w, ŋ;* (fricatives and resonants) *s, l, v, r* (untrilled, retroflex, and slightly spirantal), *w, y;* (voiceless continuants) *M, N, Ŋ, L, W, Y;* (laryngeals) *h, ʔ;* (vowels) *i, e* ([ɛ]), *a, o* [o^u], *ɨ* (Whorf's e), *ö. k* is [k^y] before *a, e,* or *i;* in syllable-final position *c* is [ts], *k* is [k], and *v* and *r* are devoiced to [f] and [ɪ], respectively. *v* is bilabial [*β*], varying to labiodental. Plain [k] before *a* (in loanwords from Spanish) is written *ḳ*. Vowels have three lengths: long (*i·*, etc.), medium (*i*, etc.), and clipped (*i̇*). Medium vowels are half-long with a decline of force before a following consonant; clipped vowels are short and staccato, being interrupted at full force by the closure of the following consonant. There are three levels of force-and-pitch stress: high (v́), middle (v̄), and low (v̀). Long and clipped vowels always have high or middle stress; only medium-length vowels may have low stress.

The Third Mesa dialect differs from the Mishongnovi dialect in lacking the preaspirated stops, the voiceless continuants, and the distinction between medium and clipped vowels. Where Mishongnovi

HP22938

Keresan by some. Keresans may very well have been present, particularly after the Pueblo Revolt of 1680, and representatives of other Pueblo groups were likely to be found in them as well. Archeological excavations at Awatovi, however, show that the town was well established in the twelfth or early thirteenth century, and the remains are similar to those found in contemporary sites elsewhere in the Hopi country. In any case, by the time the Spaniards arrived in the Hopi country assimilation had been achieved and most of the Antelope Mesa towns abandoned. Present Hopi clans on both First and Second Mesas claim rights in Awatovi and to the still-cultivated farmlands in Tallahogan and Bluebird canyons, on the western escarpment of Antelope Mesa, by direct descent. The legitimacy of these claims is attested by clan and family names (Montgomery, Smith, and Brew 1949:7).

The picture of Hopi life and achievements during the three centuries preceding European contact presents three outstanding facets: their highly specialized agriculture; their extraordinary artistic talents as shown in mural and pottery painting; and their mining and using coal at a time when a royal edict proscribed its use in the city of London as injurious to health.

Agriculture

The basis of Hopi life and the reason that the tribe could persist in their harsh, dry environment and attract others to them in periods of serious drought was the skill with which Hopis developed especially adapted plants and their ability to coax them into high yields. To view the region today and to see the meager corn plants and stunted fruit trees struggling for survival in dunes of shifting sand brings expressions of pity from tourists familiar with the lush fields of Nebraska or Illinois. The yield from those "poor" plants is phenomenal (Hack 1942:19-38, 71-80).

The Hopi country lies on the southern escarpment of Black Mesa, a dissected highland about 60 miles wide, underlain by highly resistant Upper Cretaceous sandstone. The ephemeral streams of the Tusayan washes, which separate the fingering prongs of the escarpment upon which the Hopi towns are built, bring sand and silt from Black Mesa to the barren lower plains leading toward the Little Colorado River. The prevailing southwest winds separate the sand from the silt and carry it back northward to bank it against the escarpments. Because of the relatively large quantities of dune sand resulting from this process, the Hopi country has a lower runoff after rain and more permanent springs than areas of similar climate nearby. As the moisture content of these sand-dune fields is relatively high, the crops are not affected by epicycles of erosion or by the dissection of floodplains as are flood-water fields. Because of the high winds, which produced this type of field in the first place, the crops have to be protected from the shifting sand. For this purpose windbreaks are constructed of brush held in place by large stones. The ancient fields, where the sand has now blown away and the brush has decayed, are marked for archeologists by parallel lines of stone running at right angles to the contours of the escarpment terraces. To utilize such fields, plants with deep roots must be grown, such as beans and maize and, since contact with Europeans, peaches and apricots. Specialized strains have been developed. A maize plant not many times higher than the length of its abundant ears may have roots reaching 15 to 20 or more feet into the sand aquifer.

The Hopis practiced three other types of farming (as they do today) and the records of all these are found by the archeologist (Hack 1942:19-38). Two of these are types of flood-water farming: the standard type where fields are planted in the valleys of major streams that overflow their banks during high water caused by rapid snow melting or summer cloudbursts; and the akchin type (a Papago term) wherein crops are planted in the area where water spreads out at the mouth of an arroyo (Bryan 1929). This is the most common type used by the Hopi now and in prehistoric times. Irrigation is the fourth type of agriculture that goes back to ancient times. Crops are grown in artificial terraces irrigated by ditch or by

has a vowel followed by a preaspirated stop, Third Mesa has a long vowel with falling pitch (written v̂·) followed by a plain stop. These lengthened vowels with falling pitch, which also arise from sequences of vowel plus glottal stop, have been analyzed by Masayesva Jeanne (1978) as underlying v + ʔ, in contrast to the long vowels with level high pitch analyzed as v + v: e.g., Mishongnovi *wi̱ʰti* 'woman', Third Mesa *wî·ti* (analyzed as wi̱ʔti); Mishongnovi and Third Mesa *só·hi̱* 'star' (analyzed as soohi̱). There are other patterns of correspondence between the vowel nuclei of the two dialects. Stress is assigned to the first vowel of a word if the vowel is long, followed by a consonant cluster, or in a disyllabic word; otherwise it is assigned to the second vowel. Suffixed verb forms keep the stress of the simplex: *máqa* 'gives', hence *máqani* 'will give'; some loanwords make up another class of exceptions. Because the stress is regarded as basically predictable it is not written on Third Mesa words, except when sources that mark stress are quoted; the patterns of secondary stress in compounds and other complex forms have not been described. Third Mesa and First Mesa Hopi retain *p* before a consonant and finally, where Mishongnovi and Shongopavi have [f] (phonemically *v*). Some other differences among the dialects are mentioned by Whorf (1946:160). His statement that Third Mesa has preaspiration agrees with Harrington's (1913) data against the later information used here; his statement that First Mesa lacks preaspiration disagrees with the evidence of the forms in Stephen (1936), which seem to have it regularly. A Third Mesa dialect lexicon, organized by semantic field, is Voegelin and Voegelin (1957); Kalectaca (1978) is an introductory pedagogical grammar by a Shongopavi speaker.

