PRE-EUROPEAN CULTURAL RELATIONSHIPS BETWEEN

THE PLAINS AND SOUTHWEST REGIONS

Robert Blasing
Department of Anthropology
Wichita State University
Wichita, Kansas

INTRODUCTION

The purpose of this paper is to bring together the wide ranging bits of information concerning contact between the people living in the Plains Region and those living in the Southwest Region of North America. Although a precise boundary dividing the Southwest from the Plains cannot be drawn, the break between the subsistence patterns and major cultural trends of each area is quite evident. As Wedel (1950:106) points out, "so far as archeology is an indication, there is surprisingly little direct evidence of Pueblo in the material culture of subsistence economy of the historic Plains Tribes."

Contact and influence between areas can take many forms. It could be migration of an entire population, movement of a single individual carrying cultural traits, trade, diffusion brought about by simple contact and awareness of how another group does things, warfare such as conquest or raiding or by competition and population pressure between groups. A major effect might also be seen through movement of an individual who transmitted one of the decimating diseases introduced by the Europeans. To identify where and to what extent any of these factors are operating is very difficult with the present state of knowledge. Again to quote Wedel (1950:100) "the area is vast! the time span long! and the available information still far too sketchy and uneven." With this in mind! the direction of this paper will not be to evaluate the exact nature of contact, but instead to show what evidence is available, and what general trends and changes over time can be identified.
ARCHEOLOGICAL EVIDENCE

Paleo-Indian Contacts  At the earliest time levels of known human occupation, culturally similar groups appear to have been present in both the Plains and parts of the Southwest. Wormington (1957:21) identifies the occupants of much of the Southwest, especially the eastern portion, as paleo-eastern big game hunters with close ties to similar groups on the Plains. This similarity occurred in both tool types and subsistence patterns. Judge (1973) also cites definite Plains connections for paleo-Indians in the central Rio Grande Region.

Evidence for specific movement between the regions, at this early date, includes chert, apparently from the Alibates Quarry in the Texas Panhandle and from several Clovis and Folsom type sites in New Mexico (Lapidary Journal 1966:1118). Evidence for movement in the other direction is shown by obsidian from Area 1 at the Lindenmeier Site in northeastern Colorado. This material has been traced to a source in Central New Mexico (Wilmsen 1974:114).

The La Bolsa Site in the Galisteo Basin, about twenty miles southwest of Santa Fe, New Mexico, is described by Honea (1967:571 as proto-Archaic, with a date of about 7,000 to 6,000 B.P. He argues that this group is ultimately rooted in the Agate Basin groups of the Northern Plains. Whether or not this is the case, this group appears to have Plains ties.

Archaic and Early Ceramic Contacts Some of the best evidence of contact, at Archaic levels, comes from two sites near Denver, Colorado, as described by Irwin and Irwin-Williams (1959, 1961, 1966). These are the Lo DaisKa Site and the Magic Mountain Site. They describe Complex "D" at the Lo DaisKa Site as a manifestation of the Desert Culture, as described by Jennings. They give its closest ties as being to Danger Cave, Ventana Cave, and the Uncompahgre Complex. The Magic Mountain Site contains a similar group in its Apex Complex. They feel that the external ties of the two groups lie directly with a series of related preceramic cultures from the northern Southwest. Possible material ties to the Southwest from these sites include olivella shell from Magic Mountain, obsidian from an unknown source at Lo DaisKa, and chapalote maize, very similar to corn of the same age from Bat Cave, New Mexico, also from Lo DaisKa. A carbon 14 date from Complex "D" at Lo DaisKa is about 2800 B.C.
In southeastern Colorado some additional Archaic level sites on the Chaquaqua Plateau are described by Campbell (1969:365-377). Material at these sites which may have come from the Southwest includes olivella shell, one obsidian flake from a level dated A.D. 200-45 and seven obsidian flakes from a level dated A.D. 450-750. This last level also has structures which Campbell feels resemble those of the Los Pinos Phase in the Southwest dated A.D. 1-400.

