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## TEXTILES AND IDENTITY IN PREHISTORIC SOUTHWESTERN NORTH AMERICA

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### INTRODUCTION

This study focuses on the place that textiles had in the lives of people in the central Greater Southwest after about A.D.1000, and in particular on the development of two distinctive traditions in cloth that co-existed in the central Southwest during this period. These traditions were the predecessors of two equally distinctive historic textile traditions, those of the puebloan people of the Colorado Plateau and those of the O'Odham in the Sonora Desert of southern and central Arizona.

Clothing is a basic means of indicating social identity, and in the prehistoric Southwest provides some of our most intriguing evidence of associations within and between groups of people. The study of textiles can therefore help to clarify long-standing problems in Southwestern prehistory.

In particular, the connection between the historic O'Odham (Pima and Papago) and the prehistoric people of the Southwestern deserts has been a subject of controversy for a century.

At the time of Spanish contact, O'Odham-speakers, who were apparently dissimilar in material culture to the late prehistoric Hohokam, Salado, and Sinagua, occupied the Gila and Santa Cruz drainages. Hohan-speaking groups had settled the Gila valley as far east as Gila Bend. Those who believe that similar artifacts are necessarily associated with similar languages take this as evidence that the O'Odham are not descended from the people of the central Southwest.

In contrast, similarities between the O'Odham and their widespread linguistic relatives in northern Mexico are substantial.

Miller stated that (1983:120):

**The northernmost Sonoran group, Tepiman, consists of four closely related languages -- Upper Piman, Lower Piman, Northern Tepehuan, and Southern Tepehuan. . . . Aboriginally, Piman was spoken in a long band stretching from southern Arizona to Durango . . . .**

Therefore, it has been argued that the O'Odham are relative newcomers to the central Southwest, having arrived from the south soon before Europeans. However, in their clothing the O'Odham provided clues to their identity not only to their contemporaries, but also to anthropologists many centuries later. The origins of the O'Odham are more clearly traced in their textiles than in any other kind of object that they made and used.

### THE DATA

Several thousand prehistoric textiles have survived from the Greater Southwest, permitting us to examine differences and similarities in regional and sub-regional traditions in a type of material culture that is ideally suited to the expression of social identity. However, prehistoric Southwestern textiles have received relatively little attention from archaeologists.

One problem has been that of integrating the textile data with a larger picture of the development of prehistoric societies in the region. Kent's synthetic studies (1957, 1983) provide a great deal of excellent information, but necessarily relied on secondary sources and broad generalizations about chronology and cultural associations. The data that are now available from improved methods of archaeological dating were not available at the time.

The present study has included examination of a number of variables that provide a more direct picture of the distribution of textile materials and techniques in time and space. First, whenever possible



absolute dates obtained through radiocarbon, archaeomagnetic, or tree ring studies have been used. Second, spatial distributions were first examined independently of named archaeological traditions. Finally, whenever possible quantified data, for example warp and weft counts, rather than generalizations, such as "warp-faced," have been used in the basic analysis. Generalizations offered in this paper are based upon these quantified data.

The result of this approach has been the discovery that there are significant distributional patterns that are reflected in a variety of textile attributes. These provide the basis for interpretations offered in this paper.

## SOUTHWESTERN TEXTILES BEFORE A.D.1000

Between about A.D.500 and A.D.1100 Southwestern textiles could be identified with three large-scale sub-regional traditions. In the north, the Colorado Plateau and upland areas to the east can be identified with a single broadly defined tradition. Below the Mogollon Rim in the central Southwest, in the Sonoran and Chihuahuan deserts, a second tradition developed. Yet another distinctive approach to textile production and design is found to the south, in what is now northern Mexico. Within these sub-regions, there was strong internal homogeneity in basic aspects of materials, structure, technology, and design, despite local differences in fiber choices, element densities, and other attributes.

The distinctive textiles of the Hohokam and Mogollon traditions in the central area were heavily influenced by Mesoamerica, and represented a major change from earlier Archaic fabrics. There was heavy use of locally grown cotton, a crop introduced from Mesoamerica, in preference to wild plant fibers. Central area textiles included well-woven balanced plain weaves, twills, and, relatively late in this period, weft-wrap openwork laces. These fabrics are the earliest in the region that were associated with production on a true loom.