Hopi words not available in phonemic transcription are cited in a normalized spelling in roman. In these forms u often represents *i̱* (and sometimes *ö*) and rz or zr sometimes appears for *r*.

HP22939

hand (see "Hopi Economy and Subsistence," fig. 1, this vol.).

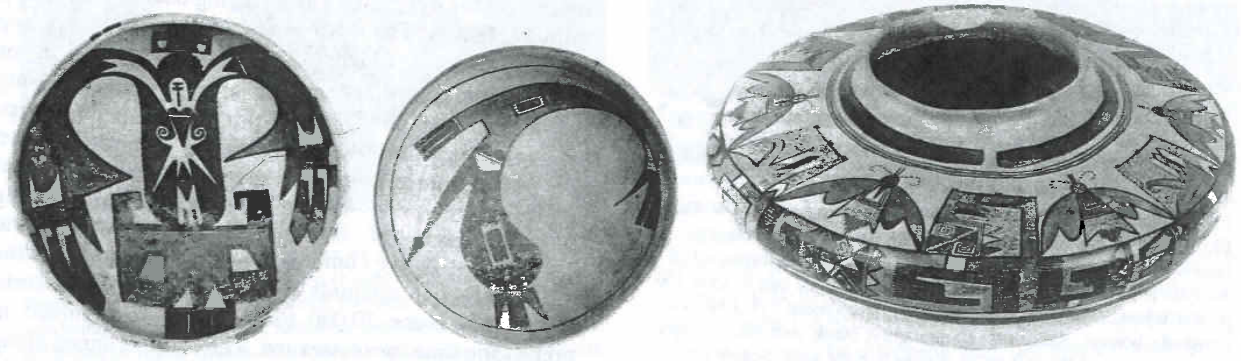
Mural and Pottery Painting

The beauty of Hopi painted pottery is known throughout the modern world; so also was it known and highly valued in the aboriginal world of the North American West. Until approximately A.D. 1300 pottery in the Hopi country was simply a regional variation on the wares of other parts of the Pueblo area. Then, with the advent of the fourteenth century, came an artistic explosion. The black-on-white designs, beloved of archeologists but relatively undistinguished, were superseded by brilliant black-on-orange designs and orange polychromes (fig. 2) (W. Smith 1971:352–473). These in turn were superseded by black-on-yellow types quite different in design layout and execution from any other Pueblo ware. By the addition of red to this, a polychrome was produced. Its modern counterpart is in constant demand in shops throughout the country. It is called Sikyatki Polychrome (fig. 3) after the first major archeological excavation in the Hopi country. Fewkes (1898) assigned the name in honor of the large prehistoric town he dug during the 1890s on the eastern terraces of First Mesa.

In contrast to the almost exclusively geometric nature of other Pueblo wares, the late prehistoric Hopi yellows and polychromes are characterized by startling sweeping

after Smith 1971: figs. 185f, 226a, 228a, 269b.

Fig. 2. Awatovi pottery. a–b, Jeddito Black-on-orange jar and bowl with black curvilinear and angular design elements painted on unslipped orange surface; c, Jeddito Polychrome jar, distinguished from Jeddito Black-on-orange by the addition of white paint in the decoration; d, Awatovi Black-on-yellow bowl with characteristic black symmetrical designs painted on unslipped yellow surface. Diameter of a about 17 cm, rest same scale.



Smithsonian, Dept. of Anthr., Archeol.: left to right, 155498, 155545, 155681.

Fig. 3. Sikyatki Polychrome pottery with characteristic painting of highly stylized life forms on yellow ware bowls and jars. left and center, Shallow food bowls with designs on interior surface representing birds; right, storage jar with wide, horizontal shoulder decorated with butterflies, possibly indicating the 6 cardinal points (Fewkes 1919:254), and geometric elements derived from abstracted bird and feather forms around the mid-body. Diameter of right 36.2 cm, rest same scale.

HP22940

curvilinear motifs; bird, animal, floral, and human representations; and religious masks and ceremonial scenes. Their freedom of rendition is completely at variance with the canons of all other prehistoric Pueblo schools of pottery design, except for the contemporary Mimbres ware in western New Mexico, which shared some, but far from all, of its freedom from established tradition.

The Sikyatki and black-on-yellow wares have an interesting history. The painted pottery being turned out on First Mesa in the 1970s is a modern manifestation. The tradition is not continuous. With the coming of the Spaniards in the early seventeenth century, Hopi pottery went into an artistic decline. During the nineteenth century, although curvilinear designs persisted, they became highly formalized and stereotyped. The untutored eye is unable to distinguish them from the products of Zuni to the east. Then came Fewkes to dig at Sikyatki. The Hopis then, as they are now, were vitally interested in their own history. One of the more avid observers was a young girl from Tewa Village (Hano) named Nampeyo. Fascinated by the ancient designs, she instituted a neoclassical revival that took hold immediately.

Paintings on kiva walls have been found in a number of Pueblo sites back to at least as early as the eleventh century (Brew 1946:fig. 87). The early Pueblo II and III examples are mostly geometric in design. The largest number known are the 180 found at Awatovi and Kawaika in the Hopi country (W. Smith 1952). These date from the fifteenth, sixteenth, and seventeenth centuries and are splendid examples of Hopi painting. The relationship with Hopi pottery painting is clear, but the murals are more varied and often more elaborate (fig. 4). Designs are both geometric and naturalistic (fig. 5). The animal, bird, and human figures are often stylized (fig. 6) and frequently masked. The murals are not decorations; they are part of the religious ceremonies performed in the kivas. Some of the figures can be identified with modern Hopi ritual.