Many Woodland sites in the Palo Duro, Canadian and Red Deer Drainages of Texas contain some plain Brownware Mogollon pottery, tempered with crushed andesite, from the Sierra Blanca Region of New Mexico (Lintz 1979:173). Radiocarbon dates of the pottery-bearing levels at Deadman's Shelter in the southern Texas Panhandle are A.D. 120-710.

Wedel (1950:103-110) points out Southwestern elements were present in Harrington's (1924) Ozark Bluff Dweller Caves and also in some Oklahoma Panhandle Caves (Renaud 1930). Wedel feels that these "hint at old connections but resist fruitful discussion."

In New Mexico, Hall (1944:66) describes the Rosa Phase, ca. A.D. 700-900, as marginal Anasazi. However, he feels that a number of traits found there have their origin to the east in the Plains although the evidence is insufficient for any positive conclusions. This evidence includes traits such as stockades around a large simple pithouse, earth storage pits and scored pottery.

Two sites in southeast Colorado mentioned by Campbell (1969:355), have HarinosadeOcho maize. This is believed to be of probably Southwestern origin at levels associated with the A.D. 900-1050 Pueblo expansion.

Mera (1935, 1938) has discussed a curious similarity between conical bottomed pottery of the Largo-Gallina Complex in Northern New Mexico (A.D. 1100-1300) and certain Eastern Woodland ceramics.

Late Prehistoric Contacts Plains contacts in the late prehistoric period began to appear along the northeastern edge of the Southwest Region. McGregor (1965:25) says that Pueblos Indians living in the Pecos and Taos Pueblos (see figure 1) are obviously descendants of the Anasazi with a history traced back to the Basket Maker Peoples in the Plateau section of the Southwest. This also, however, is where the most Plains influence seems to show up. This
New Mexico, 1000–1700, based on a map from Apache, Navaho, and Spaniard, by Jack S. Forbes. (Kenner, 1969: 13)

Figure 1
probably could be expected due to the frontier position of these pueblos. Kidder (1923:43-44) says that the many stone tools found at Pecos, with raw material and style indicating a Plains origin, first became common in late Glaze IV Period, about A.D. 1550, and increased during the next one hundred years. These include various tools connected with hunting and the dressing of skins. This is during the historic period when the Spanish were affecting trade, but two of the finest specimens at Pecos come from the Glaze I Period. Several axes of schistose fibrolite were also found in the Pecos Ruin according to Wedel (1961:154) and he quotes Witte (1947) as suggesting the Canadian Valley in Texas as the likely source of the raw material.

Jennings (1956) notes that there are several other early traits which are suggestive of Plains influence although they offer no actual proof of contact. One of these traits is the grooved axe which has a long history in eastern areas of the U. S. It was present on the eastern borderlands prior to its first appearance in the Southwest which appears to be during the Snaketown Phase of Hohokam about A.D. 400-500. This was a 3/4 groove variety. The earliest known Anasazi appearance is about A.D. 600 and the earliest in the Mogollon seems to be about A.D. 1150-1200. There are also polished stone, perforated bone and incised bone tube traits as well as others which have varied but similar counterparts in eastern areas. Jennings (1956:102) also indicates that the tubular tobacco pipe could have eastern origins and mentions a Plains pottery sherd which was identified as Upper Republican by Griffin from a Gallina site. Similarities in the gross form of projectile points from the Southwest, Plains and Central Mississippi Valley over time are shown in Figure 2.

Wedel (1961:152) notes sites in the Chama Valley of north central New Mexico where a locally made pottery "of distinctly nonpuebloan kind," known as Potsuwii Incised, appeared after A.D. 400. He says that style and technique have much in common with that of the late prehistoric pottery in the Mississippi, Ohio and Missouri River Valleys as well as with those from early historic sites in eastern Nebraska and Missouri River Valley of South Dakota. Associated with the Potsuwii Incised in the Chama sites are hide dressing tools similar to those of the Central Plains. These include a dehairing tool, made from the leg bone of a deer or other large mammal, and a drawknife-type hide scraper made from the ilium or pelvic bone of a similar animal. Both of these types are found in Kansas City Hopewell sites dated about A.D. 400 or earlier. The first also occurs in Upper Republican sites which are contemporaneous with the Chama sites.
Figure 2.
There is also evidence of contact on the Plains surrounding the northern and eastern boundaries of the Southwest during this period. On the Chauquaqua Plateau in southeastern Colorado during the period A.D. 1000-1300, Campbell (1969:IV) feels that the people there were influenced by the cultures of the adjoining Southwest although not directly related to them. In the later levels there was micaceous ware which he felt could be related to Taos or to the Dismal River People (Campbell 1969:116). There was some Puebloan trade ware in southeast Colorado, too (Campbell 1969:355). Dated types include three from the Chucharas Drainage which probably date around A.D. 1000-1300. On the Apishapa River there was Santa Fe or Taos Black-on-White from around A.D. 1300.