There is also evidence of the specific loom type used in the area. Both Kent (1957, 1983) and King (1974) have observed that the looms of the prehistoric Southwest cannot be distinguished on the basis of shedding mechanisms, since those of the ethnographically documented backstrap, horizontal, and vertical looms are effectively identical. However, the quality of tension control does provide a means of addressing this problem. The characteristics of pre-A.D.1000 fabrics in the Southwest display few errors in shed formation, which suggests good tension control. Both the backstrap and vertical looms of the historic Southwest provide this capacity, and fabric dimensions suggest that it was the backstrap variant that was actually used in the central area during this period. The two-bar horizontal loom in use by the O'odham and many of the people of northern Mexico at the time of Spanish contact produces, in contrast, a high frequency of tension-related shedding errors. These characteristic flaws are easily visible in the fabrics of the southern Southwest, for example, those from Candelaria Cave in Coahuila (Johnson 1977). This technical characteristic suggests that in the southern Southwest, the area that is now inland northern Mexico, this two-bar loom has been the characteristic type throughout prehistory.

In the southern Southwest, the two-bar loom was used in making fabrics from wild plant fibers. Leaf fibers, obtained from yucca and agave, and stem fibers from plants like *apocynum*, a variety of milkweed, were the materials of northern inland Mexico. Loom woven fabrics were strongly warp-dominant plain weaves, suggesting similarity to those of central Mesoamerica rather than to the more nearly balanced weaves of the west coast. Non-loom cloth structures included looping and very complex loop and twist structures in both densely woven cloth and in knottless netting; these are derived from Archaic antecedents.

In contrast, the fabrics in the central Southwest are similar to those of contemporaneous Mesoamerican sites such as Chametla, in southern Sinaloa. Balanced plain weaves with few errors, twills, and weft-wrap openwork are among the favored fabric structures. Contact with the west coast influenced many aspects of Southwestern fabrics at this time. The importance of interaction with that area has often been suggested in connection with other classes of material culture (for example, Haury 1976).

Above the Colorado Plateau there was little evidence of Mesoamerican influence during this period. Local Archaic traditions survived in many aspects of the textile tradition. The true loom was probably absent or, at best, very rare. The dominant textiles remained those which were produced without a mechanical device to produce sheds, for example braiding, knotted netting, twining and simple tapestry weaves. Many fabrics were strongly weft-faced. Although there is no evidence of cotton cultivation on the



Plateau at this time, cotton dominated the fabric assemblage and was probably obtained from areas below the Mogollon Rim where conditions for growth were more favorable.

A very important result of these differences in textiles was a clear expression of social identity within sub-regional areas, and an equally clear distinction in social identity between areas. On the basis of textiles, the prehistoric cultural traditions of the Southwest would not have been defined as they have been using pottery and architecture. People from the central Southwest doubtless recognized one another as very similar, whether they were from the groups that archaeologists have labelled Hohokam, or Mogollon. People from the Colorado Plateau would have struck these same individuals as radically different from themselves. On the other hand, it would have been obvious to those from the west coast of Mexico that these were people more like themselves than most of the groups on the northern periphery of Mesoamerica.

There was no distinction within villages and communities with respect to textiles. No class of individuals had access to fabrics requiring unusual skill or effort for their completion. The tools of textile production, especially spindle whorls, are found everywhere. This is consistent with other evidence that the societies of the central Southwest at this time were egalitarian, although there was a flourishing agricultural economy, growing long-distance trade, and increasingly elaborate ritual.

### ASSEMBLAGES AFTER A.D.1000

At about A.D.1000-1100 major changes are apparent in Southwestern textile traditions (Fig. 1). The first is the appearance of the true loom on the Colorado Plateau. Loom anchors in room floors of the period establish that this was a vertical loom. The spread of the loom in the north was accompanied by the appearance of high numbers of fabrics using structures previously confined to the central area.

