THE KIVA, *Vol. 46, Nos. 1-2, 1980*

THE MESOAMERICAN CONNECTION IN THE SOUTHWEST

RANDALL H. McGUIRE
Department of Anthropology
University of Arizona

ABSTRACT

The theory that Mesoamerican pochteca intruded into the Southwest between A.D. 1000 and 1400 and that these pochteca exercised political and economic control of the region during this period is critically considered. Close examination of the data and arguments advanced to support this theory reveal that it cannot be accepted. An alternate interpretation of Mesoamerican-Southwestern interaction is presented. This alternate view is not based on a simple concept of domination of one area by another but on consideration of shifting trade relations through time.

INTRODUCTION

Attempts to consider the extent of Mesoamerican connections in the Southwest have largely taken one of two extremes: that the Southwest developed independently of Mesoamerica, or that developments in the Southwest were determined and dominated by forces from Mesoamerica. The concept of a Mesoamerican-dominated Southwest originates in the 19th century. The size of many Southwestern ruins impressed early Anglo explorers and settlers. Believing that these ruins exceeded the abilities of the Indians they encountered, and having read Prescott's *History of Mexico*, they attributed the ruins to Aztecs fleeing Cortez's conquest of Mexico. The names of Southwestern ruins such as Aztec Ruin and Montezuma Castle reflect this notion of Mesoamerican domination. Archaeologists working at the beginning of this century established a long developmental sequence in the Southwest demonstrating that many of these ruins predated the Aztec ascendancy, thus dismissing the Aztec theory. Partly in reaction to earlier views of Mesoamerican domination, these same early workers stressed the isolation of the Southwest and sought to attribute all aspects of Southwestern development to independent invention. Morris's (1939) contention that pottery developed in the Four Corners area independently of Mesoamerican traditions reflects this view.

Numerous studies since then, such as Haury (1945b), Jennings (1956), Kelley (1966), and Schroeder (1965, 1966), have demonstrated that connections between Mesoamerica and the Southwest cannot be denied and that many traits encountered in the Southwest are derived directly or indirectly from Mesoamerica. One of the key studies defining Mesoamerican traits is Ferdon's (1955) consideration of architectural parallels between Chaco Canyon and

Mesoamerica. In an attempt to explain these parallels, and to spark further consideration of a Mesoamerican connection in the Southwest, he proposed that these architectural parallels resulted either from Toltec nobles fleeing the fall of Tula or the activities of Mesoamerican pochteca in the Southwest. Other researchers, such as DiPeso (1968, 1974), Kelley and Kelley (1975), Reyman (1978), and Lister (1978), have elaborated this pochteca theory into an explanation of Southwestern development based on Mesoamerican domination. The theory has gained popular appeal as indicated by an *In Search Of* television program broadcast in Tucson, Arizona, on June 17, 1979. This segment featured one of the theory's chief proponents, Dr. Jonathan Reyman, and presented the theory in a very positive manner. The pochteca theory has also caught the interest of Mesoamerican archaeologists; Weaver (1972), for example, accepts it. Unlike the opposite view of Southwestern isolation and the Aztec theory of Mesoamerican domination, the pochteca theory has not been disproved and requires critical review.

This theory proposes that highly organized groups of Mesoamerican long-distance traders (pochteca) indirectly influenced the development of the Southwest from the introduction of agriculture and pottery until A.D. 1000, and that after A.D. 1000 pochteca groups physically intervened in the Southwest, controlling developments there until approximately A.D. 1400. Advocates of this theory tend to explain the cultural evolution of the Southwest as simply a reflection of the evolution of Mesoamerica. To quote Kelley and Kelley (1975:186), "all the major southwestern cultural developments should be considered together, as peripheral manifestations of the cultural evolution of greater Mesoamerica conditioned by local ecological factors and frontier cultural drift."

Support of this theory is based on four lines of argument: (1) the presence of Mesoamerican-derived traits in the Southwest, (2) the identification of presumed pochteca burials in the Southwest, (3) the identification of presumed pochteca outposts in the Southwest, and (4) the presumed missionization of the Southwest by Mesoamerican cults. These lines of argument, if accepted, would be logically adequate to establish the validity of the pochteca theory. A sudden influx of Mesoamerican traits at a given time in the Southwest would be expected if pochteca had intruded to control the region. The most direct evidence of such an intrusion would be the physical remains of pochteca. By analogy to Hudson's Bay trading posts and the Spanish entrada into the Southwest, domination of a large native population by a small more advanced group entails the establishment of outposts from which such control can be maintained and, in the case of traders, goods can be gathered for export back to a home region. Control of a large native population by a small group can almost never be accomplished by coercion alone so that importation of foreign cults provides a means by which division can be instilled in native populations and

spiritual dependencies established which support the new order. Evaluation of the pochteca theory therefore requires that the archaeological evidence to confirm each of these propositions be reviewed. Insights gained from such a review also provide a basis for a more refined consideration of the Mesoamerican connection in the Southwest.

REVIEW OF DEFINITIONS AND CONCEPTS

The Southwest as defined in this paper includes the states of Arizona, New Mexico, southwest Colorado, southeast Utah, trans-Pecos Texas, Sonora, and Chihuahua. This corresponds to Kirchoff's (1954) concept of the Greater Southwest which is used by Kelley (1966).

