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Handbook of North American Indians

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General Editor

SRP002606

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VOLUME 9

Southwest

ALFONSO ORTIZ
Volume Editor

SMITHSONIAN INSTITUTION
WASHINGTON
1979

SRP002607

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Stock Number: 047-000-00361-0

Library of Congress Cataloging in Publication Data

Handbook of North American Indians.

Bibliography: pp. 625-678
Includes index.
CONTENTS:

v. 9 Southwest.

1. Indians of North America. 2. Eskimos.
I. Sturtevant, William C.

E77.H25 970'.004'97 77-17162

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 Basketmaker 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.

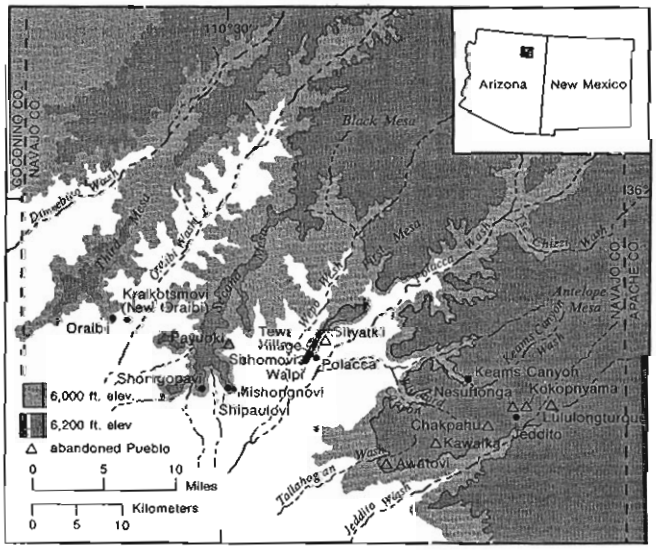

Fig. 1. Abandoned Pueblos in the Hopi area.

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 [tôˈrēva]), 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, [tsʸ]), *k* (palatal), *kʷ, q* (velar); (preaspirated stops) *ʰp* (Whorf's 'p), *ʰt, ʰc, ʰk, ʰkʷ, ʰq;* (nasals) *m, n, ŋʸ* (Whorf's ɲ), *ŋʷ, 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* [oᵃ], *ɨ* (Whorf's e), *ö. k* is [kʸ] before *a, e,* or *i;* in syllable-final position *c* is [ts], *k* is [k], and *v* and *r* are devoiced to [f] and [r̥], respectively. *v* is bilabial [β], varying to labiodental. Plain [k] before *a* (in loanwords from Spanish) is written *k̲*. Vowels have three lengths: long (*i·*, etc.), medium (*i*, etc.), and clipped (*i*). 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 (v̇), middle (v̀), and low (v). 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

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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 *wíʰti* 'woman', Third Mesa *wî·ti* (analyzed as wɨʔti); Mishongnovi and Third Mesa *só·hɨ* 'star' (analyzed as soohɨ). 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 *ɨ* (and sometimes *ö*) and rz or zr sometimes appears for *r*.

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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.

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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.

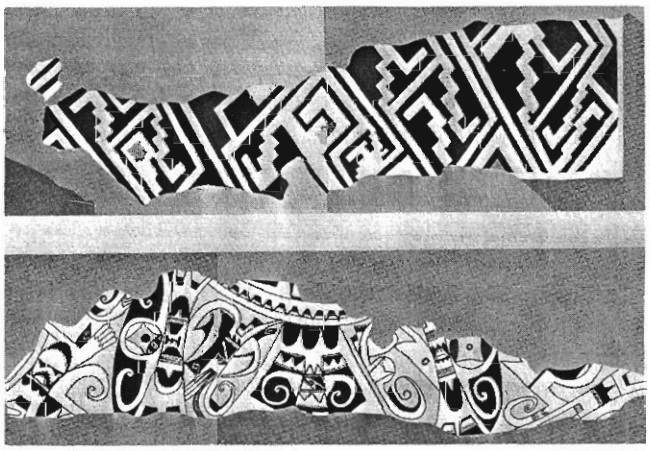

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Fig. 4. Mural paintings from excavated kivas at Awatovi (W. Smith 1952:figs. 45a, 48a), similar in design to pottery decoration. top, Geometric pattern in red, yellow, black, and white, reminiscent of Anasazi textile and black-on-white pottery designs; 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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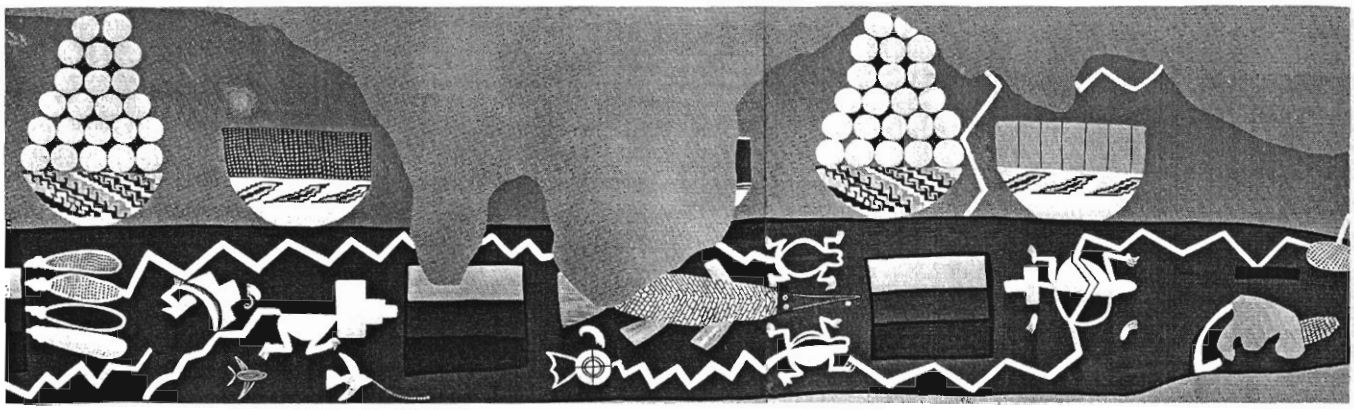

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Fig. 5. Mural painting from Kawaika (Test 4, Room 4, front, right and back walls, design 8) (W. Smith 1952:fig. 60). Lower band is of dark blue, over which frogs, lizards, a large fish with red snout and white teeth, and ears of corn in variegated 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).

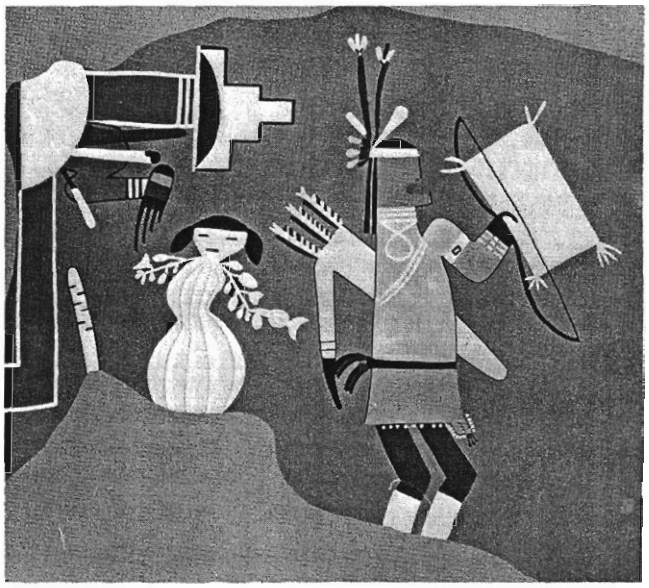

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Fig. 6. Section of painted mural from an Awatovi kiva (Room 529, right wall, design 1). Warrior figure at right holds a bow and white shield or banner and wears a quiver, lavender shirt, white necklace and bandoleer, gray kilt, and feathered headdress. 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

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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 Cibola (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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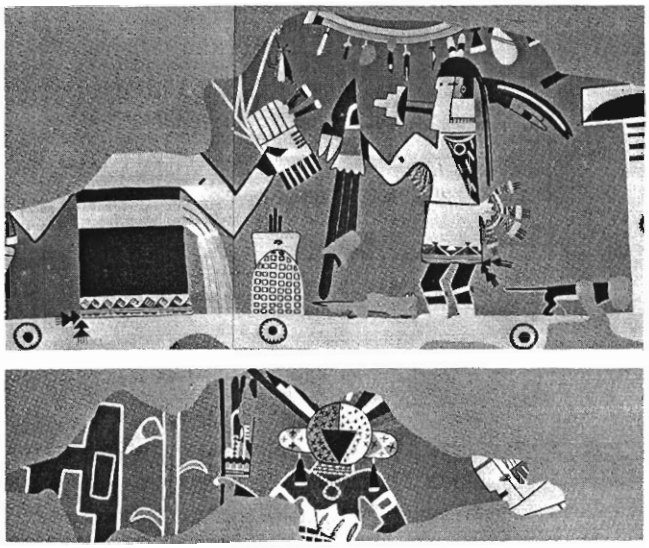

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Fig. 7. Mural paintings from kiva directly under the main altar of San Bernardo de Aguátubi mission (W. Smith 1952:figs. 79a, 81a) (see fig. 8). top, Section of one of a series of similar paintings (Awatovi, Room 788, right wall, design layer 1) extending 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.

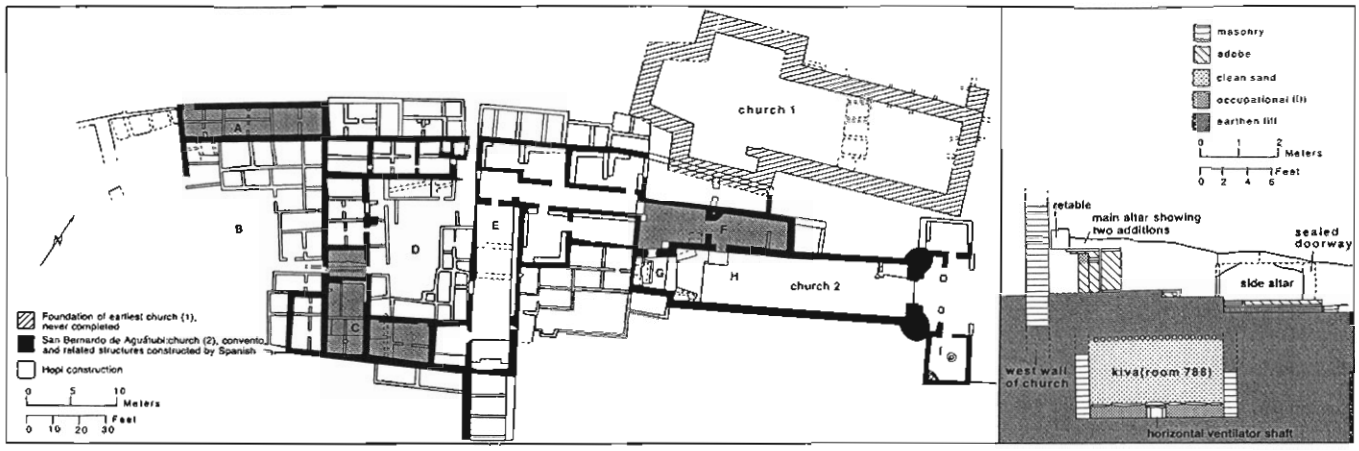
Another factor in the apparent vitality of Awatovi Christianity may lie in the personality of the man who converted them, miracle or no. Father Porras seems to have gained dominance in the minds of Awatovi over the local religious leaders. That dominance was expressed physically and persisted for 70 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.

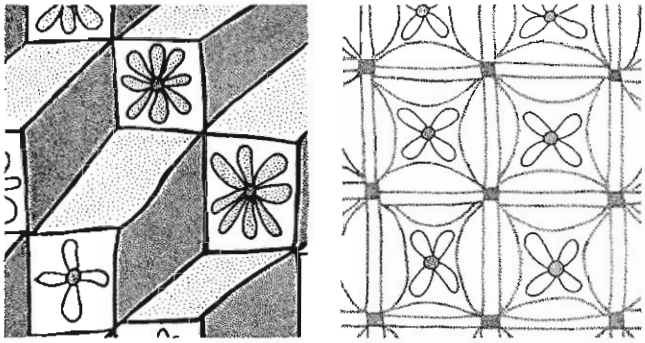
The outposts of Old World culture in New Mexico were thus at the far end of a remarkable system of procurement. The Manila galleons provided a yearly service for 250 years, 1565 to 1815, bringing Chinese goods to Acapulco, whence they came to Mexico City over the so-called China Road. The Spanish *flota* 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



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.

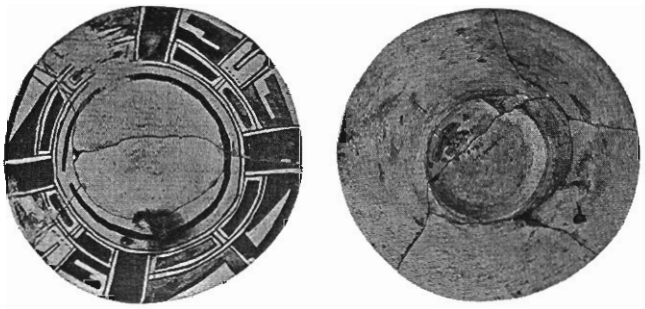
immense bowl with a hole in the bottom was found in a holy-water font at Awatovi, where the church and friary have been excavated completely (Montgomery, Smith, and Brew 1949:47–339). Friction was commonplace, however, and culminated when the Hopis joined in the Pueblo Revolt of 1680.

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.

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"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.

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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 ceremonial and world view, in relation to Great Basin Shoshoni backgrounds and possible Maya influences, is controversial.

The literature on Hopi arts and crafts is voluminous. Colton's (1950) analysis of kachina dolls, Whiting's (1939) account of ethnobotany, M.N. Wright's (1972) history of Hopi silversmithing, Harvey's (1970) account of Hopi life in native paintings, and Kabotie's (1977) account of his life as a Hopi Indian artist, illustrated with his own paintings, provide an introduction to these subjects.

Many photographers made important records of the Hopi, especially from about 1890 to about 1910. Well known are Edward S. Curtis (1907-1930, 12); Adam C. Vroman (negatives especially at the Los Angeles County Museum and the Southwest Museum, Los Angeles); G. Wharton James (negatives at the California Historical Society and Southwest Museum, Los Angeles); and Ben Wittick (at Museum of New Mexico, Sante Fe). Less known but well-documented collections are by H.R. Voth (at Mennonite Museum and Archives, North Newton, Kansas); Sumner W. Matteson and Samuel H. Barrett (both at Milwaukee Public Museum); J.H. Bratley (Denver Museum of Natural History); and Emory Kopta (Museum of the American Indian, Heye Foundation, New York). Important works by others such as Jo Mora and Kate Corey were discovered in the 1970s. General collections of historic Hopi photographs are in major anthropological repositories, such as the National Anthropological Archives (Smithsonian Institution), and the Field Museum (Chicago), and in many museums and historical societies in the Southwest.

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Hopi History, 1850–1940

FREDERICK J. DOCKSTADER

Isolation

By the middle of the nineteenth century, the Hopi were still among the lesser known and more isolated Indian peoples living within the continental United States. Although there is an almost annual mention of them in various documents, which indicates an awareness of their existence, most of these comments refer to earlier records and are not based upon actual visitation. They usually pertain to a single individual or small group—the ubiquitous fur trapper, explorer, or wandering trader in search of food, water, or directions. As far as is known, no major expedition is recorded as having ventured into the Hopi villages after Juan Bautista de Anza; a few stragglers from the gold rush did pass through (Dockstader 1954:147-158).

As a result, the Hopi were able to overcome the effects of the early Spanish interruption of their lives, and it is probable that few indications of this intrusion were evident in their everyday activities. The events leading up to the Pueblo Revolt had become part of legend, and all the interwoven patterns that made up The Hopi Way were again in force. But it should not be thought that the Spanish invasion did not leave its mark. The exposure to Christianity, Spanish military force, and the opportunity to observe from afar what Spanish domination meant to their Pueblo brethren in the Rio Grande area left an indelible impression; however, Hopi culture did not undergo the amalgam of European and Indian social patterns that is so characteristic of the Rio Grande villages. Of even greater importance was the tendency of the Hopi to assign the credit for this ability to withstand external forces to Hopi cultural qualities, rather than other, perhaps more contributory factors: thus, the attitude became, in essence, the Whites versus the kachinas, and the kachinas had won the day. This resulted in a complacency and self-confidence that overshadowed all Hopi-White relations until the end of the nineteenth century.

This was not an entirely tranquil situation, for the Hopi were increasingly preoccupied with attacks from Mexican, Apache, and Navajo raiders in pursuit of plunder, food, or captives to be sold into slavery in Mexico. In fact, the outbreak of the Mexican War had as its major effect a limitation upon Mexican participation in slave raids and the subsequent freeing of the Navajo to raid at will. To the Hopi this was certainly of far greater importance than any alteration of outside government. Mexico had never implemented sovereignty over the region following its successful revolution against the Spanish Crown, and it is doubtful that the Hopi were ever truly aware of the political change of fortune that had gone on around them.

Bureau of Indian Affairs Administration

With the end of the Mexican War in 1848, a new world opened up for the Southwest. An official Indian agent was appointed April 7, 1849, in the person of John S. Calhoun. His duties were to establish headquarters at Santa Fe and to oversee the destinies of the Indian inhabitants of the region. An honorable and sincere individual, Calhoun was devoted to the improvement of Indian conditions. Before he died in mid-1852 he put into operation a variety of excellent plans, particularly with reference to control of the increasing Navajo menace (U.S. Office of Indian Affairs 1915).

In addition to Hopi isolation, which protected them, the lack of rich mineral wealth was also to their initial advantage. Were this the only concern, they might have continued without interference or interruption; but the increasing Navajo attacks combined with curiosity about the new political situation caused a group of seven Hopi leaders to journey to Santa Fe to seek a conference with Calhoun on October 6, 1850. While they went primarily to petition for military protection against the Navajo, they were equally uneasy about the intentions of the new government that controlled their homelands. The Hopi leader at this time was Nakwaiyamtewa, the chief at Oraibi, then the major Hopi village (Titiev 1944). There were earlier Hopi emissaries to Santa Fe directed toward Spanish authority, but this is the first known Hopi-American political conference.

During the next decade, Americans are known to have entered Hopi country in increasing numbers. In 1851, Fort Defiance was established as an outpost to protect the region against the marauding Navajo; from it ventured various military personnel, either on official business or simply as early-day tourists. One such was Dr. P.G.S. TenBroeck, who is known to have made several visits in 1851-1852 (Schoolcraft 1851-1857, 4). He was followed by perhaps a half-dozen expeditions seeking a

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Thus, in five short years, three competing Christian sects had made serious inroads into an area that had not known outside religious contacts since the Pueblo Revolt in 1680 (U.S. Census Office. 11th Census 1894).

The major effect of the Mormon mission was the degree of protection that it offered from the Navajos of the western region. Surprisingly enough, there was very little interaction between the two groups, and almost no successful conversions to Mormonism took place. In effect, the two peoples lived side by side with little reaction. The one primary result of this coexistence was the slow takeover of Hopi land by the Mormons, until the Hopis were reduced to a position of relative peonage on their own lands.

In 1878 the Mormons established Tuba City as their major outpost in northern Arizona and began to expand toward the villages. The hatred felt toward them by non-Mormons, in addition to Indian discontent, caused the U.S. to dispatch W. Crothers as Indian agent in an effort to control the increasing pressures on the Hopis. The completion in 1881 of the Atlantic and Pacific Railroad resulted in more and more people coming into the country, and the towns of Flagstaff, Winslow, and Holbrook sprang up. Located less than 70 miles from the Hopi villages, they provided entry for a wide variety of outsiders: traders, tourists, and teachers, few of whom came to learn, in that period of White supremacy. These towns facilitated access to materials from the East, thus putting in motion the slow transition to a greater degree of non-Indian concepts and objects (Nagata 1970).

Factionalism

After the death of Nakwaiyamtewa, Kuyingwu had served as acting village chief since the logical candidates, Sakhongyoma and Lololoma, were judged too young to hold office. He was bitterly hostile to Americans, and when his regency ended about 1880, the dual position was terminated, and Lololoma became the formal village chief, carrying on Kuyingwu's antagonistic attitude. The Navajo problem continued to cause trouble, and in an effort to find some means of controlling the raiders, Thomas Varker Keam, an English trader who had been licensed to trade with the Hopis in 1875, took a group of village leaders to Washington to meet with President Chester A. Arthur. Lololoma was apparently deeply impressed by what he saw in the capital. Crediting these wonders to the White educational system, he changed his attitude completely and began to use his influence to persuade his people to send their children to school; thus began the disintegration of Oraibi (Titiev 1944).

With increasing hostility manifested toward Mormon occupancy of the Southwest, federal authorities felt it was necessary to head off their further expansion; one avenue was by way of the establishment of controlled lands. Accordingly, on December 16, 1882, President Arthur signed an executive order establishing a formal reservation bounded by rectangular limits. A section of approximately 55 by 70 miles was set aside for the use of "Hopis and other Indians" (V.H. Jones 1950).

By this time an increasing number of scholars and visitors began to filter into the villages; most of them were deeply interested in and largely sympathetic to Hopi culture. In one way or another they further affected the psychological reactions of the people and added to the widening schism. In late 1880 or early 1881, Alexander M. Stephen arrived in Hopi country. A remarkable Scotsman who lived with the Hopis until his death in mid-1894, Stephen (1936) left what is undoubtedly the best single account of Hopi life of the period. In 1883 the ethnologist Frank H. Cushing came on a trading trip from Zuni; he provided a revealing article concerning his confrontation with hostile village chiefs (Cushing 1922). In 1886-1888 military visitors included Gen. Nelson A. Miles and Lt. John G. Bourke. Both were primarily concerned with the Apache threat.

Internal strife was also becoming more intense; the change of attitude toward Americans demonstrated by Lololoma was by no means universally accepted by the Oraibi people, a majority of whom were extremely conservative. The conservative group soon found a capable and aggressive spokesman in the person of Lomahongyoma (fig. 2), an important ceremonial leader. In time the two factions became popularly known as Friendlies (to the U.S. government) and Hostiles.

The combination of pressures from inside and outside the village made an explosion inevitable. At this same time, one other element was added to the forces of disruption—the passage of the Dawes Severalty Act in 1887. Although the Indians of the Southwest were not seriously affected by this legislation as were those in other areas of the United States, there was a brief attempt by the Bureau of Indian Affairs to set up land allotments in the Southwest. In brief, the Dawes Act never resulted in dismemberment of Pueblo lands, but it levied some psychological trauma; indeed, some students feel that the firm opposition of Hopi leaders to the program had a major bearing on its abandonment in the Southwest in 1911. A further indication of the constriction of outside contact was the establishment in 1887 of the federal "Moqui School" at Keams Canyon (Thompson and Joseph 1944).

Thus, in the last decade of the nineteenth century, Hopi life entered its most critical phase since contact with Francisco Vásquez de Coronado. In 1890 Lololoma (fig. 4) became the "real" village chief of Oraibi, tantamount at this time to an overall tribal chief of the Hopi, due to the superior position of Oraibi. Missionaries began to arrive in increasing numbers, along with traders, tourists, and settlers. Although this was still perhaps only a few individuals at a time, it meant in effect that the Hopi people were seeing as many White people in a month as

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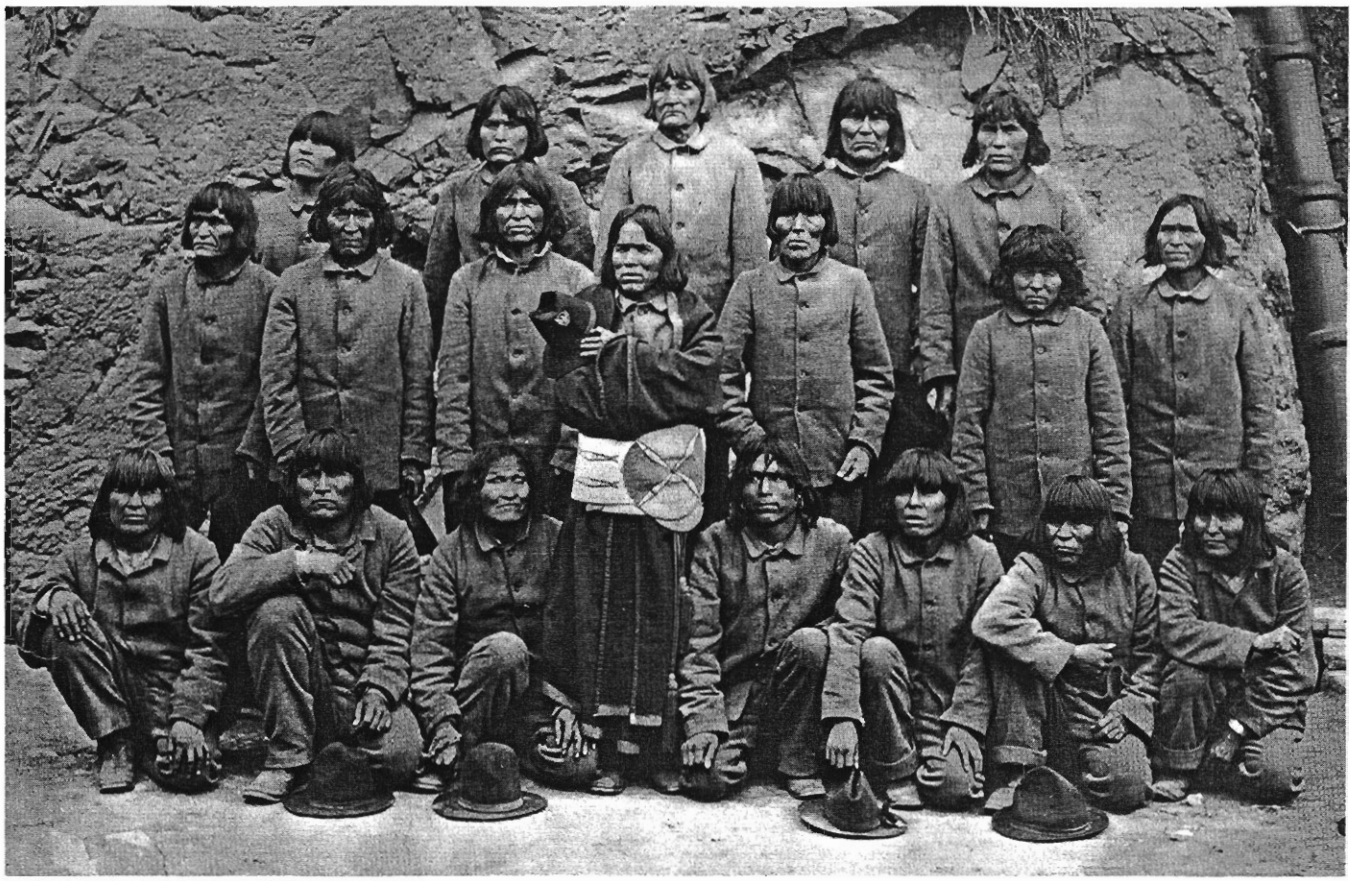

Southwest Mus., Los Angeles.

Fig. 2. Lomahongyoma (standing in dark blanket at center) with other Hostiles imprisoned at Alcatraz, Jan. 3–Aug. 7, 1895, following their active opposition to the allotment of clan-held land to individual Hopis (as provided by the Dawes Severalty Act of 1887). Earlier action against the surveying of Hopi lands for this purpose had resulted in imprisonment of many Oraibi men at Fort Wingate (Fewkes 1922:273–282). With Lomahongyoma are, left to right: (front row) Komaletstewa, Yoda, Naquatewa, Kochyouma, Soukhongva, Sekaheptewa, Karshongnewa; (second row) Kochventewa, Beephongva(?), Poolegoiva, Lomanankwosa, Kochadah, Wongnehma; (back row) unidentified, Polingyouma, Hahvema, Masatewa, Quoyahoinema; identifications (H. C. James 1974:115) were provided by Helen Sekaquaptewa. Photograph probably by Isaiah West Taber.

they had formerly experienced in the course of a year, or slightly earlier, in a decade.

In 1898 silversmithing was introduced into the Hopi crafts inventory by Navajo teachers working directly or through Zuni contacts (Adair 1944). The work, accomplished by only a few part-time smiths, was relatively simple, consisting of rings, bracelets, and buttons copying Navajo designs. Another major influence was the arrival of J. Walter Fewkes (1898) (fig. 5), an anthropologist who undertook a concentrated 10-year study of Hopi life. In June 1895 C.E. Vandever was appointed as the new Hopi agent.

With the opening of the new school at Keams Canyon in July 1887 (fig. 6), many of the conservative Hopis refused to allow their children to attend. Several efforts to force compliance with the governmental edict finally resulted in a confrontation between the two groups, and eventually a group of Hopi parents, including Lololoma and Lomahongyoma, were imprisoned for defying the authorities. This overreaction, combining with the coincidental arrival of surveyors working on the land-allotment program, resulted in a cementing of the alienation of the conservative faction.

The Baptist converts were established in 1907 at Polacca, with C.P. Cox as preacher; he was to keep passions stirred up for many years following his appointment. H.R. Voth (fig. 7), who had already established a Mennonite mission at Oraibi in 1893, was an unusual individual who seems to have "turned Hopi"; his journals and writings give an intimate picture of Hopi religious practices of the time (1901, 1903, 1903a, 1912, 1912a). Indeed, the writings of Stephen, Fewkes, and Voth provide the basis for most knowledge of early Hopi social and ceremonial life.

In 1894 the government day school at Polacca was built as well as a second school at Oraibi. This same year saw the development of what may have been the first Indian-operated store in the Southwest: the establishment of a trading post at Polacca by Tom Pavatea, a Hopi from First Mesa. And finally, Toreva Day School

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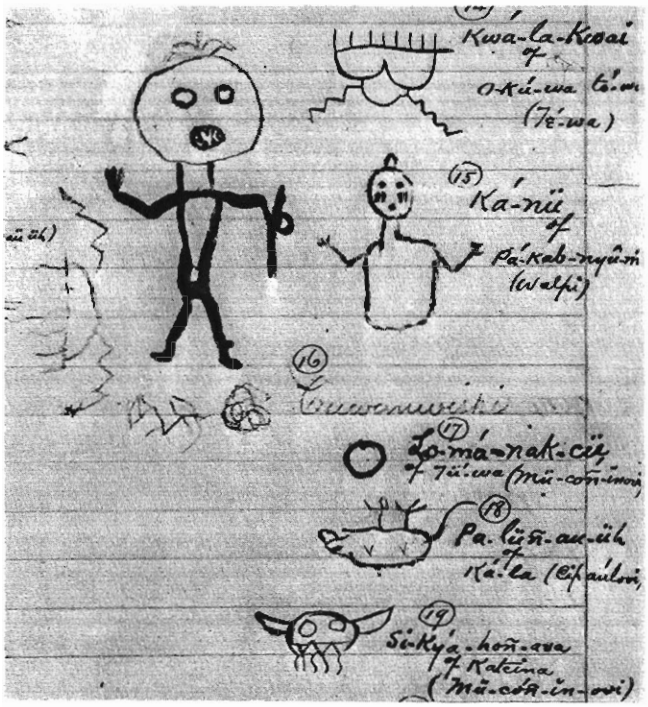
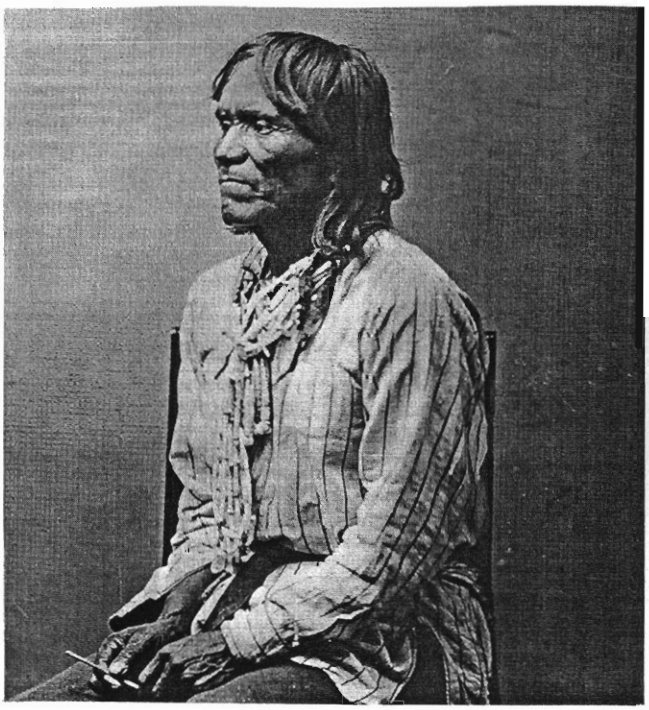


Natl. Arch.: RG 75, 1894-14830 L, p. 4.

Fig. 3. Detail of fourth page of a petition drafted in March 1894 requesting clarification of Hopi land claims, showing Hopi pictographic signatures witnessed by Alexander M. Stephen, Thomas V. Keam, and H.R. Voth. Stephen wrote the annotations here and the explanations in a separate accompanying memorandum (cf. the names in Stephen 1936, 2:1088-1137). The signers' clan "totems" shown here are: 16, Masawu; 14, rain clouds and lightning (for Cloud clan); 15, stone war fetish (for Reed clan); 17, horizon circle (for Earth clan); 18, rat (a rebus for Sun's Forehead clan); 19, Broad-Face mask (for Kachina clan); 14, 18, 19 retouched.



Smithsonian, NAA.

Fig. 4. Lololoma, chief of Oraibi. Photograph by John K. Hillers, probably in 1890 when Lololoma was in Washington, D.C., with a Hopi delegation that met with the commissioner of Indian affairs (Diehl 1961).

was built in 1897, thus closing out a decade of complete breakdown of Hopi isolation and an introduction of day-to-day government relations with the people, which has continued in the twentieth century (U.S. Census Office. 11th Census 1894).

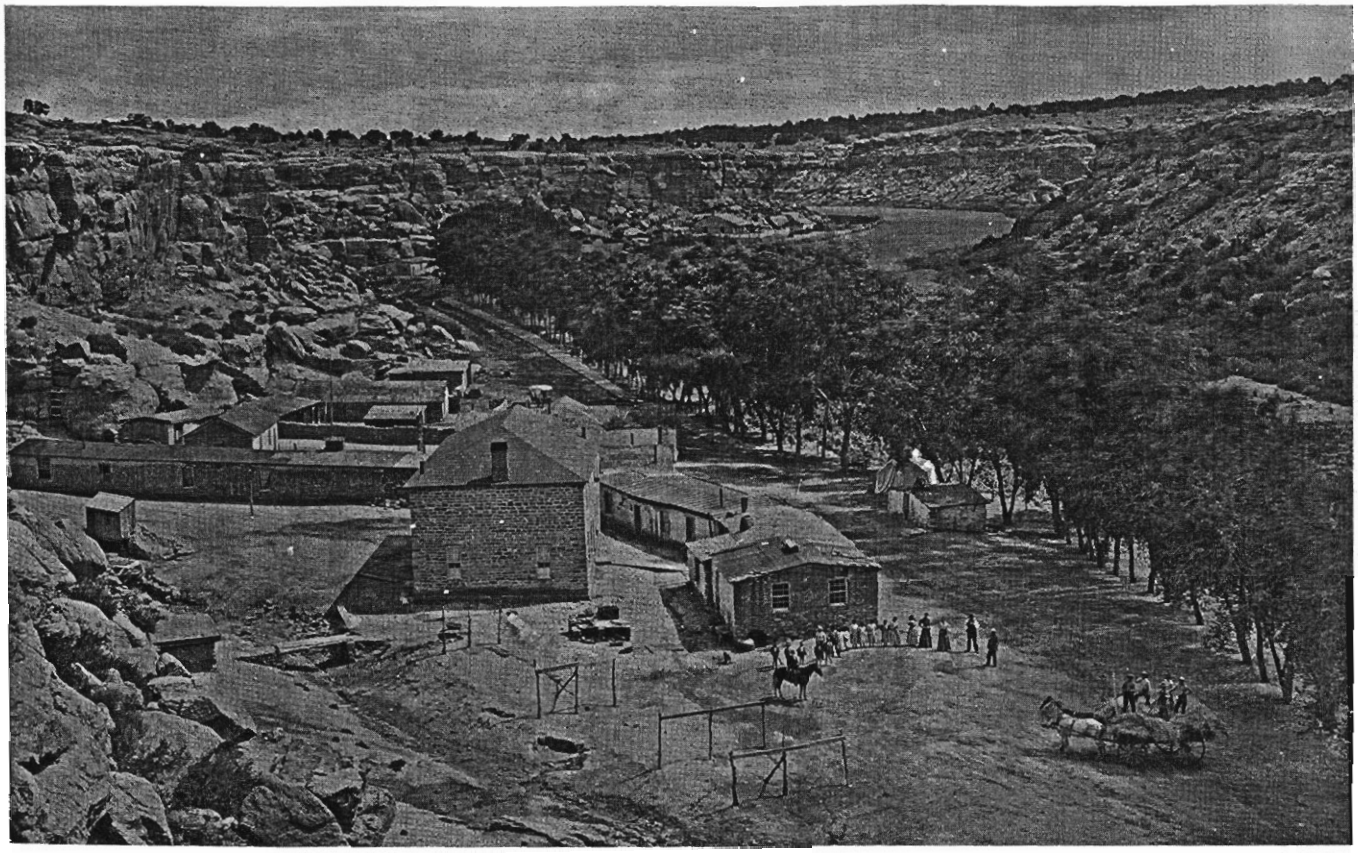
Aggravating this situation was the absolute split that had developed between the two factions within the Oraibi village. Not only did this disrupt the social and political areas, but also it seriously weakened the framework of Hopi religious life, as Lomahongyoma and Lololoma intensified their rivalry for leadership. Another factor was the ambitious Youkioma (fig. 8), a relative of Lomahongyoma who was eager to take over the leadership of the conservative faction. There was also a large number of non-Indians interested in intervening to satisfy their own personal or economic goals; most of these were missionary personnel or settlers. Impartial, sympathetic, or unbiased participants were almost entirely lacking in the struggle (Titiev 1944).

In 1901 H.R. Voth built the Mennonite church at Oraibi (destroyed by lightning in 1942), and in 1903 the Mormons were forced to leave the village as the result of

Mus. of Northern Ariz., Flagstaff: 735/E25.

Fig. 5. Hopi painted pottery tile, believed to date to 1897, possibly depicting the anthropologist J. Walter Fewkes, said to have worn a long coat, carried a lunch bag, and smoked a pipe (Barton Wright, personal communication 1976), or perhaps representing a missionary. Length 14.8 cm; collected before 1934.

SRP002622 DOCKSTADER



Mus. of N.M., Santa Fe.

Fig. 6. Keams Canyon about 1895. This was the site of the trading post built by Thomas Varker Keam near First Mesa, and of the first Hopi (then called Moqui) Agency. It was housed in buildings rented from Keam and subsequently purchased by the Indian Bureau in 1889. A school (lower right) opened in 1887 as the result of a petition by Lololoma and other Friendlies. Other buildings are the trading post and residential structures. Photograph by Ben Wittick.

a very tense conflict. During this period increasing numbers of settlers arrived in northern Arizona, adding further to Hopi discontent.

The factional split came to a dramatic climax in 1906 when the conservative and liberal forces clashed at Oraibi. From 1900 to 1905 tension between the Hostile and Friendly factions had seriously disrupted village life; even religious ceremonies were not free from interference. To gather strength and support, Lomahongyoma invited a number of sympathetic Hopi people from Shongopavi to settle at Oraibi. Outraged at the distribution of their lands to Second Mesa villagers, the Friendlies sought to evict the newcomers. On September 8, 1906, in a memorable clash, they engaged the Hostile forces in a violent push-of-war and forced them back. As agreed, the 298 Hostile members packed their belongings and left Oraibi forever. They went to a site about seven miles northwest on Third Mesa, where they established a new village, Hotevilla (fig. 9). The Friendlies, numbering about 324, stayed behind with Tawaquaptewa (fig. 10) as village chief (Titiev 1944).

The next year, during the arguments over Bureau of Indian Affairs land-allotment efforts, some dissidents tried to return to Oraibi, but their request was refused and they eventually settled nearby, where they built the present-day village of Bacabi.

By 1910 the tribal split was complete. It seems to be the continuation of an old practice that may have been the cause of innumerable divisions in village structure in prehistoric times, for the Pueblo people have had a long history of village mobility, some of which defies logical explanation (Titiev 1944). Oraibi friendliness to Whites was soon put to a test when the government announced that Tawaquaptewa was to be temporarily relieved of his position and taken to Riverside School in California to learn English and to absorb something of White customs. His protests that in view of the tension Oraibi was hardly in a position to be left without a traditional leader were ignored. This enforced absence affected him deeply, for upon his return in 1910 he was a vindictive, bitter man, and this attitude in time caused the decline of the village to a mere shell.

The Twentieth Century

In 1910 Shongopavi Day School was built, reflecting more forced schooling. Hotevilla parents refused to allow

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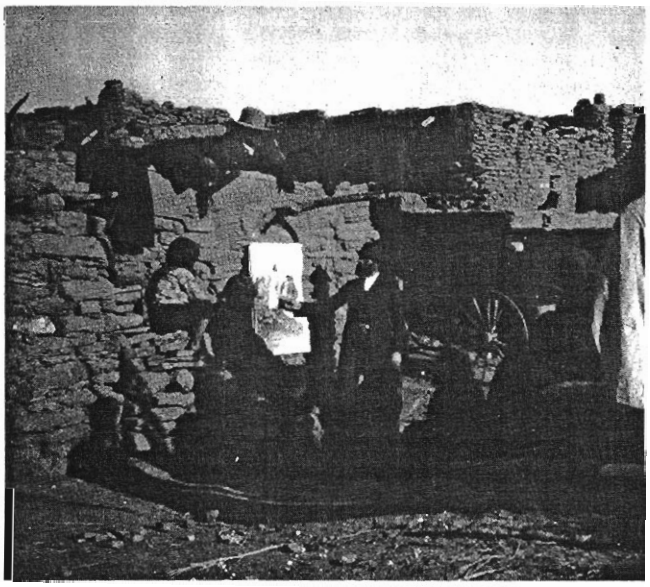

top, Milwaukee Public Mus., Wis.; bottom, Mennonite Lib. and Arch., North Newton, Kans.

Fig. 7. Rev. H.R. Voth. top, Inside a kiva during a summer snake ceremony, probably at Oraibi in 1896, 1898 or 1900, or at Mishongnovi in 1901 (Voth 1903; Dorsey and Voth 1902); bottom, apparently proselytizing among the Hopis (he is pointing to a picture of Jesus Christ), probably at Oraibi, date unknown. Photograph by Sumner W. Matteson (top), unknown photographer (bottom).

their children to attend school, and in 1911 military force was again applied to bring the children into schools. This only intensified the anti-White feelings of the Hostiles, and Hotevilla remains in the 1970s the most militant Hopi village.

Very slowly, positions solidified on the three Mesas, and day schools were built in other areas. The Bacabi Day School was erected in 1912; its title and function were changed in 1916 to the Hotevilla-Bacabi School. In 1913 the government opened a hospital at Keams Canyon, which serves both the Hopi and surrounding Indian peoples (Thompson 1950).

Smithsonian, NAA.

Fig. 8. Youkioma, Hostile leader and founder of the village of Hotevilla. Photograph by DeLancey Gill, probably at the Bureau of American Ethnology, Washington, D.C., 1910.

During the First World War, approximately one-tenth of the Hopi tribe served in the army; the majority adhered to their longstanding noncombatant tradition. Perhaps the most newsworthy event of the decade was the C.C. Pyle "Bunion Derby" fiasco. This cross-country footrace, from Boston to Los Angeles, was won by Louis Tewanima, whose elimination on a technicality became a *cause célèbre* in the newspapers. In 1924 the Hopi were included among the American Indians officially declared by the Congress to be citizens of the United States.

By 1930 Hopi economic status had declined. Tribal income was primarily gained by farming with a modest amount of off-reservation work and arts and crafts activities. In 1926 the Lee's Ferry Bridge over the Colorado River was built, bringing increased tourist travel into northeastern Arizona. While this more directly affected the Navajo reservation, it also influenced the Hopi, who saw more and more outsiders coming into the villages; following the completion of the Cameron-to-Gallup road this contact and pressure has been intensified.