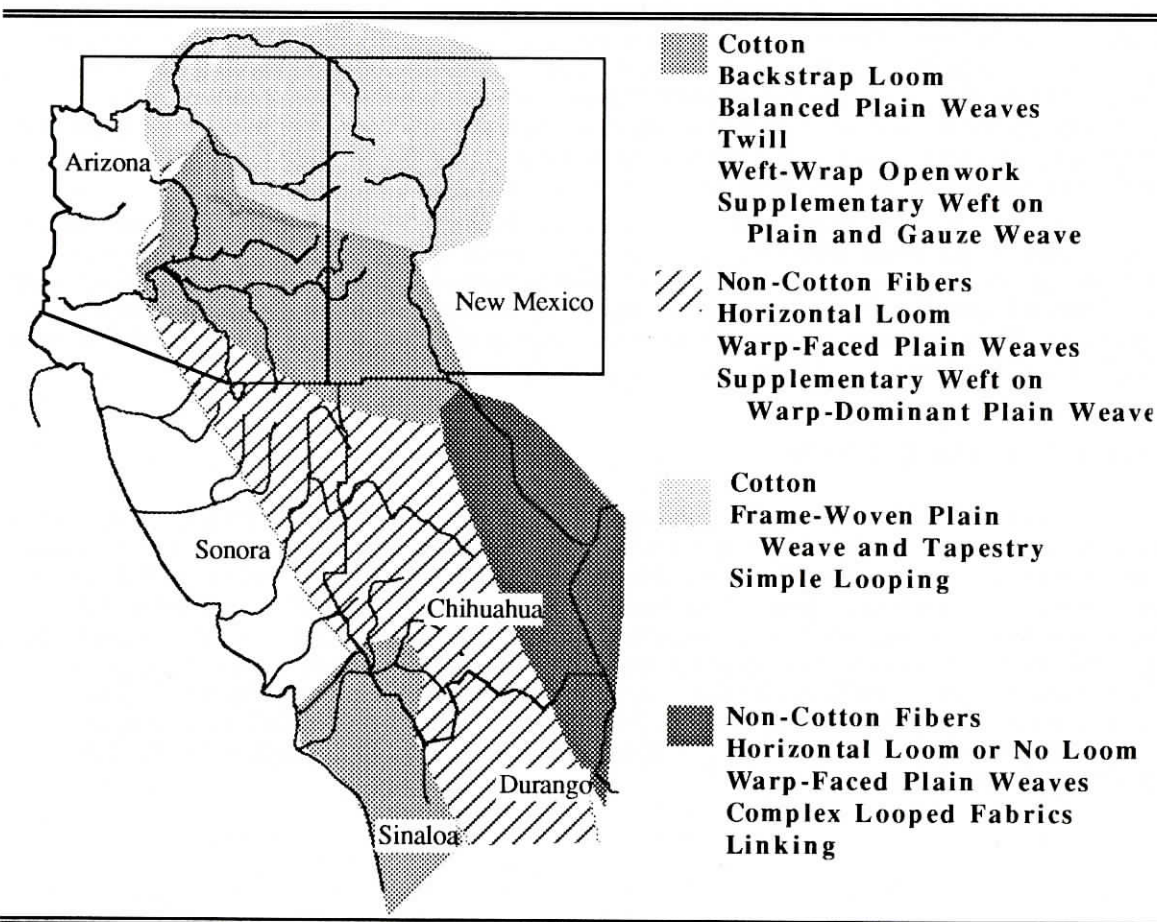


Figure 1. Distinctive Features of Textile Assemblages at about A.D.1000-1100



Other evidence of interaction between the northern and central areas is found in surface design techniques. Painted fabrics, sometimes emulating the visual effects produced by complex lace structure, represent an increasingly important part of the central Southwestern textile inventory. This technique is found earlier on the Colorado Plateau, but at this time expands to include an area encompassing the northern and central portions of the Southwest as far south as Casas Grandes. Tie-dye fabrics are also widespread, although rather rare, at this time.

Changes in the textiles of the central area included the appearance of new fabric structures and decorative techniques. One of the most distinctive of these new introductions is found in patterned supplementary weft on plain weaves and on gauze. Simple gauze and very complex twills are also prominent among these additions to the central Southwestern tradition. These fabrics are first found in Hohokam sites on the Salt and Gila rivers and Sinagua sites along the Verde River, but are subsequently present after A.D.1300 at Salado sites, including Tonto Ruins, Canyon Creek, and Gila Cliff Dwellings.

Many of these new structures seem to have been derived from Mesoamerican precedents, especially on the west coast. The adoption of distinctive and esthetically pleasing fabrics that can be produced efficiently is not difficult to explain, particularly among developing elites who might wish to exhibit their access to fine clothing. Nothing is more typical of human societies throughout history than adoption of clothing styles to express a social identity, whether wished-for or real. The Southwestern fabrics in question are clearly copies rather than trade objects, since pre-existing local design motifs and structural preferences are found in combination with new innovations. The people of the central Southwest were very competent weavers who could adapt and develop techniques that they observed easily, and even with exceptional virtuosity.