A second term used by pochteca theorists to refer to this area is the Gran Chichimeca. Chichimec is the Nahuatl term for barbarians and Chichimeca refers to the land of the barbarians. The use of this term by some pochteca theorists, specifically DiPeso (1968, 1974), presents a number of problems. They treat the term as if it applied to a specific cultural group or a specific region instead of being a generic term for all groups markedly less advanced than the high cultures of Central Mexico. DiPeso (1974) defines the Gran Chichimeca as including most of the western United States and Mexico north of the Tropic of Cancer, yet when he discusses Chichimecan history he emphasizes events in the Southwest. As a result, when he cites Spanish documents (DiPeso and others 1974b:272) referring to a feather merchant of Oxitipar who traded with the Chichimecs, the reader receives the impression that this refers to trade with the Southwest, when in fact it simply means the merchant traded with barbarians.

Another crucial concept to this discussion is the cultural area of Mesoamerica. Mesoamerica refers to the prehistoric high culture area of Central America. The northern boundary of Mesoamerica shifted through time but at its northernmost extent between A.D. 1000 and 1520 it included parts of the modern Mexican states of Sinaloa and Durango (Kirchoff 1943). The pochteca theorists treat Mesoamerica as being sufficiently homogenous to be sampled haphazardly in providing traits for comparison to the Southwest. They compare such diverse traits as an observatory from Yucatán (Kelley and Kelley 1975:209), spindle whorls from west Mexico (DiPeso 1974), a ball court from Central Mexico (DiPeso 1974), and even an artistic motif from the Dominican Republic (DiPeso 1974), to specific cultural manifestations in the Southwest as if these Mesoamerican traits all originated from a single culture. On the other hand, they draw detailed and specific information concerning beliefs, cults, gods, and institutions (such as pochteca) almost solely from Sahagún (1932, 1959). From this perspective the pochteca theorists present the gods and institutions of the 16th century Aztecs as if they were universal within

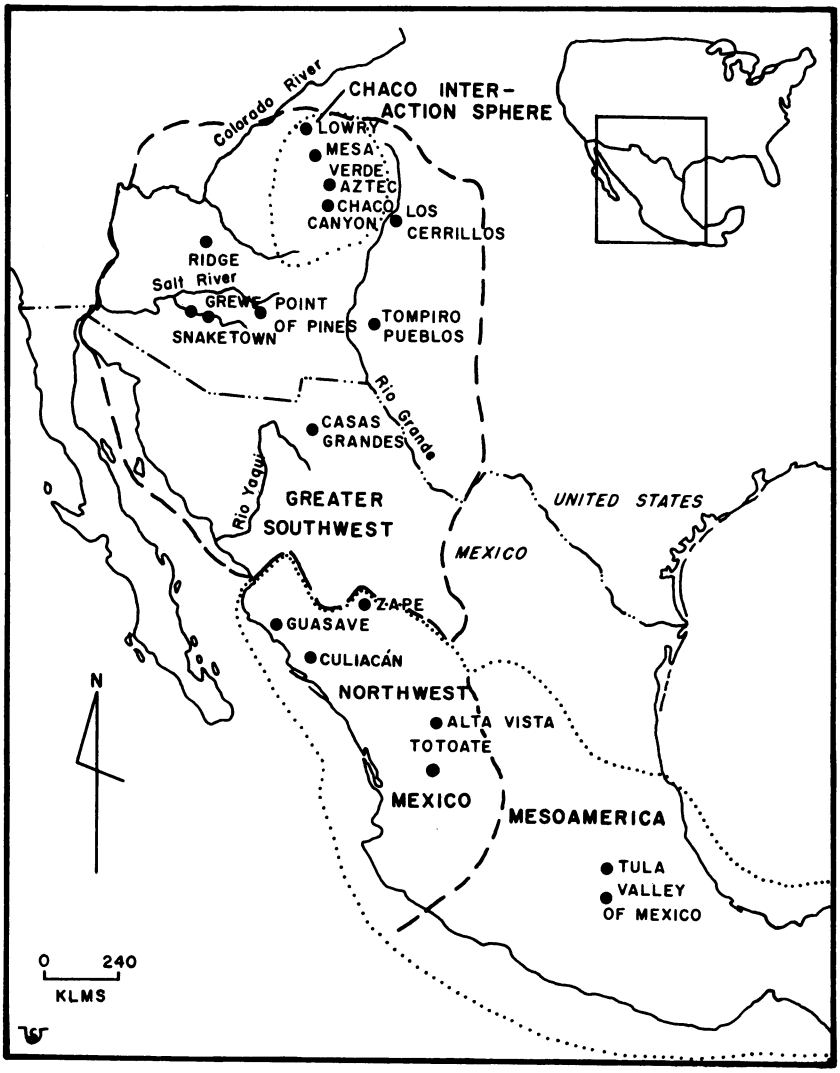

Figure 1. Map of the Southwest and northern Mesoamerica showing locations discussed in the text.

Mesoamerica and not products of a specific culture or time. Needless to say, Mesoamerica was, and is today, a culturally diverse area, and picking traits willy-nilly out of their cultural contexts demonstrates little concerning patterned relationships with the Southwest. The projection of Sahagún's account of 16th century Aztec memory culture back through time is of questionable value. The extent to which it is valid must be demonstrated in Mesoamerica

before comparisons can be made to the Southwest. More importantly, the use of Sahagún's account as a universal model of Mesoamerican culture is spurious.

The final concept that must be considered is the institution of the pochteca. Among the Aztec and in several other 16th century central Mexican city-states, the pochteca were a hereditary class of long-distance traders with their own rites, feats, courts, hierarchy, insignia, and god, Yiacatecuhtli (Sahagún 1959, Acosta Saignes 1945, Bittman and Sullivan 1978). The city-states directed pochteca activities, and pochteca served as spies and advanced agents of conquest states. The pochteca were not simply long-distance traders, but agents of expansionistic empires (Sahagún 1959, Acosta Saignes 1945, Bittman and Sullivan 1978). Therefore, evidence of direct long-distance trade between the Southwest and Mesoamerica alone is not sufficient evidence for the existence of pochteca-like groups in the Southwest.