With wage work an ever more important basis for the economy, Winslow became a key city in the Hopi world, replacing Flagstaff, since it was on a direct line to First Mesa (Nagata 1970). The Depression affected Hopi economic life drastically. Intoxication became a problem for the first time; previously, the Hopi had been widely known as a tribe remarkably free from this vice.

Perhaps the greatest change followed p 1934

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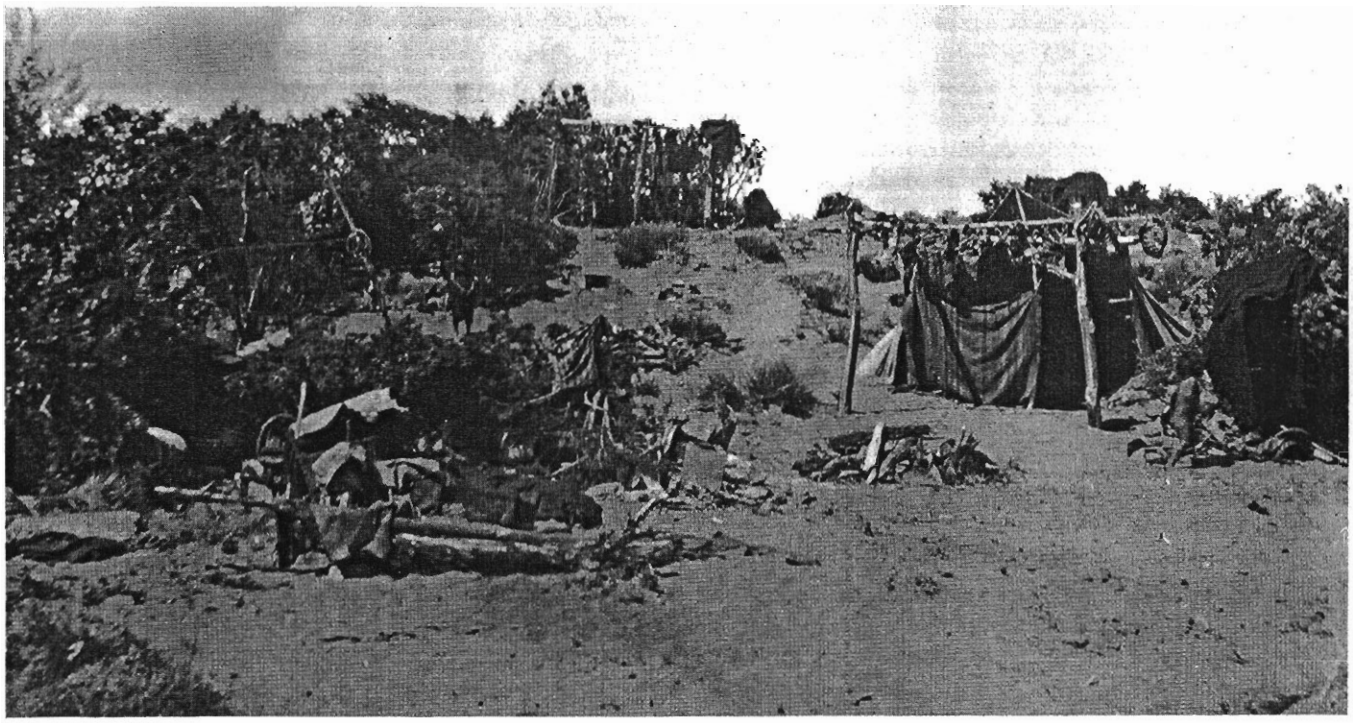
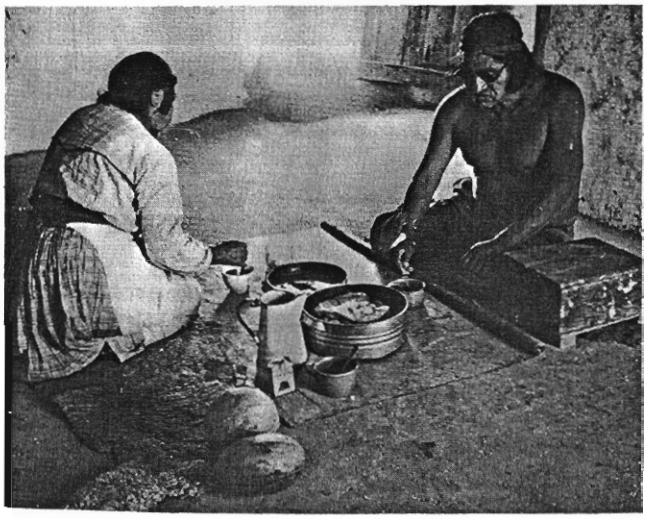


John R. Wilson, Tulsa, Okla.: Mora Coll.
Fig. 9. First Hostile camp at Hotevilla (shelters at right and on hill, center) following Hostiles' departure from Oraibi. Photograph by Jo Mora, probably Oct. 1906.

of the Wheeler-Howard bill, commonly known as the Indian Reorganization Act. Under the leadership of Interior Secretary Harold L. Ickes and Commissioner of Indian Affairs John Collier, this act offered a well-meant and dramatic change of fortune for Indian people; indeed, it was a complete about-face in federal attitude. Oliver La Farge, a long-time friend of Indian causes, drafted a constitution for the Hopi in 1936 after consulting widely with Hopi people he knew. The tribal council was established in 1935 after an election in which a minority of Hopis voted to accept the terms of the Reorganization Act. The overwhelming majority of eligible Hopi adults had registered their disapproval by just staying away from the polls. The perpetuation of political factions was reflected in the council then, as it was in the 1970s.



Musée de l'Homme, Paris.
Fig. 10. Tawaquaptewa, village chief, probably at a mid-day meal in his Oraibi home with his wife, Nasingönsi (see Titiev 1972:figs. 8-9). Photograph by unknown photographer, probably in the 1930s.

The federal stock reduction plan introduced to the Hopi was just as strongly opposed as it was among the Navajo. Eventually Hopis accepted the stock problem and worked to solve it. Oraibi High School, with about 200 pupils, was established in 1939 and has been a strong educational force ever since.

By 1940, then, the Hopi Indians had seen tremendous changes in their own social organization, problems of outside pressures increase radically, and their whole world view undergo new and irreversible alterations. Their major city, Oraibi, had declined from 600 in 1900 to a town of 112; completely new villages had developed, and the traditional centers of population suffered crippling strains (Titiev 1944). Many Hopi people left the reservation for work in the neighboring cities during World War II, and many registered as conscientious objectors, rendering alternative service. By no means of the least significance is the fact that missionary activities were reduced to a minimum, and the influence of traders became less pronounced.

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Population pressures were increasing, and the subtle but steady movement of Navajo settlers brought reservation landholding problems to a critical point. Navajos had been settling closer and closer to the Hopi villages; their population superiority and political dominance gained them a de facto recognition, and the setting aside of part of the Hopi lands under a soil conservation program resulted in the establishment of a subdivision known locally as District Six, which was in actual fact a restriction of Hopi land, diminishing their use to 501,501 acres. This remained in the 1970s a key point of dispute between the two tribes.

The Hopi have seen their isolation completely gone, their independence as a tribal unit disappear, and their internal vitality radically threatened. Almost every facet of their life has been affected: with wage work predominant, ceremonies began to be scheduled more and more on the basis of the European calendar, to accommodate those who work by the week. Architectural changes subtly affected home life, and water-supply programs altered attitudes toward rain ceremonies. The economy changed from a subsistence base with some cash supplement to a completely cash base with small subsistence support. Returning veterans had demonstrated the vital need for a sound education in order to cope with Anglo-American culture, as well as the critical need for political sophistication.

Traditional Hopi anonymity had undergone change; the emergence of recognized individuals by name, particularly in the field of arts and crafts, as well as in certain political areas, gave rise to jealousies. The recognition, at the same time, of some of the aspects of their unique culture provided a degree of comfort and balance to this very considerable internal stress.

Yet even with all of this culture shock, by the end of the period 1850-1940, the Hopi continued to follow a way of life that, in most respects, was perhaps nearer to an aboriginal way of existence than that of any other Indian tribe in the United States.

SRP002626

Hopi History, 1940–1974

RICHARD O. CLEMMER

The Hopi of the atomic age reflect the kaleidoscope of social, economic, and ideological poses evident in most nations of the modern industrial world. At the same time, fundamental behavior patterns and perceptual modes persist from aboriginal times. Two issues that emerged as central focuses of Hopi concern in the 1950s and 1960s were land and resource use and cultural sovereignty.

Land has always been the mainstay of Hopi culture. The Hopi ceremonial cycle, still practiced at all three mesas in the 1970s, expresses a philosophical imperative mandating proper preparation, use, and appreciation of land and its generative powers. Hopi elders of the 1960s and 1970s still spoke of the land reverently and emotionally, one elder even referring to it as "the Hopis' social security" (Clemmer 1974). These elders refer to Hopi land as a "shrine" that extends far beyond the Hopi villages to the Grand Canyon, the San Francisco Peaks, the northern reaches of Black Mesa, Zuni Salt Lake, and south of Route 66 (Clemmer 1968-1970)

Of course the United States government has never acknowledged such an extensive parcel as exclusively Hopi. The 1882 executive order reservation included only two and one-half million acres and completely excluded the Hopi settlement of Moenkopi (see "Hopi Social Organization," fig. 1, this vol.). By 1900 Navajos had moved onto a good portion of the Hopi reservation, and Hopis began to fear that if this trend continued, they would be surrounded by Navajos whose use of land for stock raising would confine the Hopis to their villages. In 1939 Hopi representatives met with Commissioner of Indian Affairs John Collier to enlist his support in confirming the boundaries of the Hopi shrine and enforcing the exclusivity of at least the 1882 reservation. The meeting produced no tangible results.

Hopis' fears that the United States would not protect Hopis' special relationship to their land were heightened when the Hopi and Navajo reservations were divided into grazing districts. As the main administrative agency concerned with Indian lands, the Bureau of Indian Affairs assumed administration of the districts. In 1943 the BIA's Hopi Indian Agency took charge of District Six as its area, even though District Six included only 631,306 acres (Hopi Indian Agency 1968:6) immediately surrounding the 11 Hopi reservation villages.

Although Hopis were assured that District Six would not become the new Hopi reservation, in fact Hopis' fears were confirmed. The Hopi Agency implemented stock reduction to improve grazing potential only in District Six, leaving the rest of reservation stock reduction to Navajo agencies. For practical purposes, then, the Interior Department's interpretation of the stock reduction procedures shrank the Hopi land base to an almost token fraction of the enshrined area venerated in Hopi ceremonies.

The postwar years brought increased government attempts to establish its presence in Hopi land and also brought, for the first time, conscious action by Hopis to deal with the problems of non-Hopi jurisdiction over their lands. Two of the most important legislative actions accomplishing the government's intent were passage of the Indian Claims Commission Act of 1946 and the Navajo-Hopi Act of 1950. Hopis, for their part, reestablished the Hopi tribal council and evolved a new political group referring to themselves as the Hopi Traditionals.

Revival of the Council

The Indian Claims Commission was authorized to rule on claims for monetary compensation brought against the United States by any tribal entity recognized as representing a tribe or identifiable Indian group. By far the most common proceedings were those over lands taken by the United States without rendering just compensation or without due process of law. According to Indian Claims Commission statutes, once the award is made and the money is in the hands of the Indians, such payment "shall finally dispose of all rights, claims or demands" that the claimants could make (J.D. Forbes 1965:45).

The BIA officially had nothing to do with the Claims Commission. However, the BIA took responsibility for disseminating information about the claims, calling meetings, and supervising referenda (see J.D. Forbes 1967:248-253, 257-259; Costo 1974). Teachers in the Hopi Day School at Kyakotsmovi (New Oraibi) were encouraged to talk about the claims in class, and the agency superintendent encouraged Hopis to submit a claim.

Hopis from Second Mesa who had spearheaded the attempt to establish the Hopi claim to their shrine for Commissioner Collier were joined by people from First Mesa and Moenkopi in a trip to Washington in 1950. Their intention was to see what they could do about

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pressing their land claim. In Washington they were told "that the only salvation for the Hopi people was . . . to revive the Hopi Tribal Council," which had been disbanded in 1940 after functioning sporadically and ineffectively for four years (Emmons 1955:310-311). These "progressives" enlisted the aid of the agency superintendent and persuaded 7 of the 13 villages to select representatives to the council. The council was finally reconstituted in 1951, just in time to retain a lawyer and submit a claim (Emmons 1955:312; Clemmer 1973:26) before the deadline expired.

Revival of the council came at a time when a lot of attention was being focused on the Hopi and Navajo reservations. The Navajo-Hopi Act had authorized expenditure of $88,570,000 for general improvement of both reservations. On the Hopi reservation, such improvements were items like wells, stock troughs, fences, flood-control dikes, and roads. Coupled with revival of the government-supported council, the act intensified the government's presence among the Hopi by providing jobs and services and by encouraging Hopis to think of the United States and its agencies as part of the normal state of affairs.

Two Strategies

While those who pushed for the council's revival generally supported the government's presence, the legacy of the ideological split of 1906 was reflected in a renewed resistance to government policies. This resistance was publicly expressed to the Indian world when two Hopis spoke against the Navajo-Hopi Act at the annual meeting of the National Congress of American Indians in 1949. The spokesmen presented a viewpoint diametrically opposed to that of council supporters and reflected a growing concern among traditional elders that, without

John S. Boyden, Salt Lake City, Utah.

Fig. 1. Delegation of Hopis meeting in the courtroom of Salt Lake City District Judge for the purpose of signing their first attorney's contract, July 12, 1951. They are: (seated left to right), Homer Homewytewa, Kyakotsmovi; Homer Cooyama, Kyakotsmovi; Roger Honahni, Upper Moenkopi; Lewis Numkena, Upper Moenkopi; John S. Boyden, Salt Lake City attorney retained by the Hopis; Judge A.H. Ellett, Salt Lake City District Judge; Ned Nayatewa, Sichomovi; Andrew Seechoma, Walpi; Hale Secakuku, Shipaulovi; David Talawiftema, Shipaulovi; Julius Toopkema, Bacabi; Howard Talayumptewa, Bacabi; (standing left to right), Samuel Shing, Moenkopi; Dewey Healing, First Mesa (Tewa); Dean Tevaya, Sichomovi; James S. Beck, Bureau of Indian Affairs employee; Logan Koopee, Sichomovi. Photographer unknown.

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non-Hopi allies to counter government influence, Hopi cultural sovereignty could easily be compromised.

The ideological basis of the spokesmen's message was expressed in a letter sent to President Harry Truman, also in 1949. This document should have dispelled any thoughts that Hopi religious elders suffered from torpidity born of mystical detachment. It rejected the notion of Hopis "asking the government for land that is ours" through participation in claims proceedings, denied oil companies drilling access to Hopi lands, denounced the Navajo-Hopi Act appropriations as an effort "to reduce the Hopi people under this plan," and refused participation in any military action resulting from the North Atlantic Treaty Organization alliance. It stated, in part: "This land is a sacred home of the Hopi people. . . . It was given to the Hopi people the task to guard this land . . . by obedience to our traditional and religious instructions and by being faithful to our Great Spirit Massau'u. . . . We have never abandoned our sovereignty to any foreign power or nation. . ." (Talahaftewa et al. 1949).

The document was signed by 24 ceremonial leaders from four villages. Although the letter expressed a militancy unusual for that period, it reflected the firm belief of these elders that Hopi mythic prophecy was unfolding in a manner that necessitated action on their part. Traditionally, a Hopi community adjusts psychologically to stress from the outside through mythic ideology, which regards present and future as the revelation of predictable forces whose seeds were sown in past events (see Whorf 1956:58, 59-60; Loeffler 1971).

The predictive force of Hopi mythology is indicated by a version of the Hopi origin and migration myth told to missionary H.R. Voth (1905:21-26). The storyteller incorporates the White man into the myth as *pahá·na,* the Hopis' elder brother. Upon emerging from the underworld, the elder brother headed eastward, but if the Hopi ever got into trouble, the elder brother would return and punish those who were causing trouble. The elder brother started out, "and they became the White Men as they traveled eastward. . . . But the Hopi are still looking towards their elder brother. . . . Our old men and ancestors have said that some White Men would be coming to them, but they would not be the White Men like our elder brother, and they would be worrying us."

By 1947 the second generation of elders who had to deal with Whites decided to announce that elder brother was needed. Around that year a clan elder from Second Mesa stated in a kiva meeting that in the early days of his training as a religious leader he was instructed that when a gourd of ashes fell from the sky, he was to tell teachings, prophecies, and traditions that had previously been secret. Other clan elders mentioned similar instructions. A series of meetings brought elders from all three mesas; and clan functions and duties, religious philosophy, and prophecies were discussed. Results of these meetings were an increase in initiates to religious sodalities; communication of esoteric religious ceremonies to young people; assured perpetuation of ceremonies that were about to disappear; and the start of the counter-campaign to the acculturative pressures of United States jurisdiction, resulting in emergence of the Hopi Traditionals as a political entity.

Obviously by 1950 two definite political strategies with separate leaderships had emerged among the Hopi, each communicating a different ideology to the agencies of non-Indian jurisdiction. The two strategies may manifest what Alice Schlegel (personal communication 1972) refers to as the "linearity and dialectic involved in Hopi cosmology in an almost Hegelian progression of time and space . . . encapsulated in the ceremonial cycle."

This dialectic process is seen in the continuing pursuit of diametrically opposed strategies by the tribal council and the Hopi Traditionals. The Traditionals asserted that the Hopis were an independent nation, not even extending diplomatic recognition to the United States through treaty negotiation, since the Hopi never signed a treaty with the United States. The council supporters, reflecting the influence of 60 years of Christian missionizing efforts, asserted that as "the younger generation of the Hopis who are not baptized into Hopi ceremonial customs," they had "chosen the civilized method of democratic government in dealing with others for the welfare of our people" (Emmons 1955:288).

Land Issues and Economic Development

For both the Hopi Traditionals and the council supporters, land emerged as the central focus of attention in the 1960s. Just as the Traditionals asserted their caretakership of Mother Earth, the tribal council asserted economic interest in Hopi land resources as a basis for political strength and influence. After filing a claim with the Claims Commission, the council next started negotiations with the Navajos over the areas of the Hopi reservation outside District Six, which by 1953 had become occupied almost exclusively by Navajos. After several years of fruitless negotiations between the Hopi and Navajo tribal councils, Congress passed a bill authorizing the Hopis to sue the Navajos to settle the land question in court. Filed in 1961, the suit was resolved by a three-judge panel in 1962. The panel ruled that Hopis had exclusive right and interest in District Six, but only "joint, undivided and equal rights and interests . . . to all of the executive order reservation . . . lying outside . . . district six" with the Navajos. Hopis were not happy with the decision, since it required them to pursue an aggressive strategy to enforce their rights and officially diminished what was operationally a shrunken land base.

Despite limited access to once exclusive Hopi territory, the tribal council has successfully promoted economic exploitation of land and its resources. A legacy of the Navajo-Hopi Act was a report published by the Bureau

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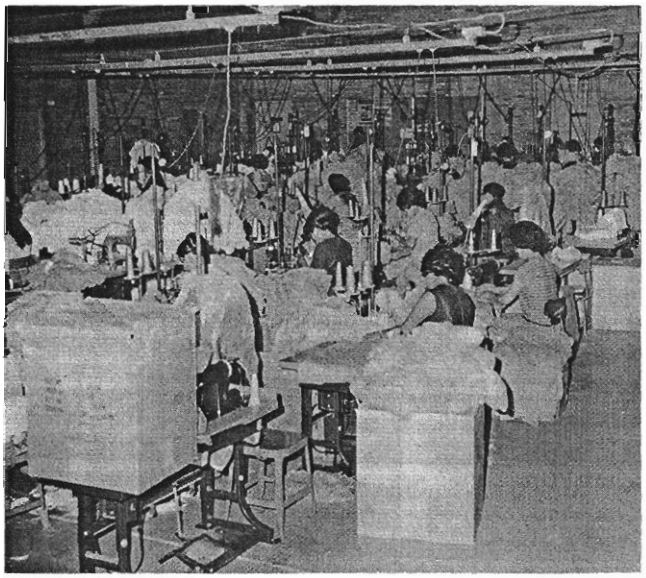
of Indian Affairs in 1956 assessing the economic feasibility of mineral exploitation (Kiersch 1955-1956, 1). Between 1961 and 1964 the tribal council secured leases for prospecting, exploring, and drilling for oil, gas, and minerals. These leases brought $3,139,104.43 in royalties (Anonymous 1961; Hopi Indian Agency 1968; Anonymous 1964). Regular income greatly bolstered the council's image and made it more like a real government. From this income, the council authorized payment of $1,000,000 for legal fees and services to their attorney, reserving about $500,000 for operating expenses, a meeting hall and headquarters, and regular compensation for council members.

The remaining $1,600,000 was invested in constructing an undergarment factory for the B.V.D. Company (fig. 2) on lands donated as a "Hopi industrial park" by private individuals and the city of Winslow in that off-reservation town. After two years of operation, the factory threatened to close down in 1971. Worker dissatisfaction, Hopi complaints of B.V.D.'s failure to pay rent, and Indians' lack of enthusiasm for relocating to Winslow indicated that the B.V.D. factory was anything but an unqualified success. Nevertheless, the Hopi and Navajo tribal councils, the Bureau of Indian Affairs, B.V.D., and the city of Winslow launched a cooperative effort to pump new life into this important Hopi investment (Anonymous 1971). This attempt was not successful, and the factory closed in 1975.

Around the same time as the council began its B.V.D. venture, it also began to provide more services and employment for Hopis under the BIA's "buy Indian" policy and under various programs of the federal War on Poverty. Through a grant-loan from the Economic Development Administration and $144,700 of its own money, the council constructed a motel-café-museum complex on Second Mesa. Known as the Hopi Cultural Center, the building opened in 1970, featuring excellent displays of contemporary Hopi weaving, carving, and visual art.



Winslow Mail, Ariz.

Fig. 2. B.V.D. factory, Winslow, Ariz. Photograph by unidentified photographer, probably 1969-1971.

The largest economic development scheme in which the tribal council has gotten involved is the 1966 leasing of a portion of the joint use area in conjunction with the Navajo Tribe to Peabody Coal Company. Peabody began strip-mining an area of Black Mesa in 1970, agreeing to pay the Hopi Tribe an annual royalty of approximately $500,000. In addition to coal, Peabody also negotiated to pump 38 billion gallons of water from underneath Black Mesa for processing the coal for power plants (McGavock and Levings 1973; Martone 1974).

Although the mining operations guaranteed a steady income to the tribal council, many observers (Clemmer 1970, 1973; Josephy 1971; Aarons 1971; Budnik 1972; Brom 1974) feared that runoff from the mining area could adversely affect Hopi crops, that Peabody's plans for reseeding and recontouring the mined area would not reverse the environmental damage to the fragile ecosystem, that no amount of money could undo the possible harmful effects of pollution from the power plants (see U.S. Department of Health, Education and Welfare 1970), and that pumping operations could seriously deplete accessible water supplies (McGavock and Levings 1973; Martone 1974).

The Hopi Traditionals, after several years of waning support, mustered impressive opposition to the strip-mining (fig. 3). In 1970 village chiefs and ceremonial leaders representing 10 of the 13 villages organized to file a lawsuit against the secretary of the interior and Peabody Coal Company. Filing of the suit in May 1971 followed nearly a year of village meetings at which Hopis, environmental experts and advocates, lawyers, and anthropologists aired their opinions. There was much discussion of Hopi prophecy, the significance of Black Mesa as a portion of the Hopi shrine, and the advisability of subjecting Hopi sovereignty to arbitration under United States law. There were even a couple of dramatic exchanges between Hopi Traditionals and Peabody representatives.

The 1971 suit (Lomayaktewa et al. *v.* Morton) alleged that the Hopi tribal council did not constitute a proper quorum when it signed the lease (see Clemmer 1973) and charged the secretary of the interior with exceeding his authority when he approved it. The basis of the suit was that the strip-mining violated "the most sacred elements of traditional Hopi religion, culture and way of life." In a statement prepared for the complaint, six Hopi elders explained that Black Mesa was "part of the heart of our Mother Earth" granted to the Hopi to hold "in trust in a spiritual way for the Great Spirit, Massau'u." "Title," they asserted, "is vested in the whole makeup of Hopi life.

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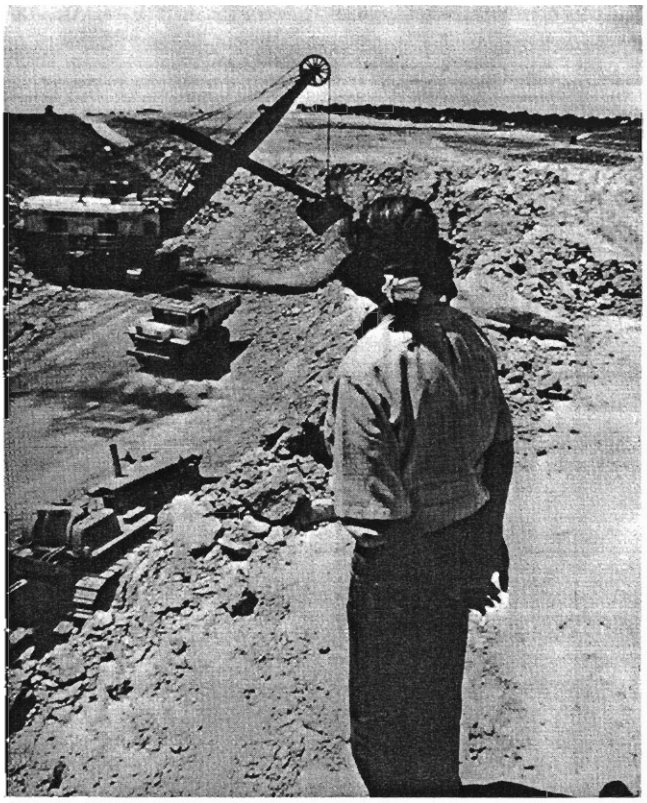
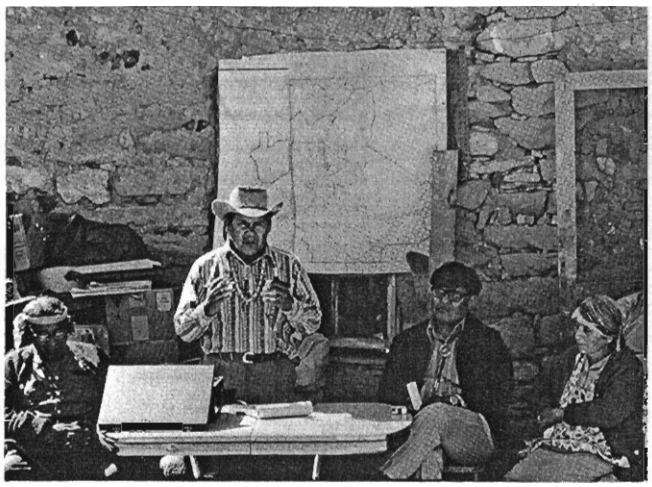


Fig. 3. Hopi man viewing the Peabody Coal Company's strip mine at Black Mesa. Photograph by Terrence Moore, 1970.



Woodfin Camp and Associates.

Fig. 4. One of several meetings called by the Hopi-Navajo Unity Committee to discuss the division of the joint use area. Thomas Banyacya (standing) and Mina Lanza (seated at right) were prominent Hopis on the committee, which was formed to oppose division and relocation. Photograph by Dan Budnick, Shongopavi, May 1972.

. . . If the land is abused, the sacredness of Hopi life will disappear."

Although this view conflicted with the council's strategy of economic development, it is clear that Traditionals and council supporters were alike in valuing land and its resources. Whether land was used for economic purposes or as a basis for religious activity and ritual enactment of the mythic process, land was regarded as the most crucial factor for the perpetuation of the Hopi as a viable Indian nation. In one sense, the tribal council's negotiation of leases with Peabody Coal was an effort at asserting their claim to the "joint use" area that was formerly exclusively Hopi. Certainly the 6,000 Hopis were conscious of their diminished position in relation to the economic and political power of the surrounding Navajo Nation. In 1970 the Navajo tribal council infuriated the Hopis by offering to purchase the Hopis' half-interest in the joint use area (fig. 4). The tribal council denounced and rejected the offer, and the Hopi Traditionals issued their own statement to the same effect, stating that no Hopi land was for sale (C.H. Johnson 1970).

Many Hopis saw land and land resources as crucial for Hopis' ability as an Indian nation to withstand the economic onslaught that development of the Southwest as a major metropolitan area could bring (see Westinghouse Electric Corporation, Systems Operations 1969;

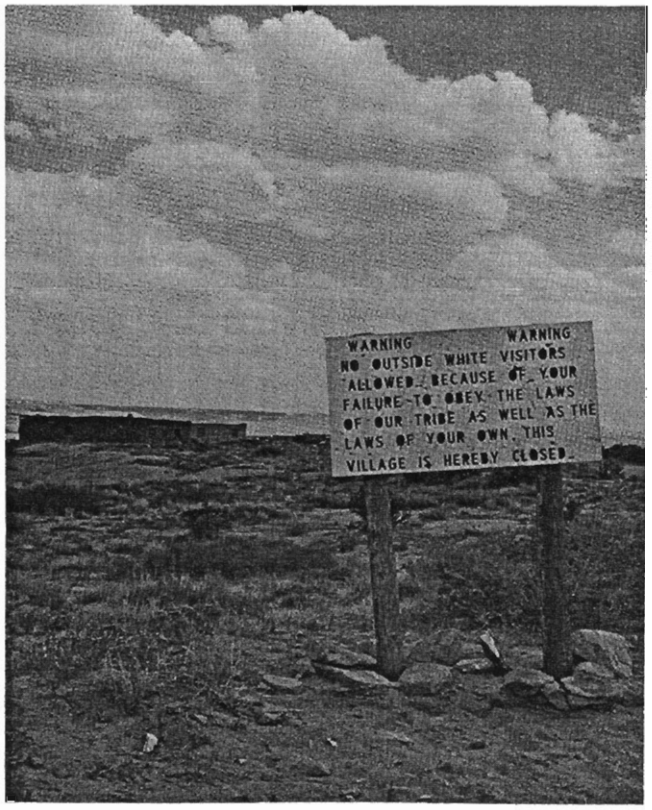


Fig. 5. Sign placed outside Old Oraibi by Mina Lanza, in 1974, closing the village to tourists. (See Hopi 1977). Mina Lanza functioned as "village chief" *(kí·kmòŋʷi)* from 1960 until her death in 1978, although her brother, Myron Poliquaptewa, was also recognized as village chief by some villagers. The sign was put up at the request of villagers because of their experiences with disrespectful tourists. Photograph by Cradoc Bagshaw, 1975.

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Martone 1974). Although by the 1970s there were several hundred Hopis attending college, few could expect reservation employment from federal or tribal agencies dependent on fluctuating government funding. Climatic factors limit agriculture to a subsistence basis, and stock production in the 1970s was severely limited by inadequate land. Efforts to work out a legislative plan for relocating Navajos, enlarging the exclusive Hopi area, and including Moenkopi in a new and diminished Hopi reservation had not solved the Hopi land problem as of 1975. Although in many respects the tribal council had intensified non-Indian influence over the Hopi after its revival in 1951, the dialectical process of cooperation and resistance manifested by the council and the Traditionals represented multiple strategies aimed at one goal: perpetuation of Hopi cultural sovereignty and the processes that underlie it. It is evident that for Hopis, land—whether it is maintained as the Great Spirit ordained it or is incorporated into non-Indian use patterns—is the crucial variable for maintaining these processes.

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Hopi Social Organization

JOHN C. CONNELLY

The concept of tribe when applied to Hopi is misleading, for the Hopi "do not form a tribe in the ordinary sense of the word" (Colton 1934). The prominent features encompassing the whole of the Hopi population are a distinctive Pueblo life-style and language, although slight but identifiable dialectical differences exist among communities. The Tewa-speaking community of First Mesa has a different language, but its people share in accommodating ways the general Hopi Pueblo culture, while retaining significant elements of their Rio Grande Pueblo culture. Efforts to gain "tribal" unity among the Hopi relate to Hopi social organization only as a contemporary issue, following the enactment of the Indian Reorganization Act of 1934. The problems that attended the efforts to achieve Hopi political unity show that such unity was not encompassed within the traditional social structure and throw some light on why such a perception of unity was antithetical to Hopi culture.

The use of the terms town, Pueblo, or village for the Hopi has also tended to distract from a clear view of the operative social organization. As Euro-American concepts they have tended to impose upon the residence groups an alien expectation of political order. The fact that the Hopi have given place-names to these residence sites and the groups occupying them has given support to the misconception. The term village has become embedded in the literature and in common usage in identifying the different residence groups, but it is used in this chapter without its Euro-American connotations to refer only to the residence sites and the specific Hopi relationships associated with them.

Hopi social structure contains a number of significant interlocking social groupings, named and unnamed. The (village) residence sites, the clans, and the societies are named groups. The households, lineages, and phratries are unnamed groups or named only by reference. Larger areas of residence sites were given American names—First (East) Mesa, Second (Middle) Mesa, and Third (West) Mesa (fig. 1). Connelly (1956) noted cluster relationships among the Hopi-named residence sites in the American-named mesa areas. Hopi individuals frequently refer to a mesa area by naming the most conspicuous village to indicate the whole cluster. It is in the data covering these named and unnamed subgroupings, both studies of their persistence and studies of the changes in them, that the social structure is most clearly seen.

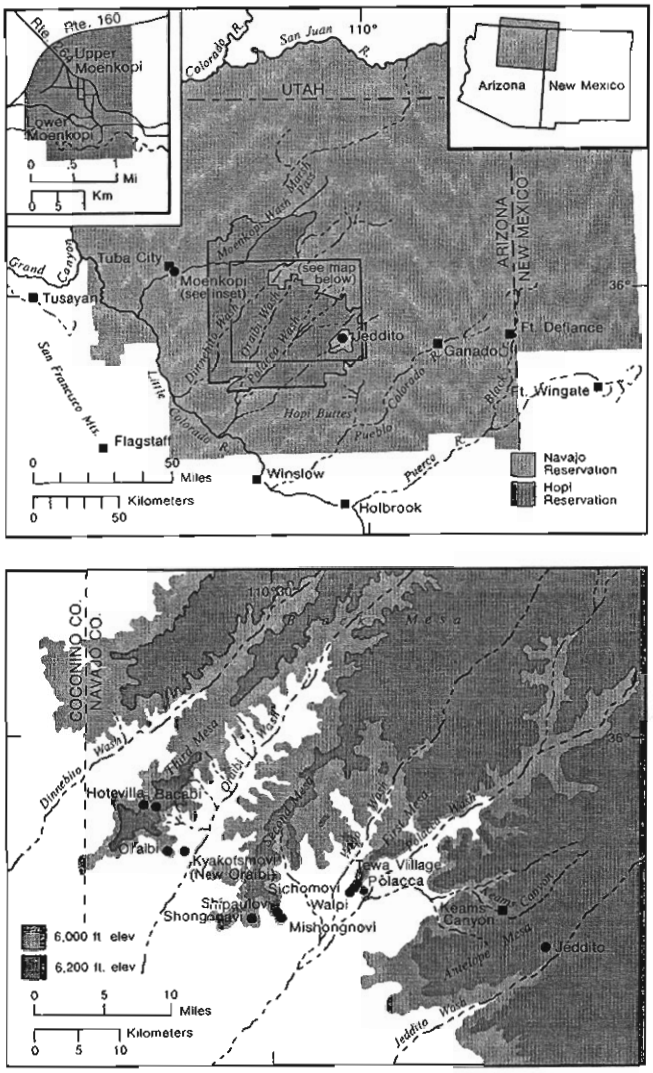

Fig. 1. top, Hopi and part of Navajo Reservations. Hopi Reservation outlined along "Mediator's Line" according to an Order of Partition issued by the U.S. District Court for Ariz., Feb. 10, 1977. bottom, Hopi village area.

The Community Clusters

Throughout the dispersed residence sites of the Hopi population there runs a common pattern of socioreligious ceremonialism and an affinity of clan identification. In

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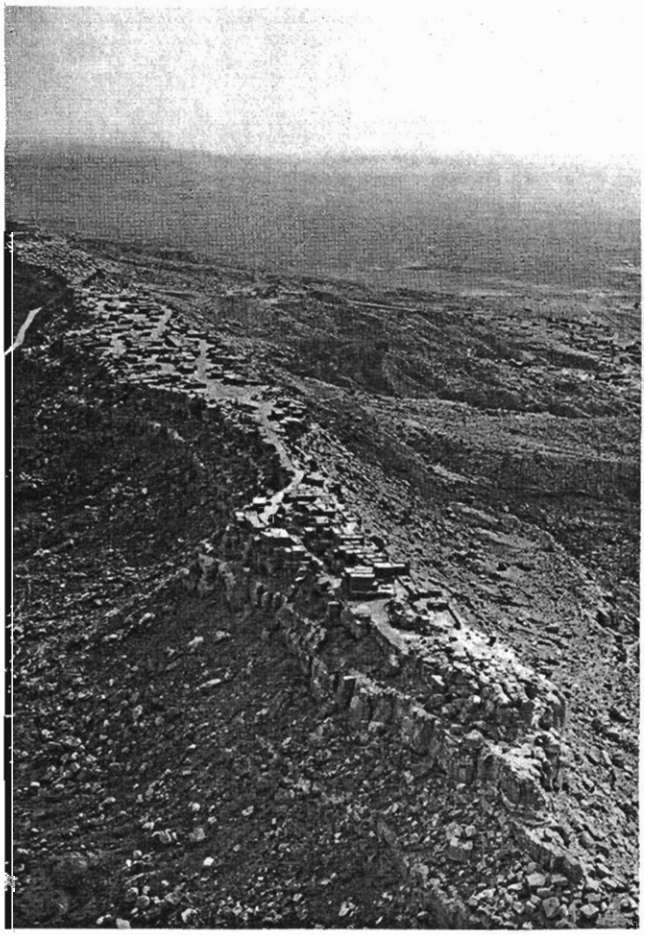
this broad extension of clan relationships, clans operate on the level of social courtesy and reciprocity, whereas within the residence sites themselves, clan kin demonstrate stronger obligatory relationships. The distinction between nominal relationships and relationships carrying mutual obligation is of help in viewing both the clan system and the other obligatory relationships that form the structure of Hopi social organization.

Significant units within which the obligatory affinity operates may be viewed in terms of orbital relationships or clusters of social units surrounding a core unit. On the minimal level of social organization, the households (within which the nuclear families are contained) are the essential core groups in Hopi social structure. At the other extreme, the clusters of named residence sites constitute the greatest extent of obligatory relationships.

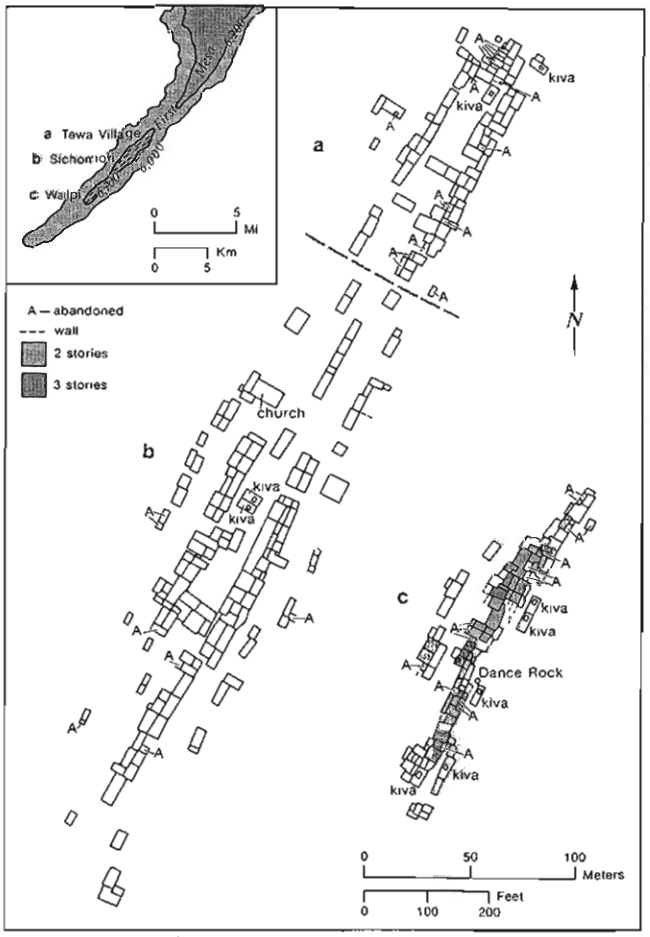
In the precarious natural environment of Hopi, the ceremonies are the instruments of supernatural management, from which arise directives for social control. In the First Mesa area (figs. 2-3) the major ceremonies are in the custody of the mother village, Walpi, and Sichomovi is in a colonial relationship, dependent upon Walpi for religious initiation. In return, Sichomovi serves as a reservoir of available population. The ceremonials must be maintained with sufficient personnel to insure their performance but protected against excess population competing to usurp ceremonial rights and status. Surplus population may be maneuvered into safe social distance if controlled by dependency relationships.

The other satellite community of First Mesa, Tewa Village, was established in historic times. The oral traditions of Hopi clans give many instances of procrastination and ambivalence attending acceptance of refugee or nomadic groups into the Hopi area and of the contractual arrangements upon which acceptance was based. First Mesa is in an exposed position, and the Tewa immigrants were assigned to protect the Hopi from intrusion (including intrusion of other Tewa) upon Hopi management of land, water, residence, and ceremonial jurisdiction. Social distance was maintained by physical separation on the narrow mesa top, reinforced by separation of role, the Tewa occupying the "prestigeless positions of warriors" (Dozier 1954:290-297). However, the bilingual Hopi-Tewa found a means for enhancing their role as guard-



Southwest Foundation for Audio-Visual Resources, Santa Fe, N.M.

Fig. 2. First Mesa, looking northeast. Walpi is in the foreground, Sichomovi and Tewa Village are beyond the narrowing of the mesa in the middle of the photograph. Photograph by Peter Dechert, June 1977.



after Stubbs 1950:figs. 22-23.

Fig. 3. First Mesa villages in 1950: a, Tewa Village; b, Sichomovi; c, Walpi.

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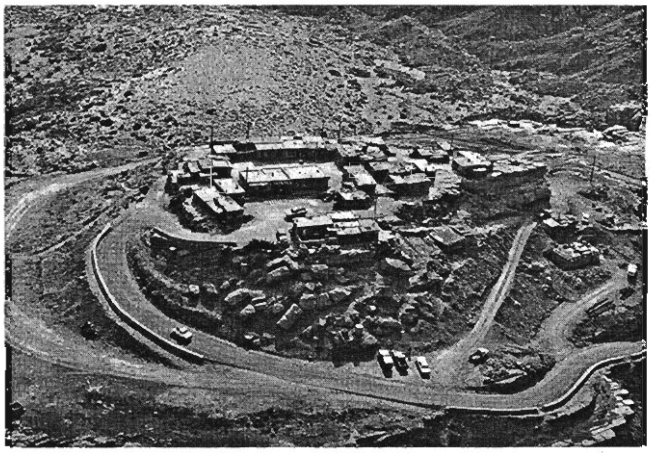
after Stubbs 1950:figs. 24-26.

Fig. 4. Second Mesa villages in 1950: a, Mishongnovi; b, Shipaulovi; c, Shongopavi.

Southwest Foundation for Audio-Visual Resources, Santa Fe, N.M.

Fig. 5. Part of Second Mesa, looking northeast. Mishongnovi is in the foreground, part of Shipaulovi is in the distance to the left (arrow). Photograph by Peter Dechert, June 1977.



Southwest Foundation for Audio-Visual Resources, Santa Fe, N.M.

Fig. 6. Shipaulovi, looking east. Photograph by Peter Dechert, June 1977.

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Fig. 7. Shongopavi, looking northeast. Photograph by Peter Dechert, June 1977.