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Fig. 4. Mural paintings from excavated kivas at Awatovi (W. Smith 1952:figs. 45a, 48a), similar in design to pottery decoration. top, Geometric pattern in red, yellow, black, and white, reminiscent of Anasazi textile and black-on-white pottery designs; one of over 100 plaster layers, 27 of which were painted (from room 218, front wall, design 3). bottom, Red, orange, blue, gray, black, and white design on yellow ground (from Test 14, Room 3, right wall, design 12) similar in type to designs painted on Sikyatki Polychrome pottery. Stylized feathers, wings, cloud symbols, and scrolls are characteristic of Sikyatki patterns. Length of each approximately 265 cm. Slightly reconstructed copy of original murals made by the Peabody Museum Awatovi Expedition, 1935–1939.

The reason so many were found is that, when they had fulfilled their function in the ceremonies, they were covered with a layer of plain, unpainted plaster so as not to be seen by unauthorized persons. (In modern Hopi kivas with more stable wall surfaces the paintings are washed off.) Archeologists carefully scraped the layers off, one by one, and revealed the paintings. At Awatovi chunks of fallen wall plaster were found with over 100 layers, 20 to 30 of them painted. Many of the recorded Hopi murals may well be grouped among the finest examples known of indigenous American art.

Coal Mining

Although coal crops out extensively throughout the Pueblo area, no evidence has been presented for its industrial or domestic use in prehistoric times except by the Hopis. They used it for cooking, for heating, for firing pottery, and for pigment. They used the flaky, resilient ash as a bed for the flagstones on their kiva floors (Hack 1942a; W. Smith 1952:6, 20, 27).

Throughout the Hopi country coal beds crop out on a wide bench beneath the mesa rim. It is mined in the 1970s and was mined in Pueblo III and IV times, the thirteenth through the seventeenth centuries. Coal was used to heat the houses and kivas. Since fuel has ritualistic significance among the Hopis, coal ash and wood ash occur in separate fireplaces in the kivas. Pottery was fired in ash heaps conveniently near the coal outcrops. The simple technique of prehistoric Hopi coal mining consisted of removing the overburden and digging out the coal—strip mining, that is. The waste was piled behind the mining face. The result, which can readily be observed in air photographs, is an area stripped of coal and overlying rock, piled high with heaps of waste material. Such heaps occur on the appropriate bench on all Hopi mesas. When the overburden became too thick for easy removal, that particular face was abandoned. Underground mining was also practiced, and the few occurrences found indicate a primitive combination of the longwall and the room-and-pillar methods (Hack 1942a:8–9). It is estimated that some 30,000 tons of coal were mined in prehistoric times near Awatovi. The amount mined along the Jeddito Valley escarpment of Antelope Mesa probably exceeded 100,000 tons. The tools used were simple: elongated picks, approximately 10 to 30 centimeters (4 to 12 inches) long; hammerstones (one found at a Jeddito

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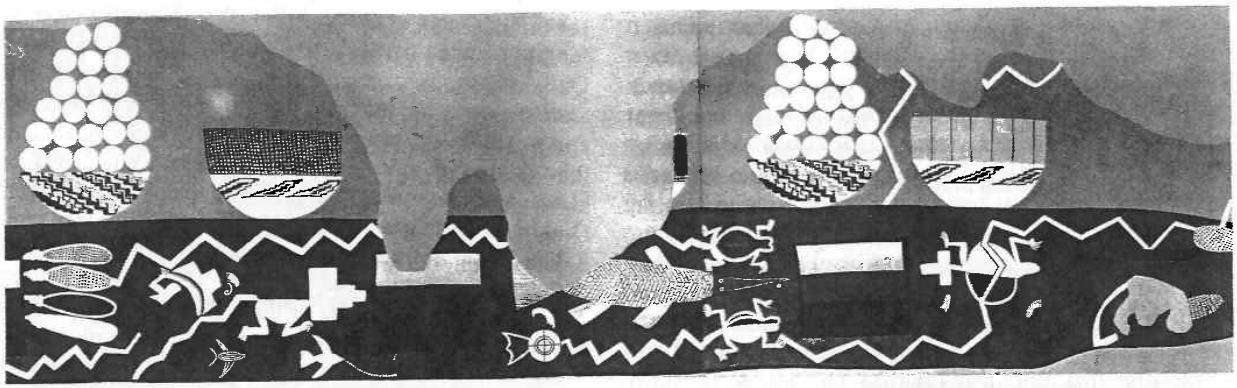

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Fig. 5. Mural painting from Kawaika (Test 4, Room 4, front, right and back walls, design 8) (W. Smith 1952:fig. 60). Lower band is of dark blue, over which frogs, lizards, a large fish with red snout and white teeth, and ears of corn in variegated colors have been painted, joined by what appear to be bolts of lightning. Several rectangles, composed of bands of yellow, dark blue, and maroon, possibly symbolize rainbows. Polychrome ceremonial bowls filled with ears of corn arranged vertically alternate with bowls stacked with round flower "blossoms" (W. Smith 1952:234–237, 249–261). Length of section shown approximately 380 cm. Slightly reconstructed copy of original mural made by the Peabody Museum Awatovi Expedition, 1935–1939.

mine was of heavy quartzitic sandstone); and large reused potsherds. Some of the potsherds at the old Jeddito coal faces and in trenches through mining waste showed evidence of having been used as scraping tools. They were probably also used on the face for prying chunks of coal loose by working along the vertical joints (Hack 1942a:11–12; Woodbury 1954:180–181).