MESOAMERICAN-DERIVED TRAITS

Pochteca theorists have put great stock in the occurrence of Mesoamerican-derived traits or influence as evidence for pochteca activity in the Southwest. Haury (1945b:62) noted that "The standard approach to a problem such as this is to bring together comparable elements. This is an absorbing game but does not always lead one to the right conclusion." Comparison of traits without reference to their cultural contexts cannot establish intervention in the Southwest by representatives of specific Mesoamerican states. Establishment of such intervention is necessary for proof of the pochteca hypothesis since pochteca were agents of specific conquest states. Furthermore, Mesoamerican influence in the Southwest does not by itself indicate pochteca activity as this is only one possible mechanism to account for such influence. In support of their hypothesis the pochteca theorists have stressed the extent of such influence and the suddenness of its appearance at different times. A brief examination of the Mesoamerican influences advocated for one region of the Southwest, Chaco Canyon, suggests these arguments are somewhat forced.

Lister (1978:236-39) has presented a list of 30 traits (Table 1) that he identifies as or presumes to be of Mesoamerican origin. Although he recognizes that the appearance of these traits is not a priori evidence of pochteca in Chaco Canyon, he feels that the extent of these traits and the suddenness of their appearance at approximately A.D. 1000 supports the pochteca theory. This date of A.D. 1000 is important, as the beginning date for the cultural florescence of Chaco Canyon is ca. A.D. 1030 (Vivian and Mathews 1965:30). After close examination it is apparent that not all the probable Mesoamerican traits on this list are unknown among the Anasazi before A.D. 1000 and some of the traits may not be of Mesoamerican origin. Lister names the four architectural

parallels presented by Ferdon (1955) but ignores (as does every other pochteca theorist cited in this paper) Gordon Vivian's (1959:82-84) rebuttal of Ferdon's position. Vivian points out pre-A.D. 1000 Anasazi precedents for most of these architectural features and notes that even though these features replicate Mesoamerican forms they function differently in Anasazi contexts. He also notes that architectural parallels from Mesoamerica for tower kivas and tri-walled structures are based on little more than shape.

Ferdon (1955:7) identified Room 1934-3 in Talus Unit 1 (a small ruin near Chetro Ketl) as a platform mound and Lister (1978:237) emphasizes this as evidence for Mesoamerican influence at Chaco. Accepting that Room 1934-3 consisted of a stairway leading to a low platform, R. Gwinn Vivian (personal communication) has suggested an alternate interpretation for its function. He noted in his initial survey of Chaco roads that one road from Pueblo Alto led to the top of the cliff face directly above room 1934-3 in Talus Unit 1 (Vivian 1972:Figure 8). The cliff face at this point is approximately 15 m high, and

Table 1. Traits which Lister (1978) suggests diffused from Mesoamerica to Chaco Canyon about A.D. 1000.

Trait	Earliest Appearance in S. W.	Culture Area	Reference
Rubble Core Masonry	PII (A.D. 900)	Anasazi (Chaco)	Vivian (1959:82-84)
Square Columns	PII (A.D. 950)	Anasazi (Chaco)	Vivian (1959:82-84)
Tower Kivas	A.D. 975-1075	Anasazi (Mesa Verde)	Hayes (1964:94)
Tri-Walled Structures	None reported from	Mesoamerica	Ferdon (1955:12)
Seating Discs for Posts	A.D. 1000	Anasazi (Chaco)	Vivian & Rieter (1960)
Platform Mounds	A.D. 500	Hohokam	Haury (1976:82)
T-Shaped Doorway	Originated in S.W.	not Mesoamerica	Love (1975)
Cylinder Jars	PI (A.D. 750-850)	Anasazi	Judd (1954:210)
Effigy Vessels	PI (A.D. 750-850)	Anasazi (Chaco)	Gladwin (1945:Pl. XIe)
Incense Burners	Pre-A.D. 1	Hohokam	Haury (1976:340)
Stamps or Seals	A.D. 1030-1130	Anasazi (Chaco)	Judd (1954)
Horned Serpent Motif	A.D. 700-900	Hohokam	Haury (1976:235)
Copper Bells	A.D. 900-1100	Hohokam	Gladwin et al. (1937:164)
Iron Pyrites	A.D. 550-750	Hohokam	Gladwin et al. (1937:132)
Conch Trumpets	A.D. 900	Hohokam	Gladwin et al. (1937:147)
Shell Beads	6000 B.C.	Desert	Jernigan (1978:15)
Macaws	A.D. 100	Hohokam	Haury (1976:116)
Turkeys	Mid-A.D. 600s	Anasazi	McKusick (1974:275)
Bone Pins	A.D. 700-900	Hohokam	Haury (1976:304)
Ceremonial Canes	A.D. 1-400	Anasazi (Kayenta)	Guernsey and Kidder (1921:100)
Painted Wood (Altars)	150 B.C.-A.D. 500	Mogollon	Vivian et al. (1978:24)
Turquoise	A.D. 1-400	Anasazi	Jernigan (1978:161)
Pseudo-cloisonné	A.D. 700-900	Hohokam	Gladwin et al. (1937:132)
Mosaics	A.D. 1-400	Anasazi	Jernigan (1978:Fig. 90)
Canals	300 B.C.-A.D. 550	Hohokam	Haury (1976:132)
Dams and Reservoirs	A.D. 1000	Anasazi (Chaco)	Vivian (1974)
Roads	A.D. 1000	Anasazi (Chaco)	Lyons & Hitchcock (1976)
Signal Stations	A.D. 1000-1150	Anasazi (Chaco)	Hayes & Windes (1975)
Architectual Alignments	A.D. 925	Anasazi (Chaco)	Williamson et al. (1975:41)
Altars in Central Courts?	A.D. 1000	Anasazi (Chaco)	Reyman (1971)
Tree of Life?	A.D. 1000	Anasazi (Chaco)	Reyman (1971)

Vivian suggests Room 1934-3 functioned as a landing and footing for a massive wooden ladder or stairway connecting the platform with the road above. It may be premature to reject Ferdon's (1955) interpretation in favor of Vivian's; however, Vivian's interpretation does demonstrate that there is no clear-cut evidence for platform mounds in Chaco Canyon.