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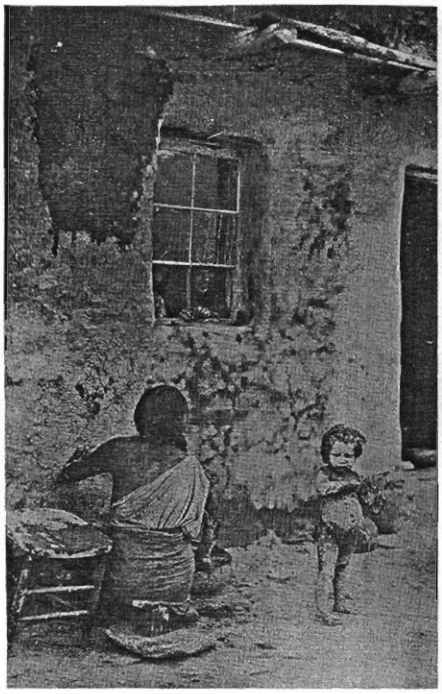

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Fig. 12. Women building and whitewashing houses at Oraibi (left) and unidentified Hopi village (right). Roof has brush and grass over two layers of beams, and then earth and adobe on top. Housebuilding is largely women's work, and whitewashing entirely so. Photographs probably by G. Wharton James or Charles C. Pierce, before 1901.

names in infant-naming ceremonies. This maneuver was a persistent process of increasing identification with Spider. A rapid move would have been subject to challenge from associate clans within the phratry, and also from within its own clan, which was at that time so numerous that its lineages had to vie for function and status. Such role transference serves not only to keep the supportive clan roles filled but also to provide roles for the excess lineages of overpopulated clans. Having a large number of lineages poses the threat of competing claims upon a clan's ceremonial functions.

Having overall responsibility for the commitments of the clans in its cluster, the prime clan is in a position to make reassignments of any ceremonial office or duty not being properly carried out. Such an assignment enhances the status of the appointed individual and kinsmen as well. The result is to wean this particular lineage away from the competing lineages in its clan toward closer ties with the prime clan.

The flexible quality of the phratry allows for the managing of population size in a physical environment where either too small or too large a population creates problems. This may explain in part why political organization appears antithetical to Hopi social patterns. Political alliances tend to produce ever larger groupings, with the goal of power to establish and retain territoriality. However, in an environment where the prime enemy is unpredictable climate and weather, large populations have been vulnerable as illustrated by the demise of the Great Pueblos. Hopi history and archeology demonstrate the importance for survival of division and balance in population.

A result of population imbalance is evidenced in the division at Oraibi (Titiev 1944:89). Of the nine phratries in the community at the time, that of Bear and Spider was next to smallest in size, and Bear had only 10 members to Spider's 23. This made the Bear clan vulnerable to challenge by its larger associated clan, the more so because of the total population imbalance in the community, as the basic challenge was to Bear's capability for carrying out its primary function of land management for the total population. Bear had no other associate clan reserves within its phratry to balance against the Spider clan challenge.

As a coordinating unit, the Hopi phratry contains competitive clan elements ready to move in toto or by lineage segments into orbits vacated by extinct or malfunctioning clans. In such maneuvers associated clans within a phratry have priority, but as there are no guarantees for survival of either clan or phratry, the functions of an entire phratry that becomes extinct may be taken over by other clans. Eggan (1950) gives an account of the demise of the Bear clan at Walpi and the last individual survivor of the affiliated Spider clan. The Snake and Horn clans from other phratries moved in, first to give assistance, then eventually to carry on certain Bear clan responsibilities in "custodial" roles.

Through such transference, contributary commitments

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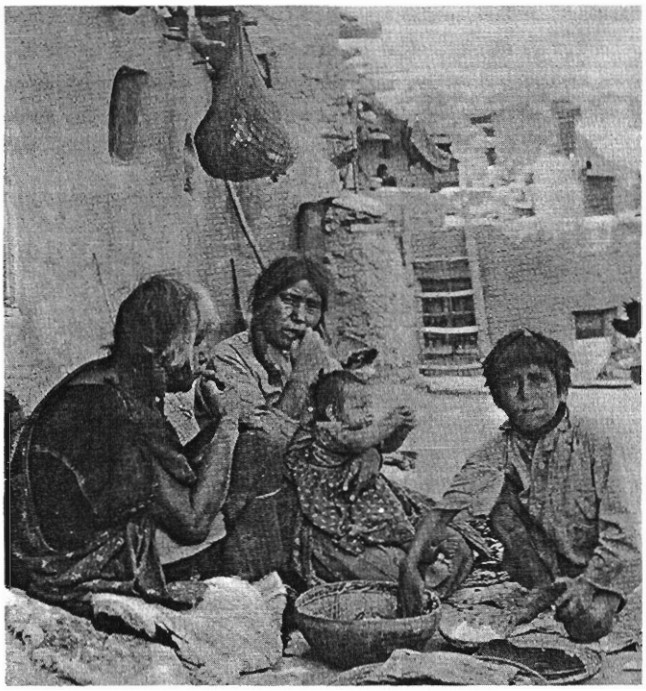
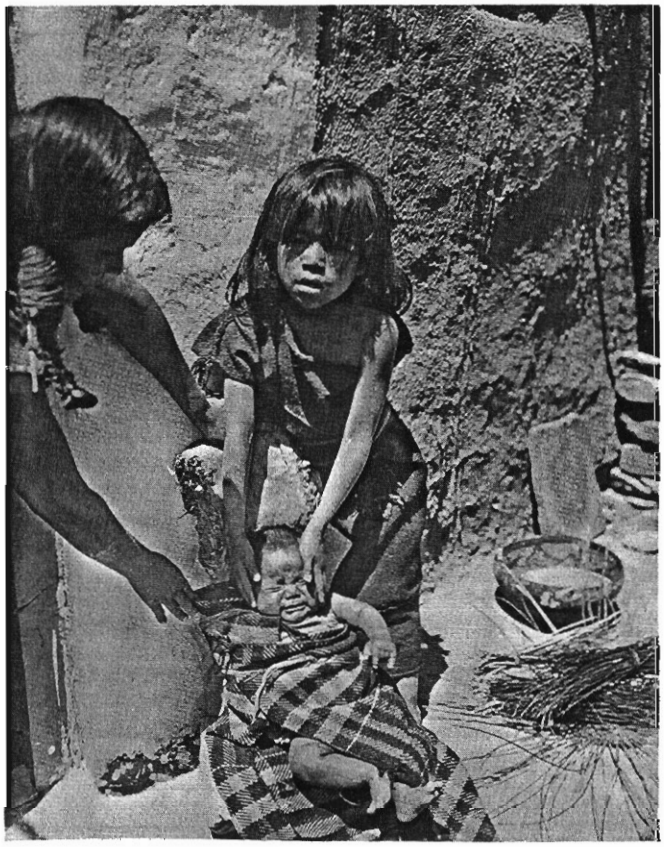


Smithsonian, NAA.
Fig. 13. Family meal. Note the standard method of dipping food up with fingers (properly, only thumb, index, and middle fingers and only as far as the first joint). Photograph probably by Adam C. Vroman, 1901.

are assured of continuity and continue to govern the behavior of individuals and groups. Instances of clan extinctions and mergers, clan revivals through adoptions, and clan reidentification all illustrate the remarkable flexibility that the phratry gives to Hopi social organization.

Households and Lineages

The household, the smallest distinct unit of Hopi society, varies in size of membership and may divide into a number of adjacent or quite separate households. Titiev (1944:51), recognizing the limitations of a genealogical procedure, turned to an examination of households in analyzing population relations in Oraibi. He lists 31 clan houses (presumably the prime households or house sites) and 145 households accommodating a population of 863 people. The Shongopavi population when Connelly began his study (1944–1945) was approximately half that of Oraibi prior to its split. Connelly retained the genealogical approach together with the study of households, which revealed two significant patterns. The first, the process of sloughing off descent-line groups not needed to support a prime descent line, has the effect of proliferating households apart from the core cluster. This separa-



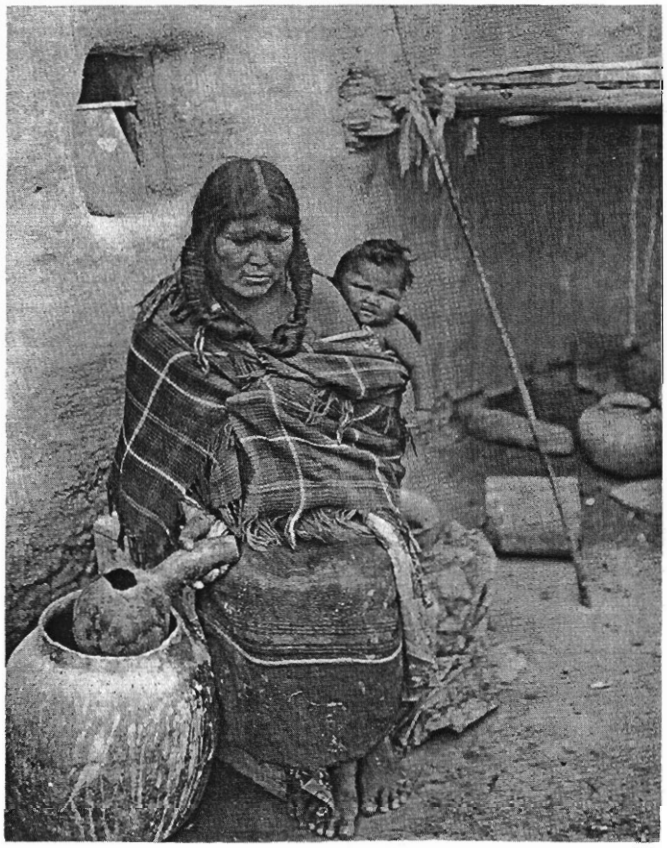


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Fig. 14. Two methods of carrying babies: left, placing baby in cradleboard (with Hopi-made blanket); right, carried in (commercial) blanket on mother's back. Woman is using gourd dipper. Photographs probably 1895–1900, photographer not identified.

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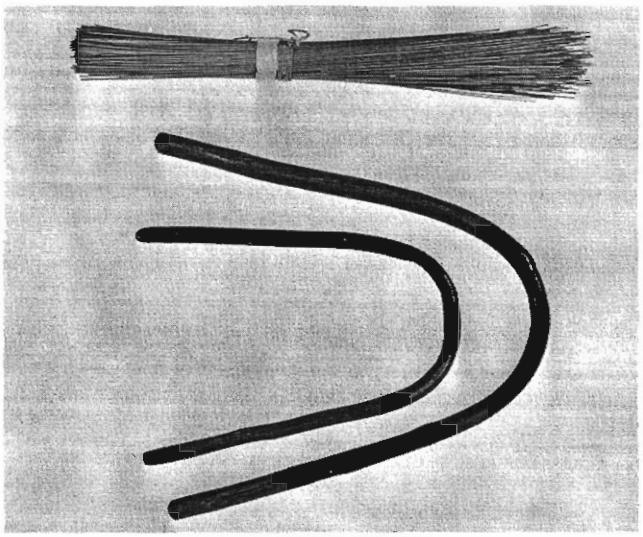

Smithsonian, Dept. of Anthr.: 409584, 128909, 22539.
Fig. 15. Hopi hair-dressing implements. top, Hair brush, a tied bundle of grass stems, collected 1941. bottom, Wooden hair bows over which a young girl's hair is wound to form a whorl, collected 1885 and early 1870s. The length of the hair to be wound determines the width of the bow used. Similar bows (usually smaller) were also used for dressing men's hair. Length of brush 26.5 cm, rest same scale.

Southwest Mus., Los Angeles.
Fig. 16. Women's hair styles. left, Married woman; right, postpubescent girl. Photographs by Adam C. Vroman, 1901, Shongopavi; for additional photographs showing this sequence see Webb and Weinstein (1973:76-79).

tion was often explained on the basis of a "quarrel." A second is the existence of biologically unrelated lineage groups often identified as immigrant. This differentiation placed a certain social distance between the "native" lineage and the other, each developing its own clusters of descent-line households. The kinship system is maintained throughout, but the intensity of obligatory relationship is diminished by degree of social distance.

A household may consist of several biological families: adult married sisters, their husbands and offspring, the mother and her husband, unmarried brothers, and frequently a senior woman. An ideal situation can be described as a prime descent line with one or more reserve descent lines allied in a close working relationship. They may live in the same house structure, in appended house extensions, or in houses placed close together. Proliferation of descent lines may lead to forming of separate households, but these often continue in amiable relations with the prime group (generally the one possessing the recognized clan house, the *ʔɨ·yi* 'plant (prayer-stick)'—symbol of clan authority—and responsibility for insuring that the clan commitments are met). In a crisis situation, such as drought, crop loss, declining domestic water supply, or overpopulation, the peripheral household groups may be pressed to emigrate.

Shifts of position can take place among households within the lineage clusters, as among clans within the phratry clusters. Occupancy of the clan house and its possessions does not guarantee its residents continuance in this important position; these are custodial holdings for the clan and its continuity. In order to hold its position, the prime household must insure that respect is maintained for the clan as a whole by the effectiveness with which it conducts its ceremonies and performs its obligatory services. It must have within its own membership the personnel for carrying out these duties, or else have them in ready reserve in satellite lineage households, with which it maintains close working and trusting ties. It must encourage supportive marital ties with other phratries to negate or minimize potential aggression. The central management of the prime household consists of the senior woman and her senior brother. Seniority is less a matter of chronological age than of a recognized

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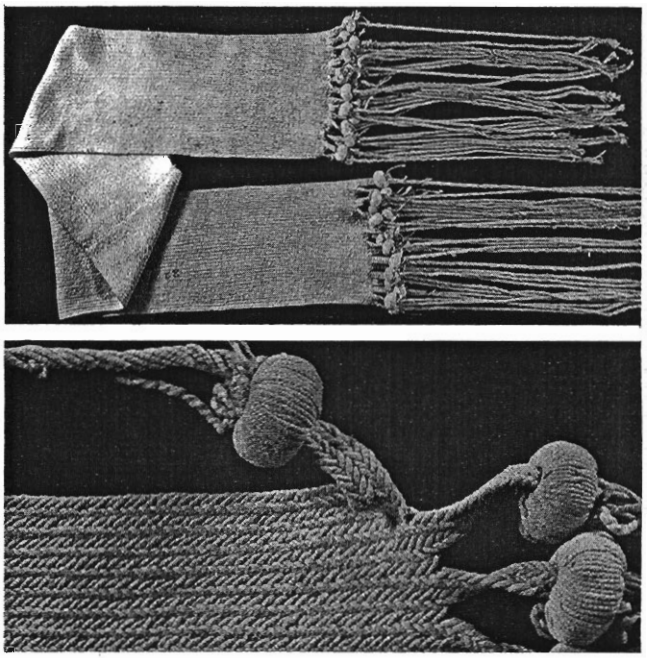
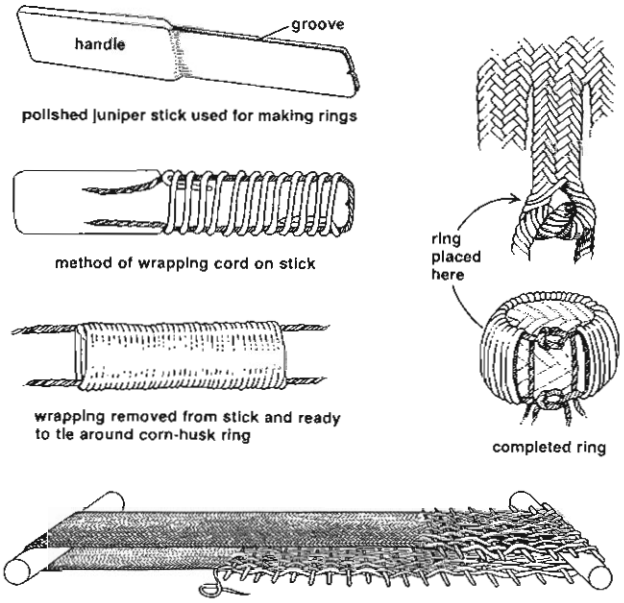
capability and dependability in attendance to clan affairs. Succession, likewise, is determined not by chronological age but by serious disposition, interest, and involvement in clan concerns demonstrated by members of the maternal group offspring as they develop—or as Hopi express it, reveal—their qualification. General instruction in clan lore, duties, entitlements, and ceremonies given to all offspring becomes more specific for the potential successor, finally leading to a more consultative role and more responsible participation in the required activities.

Hopi ceremonialism stresses pacification of the natural elements to prevent threatening disturbances in nature. Hopi ideology places equal stress upon pacifying, nonaggressive human behavior to counteract the threat posed by competition within the residence sites. Infant and child-rearing practices and expected behavior within the household manifest this nonaggressive ideology. The flexibility of the social system and its strain for balance operate to control competitive threat and prevent disintegration.

Mus. of Northern Ariz., Flagstaff (top); drawing after Nequatewa 1933:fig. 4.

Fig. 17. Second Mesa wedding ritual. top, New bride leaving the home of her mother-in-law, where she lived and worked while the groom, his closest male relatives and other men in the village wove her wedding robes and belt and prepared the rest of her wedding outfit in the kiva to which he belongs. The wedding outfit consists of the cotton wedding robe that she wears, white ceremonial moccasins (which, like the robe, have been whitened with a fine clay), and the reed suitcase that she carries, which contains another (larger) wedding robe and a plaited cotton belt with long white fringe (visible here). She wears a string of cotton, remaining from the weaving of her robes, in each ear. To the bride's left is her father-in-law, Edmund Nequatewa, who will lead her back to her mother's home, where her husband will meet her (see Nequatewa 1933; Titiev 1944:30-43). Photographer unidentified, probably Oct. or Nov. 1932. insert, Detail showing bottom corner of a wedding robe, which includes a prayer feather, tassel wrapped in black yarn, and plaited red yarn—all of which have symbolic significance.





top-center, Smithsonian, Dept. of Anthr.: 22953; bottom, after Kent 1940:figs. 12-16, 8.

Fig. 18. top, Hopi braided cotton wedding sash worn by brides and occasionally by men as part of kachina costumes; length 220 cm, collected early 1870s; center, detail of braiding; bottom, Construction of decorative ring for fringe and method of braiding sash on horizontal loom. The warps are continuous, being strung onto the loom as a complete circle, and the braiding twists are held in place by the insertion of rods (for technique of manufacture see Kent 1940:46-52).

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Titiev's (1944) population study at Oraibi shows a result of a lack of flexibility in balancing population. Between 1900 and 1906 there was a population loss of 28 percent: 18 percent through death, 8 percent through migration, and 2 percent unaccounted for. This reduction still left a population of over 600, still an excessive demand upon land and domestic water supply. Tensions were intensified with the split in the prime phratry, the one charged most specifically with responsibility for passive behavior. Political competition then resulted, for both factions had to gain support from among nonkin groups in their claims for legitimacy. The effect of this division was to release pressure within the other overpopulated clan-phratry groups and provide the prospect for eventual stabilization by a major separation into dispersed residence sites.

By comparison, the Shongopavi community had approximately half the population of Oraibi, less than half the number of phratries, and less than half the number of clans. The situation was more manageable there because of the avoidance of population compression through the development of an interdependent cluster of dispersed residence sites.

Societies

The ceremonial societies perform a religious function that in Hopi theory includes all life and all people. On the practical level within the society the cross-clan membership of the societies aids in preventing the concentration of power in any one group within a residence site.

Theoretically ceremonies belong to particular clans, though as Eggan's (1950:89-106) analysis shows, there are variations from one community to another as to the clan or clans recognized as being in charge of a given ceremony. Furthermore, the theoretically exclusive possession of a ceremony by a clan is considerably attenuated in practice. The long periods of negotiation for admission into the residence sites suggest that an apprenticeship was involved in such adoptions. It was necessary for the petitioning group to demonstrate the value of its power or service by performance, and the power claimed by the petitioners had to be delineated and shaped into a contributory component of the existing ceremonial order for the group to be admitted. Thus admission was gained after the revelation of many of the petitioners' procedural and instrumental possessions and their submission to accommodative restrictions. The cross-clan membership of the societies, while providing broad support for the individual clans' ceremonial responsibilities and performances, also provides a supervisory control over them. The resources of the broad society membership enable clan-based ceremonies to develop into impressive rituals, but the clearly defined domains of the separate societies disallow overlapping of function and prevent competition for specific ceremonies.

Milwaukee Public Mus.

Fig. 19. Hopi burials below Second Mesa, marked by pottery bowls and basketry plaques. Photograph by Sumner W. Matteson, about 1900.

The importance placed upon balance in the memberships of societies is seen in initiation rites. The four men's societies, Wuwuchim, Singer, Horn, and Agave, are involved in both Wuwuchim initiation and the initiation of the kachina cult. If any of the societies does not receive sufficient initiates pledged by their kinsmen, it may refuse to participate, and the initiation must be postponed to a future year (Connelly 1947-1954).

The clustering of clans within a society makes it possible to maintain a ceremony once gained without its being dependent on clan survival, since the transfer of function from one clan to another can prevent the loss of the ceremony to the community.

Kinship

For the Hopi the kinship system is "the most important element in their social structure. If kinship is considered as based on genealogical relations which are socially recognized and which determine social relations of all kinds between persons so related, the Hopi have emphasized the *social recognition* at the expense of the *genealogi-*

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cal relations and have used kinship relations and behavior in ceremonial as well as daily life" (Eggan 1950:19).

The Hopi kinship system is a classificatory type with mother and mother's sisters being classed together, and father being classed together with father's brothers. Further refinements of classification are made on the basis of peer generation, supergeneration, and subgeneration. An individual's identity is in the maternal group, reinforced by the close associations with matrilineal kin in the matrilocal residency group. He recognizes maternal kin as those he is involved with on the plane of subsistence. Paternal kin are identified as supportive kin. The rule of exogamy applies to all relatives of the mother's clan, immediate and remote. Although marriage is theoretically disallowed with paternal clan kin also, breaches of this rule are tolerated with the more remote kin of the father.

The degree of intensity in interpersonal affinity among kin is greatest in the close relations of households and allied households and somewhat less with kin in clans of the phratry to which one's own clan is related. In other residence areas kin association tends to operate on the basis of reciprocal social courtesy and hospitality. An individual visiting another village need only locate the houses of his clansmen and hospitality is unquestioned.

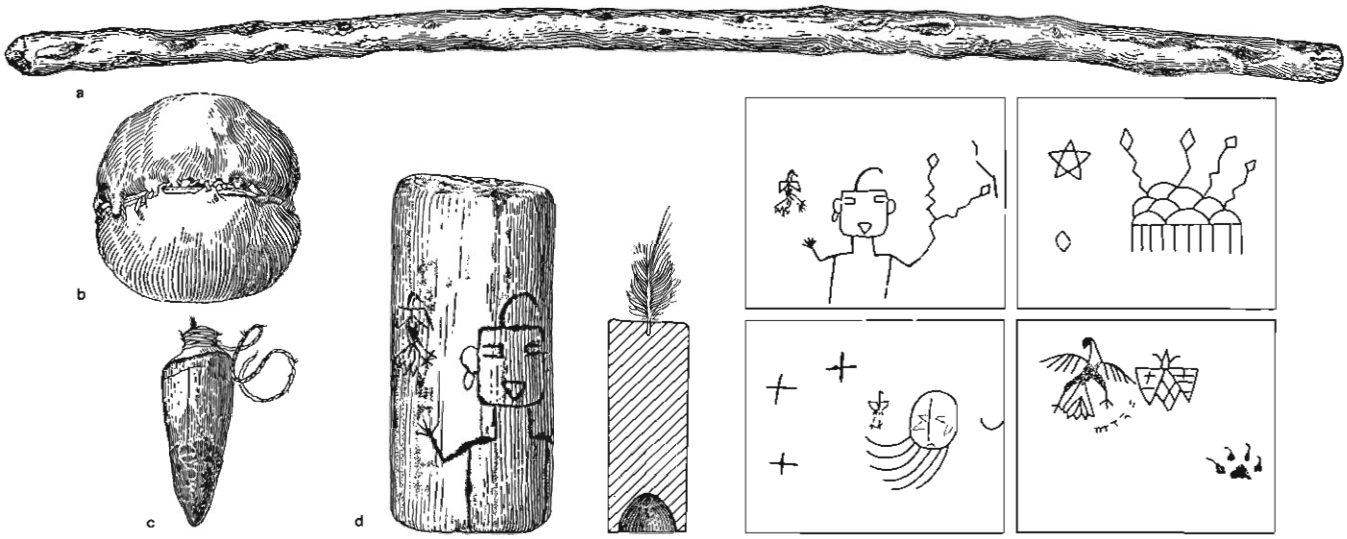
The kinship classification of individuals in identifying their relationships extends as well to ceremonial sponsors and associates and to those who have had involvement in the curing of an individual.

Eggan (1950:19-61) has provided the specifics of the kinship terminology, definition, and application. It is sufficient here to observe that the kinship system permeates the whole of Hopi society and allows for easy access from one community to another on a social basis with minimal demand, though in close-range interpersonal relations the obligations are demanding. Most important is the recognition that the kinship system, while widely differential in degree, is, like the rest of the culture, a shared understanding of human relations within a management arrangement.

Conclusion

Hopi social organization is characterized by a pattern of maneuverable management groups. A theoretical order of social prestige is rooted in the origin myths, which established highest status for the earliest arrivals, with descending positions of importance for later-arriving groups. Living in a semidesert with an unpredictable and narrow growing season and crops subject to destruction from violent spring sandstorms, prolonged drought, or torrential summer rains, the tightly knit small units of social structure are highly significant. The appearance of Hopi society as "an unstable equilibrium" (D.F. Aberle 1951:123) bears modification when it is viewed in the environmental context. Recognizing that survival and enrichment have been maintained and developed over a very long period of time in an environment of unstable equilibrium, the social organization of the Hopi appears instead as a flexible instrument of stability.

The continual process of establishing small household units, held together in strong obligatory kin groups within the manageable bounds of cooperative work groups, has provided a stabilizing effect, making possible production for survival in a natural setting adverse to large concentrations of human population. An increasing population



Smithsonian, Dept. of Anthr.: a, 22554; b, 84289; c, 84298; d, 25550.

Fig. 20. Hopi games. a–b, Wooden stick and buckskin ball for shinny, collected 1882 and early 1870s; c, wooden spinning top, collected 1882; d, 1 of set of 4 wooden cups under which objects are hidden in guessing game (Hough 1918:290), collected early 1870s. Diameter of b 11.5 cm, rest same scale. The cross section of the cylinder with its cup-shaped cavity shows the location of a feather decoration now missing on all four specimens. Diagrams to the right indicate what remains of the designs burnt into each of the cylinders.

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has resulted in a segmentation process whereby new household groups have emerged as manageable work units, a process of separation and reformation without loss of kinship affinity. The extensions of kinship classification have insured position and identity within a wide range of human associations, but with greater intensity on the subsistence level. The kinship system embracing individuals in household groups of genealogical descent lines extended to include groups having different genealogical descent but accepted as having common ancestry in clan origins. It also extended to encompass other clans in the exogamous phratries. Here on each level were core groups encircled with clusters of kin as support and as reserves to provide social continuity for the ceremonial, service, and economic needs to maintain the residence sites.

In times of crisis a dispersal of population could and did result, without abandonment, as seen in the colonial residence groups of Sichomovi, Shipaulovi, and Moenkopi. The kinship ties of migrant groups were not severed, and linkages to the clan mother house and to kinsmen in the mother community were retained. This had the practical effect of moderating the alienating effects of the separation. At the Oraibi site the delay in the dispersal of population intensified the crisis of division in that area, and the rapidity of the dispersal when it finally occurred did not allow time for defined functional relationships to develop among the new communities, though kinship ties persist among all of them and with the other Hopi communities. The guard functions carried by Mishongnovi at Second Mesa and Tewa Village at First Mesa are not so clearly delineated at Third Mesa, although within Oraibi the aggressive overt behavior of people charged with the warrior-guard function was present, exemplified in the Kokop clan. The idea of guard function goes far back in Hopi thought. In clan legends and within the religious society organization, certain clans and societies hold these responsibilities.

The political organization of the Hopi population became an issue primarily after the Indian Reorganization Act of 1934. The problems of establishing and maintaining a Hopi tribal government devolved mainly upon the Bureau of Indian Affairs. Eggan (1950:116) in his discussion of social integration notes the lack of "a political superstructure" and comments that "the clan and phratry groups tend to assert their position at the expense of the village." Titiev (1944:68) wrote that no town was "free from strife, and never has a leader arisen to mould the autonomous villages into a coordinated unit worthy of being a tribe. Whatever other talents they may possess, the Hopi do not have the gift of statecraft." The issues of tribal and village political organization are contemporary problems still to be resolved by the Hopi in their adaptation to their changing circumstances.

Nagata's (1970) comprehensive study of change and transformation in the Moenkopi communities provides a wealth of detail on changing Hopi life not only at Moenkopi but also elsewhere. The tendency of household groups to move from the refuge on the mesa tops to the older, more convenient pre-Spanish residence sites in the sandy foothills appears in the Polacca area at First Mesa, in Kyakotsmovi at Third Mesa, and to some degree near Shipaulovi and Mishongnovi at Second Mesa. There are other movements of households to residence outside the villages; but such moves, whether to outlying farming sites or to employment locations in towns or cities, do not sever the links of kinship. The emigrant household continues to be identified in Hopi view with its clan and its affiliate clan households in the village residence site, although Nagata (1970:312-314) notes occasional shifts from matrilineal to bilateral kinship ties.

Hopi society developed a cultural and linguistic integration that allowed a sociocultural identity to arise and gave to small wandering subsistence groups a shared identity, a shared value system, and a comparative enriched subsistence. These values more than compensate for the stress produced by the unpredictable environment and ever-present potential for a division and dispersal process that are part of Hopi life. There are certain aspects of the varied socioceremonial activities that provide release from the pressures of nonaggression, obligation, and responsibility required by the tightly interlocked social units.

As Eggan (1950:116) observed:

> Hopi integration may be viewed from the standpoint of the major organizations: kinship, clan and phratry, society and kiva. Each of these organizations has various devices for increasing or maintaining its own social solidarity. Each system of organization also overlaps the others in terms of membership, so that an integration of the whole is achieved; the bonds holding individuals to household, clan, society, and kiva groupings interweave in complex fashion.

Hopi social organization in its management of small units of human association provides linkages in kinship that in their practical effect serve to communicate cultural information, to reassure identity, to promote a measure of sharing, and to assure continuity. Concurrently it provides a means for survival that gives preeminence to the survival of the whole rather than any segment, in a sometimes benign but often destructive natural environment.

Synonymy*

The English name for the Hopi (ˈhōpē) is their name for themselves: *hópi* (pl. *hóhpi* or *hopíti-ʔ*) (Whorf 1936:1221),

* This synonymy has been prepared by Albert Schroeder and Ives Goddard. The forms in the Third Mesa dialect of Hopi have been provided by LaVerne Masayesva Jeanne (personal communication 1978). The Shongopavi dialect village names in Kalectaca (1978:176) are identical with the Third Mesa forms except for lacking any indication of the falling accent.

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Third Mesa *hópi* (pl. *hopí·t*) (Voegelin and Voegelin 1957:49). The Third Mesa word also means 'good in every respect', while for the Mishongnovi dialect Whorf gives *hóʰpi* 'is good, peaceable' and *hópi* 'is wise, knowing'. Fewkes (1892:4, 67, 117, 1892a:9, 1892b:33) was responsible for the name Hopi being adopted by anthropologists as a replacement for Moqui, when Moqui was found to be offensive. An earlier spelling was Hopees (Dellenbaugh 1877:170). Forms corresponding to *hópi* or Third Mesa *hopísinom* 'Hopi people' (Voegelin and Voegelin 1957:48) were earlier used to refer to all the Pueblo Indians, as distinct from the Navajos, Utes, and others whom the Hopi regarded as more warlike (Harrington 1945:178; Stephen 1936, 2:1221). From *hópi* Jemez has the borrowing *hɨ́pé* 'Hopi' (pl. *hɨ́peš*) (Joe Sando, personal communication 1978).

According to information obtained by Harrington (1945:178) from "the chief of Walpi and several old-time Indians," the original self-designation of the Hopi was *mó·kʷi* (phonemicized). Names for the Hopi borrowed from this into other Indian languages are: Southern Paiute *mo·q·wi-* (Sapir 1931:574), Zuni *mu·kʷi* (pl. *ʔa·mu·kʷi*) (Newman 1958:32; Dennis Tedlock, personal communication 1977), and, with phonetic modification, Isleta *búxiek* 'at Hopi' and *buxíde* or *bùxieʔíde* 'a Hopi' (C.T. Harrington 1920:47; William Leap, personal communication 1977) and Keresan names such as Acoma *mú·cʰi* 'Hopi country' and *mù·cʰimɨ̀·ṭʰa* 'Hopi tribesmen' (Miller 1965:164). Keresan was the source of the Spanish names used by the Antonio de Espejo party in 1582-1583—Mohose, Mojose, Mohoce, Moje (Pérez de Luxán 1929: 83, 86, 91, 93-94, 96; Bolton 1916:185)—and similar forms continued in use after the arrival of Juan de Oñate in 1598, additional spellings being Mohoze and Moze. From this period comes the first use of the Spanish borrowing of the Zuni (or Hopi?) form of the name, appearing as Mohoqui, Mooque, and Moqui (Hammond and Rey 1953, 1:327, 346, 395-396, 408, 421, 428, 477). After Oñate Moqui, sometimes Mooqui (e.g., Zárate-Salmerón 1966:65), is the standard Spanish, and later English, form until the end of the nineteenth century. The original pronunciation must have been [mókwi], but the ambiguous spelling eventually came to be taken as [móki], in accordance with later Spanish orthographic conventions (Harrington 1945), and was sometimes spelled in English Moki (ˈmōkē). This pronunciation resembled Hopi *mǫ́·ki* 'dies, is dead' and was so offensive to the Hopi that Fewkes undertook to urge that it be replaced by Hopi. In 1923 the local BIA agency officially renamed the Hopi Agency, and the term Moqui was dropped from government usage (Frederick J. Dockstader, personal communication 1978).

The first name thought to have been applied by Europeans to the Hopis was Totonteac, obtained by Fray Marcos de Niza in 1539 while among Sobaipuri Pimas (?) of southeastern Arizona and used again while among the Yavapais of central Arizona as well as in discussions with a Zuni refugee among them. Data on this name are meager. The Zuni informant placed Totonteac southeast of the Zunis. Diaz, in early 1540, possibly while among Yavapais, reported that this place was seven short days from Cíbola (Zuni), had 12 pueblos, and grew cotton. Francisco Vásquez de Coronado, later in 1540, was told at Zuni that Totonteac had 5 or 6 pueblos, others having been destroyed by war. This is the only use of this name in any of the Coronado documents and occurs prior to any visit to the Hopi villages (Hammond and Rey 1940:70-72, 79, 160, 173). After reaching the Zuni villages, documents of Coronado's expedition refer to the Hopis as Tucano (for Tuçano?), Tusayán, Tuçayán, or Tuzán (ibid.:214, 253, 259, 286, 299). This name was revived by anthropologists in the late nineteenth century as Tusayan (Powell 1891:110).

The name Asay or Osay was applied to the Hopis by the Francisco Sánchez Chamuscado-Agustín Rodríguez party, which did not visit the Hopis but journeyed west only as far as the Zuni pueblos in 1581-1582 (Hammond and Rey 1966:131, 137). This may have been a rendering of the name of the village of Oraibi, though Schroeder (1958:2-3) points out the similarity to the name Axa, which appears on the earliest maps (prior to 1569) as a place-name considerably west of Tiguex (the Tiwas on the Rio Grande), and the Acha of Castañeda, who wrote in 1567, and suggests a derivation from the name of the Tansy Mustard clan (*ʔá·sa*).

Other names for the Hopi are Rio Grande Tewa *xosóʔon,* not now analyzable but said by Harrington (1916:561) to mean 'big legging'; Arizona Tewa *ko·son* (Paul V. Kroskrity, personal communication 1977) or *kʰosoʔon* (Freire-Marreco 1914:272, phonemicized), with the same meaning; Navajo *'Ayahkiní,* literally 'underneath ones', especially applied to Walpi, and *'Oozéí,* a generalized use of the name for Oraibi (Robert W. Young, personal communication 1977). Further variants are in Fewkes (1907:567-568).

First Mesa

Walpi (ˈwälpē, ˈwôlpē) is *wáLpi* in the Mishongnovi dialect (Whorf 1936:1317) and *walpi* at Third Mesa; the meaning is 'place of the gap' or (Whorf) 'place of the ravine', from *wá·la* 'notch, ravine, narrow gorge'. The people are *wáLpiti-ʔ*. The Navajo name is *'Ayahkiní* 'underneath ones', which is also the name for the Hopi in general (Robert W. Young, personal communication 1977). Zuni has Watlpiye (tl=*ɬ*) (Kroeber 1916:275). Early Spanish sources have Oalpe or Gaspe, 1582-1583 (Pérez de Luxán 1929:99, 104) and Gualpi, 1765 (Tamarón y Romeral 1937:355) and 1782 (Fewkes 1898:579). Further variants are in Fewkes (1910:902).

Sichomovi (sĭˈchōˌmōvē, sĭˈchōməˌvē) is (Third Mesa)

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sicom?ovi 'flower hill place', and the people are (Mishongnovi) *sicómovt* (Whorf 1936:1293) and in Navajo *'Ata'kiní.* Zuni has *šiwin?a* 'where there are Zunis' (Kroeber 1916: 275; Dennis Tedlock, personal communication 1977). Though not named separately in the Spanish sources Sichomovi must have existed by 1745, when six villages are mentioned for the Hopi (Hackett 1923-1937, 3:414). Spelling variants include Sichumovi (Titiev 1944:3), Sichimovi (H.C. James 1956:22), and those listed by Hodge (1907-1910, 2:564-565).

Polacca (pōˈläku, pəˈläku) is named after Tom Polacca (see "Hopi-Tewa," fig. 1, this vol.), a Tewa who built the first store below the mesa in the late nineteenth century.

Second Mesa

Mishongnovi (mĭˈshäŋnəˌvē) was recorded by Whorf (1936:1255) as *mosáŋnɨvi,* but other sources indicate *ɨ* in the first syllable: (Third Mesa) *mɨsaŋnɨvi,* (First Mesa) müshóŋĭnovi (Stephen 1936, 2:1160, normalized). Spelling variants include Mashongnavi (Mindeleff 1891:136), Mushongnovi (Hough 1915:23), and those listed by Hodge (1907g:871). Stephen (1936, 1:745, 2:1160) wrote that the village was named after a certain large boulder or four stone pillars nearby, but the exact meaning of the name is a matter of dispute; Kalectaca (1978:176) gives 'place of the black man'. Compare the Navajo name *Tsétsohk'id* 'big boulder hill'. The early Spanish sources have Majanani, 1582-1583 (Pérez de Luxán 1929:101), Masanani, about 1760 (Miera y Pacheco 1760), Mozán, 1765 (Tamarón y Romeral 1937:355), Mossanganabi, 1776 (Auerbach 1943:108), and Mosasnabi, 1782 (Fewkes 1898:579). Whorf also gives *mosáŋnɨvt* 'people of Mishongnovi'. The Zuni name is mushshailekwe (Kroeber 1916:275).

Shipaulovi (shĭˈpäwləˌvē) is (Third Mesa) *sɨpawlavi,* usually translated 'place of the mosquitoes'. Whorf (1936:1290) has *sipáwlivt* 'people of Shipaulovi' beside *sipáwlivì* 'a little round midge' and Stephen (1936, 1:745-747) explains that the name is applied to a stone in a shrine, but Curtis (1907-1930, 12:223) indicates disapproval of this interpretation on the part of "Hopi traditionists." The spelling Shipolovi, adopted in 1915 by the U.S. Board on Geographic Names, has generally not been used (except on government maps) because it reflects an incorrect pronunciation. Mindeleff (1891:137) has Shupaulovi. Early Spanish sources have Sesepaulabi, 1776 (Coues 1900, 2:394) and Xipaolabi, 1776 (Auerbach 1943:108). The Zuni name is Shippailemma (Kroeber 1916:275).

Shongopavi (shəŋˈōpəvē, shĭˈmōpəvē) is (Third Mesa) *soŋô·pavi* 'sand-grass spring place', named after the reed (Third Mesa) *soŋóho* (Voegelin and Voegelin 1957:22), identified as *Calamovilfa gigantea* (Whiting 1939:65). Other recordings are *sɨŋópavi* and *sɨŋóhɨ* (Edward Kennard, personal communication 1978) and (First Mesa) Shüŋópovĭ and shüŋóhü (Stephen 1936, 2:1292, normalized). The spelling Shongopovi was officially adopted by the U.S. Board on Geographic Names in 1915, but Shongopavi is used on the road sign at the village (John C. Connelly, personal communication 1978). Other spellings are Shungopavi (O'Kane 1953:262), Shung-opovi (Nequatewa 1936), Shungopovi (Thompson 1950:4), and, with m for n, Shumopavi (Hough 1915:24), Shumopovi (Dorsey 1903:107), Chimopovy (Titiev 1944:3), Chimopovi, and Shimopovy. Early Spanish spellings include Comupaui (presumably for Çomupavi), 1582-1583 (Hammond and Rey 1953, 1:101), Xumupami, 1598 (Hammond and Rey 1953, 1:360), and Xongopavi, 1680 (Hackett 1942:111). The Spanish mission established about 1629 was San Bartolomé de Jongopavi (Xongopabi, etc.) (Hodge 1910m:554). The people of Shongopavi are *soŋópavìt* (Whorf 1936:1292). The Navajo name is *Kin Naazt'i'* 'strung-around building' (Robert W. Young, personal communication 1977), and Zuni has Shummahpawa (Kroeber 1916:275).

Third Mesa

Oraibi (ôˈrībē, ˌōˈrībē) is (Third Mesa) *orayvi 'oray*-rock place'. Spanish spellings include Olalla, 1582-1583 (Pérez de Luxán 1929:102), Oraybi, 1598 (Hammond and Rey 1953, 1:360), and Oraibi, 1742 (Hackett 1923-1937, 3:389). Other variants are listed by Hodge (1910l:143). The Navajo name is *'Oozéí,* also used for Hopi in general (Robert W. Young, personal communication 1977). Zuni has *?ullewa·kʷe* 'Oraibi person or people' (Kroeber 1916:275; Dennis Tedlock, personal communication 1977). The name Old Oraibi has often been used to differentiate this village from Kyakotsmovi.

Kyakotsmovi (kyəˈkätsməˌvē) is (Third Mesa) *kiqöcmovi* 'ruin-hill place'. Beside the official spelling, used here, others are Kiakochomovi (Dockstader 1954:12), Kiakotsmovi, and Kiakatsmovi. The spellings reflect the pronunciation of *i* before *q* as, approximately, [ia] (Whorf 1946:161). This village has also been called New Oraibi and Lower Oraibi, to differentiate it from Oraibi (Old Oraibi).

Hotevilla (ˈhōtəˌvĭlu, ˈhōtˌvĭlu) is (Third Mesa) *hotvela,* said by different speakers to mean 'skins the back' or 'juniper slope'. Other spellings are Hotavilla, Hotavila, and Hotevila. The Navajo name is *Tł'ohchintó* 'onion spring' (Robert W. Young, personal communication 1977).

Bacabi (ˈbäkəbē, ˈbäkəvē) is (Third Mesa) *pa·qavi,* the name of the reed *Phragmites communis,* locally called 'bamboo' (Whiting 1939:47). It is also spelled Bakabi (Dockstader 1954:12), Bacobi, and Bakavi (Titiev 1944:3). Navajo has *Tł'ohchin Biyáázh* 'offspring of Hotevilla' (Robert W. Young, personal communication 1977).

Moenkopi (ˈmō(ə)nˌkōpē, ˈmōənˌkäpē, in origin spell-

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ing pronunciations) is (Third Mesa) *mínqapi* 'flowing-stream place' (from *mi·na* 'stream'). Other spellings are Moencopi, Moenkapi (Hodge 1907h), and in early Spanish sources Munque concabe and Muqui concabe, 1776 (Coues 1900, 2:393), referring to a farm site where the village was later founded in the 1870s. The Navajo name is *'Oozéí Biyáázh* 'offspring of Oraibi' (Robert W. Young, personal communication 1977).