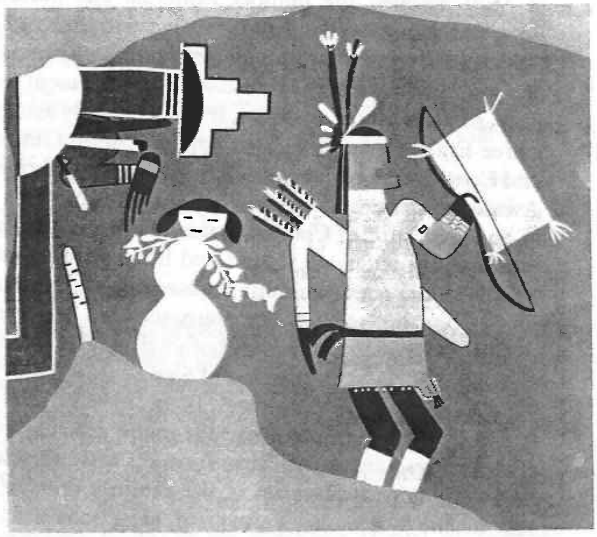

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Fig. 6. Section of painted mural from an Awatovi kiva (Room 529, right wall, design 1). Warrior figure at right holds a bow and white shield or banner and wears a quiver, lavender shirt, white necklace and bandoleer, gray kilt, and feathered headdress. A squash-woman, composed of yellow squash with tendril arms and human head (with side-whorled hairdo), appears to his left. Above her is a cloud-terrace symbol, and the posterior end of an unidentified figure (see W. Smith 1952:figs. 38c, 61b). Height of squash-woman almost 60 cm. Slightly reconstructed copy of original mural made by the Peabody Museum Awatovi Expedition, 1935–1939.

During the 300 years of Hopi coal mining near Awatovi the daily output is estimated at about 450 pounds (Hack 1942a:18). With primitive methods used in mining, this implies great activity, since Awatovi probably had a population of only a few hundred persons at a time. From the waste heaps on the terraces it is assumed that a similar consumption characterized the other contemporary Hopi Pueblos. The use of so great a quantity implies that coal must have largely, if not entirely, supplanted wood as fuel. In any case coal was an important natural resource to the Hopis from the thirteenth to the seventeenth centuries.

There is no real evidence as to why coal came to be used as a fuel by the Hopis or why it was abandoned. The location of the Hopi towns is in a border zone between desert scrub-type vegetation and the piñon-juniper forest. Since coal crops out so widely near the towns it may have been discovered accidentally and have come into use after the forest border had been pushed back by cutting or had retreated because of a slight climatic change. Perhaps when the properties of coal became known, it was easier to use coal than to cut wood with the stone axes then in use, even though the burning of coal must have been more unpleasant. The recognition of the relatively more noxious nature of coal fires seems indicated in crude stoves with chimneys found in Pueblo IV sites.

The reason for dropping the use of coal is also a puzzling problem. After the arrival of the Spaniards, wood came to be used again for fuel in the houses, and sheep dung for firing pottery. Perhaps the supply of easily available coal by stripping had become exhausted. The possibility of this at Awatovi is suggested by the dangerous undermining resorted to at the western end of the mining area. More important is the change in culture resulting from contact with the Franciscans. The priests

HP22942

built their church and friary along one side of the main plaza of the seventeenth-century town. Perhaps the friars disliked the fumes from the coal. Also when the Spaniards came they brought sheep, burros, carts, and iron tools. With donkeys and iron axes the work of gathering wood would have been much less and the area around the towns from which wood could be easily gathered greatly increased. Furthermore, the shoveling up of dried dung from the sheep corrals would have been simpler than knocking coal from the seams below the village and hauling it up. Quite probably the combination of the new technology with the dwindling of the easily mined coal supply brought about the change.

History

Franciscan Awatovi

The Spaniards were never numerous in the Hopi country. The extent of European contact was limited to sporadic, widely spaced military exploring expeditions, followed by a few resident Franciscan friars. The records of Spanish activity in the region are sparse and no actual document has come to light that originated in the Hopi country. All information comes from reports of military men, political officers, and priests, written mostly in Santa Fe or Mexico and found all the way from New Mexican to Spanish and other European archives (Montgomery, Smith, and Brew 1949:3-43, 113-176).

It is fairly well established that Awatovi was the first town in the Hopi country to be visited by Spaniards. In 1540 Gen. Francisco Vásquez de Coronado dispatched Pedro de Tovar with 17 horsemen and three or four footmen from Cíbola (Zuni) to seek the province of Tusayán (Hopi), described by the Zuni as a group of "seven villages of the same sort as theirs." A Franciscan friar, Juan de Padilla, accompanied them (Pedro de Castañeda in Winship 1896:488). A brief skirmish was followed by present giving and Tovar moved on to other Hopi towns. During his visit Tovar learned of a large river farther to the west. Since the main purpose of the exploration was to discover a route from New Mexico to the "South Sea," when Tovar reported to Coronado a new expedition was soon organized to investigate the river. The leader was García López de Cárdenas. He was well received when he reached Tusayán and was entertained by the natives, who gave him guides for his journey (Winship 1896:489). Again, the town or towns visited are not mentioned by name. The expedition discovered the Grand Canyon of the Colorado, but since the Spaniards could not even find a trail down from the rim, the discovery did not result in a practical route to the Gulf of California. The failure to find a trail down suggests that perhaps Cárdenas did not have the complete cooperation of his Hopi guides.

In 1583 the Hopi country was revisited by an expedition led by Antonio de Espejo (Pérez de Luxán 1929). The widely held, erroneous belief that Kawaika and not Awatovi was the Hopi town first visited by Tovar in 1540 arises from a misinterpretation of a statement in the journal of Diego Pérez de Luxán, a member of the Espejo expedition. A careful analysis of the documents has established Awatovi as the first point of contact by Tovar (Reed 1942; Montgomery, Smith, and Brew 1949:5-7). Espejo's first contact was Awatovi, which he mentioned by name (Aguato) and where he reported a friendly reception and took possession for His Majesty of Spain.

The last two decades of the sixteenth century and the first three of the seventeenth saw the Spaniards attempting to consolidate their position in the Rio Grande Valley. At times it was touch and go with the colony. The lack of material wealth in the New Mexico Pueblos had been a bitter disappointment to the Spanish merchant-adventurers and military men. In 1608 the abandonment of New Mexico as an "extravagant and unprofitable possession" was actually recommended by the Council of the Indies and seriously considered by the king (Hammond 1927:139). The priests alone had found a crop awaiting them and their eagerness to reap the harvest of souls had much to do with the decision to continue.