The tri-walled structures cited by Lister as a Mesoamerican-derived trait have long puzzled Southwestern archaeologists, and parallels in Mesoamerica have been difficult to identify. Kelley and Kelley (1975:209) propose that the antecedent to Anasazi tri-walled structures is the Caracol at Chichén-Itzá, Yucatán, dated between A.D. 1000 and 1200. As described by Ruppert (1935), the Caracol is a two-storied structure with two concentric walls roofed with corbelled arches rising to slightly over 13 m and with a spiral staircase in the center. The tower itself is set on two stacked platforms, the lower one being 6 m in height and covering 3,445 m^2. The upper platform rises to a height of 3.24 m and covers 483 m^2. The total structure has a height of over 22 m and covers 3,445 m^2. By way of comparison the Hubbard site, a tri-walled structure at the Anasazi site of Aztec Ruin, which dates between A.D. 1100 and 1300, was never more than a single story, 6 m in height, and had three concentric walls covering a maximum area of 734 m^2. In addition it has two kivas, one in the structure's center and the other attached to the south edge of the outer wall (Vivian 1959:6). The Caracol and the Hubbard site are similar only in being circular and having multiple walls. In the case of the Caracol the multiple walls result from a central spiral staircase, while tri-walled structures in the Southwest have no apparent structural reason for multiple walls. These structures are separated by over 4,500 air km and circular multi-walled structures have not been reported in the area between, so the Caracol appears an unlikely prototype for Anasazi tri-walled structures.

Beyond major architectural features, a number of the traits which Lister advocates as evidence for increased Mesoamerican influence in Chaco Canyon at A.D. 1000 have been documented in the Southwest at earlier dates than in Mesoamerica. These would include T-shaped doorways (Love 1975), turkeys (McKusik 1974:275), and turquoise (Jernigan 1978:161). The jewelry items, such as shell beads and bone pins, are dubious indicators of Mesoamerican influence. Shell beads occur in the Southwest at least as early as 6000 B.C. (Jernigan 1978:15) and, in terms of jewelry in general, Jernigan (1978:222) concludes that commonality in form between the Southwest and West Mexico results not from a one way passage of style north but from long-term casual interaction between the two areas beginning ca. A.D. 1. In addition to traits of questionable Mesoamerican origin, Table 1 shows that the majority of Lister's traits occur in the Southwest in general or in the Anasazi region specifically before A.D. 1000 and are not, therefore, good evidence for direct Mesoamerican contact with Chaco Canyon at A.D. 1000.

Of Lister's 30 traits of Mesoamerican origin which are supposed to appear suddenly at Chaco Canyon in the mid-1000s only eight are not of questionable Mesoamerican origin or do not appear in the Southwest before A.D. 1000. These eight traits include the inference that a tree in the courtyard at Pueblo Bonito represents the "tree of life." This is a questionable inference as similar symbolic forms do not always indicate similar meanings.

More important than Lister's apparent overemphasis of the extent and impact of Mesoamerican influence at Chaco Canyon is the fact that none of the traits he lists can be traced to specific Mesoamerican cultures. The presence of these traits does not, therefore, support the contention that Chaco Canyon was dominated by the pochteca of a given Mesoamerican state. As Lister (1978:240) indicates, these traits demonstrate only that there was contact between Chaco Canyon and Mesoamerica. They do not tell us the nature of this contact, whether it was the result of the passage of ideas or commodities from group to group, or direct exchange between occupants of Chaco Canyon and individuals in Mesoamerica. Demonstration of pochteca domination in the Southwest requires other lines of evidence beyond the comparison of traits.

Pochteca Burials

The recovery of the physical remains of a Mesoamerican pochteca in the Southwest would be strong evidence for pochteca activities there. Two researchers, Frisbie (1978) and Reyman (1978), have identified remains which they suggest are those of pochteca. Frisbie (1978) reviews most of the high status burials reported for the Southwest and concludes that some of them may be pochteca. He does not indicate what specific attributes should be present in a pochteca burial but instead refers to Reyman's (1978) article for such consideration. Reyman (1978:245) uses Sahagún's (1932, 1959) description of pochteca status symbols which includes a cane or staff, lip, ear, and nose plugs often made of gold, and distinctive shields, feather devices, hair styles, body paint, and clothing. He uses Sahagún's (1959:25) description of the burial of a pochteca in Anahuac as a model of pochteca burial practices.

> But if only sickness took one, if he died there in Anahuac, they did not bury him. They only arranged him on a carrying frame. Thus did they adorn the dead: they inserted a feather labret in his lips, and they painted black the hollows about his eyes; they painted red about the lips with ochre, and they striped his body with white earth. He wore his paper stole, each end reaching his armpit. And when they had adorned him, then they stretched him on the carrying frame; they bound him there with the carrying frame cords. Thereupon they bore him to a mountain top. There they stood him up; they leaned the carrying frame against (a post). There his body was consumed. And they said that indeed he had not died, for he had gone to heaven; he followed the sun.

From this description Reyman develops a list of artifacts which he feels are indicative of a pochteca burial.