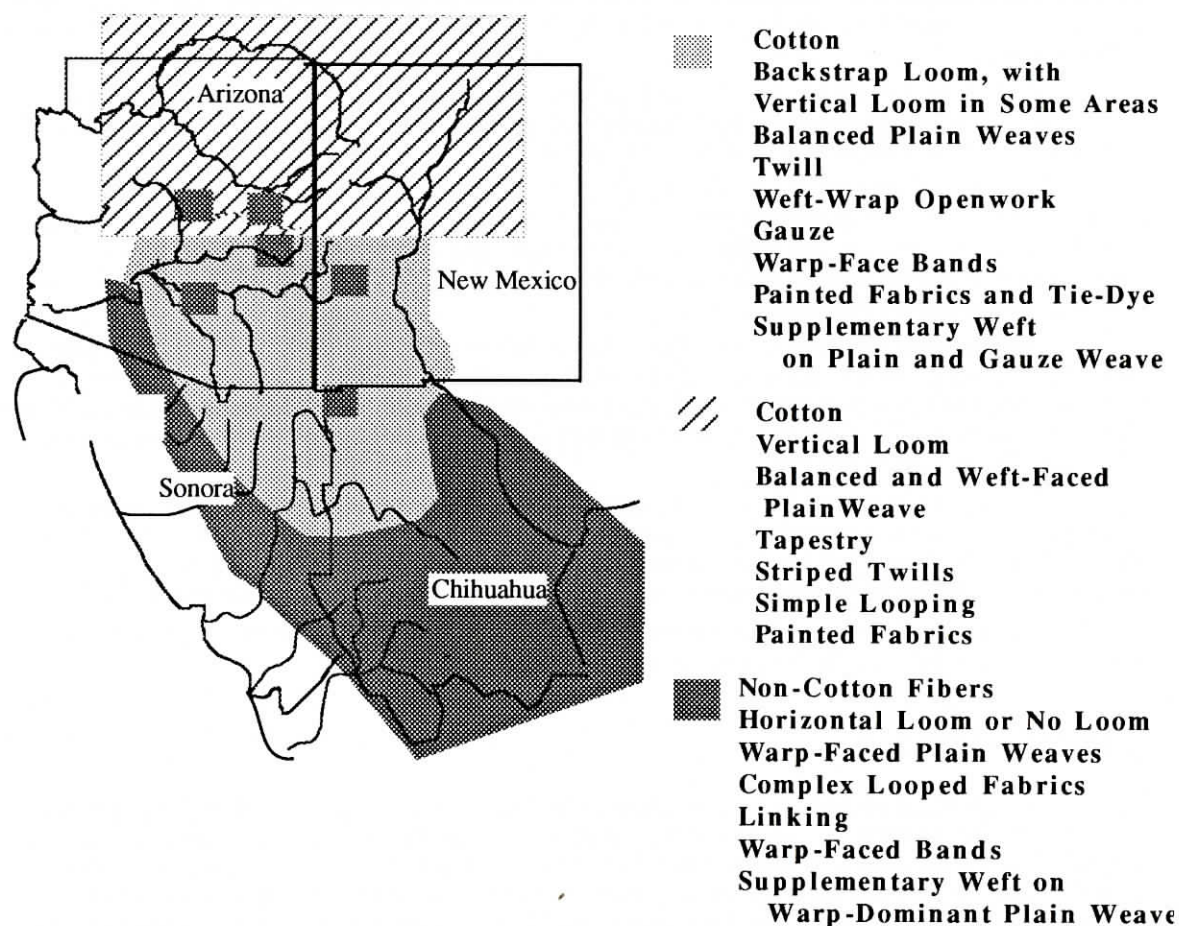
The distribution of these fabrics corresponds to a significant shift in the local organization of Southwestern societies. There is evidence of greatly increased social hierarchy within local communities and the integration of villages along major canal systems, elaboration of ritual in the hands of a relatively few specialists at large villages having platform mounds, and the development of at least part-time craft specialists in some areas. It is the central sites of these larger and more complex communities that have produced many of the most elaborate decorative fabrics. Some of the most beautiful fabrics of the prehistoric Southwest, like the Tonto shirt are found in Saladoan sites of the 14th century. The distribution of this complex parallels quite closely that of polychrome pottery of late prehistory and is therefore very likely to be a product of the same sphere of communication and interaction.