At the Pratt County sites on the Ninnescah River in Kansas there are turquoise beads, obsidian and pot sherds including Rio Grande Glaze III, and one piece of Biscuit "B" Black on Grey." These sites probably date between A.D. 1400-1500 (Wedel 1959:289, 505). In one Upper Republican site near Optima, Oklahoma, Black-on-White sherds were found that were identified by Mera as from the Pecos Valley in the A.D. 1300-1375 age range (Burnett 1945:68).

There is a considerable amount of evidence for contact in the Texas Panhandle, too. In this area there are groups that built many-roomed stone and adobe buildings which seem to indicate a Pueblo influence. In both their farming and their utilitarian cord-marked pottery, they seem to have ties to Plains groups (Lowie 1954:209). The best known of these sites are at Antelope Creek, Alibates, Saddleback and Ruin Number 55. Krieger (1947:141) lists a number of architectural similarities to the Pueblos but also points out the relationships to the Upper Republican Focus. Lintz (1978:49) also mentions similarities which may indicate trade with both Upper Republican and Southwest groups.

It appears that the Antelope Creek Focus began about A.D. 1200 (Lintz 1979:173. The appearance of sherds relating to the late Pueblo III and early Pueblo IV indicate trade with the Southwest around A.D. 1300-1450 (Lowie 1954:209) when this group apparently disappeared from the area. At least fifteen Puebloan ceramic types have been recorded from Antelope Creek sites but the architecture of the sites shares few traits with the sources of the pottery (Lintz 1979:176). Of the almost five thousand sherds found at these sites less than two percent were of Puebloan origin. Few of the artifacts made from Alibates-like chert, found at Pecos, were in the time levels corresponding to Antelope Creek Focus (Kenner 1969:5).
At the Alibates site, trade sherds included Lincoln Black-on-Red, Glaze A Cienguela Glaze-on-Yellow, Aqua frío Glaze A and St. Johns Polychrome. All date in the A.D. 1200-1450 range. There were also turquoise, obsidian and olivella shell found at the Alibates Site (Lapidary Journal 1966: 1124). Another site from this Focus yielded Santa Fe, Wiyo, Galisteo and Rowe Black-on-Whites. All four indicate A.D. 1300-1375 time period (Lintz 1979:175).

Lintz (1979:177) points out that the development of both Apishapa in southeast Colorado and Antelope Creek in Texas roughly coincides with a major Puebloan expansion east of the Sangre de Cristo Mountains around A.D. 1150-1200. This is also the time when Mogollon Brownware is replaced by Puebloan types as trade wares. He feels that this suggests that Plains populations might have been responding to major population shifts in the Southwest.

The brief expansion of farming peoples from the Southwest onto the Plains is shown by sites on the Llano Estacado at the heads of the Red, Brazos and Colorado Rivers of Texas. That these are Puebloan groups is shown by Puebloan handmills, projectile points common to the late Pueblos of central New Mexico, and ceramic types including Chupadero Black-on-White and Glaze, El Paso Polychrome, Lincoln Black-on-Red and Glaze I-III. Kreiger (1974:144) suggest this group was forced out onto the Plains by enemies. Wedel (1961:150) indicates the circumstances of occupation are uncertain and these sites may even be seasonal in nature. Kreiger (1947:147) also mentions five Puebloan sherds of Upper Gila types found with the Titus Focus in Texas which seem to date in the 1400's.