Based on his artifact list and Sahagún's (1959) description, Reyman (1978:258) identifies the Magician's burial at Ridge Ruin (McGregor 1943) and skeletons 13 and 14 from Room 33 in Pueblo Bonito (Pepper 1920:195-96) as pochteca burials. Reyman's supporting arguments are, however, inadequate in two respects and preclude acceptance of his identifications. First, none of the burials conform to the expectations resulting from Sahagún's description. Reyman (1978) states that the question of later interment is left open by the description. However, Sahagún's (1959:25) statement that "they did not bury him" makes it quite explicit that the remains were not interred. Also, if the remains were buried after the flesh had been consumed, then the resulting interment would be a secondary burial and not a primary extended burial, as is the case for all the burials Reyman proposes as pochteca.

The second inadequacy concerns how definitive of pochteca are the items associated with these burials. For some of these artifacts, specifically shell trumpets, locally made pottery, tomb burials, human and animal sacrifices, and baskets, it is not obvious, given Reyman's sources (Sahagún 1932, 1959), why these items would be associated with a pochteca burial. Most of the other categories Reyman indicates are general ones such as turquoise, shell artifacts, lip and nose plugs, earrings, cotton, foodstuffs, and exotic materials. Nowhere does Reyman discuss how these artifacts would distinguish a pochteca burial from any other high status burial. All of the items associated with the Magician's burial and the Room 33 burials have been recovered from other Southwestern burials. What makes these burials unique is not the nature of their contents but the quantity.

Reyman (1978:245), as well as other pochteca theorists (DiPeso 1974, Kelley and Kelley 1975), puts great emphasis on canes or staffs as identifying pochteca. Ceremonial staffs, canes, or sticks appear in the Anasazi area at least as early as Basketmaker II (A.D. 1-400) (Guernsey and Kidder 1921:100). Parsons (1939:325-28) discusses aboriginal pueblo uses of staffs, canes, or sticks as religious and political symbols. To enumerate a few of these: (1) crooked and straight staffs are placed around altars, (2) at Zuni they symbolize the high rain chief, (3) in Keresan society they symbolize the town chief, (4) all members of the Cochiti Clown society and the Hopi Agave or Horn societies possess staffs, (5) the Hopi Powamu chief carries a staff, and (6) women use staffs in a variety of dances at Taos, Zuni, and Acoma. These aboriginal pueblo symbolic uses of canes, staffs, or sticks do not exhaust the uses listed by Parsons (1939) but indicate the extremely wide range of functions and meanings these artifacts have. Given the great antiquity of the use of such symbols among the Anasazi and the vast variety of functions they perform in historic pueblos, the identification of canes in the Magician's burial and the Room 33 (Pueblo Bonito) burials as pochteca objects appears tenuous. A much more probable explanation for the occurrence of these canes is that they symbolize

membership of the dead individuals in certain societies or political or ceremonial offices held.

If such individuals were pochteca then artifacts of definite Mesoamerican origin should be associated with them; indeed, the symbols of their status and rank should be Mesoamerican artifacts. In the burials identified by Reyman as pochteca all the associated goods are indigenous to the Southwest. Reyman does list macaws as possibly being associated with the Magician's burial; however, the macaws from Ridge Ruin were *not* buried with the Magician but separately in the site (McGregor 1943:287-88). Furthermore, Sahagún (1932, 1959) consistently associates pochteca with gold and jade. Neither of these materials occurred in any of the burials considered here and there is no verifiable instance of either of these materials ever being recovered from a prehistoric context in the Southwest. In summary, the burials in question do not conform to Sahagún's description of pochteca burial practices which Reyman proposes as a model, the artifacts associated with the burials are those which would be expected with a pueblo ceremonial or political leader, and the artifacts which should be present in the pochteca burial (Mesoamerican goods, including gold and jade) are absent. In short, Reyman's (1978:258) identification of these burials as pochteca members is not warranted.

DiPeso (DiPeso and others 1974b:371-72) has identified three burials at Casas Grandes as pochteca, but this identification suffers from the same problem as Reyman's. DiPeso's model of pochteca burial practices uses the same passage from Sagahún (1959:25). As was pointed out this passage indicates that pochteca were not buried. In one sense, however, DiPeso's burials better fit Sahagún's description because they are at least secondary burials. The remains DiPeso identifies as pochteca include two men whose bones were placed in Ramos Polychrome jars in two tombs under the Mound of Offerings. These tombs had been plundered so the burial goods associated with them are unknown. However, several aspects of these burials do not fit with DiPeso's identification of them as pochteca. First, the crania and mandibles of all three of these individuals were absent. Nothing in Sahagún or any other source indicates that pochteca should be buried without their heads. Second, included in these tombs was a middle-aged female who had been buried in the same manner as the two males. Again, neither Sahagún nor any other source indicates that there were female pochteca or that the female relatives of pochteca would accompany them on journeys. The three burials under the Mound of Offerings at Casas Grandes are certainly unusual but this is not enough in itself to justify identifying them as pochteca.

Identification of burials in the Southwest as pochteca cannot be based simply on how unusual a burial is or whether it contains a large quantity of goods. Such identification must be based on the presence of Mesoamerican items definitely symbolic of pochteca status. If Sahagún's description is accu-

rate the whole enterprise of searching for pochteca burials may be fruitless as they cannot be expected to occur. For this reason, and because the pochteca theory does not require a large number of individual pochteca in the Southwest, the absence of pochteca burials neither confirms nor refutes the theory.