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Hopi Economy and Subsistence

EDWARD A. KENNARD

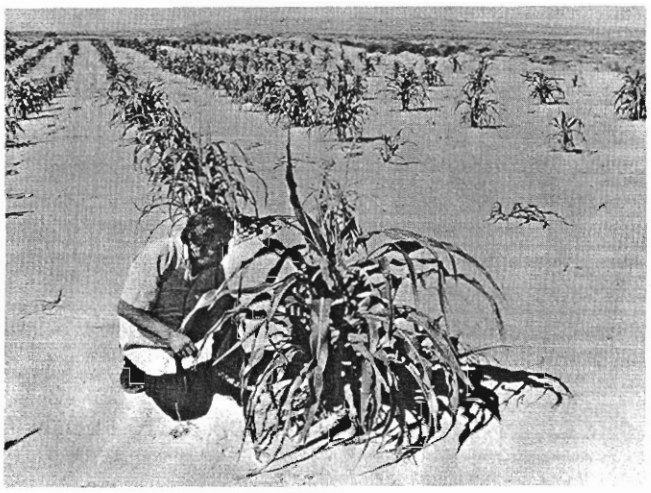
The economy of the Hopi can be best understood historically. The prehistoric foundation was an agriculture based upon the cultivation of corn, beans, squash, gourds, and cotton. During the sixteenth and seventeenth centuries Hopis acquired from the Spaniards domesticated animals—horses, mules, burros, sheep, and cattle. From the same source they derived peaches and apricots. Chili peppers from Mexico were also introduced during this time. The period of American contact, which dates from 1848, has been marked by gradual but accelerating additions of a wide variety of consumption goods, new skills, and a cash economy first supplementing and later displacing the traditional subsistence economy.

Agriculture

Land Tenure

Each village is autonomous and has its own land. The cultivated fields of one are separated from another by sight lines and geographic features, projected southward from the mesas. Along the water courses below the mesas, the fields of each village are divided into large sections assigned to the various matrilineal clans of the village. Formerly, each clan allotment was marked by boundary stones, set up at the corners of the fields, with symbols of the clans painted on them (Forde 1931:368). The clan land system of the First and Second Mesa villages and the boundaries between villages are shown in Forde (1931: maps 2, 3, 4).

Within each clan allotment, fields are assigned to women of the clan, and they are planted and cultivated by the men of the household—husbands, brothers, or sons (fig. 1). With the pattern of matrilineal inheritance and matrilocal residence, fields tend to become associated with specific households. Each clan has land in more than one location so that if one fails, either through lack of rain or from sudden flooding that destroys the crop, the other may still be productive.



middle, Calif. Histl. Soc., Los Angeles: Title Insurance Coll.; bottom, Smithsonian, NAA.
Fig. 1. Hopi farming. top, Corn plants in dune field below Hotevilla, photograph by Cradoc Bagshaw, July or Aug. 1975; middle, men roasting unhusked corn in a field near Oraibi, photograph possibly by G. Wharton James or C.C. Pierce, probably about 1900; bottom, terraced gardens at Hotevilla, photograph by O.C. Havens, 1924.

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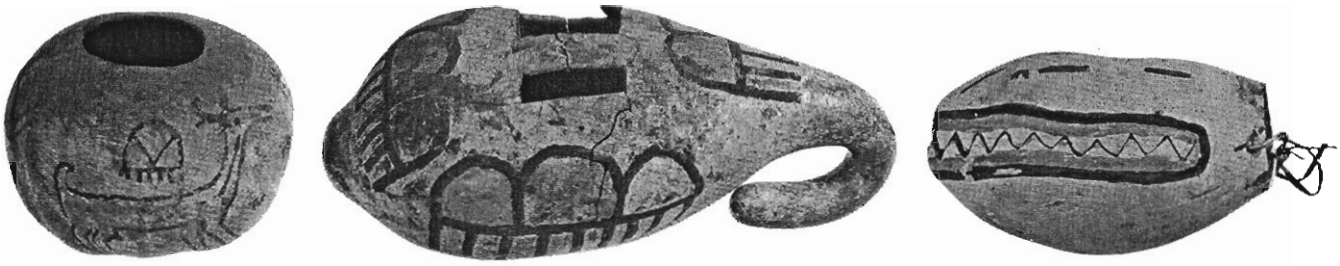


Smithsonian, Dept. of Anthr.: a, 84139; b, 166761; c, 128902.

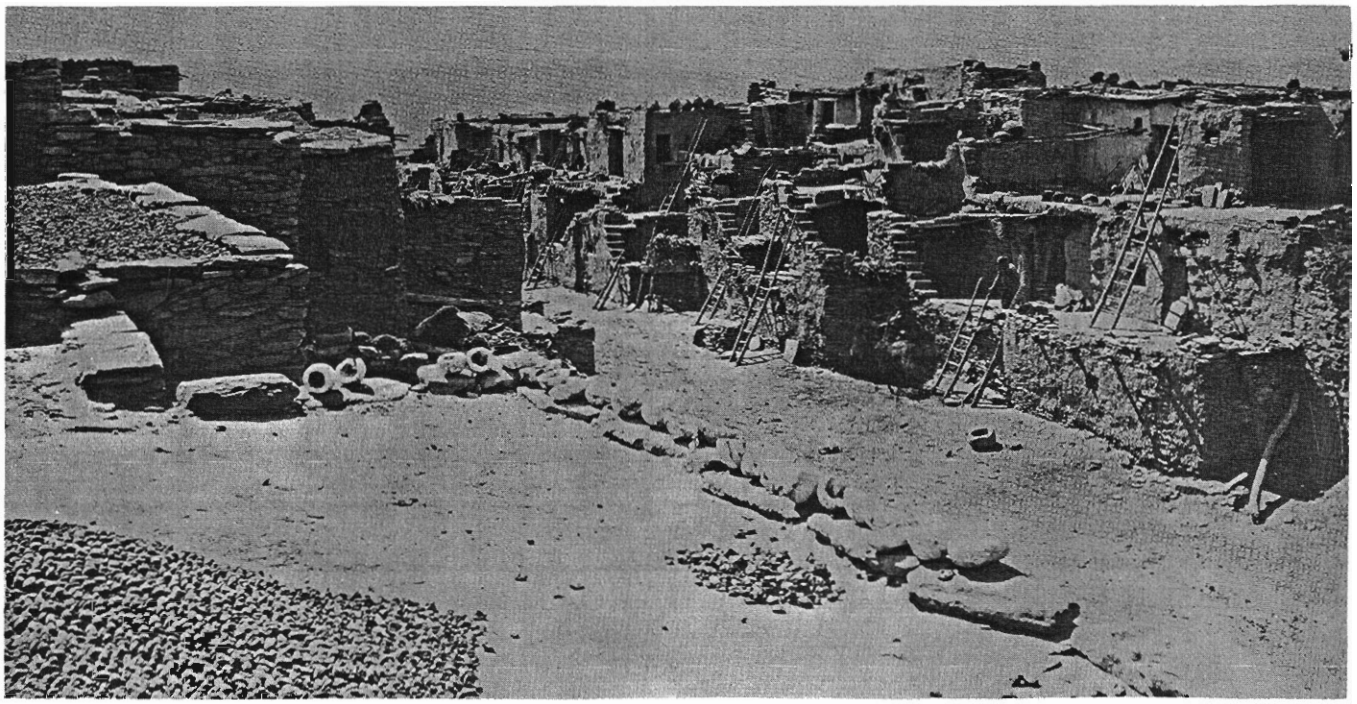
Fig. 2. Hopi uses of gourds. a, Container decorated with black painted human and animal figures, collected 1883; b, painted ceremonial container, collected 1892; c, painted gourd snout for mask worn by some kachina impersonators, collected 1885. Length of c 27 cm, rest same scale.

Formerly, some fields were allocated to the chiefs of ceremonial societies, and they were planted for them by the men of the village, but this custom has disappeared (Parsons 1925a:87; Forde 1931:map 4).

In addition to the clan lands, any man may establish a field in the area beyond them. He has the right to use it as long as he cultivates it and may assign it to another; however, should he abandon it, that land reverts to the common domain. About 1900, the best fields for the floodwater irrigation employed were along the water courses close to the villages. However, as the Polacca, Wepo, and Oraibi washes grew deeper and wider, much of this land was destroyed. Consequently, new fields were developed 20 and 30 miles south, where the water spreads more readily over the flatter land of the valleys. The possession of horses and wagons, and later pickup trucks, facilitated the development of more distant fields.

Hopi agriculture has always been precarious, subject to long-term wet and dry cycles. In the period 1866-1870 there was a nearly total crop failure, and some villages were abandoned, while the people sought refuge with the Pueblos to the east. In a study of land use in the Oraibi valley, it was discovered that the dissection of the wash had over a period of 50 years destroyed approximately one-third of the fields that had been in cultivation (Bradfield 1971). This may have been responsible for the gradual growth of Moenkopi, a satellite of Oraibi, 40 miles to the northwest, where there was a system of irrigation.

There is no private property in grazing land. Horses



Smithsonian, NAA.

Fig. 3. Peaches and squash drying on the rooftops in the east courtyard of Oraibi. Photograph by John K. Hillers, about 1879.

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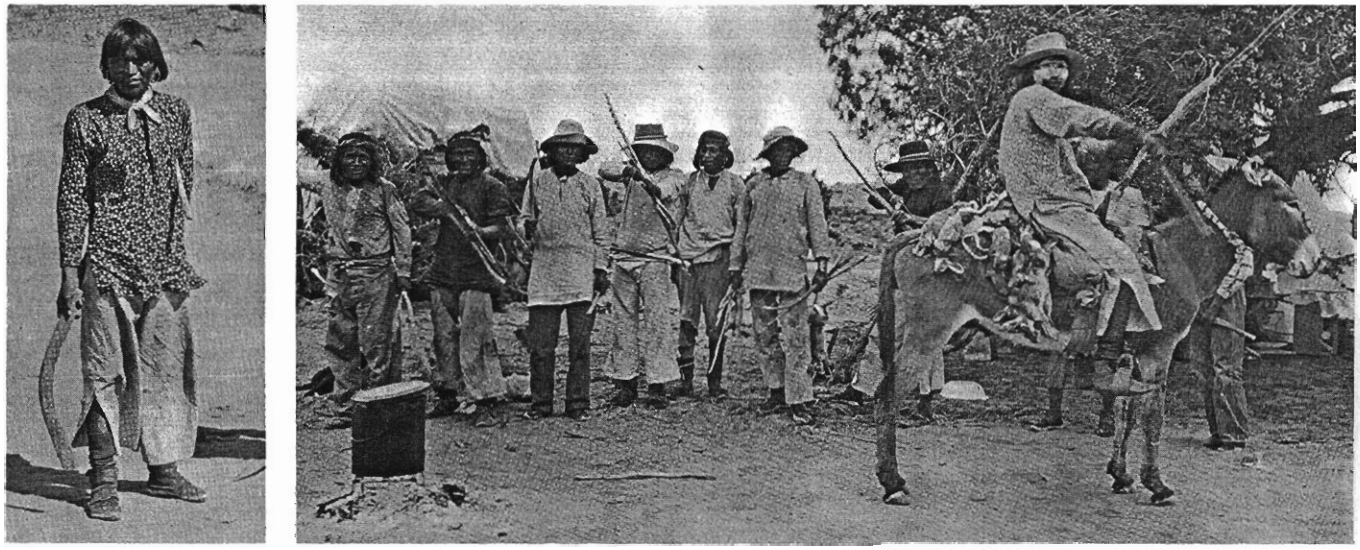
and burros are hobbled and permitted to graze where they will. Cattle are permitted to drift in areas where there is a relatively permanent supply of water. Sheep are herded every day and corralled at night. Most sheep owners have shelters or regular Hopi houses in the area where they customarily graze their sheep. Sometimes they have their major cornfields in the same area in places like Coyote Spring and Burro Spring.

Irrigated gardens watered from nearby springs are utilized for the cultivation of chili peppers, onions, and other vegetables; and titles to these small plots are jealously guarded. A Patki clan plot below Wepo spring was planted every year by men from Shongopavi, whose grandmother had come from the Tewa village at First Mesa (Forde 1931:391).

Although the pattern of land ownership is clear in Hopi theory and reflects the myths of the settlement of each village, adjustments have to be made. Matrilineages vary in size and increase or decrease in a few generations. Should there be a shortage of land in his wife's clan lands, a man may be assigned a field of his own clan's land, or in his father's if there is a surplus (Forde 1931:380). Fields for beans, melons, squash, and gourds are sometimes planted adjacent to a cornfield, but bean fields are also located on the tops of the mesas, as are orchards at both Second Mesa and Hotevilla.



left, Milwaukee Public Mus.; right, Los Angeles Co. Mus. of Nat. Hist.

Fig. 4. Hunting of rabbits done individually or in small groups and as a more organized communal pursuit is connected with ceremonial activities and can itself entail many ritual procedures (Beaglehole 1936:11-17, 23-25). left, Man from Oraibi with a rabbit stick, a throwing stick made in distinctively flat curved shape with a defined handle (and often with painted decoration) that is used to flush out rabbits; photograph by Sumner W. Matteson, perhaps about 1900. right, Rabbit hunters at camp, probably at Kawaika, Ariz., 1901, carrying bows and arrows (also used to hunt rabbits) and apparently mugging for the camera; photograph by Adam C. Vroman or Walter Hough (NAA, BAE original prints).

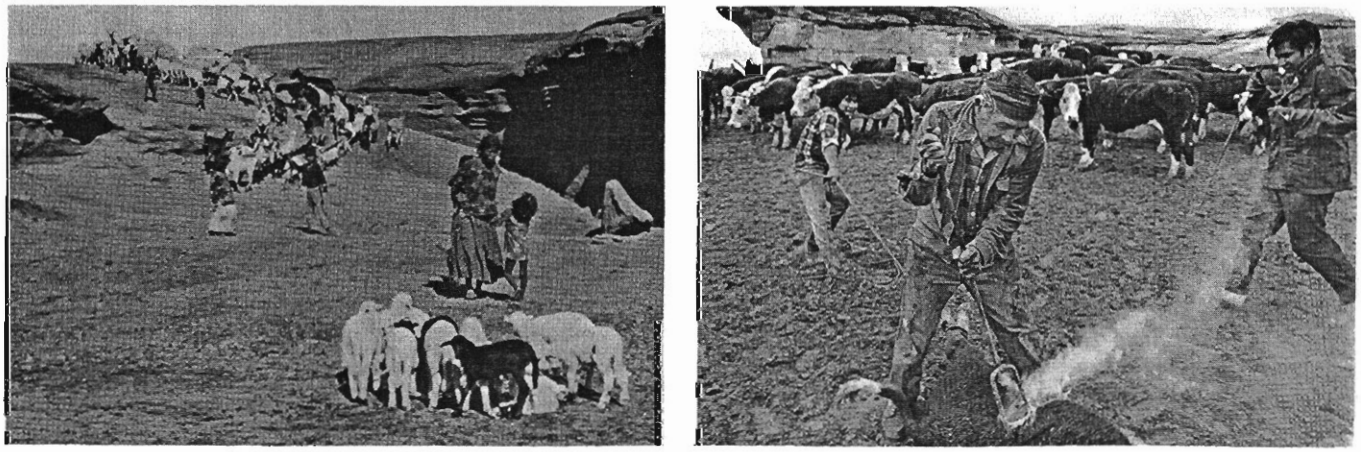


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Fig. 5. Stock raising. left, Woman and children herding sheep and goats, photographed about 1900 by Sumner W. Matteson. In more recent times this, like cattle herding, has been an exclusively men's activity. right, Willie Coin branding a calf; photographed south of Oraibi by Cradoc Bagshaw, July-Sept. 1975.

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Crops

Hopis plant several varieties of corn, classified by color, but most of the fields are devoted to blue and white. Whiting (1939:67-70) lists 24 varieties of Hopi corn. They also cultivate a short-eared variety of sweet corn.

The first planting occurs in April, usually on dune fields close to the mesas, so that it will be mature by the time of the Niman ceremony in mid-July. The main planting, which is announced by the Crier, usually begins in the middle of May and frequently extends through the month of June. Some men plant their fields by themselves, but others have a work party for planting. The men all assemble at the host's field and complete it in a day. In the evening when they return to the village, the host's wife feeds them all an evening meal in payment.

Sweet corn is baked in field pits (fig. 1) and then stored for future use. Most of the corn crop is harvested in October—picked, husked, and hauled to the village in wagons and trucks. It is sorted by color and stored in the rear room of the house, stacked like cordwood.

Hopis grow 23 varieties of beans, some quite old but many recently introduced (Whiting 1939:80-83). Several species of squash, pumpkins, and melons are regularly cultivated. The squash is dried and preserved, but melons are eaten when they are ripe in August and September. They plant gourds in the same fields as squash. They are used as spoons, dippers, cups, rattles, pottery scrapers, medicine containers, and as decorations on kachina masks such as snouts and horns (fig. 2).

Fruit trees do not yield a crop every year. Frequently, late frosts when the trees are in blossom destroy the potential for fruit; however, in good years they yield bountifully and most of the fruit is preserved by drying. The peaches and apricots are pitted, split in halves, and spread out on the roof to dry (fig. 3). Orchards or even individual trees are owned by men. It is the tree and not the land on which it grows that is conceived to be property, and it is inherited by men, usually sons of the previous owner.

The estimated agricultural figures for 1893 show the proportionate production at various communities. At First Mesa, 1,200 acres were planted in corn; at Second Mesa, 800; at Oraibi, 1,600. Of the total corn crop of about 2,500,000 pounds, 1,150,000 pounds were consumed, 100,000 were sold to traders, 150,000 were otherwise traded, 500,000 were bartered to Navajos for sheep, and 600,000 were stored as surplus. In addition, 2,000 acres were sowed with vegetables (beans, melons, squash, pumpkin, chili, onions, gourds), sunflowers, and cotton. Peach and apricot orchards accounted for another 1,000 acres (Stephen 1936, 2:954-955).

Wild Plants

The Hopis make extensive use of the wild plants in their habitat. The roots of yucca (soapweed) are used in hair washing, which is an essential part of every ceremony—naming, initiations, girl's puberty grinding, marriage. The leaves are split and sewed around a core in making coiled basketry and in making sifting baskets and trays. The Hopi brush, which is an essential tool in every house, is made from the culms of purple hair grass (Whiting 1939:65). A handful is tied with a piece of string near the butt end. The lower end serves as a hair brush, while the upper is used to sweep the meal from the grinding stones, as well as to sweep the floor of houses with adobe floors.

Of 150 plant species identified in their habitat, the Hopi utilized 134: for agriculture and forage, 11 species; art materials, 16; house building, 4; domestic life, 10; dress and ornament, 6; food, 40; medicine, 29; and religious purposes, for example, prayer sticks and kiva fuel, 18 (Hough 1897:43-44).

Hunting

Hunting has not been important as an economic activity since the sixteenth century when the Hopis acquired domesticated animals. The area is not rich in large game, although deer and antelope were reported to have grazed in the area between the Hopi Buttes and the Little Colorado River. They were formerly hunted by men in pairs, and it was regarded more as a sport than a subsistence quest (Beaglehole 1936).

Rabbit hunting is a regular fall and winter sport (fig. 4). Announcement of the hunt is made in the evening before the hunt. The place of assembly, the direction in which they are going to hunt, the place-names along the route of the hunt, and the route of return are all included in the announcement. In the morning the men assemble with their throwing sticks. They form a surround a mile to a mile and one-half in area, and those at the rear close up the circle. When a rabbit is raised the hunters throw their sticks with a side arm motion at it. When a man hits and stuns one, he runs to it and kills it.

Livestock

The major forms of men's property are sheep and cattle (fig. 5). Horses, burros, and wagons become important as the distance one has to travel to his fields or to cut and haul firewood increases. The size of the flocks and herds has always been limited by the amount of browse and the availability of water.

From the earliest days of the agency at Keams Canyon the government made systematic efforts to aid Hopi stockmen. Drilling deep wells with windmills, storage tanks, and watering troughs has been one of the most effective ways aiding the growth of the Hopi herds. Efforts were also made to improve the quality by assisting in the purchase of pure bred rams and bulls, but the benefits were limited since the Hopi did nothing to control the breeding. It was not until 1944, when a fenced

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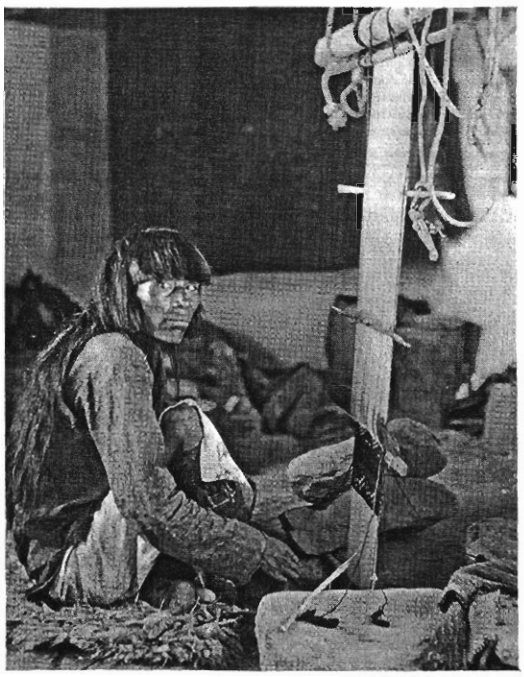

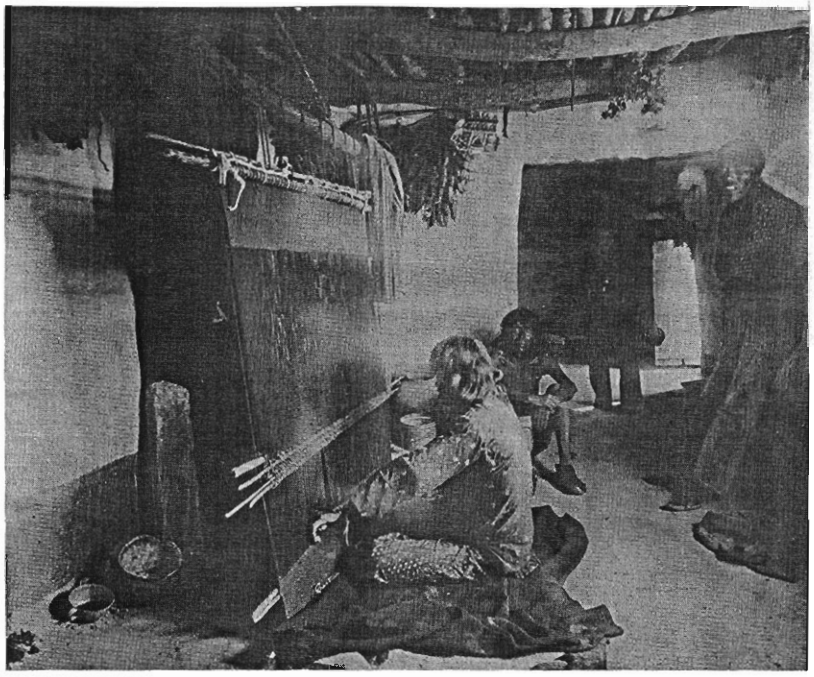

Calif. Histl. Soc., Los Angeles: Title Insurance Coll.

Fig. 6. Men weaving at Oraibi, about 1898. Both men use vertical looms that are suspended from the ceiling beams. left, Man weaving a brocaded ceremonial sash (fig. 7) of the type traded to the other Pueblos; the red, green, and blue weft elements are wrapped completely around the warp elements to produce the design—the white areas being unwrapped warp threads. right, Man weaving a blanket inside a Hopi house; a kachina doll and braids of corn are suspended against the wall to the right of the loom. Photographs by G. Wharton James, about 1898.

Smithsonian, Dept. of Anthr.: 22959.

Fig. 7. Man's ceremonial cotton sash with brocaded designs on top surface at each end formed by nonstructural wool wefts (for technique see Douglas 1938:35-38). Brocade table runners, a modification of the traditional sash, are made for tourist sale (see Kent 1976:fig. 27a). Length 224 cm, collected early 1870s.

U. of N.M., Maxwell Mus. of Anthr., Albuquerque: 63.34.141.

Fig. 8. Man's wearing blanket of brown and white handspun wool in diagonal twill weave. Length 137 cm, collected about 1930.

pasture for rams and bulls was built by the agency, that the program to improve the quality of the stock became effective.

Sheep owners usually have one or two partners—a pair of brothers, father and son, uncle and nephew. If there are only two, half a man's days must be devoted to sheep herding. A man will spend two or three days at a time herding and then be relieved by his partner. Men who have corrals close to the mesa pen their sheep at night and go out to herd each day. During lambing season all hands are with the flock, and each earmarks the lambs from his own ewes. Table 1 gives five examples of how Oraibi men allocated their work activity in autumn 1933.

In June the flocks are brought close to the village, and

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Table 1. Work Distribution of 5 Oraibi Men, Aug. 7-Nov. 12, 1933, by Numbers of Days

Type of Work	*Luther*	*King*	*Cecil*	*Alex*	*Don*	*Total*
Herding	0[a]	49	22	17	22	110
Cornfields	10	10	9	14.5	23	66.5
Bean fields	3	1	3.5	0	0	7.5
Melon fields	9.5	6	3	3	1.5	23
House building	9.5	8	20	0	0	37.5
Wood hauling	1	7	5	1	4	18
Horses	0	1	3.5	9.5	2.5	16.5
Other work	14.5	7	6	3	5.5	36
No work	3.5	9	10	35	10.5	68
Days noted	51	98	82	83	69	383

SOURCE: Titiev 1944:196.
[a] Luther owned no sheep.

Mus. of Northern Ariz., Flagstaff: a, E6363; b, E7804; c, E5964; d, E5370.
Fig. 9. Contemporary Hopi and Hopi-Tewa pottery from First Mesa. a, Jar with black and red on orange bear-paw design used by the Nampeyo family; made at Polacca by Dextra Quotskuyva, great granddaughter of Nampeyo, collected 1973. b, White wedding jar with black and red decorations made by Nancy Lewis of Sichomovi, collected 1977. c, Black on red bowl by Ella Mae Talashie of Walpi, collected 1973. d, Orange jar with black painted Sikyatki-type designs, made by Lorna Lomakema of Tewa Village, collected 1974. Diameter of a 22.4 cm, rest same scale.

work parties assemble to shear the sheep. The wool clip is sold to the traders, and until the end of World War II it was often the only source of money for many men. Most Hopis do not sell their lambs; they are butchered and eaten on all the occasions during the year that require feasts, such dance days, weddings, and initiations. They practically never butcher just to have meat in their diet. What little is not cooked for the immediate occasion is dried in the sun and preserved for future use.

Cattle are always marketed.

In 1937, the total livestock on the Hopi reservation consisted of 11,203 sheep, 317 goats, 7,695 head of cattle, and 5,085 burros and horses (Hack 1942:17). In 1944 the government instituted a stock-reduction program to bring the total number of animals within the carrying capacity of the range. Since it had been preceded by the program of controlled breeding and improved quality, the actual income of the Hopis was not reduced. All stock owners were issued grazing permits, and reductions were made in proportion to the number of head owned at the time.

With the spread of wage work and other forms of cash income on the reservation since 1946, Hopis have been shifting their forms of livestock from sheep to cattle, which do not require constant care. At the same time, the widespread ownership of cars and trucks has reduced the need for horses and burros, freeing that many more range units for cattle.

Trade

The Hopis have traded with the Najavo for sheep and wool, with the Havasupai for buckskins, and with Zuni and the Eastern Pueblos for turquoise and other goods. Hopi weavers of ceremonial garments have kept the other Pueblos supplied for many years (fig. 6).

A trading post at Keams Canyon was operating in 1881, and Hubbell's post at Oraibi was established in 1919. All other posts and stores on the reservation have been owned and managed by Hopis. Tom Pavatea's post at Polacca was one of the largest and most successful. When he died in 1941, his estate was valued at more than $40,000.

In 1937 of a total of 17 licensed trading posts 15 were owned by Hopis. Many have been started, operated for a number of years, and then abandoned. Clothing, flour, sugar, coffee, and canned goods were sold; and craft products, corn, and wool were taken in payment as well as money when it was available.

With the spread of wage work, both on and off the reservation, and with the completion of a network of paved roads, a cash economy has been gradually displacing the traditional subsistence economy. As a result trading posts have become supermarkets. Bottled gas,

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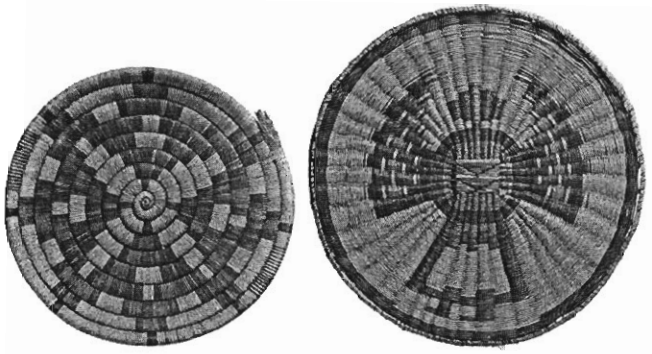

Smithsonian, Dept. of Anthr.: 166452, 213546.

Fig. 10. Basketry plaques. left, Second Mesa coiled basketry plaque; coiled foundation bundles of shredded yucca or grasses are closely sewed with strips of split yucca leaves (O. Mason 1976:257; Underhill 1944:29); collected 1892. right, Third Mesa wicker basketry plaque; two bound groups of peeled and smoothed sumac or willow stems are crossed and lashed to form radiating ribs around which stems of rabbitbrush are woven (Hough 1918:265-266; Underhill 1944:20-25) to form Kwahu (eagle) kachina design; the basket edge is wrapped with yucca leaf strips; collected 1901. Diameter of right 35 cm, other same scale.

top, Calif. Histl. Soc., Los Angeles: Title Insurance Coll.; bottom, U. of Ariz., Ariz. State Mus., Tucson.

Fig. 11. Making coiled plaques, trays and baskets. top, Group of women outside house, probably in a Second Mesa village about 1895-1900. bottom, Annabella Nequatewa (a Shongopavi basketmaker) with her grandchild and her husband, Edmund Nequatewa, who makes kachina dolls (these are on the table between them, with brushes and paints with which he has just been painting them). Photographs by unknown photographer (top) and by Helga Teiwes, Oct. 1973 (bottom).

top, Calif. Histl. Soc., Los Angeles: Title Insurance Coll.; bottom, U. of Ariz., Ariz. State Mus., Tucson.

Fig. 12. Making basketry. top, An Oraibi woman, her hair bound in the style worn by married women, making a wicker basketry plaque. Her husband is knitting, or possibly crocheting, one of a pair of cotton or wool leggings, an item typically manufactured by men. Photograph by G. Wharton James, about 1898. bottom, Marietta Tewa, a resident of the Third Mesa town of Kyakotsmovi, making a twilled yucca ring basket (2 finished baskets on table). Photograph by Helga Teiwes, Oct. 1973.

electricity, and refrigeration permit the sale of fresh meat, frozen vegetables, fruit, and a multiplicity of other foodstuffs.

Crafts

A supplementary source of income in every household is the production of crafts. Since the beginning of the twentieth century, women's products have tended to become specialized; at First Mesa they make pottery (fig. 9), at Second Mesa coiled basketry (figs. 10-11), and at Third Mesa wicker basketry (figs. 10, 12).

Hopi men do the weaving, and the bulk of their work is in ceremonial garments of cotton and wool. Sashes (fig. 7), kilts, wedding robes, belts, and garters are the most commonly produced forms of the weaver's art. They also make the woolen black dress, which is part of a woman's traditional costume, and knit black or blue leggings, which are worn in dances. Some men also weave a striped woolen blanket (fig. 8).

Since about 1930, the Museum of Northern Arizona in Flagstaff has encouraged the production of the best work, holding an annual exhibition in July. Prizes including cash awards are given for the best pieces, and they are sold to the public at whatever price the craftsman puts upon his work.

The carving and painting of kachina dolls has become increasingly popular since the growth of a cash economy. Originally made for distribution by the kachinas to girls at dances, they are now made in large numbers for sale in the market. They tend to become larger and more elaborately carved and feathered to appeal to the tastes of the buyers.

Until 1946, there were a few Hopi silversmiths, but their work was not distinguishable from that of the Navajo or Zuni. In that year a group of 17 Hopi veterans was taught the art, and a set of traditional Hopi design elements was adapted to the possibilities of the medium. In 1965 there were seven men who worked full time at silver and another 12 who worked during the winter months. They now constitute a guild with its own hallmark (fig. 15).

On top of Second Mesa, at the junction of the roads from Shongopavi and Mishongnovi the Hopi Craft Guild has its own building, where native products are displayed and sold. Any craftsman, potter, basketmaker, weaver, or silversmith can have his work displayed and sold there. The other half of the building is devoted to work benches and supplies for the silversmiths.

Household Economy

The basic economic unit of production and consumption has always been the household. It is here that the basic division of labor between men's work and women's work, between male property and female property, is focused.

Every Hopi house has a set of three grinding stones, set in a wooden frame (fig. 16). The metates differ in the degree of coarseness. When corn is ground it is first shelled and cracked, and then ground successively on each of the metates until it is as fine as powder. Since almost all Hopi foodstuffs are made of it, plaques piled high with meal are one of the commonest forms of payment in exchanges between households.

The other essential item of equipment is the piki stone (fig. 17), sometimes located in a back room, but more often in a small house built for that purpose. Piki (*píkí*) is a wafer-thin bread of finely ground blue cornmeal. A fire is built under the stone, the surface is rubbed with the oil from cotton seeds or watermelon seeds, and a thin batter is spread upon the hot stone by hand. The piki is peeled off the stone, turned over for a minute, and then folded into squares or rolled up like a diploma (fig. 17). It is prepared before all ceremonies, and it is an item of daily consumption. Many houses also have a stone and adobe beehive-shaped oven outside, which is used for baking bread.

In addition to piki, and many other dishes prepared from a cornmeal base, a standard feast dish is hominy and mutton stew (*nõqkwivi*). The women prepare the hominy and the men butcher sheep, which are then boiled together. Child naming on the twentieth day, a girl's grinding following first menses, marriages, boy's initiation, as well as all the ceremonies of the annual cycle require the preparation of these foods.

At marriage a girl spends four days grinding and making piki at her mother-in-law's house. Meanwhile the men who are relatives of the groom are carding and spinning cotton and setting up a loom in a kiva to make the bride's wedding clothes (see "Hopi Social Organization," figs. 17-18, this vol). Until the weaving is finished, the bride stays grinding and cooking. When the clothes are finished, she is dressed in them and returns to her own house accompanied by her mother-in-law, bearing a bowl of hominy stew. After they feast, her mother-in-law's bowl is filled with other Hopi foods as a gift. Later the girl and her mother and female relatives will grind and prepare other kinds of food, which is carried to the house of every man who participated in the weaving. When a boy has his Wuwuchim (*wíwicim*) initiation, his mother gives ground meal, piki, and other food to his ceremonial father's sister. A woman who sponsors a kachina dance is obligated to prepare food to feed all the dancers as well as the guests who will visit her house.

A man contributes his work, his fruit, his livestock or his income to whatever house he is living in: his wife's when he is married, his mother's before marriage, or his mother's or sister's if he should be divorced.

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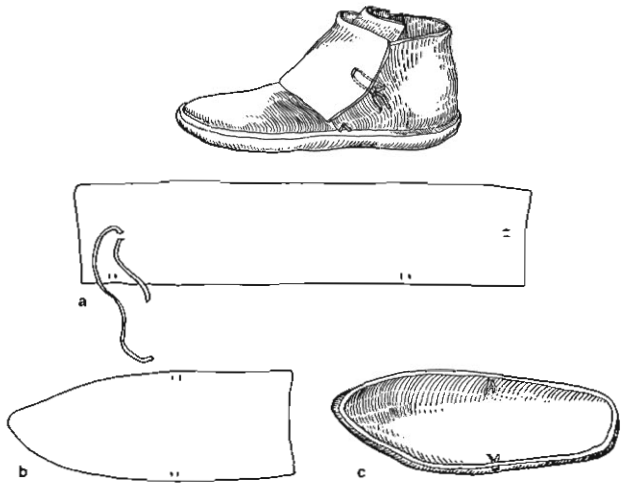
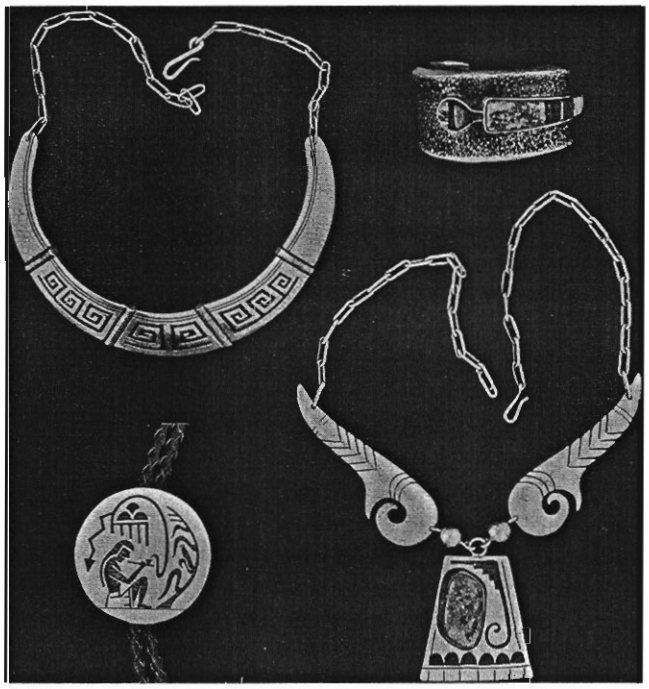


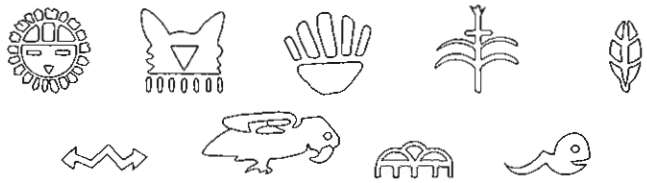
after Hough 1918:fig. 15.

Fig. 13. Construction of ordinary men's and women's moccasins consisting of three sections sewed together: a, ankle wrap and b, vamp with tongue, both of tanned deerskin; c, sole of cow (formerly elk) rawhide (see Kewanwytewa and Bartlett 1946).



Mus. of Northern Ariz., Flagstaff: E3387, E5949, E6213, E5110.

Fig. 14. Hopi silver jewelry characterized by the silver overlay technique (Bedinger 1973:203-204), minimal use of turquoise, and traditional Hopi pottery and textile designs (M. Wright 1972:38; M.R.F. Colton 1939:2). top left, Overlay choker made by Billy Rae Howee of Shongopavi, collected 1964; top right, cast bracelet in distinctive contemporary style of Charles Loloma of Hotevilla, with gold bezel around Turquoise Girl anthropomorphic figure in turquoise, Italian oxblood coral, lapis lazuli, and ironwood (see M. Wright 1972:69; Fair 1975), collected 1973. bottom left, Bolo tie with overlay design described by silversmiths, Lawrence and Gracilda Saufkie of Shongopavi, as a kiva chief blowing smoke into the clouds to make rain for the corn crops, collected 1973; bottom right, necklace with overlay, turquoise setting, and stamped designs by Morris Robinson of Bacabi, collected 1955. Diameter of bottom left 5.0 cm, rest same scale.



after M. Wright 1972: top, pp. 92, 87, 85, 90; bottom, pp. 87, 81, 83.

Fig. 15. Hopi Silvercraft Guild and silversmith's stamps. top row, left to right, One of the several similar stamps of the Hopi Silvercraft Guild depicting the sun, and personal marks of Hopi silversmiths representing Crow Mother, bear paw, corn plant, feather, and bottom row, lightning, parrot, rain cloud, and tadpole.

Milwaukee Public Mus.

Fig. 16. Unmarried woman grinding cornmeal at Sichomovi; each Hopi house has a set of two to four grinding stones, of graduated fineness, tilted in bins, on which corn is successively ground by rubbing with a long stone mano (3 stand in corner, and one in bin in foreground); photograph by Sumner W. Matteson, about 1900.

Traditionally, the family was of the extended matrilineal type. In more recent years when it became easier to build a house or have it built, young couples moved into houses of their own. As a result, a census of the three Second Mesa villages in 1961 revealed that about one-half the families were nuclear in pattern, the other half reflecting the extended matrilineal form (Kennard 1965:30).

While the effects of contact with the larger society upon the Hopi economy and culture are similar in all villages, the extent is variable. Moenkopi, the westernmost village of all those whose people came from Old Oraibi, has been for many years the most highly acculturated. Only 13 miles from U.S. Highway 89 leading south to Flagstaff, and only two miles from the Western Navajo Agency at Tuba City, it has been a ready reservoir of manpower and skills. With the breakdown of the traditional order at Old Oraibi there has been little to tie them to the traditional way of life. As the population grew from 200 in 1903 to 592 in 1962, even the available irrigated land would have been inadequate to support them (Nagata 1970:224).

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left, Calif. Histl. Soc., Los Angeles: Title Insurance Coll.; center and right, Mus of N.M., Santa Fe.

Fig. 17. left, Woman identified as Mashongke toasting cornmeal—probably to remove moisture after preliminary grinding—in a jar on the interior cooking fire, stirring it with the basket in her hand, brush of bound grass at left; photograph by G. Wharton James at Oraibi, 1898. center, Piki stone greased with burro fat is over the fire; a thin layer of batter spread on it cooks instantly and is peeled off, then laid on top of the next sheet being baked, then folded and sometimes rolled (Beaglehole 1937:63-64). right, Carrying folded piki bread, perhaps to a ceremony, probably at Oraibi. center and right, by unknown photographer 1917 or before.

SRP002655

Hopi Ceremonial Organization

ARLETTE FRIGOUT*

In a sense, all Hopi life is based on the ceremonies, which assure vital equilibrium, both social and individual, and conciliate the supernatural powers in order to obtain rain, good harvests, good health, and peace. Some 300 kachinas (*qacína* sg., *qacínam* pl.),† the mythical heroes, and numerous gods are venerated: the sun (*tá·wa*); *mɨy'ʔiŋʷa* (god of germination); *másàwɨ* or (Third Mesa) *mâ·sawɨ* (god of death); *tɨwávoŋʸtɨmsi* 'sand-altar young woman' (the earth); *kóʰkaŋwɨʰti* 'Spider Woman'; *talátɨmsi* 'daylight young woman' (Dawn Woman); *sótöqǒnaŋʷɨ* (the star god); *pǒqaŋhòyat* (the Twin War Gods); and others. Different names and different forms can correspond to similar beings (Fewkes 1903; Earle and Kennard 1938; Colton 1959). In spite of the presence among the Hopi of various missionaries, religious syncretism such as occurs among the Rio Grande Pueblos does not exist.

The Villages and Their Calendar

Hopi ceremonial organization is based on the year as a temporal unit and the village or mesa as a spatial unit. The ceremonial importance of each village varies according to its cultural conservatism and its antiquity. First Mesa includes Walpi, Sichomovi, and Tewa Village on top of the mesa, and down below Polacca, which has no dance plaza and no ceremonial life. Second Mesa consists of three villages above, Shongopavi, Mishongnovi, and Shipaulovi. Third Mesa includes Old Oraibi above where ceremonial life has much declined and Kyakotsmovi (New Oraibi) at the base, which organizes secondary ceremonies. Equally a part of Third Mesa, although geographically removed, are Hotevilla and Bacabi, the latter comparable to New Oraibi. Moenkopi, divided into two villages, is on a detached section of the Hopi Reservation surrounded by Navajo territory.

In principle, each traditional village organizes its own ceremonies following a general model that permits variation. But the villages of Walpi (until recently), Shongopavi, Mishongnovi, and Hotevilla serve as leaders; when a ceremony cannot be held in one of the less important villages, their occupants can go to "serve" in the principal village of their mesa. The ceremonies are organized only at the village level, never at the tribal one, even though the Hopis believe that it is necessary to pray for all the Hopis and even for all of humanity (Titiev 1944:106). In the early 1970s the cycle of ceremonies outlined here still obtained as a general model, although only Shongopavi performed the full cycle. It was still possible for any Hopi to participate in the whole series of ceremonies although not necessarily in one village or on one mesa in a given year.

Extensive discussions of Hopi ceremonial organization appear in Eggan (1950), Titiev (1944), and Bradfield (1973, 2:46-305).