Athapascan Movements and Interaction One area where there is little doubt that people of the Plains were interacting with people of the Southwest is in the case of the Athapascan Peoples. The major representatives of this linguistic group include the Southwestern and Plains Apaches and the Navaho. The Apache are often referred to in the literature by many band names. These include Querechos, Vaqueros, Cuartelejos, Faraones, Jicarillas, Conejeros, Carlanas, Calchufines, Limitas, Natageas, Palomas, Penxayes, Lipan, Chiricahua and others (Dolores Gunnerson 1956:354). These groups spoke dialects of the Athapascan language which is remarkably similar to that of groups in the interior of Northwest Canada and Alaska (Powell 1891). There is little disagreement that these peoples are a fairly recent group of immigrants from the North. There are, however, many theories on the exact route or routes they might have followed. Suggestions
have been made for the Great Basin, the main Rocky Mountain chain or the high plains east of the Rockies as possible migration routes (Wormington 1947:105). There is also a controversy over the exact arrival date or dates. Some feel that they were in the Southwest as early as A.D. 1200. Others feel that they did not arrive until the early 1500's (D. Gunnerson 1956). The Navaho appear to be the members of this linguistic group who were affected most by southwestern cultural patterns. Their culture seems to have absorbed a tremendous amount from Pueblos who preceded them in the Southwest (Spencer and Jennings 1965:318).

The Apache varied a great deal in their interaction with Puebloan groups. Onate mentioned Apache who were described as Pueblo dwellers (Hammond and Rey 1953:345, 484), and in 1719, Valverde described foothill Apache as living in adobe houses in settlements of one to eight. They also had ditches for irrigating their crops (Thomas 1935:110-133). The Plains Apache, on the other hand, seem to have been entirely nomadic, but they traded with the Pueblos and occasionally raided them. There are even recorded cases of the Apache forming an alliance with one Pueblo to fight another.

To Dolores Gunnerson (1956:350) it appears that the Apacheans were a moving force in the major increase in Plains tool types at Pecos Pueblo in the early 1500's. She speculates that although there was some trade with the Antelope Creek Focus it was not very active because these people did not need the Pueblos. They had their own corn and pottery. When the nomadic Teya and Querecho arrived, however, they did need the trade to get through hard times and it was also very beneficial to the Pueblos who participated. The Apaches apparently controlled strategic passes in the Sangre de Cristo Mountains for a long time. This gave them strong control over interactions between Plains and Pueblo groups (James Gunnerson 1969a:24).

Most evidence would appear to support the theory that the Apache, and probably the Navaho, entered the Southwest area from the Plains. Dolores Gunnerson (1956:360) cites historical reference to several expeditions to the Plains by Navahos where they went both to Quivira and to fight the Pawnee in their homeland. Such extensive journeys might indicate a previous knowledge of the country. There is also much discussion about the similarity of Dismal River archeological sites on the Plains and the Athapascans (Haskell 1971; Schlesier 1972; James Gunnerson 1960). The Dismal River pottery strongly resembles utility pottery
at Taos, Picurís, and some other Upper Rio Grande Pueblos; the percentage that is micaceous, an Upper Rio Grande trait, increases from north to south in sites (Wedel 1959: 593). There are also occasional finds of turquoise, obsidian, and glaze paint pot sherds at Dismal River sites as well as a similarity in location and type to ethno-graphically described Apache settlements (Wedel 1961:113). Although there is disagreement on details it would still appear that the various Athapascan groups were a major source of Plains-Southwest interactions, possibly acting as middlemen for contact between groups in the Southwest and on the eastern edge of the Plains, especially the Caddoan speakers.

The Dismal River research has also been tied into an area of less direct interaction between the Plains and the Southwest. The Fremont Culture in Central Utah shows several similarities to groups in the Southwest in such traits as figurines, bundles, maize, ball games and possibly cannibalism (Haskell 1971:115). It also has similarities to the Dismal River groups on the Plains. The Promontory Culture in northern Utah also shows some of these ties and may be a variant of the Fremont People (Aikens 1967). Whatever the nature of this relationship is, it does have importance for study as a possible indirect route for contact between the Plains and Southwest. While Fremont and Promontory Cultures are neither in the Plains nor the Southwest proper, they do provide a source of contact via the Great Basin and have caused a great deal of discussion (Wormington 1955; James Gunnerson 1956, 1969b; Aikens 1966, 1967; Haskell 1971). Shoshonean groups could have played a similar role in more recent times as a contact via the Great Basin.