The Franciscan Period

By the end of the third decade of the seventeenth century the Spaniards in the Rio Grande were ready to expand. An influx of 30 new Franciscan friars from Mexico City in 1629 doubled the number available and permitted foundation of establishments to the west (Scholes and Bloom 1944-1945:69-72). The new conversions included Acoma, Zuni, and Hopi. The initial establishment in the Hopi country was at Awatovi. It was not easily achieved. Three Franciscans, Francisco Porras, Andrés Gutiérrez, and Cristóbal de la Concepción (a lay brother), arrived at Awatovi on August 20, 1629. Since that is the feast day of Saint Bernard of Clairvaux, the mission, according to custom, was dedicated to him and henceforth known as San Bernardo de Aguátubi. Subsequently a confusion arose from the fact that San Bernardo and San Bernardino, in abbreviated form, are both written Ber^{do}. Bernardo is correct. Saint Bernardine of Siena's feast day is May 20 (Montgomery, Smith, and Brew 1949:9, 124-125).

This was an important day in Hopi history. The events that occurred there then and during subsequent weeks changed radically the ways of the people and eventually led to the downfall of Awatovi. The inhabitants of Awatovi at first resisted conversion but it is said that they submitted in response to a miracle when a cross placed on the eyes of a blind youth by Father Porras restored his sight (Perea 1945; Benavides 1916:28-30). Whether or not something like this actually happened at Awatovi in 1629, the story of it is important and should not be underestimated. For if the citizens of Awatovi 71 years later, in 1700, believed that such a miracle had occurred it would help to explain the unusual strength of their

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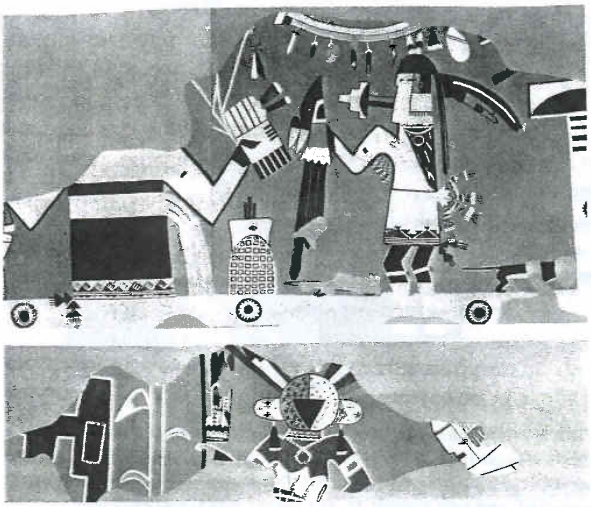

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Fig. 7. Mural paintings from kiva directly under the main altar of San Bernardo de Aguátubi mission (W. Smith 1952:figs. 79a, 81a) (see fig. 8). top, Section of one of a series of similar paintings (Awatovi, Room 788, right wall, design layer 1) extending around 3 walls of the kiva, each composed of a central figure (left) flanked by an ear of corn similar to those used on altars (see Fewkes 1927:pl. 3) and a figure in full dance costume holding a parrot. The central figure, legless but with a black dance kilt and white rain sash, carries what may be a prayer-stick bundle in his left hand. The flanking figure (at right) wears a white dance kilt with red and black designs, a feather headdress, and (probably) a mask. The cloud-terrace symbol emerging from his mouth has been interpreted as a breath cloud or pipe, relating to the ritual symbolism of blowing either breath or smoke (W. Smith 1952:237). bottom, Figure from design layer 4 of the same wall. This figure corresponds in mask, headdress, and complex staff to the Ahul kachina or one of its variants (W. Smith 1952:303-304; see also "Pueblo Fine Arts," fig. 6, this vol.). His mask is half gray and half white, with crosses and a large triangle painted in black, and is topped with eagle-tail and unidentified red feathers. Length of top segment approximately 190 cm, bottom same scale. Slightly reconstructed copies of original murals made by the Peabody Museum Awatovi Expedition, 1935-1939.

Christianity in comparison to that of the remainder of the Hopi. It would be a good reason for their return to the fold, alone of all the Hopi towns after the revolt, against the advice and threats of their neighbors. There must have been strong motivation for their choice to face death and destruction on the side of the Christian God and the Spaniards against their native kachinas and fellow Hopis.

Another factor in the apparent vitality of Awatovi Christianity may lie in the personality of the man who converted them, miracle or no. Father Porras seems to have gained dominance in the minds of Awatovi over the local religious leaders. That dominance was expressed physically and persisted for 70 years. The finest examples of Hopi kiva murals were found at Awatovi, directly under the main altar of church 2 (fig. 7). The kiva was complete, even to the entrance hatchway, and filled to the top with clean sand (fig. 8). Obviously it had been obtained by the priest from the Hopi owners for the express purpose of "superposition," demonstrating the ascendancy of the new faith over the old. Amid seventeenth-century New Mexico records replete with reports of mistakes, irregularities, and immoralities in the public and private lives of members of the government, the military, and the priesthood, Porras stands out as a man of exceptional ability and probity. The archeological evidence demonstrates that he was a great builder. He also learned to speak Hopi.

Two other missions were established in the first flush of missionary zeal, at Oraibi and Shongopavi, and also two *visitas,* at Walpi and Mishongnovi. The two missions subsequently were demoted to *visitas,* with only occasional visits by a priest. Christian zeal persisted only at Awatovi.

Although the religious effect of the Spanish advent on most Hopis was small, the material effect was great. In addition to domestic animals and new food plants, European goods flowed into the Hopi country, although this stream, like the local watercourses, was intermittent and irregular. Every three years, beginning in 1631, His Majesty's government set aside a considerable sum for the New Mexico missions. This largesse produced a triennial wagon train of iron-tired carts pulled by mules, which carried north the products of workshops in Mexico City, Puebla, Europe, and the Orient.