The Ceremonial Cycle

The ceremonial cycle is an annual cycle consisting of two major periods, that of the masked and that of the unmasked ceremonies. The masked dancers, called kachinas, arrive in either January or February (depending on the calendar and the village) and depart in July. Their first great ceremony is Powamu (*powámɨ*), when children are initiated into the kachina and Powamu societies, and their last is the Niman (*nimán-* 'returning-home') ceremony. Thus, their presence marks a season extending from sometime in the month or so following the winter solstice to sometime in the month after the summer solstice (cf. Titiev 1944:109, 175), and their departure coincides with the end of planting the fields. Following this comes the Snake-Antelope ceremony (*cɨʔcɨvti*) or the Flute ceremony (*lé·lenti*), in alternating years in each village. In even-numbered years Shipaulovi, Oraibi-Hotevilla, and Shongopavi have Snake-Antelope, and Walpi and Mishongnovi have Flute; in odd-numbered years the reverse is true. The Butterfly Dance takes place in late summer and the Buffalo Dance (figs. 1-2) following Soyal, though these so-called social dances do not have precise dates. In autumn come the ceremonies of the three women's societies: the Maraw (*máraw*) ceremony of the *mámraWt*, the Lakon (*lakón-*) of the *lálakòNt*, and the

* The original manuscript of this chapter, written in 1972, was translated from French by William C. Sturtevant. After the author's death Louis A. Hieb edited and revised the chapter, and Ives Goddard revised sections on the Hopi calendar.

† Hopi religious and ceremonial vocabulary is poorly known to linguists and anthropologists. The phonemicized terms cited in this paper have been provided by the editors, chiefly from Whorf (1936), who recorded the Mishongnovi dialect; a few forms not directly attested have been made on the analogy of words Whorf recorded. Some Third Mesa forms from anonymous sources have been added when they are particularly different.

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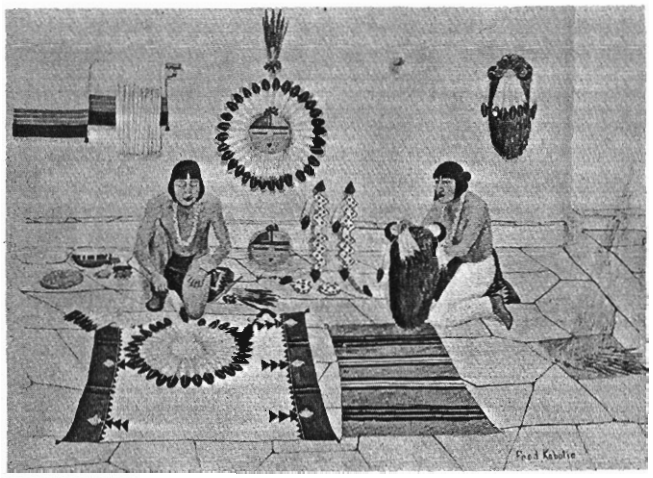

School of Amer. Research, Santa Fe.

Fig. 1. *Hopi Men Getting Ready for A Buffalo Dance.* The man at left is preparing a sun symbol from eagle feathers (worn by the buffalo maidens, fig. 2), while the man at right prepares the headdress worn by the male buffalo dancers. Completed versions of both items hang on the kiva wall behind them, along with rain sashes and ceremonial kilts; lightning sticks (carried by male buffalo dancers) are propped against the wall. Painting by Fred Kabotie, about 1920.

Mus. of Northern Ariz., Flagstaff.

Fig. 2. *Buffalo Dance.* This is one of several so-called social dances (a variant of which is also done among the Eastern Pueblos—see "San Ildefonso Pueblo," figs. 10-12, this vol.). Participants include (left to right): the chorus (some of whom hold standards), 2 buffalo maidens (wearing sun symbols on their backs), and 2 buffalo dancers. (For an almost contemporaneous photograph showing this same scene, see Hightower 1977:120-121). Watercolor painting by Fred Kabotie, about 1920.

Owaqol (*ʔowáqölõ, ʔowáqöl-*) of the *ʔowáqöLt;* the sequence of occurrence differs somewhat among the villages. Then comes Wuwuchim (*wɨwɨcim*), the ceremonies of the four men's societies: the *kʷá·kʷaNt* (Agave), *ʔá·ʔaLt* (Horn), *wɨwɨciMt* (Wuwuchim), and *tá·tawkam* (Singers); the Wuwuchim ceremony (fig. 3) takes its name from the Wuwuchim Society, but the name has no other known meaning. Wuwuchim includes in principle an initiation ceremony every fourth year (for Oraibi, which is somewhat different, see Titiev 1944:131), which corre-

Mennonite Lib. and Arch., North Newton, Kansas.

Fig. 3. Wuwuchim ceremonial. Wuwuchim society members dancing in plaza in Oraibi before the village divided. They are led by two Alosaka, priests of the Horn Society, who represent Mountain Sheep. The members dance in a sideways step, with fingers intertwined, and are accompanied by a drummer (center). The songs sometimes taunt the women of the Maraw Society who douse the dancers with water. The hair ornaments are cutouts representing flowers. Photograph by H.R. Voth, before 1906.

sponds to the initiation into manhood; the initiation into the women's ceremonies is not of equivalent importance. Finally comes the most important ceremony of all, Soyal, which marks the winter solstice (fig. 4); the Hopi designation is *soyála* (Third Mesa *so·yal*), or *soyal-* in compounds.

The dates of the ceremonies are determined by the position of the sun and, to a lesser extent, by the lunar calendar. For most ceremonies the sequence of ritual preparations is begun when the sun is observed to rise or set over a particular landmark on the horizon, the geographic features used being different from village to village. In contrast, the date of *powámɨ* is determined by that of the new moon of the lunar month *powámɨyàw,* at least on First and Third Mesas, and the date of the Snake-Antelope and Flute ceremonies by both the moon of the summer month *pá·mɨyàw* and the (solar-determined) date of Niman, which these ceremonies must follow (Stephen 1936, 1:136, 155, 577-767; Titiev 1944:244; McCluskey 1977:188-190).

The lunar calendar has 12 months in most years, but every two or three years (7 or 8 out of every 19) an additional month is intercalated between the eleventh month and the last month. This intercalary month is necessary to keep the lunar year (in which 12 months total only approximately 354.37 days) roughly in step with the solar year of approximately 365.24 days. The eighth through (ordinary) twelfth months of summer have the same names as the first through fifth months of winter, but there are also alternate names for some of the

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John R. Wilson, Tulsa, Okla.: Mora #173.

Fig. 4. "Opening" the kivas for the kachina season at Walpi. Auhalani (center kachina) and his two corn-maiden sisters, Sikyamana or Yellow Corn Girl (carrying a tray of upright ears of yellow corn) and Sakwapmana or Blue Corn Girl (carrying blue corn) generally appear on the 6th day of the Soyal ceremony and go on a circuit throughout the village, singing what is in effect an announcement of the coming kachina season (Wright 1973:14-16). They have just emerged from the Chief kiva (out of view at right) with Supela, the Soyal Chief, who holds a basket of cornmeal with which he will sprinkle the kachinas. At Oraibi, the Soyal kachina (impersonated by Soyal Chief), rather than Auhalani, inaugurates the kachina season. Photograph by Jo Mora, 1902-1904.

Mus. of the Amer. Ind., Heye Foundation, New York.

Fig. 5. *Young Men at the Shrine.* Young men placing willow prayer sticks at shrine identified as Somaikoli, a Second Mesa hunt shrine, which is one of many shrines visited at the time of the Soyal ceremonies. Also shown are antler and skull offerings, broken pottery (the bowl with which a newborn baby's hair is washed may be placed at the shrine), and a large pottery canteen containing offerings (Harvey 1970:29). Watercolor painting by Narron Lomayaktewa, one of 270 paintings documenting Hopi life commissioned from 5 Second Mesa Hopis under the aegis of the Mus. of the Amer. Ind., 1964-1965.

summer months, which, like that of the intercalary month, tend to be given differently in sources from different villages. The outline of the basic lunar calendar in table 1 gives the most firmly attested month names and translations.

The first month, *kélmɨyàw,* is the Initiates' Moon, the time of the Wuwuchim ceremony. An initiate or neophyte in a society is called *ké·le* (pl. *ké·keLi*) 'sparrow hawk' (Stephen 1936, 2:1229); *-mɨyaw* is the compounding form of *mɨ́·yàwɨ* 'month, moon'. The Dangerous Moon, *ká·mɨyàw,* is the month of the Soyal ceremony, which requires the observance of numerous prohibitions and taboos to prevent misfortune. The name of *pá·mɨyàw* has been taken as the Water (*pá·hɨ*) or Prayer-stick (*pá·ho*) Moon, or as the Play or Foolish Moon. In this month the prohibitions are lifted, and it is the time for pastime dances (Butterfly, Buffalo) and amusements (fig. 6). It is also referred to as *qacínam ʔǫ̓ki* 'the kachinas return, are back' and *qacínam nǫ̓ŋa* 'the kachinas come up', a reference to their ascent at this time through the sipapu from their home in the underworld (Parsons in Stephen 1936, 2:1037). *powámɨyàw* is the month of the purification by the kachinas of the first ceremonial plantings inside the kiva and the purification that terminates the Powamu ceremony. *ʔösǫ̓mɨyàw* is the Whistling Moon (compare *ʔǫ̓sö* 'gives a low whistle'), when the soft wind whistles, or the Cactus Moon (*ʔǫ̓sö* '*Opuntia* cac-

Federal Emergency Management Administration, Washington.

Fig. 6. Third Mesa butterfly dancers, posing before the dance in 1978. The men wear traditional white dance kilts with black, red, and green embroidery down one side, and black shirts with colored ribbons. The women wear black mantas, woven belts in red, black, and green, carved and painted tablita headdresses with butterfly and other designs, and fringes of false black hair across their foreheads. Both men and women have vertical red stripes painted on each cheek, similar to the "warriors' markings" described by Titiev (1972:339). Photograph by W. G. Williams, Aug. 1978, at Bacabi.

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Table 1. Hopi Lunar Calendar

Month Names	*Range of Gregorian Calendar Dates of the New Moon*
1. *kélmɨyàw,* Initiates' Moon	mid Oct.-mid Nov.
2. *ká·mɨyàw,* Dangerous Moon	Nov.-Dec.
3. *pá·mɨyàw,* Water Moon	Dec.-Jan.
4. *powámɨyàw,* Purification Moon	Jan.-Feb.
5. *ʔösőmɨyàw,* Whistling or Cactus Moon	Feb.-Mar.
6. *kʷiyámɨyàw,* Windbreak Moon	Mar.-Apr.
7. *hakítonmɨyàw,* Waiting Moon	Apr.-May
8. *kélmɨyàw; ʔɨyí(s)mɨyàw,* Planting Moon	May-June
9. *ká·mɨyàw* } also called "nameless moons"	June-July
10. *pá·mɨyàw*	July-Aug.
11. *powámɨyàw*	Aug.-Sept.
(12. *nösánmɨyàw,* Feasting Moon; *höhőqmɨyàw,* Harvest Moon)	(Sept.)
12. or 13. *ʔösőmɨyàw; tohósmɨ·yaw,* Autumn Moon	Sept.-Oct.

NOTE: The parenthesized 12th month is the intercalary month. The transcriptions of the names have been arrived at by comparing the available sources and may contain errors of detail. The range of dates of the new moon of each Hopi month is from mid-month to mid-month on the Gregorian calendar for the last month and the early months of the Hopi year, falling back gradually to a range of early August to early September for the 11th month; the new moon of the intercalary month comes in early or mid-Sept. For a hypothesis of the specific dates see McCluskey (1977:177), who is followed here with the addition of the intercalary month, which he does not account for. Other sources: Stephen 1936, 2:852, 953, 1037-1040; Whorf 1936; Titiev 1938a, 1944:174; Frigout 1962-1965; Fewkes 1892:151-159, 1897:256-257; Beaglehole 1937:23-25; Curtis 1907-1930, 12:250-251.

tus'). The Windbreak Moon, *kʷiyámɨyàw,* is when rabbit brush (*sivá^{h}pi; Chrysothamnus nauseosus*) is gathered and set out in lines for protection where the seeds are to be planted. The Waiting Moon, *hakítonmɨyàw,* when the favorable moment for planting is awaited, is also called the sweet-corn-planting month (Parsons in Stephen 1936, 2:1037), because it includes the time of the first ceremonial planting of sweet corn. The *kélmɨyàw* of summer is also called (Third Mesa) *ʔɨyimɨya* or (First Mesa?) *ʔɨyísmɨyàw,* Planting Moon (Third Mesa *ʔɨyis* 'early summer, planting time'). The intercalary month is most often said to be called *nösánmɨyàw,* Feasting Moon (compare *nő·sa* 'eats (it)'; Whorf 1936:1260, 1265) or *höhőqmɨyàw,* Harvest Moon (compare Third Mesa *hőhöqö* 'he is harvesting'; Voegelin and Voegelin 1957:21); the first part of the second name is also spelled hüük-, höök-, and hüükī- (Fewkes 1897:257; Curtis 1907-1930, 12:251; Parsons in Stephen 1936, 2:1038). The alternate name of the last month is based on (Third Mesa) *tɨhoʔos* 'autumn' (Voegelin and Voegelin 1957:15) and is also interpreted as Basket-Carrying Moon. Since none of the investigators figured out how the intercalation of the extra month worked, there is particularly extensive disagreement among them over the names of the final months of the Hopi year.

The Niman, Snake-Antelope, and Flute ceremonies, and those of the *mámraWt* and *lálakòNt* societies, have not only an announcement during the month when each is performed but also a preliminary announcement during the winter month that is homonymous with it. The reason why, inversely, Wuwuchim, Soyal, and Powamu are not announced in the summer is not exactly known. A ceremony is announced six months before by means of a sort of minor celebration of the same ceremony (Fewkes 1898a:67, 1902a:494; Titiev 1944:175).

Some Hopis begin the year with Wuwuchim, which includes a new fire ceremony, others with Soyal and the winter solstice, and still others with Powamu, the first great ceremony of the kachina and the start of the agricultural season (Frigout 1962-1965).

The Ceremonies

There is a general plan common to all the ceremonies, although notable differences appear according to the ceremony, the village, and the year.

All the great ceremonies last eight full ceremonial days, grouped into two sets of four, plus a preliminary day for entering into session, hence nine days altogether according to the following scheme (after Stephen 1936, 1:162, 104, 2:930-931; Parsons in Stephen 1936, 2:1041; Titiev 1944:105; Voth 1901:84):

Day	*Meaning*
1. *yɨŋʸa*	'they enter, assemble in kiva'
2. *sís-tá·la*	'the first day', or *sós kahími* 'all (do) nothing'
3. *lős-tá·la*	'the second day'
4. *páyis-tá·la*	'the third day'
5. *ná·lös-tá·la*	'the fourth day'
6. *sís-tá·la* or *sós kahími*	
7. *komóktotòka*	'wood-carrying sleep (i.e., day)'
(Third Mesa *piktotoka*	'piki(-making) sleep')
8. *totóka*	'sleep'
9. *tí·kive?*	'at the dance'

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Short ceremonies last four days, plus the preliminary day. It is also possible to double the duration of the ceremony when it is considered to be particularly important, such as for Wuwuchim in years of initiation (Titiev 1944:104). It consists then generally of two times eight plus one, making 17 days. Sometimes it takes even 20 days. The first days include mostly secret rituals that are principally performed in the kiva, while the second part includes mostly public rites conducted mainly in the plaza, constituting the festive aspect. There are other locations that also play a role, such as the clan house (which replaces the kiva for the Flute ceremony) and various sanctuaries.

The kivas or ceremonial chambers (Hopi *kíva,* sg.) are constructed separately from the dwellings. They are either subterranean or semisubterranean and are rectangular among the Hopi. Ceremonial access is by means of a ladder passing through the trap door constructed in the roof and resting on the floor of the kiva, near the fireplace. The floor is divided into two parts, an elevated platform for the public when they are admitted, and a lower level where the participants perform, which is generally provided with wall benches (see "Hopi World View," fig. 3, this vol.). In the lower level is the sipapu (*sípàpɨ,* Third Mesa *sípa·pɨ*), a hole dug in the ground symbolizing the place of emergence, which is supposed to communicate with the underworld. It is covered with a wooden plug in normal times and uncovered when in use (Mindeleff 1891:117, 121, 123; Titiev 1944:103-104). There are several kivas per village. The plaza where the public performances occur is traditionally considered to be the principal place of the village. It generally shelters a sanctuary called *pahóki,* literally 'prayer-stick house'. Shongopavi is the only village where there are two plazas, one with and one without a *pahóki* (Frigout 1962-1965).

At the start of a ceremony, there is first a meeting either in the clan house or in the kiva, where the participants smoke, prepare offerings, and arrange the announcement. This announcement is effectuated on top of a house roof by the Crier chief, the spokesman for the village chief. These religious announcements differ from everyday announcements and are addressed more to the Clouds than to the inhabitants of the village. The beginning of the ceremony as such is marked by the erection of a standard (a decorated pole called a *ná'ci*) at one side or on the ladder of the kiva that houses the ceremony (fig. 7).

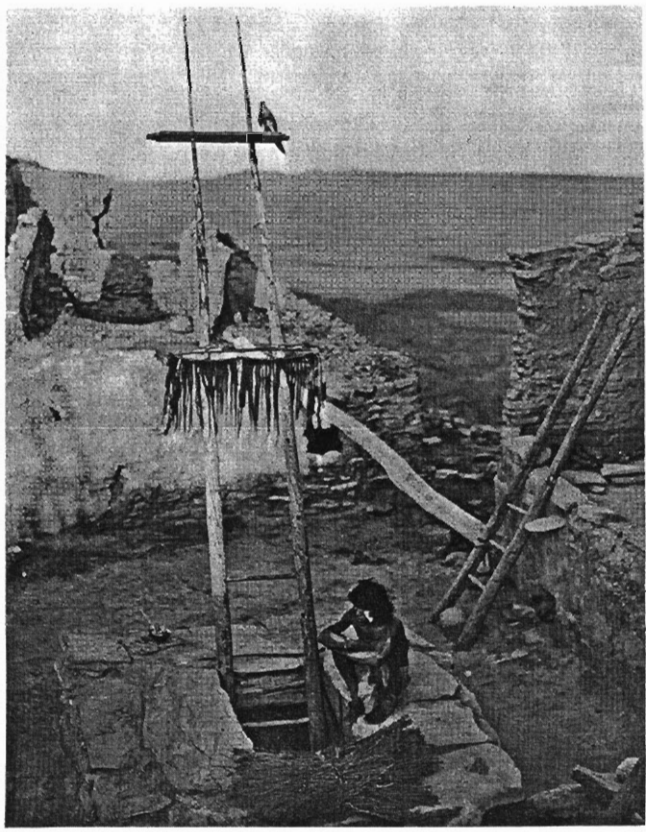

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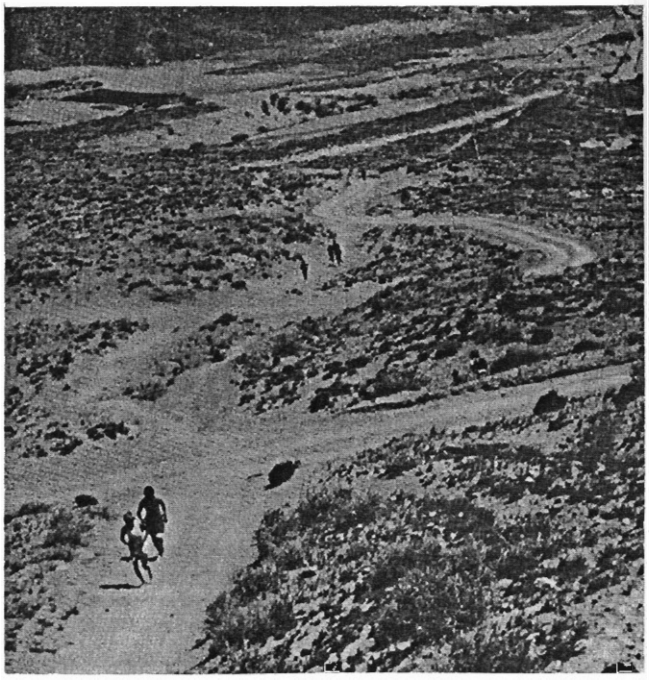
Fig. 7. Guard at the entrance to the Antelope kiva at the First Mesa village of Walpi, during the Snake-Antelope ceremony. A standard *(ná'ci),* composed of a bow to which red horsehair has been attached, hangs on the ladder. The bow standards for the Snake and Antelope societies are similar; on Third Mesa (where the ceremony differs somewhat), the Snake Society bow standard includes animal skins and eagle feathers. In the matting in front of the kiva is a snake whip (whip standard; Voth 1903:285, pl. 155), used in addition to the bow standard, to indicate ceremonial activity within the kiva. Photograph by C. C. Pierce or G. Wharton James (copyright by C. C. Pierce), about 1898.



Mus. of Northern Ariz., Flagstaff.

Fig. 8. Hopi runners, on unknown occasion, approaching Oraibi from Kyakotsmovi (New Oraibi). Races may be run on a variety of ceremonial occasions and may also be run by kiva groups and by racing kachinas who challenge the villagers to race. The kiva races usually involve kicking a specially prepared seed-filled ball around the course. Photograph by L. L. Hargrave, 1929.

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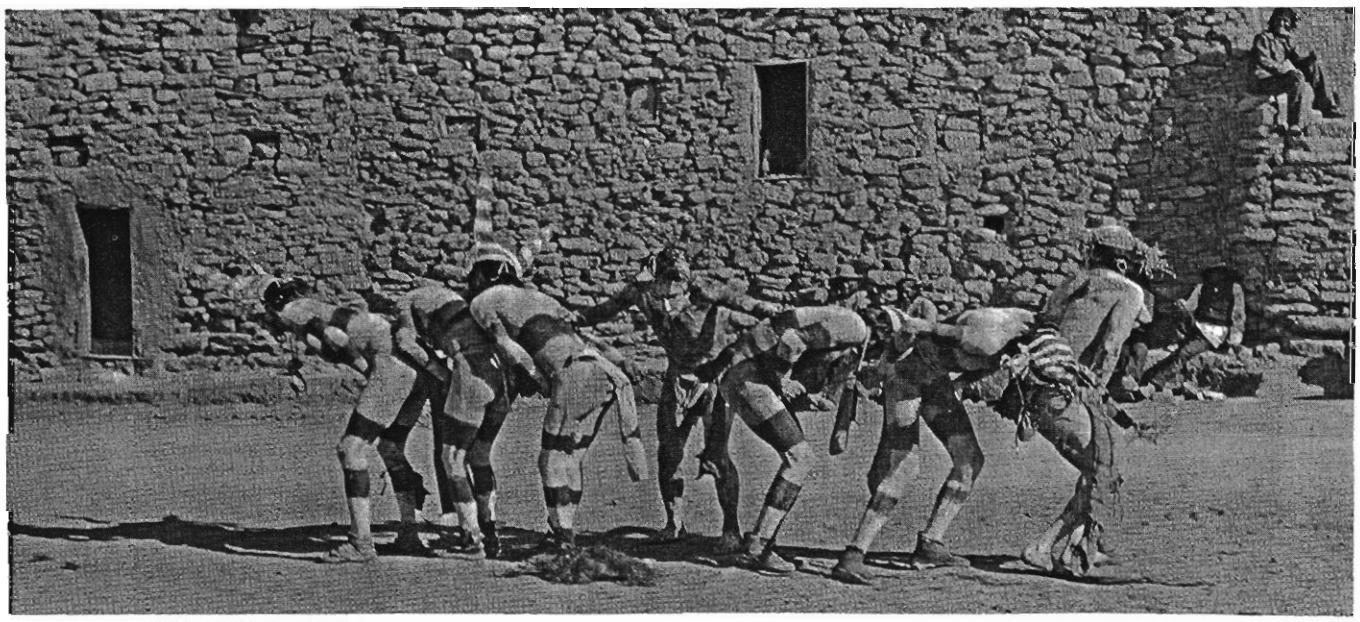
James T. Bialac, Phoenix, Ariz.

Fig. 9. *Clowns Between the Dances.* Ritual clowns shown here include Koyimse clowns or Mudheads (the three figures standing at center with drum) and Chuku (Third Mesa *cíkí*) clowns (standing and being offered food by the women at center), who are thought to be the true Hopi clowns. Also shown are kachinas who often appear with the clowns: the Angwusi or Crow kachina (figure seated at left), a warrior kachina who threatens the clowns; Mongkachina 'Great Horned Owl kachina' (standing between Mudheads at center), who with the other warrior kachinas punishes the clowns for their misbehavior; and Kokopelmana, the female counterpart of Kokopeli (the Humpbacked Flute Player) who mimics copulation with selected challengers. (See Wright 1973 for kachina identifications.) Painting by Hopi artist Otis Polelonema, 1966.



John R. Wilson, Tulsa, Okla.: Mora #223.

Fig. 10. Koyala clowns (with striped decorations) engaged in a mock tug-of-war under the direction of a Chuku or Hopi clown at a kachina dance. The Koyala were introduced by the Tewa from the Rio Grande region and the Koyimse (see fig. 9) are of Zuni origin (see Titiev 1972a). Photograph by Jo Mora at Sichomovi, 1905.

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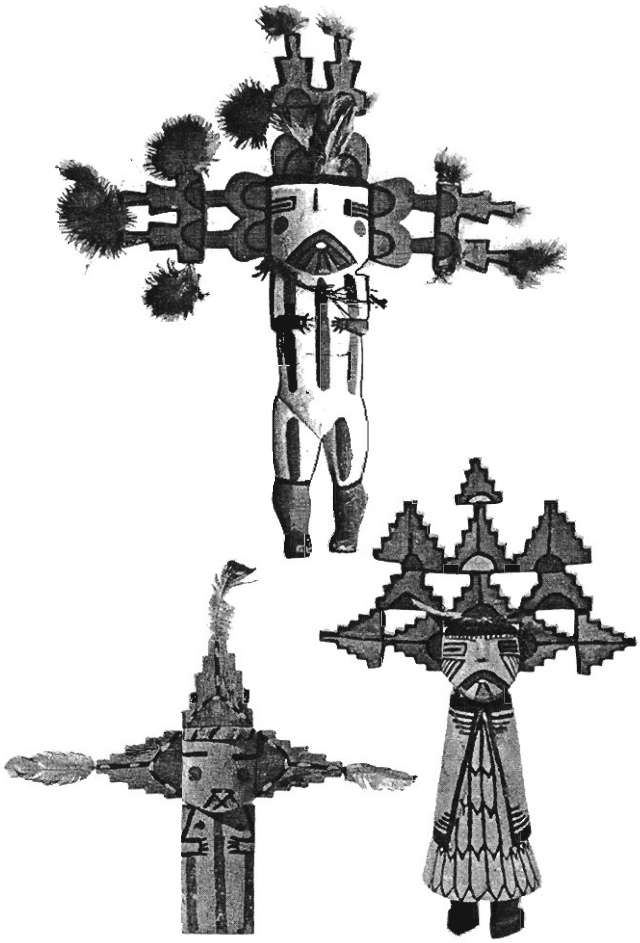
From this moment on no one, unless he is a member of the participating fraternity, can enter the kiva. As for the participants, throughout the ceremony they must observe sexual continence and abstain from salt and meat (Titiev 1944:60, 104).

Inside the kiva the most important ceremonies consist of smoking, singing, praying, and erecting altars. The songs may accompany dances, which may include imitative sequences. Some of these songs and dances, rhythmically accompanied by gourd rattles and by tortoise shells attached to the dancers' lower legs, serve as practice for the public performance. The act of smoking is very important because clouds of smoke are considered to favor the appearance of rain clouds (cf. Stephen 1936, 1:106). The altars erected in the kiva consist of vertical slabs, with symbolic or realistic paintings of maize, clouds, lightning, sacred animals, and cult heroes. On the ground in front are displayed objects, in particular: the *típòni,* fetishes of the chiefs (Stephen 1936, 2:1305), effigies of sky and earth gods and of cult patrons (Titiev 1944:105), and the medicine bowl holding spring water. This last is placed in the middle of a figure drawn on sand, with six lines of sacred cornmeal corresponding to the six directions, on each of which is an ear of maize of a color corresponding to the traditional association: yellow for the northwest, turquoise blue for the southwest, red for the southeast, white for the northeast, black for above, and speckled for below (see also "Hopi World View," this vol.). This traditional order of the four or six directions, beginning with the northeast and proceeding counterclockwise in the manner that Fewkes calls the ceremonial circuit, is also followed in numerous ritual acts, such as the sprinkling of water and cornmeal (Fewkes 1892b, 1901:215). Generally on the next to last day the altars are dismantled and the sand paintings erased (Titiev 1944:106).



Smithsonian, Dept. of Anthr.: 212,659, 22,934, 9567.

Fig. 11. Salako and Salako maiden kachina dolls in flat and rounded styles prevalent in the 19th century; in the 20th century there has been a trend toward more realistic, 3-dimensional representations (see "Pueblo Fine Arts," fig. 5, this vol.; Dockstader 1954:95-106; Erikson 1977). left, Salako maiden, carved in the flat style that was probably characteristic of the earliest kachina dolls, collected before 1902. center, Salako carved in a transitional flat-rounded style, probably collected in 1876. right, Salako maiden carved in a rounded style, collected in 1869 and thought to be the earliest collected kachina doll in a museum collection. The Salako and Salako maiden (Colton 1959:47) are only 2 among hundreds of recorded kachina representations (see Fewkes 1903; Colton 1959; Wright 1977). Height of kachina at left 23 cm, others (both virtually destroyed in a 1965 fire) same scale.

Usually on the last day or two the most important public performances take place: dances or simply the depositing of offerings at the *pahóki* or at other sacred places, the distribution of provisions, or races that begin at a sanctuary or a sacred spring and tend to lead the clouds or other benefits of the gods into the village (fig. 8). The principal dances on the plaza move according to the counterclockwise ceremonial circuit (Fewkes 1892b:39; Frigout 1962-1965). The public gathers all around the plaza, on benches in front of the houses, and on the roofs.

After these public performances the participants sleep in the kiva and continue their abstinences for four days. Before taking up ordinary life again and mingling with others they must purify themselves by a rite called *ná·vociwa* 'he exorcizes himself', which consists in sprinkling ashes with the left hand on the participant or the ceremonial object (Parsons 1939, 1:457-460; Titiev 1944:106). Contact with ceremonial secrets is considered to be dangerous; without this purification it may bring on the participants the same sickness that the secret society in question is supposed to control, each society having its specific sickness (Titiev 1944:106).

Kachinas

Night dances begin on First and Third Mesas with the Soyal, on Second Mesa after the Powamu. Each kiva in the village organizes its dance, repeats it, and in the evening goes to perform it in all the other kivas. The

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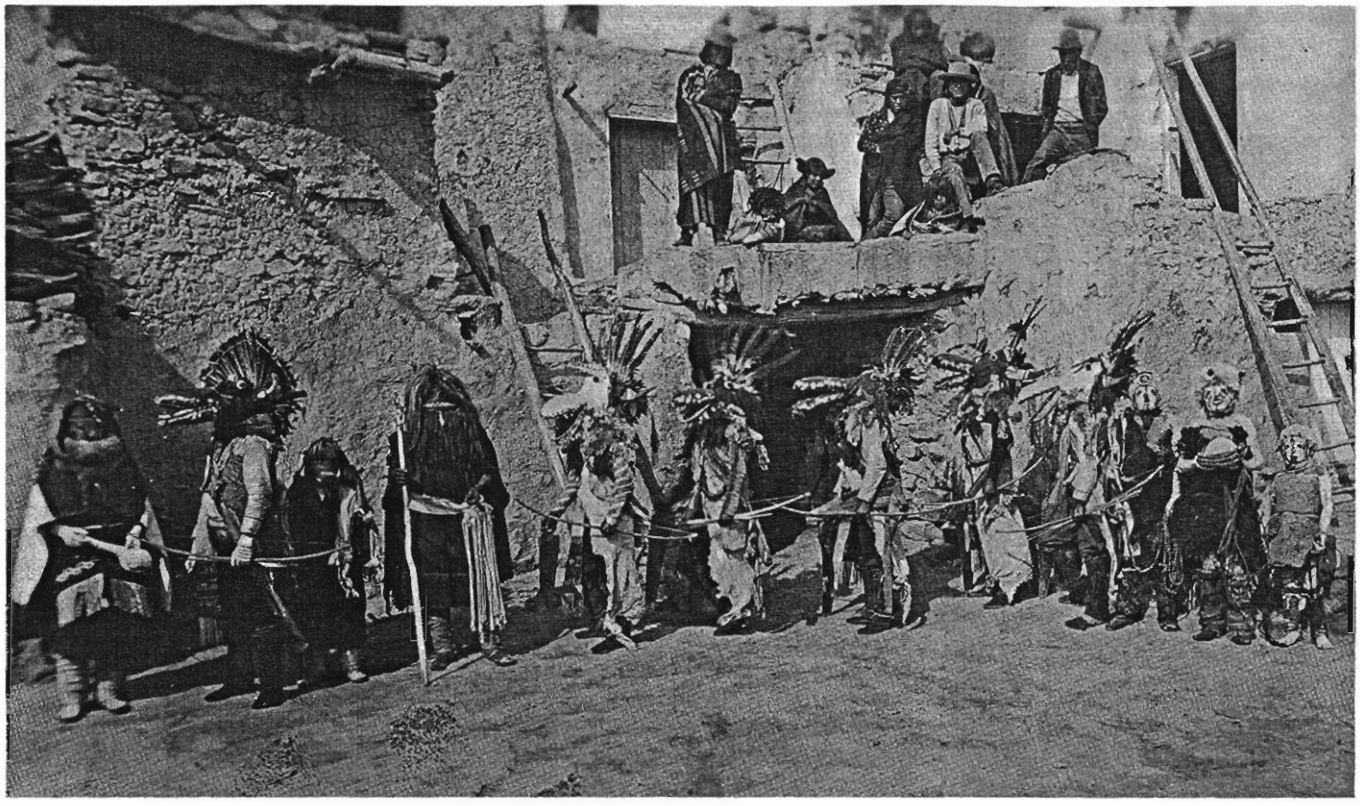

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Fig. 12. Powamu kachinas in the plaza at Walpi. These kachinas are ogres who go from house to house during Powamu to scare children into obedience to their parents. They are (left to right): Hahaiwuhti (a mother of the kachinas) who leads the procession, a Black Natashka, Soyokmana (Natashka kachina girl), Soyokwuhti (grandmother of Natashka), a White Natashka, 3 Black Natashkas, a White Natashka, and 3 Heheya kachinas (who pretend to copulate with spectators). Photograph by James Mooney, Feb. 1893.

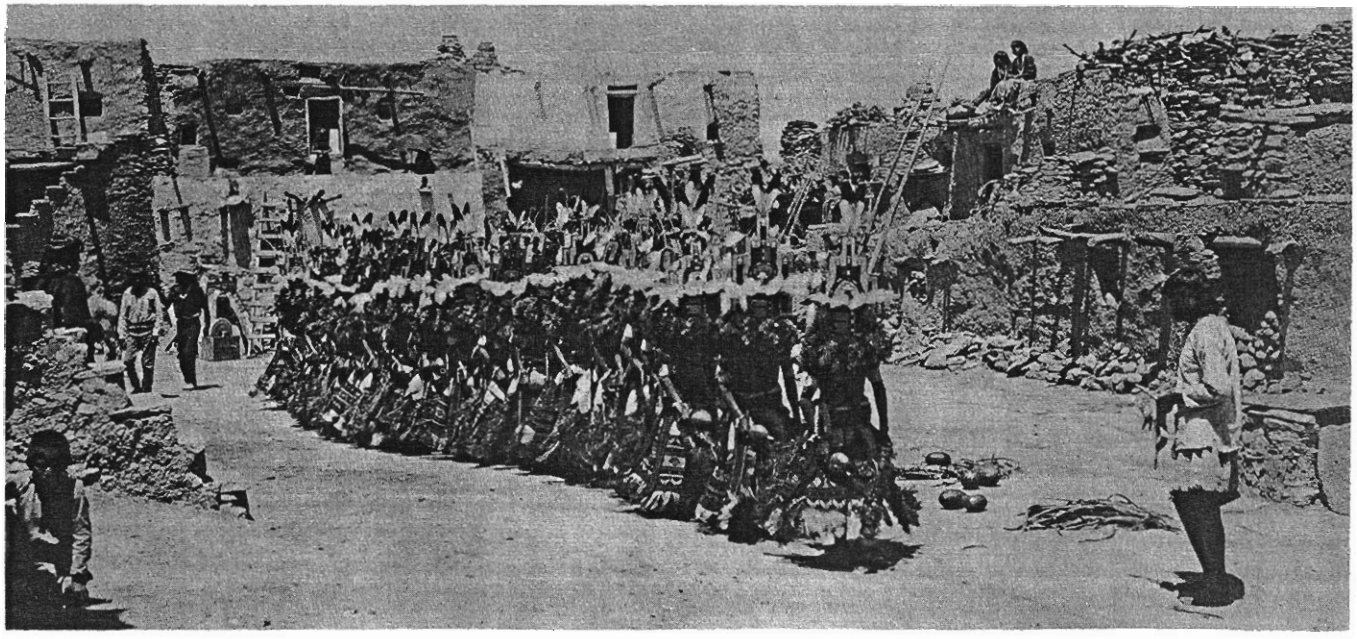

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Fig. 13. Humisi ('corn flower') kachinas dancing during a Niman ceremony. The "father" of the kachinas (at right) is a member of the Powamu society who leads the kachinas in and out of the plaza, "feeds" them (by sprinkling them with cornmeal) and represents the village to the kachinas. The melons and cornstalks at right are for distribution by the kachinas to the audience. Not shown are the Humismanas who appear with the Humisi. Photograph by Adam C. Vroman at Shongopavi, 1901.

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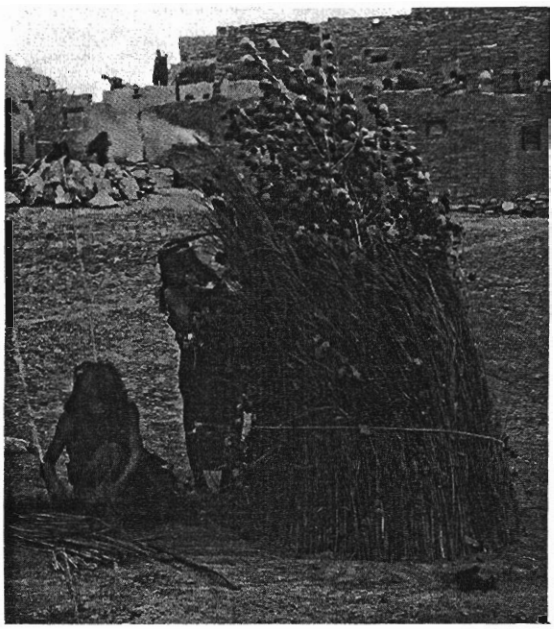

left, Los Angeles Co. Mus.; right, Calif. Histl. Soc., Los Angeles: Title Insurance Coll.

Fig. 14. Public performance of the Snake-Antelope ceremony at Oraibi, 1898 and 1902. left, Building the bowers to be used in the plaza dances later that afternoon when the Antelope priest dances with vines in his mouth; the bower is constructed of cottonwood boughs and long reeds gathered that morning. Photograph by Adam C. Vroman, 1898. right, Antelope dancers (wearing white kilts with brocaded sashes, and horizontal lines painted just above their mouths) stand in a line in front of the bower beating time with their rattles as the Snake dancers dance in the plaza with live snakes in their mouths on the afternoon of the 9th day; the wooden plank at their feet covers a symbolic sipapu or earth navel. Photograph by C. C. Pierce or G. Wharton James (copyright by C. C. Pierce), 1902. The Snake and Antelope ceremonials were extensively photographed (see Webb and Weinstein 1973:85-102) and written about (see Fewkes 1894b; Voth 1903) during this period.

public, invited by the kiva chief, is then admitted into the kiva (Titiev 1944:112-114). One of the most famous variants of the night dances is the dance of *pá·lölöqaŋʷi*, the Horned Water Serpent, in which puppets represent the mythical serpents (Fewkes and Stephen 1893; Stephen 1936, 1:287-324; Titiev 1944:121-123).

The day dances succeed the night dances about April. The masked dancers conducted by their "father," who traces their route in maize flour, arrive in the plaza with the sunrise and dance in place in a line, one behind the others, in several successive locations, generally three. In the intervals between the dances during the day the kachinas distribute gifts, particularly foods, and there are some comical interludes performed by different kinds of clowns (figs. 9-10) (Stephen 1936, 1:350-463; Earle and Kennard 1938:29-33; Titiev 1944:126-128). The very popular Koyimse are kachinas but they also participate in comical acts. For a more thorough discussion of clowning see Titiev (1972a) and Hieb (1972).

There are also some solitary appearances of kachinas, such as that of the Sòyal kachina who comes (on Second Mesa the day after the Soyal, on Third Mesa 16 days before) to open the kivas symbolically for the kachinas coming from all directions (Titiev 1944:110).

At Powamu beans and maize are ritually planted inside the kivas, to assure good harvests and to demonstrate the "good heart" of the participants (Titiev 1944:114-115). Small boys and girls, after having been whipped (or not, according to whether they are entering the Kachina society or the Powamu society, and according to the village) are shown, by attending a performance of unmasked dancers, that the kachinas are none other than their relatives and other villagers (Talayesva 1942:83-84). The afternoon of the ninth day the kachinas go about in the village (fig. 12), but there is no organized dance (Voth 1901:114-117; Titiev 1944:115, 117-118). The Niman ceremony usually consists of a personification of the male and female Humisi kachinas (fig. 13), the female figures imitating corn grinding (Titiev 1944:128; Stephen 1936, 1:533, 575). Some eagles, previously captured and kept on the house roofs, at the end of the ceremony are ritually suffocated so that they will carry the people's messages to the spirits (Voth 1912a:108; Stephen 1936, 1:568-569). At Powamu as at Niman the kachinas bring many presents, especially to children: kachina dolls for girls; toy bows and arrows, ball games, and rattles for boys (Titiev 1944:232, 115, 117-118).

The kachina masks are considered to be incarnations of the ancestors, more or less individualized, who spend half the year with the Hopis and the other half in the subterranean world (Titiev 1944:109, 129).

Snake-Antelope and Flute

The Snake and Antelope societies perform a single ceremony, but only the Snake men go to hunt snakes on four days, successively to the northwest, southwest,

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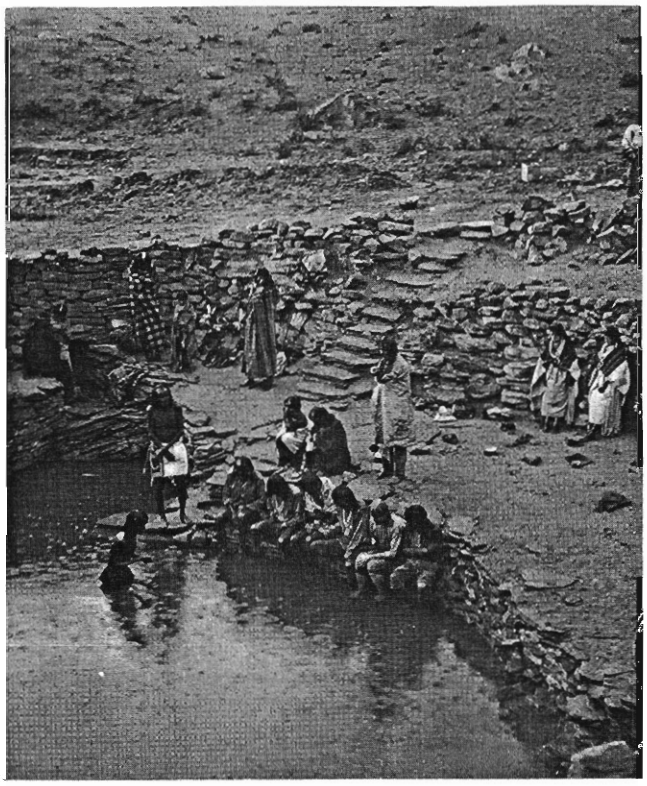

Los Angeles Co. Mus.