Protohistoric and Historic Contact One of the more interesting sites from the historic period is located in Scott County, Kansas. This apparently was the site of El Quartelejo which was described by the Spanish. In the unrest preceding the Pueblo revolt of 1680, several families of Taos Indians fled to El Quartelejo on the Buffalo Plains. The Spanish sent Juan de Archuleta to bring them back just prior to 1680 Wedel (1959:22). After the Revolt there were again Pueblo Indians who fled to El Quartelejo, including a group of Picurís who went there in 1696. In 1706 Ulibarri left Santa Fe to return these Indians (Wedel 1959:71). The Puebloans went to El Quartelejo to stay with Apaches who were apparently their earlier trading partners.
The site in Scott County appears to have many Dismal River traits, except for a number of items of Puebloan origin (Wedel, 1959:463). The Puebloan traits include architecture, rectangular slab-lined hearths, grinding troughs, shaft straighteners of steatite-like material (very similar to ones found at Pecos), irrigation ditches, tobacco pipes strongly reminiscent of late Rio Grande styles, olivella shells turquoise, obsidian, and Puebloan ceramics. These include Tewa and Pojoaque polychromes, "Kapo" Blackware, late Redwares and Rio Grande culinary wares. The ceramics indicate an A.D. 1600 to 1700 date.

Further east, Puebloan sherds are often found in Great Bend sites of the protohistoric and historic periods (see Figure 3). At sites in Rice County which Wedel (1942) indicates may have been visited by Coronado, there are turquoise beads, obsidian, items of European manufacture and sherds of late Rio Grande Glazes which date about A.D. 1525-1650. One sherd is specifically identified as Chupadero Black-on-White (Wedel 1942:6). In other Great Bend sites of the same era, there are similar finds of Puebloan ceramics. They include the Saxman Site on Cow Creek, some sites on the Little Arkansas River, the Country Club Site at Arkansas City and sites near the great bend of the Arkansas River. During this same time period at Pecos, there are many tools indicative of the Great Bend Sites such as chipped end scrapers, cancellous bone paint applicators, numerous cap hide grainers and others (Wedel 1959:583).

Recent work in Oklahoma has shown other examples of contact. On the Kaw Reservoir in northern Oklahoma, obsidian flakes of undetermined origin have been found, probably of Woodland age (Rohn 1981).

Farther south Baugh and Swenson's (1981 a & b) recent publications on protohistoric exchange systems deal with the Edwards I and Taylor Sites in Beckham County, Oklahoma. Obsidian flakes from the Edwards I Site were analysed by X-ray flourescence and compared to sources in New Mexico, Colorado, Arizona and Utah. Two types were found. Twenty-nine items were found to be from the Jemez Mountains in northern New Mexico, 600 km west of the site. A single item was found to be from still farther west in the San Francisco Mountains of northern Arizona (Baugh and Swenson 1981a:4). There were also turquoise and micaceous pottery found which was indigenous, but possibly influenced by techniques in the Southwest such as firing, decoration and smoothing of the interior (Baugh and Swenson 1981b:84). Southwestern sherds made up 5.16%, or 191 sherds, of the ceramics at the Taylor Site. Pottery from Pecos was predominant at both sites. The sherds from Taylor included one from Gran Quivira and five from Taos or Picuris.
Those from Edwards I included one from Kuaua, one from San Lazaro and a Hopi Brown-on-yellow Skiyati ware. There was also a Vadito Micaceous from Picuris or Nambe. The sherds and obsidian from northern Arizona may be the result of indirect contact since sherds found at Pecos and Picuris show trade with the Hopi (Baugh and Swenson 1981a:5). Both sites in Oklahoma also show trade with the Southwest region at the same time periods (Baugh and Swenson 1981b:99).