Very finely woven fabrics were also made. The most closely woven of these was reported from Casas Grandes (King 1974), where architecture and other aspects of material culture provide the most elaborate physical expression of social complexity in the prehistoric Southwest. Another very fine example was found at Snaketown, again a very large site that seems to have served a central place in a hierarchy of settlements. These finer fabrics suggest production as a display of wealth, specifically represented by access to amounts of labor in excess of those normally required for the production of ordinary goods.

## TEXTILES AFTER A.D.1300

After A.D.1000 there is another trend apparent in the fabrics of the central Southwest, one that becomes more widely distributed until by A.D.1300 it is found throughout the central area (Fig. 2). These textiles show greater similarity to the simple cloth of inland northern Mexico than did earlier fabrics in the area. Non-cotton plant fibers, especially yucca and milkweed stem, were used extensively in the central Southwest for the first time since the introduction of cotton. Coarse fiber blankets resemble modern burlap quite closely in their heavy yarns and harsh texture. Heavy use of non-cotton plant fiber is apparent at Tonto Ruins, Canyon Creek Ruin, Gila Cliff Dwelling, and at Ventana Cave in the Papagueria. There is marked similarity in the structure and density of these later textiles from the central Southwest to those from inland Mexico. Assemblages in parts of Sonora and Chihuahua and in Coahuila reflect the same broadly defined tradition.





**Figure 2. Distinctive Features of Textiles at about A.D.1300**

The technology of weaving also gives evidence of connections between the central area and the southern portions of the Southwest. The appearance of fabric flaws arising from tension problems in the central area, for the first time, suggests the introduction of the characteristic loom of the southern periphery, the two-bar horizontal loom, into the central area.

Evidence of inland northern Mexican influences is also found in basketry. Bell notes that several very similar coiled basketry specimens, remarkable in representing the rare basketry technique of coiling without foundation, were recovered from Ventana Cave (Haury 1950) and from Montezuma's Castle on the Verde River (Jackson and Van Valkenburgh 1954). Numerous similar specimens were recovered from Candelaria Cave in Coahuila (Bell 1988).

It is unlikely that trade accounts for the appearance of this new style of cloth in the central area. The Salado and their neighbors, who produced beautifully woven soft cotton blankets, would scarcely go hundreds of miles out of their way to obtain cloth indistinguishable from burlap. Emulation of inferior techniques and designs also does not adequately account for the appearance of characteristically southern textiles in the central Southwest.

Instead, population movement and increased interaction with northern Mexico, in combination with change within the societies of the central area, are reasonable explanations. At this time there were several major changes in the overall regional distribution of Southwestern cultural traditions. Major settlement concentrations developed in a corridor occupying much of central and eastern Sonora (Riley 1982). These groups on the Rio Sonora were hierarchically organized and warlike. In addition, they



occupied one of the most direct routes between northern Mesoamerica and the central Southwest, flanked by Trincheras groups controlling the western route and the Casas Grandes area dominating the route north to the eastern pueblos.

North of the Trincheras, in what had been the very sparsely settled "Desert Hohokam" area, population increased substantially in the Classic Period Sells Phase. At the same time, interaction changed to focus on the Tucson Basin rather than the Salt and Gila area.

The Gila Bend area on the western Gila ceased to follow central Hohokam patterns of development after A.D. 1100. Instead there was interaction with the Tucson Basin, the Trincheras area, and western Hohan speakers (Teague 1989a). The Tucson Basin, and in particular the southern portions of the Tucson Basin, was at the heart of an increasingly divergent cultural tradition in the Santa Cruz and western Gila drainages and in the Papagueria.

There are indications in the late Classic Period sites of the Papagueria and the Santa Cruz and San Pedro River drainages of influences from the eastern Sierra Madre. This is not surprising given the expansion of Casas Grandes influence into western New Mexico and extreme southeastern Arizona. Casas Grandes seems to have been interacting with both the residual northern Chalchihuites tradition and with the west coast (Di Peso and others 1974).