The outposts of Old World culture in New Mexico were thus at the far end of a remarkable system of procurement. The Manila galleons provided a yearly service for 250 years, 1565 to 1815, bringing Chinese goods to Acapulco, whence they came to Mexico City over the so-called China Road. The Spanish *flota* provided more frequent service to Vera Cruz. So crockery came from the kilns of Puebla in Mexico, Valencia in Spain, and Ching-te-chen in China (Woodward 1949). In addition to silks, tapestries, and tablecloths, the Manila galleons brought nails, sheet iron, tin, and lead. For the Hopi, the most valuable imports were the Spanish woodworking and stoneworking kits: knives, axes, adzes, mattocks, picks, crowbars, saws, chisels, planes, and augers. Religious paraphernalia loomed large in the caravan inventories (Scholes 1930). In September 1627, 18 bells of 200 pounds weight each were brought for New Mexico. Fragments of one of them were found in the excavations at Awatovi, and two still serve the church at Acoma.

Relations between Hopis and clergy during the seventeenth century were varied in character. Under the supervision of the blue-robed priests, Hopis built the churches and friaries, painted decorative murals on the walls (fig. 9), and made pottery utensils for the kitchen and refectory. Soup plates with Hopi designs and a fillet of clay affixed to the base in imitation of Old World wheel-made pottery are found in the ruins (fig. 10). An

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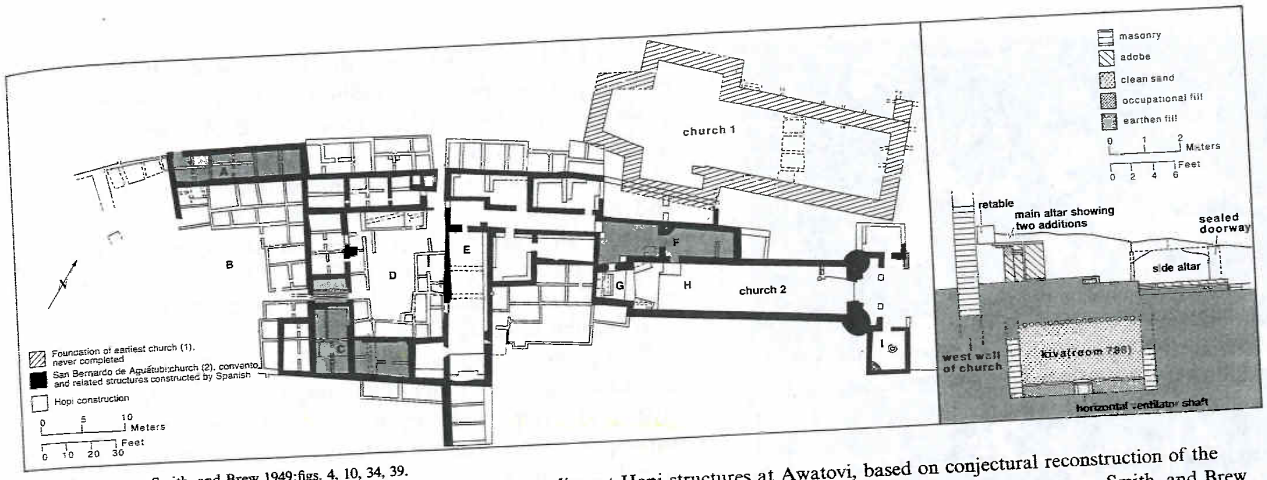
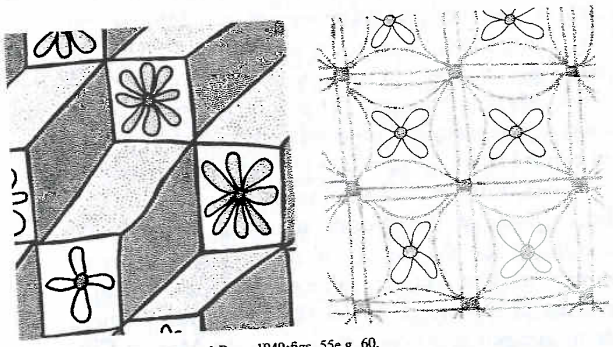


after Montgomery, Smith, and Brew 1949:figs. 4, 10, 34, 39.

Fig. 8. Plan of San Bernardo de Aguátubi and immediately adjacent Hopi structures at Awatovi, based on conjectural reconstruction of the ruins. (For plan of the entire site of Awatovi as excavated by the Peabody Museum Excavations 1935–1939, see Montgomery, Smith, and Brew 1949:fig. 3.) Church and convento complex included: A, storage and shop area; B, service yard; C, kitchen and refectory areas; D, courtyard; E, friar's chapel; F, sacristies; G, nave (containing main altar, which had been twice renovated, and side altars); H, sanctuary; and I, baptistry (font in center). Cross-sectional detail shows position of main altar relative to the filled kiva (room 788), one of many rectangular kivas excavated at Awatovi. The opening under the floor of the kiva is the ventilator shaft.



after Montgomery, Smith, and Brew 1949:figs. 55e,g, 60.

Fig. 9. Painted mural designs from the church of San Bernardo de Aguátubi that appeared to either side of the altar. These were probably executed by the Hopis on the basis of designs provided by the friars, apparently in imitation of decorative tiled designs used for altar faces in Spanish and colonial Mexican churches (see Montgomery, Smith, and Brew 1949:291–339). As with kiva murals, different designs were applied to successive layers of plaster, not all of which were decorated. Design at left (in green, ocher, and brown) was applied after the black, brown, and cream design at right. Drawn to scale; width of each section approximately 30 cm.