Pochteca Outposts

Chaco Canyon

The best line of evidence for reviewing the pochteca theory and the basis by which the theory may be refuted or confirmed is the existence in the Southwest of pochteca outposts. Kelley and Kelley (1975) identify Chaco Canyon as one such outpost and DiPeso (1974) identifies Casas Grandes as another. The Kelleys and DiPeso maintain that the advanced developments at these locales resulted from intrusion by pochteca-like traders who took political control of the areas and used them as outposts to gather turquoise for shipment back to Mesoamerica. These researchers further maintain that specific groups in Mesoamerica directed these activities.

Kelley and Kelley (1975:186) use the Spanish entrada into the Southwest as a model of what archaeological evidence should exist for their posited pochteca entrada into Chaco Canyon. Perhaps the clearest archaeological evidence for the Spanish entrada is the association of churches with aboriginal villages at sites such as Pecos, Gran Quivíra, Awatovi, and Hawikuh. Drawing on this analogy to Spanish churches they propose (1975:197) that the great kiva was introduced into the Southwest as headquarters structures for pochteca traders. They maintain, therefore, that the occurrence and the florescence of Anasazi great kivas in Chaco Canyon are evidence for pochteca domination of Chaco Canyon. The second line of evidence the Kelleys (1975:205) muster in defense of their position is physical evidence in Chaco Canyon for its functioning as a trade outpost: "Pueblo Bonito, at least, looks very much like a trading post crammed with trade objects, ready for transport and sale."

The Kelleys' hypothesis that Mesoamerican pochteca introduced the great kiva into the Southwest flies in the face of established interpretations which maintain great kivas originated in the Mogollon area and later spread to the Anasazi (Vivian and Reiter 1960). Confirmation of this position would certainly lend great credence to the pochteca theory. The Kelleys base their hypothesis on three propositions: (1) that the prototypes for great kivas are large circular ceremonial structures which occurred in Jalisco between A.D. 200 and 600, the excavated example being at Totoate (Kelley 1971); (2) that the construction of great kivas led to the development of large population centers among the Anasazi and that all the great pueblos in Chaco Canyon have great kivas; and (3) that Anasazi great kiva development is not continuous through time but interrupted by two 150-year gaps at A.D. 700 to 850 and A.D. 900 to 1050.

The structure at Totoate which the Kelleys propose as the prototype of Southwestern great kivas is "a large masonry walled circular court partly subterranean, with terraced platforms attached at the cardinal points. In the center of the court there is a multiple walled circular stone tower" (Kelley 1971:770). This structure is shown in Figure 2 with the plan view of Casa Rinconada in Figure 3 for comparison. The Totoate circular court resembles Anasazi great kivas only in being round and large. Neither of these two features are definitive of Anasazi great kivas, as indicated by the Court Kiva at Chetro Ketl which resulted from modification of an existing small kiva, and by the Fire Temple at Mesa Verde which is built in a cliff and rectangular. The Totoate structure lacks the usual diagnostic features of classic Chaco (A.D. 1000-1150) great kivas including floor vaults (footdrums), antechambers, timber or masonry roof supports, a bench, and a raised fire box (Vivian and Reiter 1960:82). Besides lacking these features, the circular court at Totoate exhibits other features which are never seen in Anasazi great kivas including attached terraced platforms and a circular tower in the center. Furthermore, neither of these features are found in Mogollon great kivas (Neely 1974).

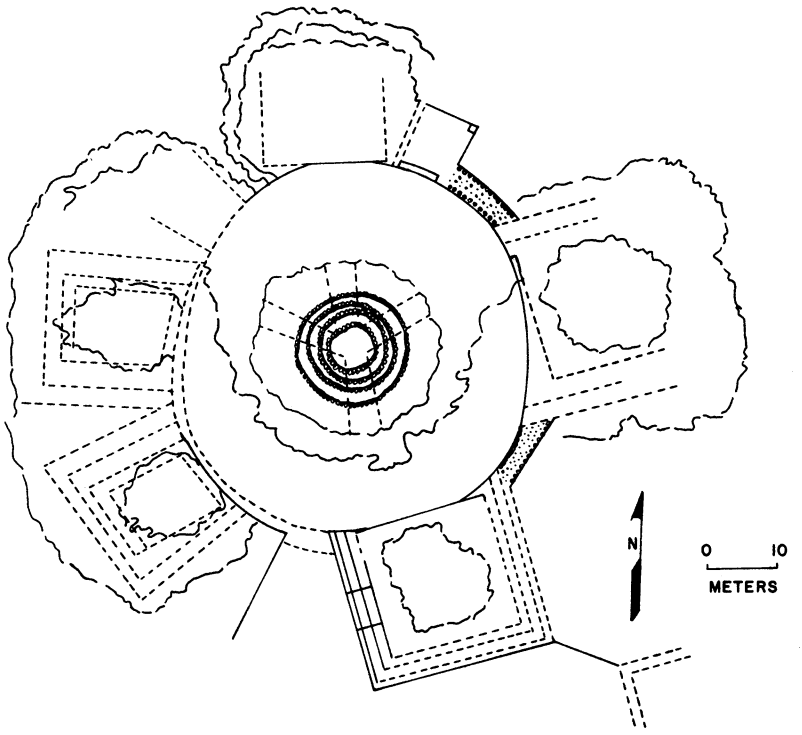

Figure 2. Totoate (Site LCBH 3-1), Structure 2, Jalisco, Mexico (after Kelley 1971:772, Figure 1a).