Fig. 15. Ninth day of the Mishongnovi Flute ceremony, 1902. The Flute ceremony and the Snake-Antelope ceremony are held in alternate years in any given village and follow the same basic pattern of 8 days of nonpublic ritual followed by 1 day of public ritual. Here the Flute men sit at Toreva Springs, the sacred springs below the mesa where the "entrances" to the underworld and the homes of the Horned Water Serpents and the clouds are located; a priest (standing in the springs) is hunting for 3 water jars, which he will symbolically obtain from the underworld, which will then be carried in procession to the plaza. Photograph by Adam C. Vroman.

southeast, and northeast of the village (Voth 1903: 286-290; Stephen 1936, 1:587, 726, 732, 736). The evenings of the fifth and sixth days the two groups gather in the Antelope kiva where a man and a woman are costumed to represent the heroes of the Snake myth (Voth 1903:310). The mornings of the eighth and ninth days there is a race, the winner bringing a gourd full of water to the village (Voth 1903:323-327, 337). The afternoons of the same days the Snakes and the Antelopes dance in the plaza, near the *kí·si* (a bower of cottonwood erected there for the ceremony). The ninth day the Snakes dance while holding in their mouths living snakes taken out of the *kí·si* (fig. 14). Afterward the snakes are set free far from the village in sacred places situated at the four Hopi cardinal directions, and the dancers take an emetic (Voth 1903:334-336, 345-348; Stephen 1936, 1:707-709, 712, 754-756, 763-764).

There are two Flute societies: the Blue Flute and the Gray Flute (except at Walpi where there is only one). A particular mythico-historical episode took place at Walpi, when the members of the Flute society returning to the village found their way blocked by the chiefs of the Bear clan and the Snake clan, then by a personage representing *ʔálwisàqa*, and they did not finally gain access to the village until the promise of bringing rain in the middle of their ceremony (Stephen 1936, 2:769, 805-811). On the evening of the ninth day there is a race like the one for the Snake and Antelope ceremony. In the afternoon the Blue Flutes followed by the Gray Flutes go toward the *kí·si* while drawing cloud symbols on the ground with maize flour (Stephen 1936, 2:816-817; Titiev 1944:147-148).

Titiev (1944:153-154) classes the Snake-Antelope and Flute ceremonies (fig. 15) among the solar ceremonies, with the Soyal.

Women's Rites

At the Maraw ceremony the caricature dances can take place on the plaza the next to the last days (Stephen 1936, 2:899). At the Lakon ceremony there is a women's race the eighth day, at least at Walpi, and a men's race the ninth day (Stephen 1936, 2:851-852; Fewkes and Owens 1892:123-125). At the Owaqol ceremony there is a men's race the ninth day (Voth 1903a: 40-41).

On the ninth day two protagonists direct themselves toward the dance circle on the plaza, which is moving at Maraw and at Owaqol, but fixed at Lakon: at Maraw they aim some arrows toward a bundle of vines thrown on the ground (followed at Oraibi by two others with lances and hoops); at Lakon they throw ears of corn (yellow for the northwest, blue for the southwest, red for the southeast, white for the northeast) into the cloud symbols traced in cornmeal; at Owaqol they aim a corn husk at a hoop. Many presents are then thrown by these protagonists toward the spectators at Lakon (fig. 16) and at Owaqol (Voth 1912:66, 1903a:42-43; Fewkes and Owens 1892:126-128; Stephen 1936, 2:855, 909).

The Maraw rites are considered to relate to war and fertility (among other things) while those of Lakon and Owaqol relate particularly to fertility.

Initiation

When adolescent boys are initiated into the Wuwuchim, Singers, Horns, or Agaves, the four societies gather on the first day in a common kiva for the lighting of a new fire, at which time an Agave member personifies *másàwɨ* (Fewkes and Stephen 1892:195; Titiev 1944:131), the god of death and the owner of the earth, who in the myths welcomed men on their emergence from the subterranean world and gave them fire (Titiev 1944:138; Colton 1959:78). The initiation is considered to be like a birth into adult life and is probably at the same time the introduction to the society of spirits to which the individual will belong when he dies (Fewkes and Stephen 1892:197-199; Titiev 1944:136). The fourth day all the roads leading into the village are blocked off, except for one at the northwest by which, at least at Oraibi, tradition

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Fig. 16. Basket Dance (in which many specially prepared baskets are thrown to the spectators) performed in the plaza at Oraibi on the 9th day of a Lakon ceremony (see Fewkes 1899b:84-85 for other photographs in this series). The public dances of the Lakon and Owaqol societies are somewhat similar (see Fewkes and Owens 1892; Voth 1903a for extensive descriptions), each generally having two special priestesses or maidens who dress in characteristic headdress and costume. On this occasion there were 4 rather than 2 Lakon Maidens, one of whom can be seen at the opening of the circle throwing a basket. Photographer unknown, possibly G. Wharton James, E.E. Palmer, or G.L. Rose (all credited elsewhere with photographs of this event), Oct. 26, 1898.

says that the dead will return during the night to the abandoned half of the village to eat the food prepared by the women. Some Agaves are sent to the burial grounds, where it is believed that they disinter cadavers in order to borrow their clothes to wear before the initiates (Titiev 1944:135-136).

The Wuwuchim and the Singers dance in public several days in a row, surrounded by the Horns. The ninth day the Agaves trace a path of maize flour on the plaza, departing from the west; then they efface it in order to reestablish the customary dissociation between the dead and the living (Fewkes and Stephen 1892:217; Titiev 1944:132, 136).

The Wuwuchim and the Singers are particularly associated with fertility, the Agaves with war, and the Horns with hunting. The Wuwuchim and Maraw societies are considered to be socio-ceremonially connected (Titiev 1944:168; Eggan 1950:93, 100).

Winter Solstice

Initiation at Wuwuchim is necessary in order to participate in Soyal. Most of the Soyal rites take place in the kiva. One of the most significant occurs on the evening of the ninth day and consists in a dancer depicting the hesitant course of the sun returning toward the summer solstice. At Oraibi a Star Priest turns a solar symbol; at Walpi a group of Singers forces the carrier of a shield in the form of a sun to return into the correct road (Dorsey and Voth 1901:54-55; Stephen 1936, 1:22-24). The first evening the participants in the Soyal give back to their relatives and friends the prayer-sticks (*pá·ho,* sg.) that they have prepared for their use. These prayer-sticks are then deposited in the proper sanctuaries, generally one by the men, the other by the women in each village (Dorsey and Voth 1901:57; Titiev 1944:144).

The so-called social dances that follow, such as the

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Table 2. Major Hopi Ceremonies and Their Society, Clan, and Kiva Affiliations

	Oraibi before 1900		*Shongopavi*		*Mishongnovi*		*Walpi*	
Ceremony and Society	*Controlling Clan*	*Home Kiva*	*Controlling Clan*	*Home Kiva*	*Controlling Clan*	*Home Kiva*	*Controlling Clan*	*Home Kiva*
Initiation (Wuwuchim)								
Wuwuchim	Sparrow Hawk[a]	Hawiovi	Corn and Bluebird	Bluebird	Coyote and Squash	Badger	[Squash] Mustard	Wikwalovi
Singer	Parrot	Singer	Bear and Kachina	Parrot	Parrot[a]	Parrot	Tobacco[a]	Chief
Horn	Bow	Middle	Fog[a] and Patki	Horn	Patki	Horn	Bear and Reed	Horn
Agave	Masawu	Agave	Kachina, Sun, and Snow	Snow Mountain	Lizard	Kochovi	Patki	Goat
Soyal	Bear	Blue Flute	Bear	Parrot	Bear(?), Lizard	Horn	Patki	Chief
Powamu								
Powamu	Badger	Hochichivi	Kachina and Bear	Parrot	Kachina	Kochovi	Kachina-Parrot	Chief
Kachina	Kachina	Hawiovi	Kachina	Parrot	Kachina	Kochovi	Kachina-Parrot	Chief
Niman	Kachina	(rotates)	Kachina	(rotates)	Kachina	(rotates)	Kachina-Parrot	(rotates)
Blue Flute	Spider	Blue Flute	Patki	(clanhouse)	Parrot	(clanhouse)	Millet	(clanhouse)
Gray Flute	Patki	Hawiovi	Bear	(clanhouse)	Squash	(clanhouse)	[Squash]	——
Snake	Snake	Snake	Sun and Sun's Forehead	Nuvaovi	Lizard	Badger	Snake-Cactus	Wikwalovi
Antelope	Spider	Middle	Carrying Strap	Parrot	Bear	Horn	Snake-Dove	Chief
Maraw	Lizard	Maraw	Bluebird	Parrot	Parrot	Badger	[Squash] Snake	Horn
Owaqol	Sand	Hawiovi	Bear	Parrot	Badger	Badger	Reed-Eagle	Young Corn Mound
Lakon	Parrot	Hawiovi	Snow	Parrot	Lizard	Kochovi	Patki	Goat

SOURCE: Eggan 1950:103, which gives variations from this summary.

[a] Clan of chief in general charge.

[ ] Extinct clan.

Buffalo, are mixed dances with a chorus of men, performed both for obtaining blessings (moisture, game animals) and for pleasure. Formerly they apparently had some relationship with war (Fewkes 1902a:507, 1910a:588-589; Stephen 1936, 1:125, 126, 128, 130; Titiev 1938a:107).

War

When the Hopi still made war the Warrior Society (Third Mesa *mo·mcit*) held an annual ceremony, either in the autumn (reported for Oraibi) or just after Soyal (reported for Walpi), at which a war medicine was prepared and a public dance was performed. In the autumn, after the harvest, was the traditional time for going to war, and when the warriors (*qalêʰtaqa,* sg.) returned and were welcomed back to the village by the women there was a scalp dance (Mishongnovi *ʔósnina tiva;* Third Mesa *qalê·ti*), also referred to as the Market Dance (Third Mesa *ho·winaʔay*), though the latter has also been described as a harvest dance of thanksgiving (Mishongnovi *hoyna;* First Mesa Howina and variants). The celebration of a war dance in the fall continued for some years after

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the end of traditional warfare (Titiev 1944:156-163; Stephen 1936, 1:83-96, 2:911).

Societies, Clans, and Kivas

Each ceremony reflected a triple membership in a society, a clan, and a kiva (table 2) but with no precise correspondence between the society and the clan and not with identical systems in each village (Mindeleff 1891: 133-134; Stephen 1936, 2:1169-1179; Eggan 1950: 89-106).

Each ceremony is controlled in principle by a clan, or sometimes by several. The clan and especially a lineage within the clan is in charge of the ceremonial paraphernalia and furnishes the chief official who must of course be initiated in the society and is thus at the intersection of the society and the clan. The charge is transmitted within the lineage, or if this becomes extinct, within the clan; if the clan becomes extinct, it stays in the phratry. In some cases a ceremony can be put on by any person who claims it (Stephen 1936, 2:958-959; Eggan 1950:90).

Mythically the ceremony was "given" by the gods or the heroes to the clan after the emergence, an explanation that is not consistent with the variety of socio-ceremonial associations from village to village (Eggan 1950:90-104). In fact, each ceremony is put on by one or several secret societies, the membership of which does not depend on clan affiliation. Each postulant has a ceremonial father who belongs to another clan and who initiates him to all the societies to which he himself belongs.

In any case, each ceremony is conducted by a village within a given kiva (except in the case of the Flute), which was constructed by one or several clans that are its proprietors. It is difficult to agree with Parsons that the clan association is primary, because the kiva membership is ceremonial (Eggan 1950:96). Each man is basically associated with the kiva of the men's society into which he was initiated; he belongs secondarily to other kivas for other ceremonies. At an earlier age each child or adolescent goes to the kiva where he was initiated into the kachinas. The number of kivas varies with the village: five at Walpi, two at Sichomovi, two at Tewa Village; five at Shongopavi, four at Mishongnovi, three at Shipaulovi; six at Hotevilla, three at Old Oraibi, three at Kyakotsmovi, two at Bacabi, and five at Moenkopi.

Within a ceremony certain rites belong to certain clans; for instance, a man of the Tobacco clan prepares the pipe and a man of the Sand clan brings the sand for the altar (Eggan 1950:102).

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Hopi World View

LOUIS A. HIEB

A people's world view is "their picture of the way things, in sheer actuality are, their concept of nature, of self, of society. It contains their most comprehensive ideas of order" (Geertz 1958:421-422). World view is, thus, to be understood as a people's way of selecting, classifying, and structuring reality and is concerned with the logical properties of belief. However, as Leach (1968:3) has noted, "the components of a religious system are meaningful not only because of their internal coherence but because of their practical integration with the secular life of the congregation." Religion is felt to be not only logically true but also empirically true, that is, its validity is equally derivable from its relationship to everyday realities. A description of world view should, at least in some minimal fashion, attempt to indicate connections with other symbol systems, like art, architecture, and social organization.

The Bipartite Universe

Titiev (1944:107-108, 171-178) has provided an extensive discussion of the bipartite structure of the Hopi universe. One of the fundamental elements of Hopi world view is:

> the concept of a dual division of time and space between the upper world of the living and the lower world of the dead. This is expressed in the description of the sun's journey on its daily rounds. The Hopi believe that the sun has two entrances, variously referred to as houses, homes or kivas, situated at each extremity of its course. In the morning the sun is supposed to emerge from its eastern house, and in the evening it is said to descend into its western home. During the night the sun must travel underground from west to east in order to be ready to arise at its accustomed place the next day. Hence day and night are reversed in the upper and lower worlds . . . (Titiev 1944:173).

Life and death, day and night, summer and winter are seen not simply as opposed but as involved in a system of alternation and continuity—indeed, a fundamental consubstantiality. Death is "birth" into a new world, and many Hopi burial practices (cf. Stephen 1936, 2:824-825) parallel those of birth except that four black lines of charcoal separate the dead from his home in the village while four white lines of cornmeal mark the walls of a newborn baby's home.

This world and the world of spirits are transformations of each other. At death a cotton mask—a "white cloud mask" (Stephen 1936, 2:825)—is placed on the face of a dead person. The spirits of the dead return to this world as kachinas. All kachinas are believed to take on cloud form—to be cloud people—and their spiritual essence, or navala, is a liquid that is manifested as rainfall. When the kachinas (as ritual figures) depart, they are petitioned, "When you return to your homes bring this message to them that, without delay, they may have mercy for us with their liquid essence [rain] so that all things may grow and life may be bountiful." Everything, in Hopi belief, is dependent on rainfall, which, when combined with Mother Earth, is the essence of all things. Hence navala is also the essence of the individual self, conceived of as a liquid, and a Hopi will say, "I have the liquid essence of my fathers," to express the English notion of being of the same flesh and blood. Through the combination of the rain with the earth and its transformation into corn, the blessings of the kachinas (their navala) become the essence of our bodies (our navala). There is, thus, an essential consubstantiality in the bipartite structure of the Hopi universe that relates cotton masks and clouds, the living and the dead, rain and life.

The System of Correspondences

In ritual, songs, prayers, masks, and altars, concepts of space, time, color, and number (as both sequence and quantity) are interrelated paradigmatically. Expressed together, they form the basis of an elaborate system of correspondences that orders much of what is significant in the Hopi world by relating a vast number of domains within a bipartite universe. This forms a system of symbolic classification, which is one aspect of the Hopi world view.

Fundamental to this system is the spatial orientation of the traditional Hopi, which is related to the four most distant points reached by the sun in its apparent movement during the year along the eastern and western horizons. These define the four cardinal directions, *kwiniwi* 'northwest' (at the horizon point of the summer-solstice sunset), *té·veŋà* 'southwest' (winter-solstice sunset), *tá·tôqa* 'southeast' (winter-solstice sunrise), and *hó·pòqa* 'northeast' (summer-solstice sunrise), in addition to which *ʔó·mi* 'above' and *ʔatkámi* 'below' are also treated as primary directions. Certain colors are associ-

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ated with each direction (fig. 1), and nearly every ritual act expresses this fundamental conception of order in being repeated four or six times in time, or space, or both (Stephen 1898:261-262, 1936, 2:1190-1191). Stephen (1898:261-262) explained that the northwest was yellow "because the anthropomorphic deity who sits there is yellow, wearing a yellow cloud as a mask which covers his head and rests upon his shoulders; a multitude of yellow butterflies constantly flutters before the cloud, and yellow corn grows continually in that yellow land," and that below, associated with all colors, is where there "sits the deity regarded as the maker of all life germs. He sits upon a flowery mound on which grows all vegetation; he is speckled with all the colors, as also is his cloud mask, and before it flutter all the butterflies, and all the sacred birds." These associations have remained strong, even though the Hopi in the twentieth century have come to conform their directions to the cardinal points of the European compass, familiar from local road maps, by making *kwiniwi* north (Hieb 1969-1971; Stephen 1936, 2:1221, 1241, 1301, 1304).

This basic space-time-color-number paradigm provides the logical basis for an elaborate system of correspondences that find expression throughout Hopi ritual. Clouds, butterflies, corn, lightning, rains, winds, birds, animals, trees, shrubs, flowers, beans, and so on are ordered in terms of this schema in song and prayer and in Hopi religious thought. Various ritual paraphernalia are constructed in accordance with this paradigm. However, unlike the Tewa of the Rio Grande (Ortiz 1969) or the Zuni of western New Mexico (Cushing 1896), this schema does not in 1970 serve as a system of classification with practical consequences for social organization and the division of labor during the year's subsistence activities. Nor do the writings of Stephen (1898, 1936), Fewkes (1927), or Voth (1901, 1905, 1912) indicate a correspondence between this system of meaning and any system of action outside the ritual context at the turn of the twentieth century.

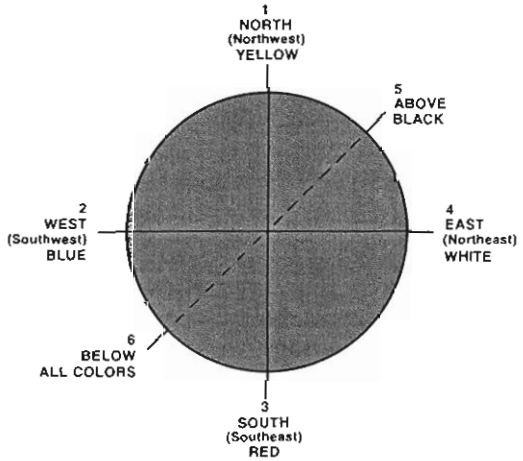
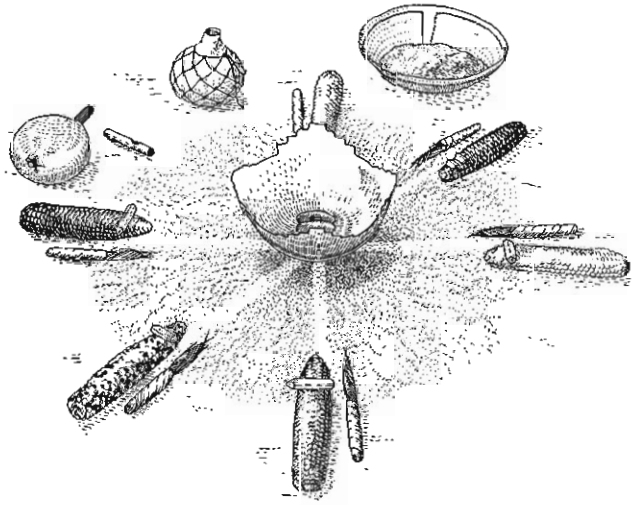


Fig. 1. Schematic diagram showing association of specific colors with each of the traditional 6 directions. When laid out symbolically on the plane surface of a kiva floor (see fig. 2), the up and down directions are represented on a diagonal axis.

Space

The Hopi cultural construction of space is a quadripartite one to which are added "up" and "down." This spatial orientation is centrifugal, as illustrated in the Hopi "six directions altar" (fig. 2) (cf. Fewkes 1927). After sand is spread upon the floor of the kiva to form the "earth," a bowl (usually with cloud symbols on its four sides) of water is placed in the center. From this middle place paths of cornmeal radiate outward to the six directions and various objects (including ears of corn, feathers, animal fetishes) are added according to their positions in the system of correspondences. This spatial paradigm is articulated throughout Hopi ceremonialism. Rarely is a ritual act performed once but is, rather, given fourfold or sixfold expression according to the syntagmatic stereotype that derives from the basic paradigm: for example, yellow clouds come from the north, blue clouds from the west.

Unlike the Zuni, the Hopi do not articulate the notion of the "middle" in this schema; however, there are many middles. As prayers radiate centrifugally, the rain-bearing clouds are beckoned centripetally. The Hopi entered



after Fewkes 1927:pl. 1 and Stephen 1936, 1:fig. 296.

Fig. 2. Six directions altar. An appropriately colored ear of corn rests on each end of the directional cornmeal axes. To the right of each is a pollen sprinkler *(makᵛáNpi)*, made of feathers bound together with either cotton or leather thongs. Pieces of quartz crystal and other minerals have been placed on each ear of corn and in the medicine bowl at the altar's earth center. The peripheral items, which seem to be more variable, are: a net-covered water gourd, a bone whistle, and a gourd rattle. This altar is one section of a more elaborate Niman ceremony altar that was recorded at Walpi in the 1890s by Fewkes (1927:pl. 3) and by Stephen, who in addition described the precise order in which the directions altar was laid out on 2 different days of the ceremony (Stephen 1936, 1:fig. 286, 2:figs. 512-513, 526).

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this world at its middle, through Sipapu (Hopi *sípàpɨ*), which is said to be at the bottom of the Grand Canyon to the west of the Hopi villages. It is there that the dead travel to find their way to the world, the "house," below. Sipapu is represented, symbolically, by a covered hole in the floor of the kiva. The architectural form of the kiva (fig. 3), the dance positions assumed by the kachinas (*qacínam;* sg. *qacína*), various shrines in and around the village—all reduplicate this middle. To it prayer offerings are made and from it come blessings.

Time

The dual organization of time provides a structural principle fundamental to Hopi religious belief and ritual action. The organization of the Hopi ritual calendar is based on this notion (see "Hopi Ceremonial Organization," this vol.). Time as quantity or as sequence is given fourfold expression throughout ritual. The major ceremonies of the priestly period begin 16 days after an "event" in the solar or lunar calendar and are followed by four days of prayer and fasting. Observances during the kachina period also involve fourfold expressions, and processions follow the counterclockwise sequence noted in figure 1.

Color

The ritual construction of the continuum of color is sixfold: red, yellow, blue/green, black, white, and gray. In the system of correspondences the "color" for "down" is "all colors" but this is sometimes given ritual representation by gray. A distinct series of colors is thus established, which makes color an important symbolic classifier: first, because the six colors are easily represented by living things found in nature; and second, because it is easily applied (conceptually or by application of paints or dyes) to a variety of significant elements, for example, clouds, flowers, or corn as they are depicted in altars or on masks. Color may be viewed as an abstract and arbitrary classifier especially in its paradigmatic application. But this sixfold division of color has important natural motivation. According to one early observer, "at least ninety percent of the vegetable food eaten by the Hopi Indians is made of corn" (Owens 1892:163). Hopi corn is yellow, blue, red, white, black, and sweet ("kachina corn"). To the Hopi, corn is their "mother" for "they live on and draw life from the corn as the child draws life from its mother" (Voth 1901:149). A second basic source of food is beans. According to Stephen (1936, 1:354) the "old time beans" of the Hopi seem to be "yellow, blue, red, white, black, speckled." It is here that the system of correspondences is most closely related to Hopi life. Hopi dependence on corn has decreased since the nineteenth century, but corn remains a meaningful symbol of life—its substance and that which sustains it.

Number

As either quantity or sequence, number is an abstract classifier that derives its significance from the other dimensions of the basic paradigm. Again, the numbers four and six provide a structural principle for dividing

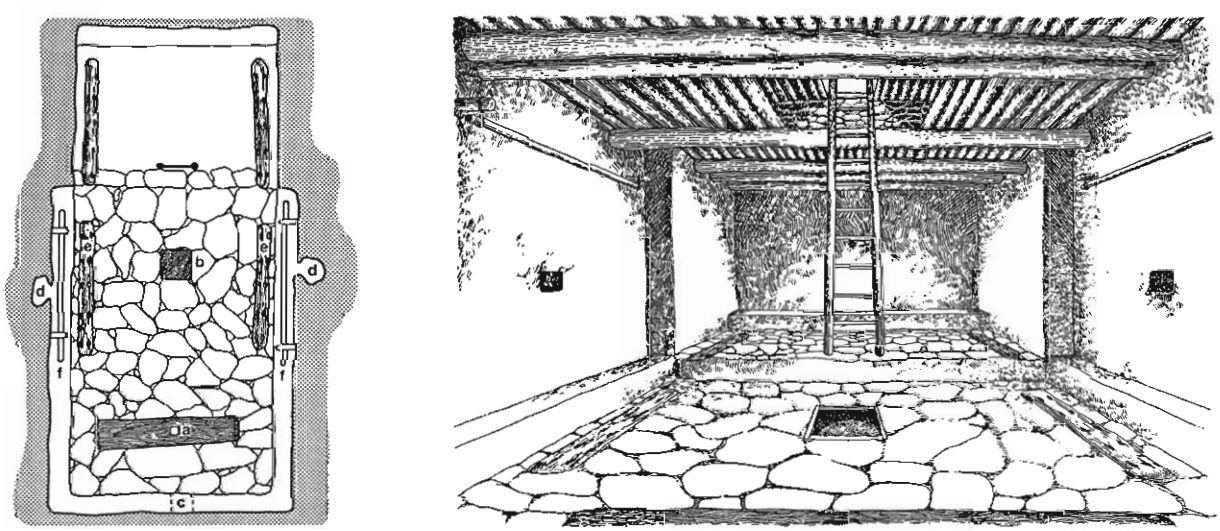

Fig. 3. Plan and interior view of a subterranean Hopi kiva: a, sipapu or symbolic earth navel represented as a hole (which can be covered by a wooden plug) leading from an underground cavity, which is covered over with a cottonwood plank; b, firepit, directly under hatchway that serves as entrance, exit, and chimney; c, kachina house or shrine, a niche in the front ledge (adjacent to northwest wall) in which kachina masks are placed; d, niches in side walls, once used exclusively for pipes, tobacco, and small ritual paraphernalia; e, wooden planks with indentations, used to anchor vertical looms; f, bars from which loom is suspended. The masonry ledge behind the sipapu is used to display ritual paraphernalia. Similar ledges lining the side walls are used as benches by participants in kiva ceremonies, while spectators are relegated to the narrower section of the kiva, which is slightly elevated. The kiva structurally replicates Hopi cosmological organization, with its three distinct levels in which the sipapu leads from the first to the second level, and a ladder leads from the third level through the hatchway to the fourth or outside world (Mindeleff 1891:135; Stephen 1936, 1:151). Plan and reconstruction based on Mindeleff (1891:118–136) and Stephen (1936, 1:719–720).

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and classifying reality, and nearly every ritual act is ordered by this notion.

Reciprocity with the Spirits

For the Hopi, all forms of prayer offering are understood to be prestations requiring reciprocity between the two realms. Prayer offerings in any form are operations of exchange. They are relational but, more important, they make obligatory and compensative requirements of the spirits of the other world. In making prayer offerings to the kachinas, for example, the Hopi "feeds" them. The kachinas are to reciprocate by feeding the Hopis with rains so their crops will grow. The ritual cycle consists, then, in a series of elaborate prayer-prestations between the two worlds. In Hopi belief the peoples of the other world mirror the ritual activities of this world, and there are minor opposite-period observances of all rituals in which reciprocal prayer-prestations are made. As Voth (1912:55) noted: "It is the supposition that the spirits of the departed come and get the food and the prayer-feathers, or rather the *[hík^{w}si]* (breath, essence, soul) of those objects. [There is] the custom of not only informing the ancestors and friends in the other world that a ceremony is in progress here, but also of providing the means to have them share its benefits." Because the dead "eat only the odor or the soul of the food . . . they are not heavy. And that is the reason why the clouds into which the dead are transformed are not heavy and can float in the air" (Voth 1905:116). While one end of ritual in this world is to contribute to the well-being of the spirit world, the spirit world is obligated to contribute to the well-being of this world by providing rain, which is essential to the crops and, hence, to the health of the Hopis (and all living things of this world). Rain is the most common request in Hopi prayer; however, the "gift," "blessing," or "benefit" (Third Mesa *ná(:)maŋ^{w}i;* cf. Voth 1901:146) may take other forms as well. The living and the dead, patterns of subsistence, various rhythms of nature—are all systematically interrelated through an elaborate system of reciprocities. It is this notion that is the most pervasive element in the Hopi world view.

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Hopi Semantics

C.F. VOEGELIN, F.M. VOEGELIN, AND LAVERNE MASAYESVA JEANNE

The major contribution to understanding Hopi semantics, so far, was certainly made by Benjamin Lee Whorf, who alluded to many semantic problems but, with a few exceptions, did not have time or opportunity in his brief career to obtain enough information to fully explicate the problems; characteristically, he treated these problems in outline rather than in detail. Perhaps the most successful semantic treatment of all the Whorf papers is that concerned with Hopi architecture. Architectural terms, which have as their referents 'hollow spaces' or empty spaces (that is, interior three-dimensional spaces such as would be referred to in English as a room or passageway or storeroom) are relatively few in number and, like deictics of location, such as 'here', 'there', 'above' and 'below', and some pronouns, are combinable with locational suffixes. Such terms are not nouns; unlike nouns, they are not inflected for nominative or oblique cases or for possession: Hopi cannot say 'our room' or 'our passageway'. And terms for hollow spaces are restricted to a few lexical items in contrast to terms for component parts of buildings, such as 'door', and for adjuncts of buildings, such as 'ladders', for which Whorf cites about a score of lexical items. These terms with referents that are structural elements or parts of a building are really nouns; they can be inflected for possession and for the same cases as other nouns. When Hopi is expanded in consequence of new social relationships, it sometimes becomes necessary to speak of a room in town that belongs to a Hopi renter who will not say in Hopi 'my room' but he might say in Hopi 'my door' or 'my floor' "which would acquire the extended meaning of an individual person's own room, like French *foyer* 'hearth' meaning one's home" (Whorf 1953:142).

The semantic aspects of Hopi that Whorf analyzed are related to what he liked to call "linguistic relativity": Hopi in its way—and Shawnee in another way (Whorf 1940)—is so language-particular in its semantics as to be sharply differentiated from English as a representative of what he referred to as Standard Average European. This higher question or claim of linguistic relativity is challenged by a bolder question (does there exist for all natural languages a shared semantic core that is language-universal rather than language-particular?) that is in conflict with Whorf's thesis inherited from Edward Sapir. The main thrust of this chapter will be to balance what appears to be language-particular in Hopi semantics against what might be claimed to be either language-universal or at least shared by some Old World languages rather than being a peculiarity of New World languages or of Hopi in particular.

Tense

Whorf (1941:143-145) argues that tense or awareness of time—that is, "real time"—can be reduced to 'changing certain relations in an irreversible manner', in short, 'getting later' or 'latering' or 'durating', with a contrast between what is most recently attended to and what was attended to earlier.

According to Whorf, scores of languages distinguish two tenses (later to earlier), while Standard Average European languages with their "objectification tendency" construct a system of points on a line: past, present, future. In contrast, there is no "basis for an objectified time in Hopi verbs."

In 1941 and again in 1946 and 1950 Whorf denied tense for Hopi, whether or not "objectified," and reinterpreted as "validity-forms" forms that resemble tenses semantically. But Whorf's (1936a:127, 1956a:103) first impression of Hopi was that this language distinguishes three tenses: a "past" also called a "factual or present-past" (a "non-future" since the so-called past in Hopi extends up to and includes the present); a "future"; and a "usitative" also called "generalized tense" (which may be classified as an aspect rather than a tense). When the last two were taken to be "validity-forms" rather than tenses, the "future" was called "expective" and the "generalized tense" was called "gnomic"—in Whorf's spelling "nomic" (for verbal activity that is true generally or universally).

For verbs in simple, nonconjoined sentences, those to which the future suffix is attached should be regarded as future in tense, and those to which the future suffix is not attached as nonfuture, that is, present or past in tense, which Whorf (1938:113) calls "reportive"; both tenses in different sentences can be read with different modal interpretations—not only expective in the case of future verbs in some sentences but also desiderative, as in the interpretation of a sentence with the denominal verb 'want coffee' or 'will have coffee': *kaphe* for 'coffee' before oblique case suffix *-t*, which precedes the future suffix *-ni*,

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as in the sentence for 'Do you want coffee?' or 'Will you have coffee?' *(ya ʔɨm ḳaphetni).**

But the scope of tense in conjoined sentences (and in complex sentences with embedding) often extends beyond the clauses of verbs marked for future or nonfuture, as appears in examples of sentences cited below. And a variety of time adverbs often make it clear whether a verb marked for nonfuture refers to time in the past or in the present, though often enough a nonfuture verb occurs in simple sentences without a time adverb, so that the time referred to by the nonfuture verb is left vague—past or present—though probably not regarded by Hopi speakers as immaterial. Instead, the context or Hopi culture space in which such a sentence is spoken is usually sufficient to refer it to present or past time even when this nonfuture time is unspecified.

Whorf presents an argument against accepting the English kind of tense distinction as a language universal that is shared by Hopi; he exaggerates the possibility of Hopi speakers regarding tense or time to be immaterial in some sentences; and he even seems to claim that time adverbs are not 'words' relevant to time: "the Hopi language is seen to contain no words, grammatical forms, constructions or expressions that refer directly to what we call 'time'. . . . Hence, the Hopi language contains no reference to 'time', either explicit or implicit" (Whorf 1950:67).

Just as Hopi makes a minimum division between future tense and nonfuture tenses, so some linguists, in contrast to the traditional past-present-future division, suggest that English makes a minimum division between past and nonpast tenses. Both languages contain some minimum expression of tense; and this may well be a language universal, even if it turns out that no universal can be found for matching a particular tense in one language with a particular tense in another. This mild caveat on the universality of tense is quite different from Whorf's (1950:72) argument against language universals by counter-example: "the Hopi language gets along perfectly without tenses for its verbs."

Hopi verbs make a minimum division of time in terms of stative or active conditions expected or wanted or predicted or otherwise contemplated, but not yet occurring (future tense or tense-modality) versus conditions occurring now or in the past (nonfuture tense). This is roughly the minimum division that verbs make in respect to two tenses that saliently combine with modality the notion of the time an event or condition occurs. But Hopi sentences are not restricted to this minimum division of time; for example, time adverbs make possible a further distinction of the nonfuture tense into present time and past time.

* All the Hopi forms and sentences in this chapter are in the Third Mesa dialect; see the orthographic footnote in "Hopi Prehistory and History to 1850," this vol.

So far as modality is concerned, Hopi *ʔas* is by no means the only modal adverb in the language, as the examples cited by Whorf (1946:177) suggest. Some of these, like *ʔas,* have a semantic scope not restricted to the clause in which they occur in conjoined sentences (Voegelin and Voegelin 1969). Such sentences also show the interplay of tense between constituent clauses within a given conjoined sentence. Tense or time is clearly involved in two of the four proximate suffixes discussed by Whorf (1946:176), who names the individual proximate suffixes but offers no cover-term for the set of four. The cover-term "proximate" for these four is used here because the functional subject of one clause is the same as (coreferential with) that of another clause in the same sentence; this is in contrast to a set that includes only one suffix on a verb having a functional subject that is obviative or in other words nonidentical with the functional subject of an adjacent clause in the same sentence; when there is switch-reference for the functional subjects of adjacent clauses the verb of one of the clauses is obviative.† Thus, the subject of the first clause in the translation of the Hopi sentence following is 'I' with obviative verb; that of the second clause is 'it', with proximate verb; that of the third clause is coreferential with the 'it' of the second clause: (1) 'I bumped your dish hard' *(nɨ ʔɨ·caqaptay hinʔɨr toŋoknaq),* (2) 'and because it gave out a ring' *(ʔeyomtiqaʔe),* (3) 'it frightened me' *(nɨy ca·wina).* The tense is nonfuture for each clause in this sentence.

Compare the following pair of sentences, which have two proximate suffixes that involve tense as well as coreferential agreement between adjacent clauses: *-t,* which Whorf labels "sequential"; and *-kaŋ, -ka·kaŋ,* which Whorf labels "concursive" (for singular and plural functional subjects, respectively). The sequential *-t* is attached to each of the verbs in the first four clauses of the next sentence: (1) 'Well, a person doesn't skin prairie dogs' *(pay, hak tɨkat qa siskʷat);* (2) 'he just first takes out entrails from the stomach of one that has its pelt on' *(pay pɨ·kaʔytaqat ponoŋaq mô·ti sicamt);* (3) 'then he washes [the carcass] out' *(pɨʔ ʔaŋq tɨ·vahomt);* (4) 'and he sews [the carcass] back together' *(ʔahoy ʔakʷ kopkinat).* These four clauses are all in the proximate conjunct mode; the fifth and final clause is in the independent mode, ending in a verb to which neither a proximate nor an obviative conjunct mode suffix is attached. (5) 'then a person always cooks it [the carcass] buried in the hot sand' *(pɨʔ hak pɨt nakʔamŋʷɨ).* The same noun *(hak)* serves as the functional subject of each clause in this sentence; it is specified in the first and last clauses but is interpreted to

† The type of syntactic marking here called obviative has more generally been called switch-reference. The terms obviative and proximate have been borrowed from the grammatical terminology of the Algonquian languages for their convenience but should not be taken to imply any close similarity to the Algonquian categories, which differ from those of Hopi in several important ways.

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be the same 'person' even when left unspecified in clauses (2), (3), and (4). Note that the minimum division of time would place the five verbs in the five clauses as nonfuture; but the referential time changes sequentially for each clause. The event or denial of event in clause (1) occurs before the event of taking out the entrails in clause (2), which precedes the event of washing in (3), which in turn precedes the event of sewing in (4), while the last event in the sequence is sand-bury cooking in (5). Note that the sentence final verb of clause (5), *nakʔamŋʷɨ,* ends in the suffix *-ŋʷɨ,* which contributes no time nuance to the nonfuture tense but does add an indication of the gnomic aspect, here translated 'always'.

Now compare the kind of time nuances that the proximate conjunct mode suffix *-t* 'sequential' contributes to the nonfuture tense of the verbs in clauses of the preceding sentence, with the time nuance that the proximate conjunct mode suffix *-kaŋ* 'concursive' contributes to the future tense of the verb in clause (1) of the following sentence. This sentence can be spoken as two pairs of clauses, the first pair ending with the verb of clause (2) in the independent mode and with tense shown by future suffix *-ni;* and the second pair having clause (3), which ends with conditional proximate mode suffix *-eʔ,* preceding clause (4), ending in the same mode and tense as clause (2); the pairs of clauses are separated by a semicolon in the following translation. (1) 'She, it is said, while making piki tomorrow' *(pam yaw qa·vo piktani ni·kaŋ),* (2) 'she will, just then, not be rolling them, it is said' *(yaw pay pam qa mɨ̂·pantani);* (3) 'just later, under the condition that [she] will finish them, it is said' *(pay yaw ʔason yɨkʔeʔ),* (4) '[she] will then quickly be folding [the piki] over and over' *(pɨʔ nömömnani),* that is, she will then be quickly repeatedly folding flat piki cakes that she did not roll or fold earlier, as mentioned in clause (2).

The same pronoun, *pam* for 'she', serves as the subject of each of the four clauses. The specification of the functional subject, here *pam,* in the initial clause (1), is usual; the repetition of *pam* in clause (2) is optional, and the subject is interpreted to be coreferential with that of (1) and (2) in clauses (3) and (4), but left unspecified in (3) and (4).

The verb of clause (3) has the conditional proximate mode suffix, *-eʔ,* attached to a verb *(yɨkʔeʔ)* in nonfuture tense. Note that an interesting constraint is found for clauses with this conditional proximate mode suffix: they appear only when preceding an independent mode clause inflected for future tense, or else inflected for gnomic aspect, marked by suffix *-ŋʷɨ* instead of future suffix *-ni,* which appears in clause (4).

But this is a one-way constraint. An independent clause with its verb inflected for gnomic aspect or future tense is only optionally preceded by a clause with its verb inflected for conditional proximate mode; see above where clause (1) with concursive *-kaŋ* precedes (2) with future; compare clause (5) of the Hopi sentence before this, where the independent mode gnomic aspect clause is preceded by sequential proximate mode suffix *-t* ending clauses (1), (2), (3), (4).

Note that the tense of conditional proximate mode clauses in *-eʔ* matches semantically the future tense of the following independent verb, as above; in other words, (3), which is without tense suffix matches semantically the tense of the independent mode clause (4), which is explicitly marked with the future suffix, *-ni.* This much was stated by Whorf (1946:176) who then overstated the case by saying that a parallel semantic matching occurs between 'dependent clause' verb inflected for the conditional proximate mode with a following independent mode clause with verb inflected for gnomic aspect. This kind of semantic matching, as just shown, exists only between a conditional mode clause unmarked for tense, but interpreted as anticipating the tense in the following independent mode clause, where that tense is marked as future tense. The semantic parallel of this does not exist between a conditional mode clause unmarked for tense and a following clause with independent verb marked for gnomic—possibly because gnomic is not a tense as Whorf (1956a:103) claimed in 1937, but an aspect. The clearest counter-examples to Whorf's claim are sentences with conditional clauses like 'if the beans get burned' *(ʔöŋava taqteʔ),* which cannot be interpreted in gnomic aspect, for it is not generally or universally true that beans get burned, even though the following clause is inflected for gnomic: 'they really don't taste good' *(pas qa kʷaŋŋʷɨ).* The second clause can be interpreted as being gnomic in aspect, because it is generally or universally true that beans do not taste good after they are burned in cooking.

Aspect

Perhaps the most sustained, though not the most successful, of Whorf's selected writings is his treatment of two contrasting aspects—punctual and segmentative—which contrast only in respect to verb stems that permit final syllable reduplication.

The following two separable questions about aspect can be asked in respect to verbs that permit final syllable reduplication. First there is the question of the aspect of the unreduplicated form, of which Whorf (1936a:127) says the "verb is a bare root of the form CVCV, and is in the third person singular intransitive voice, punctual aspect, and present-past tense [nonfuture tense]." Whorf generalizes from his examples, without suffixes added to the "bare root" when it is left unreduplicated. What is the aspect ascribed to the same verbal lexeme when the final syllable is reduplicated? Whorf restricts all his examples of the reduplicated forms to those occurring before suffix *-ta,* which is itself an aspect marking suffix, as he realizes. "The segmentative aspect is formed by final reduplication of this root plus the durative suffix *-ta. . . .*"

The next question is in two parts: how to balance the

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aspectual meaning of an aspect suffix, *-ta* or some other aspect suffix, against the aspect contributed by the final syllable reduplication of the "bare root." And the second part of this question is how the aspectual meaning of the word as a whole is affected by the referential phenomenon of the "bare root." Whorf (1936a:128 ff.) treats the second part of this question but not the first, for which he is content to cite the unreduplicated stem without any suffix, though suffixes may be attached to it. It is true that the reduplicated form cannot occur without suffixes (but *-ta* is not the only suffix permitted).

In short, Whorf's treatment is restricted to the contrast between two aspects that he labels punctual and segmentative and his exemplification is by contrasting words rather than by contrasting sentences, words that he classifies according to their referential phenomena.

Nonetheless, he argues that this restricted treatment permits him to make the strongest of the many arguments he presents in favor of "linguistic relativity." His restricted or simplified problem is to show that final reduplication changes the meaning of the simplex (the "bare root" without reduplication): the phenomenon denoted by the "bare root" is "manifested about a point"; once the root undergoes final syllable reduplication, the phenomenon "becomes manifested as a series of repeated interconnected segments" (Whorf 1936a:127).

(a). This is true even when the "phenomenon" has "a rigid or semirigid substance for its field of manifestation" (Whorf 1936a:128).

(b). When the "bare root" denotes "a non-rigid or mobile substance . . . for example a liquid or a swarm of mobile particles . . . the punctual [= "bare root"] will denote one pulse of the deformation . . . while the segmentative [=with final syllable reduplication] will refer to the entire train or field of vibrations, both as extending in space and as continuing in time . . . *wála* it (e.g. a liquid) makes one wave, gives a slosh *walálata* it is tossing in waves, it is kicking up a sea" (Whorf 1936a:128).

(c). When the "bare root" denotes a phenomenon resulting from torque, the punctual [= "bare root"] will denote a "single oscillation or a single turning," while the segmentative [= with final syllable reduplication] will denote continued rotation (Whorf 1936a:129).

(d). Though a gaseous or etheric medium lacks evidence of extension in space in the "bare root" (*ʔɨwi* 'it flames up'), the segmentative [= with final syllable reduplication] "denotes only pulsation in time" (*ʔɨwiwita* 'it is flaming') (Whorf 1936a:130).