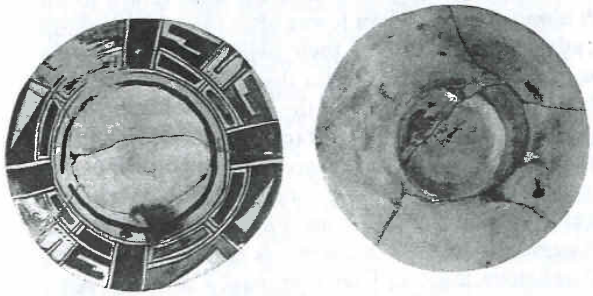
immense bowl with a hole in the bottom was found in a holy-water font at Awatovi, where the church and friary have been excavated completely (Montgomery, Smith, and Brew 1949:47–339). Friction was commonplace, however, and culminated when the Hopis joined in the Pueblo Revolt of 1680.

The Pueblo Revolt

Although local rebellions occurred from time to time, except for the rebellion at Zuni, 1632 to 1635, they were short-lived, ending in capitulation or destruction of the recalcitrant Pueblo. In 1680, however, the Pueblo Indians, for the first and only time, acted together. Every Pueblo rose, and the Spaniards were driven from New Mexico with great loss of life to both clergy and laity. Refugees collected in El Paso del Norte (present-day Ciudad Juarez) where those who did not go on to Mexico City remained until the reconquest in 1692.

This, their one successful expression of solidarity, was a triumph for the Pueblos. Yet for most of them it lasted less than 20 years. The Spaniards came back stronger than ever. But not to the Hopis. The struggle lost by the Christian God in Tusayán in 1680 stayed lost. The kachinas won and the kachinas have held the field since. From that time on, Spaniards appeared on the Hopi mesas only as unwelcome visitors, except at Awatovi, and Awatovi did not live long to enjoy the reunion.

Little is known of events in the Hopi towns in 1680. The date was sometime between August 10 and 13. All the priests were killed, two at Oraibi, two at Shongopavi, and one at Awatovi. The churches were destroyed and at Awatovi, at least, the Hopis took over the friary and converted it for their own use.



Harvard U., Peabody Mus.: 38-120-10/13668.

Fig. 10. Shallow bowl from Awatovi dating from the 17th century, which combines traditional Sikyatki design and color with European-influenced form. Excavated from the baptistry and friars' chapel of church 2, circular base added to copy European wheel-thrown pottery. Diameter 18.1 cm.

HP22945

"Reconquest"

In 1692 Capt.-Gen. Diego de Vargas effected the reconquest of New Mexico, in the course of which he visited the Hopi towns (Sigüenza y Góngora 1932). His retinue consisted of 63 soldiers and "numerous Indians." The reception was hostile, except at Awatovi, and although the other towns openly submitted to Spanish arms, the submission did not last. It was merely a matter of temporary expediency. Geographically the most remote from Santa Fe, the Hopi country became the refuge of the irreconcilables among the Pueblos of the east who could not bring themselves to bear the Spanish yoke. After the rebellion, the First and Second Mesa towns had moved, for better defense, from the springs of the terraces to the mesa tops, even though they had to carry water. There they were joined by Rio Grande refugees. Some of them established their own towns, of which Hano on First Mesa and now-ruined Payupki on Second Mesa are the best known. Since no Spanish farmers or traders had, as far as is known, ever settled in the Hopi country, the area was of interest only to the priests. Furthermore, when it came to military resistance, the Hopis had allies among the non-Pueblo groups around them who were able fighters. De Vargas in 1692 had found the Hopi leaders supported by Utes, Havasupais, and *Apaches de Navajú* (Navajo).

The attitude of the Hopis is illustrated by the sacking of Awatovi, the only Hopi Pueblo to return to Christianity after the rebellion. Sometime during the winter of 1700–1701, Hopis from the other towns attacked Awatovi. Legend says that the men were killed and the women and children taken captive (Bandelier 1890–1892, 2:371–372). When the Franciscans had returned to Awatovi they had driven the Hopis out of the friary and had established a small church in one side of it. No attempt was made to rebuild the old church, which was the size of the one still in use at Acoma.

Throughout the first half of the eighteenth century, sporadic attempts were made (some by priests without military support) to bring the Hopis back into the fold. None succeeded. In 1701 the governor at Santa Fe sent a military expedition to punish the Hopis for their destruction of the Christian Pueblo of Awatovi. It failed because of the superior military force of the Hopis. This set the pattern for the eighteenth century. Two military expeditions failed in 1707. The most ambitious attempt occurred in 1716 when the governor and the Franciscan custos of New Mexico led a force of soldiers considerably larger than usual to Walpi. The wisdom of the move of the towns to the mesa tops was demonstrated. Walpi proved impregnable and, although there were some deaths and many cornfields were laid waste, the Spaniards again failed. In 1724 two priests vainly attempted to gain a foothold, followed very shortly by a lone priest. Promises for the future were all that was obtained by these visits.

In 1741 a new and somewhat startling development occurred on paper; it never seemingly passed beyond that stage. The king of Spain, disappointed by the failure of the Franciscans, removed the Hopis from their theoretical charge and handed them over to the Jesuits, who showed no enthusiasm whatever for this opportunity. Although Jesuits tried at least three times to reach Tusayán to have a look at the persistent pagans who had been assigned to them, they never got there. Meanwhile the Franciscans attempted to regain jurisdiction over the Hopis by submitting false reports of thousands of Hopi converts; however, the Hopis remained obstinately and successfully anti-Christian.

In 1775 Father Silvestre Velez de Escalante visited the Hopis in his attempt to reach the Colorado River. His recommendation of a military expedition as the only solution to the Hopi problem was not accepted. Another attempt, by Father Francisco Garcés, failed dismally in 1776. The Hopis would not let him in their houses and spurned his gifts. A final attempt to reduce the Hopis was made in 1780 by Gov. Juan Bautista de Anza, who later founded San Francisco, California. The real aim of this expedition was to secure the neutrality of the Hopis in a campaign planned by de Anza against their then allies, the Apaches. Like all others, this attempt failed.