Baugh and Swenson (1981b:83) also quote Krieger (1946:237-241) as giving evidence for trade across the Plains. This consists of neck-banding in Caddo country which closely resembles the Southwestern technique of corrugation. He suggests certain shouldered and carinated bowl styles found at Pecos were borrowed from the styles of the Texarkana Focus Caddoan groups in the early 1500’s. Krieger (1947:145) also mentions a Plains site at Spanish Fort on the Red River of Texas which has Tewa Polychrome sherds and dates in the mid-1700’s.

ETHNOGRAPHIC EVIDENCE OF CONTACT

There are many early references to interactions between native residents of the Plains and Southwest. There is archaeological evidence of Apaches at Pecos Pueblo (Gunnerson and Gunnerson 1970). When the first Spaniards arrived there in 1541, they reported that Querechos and Teyas of the Plains traveled to the Pueblos to trade hide robes and meat for corn. Kessel (1979:k34) notes that the Apache were at Pecos every year at harvest time to trade and some spent the winter beneath the walls of Pecos. In 1598 Zaldívar met Vaqueros returning from Taos and Picuris to the Plains. They had traded meat, hides and other items for cotton blankets, maize, pottery and some small green stones (Wedel 1959:70). In the 1650’s Fray Alonso de Posada reported Apaches brought robes and captive Indians from Quivira to trade for horses. He added that they took particular care to maintain peace with the Spaniards in order to preserve an outlet for their dressed hides (Kenner 1979:16). Fray Augustin Vetancourt wrote, before 1700, that more than five hundred Apaches were coming annually to Pecos with their laden dog trains to trade for corn, varicolored stones and tobacco. There are also reports of Plains Indians bringing salt, tallow and other items to trade and sometimes exchanging or ransoming prisoners during their visits.

Kenner (1969:18) reports that at times there were specific trade alliances between groups, with the Siete...
Rios Apache going to the Tompiros, Apache Del Acho going to Taos and Faraones, who were probably the same as Vaqueros, going to Pecos as examples of this. At one time the Tompiros Pueblos were called the Jumano Pueblos by the Spanish because so many Jumano Indians went there to trade. In the 1580's Espejo described trade between the Acoma and Cochito Pueblos and the Apache (Hester 1962:25) and apparently the Navaho (Hester 1962:58) and even the Zunis and Hopis of the western deserts had plenty of buffalo hides for winter wear (Kenner 1969:11).

The Comanches made their first recorded visit to Taos for trade in 1707 and were still reported to appear annually in 1736 (Kenner 1969:28). After the Spanish had gained control, annual summer trade fairs were held at Taos, Pecos and Picuris in which the Plains Tribes participated (Lange 1979:202). Trade was not always limited to the area of the Pueblos either. In 1693 there was a report that the leaders of Picuris had gone on an important journey to the Buffalo Plains to barter (Kenner 1969:20). Pecos also sent out traders onto the Buffalo Plains according to Castaneda (Kenner 1969:9). Another report of the Tompiros stated that they were afraid to visit the Plains at that time, warning that the followers of the buffalo would kill any who trespassed on their domain (Kenner 1969:10).

Many further details of trade in historic times are listed by Kenner (1969), Thomas (1940) and Lange (1957). The economic aspects of this trade appear to have had far-reaching effects. Kroeber (1928:393) says that "Taos, the frontier settlement, is counted Pueblo and essentially is such: but in material culture and dress it is half Plains." Jeancon (1960) points out that Taos and the Jicarilla Apache had many points in common, citing the genesis myth of each example. There is evidence that they had an alliance and intermarried. Kenner (1969:9) cites evidence that Pecos used their military power to become a center of trade and Kessel (1979:159) states that they became dependent on the trade goods bought by the Vaqueros. Evidence that even at first European contact, this interaction was well developed is shown by the presence of Quiviran and Harahey Indians at Pecos when Coronado arrived. These were called Xabe, Sopete, and the Turk (Kessel 1979:21-22). The very fact that the early Spaniards could find guides able to communicate with as many groups as they found on the Plains is evidence of a certain level of contact. On the DeSoto Expedition in eastern Texas at Guasco in 1541, they found "turquoise and shawls of cotton which the Indians signed, were brought from the direction of the sunset" (Baugh and Swenson 1981b:83).