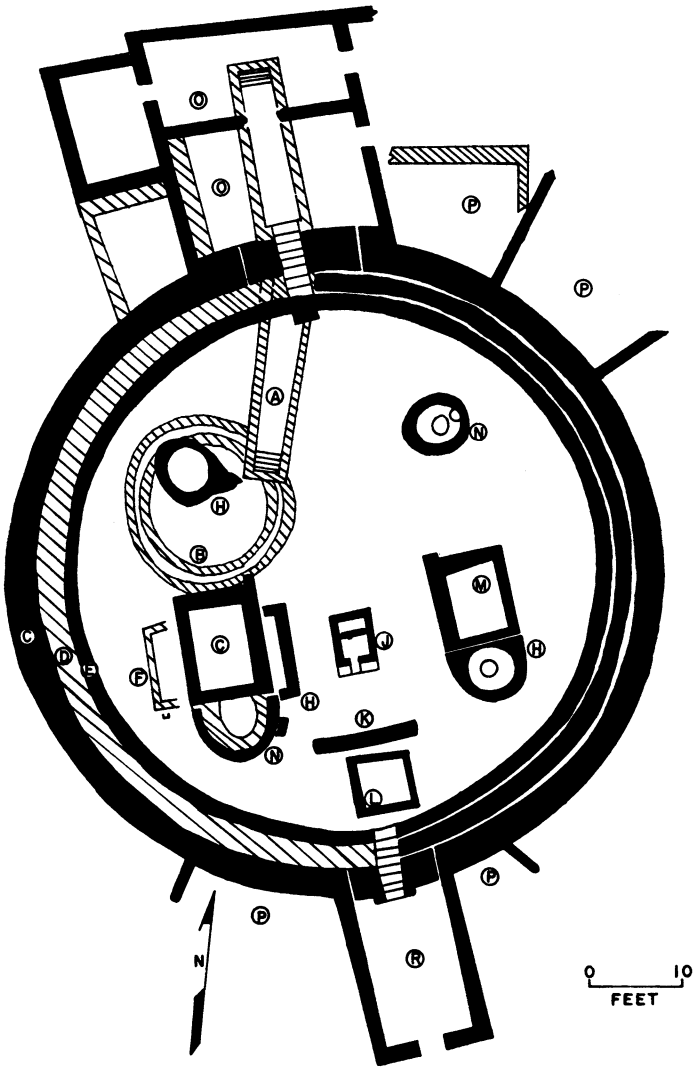

Figure 3. The isolated great kiva Casa Rinconada, Chaco Canyon, New Mexico. A, subfloor passage, lower floor level; B, circular trench, lower floor level; C, outer wall; D, original bench, later covered with veneer; F, earlier partial vault; G, west vault; H, vault extension; J, firebox; K, fire screen; L, subfloor enclosure; M, east vault; N, the seating pits; O, north antechamber; P, partial peripheral rooms (after Vivian and Reiter 1960:10, Figure 4).

The Kelleys' second proposition, that great kivas caused large population aggregation among the Anasazi, suggests that all great kivas should be associated with large sites and that all large sites in areas where great kivas occur should have great kivas. In Chaco Canyon this is not the case as there are at least four great kivas, including Casa Rinconada and Kin Nahasbas, not associated with any specific site (Vivian 1970:67), and the Chaco towns of Pueblo del Arroyo, Wijiji, Tzin Kletzin, Pueblo Pintado, Old Alto, and Kin Bineola all lack great kivas (Gwinn Vivian, personal communication). In terms of great kiva distribution Kelley and Kelley (1975:201) further attempt to substantiate the identification of Chaco Canyon as a pochteca outpost by noting "outside of the Chaco Canyon, full-fledged great kivas appear elsewhere at this time, only at Nutria on the Zuni reservation." This assertion is simply false, as between A.D. 1000 and 1150 great kivas occur at Aztec Ruin and Solomon Ruin on the San Juan, the Lowry Ruin in southwest Colorado, Fort Wingate on the Navajo Reservation (Vivian and Reiter 1960:6-7), at LA 835 near Santa Fe (Stubbs 1954), and many other sites.

I must raise three questions concerning the Kelleys' position that there are gaps in the developmental sequence of Anasazi great kivas at A.D. 700-850 and A.D. 900-1050. First, archaeologists working in the Southwest have excavated and dated only a handful of Anasazi great kivas so the gaps the Kelleys see could be the result of excavation bias. Second and more important, there is evidence which suggests that the remains of Chaco Canyon great kivas from the two periods in question have been buried or destroyed by later construction. Clear stratigraphic evidence at the site of Pueblo Bonito indicates occupation of the site from Pueblo I through Pueblo III (ca. A.D. 700-1150) (Judd 1964:132). Extensive construction at this site after the mid-A.D. 1000s would have destroyed or deeply buried any great kiva dating to the Kelleys' gaps. The presence in the west court at Pueblo Bonito of a razed and buried great kiva indicates that such processes did indeed occur. Judd (1954:211) could not date the razed great kiva precisely as he recovered no wood from it, and almost all the facing stones on the walls had been removed preventing accurate identification of the masonry style. On the basis of negative evidence (the absence of Old Bonitan traits), Judd (1954:198, 211) identifies the great kiva as an early New Bonitan project. Positive stratigraphic evidence indicates the razed great kiva cuts through a Pueblo I (ca. A.D. 700-900) pit house and preceded the construction of Kiva Q (the earliest of the two great kivas extant between A.D. 1011 to 1150). The razed kiva must, therefore, date between Pueblo I and the Kiva Q construction placing its construction sometime during the Kelleys' second gap of A.D. 900 to 1050. The third question which I raise concerns construction dates versus abandonment dates. The Kelleys use tree ring dates which more likely date construction or repair of structures and definitely do not date abandonment. We do not know how long a great kiva may have been used. Extant

pueblo rooms have been documented as having been used for as long as 250 to 300 years (Ahlstrom et al. 1978:56). It does not seem unlikely, therefore, that great kivas may have been used for periods of 50 to 150 years or longer, thus further narrowing the Kelleys' gaps.