(e). Where English occasionally employs two different stems "Hopi simply uses the punctual and segmentative of the same stem," as to denote, respectively, a shock or jar (*tɨrɨ* 'he gives a sudden start') and pulsative phenomenon or a succession of shocks (*tɨrɨrɨta* 'he is quivering, trembling') (Whorf 1936a:130).

(f). There is an overall semantic constraint on disyllabic stems that permit final syllable reduplication. "It is not applied to 'mental', 'emotional' or other 'inner' or 'psychological' experiences. It concerns only the world of external observation" (Whorf 1936a:130).

Whorf claims that an overall interpretation of the punctual-segmentative contrast is possible, despite the diverse range of phenomena to which the contrast is applicable, as outlined above: to (a) a rigid substance, (b) mobile substance, (c) rigid or mobile substance that permits rotation, (d) gaseous medium, (e) external parts of living beings, but not (f) to internal sensations of living beings. His overall interpretation is that "the Hopi language maps out a certain terrain of what might be termed primitive physics . . . all sorts of vibratile phenomena in nature are classified by being referred to various elementary types of deformation process . . . analysis . . . is freely extensible . . . such extension could be made with great appropriateness to a multiplicity of phenomena belonging entirely to the modern scientific and technical world . . ." (Whorf 1936a:131).

The tenor of this interpretation leads Whorf to his grand conclusion about linguistic relativity, a conclusion that goes beyond his usual claim that Hopi semantics for the most part can be classified as language-particular to the claim that in some semantic resources Hopi is superior to English and other Standard Average European languages: "The Hopi actually have a language better equipped to deal with . . . vibratile phenomena than is our latest scientific terminology. This is simply because their language establishes a general contrast . . . the contrast of particle and field of vibrations . . ." (Whorf 1936a:131).

Note the contrast that Hopi speakers make when their sentences include disyllabic stems that permit final syllable reduplication. Most revealing of all the verbal lexemes that appear in the following sentences are those that include disyllabic stems, which permit not only final syllable reduplication but also initial syllable reduplication; but it must be admitted that such permissive disyllabic stems are relatively rare in number, rarer indeed than those that permit final syllable reduplication but do not also permit initial syllable reduplication, which, in fact, are far outnumbered by verbal stems that permit initial syllable but not final syllable reduplication. (The latter are, in turn, even further outnumbered by nominal stems that permit initial reduplication.)

(1) 'This tape-recorder's wheel is rubbing against its lid' (*ʔit* tape-recorder*t ŋöla ʔat ʔɨʔɨcpiyat ʔaŋqe rɨkʷakʷata*). The selection of the verb for 'rubbing' when, as here, the friction is fast and continuous is not merely the intransitive stem *rɨkʷa;* it includes this stem with final syllable reduplication, *rɨkʷakʷa-*, followed by an aspect suffix, *-ta*. The predictable aspect of the word as a whole, which may be called fast progressive, is derived from both the final reduplication and the aspect suffix under the usual

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assumption that the meanings of a word or sentence are built up from the meanings of their constituent processes and parts, unless the combination leads to unpredictable semantic results such as are characteristically encountered in compound words made up of two or more words, and also in some kinds of nominalization and verbalization and in idiomatic sentences.

(2) 'A dog is rubbing himself against the wagon' (*pô·ko qare·tat ʔaŋqaʔy na·rɨkʷanta*). The stem selection for 'rubbing' is the same as in (1), but in (2) there is no reduplication before the suffixes *-n-ta;* the prefix *na·-* is attached to verbs when the reflexive is expressed. The meaning of the verb in (2) is 'singular subject is rubbing self' with progressive aspect, which is noncommittal as to whether the dog is rubbing himself slowly and rhythmically or in segmentative jerks; the dog is giving more than a 'punctual' rub at any rate, for the final suffix *-ta* signifies one kind of progressive aspect. What the verb specifies is no more than that the 'rubbing' is or was going on progressively, and since fast rubbing could be expressed, the lack of final reduplication in (2) makes a weak implication that the rubbing was relatively slow.

(3) 'Evidently she is/was/has been smoothing her piki stone' *(pam kɨr tɨmay rɨ·rɨkʷa).* The stem selection for 'smoothing' in this sentence is the same as that for 'rubbing' in (1) and (2), but the processes signifying progressive aspect are different: reduplication involves the first or initial CV of the CVCV stem in (3), in contrast to reduplication involving the second or final CV of the same CVCV stem as for (1). Final reduplication as in (1) signifies a fast progressive; initial reduplication signifies progressive aspect but is noncommittal as to the speed involved, so far as language-linked semantics is concerned. Part of the interpretation for (3) is derived from culture-linked semantics—namely that the subject was smoothing her piki stone at the appropriate rate for smoothing such stones; and that whether she is, was, or had been doing so depends on the 'evidence' (indicated by *kɨr*) that the Hopi speaker who reported this had utilized—she saw her doing so, came upon her freshly smoothed stone, or something else—whatever the 'evidence' might be. The gender interpretation (the subject is 'she' rather than 'he') is also derived from culture-linked semantics: in the division of labor among the Hopi, women take care of the piki stones on which they cook piki, but only a male specialist—not just any adult male—knows how to make piki stones. If sentence (3) were altered so as to be translatable as 'Evidently he is making a piki stone', the same pronoun for subject, *pam,* would be interpreted as 'he' rather than 'she'.

(4) 'Sand drifted down from the kiva top' *(pisa kivacʔoŋaq siwɨ).* The stem selection for 'drifted down' is *siwɨ,* lacking both reduplication and suffixes (Whorf's "bare root"); this indicates, as Whorf said, punctual aspect, but not in the sense that a single grain of sand drifted down; tense of the verbal reference is not relevant, but the duration of it is—namely, almost but not quite zero duration, or in other words the duration is nonprogressive; and nonprogressive might be a more suggestive label for this aspect than punctual. There is a parallel between this particular aspect and nonfuture tense; neither is ever explicitly marked by any affix or process.

(5) 'The woman had been sprinkling salt on the meat' *(pam wɨ·ti ʔö·ŋat siwɨwɨykina sikʷit ʔaŋ).* The stem selection in (5) for 'had been sprinkling' is the same as that for 'drifted down' in (4), but here the final syllable of the stem is reduplicated and followed by two suffixes; the first is *-yki,* a sort of completive or perfective combined with imperfective reading here, but the imperfective or fast progressive is really made explicit by the reduplication process preceding *-yki,* which in turn is followed by *-na* to indicate a transitive (or causative) voice, if 'sprinkle' is here taken to mean 'to cause to be drifting down quickly'. Hence it cannot be said that the reduplication process in question is compatible only with intransitive voice; but it can be said (as Whorf implied) that CVCV stems are capable of final syllable reduplication only when the underlying stem is intransitive; from such a stem the derived verb may be made transitive, as here in (5).

(6) 'Sand is trickling down from up there' (*pisa ʔayaŋq ʔo·ŋaq siwɨwɨta*). Whorf has adequately accounted for sentences like (6), in which the stem, here *siwɨ* as in (4), has its final syllable reduplicated, and has this process followed by *-ta,* a suffix for durative aspect (another label for progressive). Yet the detailed nature of the aspectual duration (for all? or for different semantic classes of stems with different referential phenomena?) is open to question. Is it 'segmentative' as Whorf thought? Or is it noncommittal as to segmental division of sand trickling down? Should this particular sentence be interpreted as sand trickling down quite fast rather than in segments—in short, fast progressive?

Sentences (4), (5), and (6) exemplify the type of verb stem that permits reduplication of the final syllable without permitting reduplication of the initial syllable of the stem. Sentences (7) and (8) show the converse of this, the type of verb that permits reduplication of the initial syllable of the stem, but not the final syllable. There are two subtypes of stems of this only-initial reduplication type: in one subtype the reduplication indicates aspect (a progressive aspect—slow or at least non-fast progressive); in the other subtype, the initial reduplication indicates number.

(7) 'Because it [the firewood] didn't flame up' (*qa ʔɨwiqqaʔe ʔo·vi*) 'it began to smoke' (*kʷicva*). Here the CVCV verbal stem is *kʷici;* the stem final vowel is deleted before the inceptive suffix *-va.*

(8) 'It keeps smoking from your piki house' (*ʔɨ·tɨmcokkiy ʔawŋq kʷi·kʷici*). The stem in (7), *kʷici,* appears here with reduplication of the initial syllable. Note that verbal stems with reduplication of initial syllable (as here) may appear without following suffix,

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while stems with reduplication of the final syllable may not.

Number in Nouns and Verbs

Number—at least the distinction between singular and plural—is marked on both nouns and verbs in Hopi in a variety of ways.

Initial reduplication is used to mark the plural of many nouns, as *so·hɨ* 'star', *so·sohɨ* 'stars', and for some intransitive verbs to mark the fact that they have plural subjects, as for example, *nimani* 'he will go home', *ninmani* 'they will go home'. In these examples the first vowels of the stems are shortened or deleted after the initial syllables are reduplicated.

Suffixes may also mark plural on nouns and verbs—with suffix *-m* for some nouns, as *höya* 'yellowjacket', *höyam* 'yellowjackets', and for other nouns suffix *-t*, as *höwi* 'dove', *höwit* 'doves'. Plural subject of verbs of one type is indicated by suffix *-ya*, as *pô·toyla* 'he counted it', *pô·toylaya* 'they counted it'. Verbs of another type indicate plural by suppletion. For these replacing the singular stem by a different stem is sufficient to mark the plural, as *pitɨ* 'he arrived', *ʔöki* 'they arrived', but the rare type of noun that uses suppletion to mark the plural uses it in combination with a suffix, as *wɨ̂·ti* 'woman', *momoyam* 'women'. So also, a combination of initial reduplication and the suffix *-ya* is used for the plural of some verbs, as *hɨ·wi* 'he's trapping', *hɨ·hɨwiya* 'they're trapping'.

Whorf (1946:176) speaks of the *"agentive* -qa" that "forms relative clauses and is inflected as a noun" and cites a sentence without head noun, but Masayesva Jeanne (1974; revised in Hale, Masayesva Jeanne, and Platero 1977 and Masayesva Jeanne 1978) cites all sentential examples with head nouns. It is interesting for the consideration of number that all plurals of nominalizations in *-qa* are formed by attaching the suffix *-m* to *-qa*, while nominal stems form their plurals in a variety of ways, as mentioned above.

For nouns Whorf distinguishes those plural forms with suffixes *-t* or *-m* as being "paucal", in the sense of few, as opposed to "multiple", marked by initial reduplication, with the restriction that the multiples of some animate nouns are "paucals with the addition of reduplication, i.e., they have paucal suffixes in all the forms. . . . Some animates use the paucals for all plurals [i.e., they are not reduplicated]" (1946:170). Many Hopi speakers have lost the paucal-multiple distinction for the inanimate nouns for which it may have been formerly made and use one form or the other as their only plural form.

Another number distinction for nouns made only by speakers of some Hopi dialects (Whorf) is the distinction of a dual category (exactly two), marked by a suffix, as opposed to the unmarked singular (one) and the plural (three or more) marked in any one of the ways discussed above.

But all Hopi speakers, whether or not they distinguish dual forms for nouns, do distinguish dual from singular and plural subjects of sentences, not necessarily by utilizing a dual form but by the way in which they combine singular and plural nouns or pronouns and verbs. If the subject of the sentence is singular it always takes the verb form for singular subject and is interpreted as a singular: *pam pitɨ* 'he (or she) arrived'. But if the subject is nonsingular it is used with a plural verb to indicate a plural subject (*pɨma ʔöki* 'they (three or more) arrived'), and with a singular verb to indicate a dual subject (*pɨma pitɨ* 'they (two) arrived').

While suppletion and initial reduplication are both used to mark the fact that the subject is plural for some intransitive verbs like 'arrive', some transitive verbs have suppletive or reduplicated forms that mark the fact that the object is plural, rather than the subject (pluralization of the subject is marked for these verbs by suffix): *tavi* 'he moved it', *taviya* 'they moved it', *ʔoya* 'he moved them', *ʔoyya* 'they moved them'; *lakna* 'he dried it', *la·lakna* 'he dried them'.

The fact that a verb has a plural subject may be marked by suffixes other than the plural suffix *-ya*: certain verb suffixes have one form when the subject of the verb is singular and another when it is plural. When one of these suffixes occurs, its plural form, rather than *-ya*, is used with plural subjects. Thus, the plural of the singular suffix *-ma* is *-wisa* (*mɨmamatima* 'it's rolling along', *mɨmamatiwisa* 'they're rolling along'), and the plural of the singular suffix *-ta* is *-tota* (*qöninita* 'it's whirling around', *qöninitota* 'they're whirling around').

Whorf (1946:175) postulates the semantic interpretation of the suffix cluster *-m-ti* to be an "inner plural" that "pluralizes the single figure of the root within a small local region," but attempts to replicate fully this interpretation have not succeeded. The suffix sequence *-m-ti* does appear after the unreduplicated stem of some, but not all, stems that permit final reduplication, but then usually yields an interpretation of punctual-completive aspect, as in 'The jackrabbit jumped out from the bush' (*cokit ʔaŋqaq sowi coʔomti*). This aspect sometimes has the force of 'became, got', as in 'My bean plants blossomed', or more literally, 'My bean plant's flower evidently became flapped open' (*ʔimoriʔiyiy siʔat kɨr pɨyamti*).

Note that in the last example the words for 'bean plant' and 'flower' are both singular nouns. Indeed, for most plants, plant parts, and fruits, the singular form of the noun is used with plural meaning. When, as in this sentence, the singular noun is subject, the verb agrees with it in also being singular.

SRP002678

Hopi-Tewa

MICHAEL B. STANISLAWSKI

The Hopi-Tewa (ˈhōpē ˈtāwu) are one of the smallest of the Native American societies in the American Southwest, estimated in 1975 to number about 625, approximately 475 of whom were living in their traditional home area on the Hopi Indian Reservation, on or near the easternmost of the Hopi Mesas in northeastern Arizona ("Hopi Social Organization," fig. 1, this vol.). The society includes those people who trace descent through their mother's female lines to immigrant Tano families from the Rio Grande who settled at First Mesa, Arizona, in 1700 and who thus have traditional land rights and houses there (Dozier 1951:57, 1954).

The Hopi-Tewa are often grouped with the Hopi of First Mesa, with whom they have lived for the past 275 years, and with whom they share most cultural patterns. However, even in the late twentieth century the cultures are not identical, and they were even more divergent prior to the beginning of European influences at the end of the nineteenth century (Dozier 1954:259-260, 290-297, 367-371; Eggan 1950:172-175).

Language

The Hopi-Tewa do not speak the Uto-Aztecan language of the Hopi but a variety of Tewa, a Tanoan language.* The Hopi-Tewa dialect is the modern continuation of Tano, or Southern Tewa, and until A.D. 1700 it was spoken in the Rio Grande Valley, where the closely related Northern Tewa is spoken in several dialects in Santa Clara, San Juan, and the other Rio Grande Tewa Pueblos. Because of their modern locations these dialects are usually distinguished as Arizona Tewa and Rio Grande Tewa, respectively. The Hopi-Tewa and Rio Grande Tewa can understand each other's speech, but only with some difficulty and after a short period of adjustment. Hopi-Tewa and Hopi, on the other hand, are mutually unintelligible, and their speakers can communicate only if one has learned the other's language or through a shared third language such as English (Dozier 1951:56-57, 1955; Reed 1943a:75).

Almost all adult Hopi-Tewa are trilingual in Hopi, English, and Tewa. They have no language problems when they intermarry with Hopi, but the reverse is not true (Dozier 1951:58-63, 1954:279-292). Many Hopi-Tewa speak Spanish, which is needed in trading with Rio Grande Pueblo peoples, and many also speak Navajo, which was one of the first languages used by Anglo traders, such as Tom Keam, and by scientists, such as Alexander M. Stephen (1936,1:xxvii-xxviii). Thus, many Hopi-Tewa speak five languages: Tewa, Hopi, English, Navajo, and Spanish (Dozier 1954:281).

It is thus clear why the Tewa were the first "speakers" for First Mesa. They were serving as go-betweens in English, Spanish, Navajo, and other languages as early as 1850 and were the official interpreters by the 1870s-1890s (fig. 1), the period of first major Anglo contacts. In the 1970s Hopi-Tewa interpreters were still requested by Hopi chiefs and tribal council members (Crane 1925:136-137; Dozier 1954:291-297, 1966a:27-28).

Territory and Environment

The society has always had a limited geographical distribution. The two major settlements are mesa-top Tewa Village (Hano) with a 1975 population of 218 (about 200 Hopi-Tewa) and Polacca, the government village founded in 1888 at the east base of First Mesa (shared with the Hopi), which had a 1975 population of 782 (perhaps 650 resident) indicating perhaps 220 Hopi-Tewa ("Hopi Social Organization," figs. 1-3, this vol.). The villages are located in Navajo County, northeastern Arizona, about 80 airline miles northeast of Flagstaff and 55 airline miles north of Winslow. Hopi-Tewa are also settled in Keams Canyon Hopi governmental center, 12 miles to the northeast, whose 1975 population of 252 included 30-40 Hopi-Tewa. In addition, about 20 percent

* As analyzed by Yegerlehner (1959) Hopi-Tewa (Arizona Tewa) has the following phonemes (with his "component combinations" interpreted as units): (voiceless stops and affricate) *p, t, c, kv, k, kʷ;* (aspirated stops) *pʰ, tʰ, kvʰ, kʰ, kʷʰ;* (voiced stops and continuants) *b* ([v] or [β]; [b] after *n*), *d, g;* (glottalized stops and affricate) *ṗ, ṭ, ċ, k̇v, k̇, k̇ʷ;* (nasals, liquid, sibilant, and glides) *m, n; l; s* ([s] or [š]); *w, y, ẇ, ẏ; h, hv, hʷ, ʔ;* (vowels) *i, e, a, o, u,* and their nasalized *(ą),* long *(a·),* and long nasalized *(ą·)* correspondents; (pitch) high (v́) and low (v). The inventory of sounds given by Dozier (1954:261-262) differs from this in being more similar to that of Rio Grande Tewa as described by Hoijer and Dozier (1949). Arizona Tewa words in italics in the *Handbook* have been written by Paul V. Kroskrity (personal communication 1977) in the orthography used in his doctoral dissertation (Kroskrity 1977), on the basis of information supplied by Albert Yava and Dewey Healing. This orthography differs from Yegerlehner's in recognizing an additional front vowel *(ε),* in the marking of aspiration, and in a few other details. Since it has not been possible to reconcile the differences among the available transcriptions the forms cited doubtless contain inaccuracies.

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Smithsonian, NAA.
Fig. 1. Tom Polacca (Polaccaca), brother of Nampeyo, member of the Tewa Corn clan, and owner of a small store around which the town of Polacca grew up. Polacca was a speaker of Tewa and Hopi and an interpreter at First Mesa in the 1880s and 1890s. Photograph by an unknown photographer, probably taken about 1890 when Polacca accompanied a Hopi delegation to Washington, D.C.

(100-125) of the population is probably living off the reservation at any one time in Winslow, Holbrook, and Flagstaff, at the Parker Indian Reservation in southwestern Arizona, or out of state. The Hopi-Tewa form about one-third of the population of First Mesa, and about one-tenth of the total Hopi tribal roll, which numbers about 6,600 (Dozier 1954:288-290; Kunitz 1973, 1974:9; Anonymous 1975).

The principal settlement is known as Hano (to outsiders) and as Tewa Village to the Hopi-Tewa (Dozier 1951:56, 1954:259-263). It was founded in A.D. 1700 on the flat, bare, windswept, sandstone top of First Mesa, the southern and easternmost fingerlike extension of Black Mesa, a diamond-shaped area about 60 miles to a side. The mesa is sculpted by the water of two of the southwest-flowing Tusayan washes, Wepo and Polacca, which rise at 8,000 feet at the north mesa edge. The tip of First Mesa has an area of about 10 acres, measuring about 3,500 feet long by 200-350 feet wide (Hoover 1930:427; Forde 1931:358). Where the villages of Tewa, Sichomovi, and Walpi are located, the altitude is 6,190-6,210 feet.

Most of the houses of the new town of Polacca are built on the talus slopes and sand dunes at the eastern base of the mesa at an altitude of about 5,700-5,900 feet. Some new government-built houses are at 5,600-5,700 feet, south of the highway. The vertical face of the mesa near Polacca is about 300 feet high; the talus slope and dunes cover another 200 feet of drop, and finally there is a 150-foot gradual slope to Polacca Wash edge at about 5,650 feet, with water level at about 5,640 feet east of Polacca village.

The smaller settlements and ranches at Bluebird Canyon and at Awatovi on Antelope Mesa (established about 1900) stand at 6,300 feet, and some ranches on the flats below are at 5,600-5,700 feet. The Hopi-Tewa at Kearns Canyon numbered about 450 in 1978, with 252 on the Hopi tribal roll. They lived in a government settlement founded about 1887 near a school and trading post at an elevation of 6,200-6,300 feet. There are also a few Hopi-Tewa in Public Health Service housing near the new hospital and at local trailer camps.

Mean annual temperature at Tewa Village (6,200 feet) or Polacca (5,700-5,900 feet) is about 50-52°F., with 9.5-11.0 inches of rain. The growing season is 133-135 days, with the last frost averaging May 18-19. Because the rainfall and growing season vary widely from year to year (5-20 inches of rain), dry farming is always precarious. Heavy winds occur in May and June, and in July and August (the hottest months and the early harvest period) the heaviest rains occur, dropping one-half the year's moisture in torrential cloudbursts, which may wash away the topsoil and crops. Evaporation, runoff, and erosion are thus very high, although humidity readings between the rains may be as low as 5 percent (Forde 1931; Beaglehole 1937; Hack 1942; Bradfield 1971; Ellis 1974b).

Settlement in the Southwest is dependent upon the rare water sources. While arid, the Hopi mesa region is particularly blessed in some ways. Washes provide much annual runoff and there are many permanent springs. The collection area for the wash water supply has been stated at 672 square miles for Polacca Wash and 176 square miles for Wepo Wash (Forde 1931:361; Bradfield 1971:2). The washes flow into the flat plains to the south of the mesa at about 5,600 feet altitude (fig. 2), providing floodwater for irrigation and depositing a large load of sand, which is then blown back, north and east, onto the valley edge and the mesa rim, forming dunes (Hack 1942:5-7). The dunes hold the rainwater, which allows dune farming, and also affects the spring water supply. For it is primarily in the dunes that water is held to percolate to the contact area between the permeable sandstone and the impermeable shale layers, at the 5,900-6,000 foot level, forming the 19 permanent First Mesa springs. However, because of the talus slopes and permanent dunes, the water may actually outcrop at the 5,700-5,800 foot level on the valley floor (Forde 1931:360, maps 2-3; Bradfield 1971:11-12; Hack 1942). The catchment basin of the average spring includes a few hundred acres near the northeast tilting mesa edge, and spring flow is rarely more than 5 to 30 gallons a minute (Hack 1942, 1:12-13, 36). The strongest springs, such as

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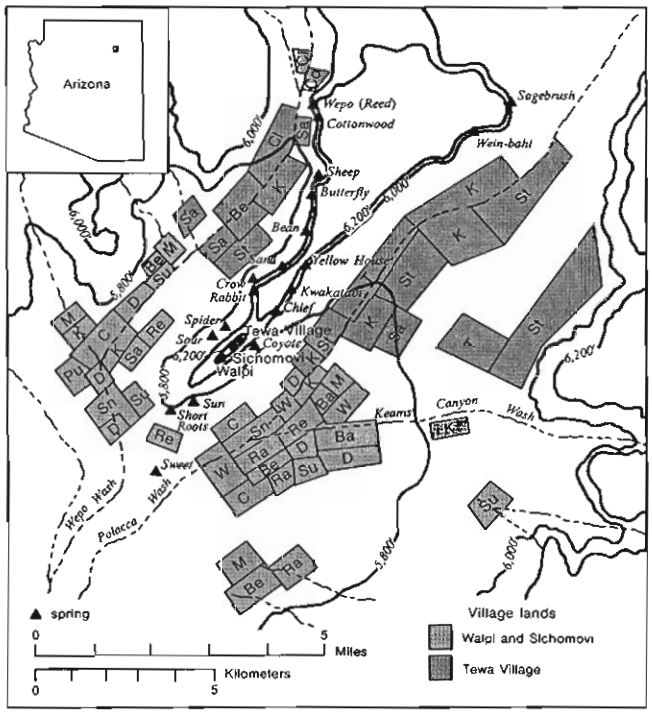

after Forde 1931: maps 2-3.

Fig. 2. First Mesa clan lands. Ba: Badger, Be: Bear, C: Coyote, Cl: Cloud, Co: Corn, D: Deer, K: Kachina, M: Mustard, Pu: Pumpkin, Ra: Rabbit, Re: Reed, Sa: Sand, Sn: Snake, St: Stick, Su: Sun, T: Tobacco, W: Water. The clan names given by Forde have been brought into conformity with usage elsewhere in this chapter.

Wepo, are found on the northwest side. The water, which is slightly saline and hard, is high in calcium and has a pH of 8.1 (Bradfield 1971:60). Water is also sometimes trapped in rock tanks, both naturally and artificially formed, in the pitted mesa surface. Some of these tanks, near house blocks, are "owned" by individual Hopi-Tewa and are passed along matriclan lines (Hack 1942, 1:10-14; Beaglehole 1937:13).

Much of the water for Hopi-Tewa agriculture and drinking still comes from these traditional springs, and many springs also figure in annual religious observances. Forde's (1931:360, 404-405, maps 2-3) maps of clan lands near First Mesa show a total of 19 named springs that are owned by Hopi or Hopi-Tewa clans (fig. 2). All are classified for domestic use, irrigation, livestock watering, or vegetable and peach tree gardens (Forde 1931:365-366). Coyote Spring, in particular, is important to the Hopi-Tewa, for it probably was the site of the first Tewa settlement at Hopi in 1700 (Fewkes 1899:257, 1900:610, 615; Mindeleff 1891:30), and later it was the site of the beginning of the new town of Polacca (Stephen 1936, 1:510; Fewkes 1898:580). In the 1970s the Hopi-Tewa prefer Sour Spring on the north scarp, or the large Wepo Spring (Reed Spring) located four miles to the north in Wepo Wash. Spider Spring is also used for drinking, and Cottonwood, Wein-bahi, and Yellow House (Sikyatki) springs are used to irrigate gardens.

Settlements

The day-to-day resident population of Tewa Village is about 165, but 218 individuals claim allegiance. During ceremonial days the population may rise to 400 or more. Hopi-Tewa clan population is about 625 as compared to the 1893 population of 156 (table 1). The majority of the new growth since 1890 has obviously been in new settlements. From 1920 on, the Hopi-Tewa have leased nonclan lands from the tribe for ranches and second homes (Dozier 1954:288, 1966a:22, 1970:122), and it is there at the ranch or "second" home in Keams Canyon or Polacca that they generally live, to take advantage of modern facilities such as piped water and electricity, stores, and schools. Tewa Village is still the "home" settlement for the Hopi-Tewa individual because it is in his mesa home that each person recognizes his primary family relationships and social obligations. This house, generally that of his mother, is the lifelong center of his social life. It may also be the place in which his lineage or clan group's important religious symbols are stored and maintained (Dozier 1954:284-288, 310-312, 1966a:20-22; Eggan 1950:146-147; Titiev 1944:44-58).

Tewa Village in the 1880s was a pyramidal, multistory, hollow-plaza settlement, somewhat atypical of other Hopi mesa villages (Fewkes 1898:642; Mindeleff 1891:61). Early pictures indicate that the north, west, and east house rows all had two- to four-story sections, and there was a 356-foot gap between Tewa and Sichomovi villages, the empty land being on the Tewa side (fig. 3). Today, all Tewa Village houses are one story, and the village has spread out and is contiguous with Sichomovi. Fewkes (1906:90-94, pl. 11) believed that there were three original nuclei of the present Pueblo beginning about 1750-1800: in the middle of the north wing of the main (north) plaza (Corn, Tobacco-Bear clan rooms); east wing (Cloud-Sand-Sun clan rooms); and an early abandoned (pre-1800) room group north of the main plaza (Kachina clan rooms). The west wing began to develop about 1850 when Cloud clan houses were first built there. The continued development of the Pueblo, like that of nearby Hopi towns, has resulted in several hollow plazas and long north-south room lines. Fewkes (1906), Dozier (1954), and Mindeleff (1891:100-225) provide the best maps, descriptions, and architectural details.

In 1975 Tewa Village was still a Hopi-style Pueblo with flat-roofed (earth-covered) adobe material stone houses, but with some new cinder block additions as well. Asphalt and plastic sheeting, board ceilings, and linoleum floors have become common in reconstructed houses. Domed, adobe-plastered, stone-built bread ovens are found by nearly every house. Finally, the modern wage economy has led to familiarity with modern appliances such as radios, televisions, stoves, and refrigerators (Nagata 1970:207-208); but no Tewa Village house yet

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Table 1. Clan and Village Population, 1700-1975

Date	*Clans*	*Tewa Village*	*Polacca*	*Source*
1700	300?	300[a]		Hargrave 1951:35
1775		550[a]		Fewkes 1899:259
1853		600[a]		Page 1940:15 (Leroux)
1865		250[a]		Page 1940:15 (Ward)
1870		75[a]		Powell 1895:345
1883		175[a]		C. Mindeleff 1900:651
1884		150[a]		Bowman 1884:93
1888			5[a]	Stephen 1936, 1:590
1890		161[b]	10[a]	U.S. Census Office. 11th Census 1893:45; Fewkes 1922:270
1893	156[d]	163[a]		Fewkes 1894a:165-166
1898	151[d]	159[a]		Fewkes 1899:255, 1900:623
1900		160[a]	20[a]	Fewkes 1907:561
1929		308[a,c]		Hoover 1930:426
1932		309[a,c]	787[a,c]	Colton and Baxter 1932:40
1951	405[c]	164[a]		Dozier 1954:288
1964	450[c]			Dozier 1970:122
1966	500[c]	230[a,b]	530[a]	Dozier 1966a:22; Cox 1967
1968	500[c]	150[d]	590[a]	Dozier 1970:122; U.S. Bureau of Indian Affairs 1968
1972		212[a,b]	789[a,b]	Kunitz 1972
1974	615	225[a,b]	850[a,b]	Estimated from Kunitz 1972
1975	625[c]	218[a,b]	782[a]	Estimated from Kunitz 1972; Anonymous 1975:1

NOTE: Figures are sometimes estimated, sometimes by actual count.

[a] All village residents, including non-Hopi-Tewa.

[b] Those who give allegiance to the village as place of birth rather than actual residents.

[c] Total tribal population regardless of habitation.

[d] Only those who were actually counted in the village or on the reservation.

[e] People may be counted in several villages at the same time, i.e., the village of allegiance and the village of residence.

had a telephone in 1974 although a few houses in Polacca and Keams Canyon did. Many houses in Tewa and Polacca have store-bought lamps, chairs, dining tables, dish cabinets, and beds; religious portraits and photographs of relatives cover the walls, side by side with traditional basketry plaques, kachinas, ceremonial rattles, and bows and arrows (Stanislawski 1968-1974:74).

Polacca village, in contrast, is an open, dispersed, single-family-house, grid-pattern, Anglo settlement, with some traditional stone houses, and some multiroom, peaked-roofed Anglo houses, including government-built modern prefabricated ones and trailers near the highway. Several government buildings, including a post office and a modern grade school, are also located there. House and land ownership continue to follow traditional matrilineal inheritance rules (Dozier 1954; Cox 1967).

Hopi-Tewa religious architecture continues in traditional style. There have been at least three partly subterranean kivas (or men's houses and ceremonial chambers)

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Fig. 3. Main plaza at Tewa Village in 1875, viewed from a north house row rooftop, looking south toward the Hopi First Mesa villages of Sichomovi and Walpi. (For a view from the opposite end of the plaza, see Mindeleff 1891:pl. 17.) At right are Nampeyo and members of her family seated on the roof of their Corn clan house, located at the northeastern corner of the main plaza. (For a map of Tewa Village in 1883 showing settlement pattern by clan, see C. Mindeleff 1900:pl. 25.) Photograph by William H. Jackson.

in use since the 1880s, all in Tewa Village ("Hopi Social Organization," fig. 3, this vol.). Chief kiva (also known as Central Plaza kiva) is found at the northeast edge of the main plaza, where Kachina clan houses were built in the 1800-1850 period (Fewkes 1900:607). Outside kiva is located northeast of the plaza rooms near the entrance road, and the remains of at least one earlier kiva are found there, too (Mindeleff 1891:61; Stephen 1936, 1:483-484). Kiva construction and architectural details are described by Mindeleff (1891:135-137) and Fewkes (1899:265). In general, they are rectangular, semisubterranean, roof-entered rooms with a raised stone platform at one end; they are oriented northwest-southeast (north 44° west). Built by ceremonial societies, clan groups, or individuals, these are used by many different groups of people in different societies and clans as ceremonies are performed, or for the men's leisure activities such as weaving and stone chipping (Stephen 1936; Parsons 1940; Fewkes 1899:265).

Demography and Health

In 1893 Fewkes (1894a:165-167) found that there were 54 adults and only six families and six living children claiming to be of unmixed Tewa ancestry. Rules against intermarriage with Tewa were strictly enforced by the Hopi during the eighteenth and early nineteenth centuries (Dozier 1954:289-291, 1966a:23-26), but the First Mesa community as a whole is now known to be the least homogeneous, least inbred, and most "mixed" of all of the Hopi areas (Woolf and Dukepoo 1969:34).

By the 1950-1970 period, two-thirds of Hopi-Tewa over 16 were married; 15 to 17 percent were widowed,

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and 10 to 19 percent were divorced. There has been a very even (±3%) male-female sex ratio at all times (Dozier 1954; U.S. Census Office. 11th Census 1893; U.S. Bureau of Indian Affairs 1968). Age studies show a generally young population, with 15 percent under 6, 48 percent under 20, and only about 17 percent over 55 (U.S. Bureau of Indian Affairs 1968). In the 1890s there were fewer people aged 6 to 19, and in Tewa Village, many less children under 6 (U.S. Census Office. 11th Census 1893). Hopi-Tewa longevity is slightly greater than that of the Hopi, and the population is a slightly older one. The population expanded at an average of 2.1% a year in the 1940-1970 period (Kunitz 1973:3-4, 1974; Thompson and Joseph 1944:30-31). Average family size is about five persons (Kunitz 1974).

Hrdlička (1908, 1935) studied Hopi and Hopi-Tewa anatomy and physiology in the early 1900s; Thompson (1950) summarizes medical, nutritional, psychological, and anatomical data; Kunitz (1973, 1974), Levy and Kunitz (1971), and Kunitz and Euler (1972) discuss health, mental health, fertility, and birth and death ratios. Woolf and Dukepoo (1969) provide general demographic discussions and a detailed analysis of one unusual genetic disease of the area, albinism, which is 100 times more common among Hopis than among Anglos. (Because of the relatively low rate of inbreeding at First Mesa, no Hopi-Tewa albino is known, although local people are carriers.)

Culture

Subsistence

The most complete descriptions of the floral environment and the more than 200 plants used by mesa area peoples are found in Bradfield (1971), Hack (1942), Forde (1931), and Whiting (1939). Beaglehole (1936), Page (1940), and L.D. Mason (1965) discuss domestic animals and the fauna; Willey (1969), Beaglehole (1937), and Ellis (1974b) give general ecological surveys. Bradfield, Forde, and Hack discuss traditional farming methods, and Forde mainly used Hopi-Tewa informants.

• ANNUAL CYCLE Traditional dates of subsistence activities and ceremonials are entrusted to officials called Sunwatchers who observe the position of the sun at dawn

Table 2. Traditional Annual Cycle

Month	*Agriculture*	*Hunting and Herding*	*Wages and Crafts*
January		Hunting, sheep breeding	Pottery making, jewelry, moccasins, tools, games
February	Breaking ground, clearing fields 3-4	Sheep breeding	Crafts
March	Preparing seed, terracing/breaks, some green corn 4	Lambing	Crafts taper off, housebuilding
April	Green spring corn 1-2, onions/chili (irrigation) 2-3, early beans and melons 3-4, squash 3-4	Lambing	
May	Musk and watermelons 1, main squash and melons 1-3, beans and sunflowers 3-4, major corn 3-4	Sheep shearing 3-4	
June	Major corn 1-2, late plants (irrigation) in flood fields and sand dunes. Last plants June 22	Rabbit hunts, eagle collecting, turtle hunts	Pottery and kachina making, housebuilding
July	Weeding and hoeing, harvest first apricots, harvest green corn 3-4	Eagles killed	Pottery, weaving
August	Early peaches picked and dried, weed plants collected	Sheep dipped; cattle branded; deer, antelope, mountain sheep hunting	Pottery
September	Melons, beans, squash harvested 1-2; main peaches 4; main corn harvests 3-4		Salt trips to Zuni, trading
October	Peaches harvested 1-3, peach seeds planted, fruit trees pruned, main corn harvests 1-2 (town chief harvest)	Cattle sold	Salt trips to Zuni, trading
November	Final late harvests 1-2	Sheep herding	Weaving, moccasins, tools, pottery
December		Sheep breeding	Games

SOURCES: Titiev 1938; Forde 1931; Beaglehole 1937; Ellis 1974b; Parsons 1926; L.D. Mason 1965.
NOTE: Weeks are numbered 1-4.

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Southwest Mus., Los Angeles.

Fig. 4. Lesho or Lesou, cutting mutton. Meat, cut into thin slices against the grain, was preserved by hanging to dry in the sun; eventually it was boiled, after first soaking to soften it (Underhill 1946:74). Among the Hopi, this meat cutting task was generally performed by the women (Beaglehole 1937:18). Pottery on the ledge is by Lesho's wife, Nampeyo. Photograph by Adam C. Vroman, 1901.

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Fig. 5. Nampeyo, one of the most famous Pueblo potters, is credited with the resurgence of a declining Hopi pottery tradition through the Sikyatki revival (Collins 1974; Ashton 1976). This style was inspired by pottery excavated at Sikyatki (Fewkes 1898:631ff.; Frisbie 1973), a site at which Nampeyo's husband, Lesho, was a fieldworker. The coil method of constructing pottery, which entails the progressive addition of coiled pieces of clay, is common to all of the Pueblos (see Douglas 1930). Nampeyo is shown here in her Corn clan house in Tewa Village, seated in front of the traditional graduated grinding bins. Photograph by Adam C. Vroman, 1901.

as it appears above or between selected geographical features on opposite mesas. Dates and months of such appearances are fixed from solstice to solstice (Ellis 1973; Parsons 1925a:74-75). Leslie Agayo, of the Hopi-Tewa Corn clan, drew a Sun chart in 1913 for Tewa Village. There appears to be a 13-month cycle—a dual division of the year in which there are two six-month periods with repeated names, and one unnamed segment (Ellis 1973). Since the 1920s dates have been similar for the Hopi and Hopi-Tewa calendars, varying but a few days from year to year (Parsons 1925a:120), and since 1930, the Tewa have often used a Hopi Sunwatcher (Dozier 1954:345; Forde 1931:385). The traditional annual work cycle as practiced in the 1930s is summarized in table 2. Excellent descriptions of a typical winter and summer work day are given by Beaglehole (1937:17-26).

• DIVISION OF LABOR During the annual cycle, there is a traditionally strict division of labor by age and sex for both Hopi and Hopi-Tewa peoples, although this is slowly changing due to modern wage work requirements, transportation, and machinery. In general, the Hopi-Tewa male: farms; gathers plants; herds cattle, sheep, horses, and burros; hunts deer, turtles, eagles; builds the houses; spins cotton and wool and weaves all native cloth; makes leather objects, principally leggings, moccasins, and riding gear; makes most jewelry and most kachina carvings; does some pottery decoration; makes most tools, ceremonial objects, and masks; cuts and stacks wood supplies; collects clay for pottery, paint minerals, and salt; carries water in trucks; trades for shells, turtles, and parrots. In addition, males are generally the shamans or medical specialists, and they do wage work on road crews and fire fighting crews, for instance. They play the active roles in public religious ceremonies, dances, and sings; in politics, language, and political interpretation; as policemen and judges, and in tribal council activities.

Women: also gather plants; gather raw materials for basketry and pottery; make pots (figs. 5-8) and carve some kachinas; prepare foods for eating and storage; cook; care for children; plaster and clean houses and kivas annually; construct and repair bread ovens. They also carry water by hand from springs or pumps. Women also do wage work in the hospital at Keams Canyon and as nurses and secretaries, school cooks, teachers, and maintenance personnel. They conduct trading parties in winter; they organize weddings and funerals. Pregnant women avoid dyeing of clothes, tanning of leather, or preparation of basketry materials, but there are few, if any, menstruation taboos (Beaglehole 1937:18-19; Ellis 1974b:137).

• WILD PLANTS AND ANIMALS Hopi mesa people still collect about 100 wild plant species in their local area (Whiting 1939:48-50; Beaglehole 1937:50), and an addi-

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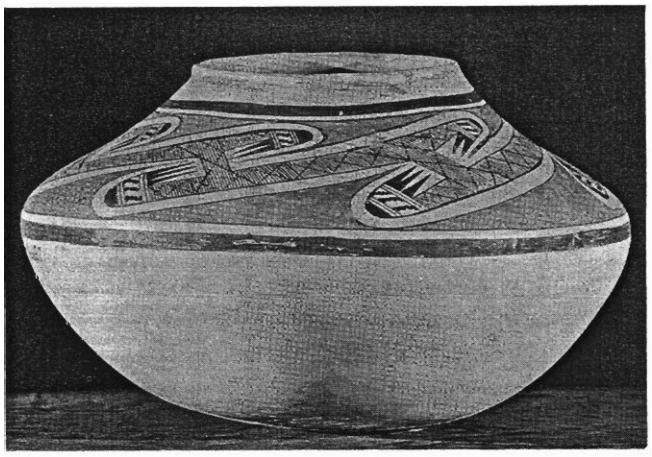
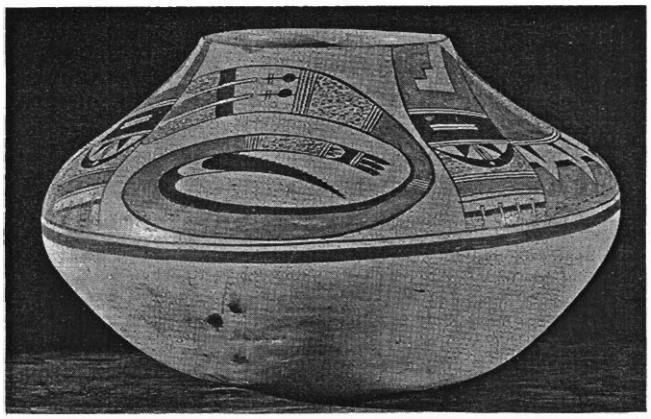
Fig. 6. Four generations of Hopi-Tewa Corn clan women. From right to left, Nampeyo (at age 43), her mother, Kochaka, and Nampeyo's daughter, Annie Nampeyo Healing holding her daughter, Rachel Nampeyo (who became a renowned potter in her own right). Photographer unknown, 1901.





top to bottom, Amer. Mus. of Nat. Hist., New York: 50.1/6688, 50.1/6690.
Fig. 7. Hopi First Mesa pottery jars made by Nampeyo in her famous Sikyatki revival style. Diameter of top about 36 cm, bottom about same scale; both collected 1912.