It must be remembered, though, that the relationships between these groups were not always friendly. Castaneda
(Wedel 1961:103) reported raiding in the Rio Grande country by the Teyas, that they had destroyed several towns near Pecos sixteen years earlier and had even besieged Pecos unsuccessfully. Kidder (1962:83) attributes the decline and final abandonment of Pecos to the arrival in the Southwest of the Comanche, a Shoshoean linguistic group particularly hostile to Pecos.

In the early 1700's it was common for the Pawnee to raid in the Southwest (Dunbar 1910:405) and some have argued that cultural parallels indicate a much earlier contact. Linton (1926:465) suggests that the Skidi Pawnee's "Morning Star Sacrifice" may have had a dual origin with part coming to them by way of the Mississippi and part by way of the Southwest. Parsons (1929:642) lists many similarities between Pueblo and Plains ritual practice. She states, "When cultivation of maize was acquired by the Pawnee, it carried ideology and ritualism similar to the Pueblo." Underhill (1954:650-51) specifically points out the four corn groups of the Pawnee are similar to Isleta; a mother corn of the Pawnee, like the Keresan Iyatiko; and the way the Pawnee divided their sacred bundle into summer and winter moieties, similar to the eastern Pueblos. Parsons (1929) also notes groups such as police groups and warrior societies which occur in parts of the Southwest and are well known Plains traits.

An example of contact from even farther north on the Plains comes from the journal of Andrew Garcia (1967). While in eastern Montana in 1878, he mentions meeting an old Blackfoot Indian named White Grass. White Grass told Garcia (Garcia 1967:165) of his first time on the trail as a warrior, "long, long ago." He went on a raid for horses to a place "where cactus is a tree and the ground is dry." Along with many other Blackfoot warriors,

" started out afoot, in the Spring when the grass got good. . . in the land of the Shoshones, their enemies, they soon surprised some camps and got horses to ride. They stayed with the Utes all Winter. In the Spring a large party of Utes, including the Blackfeet, started south on the war trail. It was not long until they came to the land where the Injuns lived who had strong tipis, with no doors. They went on top with a ladder, which they pulled up so no one could get at them. Then they went down in their tipi through a hole in the top."
LOCATIONS OF SOME SITES DESCRIBED IN THIS SECTION

FIGURE 3

(Baugh, 1981b:94)
The Blackfeet spent the next winter with the Utes again and returned to Montana the next Spring.

Another ethnographic account which gives an excellent insight into the nature of some contact is the story of Juan Sabeata (Kelly 1955). Juan was a chief of the Jumano and Cibolo Indians from at least 1683 to 1692. These Jumanos were a Plains buffalo group who had been in Texas well before 1500. Sabeata made at least eight journeys across almost the entire width of Texas during the summer months (see Figure 4). His was probably not the only group of bison nomads who developed a profitable trade between the Southeast Plains and the Southwest either. He was a great gossip and a major trade item for him was not in material goods but in news. Sabeata gives a unique look at "word of mouth" diffusion and such nonmaterial transmission of traits could, at least in some cases, account for large blank areas between similar cultural traits in North America.

Another way to look at ethnographic information is to look for long lasting routes of diffusion. Wedel (1950:101) identifies three principle historic routes of travel between the Plains and Southwest Regions. These could provide clues to earlier movements. The best known of these is the Santa Fe Trail. It was an excellent route from the upper Rio Grande Pueblos to eastern Kansas with suitable camping spots at five to thirty-six mile intervals. Coronado's band returned along this approximate route on their journey of 1541, so it may well have been in use prior to that time. A second route followed by Josia Gregg (1851 II:136) led eastward from the Santa Fe district and down the Canadian River. The third route which had been followed by early Spanish explorers and soldiers went up the east front of the Rockies to the Arkansas River near Pueblo, Colorado.

A number of studies have also been done of the diffusion of the horse northward after it was introduced in the Southwest by the Spanish (Wissler 1914; Haines 1938; Ewers 1955; Jacobsen and Eighmy 1980). This diffusion may have been by trading or theft, but the routes (see Figure 5) could still have imporance in studying earlier diffusion of traits in either direction.