A reasonable inference regarding the source of these less decorative innovations in textiles is population movement and increased influence from the south and southeast, in what is now northern Mexico. It is also possible that a social emphasis upon simplicity and identification with the less hierarchical societies of the southern area was consciously adopted by some part of the population.

This lays the foundation for a better understanding of the people, and the fabrics, found in the Southwest at the time of the Spanish entrada in the sixteenth century.

## O'ODHAM TEXTILES

Historically, it was the textile tradition derived from the southern Southwest, with its horizontal loom, coarse plain weaves, and warp-faced belts, that survived among many of the occupants of the Sonoran Desert at the time of Spanish contact. The Papago or Tohono O'Odham produced simple warp-dominant plain weave blankets in cotton and patterned warp-float belts very similar to those of late prehistory at sites like Ventana Cave, Tonto Ruins, and Canyon Creek. O'Odham fabric dimensions were also consistent with contemporaneous forms in the Piman-speaking areas of northern Mexico.

Historic O'Odham weaving in southern Arizona employed cotton to a much greater extent than did either the prehistoric traditions of the far southern Southwest or the late prehistoric assemblages of the northern Southwest. This is not surprising, however. The progressive adoption of cotton for flexible textile manufacture when this material became easily available parallels the increased reliance upon cotton worldwide wherever it has become possible. It is simply a superior fiber for spinning and weaving and produces a more comfortable cloth than do coarse wild plant fibers.

Other parallels, not in textiles but in less flexible fabrics, are found in basketry. It has been observed that twilled basketry and matting found at Tonto Ruins closely resembles that made historically by the Pima and Papago (Steen and others 1962). These baskets parallel Tohono O'Odham (Papago) examples reported by Kissell (1916) early in the 20th century although differences in material and edge finish have been noted (Steen and others 1962). This twilled basketry is also essentially identical to that made by the people of Chihuahua and Durango, especially the Tarahumara.

A study of contemporary Tohono O'Odham looped wire baskets also provides important evidence (Bell 1988). Conical burden baskets made in looped structures are typical of the Tohono O'Odham, but very similar baskets are made by the Tarahumara, Tepehuan, and other groups of northern Mexico. The Southern Tepehuan of Durango made elaborate lace coil bags virtually identical structurally to the burden baskets of the Tohono O'Odham at the turn of the century. Taylor (1966:94) has observed that the prehistoric homeland of the Tepehuan probably included precisely the area (western Coahuila, northern Durango, southeastern Chihuahua) in which prehistoric evidence of fabric traditions identical to those of the historic northern Pimas is found.

This coiled basketry tradition appears prehistorically after the 12th century at Ventana Cave and also at sites along the southern margin of the Mogollon Rim and may be traceable to origins on the southeastern margin of the Greater Southwest in western Coahuila, northern Durango, and southeastern



Chihuahua. Somewhat similar prehistoric examples of coiled basketry were found at Canyon Creek Ruin north of the Salt River. Haury (1934) noted that the Canyon Creek coiled baskets have "exact parallels in technique in the Pima granary baskets of to-day."

There is, therefore, a traceable tradition in fabrics, that seems to have moved north into the Papaguería and into the Salt and Verde drainages in late prehistory, probably in the late 13th or early 14th century. It is represented historically by the material culture of the Piman-speaking O'Odham of Arizona and by speakers of Piman and closely related languages much farther to the south, among them the Tepehuan.

## HISTORIC PUEBLOAN TEXTILES

In the 14th and 15th centuries the decorative fabric types of the prehistoric Sonoran Desert are not found in many of the areas where they had appeared prehistorically. Instead they were seen within the central region only among the Opata of Sonora and in some localized coastal areas, and among the Sobaipuri of the San Pedro River and the Gila River Pima. Di Peso (1953:8-9) has brought together a number of Spanish references to the clothing of the O'Odham-speaking Sobaipuri of the San Pedro River Valley. Well-woven cotton painted in red and yellow was described by Velarde and in 1732 Manje described the Sobaipuri as "... dressed and adorned with colored mantas, belts, and strings of beads around the neck." The Sobaipuri costume seems, in these accounts, to have extended north to include the O'Odham-speakers of the middle Gila River and on the Colorado Plateau among the puebloan peoples.