So the Hopis remained isolated on the mesas. Their valiant stand against the return of the Spaniards bears fruit today. They live in enjoyment of their own indigenous culture when so many American Indian groups have lost all or most of theirs.

Sources

This section† refers to all the chapters on the Hopi. It is limited to monographs that provide major syntheses or new information based on field research in Hopi communities and to sources of photographs.

Laird's (1977) *Hopi Bibliography* is both comprehensive and annotated and includes some 2,935 references that cover almost every aspect of Hopi life.

Laird (1977:148) notes that Donaldson (in U.S. Census Office. 11th Census 1893) is "the first, and perhaps the only, work ever to attempt a comprehensive coverage of the Hopi," and it is far from complete. Brew (in Montgomery, Smith, and Brew 1949) provides a history of Awatovi, and the Hopi villages generally, from 1540 to 1700, based on both documentary and archeological research. The early attempts to study Hopi history in terms of clan legends were inconclusive, but Nequatewa (1936) has provided a Hopi interpretation of clan legends that is useful.

† This sources section was written by Fred Eggan and Alfonso Ortiz; the last paragraph is by Laura J. Greenberg.

HP22946

General ethnographic coverage varies from mesa to mesa, and from village to village. For First Mesa Stephen's *Hopi Journal* (1936), which covers events from 1891 to 1894, is an indispensable source, and Fewkes utilized much of Stephen's data in his many publications at the turn of the century. For Third Mesa, the Rev. H.R. Voth, a Mennonite missionary who resided at Oraibi from 1893 to 1902, provided, in collaboration with G.A. Dorsey and the Field Museum, Chicago, an outstanding series of accounts of Hopi ceremonies and observations on selected aspects of Hopi life, along with extensive collections of artifacts and reconstructions of altars (see Dorsey and Voth 1901, 1902; Voth 1900, 1901, 1903, 1903a, 1905, 1905a, 1967 for examples). The Second Mesa villages are less adequately covered. Parsons (1939) synthesizes the Hopi materials on ceremonialism with those of the other Pueblos.

More ethnologically oriented studies began with Freire-Marreco's (1914) account of kinship at Tewa Village on First Mesa, and with Lowie's two summers, 1915 and 1916, on First and Second Mesa, which provided the first adequate accounts (1929, 1929a) of the Hopi clan and kinship systems. Curtis (1907–1930, 12) independently provided new and important information on First Mesa to supplement his photographic records. Forde (1931) made an excellent study of Hopi agriculture and land ownership, which clarified the understanding of clan lands.

During the summer of 1932 the Laboratory of Anthropology at Santa Fe sponsored a field training session on the Hopi reservation where Titiev, Kennard, and Eggan began a long-range study of the Hopi. Titiev (1944, 1972) concentrated on the breakup of Old Oraibi in 1906. Kennard became fluent in Hopi, and his account of the kachina cult (Kennard and Earle 1938), his study of linguistic acculturation (1963), and his concern with key concepts in Hopi culture (1972) are important additions. Eggan's monograph (1950) attempted a comparative study of Western Pueblo social structure, based on the Hopi model.

During the period 1935 to 1939 the Peabody Museum's expedition to the no longer occupied historic Hopi town of Awatovi was in operation under the direction of J.O. Brew; the resulting monograph by W. Smith (1952) on kiva mural decorations and his (1971) report on painted ceramics provide an important background to Hopi cultural development.

More specialized studies occupied the war and postwar periods. The autobiography of Don Talayesva (1942) has been published. D. Eggan (1949, 1952, 1955) collected and analyzed Hopi dreams as cultural products. Dennis (1940) studied the Hopi child, Thompson and Joseph (1944) gave an account of the Hopi Way, and Thompson (1950) discussed culture crisis. Brandt (1954) provides an analysis of Hopi ethics based in part on field research. Dozier, himself a Tewa Indian from Santa Clara Pueblo in New Mexico, has written an outstanding monograph (1954) on the Tewa of First Mesa.

In the 1930s Whorf (1946) began the studies of Hopi linguistics that culminated in his grammar of the Mishongnovi dialect and a series of articles on the relation of language to thought (1956a), which have evoked controversy ever since. Kennard (1963) and Dozier (1951, 1955) have contributed to an understanding of linguistic acculturation, and Voegelin and Voegelin (1957, 1960) have continued the study of the Hopi language.

Waters (1963), in collaboration with Oswald White Bear Fredericks, wrote a very personal interpretation of the Hopi. Nagata's (1970) study of modern Moenkopi is an important contribution to the understanding of the processes of modernization among the Hopi villages. Bradfield's (1973) detailed analysis of Hopi ceremonia and world view, in relation to Great Basin Shoshon backgrounds and possible Maya influences, is controver sial.

The literature on Hopi arts and crafts is voluminou Colton's (1950) analysis of kachina dolls, Whiting (1939) account of ethnobotany, M.N. Wright's (197 history of Hopi silversmithing, Harvey's (1970) accou of Hopi life in native paintings, and Kabotie's (197 account of his life as a Hopi Indian artist, illustrated wi his own paintings, provide an introduction to the subjects.

Many photographers made important records of t Hopi, especially from about 1890 to about 1910. W known are Edward S. Curtis (1907–1930, 12); Adam Vroman (negatives especially at the Los Angeles Cour Museum and the Southwest Museum, Los Angeles); Wharton James (negatives at the California Histori Society and Southwest Museum, Los Angeles); and E Wittick (at Museum of New Mexico, Sante Fe). L known but well-documented collections are by H Voth (at Mennonite Museum and Archives, North Nc ton, Kansas); Sumner W. Matteson and Samuel Barrett (both at Milwaukee Public Museum); J.H. B ley (Denver Museum of Natural History); and Em Kopta (Museum of the American Indian, Heye Foun tion, New York). Important works by others such a Mora and Kate Corey were discovered in the 19 General collections of historic Hopi photographs ar major anthropological repositories, such as the Nati Anthropological Archives (Smithsonian Institution), the Field Museum (Chicago), and in many museums historical societies in the Southwest.

HP22947