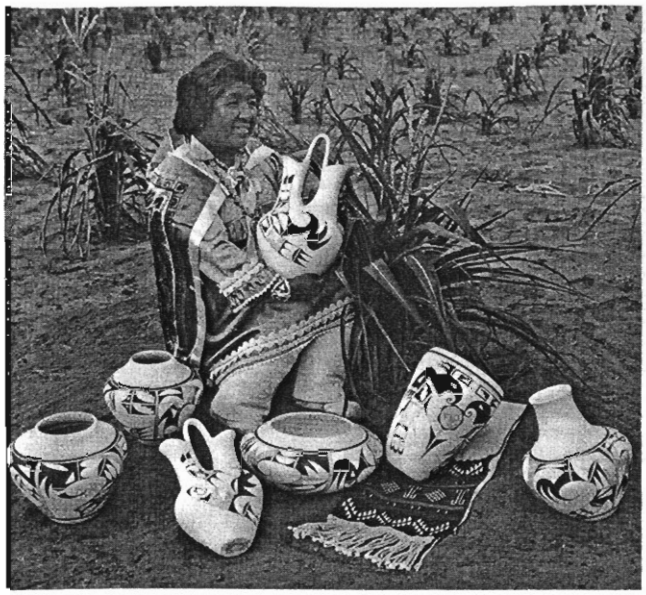


Fig. 8. Joy Navasie, famous modern Hopi-Tewa potter of the Kachina clan. She continues the fine whiteware pottery styles her mother, Paqua Naha, helped originate, and uses her mother's frog identification mark on the bottom of her pots. She appears here in social dance costume in her husband's cornfield on Antelope Mesa, east of First Mesa. Photograph by Ray Manley, 1973.

tional 100 plant species are collected or traded for from distances as great as 200 miles. Whiting states that 65 plants are used for medicine, 37 for ceremonial purposes, 47 for construction or decoration (agriculture, hunting, crafts, housing), 54 for food staples, seasonings, and beverages. Wild-plant collecting is thus still an important activity, but while communal work parties used to collect such plants (Beaglehole 1937:51-52), in 1974 individual Tewa families were more often seen (before the harvest is in) collecting weed plants by the roadside (Stanislawski 1968-1974).

Rabbits, mice, rats, prairie dogs, and other rodents, as well as coyote, turtles, small birds, lizards, and snakes have been hunted since the 1890s. In the 1850s and before, badger, porcupine, deer, antelope, mountain sheep, mountain lions, grizzly bear, and gray wolf were also hunted (Beaglehole 1936:3). Animals were important both for food and for raw materials (fig. 9), and in 1974 rabbit was still a critical resource in times of poor harvests and for ceremonial purposes. Turtles are also collected and their shells used in dance ceremonies as leg rattles. Hopi-Tewa do not have eagle-collecting rights, although they do use Hopi eagles in ceremonial ways. Fish were not caught or eaten (Ellis 1974b:147-153).

• AGRICULTURE Horticultural work is still the traditional center of Hopi-Tewa activity; their lives revolve around problems and ceremonies concerned with farming. Among cultivated plants used by First Mesa peoples Whiting (1939:12) lists as possibly native plants: corn, squash, kidney and tepary beans, sunflower, gourd, and

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Fig. 9. Hopi-Tewa women preparing a rabbit-fur blanket (see "Nambe Pueblo," fig. 6, this vol.) on a Tewa Village rooftop. They are probably cutting the skins into long strips. These are twisted together to form a rope, which is arranged on a simple upright loom as a continuous warp, then formed into a blanket by twining across with weft cords (Tanner 1968:43, 58). These blankets are one of the few garments traditionally woven by women as well as men. Photograph by J.H. Bratley, about 1902-1903.

cotton. Spanish introductions, from about 1630, include onions, chili, watermelons, peaches, and wheat. Anglo introductions (1870 on) have been: safflower, sorghum, turban squash, peanut, beet, turnip, cabbage, carrot, tomato, peas, apples, apricots, pears, and cherries. By the 1950s flour corn varieties were preferred to hard flint types because of their ability to store well, and few Anglo hybrid types are used. But all major traditional corn varieties are still grown, because seed is inherited. Vegetables, which take much water, are now more often purchased at the store.

In 1890 First Mesa people planted 3.3 to 3.6 acres per person, about 80 percent in corn. Fifty percent of the corn was used, 25 percent stored, and 25 percent traded (Bradfield 1971:21). Dozier's (1954) 1950 figures seem to indicate an average plot of 1.5 acres per person; thus the average modern farm would be about eight acres for a family of five. By 1950 the population of resident Hopi-Tewa was 400, living on 50 farmers' work, that is, an actual average of little more than one acre a person. Obviously, wage work, herding, and crafts are required to support a modern family, and subsistence farming, while culturally vital, is no longer economically possible for the Hopi-Tewa.

Excellent descriptions of traditional Hopi-Tewa hand tools and planting and harvesting techniques appear in Forde (1931), Hack (1942), and Ellis (1974b). Traditional planting and harvesting dates and schedules are seen in table 2.

• LAND OWNERSHIP Hopi-Tewa lands are traditionally upstream or north of lines drawn through the gap north of Tewa Village (fig. 2). Plats have been allocated in order of the traditional arrival of each Tewa clan, but the amount of land does not correspond to clan size; for example, the Corn clan, one of the largest, has the least land. Boundary stones with engraved clan symbols are used to delineate plat borders (Dozier 1954:355; Forde 1931:367-368, map 3). Women are considered the actual owners of land and houses, the rights descending within the matrilineage; however, lands are received in trust, for use only. Thus each matrilineage of each clan has long-term control of lands averaging about 40 to 60 acres (Bradfield 1971:21), and some additional waste lands are held in common by the clans for general use during emergencies (Forde 1931:370-371).

In the 1950s-1970s a new trend emerged. Men moved off clan lands to tribal council-leased, nonclan lands in Hopi territory at Awatovi, north on Antelope Mesa, and near Keams Canyon (Cox 1967:146-147; Stanislawski 1968-1974). Such leased lands may be passed on to a man's own daughters or sons, rather than the nieces in his sister's line; that is, bilateral inheritance may be involved. Tewa men have also received sisters' clan lands when other clan members were few, and some men have given lands to their sons or daughters, who are in different clans (Forde 1931:378-379); however, such lands usually revert to the original clan in the next generation. Finally, if a clan is near extinction, the last members may adopt a woman of another clan to care for houses and fields, as Kosha (*k̓osa*), the last Hopi-Tewa Sun clan man, adopted a Kachina/Cottonwood girl in the 1890s (Parsons 1925a:91). Land may also be lent, as the land-wealthy Hopi Snake clan did in the 1920s, helping out Hopi-Tewa related by marriage (Forde 1931:382).

• DOMESTIC ANIMALS Hopi-Tewa had large numbers of black sheep and goats by 1840; large herds of horses, cattle, and sheep are noted by the 1870s to 1890s. Burros became important after 1870; the pig, chicken, and turkey were reintroduced in 1891-1892, according to Fewkes (1900, 1922). Cattle were not generally economically important, with the exception of two Hopi families (Page 1940:29-47).

By 1880 herding was the first major cash industry for First Mesa (Page 1940:29-47, 1940a:29-36; Bradfield 1971:29, 42; U.S. Census Office. 11th Census 1893), and many Hopi-Tewa households were still supported by herding in the 1970s. This is because the Hopi-Tewa were among the first to hire Navajo shepherds and thus go into the herding business (Page 1940:38-39). The men do the work and own their flocks individually, thus giving men a new independence. Hopi-Tewa women may only own shares in flocks (Dozier 1954:356). Range lands are generally nonclan lands held by the villages in common.

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Page (1940) provides excellent maps of the locations of corrals and grazing areas on the Hopi Reservation, including Hopi-Tewa areas in Polacca Wash. Ranges may be 10 to 15 miles from the villages, and Hopi-Tewa men often stay for extended periods at the sheep camps and ranches.

In the postwar period, there has been a shift from sheep to cattle raising. Although cattle are more expensive to buy, feed, and care for, they take less continuous care and bring a much higher sales price, vital items in an emerging wage economy. In 1950, 43 Tewa men were livestock owners, about one-half owning sheep (1,602 head) and one-half owning cattle (658 head). About one-quarter were sold each year (Dozier 1954:357). By 1963, nearly half the reservation cattle were at First Mesa (L.D. Mason 1965), and the First Mesa Hopi-Tewa and Hopi were the major cattle ranchers of the reservation.

Some Hopi-Tewa also have a few chickens and one or two pigs; horses or burros are commonly seen in corrals along the mesa edges. Dogs are common in the village, but cats are rare (L.D. Mason 1965).

It is clear that the herding of animals has changed the Hopi-Tewa culture in many ways: wool clothing replaced cotton by 1900; male ownership of herds changed family life; settlement patterns changed as second homes or ranches, 10 to 15 miles from the villages, were built. First Mesa Tewa have done better than most economically; the early First Mesa sheep herding economy has turned into a cattle raising business economy, with Tewas in the lead (L.D. Mason 1965:58-77; Kennard 1965; Nagata 1970:153-175).

• CRAFTS Dozier (1954:359) noted 25 craftsmen in 1950. A minimum of 24 men at First Mesa wove belts, women's wedding robes and ceremonial kilts, sashes, stockings, and other objects in 1970 (Hopi Tribe 1970). Only two or three men in the 1970s still made moccasins, drums, and other leather objects. Special piki cooking stones are collected at Awatovi. Grinding stones, pottery polishing stones, yucca paint brushes, and paint mortars are collected from archeological ruins nearby or are made from local materials. Chipped-stone manufacturing has not been seen in recent years. Almost all local men made kachina dolls, rattles, and bows and arrows to use as gifts at kachina dances (Stanislawski 1968-1974).

Many Tewa women (a minimum of 60 to 65) produced pottery in the 1970s (Stanislawski, Hitchcock, and Stanislawski 1976). A few earned as much as $5,000 to $10,000 a year by ceramic sales. Much of the pottery was sold directly to tourists from Hopi-Tewa homes, but some particularly well-known Tewa potters produced much of their pottery for sale and exhibit at fairs or for specific traders. Specific pottery forms such as mutton stew bowls, ladles, piki mixing bowls, ceremonial jars, and pipes were still widely used by the Hopi and Hopi-Tewa in ceremonies.

• PRODUCTION AND CONSUMPTION The family had been the primary production unit for all Hopi and Tewa reservation people until World War II (Beaglehole 1937:72-81; Kennard 1965; Nagata 1970:181-186, 200-222). Wage work was scarce, even with the start of Works Progress Administration projects during the 1930s; and traditional horticulture, herding, and craft activities were thus the primary economic occupations. Only one Tewa wage earner was noted in 1890 (U.S. Census Office. 11th Census 1893:45), and only six men over 18 on the entire reservation earned wages in 1890.

Quantities of food (particularly bread and fruit), baskets, kachina dolls, and pottery are still produced in Tewa Village for ceremonies, such as initiations, weddings, and kachina dances, and are then recirculated by ceremonial gift giving, producing a leveling effect. The total may approach 15 percent of the foodstuffs, particularly corn (Ford 1972; Nagata 1970:148-149). Thus the traditional annual ceremonial cycle of the Hopi-Tewa and Hopi has a major economic impact on the communities. In the 1970s there were more dances, and they were held more frequently, than in the past; they are longer and more costly and tend to be held on weekends so that off-reservation people may attend (Kennard 1965:29; Dozier 1954:363). Clan and phratry sharing is still vital; Dozier (1954) discusses in detail the traditional cooperative sharing among the Tewa and all peoples of First Mesa.

• MODERN ECONOMY In 1950, 22 percent of the adults were wage earners; 57 percent were still mainly self-employed in farming and crafts (Dozier 1954:356-369). By 1970 population had outstripped the production, and less than 40 percent of the basic requirement of food per person was produced. The majority of income in 1975 must come, therefore, from wage earnings, cash herding, social security payments, and other government funds. Because of reservation status, there is no rent for lands or houses, no property tax, no medical or educational costs for most families (Nagata 1970:116-117, 123-126). The Hopi tribal government also provides facilities such as social service centers, the Cultural Center, schools; U.S. governmental activities and services have created nearby reservation community or agency towns such as Polacca and Keams Canyon, which provide jobs and nontraditional opportunities. The new wage work, well discussed by Dozier (1954, 1966a) and Nagata (1970:176-194, 1971), has caused serious economic and social changes. Hopi-Tewa can choose to stay on underdeveloped reservation areas and remain poor with a semblance of traditional life; or they may migrate to the cities, as encouraged by the government, and have the problems of "city exiles" (Nagata 1971:116). About 20 to 25 percent of the Hopi-Tewa lived off-reservation, but they generally returned to their home villages to take part in local activities (Nagata 1971:144-147; Dozier 1954:353). In addition, the husband's increasing control of his own money and leased lands (neither tied to his wife's hold-

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ings) have freed him from some social responsibilities, thus changing relationships in Tewa Village.

Ellis (1974b) noted that the pre-World War II income of the reservation family was about $300, with a per capita mean of about $80. Dozier's (1954:357) figures indicate Hopi-Tewa income of about $350 per capita, and a 1968 census of the Hopi Reservation shows that 45 percent of all reservation Hopis over 16 earned less than $1,000 per year, 65 percent earned less than $3,000, 32 percent earned $5,000 to $10,000, and only 1 percent earned more than $10,000 per year (U.S. Bureau of Indian Affairs 1968:62). The average family income in 1970 was about $2,000, or $400 per person (Dutton 1975:41).

Clothing and Adornment

In the 1970s Hopi-Tewa wore store-bought Anglo clothes, except during ceremonies and traditional dances. Blue jeans, cotton work shirts, wool jackets, and store-bought shoes were common for men, although long hair (often braided) was still worn. Older men might occasionally wear calico pants and traditional cotton shirts. Older women wore Mother Hubbard dresses with walking shoes. Some men and women still wore their hair in the traditional Dutch bob. Comparisons with the dress and material culture of the 1890s and 1920s may be seen in Fewkes (1922:270-272), Ten Kate (1885:255), and Harshberger (1926).

Social Organization

The Hopi-Tewa social system is almost identical to the matrilineal, matrilocal, extended-family, exogamous clan system of the Hopi (Dozier 1954, 1955, 1970; Eggan 1950, 1966; Titiev 1944, 1972). The female-oriented household is the important group. It is usually an extended family, composed of several siblings, the mother, her sisters, their children, and also the attached spouses (including father) of different clans. Next in importance are the father's household and clan; linked clans in the mother's line (her phratry group); the father's phratry group; the clans and households of one's sponsors in the kachina initiation rite, kiva group rites, or curing ceremonies. Rules of exogamy are followed. Marriage is forbidden with the mother's or father's linked clans; and also unlike the Hopi case, Hopi-Tewa marriage is traditionally forbidden between cross-cousins (Freire-Marreco 1914:286). There is a joking relationship with father's sisters' husbands. The household group is unnamed, but the matriclan units are named in similar fashion to those of the Hopi (Bradfield 1973). The clans are generally composed of multiple lineages—for example, in 1974 there were two Corn clan lineages and three in the Kachina clan—and are generally connected through a grandmother or great-grandmother, although the relationship may be so vague as to be possibly fictional (Forde 1931:372; Eggan 1950:166). Residence is matrilocal. The married daughters come to live next to or with the mother, or on her clan lands in her village. Only 11 instances of violation of this rule were found in 1950, and accounts of the 1890s reveal no such violations (Dozier 1954:289-290). This system has helped to preserve Hopi-Tewa independence from the Hopi (Eggan 1966:124).

A few Hopi-Tewa clans are also linked into weak phratries similar to those at Hopi. For example, Bear, Fir/Stick, and a Spider lineage seem to be linked; a Parrot lineage is linked with Kachina/Cottonwood (Dozier 1954:335; Stanislawski 1968-1974). In addition, the two Hopi-Tewa kiva groups are formed of linked clans that "go together" for ceremonies. Bear, Corn, Tobacco, and Fir/Stick (replacing the extinct Sun clan) are linked in the Central Plaza kiva and in the Outer kiva, Earth/Sand, Kachina/Cottonwood, and Cloud (in 1975 almost extinct) "go together." The presence of two kivas suggests the Rio Grande pattern of dual moieties, but Parsons (1926:211) gives objections to this concept. Members of linked clans share ceremonial privileges, extend kin terms to each other, and accept marriage restrictions; and the Hopi-Tewa can also extend their relationships to clans of the Rio Grande Tewa, Navajo, and Hopi in the same way.

Each clan has a senior female head who "feeds" and protects the clan religious symbols and who lives in the clan house. She also controls assigned clan lands. The clan house is the center of religious and economic activity for the clan members, and the eldest woman owns the house, stored food, and its furnishings (Dozier 1954:333). A man has primary authority in his mother's house, not his wife's house. The relative size of these clans has waxed and waned at Tewa Village over the centuries, and since 1870-1880 at least two clans have become extinct. In the 1890s there were eight clans ranging in size from 9 to 28, and six others were claimed to have once existed (Hodge 1896:349-350; Fewkes 1899:253-254). In 1974 there were only six clans (and one remaining Cloud man), but these same units were up to 300 percent larger than in the 1890s. As clan sizes change, so do people's relationships to allocated lands, ceremonies, and housing.

• KINSHIP Hopi-Tewa kinship terminology is classified as a Crow type and, though different in phonemes, is very similar in meaning to that of the Hopi (Dozier 1954:305-311, 1955; Eggan 1950; Freire-Marreco 1914). Only a few words have been borrowed from Hopi. The terms are descriptive, use many reciprocals, and are cognate with Rio Grande Tewa kinship terms; thus, as in the Rio Grande Tewa area, age is a major factor in Hopi-Tewa terminology, and older brothers and sisters are separated from their younger siblings. But while the words used are the same as the Rio Grande Tewa terms, the principles and behaviors associated are mainly those of the Hopi. In short, behavior has changed, but the terminology has stayed the same (Eggan 1950:153; Do-

zier 1954:310, 1955). Kinship terms are extended to other members of one's linked clans, to Rio Grande Tewa, and to other Indian groups. They are also extended to ceremonial clan relatives such as those godparents taken at kachina initiation ceremonies, who are considered substitute fathers and mothers. The ideal and real kinship behaviors (Dozier 1954:313-325, 1955) are similar to Hopi practices (Eggan 1950; Titiev 1944); but the Hopi-Tewa, in contrast, still do always distinguish between real father and father's brother, and real mother and mother's sister, and seniority rules also apply. Hopi-Tewa behavior is thus partly controlled by relative age, as in the Rio Grande area.

• SOCIAL CONTROL The Hopi-Tewa connect migration legends with the two kiva groups. The Central Plaza kiva is given priority, and one of its Bear clansmen was village leader in 1950, followed by an associated Corn clansman in the 1960s; however, the early leaders of the late 1800s were Sand, Bear, Tobacco, and Corn clansmen, thus including members of both kiva groups (Dozier 1954: 338; Fewkes 1900:615-616; Parsons 1926:210-211).

The men generally play the official and public political and religious roles, but in their mothers' rather than their wives' clans. Fathers more often discipline their sister's children than their own. The strongest relationships in the family are mother-daughter, aunt-niece in clan, and sibling-sibling, for in these are the continuation of the clan group. Thus, the matrilineal household, including mother's brothers, still provides the authority and training, although affection comes from the father and father's clan. The Hopi-Tewa system also encourages mock fighting and insults with the father's relatives, thus providing a tension release. No witchcraft trials or public accusations seem to occur, although after an unexplained illness a relative with a "bad heart" may be suspect.

The modern wage economy, schooling, and the automobile have deflected younger Hopi-Tewa from traditional patterns. Both men and women are now more protected from gossip and ridicule from the clowns and ogres at dances; ostracism is not so effective in the 1970s. However, officials still warn people of the consequences of bad habits during major ceremonies; and the war chief, traditionally of the Kachina/Cottonwood clan, may still attempt to maintain order (Parsons 1922a:293). The town is generally under very loose ceremonial control; in the past, the winter solstice chief was town head for part of the year, starting in November, and the summer solstice chief was leader for the other part, starting in March (Parsons 1922a:292, 1926:225-226). The Hopi-Tewa are, in part, also governed by the Hopi tribal council, established in 1936 with Hopi-Tewa aid. Polacca, in particular, has supported the council (Nagata 1970:97), and the Tewa group is well represented on the council. The fact that all of First Mesa now acts as one political unit (rare in the Hopi area) may be a result of such Hopi-Tewa influence (Cox 1967, 1968; Dozier 1954:342, 360).

Religion

The First Mesa villages cooperate ceremonially, as they do politically. For example, they share most Kachina, Initiation, Snake-Antelope, Flute, and Niman ceremonies (table 3). Kachina dancers often visit all First Mesa kivas during one dance, including Tewa Central Plaza kiva (Fewkes 1903:36). The Hopi-Tewa cooperate with the Hopi religious societies, if asked, and prepare foods, provide transportation, or take part in official religious duties. However, there are differences in ceremonial activity, and before 1900 these differences were even more pronounced (Fewkes 1899:260). Hopi-Tewa may still exclude Hopi from some ceremonies, such as the Tewa Winter Solstice ceremony (*tán-tay*); the Hopi, in turn, may exclude Hopi-Tewa from parts of their Winter Solstice ceremony, the Soyal (Fewkes 1899:273; Parsons 1926:218). They did not borrow each others' ceremonies in the past for fear that the ceremony would be "polluted" (Dozier 1951:61); this practice has only gradually changed in the twentieth century (Dozier 1954:344; Fewkes 1899:260; Parsons 1926; Eggan 1950:161).

The Central Plaza kiva group is clearly the most powerful and important leadership unit in the village, but the Outer kiva group has its own duties, responsibilities, and powers. For example, the Sunwatcher traditionally was from the Sun clan, and after its extinction, the Cloud clan took over its responsibilities. In 1975 the Cloud clan also controlled the important *sumako·le* curing ceremony. The war chief, traditionally of the Cottonwood/Kachina clan, punished wrongs, prayed for village health, and maintained warrior groups. Finally, Outer kiva members performed the vital initiation ceremony at the winter solstice, during which 14 to 18 year old boys are taken into kiva groups.

Table 3. Traditional Ceremonial Round

January	Kachina dances; War ceremony
February	Hopi Powamu; Ground Freezing ceremony
March	Horned Serpent Dance; seasonal transfer ceremony; hockey games and races
April-June	Kachina dances; Summer Solstice ceremony
July	Sun Stick making
August	*sumako·le* curing ceremony
September-October	Harvesting for Tewa Village town chief
November-December	Winter Solstice ceremony *(tán-tay)*

SOURCES: Fewkes 1900:623; Parsons 1926:209-210; Fewkes 1903.

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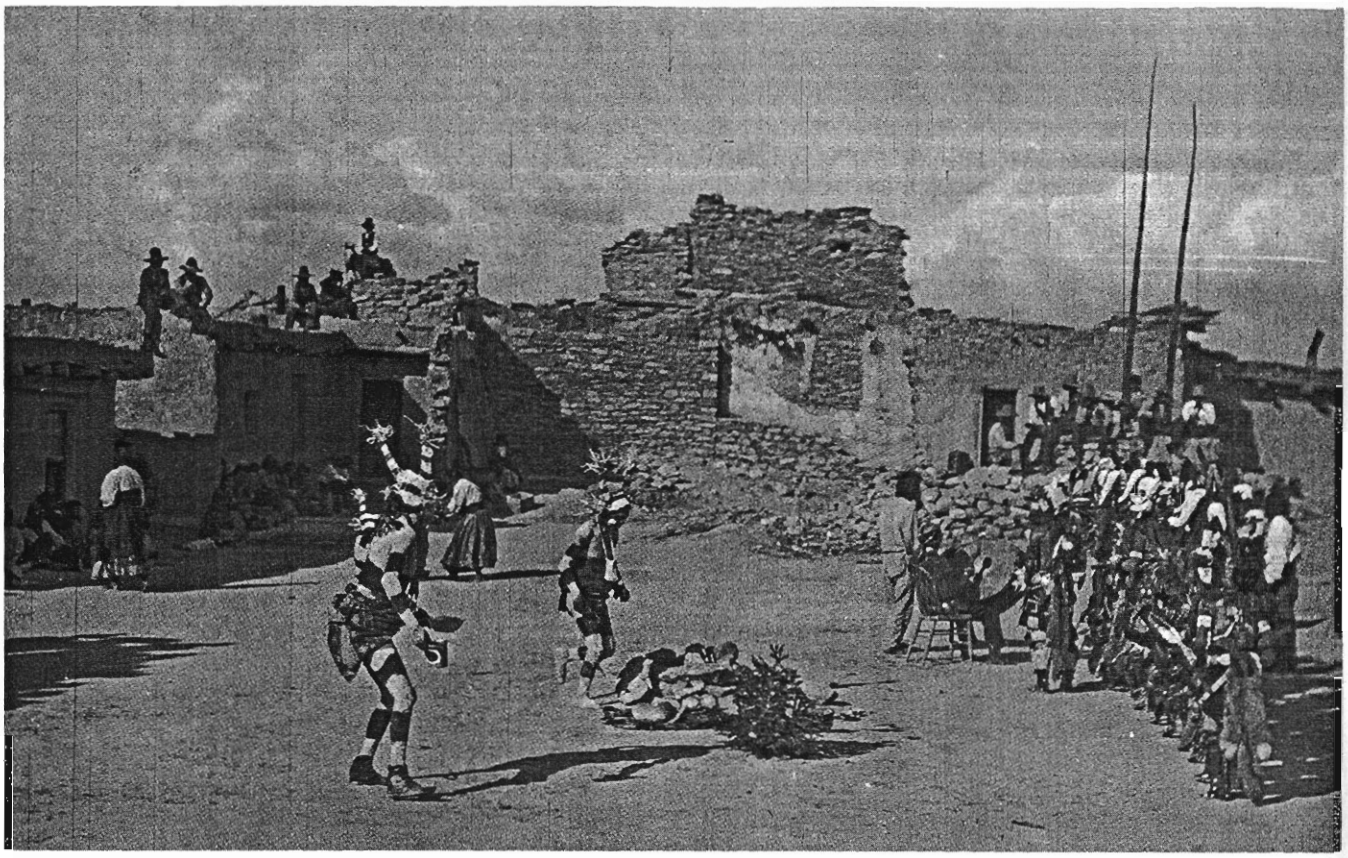

Amer. Mus. of Nat. Hist., New York.

Fig. 10. Tewa clowns performing during a kachina dance (possibly a Niman kachina dance) in the central plaza at Tewa Village, viewed from the south. The men sitting on the roof may be Navajo spectators. Photograph by Robert H. Lowie, 1916.

The Tewa lack Hopi rites such as Niman and most kachina dances, the Snake-Antelope and Flute ceremonies, and nearly all the women's rituals. The War ceremony, Ground Freezing ceremony, Sun Stick making, *sumako·le* curing ceremony, Tewa Horned Serpent ceremony, and Winter Solstice kiva group initiation ceremonies were uniquely and traditionally Tewa (table 3). The Tewa also have one habit irritating to the Hopi: they like to continue kachina dances after the Hopi Niman ceremony, when in Hopi belief the kachinas return home for half the year (Stanislawski 1968-1974). In general, the Hopi ceremonies are basically water and fertility ceremonies, while the Hopi-Tewa ceremonies are curing and village-aid ceremonies. Kachina dances are sponsored by the ill person or his family to help in the curing (Parsons 1925a:75, 104, 107); such a dance to cure a Hopi-Tewa woman of cancer was held during the summer of 1970 (Stanislawski 1968-1974). Members of sacred societies, such as the *sumako·le* society, recruit members from those they cure (Stephen 1936, 1:xl; Parsons 1926:214-215; Dozier 1954:348). Whipper kachinas and shamans may also be used in curing. Hopi-Tewa shamans are widely respected and have a large clientele among Hopi and Navajo, perhaps due to their Rio Grande origins.

Exact observance of ritual in dances, prayers, and ceremonials, and strict obedience to the village chief and senior clansmen, are required to prevent such diseases and accidents from occurring in the first place.

Finally, while the Tewa, like the Hopi, make prayer sticks for all ceremonies, their sticks have always been slightly different in shape (Stephen 1936, 1:392), and the Tewa clowns, similar to Hopi mudheads in function, are quite different in appearance, being dressed in broad black and white horizontal stripes, with painted double horns. They are recruited in the same way as the Hopi clowns, that is, after curing for illness or by trespass (Parsons 1926:215, 223-224). A few Hopi kachinas are thought to be derived from Tewa, such as the Nuvakchina (snow kachina), Chaveyo, Hano mana (Tewa maiden), and Chakwaina warrior maiden (Wright 1973). Good discussions of traditional Tewa Village altars appear in Fewkes (1899, 1903) and Parsons (1926).

It is in the shared Hopi-style kachina ceremonies that the two groups are most similar (Dozier 1951:61, 1954:350-351; Parsons 1926:214-215, 228). Many dances are exchanged with Hopi from other villages and mesas (Parsons 1925a:24, 49, 83-85) as well as games and races such as the hidden ball game, stickball (connected with the war god), and kickball (connected with fertility). Both groups also have extramural ceremonial shrines,

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central plaza shrines, and four or more shrines marking the boundaries of the villages (Edward P. Dozier, personal communication 1968; Fewkes 1906:357-370), and they each plant prayer sticks in appropriate springs near the mesa (Parsons 1925a:13, 119; Ellis 1974b:172-187).

Acceptance of modern Anglo religions is still slight. The first missionaries arrived in Keams Canyon in 1870, and a Baptist mission was founded at Polacca in 1893. Since that time, the Hopi-Tewa have been in constant contact with Anglo churchmen, and many homes in 1975 had some Christian pictures on the walls; however, few Hopi-Tewa are really serious about Anglo religion, and Dozier (1954:298-300) cites some fascinating anecdotes showing the courteous but casual treatment of missionaries. Missionaries do give food, clothing, transportation, and other material benefits; as long as they do not seriously attempt to stop Tewa ceremonies, they are tolerated. Polacca and Keams Canyon have five churches: a Baptist and a Roman Catholic mission in Keams, and two Baptist missions and an Assembly of God church in Polacca. Mormon missionaries also commonly work at First Mesa (Hopi Tribe 1970:13).

Life Cycle

There is a traditional series of life events that most Hopi-Tewa still consider to be important. These ceremonies make one a Tewa rather than an Anglo or Navajo.

• BIRTH Birth takes place in a darkened room with only women, generally aunts or sisters, present. A male shaman is called in case of serious trouble. The woman's husband's mother cuts the cord with an arrowshaft for a male, a corn-stirring stick for a female. She puts ashes on the navel and then washes the baby. The husband's clan women care for the mother and child until the naming ceremony, washing the infant every four days and keeping an ear of fresh white corn by it. On the twentieth day, a naming ceremony occurs, the husband's clan women naming the child with a series of names related to their clan. The parents hold the child up to the sun and choose the "best" name of those given. This is typical also of Hopi practice (Dozier 1954:325; Eggan 1950). The infant then joins his mother's household until he is ready for the local nursery or day school at Polacca.

• PUBERTY At about age 8 to 10, the male child is given a nonclan ceremonial mother or father and goes through a kachina initiation and whipping rite four days before the Hopi Powamu ceremonies. A new name is given and male children can play kachina roles (such as the Avachhoya) after this time. At about age 14, boys get a new ceremonial father from their proper clan kiva group and are initiated at the Tewa Winter Solstice ceremony. From that point on, they may take part in ceremonial societies and religious and political events. The stories in this ceremony, closed to Hopi, detail the differences between Hopi and Hopi-Tewa and emphasize the Tewa migration legends.

A similar girls' initiation ceremony occurs at the time of first menstruation. It involves seclusion and corn grinding for four days and dressing of the hair into the maiden's traditional "butterfly" whorls.

• MARRIAGE Weddings usually occur when boys and girls reach 20 to 25 years of age. Courtship is left to the individuals; many children are born shortly before, or after, wedding ceremonies. Weddings are generally planned for January and August in order to avoid the kachina season, during which the weekends are already filled with parties and ceremonies. Relatively elaborate ceremonies are carried on in traditional homes. Clothes are woven by the husband's relatives for the girl's wedding, and in turn the girl grinds corn to be given to the husband's family. Ceremonial mud fights may be held to symbolize the loss of the boy from his family. The girl is then dressed in her new clothing and moved into her new home (generally near her mother). Her hair is dressed in the distinctive Hopi-Tewa married woman's style.

• DEATH Early death is traditionally thought to result from witchcraft, unkind thoughts, and the failure to maintain proper ceremonial and sacred rules. Natural death is another transition, another rebirth. As in all ceremonies, the washing of the hair is critical, this time with a corn ear. Feathers are tied over the head, and a cotton mask is formed over the face, with a string feather also tied on. The face is painted partly black. These activities make the body "light," like a cloud, and give breath for the other world. The face and body may then be washed, like that of a baby, with cornmeal. A prayer stick is made and the individual is given a new name, because he is now considered a baby in the other world. He will probably be buried in the burial ground near the entrance road east of the mesa, near Coyote Spring. Water and piki bread are placed on, or near, his chest; he is placed in a sitting position with pottery bowls of water nearby. Other pottery bowls, sometimes broken ("killed"), a basket with prayer sticks, and a planting stick are placed on the grave mound. Women traditionally wail throughout the entire ceremony. Shroud clothes and a corn cob are kept at the house for four days, after which the dead person is considered to have finally departed (Parsons 1925a:75-77; Stephen 1936, 2: 824-828). These traditional descriptions do not hold for all recent "Christian" burials, which of course follow normal Anglo procedures.

Prehistory

The prehistory of the Rio Grande Valley, the original home of the Hopi-Tewa, is still a matter of controversy (Dozier 1954:263-275, 1966a:3-19; Ellis 1967b; Ford,

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Schroeder, and Peckham 1972). The Tewa-speaking people probably came from the upper San Juan River area about A.D. 1000-1200 and moved into the Pajarito Plateau or Nambe district, then into the Galisteo Basin (Ellis 1967b:38-42; Ford, Schroeder, and Peckham 1972:31-32). The Galisteo Basin Tewa may then have separated from the Northern Tewa speakers (about 1200-1300), leading to the linguistic and cultural differences that distinguished the two groups by the 1680-1700 period.

History

Dozier (1954, 1966a), Ellis (1974b), and Montgomery, Smith, and Brew (1949) survey the early history of the Tewa speakers and their contacts with the Spanish invaders and discuss Spanish contacts in the Hopi mesa area. The Tewa groups on the Rio Grande and the Hopi were involved in the Pueblo Revolt of 1680, and according to their traditional oral history the Hopi-Tewa moved as a single village unit to First Mesa at the request of Walpi village chiefs, following the revolts (Fewkes 1899:253, 1900:614-616). They are said to have been asked to guard the mesa trail to Walpi from Utes and Paiutes. The Hopi Asa clans, thought to be related to the Tewa (traditionally the founders of Sichomovi), may also have come at the same time, or shortly before. The Asa clans were said to have come from the Santa Fe or Abiquiu region and to have traveled first to Zuni Pueblo, then to Hopi First Mesa (Ellis 1974b:81-84; Stephen 1936, 2:1085-1086). However, the Hopi-Tewa were in origin definitely Tanos from the Southern Tewa area in the Galisteo Basin, probably from the towns of San Cristóbal and San Lázaro. They moved north of Santa Fe to the town of Tsawarii (Harrington 1916:253) near Santa Cruz, following the Pueblo Revolt of 1680. After continuing pressure from the Spaniards, they left in 1696, traveling through Jemez, Fort Wingate, Fort Defiance, Ganado, and Keams Canyon on their way to First Mesa (Reed 1943a, 1952; Dozier 1951:56-58; Fewkes 1899:257). They may have first built a village near Coyote Spring at the south foot of the present entrance road to Tewa Village, but after defeating the Utes in a battle north of the gap, they were granted permanent farmlands by the Hopi, and their present mesa-top village site (Fewkes 1899:256-259, 1900:614-616; Mindeleff 1891:36).

Narváez (Reed 1943a:74) noted that the "Janos" or "Teguas" were at First Mesa in 1701. Wilson (1972:127-129) cites new evidence to show that in June and July of that year, Spanish soldiers attacked at First Mesa to avenge the previous attacks at Awatovi. Fewkes (1893:368, 1898:633) and Mindeleff (1891:31) state that the Tewa were not at First Mesa until 1700 and were probably not there at the time of the destruction of Awatovi, which took place in November 1700. The month is known because the attackers came early in the morning during part of Wuwuchim, the tribal initiation ceremony held by the Hopi in November. There is archeological evidence of destruction and burning of Awatovi Pueblo (Fewkes 1893, 1898:601-608) and evidence of a massacred and possibly cannibalized group of 30 victims some 10 miles south of Polacca (Turner and Morris 1970). Thus it appears that Awatovi was destroyed in November 1700 by men from First and Second Mesa Hopi Pueblos as well as some clansmen from Oraibi, before the time of the Tewa arrival. The Hopi-Tewa may have been contacted by a mission of Hopi who visited Santa Fe in October 1700 and thus may have come to First Mesa a few months later (Montgomery, Smith, and Brew 1949:21-24, 222; Mindeleff 1891; Fewkes 1893, 1894a).

The Hopi would presumably have been delighted to have a new guard village at the head of the trail, particularly after their attack on Awatovi, which they no doubt expected would be avenged. In fact, following the Awatovi attack and the migration of the Hopi-Tewa in 1700-1701, the Spaniards did attempt to counterattack in 1701 at First Mesa, and again in 1706 at Payupki at Second Mesa against another Tewa group, and finally in 1716, again at Walpi and Tewa Village. At this time, the Hopi offered to give the Tewas back to the Spaniards, but the Tewa Village military position was too good, and the Spaniards retreated after burning some nearby Polacca Wash farm fields (Dozier 1954:277-283; Montgomery, Smith, and Brew 1949:24-26). Priests attempted to visit the villages several other times in the 1700s, but no military expeditions came again to the mesas, and the Spaniards were no longer to be an influence in the region.

The Navajos and Utes again began to attack the mesas in the late 1700s and early 1800s, and Mexican government officials who took over the territory from Spain in 1823 had neither time nor opportunity to consider the Hopi problems. Anglo trappers reached the mesas in the 1830s, and a few other United States citizens visited in the 1840s. The U.S. control of the territory began in 1848, following the Mexican-American War, and military expeditions and civilian visitors began to visit First Mesa in increasing numbers from 1850 on, particularly after the Civil War. A Hopi agent was appointed in 1869; missionaries and traders settled in Keams Canyon in 1870; a small missionary school was built there in 1875; the Keam trading post was founded in 1878. Anthropologists began to settle and study the First Mesa Hopi and Hopi-Tewa from 1880 on. The reservation was established in 1882, the same year the railroad reached Winslow, and this last was perhaps the most important event of all, for even though 75 miles south of the mesas, the railroad opened the area to tourists, a boom that has continued throughout the twentieth century.

Education

Most Hopi-Tewa under 80 years of age have had some formal education. They were the first group to support the new government reservation school, founded in 1887; 18 Hopi-Tewa were enrolled by 1890, 12 speaking English by then (U.S. Census Office. 11th Census 1893:45; Dozier 1951:64; Fewkes 1922:273; Thompson and Joseph 1944:28-29).

Thompson (1950:92-93, 96-97) showed that First Mesa children, as a group, were more aggressive, more spontaneous, and had less anxiety than other Hopi groups. Their language ability and their "outsider" status have also encouraged them to deal more frequently with Anglos (Dozier 1954:326). As they are going to school, they continue to work either with their fathers in the fields or their mothers and aunts at home. They learn a great deal of traditional and ceremonial life from their grandparents. Most children learn such tasks by doing, or by demonstration, rarely by instruction, in contrast to Anglo education (Bunzel 1929; Dozier 1954:311-325; Stanislawski 1968-1974; Stanislawski, Hitchcock, and Stanislawski 1976).

In 1968 most adults over 25 (68%) had attended at least nine years of school, and more than one-half (54%) had attended high school, with nearly 32 percent graduating (U.S. Bureau of Indian Affairs 1968:56). Median years of education in 1968 were 10.5 (Kunitz 1974:12).

Synonymy†

The designations Hopi-Tewa and Arizona Tewa are references to the location of this group since 1700. Their original name was what was written in Spanish as Tano, applied to their ancestors while they were still in the Galisteo Basin east of the Rio Grande. In the early 1950s this name was still used by elderly Hopi-Tewas in the self-designation *tʰá·nu té·wa* (Dozier 1951:57, 1954:263), and Curtis (1907-1930, 16:260, 262-263) recorded the Rio Grande Tewa form as táno (probably for tʰáno), with the locative tánoge for 'Tewa Village'. What is probably the same name, recorded as tʰanuge, is also applied to the Galisteo Basin and a prominent abandoned Pueblo there (Harrington 1916:104, 481); the exact form in Rio Grande Tewa is uncertain, but translations include 'lower settlement' (assuming *θa(·)-* 'dwell') and 'near the sun, on the sunny side' (with *θan* 'sun'). Arizona Tewa *tʰá·nu* was borrowed into Hopi as *há·no, há·nòwɨ* (Whorf 1936:1215) 'Hopi-Tewa Indian' (Third Mesa *ha·no,* pl. *ha·nomɨ;* Voegelin and Voegelin 1957:49); from this comes the English name Hano for Tewa Village and its inhabitants (Reed 1943a:74-75, 1952:17; Curtis 1907-1930, 12:6, 18; Fewkes 1894a; Dozier 1951:56-57). Spanish spellings are Tagnos, 1680 (Hackett 1942, 1:3, 11, 22); Janos, 1760 (Tamarón y Romeral 1937:355, 1954:74); Thanos, 1779 (Miera y Pacheco map, Auerbach 1943:24); and Tanos, 1782 (Fewkes 1898:579).

When the Hopi constitution was drawn up in 1936 the Hopi-Tewa asked that the name of their Pueblo be changed officially from Hano to Tewa (Dozier 1951:56), and Tewa is now their preferred self-designation. (For the name Tewa and its variants, see the synonymy in "Pueblos: Introduction," this vol.)

The Zuni at one time called the Hopi-Tewa *te·wa* or *te·wa·kʷe* (Kroeber 1916:275, phonemicized), and their village *te·wanʔa*, but they now group them with the Hopi and use these names especially for the Rio Grande Tewa (Dennis Tedlock, personal communication 1977). The Navajo call them *Naashashí* or *'Anaashashí* 'bear enemies', a name also applied to the Santa Clara Tewa (Robert W. Young, personal communication 1977).

The Rio Grande Tewa use *téwa* 'Tewa' or *xosóʔon* 'Hopi' or combinations of these: *téwa xosóʔon* or *xosóʔon téwa* (Harrington 1916:569, phonemicized). Jemez has *tǽwa-hɨpé* 'Tewa Hopi' (Joe Sando, personal communication 1978). Other forms are given by Hodge (1907b: 531-532) and Harrington (1916:569-570).

Sources

The only major account of the Hopi-Tewa was published by the anthropologist Edward P. Dozier (1954), himself a Tewa from Santa Clara. He also published several preliminary reports (1951, 1955) and a good popular monograph on Tewa Village (1966a). His emphasis was on the social and religious organization of the society and its mechanisms for preserving separate identity in a longstanding culture-contact situation.

A number of early anthropologists wrote brief accounts of the group. Mindeleff (1891) did the best and most detailed study of architecture and settlement of the Hopi mesas. Stephen (1936), who lived at Keams Canyon and on First Mesa in the 1880s until his death at Walpi in 1894, left journals that have some revealing details on Tewa Village and its relations with its Hopi neighbors. A diary by a Hopi-Tewa man, Crow Wing, was edited by Parsons (1925a). Fewkes provided very detailed census counts, clan discussions, religious descriptions, and details of mythology and tradition in Tewa Village in the 1890s, as well as the best early archeological reports of the Hopi area (1894a, 1898, 1899, 1900, 1906). Freire-Marreco did fieldwork at Tewa Village in 1913 and published a detailed and accurate kinship discussion (1914). Parsons, who visited in the 1920s, wrote several fine works on social organization and religion and gave the best picture of the differences in Hopi and Hopi-Tewa ceremonial schedules (1925a, 1926). Bunzel (1929) used Tewa potters as major informants on Pueblo pottery making. Forde's (1931) agricultural study mainly used

† This synonymy was prepared by Ives Goddard, incorporating material from Michael B. Stanislawski and Albert H. Schroeder (personal communication 1978).

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Hopi-Tewa informants. He also included maps of land ownership rights, which are also discussed by Cox (1967). Reed (1943a, 1952) discussed the basic historical evidence, and the first attempt to summarize the social organization was by Eggan (1950).

Robert Black (1975) has worked with Hopi-Tewa informants on folklore and ethnomusicology and has prepared a biography of Irving Pabanale, a Hopi-Tewa judge. Stanislawski (1969, 1969a, 1969b, 1973, 1974, 1975; Stanislawski and Stanislawski 1975) has done ethno-archeology studies in Tewa Village and Polacca, concentrating on pottery and its relationship to culture in Pueblo society. Yegerlehner (1959, 1959a) has described aspects of the Hopi-Tewa dialect.

Good collections of Hopi-Tewa pottery may be found at the Museum of Northern Arizona, Flagstaff, and at the Smithsonian Institution, among others. The Museum of Northern Arizona also has detailed records and photographs of craft exhibits since 1930, including many Hopi-Tewa craft items. The work of Nampeyo and other Hopi-Tewa potters is exhibited worldwide (Collins 1974; Maxwell Museum of Anthropology 1974).

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