To the north, textiles depicted in the kiva murals of the Hopi (Smith 1952) and those of Pottery Mound (Hibben 1975) represent a composite of northern and southern characteristics including kilts, openwork shirts (interlinked, gauze or weft-wrap?), plaids, and warp-float belts. Puebloan fabrics also display design and pattern development found earlier in contexts related to the Mogollon, Hohokam, Sinagua and Salado traditions. Some of the prehistoric sites that produced these fabrics, most conspicuously the Sinagua site of Montezuma Castle, are among those regarded in Hopi tradition as ancestral settlements.

## CONCLUSIONS

The prehistoric cultural traditions of the Southwest were not simple unadulterated expressions of ethnicity or biological relationships. They were, as the textiles illustrate, the product of centuries of interaction and communication within the Southwest. In the central area the process of their development was strongly influenced by Mesoamerican contacts and an environment suitable for the growth of more complex social and economic forms. In adjacent parts of the southern Southwest, prehistory apparently saw a different complex of influences lead to a different way of life, despite linguistic and biological relationships to those who were proceeding on a different path.

The connection between contemporary western pueblos and those in the prehistoric central Southwest has been easily accepted. There is abundant archaeological evidence in support of this affiliation (for example, see Adams 1991). In textiles, the post-contact distribution of painted and tie-dyed cloth, supplementary weft structures, finely-made cotton cloth, and distinctively high quality weaving parallels the distribution of polychrome pottery, specific types of ritual architecture, and other evidence of cultural similarity.

Many textiles of the historic O'Odham were, instead, identical to the simpler fabrics of linguistically related groups in northern Mexico. In the Papaguería, their clothing was apparently indistinguishable from that of the Lower Pima and Tepehuan in Mexico. This was the horizontal-loom based, warp-faced fabric tradition.

The textile evidence indicates that this tradition was present at least by A.D. 1100 in the Papaguería and adjacent areas, and by A.D. 1300 it co-existed with the dominant approach to textile design and production in a large portion of the central Southwest. It was not a last-minute introduction into the central Southwest before the arrival of the Spanish. The historic dominance of these textiles in the Sonoran Desert might have arisen through several processes that are not mutually exclusive. The first of these is introduction of small groups of southerners into central Southwestern society after A.D. 1100.

An historical event might have contributed to this phenomenon. O'Odham oral histories (Teague 1989b) state that Hohokam leaders associated with the platform mounds were opposed in war by a group



from the south led by "Elder Brother," a culture hero from the Salt River area. One version (Di Peso 1958) specifies that these people came from the Rio Sonora in what is now the Mexican state of Sonora, a location consistent with Lower Pima and Tepehuan distributions at the time of Spanish contact. The southerners stayed in the central river valleys to intermarry with the existing local populations, who were like themselves O'Odham-speakers (Hayden 1935).

O'Odham-speakers moving from northern Mexico into the central Southwest in late prehistory could have contributed to the historical dominance of southern fabrics in the central Southwest. Mason (1971:218) observed that linguistic evidence suggests differentiation of northern Piman and Tepehuan around A.D.1265. Although the use of linguistic evidence in such chronologies has a very large margin of error, this dating is not unreasonable in terms of the information that has been presented here. At the same time, the persistence of some decorative fabrics among the O'Odham of southern Arizona supports a local heritage in the central Southwest.

O'Odham traditions also relate that at the time of the conflict residents of many of the Salt River settlements from Pueblo Grande west along the river, went north to the pueblos. This account is confirmed in Hopi traditions that trace ancestry to southern villages under very similar circumstances. Such a movement could have contributed to the appearance of prehistoric central-area clothing styles among the pueblo people to the north, although other prehistoric connections certainly played a significant part.

Archaeological evidence and traditional accounts of conflict in late prehistory suggest another possible influence on these distinctive textile styles. Association of specific kinds of fabrics with social and political factions, among them the deposed platform mound leadership, could account in part for clothing distinctions. Decorative textiles in late prehistory display a temporal and spatial association with the development of hierarchically organized society. The cultural significance of simpler fabrics made on horizontal looms would have been very different. Simple clothing could have expressed broad ethnic and linguistic affiliations rather than political identity. History provides abundant examples of social and political expression through clothing, including the conscious adoption of relatively austere styles as a protest against authority.

The roots of historic O'Odham textile traditions are visible in the archaeological record, and are consistent with what the O'Odham themselves have always maintained: that they are the descendants of the prehistoric people who built ballcourts, and platform mounds, and created one of the most distinctive and impressive cultures of Southwestern prehistory.

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