Another trait introduced by the Spanish, which also very likely diffused from the Southwest and spread very rapidly across the Plains and beyond, is the watermelon. (Citrullus lanatus). This plant apparently spread so rapidly that many early explorers from the East recorded it as a native crop of North America. The course and speed of its diffusion has been studied by Blake (1981). Similar studies of European trade items, as they spread out from the Southwest or into it, could also give insights.
Figure 6

Figure 5 Map showing the northward spread of the horse in western United States. Lines indicate the approximate routes followed by horses; the dates, the approximate time the horse reached each area. (Haines, 1938: 430)
Figure 6: Schematic diagram of population movements in northeastern New Mexico in late prehistoric and early historic times, according to Wendorf (1960).
Wendorf (1960) has mapped and described the major routes of movement, both of peoples and traits in northeastern New Mexico along the Plains - Southwest border. Population movements are shown in Figure 6.

Many theories have been given on the effects of Plains - Southwest contacts in all aspects of life for the groups involved and on the effects of other factors on the nature of contact. Kelly (Kenner 1969:9) suggested that drought conditions may have caused a shift from trade relations to war when Plains Indians who were dependent on the trade found that the Pueblos had little to trade because of the drought. This may have left them little alternative but to raid.

Wedel (1950:100) cites the arrival of more warlike Plains tribes on the Southwestern frontier in the early 1700's as a possible cause of the sharp decrease in trade interactions at that time. There are also many other theories which explain the migration or disappearance of various Puebloan groups as a result of harassment by nomadic raiders, often the Athapascans. Jett (1964:290) lists Gladwin as a strong supporter of the idea that the arrival of the Athapascans profoundly affected the lives of the earlier inhabitants of the Southwest. Linton has argued against this because of the superior numbers and organization of the Puebloans, but others point out the vulnerability of the crops upon which the Puebloans were dependent (Jett 1964:290).

CONCLUSION

In order to limit the extent of this paper, a few lines of evidence which at the moment seem less fruitful than those presented have been left out. These areas include physical anthropology, comparative linguistics and comparative kinship analysis. A good summary of the evidence from these areas is given by Lange (1953:212:226).

Although not enough is known about most of the Southwest - Plains contact to describe the full interaction that was taking place, there are some trends that seem to stand out. One is that, although a relatively obvious cultural boundary existed, there has been a great deal of interaction across that boundary far into the past. Some contacts may not have been direct, but simply passed from one group to another by a series of lesser contacts or possibly by word of mouth. In addition to the many types of evidence given here, there is a distinct possibility that, at times, fairly vigorous interaction may have taken place which left little
in the way of material remains for the archaeologist to find. It would seem possible for trade in items such as salt, maize, meat, hides, slaves or simple information to be carried on at a fairly large scale with little material residue or visible change in the culture involved.

It is also possible that two groups with life styles as diverse as the dog transporting nomads of the western High Plains and sedentary irrigation agriculturalists of the Southwest found little of value in each other's cultures, other than food and self-transporting slaves or animals. Many nomads would have little desire to transport heavy and fragile ceramics or build massive houses and the Puebloans may have found equally little use for buffalo processing tools or small tents for which repair and replacement hides were not easily obtained. There are exceptions, of course. Sometimes the two groups did find use for the other's tools as is shown by the examples in this paper.

There are also sedentary people on the Plains, though seldom as far west as the High Plains bordering on the Southwest, and nomads such as the Apache who lived in the Southwest. The boundary between the Southwest and the Plains would seem to have been both cultural and geographic. The significant boundary is cultural but the culture is never entirely free from the influence of environment. Geography influenced two very different life styles which in turn reinforced the geography to divide these two areas. The boundary could be crossed, often with major impact on both sides - sometimes with favorable economic impact in the form of trade - sometimes with unfavorable population pressures and sometimes with the destructive impact of warfare. The boundary maintained itself, except for small shifts in its geographic position, with each life style continuing to dominate its respective side. The dichotomy must have existed at least since agriculture became established in the Southwest and possibly before. It seems Southwestern contact with sedentary groups farther east on the Plains should have resulted in more cultural blending of the two similar life styles but this apparently did not happen. Possibly this was because the contact was usually not direct, but was via nomadic groups who traded in both directions.
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