Even if future archaeological work substantiates the gaps in great kiva development advocated by the Kelleys, their overall assertion that Anasazi great kivas are pochteca structures cannot be accepted. The Mesoamerican structure they propose as a great kiva prototype is dubious, and there is at present no long developmental sequence of great kiva structures in Mesoamerica. There exists, however, a long and unbroken developmental sequence of great kivas in the Mogollon area (Neely 1974). If we must seek recurrent inspiration for Anasazi great kivas we need look no farther south than the Mogollon. Furthermore, if great kivas were pochteca structures, then they should not vary between the Mogollon and the Anasazi, just as Spanish churches were similar among the Pima and the Tewa. This, however, is not the case, as Mogollon great kivas do not share all the features of Anasazi great kivas and come in a greater variety of forms than the Anasazi examples.

The second argument advanced by the Kelleys in defense of a pochteca-dominated Chaco Canyon concerns the existence of extensive storerooms crowded with goods ready for transport and sale. Close examination of Pepper's (1920) and Judd's (1954, 1964) descriptions of Pueblo Bonito reveals that no more than 12 rooms out of 341 excavated contained large quantities of items. Also, excavations at three other Chaco towns, Pueblo del Arroyo (Judd 1959), Pueblo Alto, and Chetro Ketl, have failed to produce even this much evidence of storerooms filled with goods (Gwinn Vivian, personal communication). As is the case with burials, the absence of such rooms does not discredit Chaco Canyon as a pochteca outpost because highly valued goods probably would not have been abandoned in the pueblos, and, if Chaco was an efficient trade outpost, goods would not have piled up in rooms but moved through. More important than the number of rooms in which goods have been found is the Kelleys' assertion that these goods are objects ready for transport and sale. There is a definite pattern to the distribution of goods in the loaded storerooms in Pueblo Bonito. For example, Room 2 contained 194 pieces of worked wood and 10 arrows; Room 12 contained 555 fossil shells; Room 28 contained 111 cylinder jars, 24 pitchers, 39 bowls, and four plainware vessels; Room 33 contained shell objects — 831 beads, 98 bracelets, 104 pendants, and 13 unworked shells; Room 42 contained 142 manos; and Room 48 contained 33 metates (Pepper 1920). Were these goods stockpiled for transport and trade or were they goods stored for distribution within the Chaco interaction sphere? In terms of the cylinder vessels it appears extremely unlikely that these were stockpiled for trade as Chaco Black-on-white cylinder vessels have a distribution limited almost exclusively to the Chaco interaction sphere as defined by

Altschul (1978). The marine shell in Room 33 originates almost entirely from the Gulf of California and probably came to Chaco through trade with the Hohokam or Casas Grandes. If this material was stored for trade, then we would expect to find quantities of shell in the contemporary areas to the north (Mesa Verde) and the east (Rio Grande) of Chaco Canyon. Morris (1919:95) recovered a number of shell items from the Aztec Ruin, a northern site of the Chaco interaction sphere, but marine shell is rare in Mesa Verde and Rio Grande sites of this time period (Tower 1945:18). Although it appears that shell was passed from Chaco Canyon to its outliers, that is, within the Chaco Canyon interaction sphere, the Chaco system appears to be the northern terminus of the shell trade between A.D. 1000 and 1180. Thus, large quantities of stored shell were more likely for use within the Chaco interaction sphere and not external trade. The contents of Rooms 48 (33 metates) and 42 (142 manos) indicate more strongly than the contents of any other rooms that much of the material in these storerooms (if not all of it) was intended for local use. Sandstone similar to that used to make milling stones in Chaco Canyon occurs all over the San Juan basin so milling equipment appears to be a poor candidate for export from the canyon. These considerations lead to the conclusion that much, if not all, of the material Pepper (1920) found stored at Pueblo Bonito was intended for use at Pueblo Bonito or redistribution among Chaco settlements and not for export. This, plus the paucity of storage rooms filled with such material, makes the Kelleys' assertion that Pueblo Bonito was a trading post filled with goods for export highly dubious.

Kelley and Kelley (1975) claim that the pochteca used Chaco Canyon as an outpost primarily to control the flow of turquoise into Mesoamerica. In this regard it is important to examine the evidence that Chaco Canyon was a large-scale exporter of turquoise. No turquoise occurs naturally in Chaco Canyon nor in the Chaco interaction sphere. It has long been held (Pepper 1920) that Chaco Canyon turquoise originated from the Los Cerrillos mine near Santa Fe and it has been demonstrated that 80-odd pieces of turquoise at the west Mexican site of Alta Vista came from the Cerrillos mine (Weigand et al. 1977:31). The Los Cerrillos mine lies 200 km east of Chaco Canyon. If Mesoamerican pochteca had sought to establish an outpost to control this mine, why would they locate it 200 km west of the mine and not in the Rio Grande to the south of the mine? Large amounts of turquoise have been recovered from Pueblo Bonito — over 50,000 pieces (Brand et al. 1937:62) — but the distribution of this material at the site does not suggest large-scale production of it for export. Pepper (1920) and Judd (1954, 1964) located turquoise at Pueblo Bonito with burials, cached in various crevices, and randomly scattered through the deposits. They report no evidence of workshop areas or storage of large amounts of unworked turquoise or finished items. The widespread distribution of turquoise in Pueblo Bonito and the lack of evidence for specialized

manufacturing suggests that Chaco Canyon was not an exporter but an importer of turquoise.

All present evidence suggests that Chaco Canyon was not a peripheral outpost of development but instead a cultural center in its own right. Evidence for roads in the Chaco Canyon interaction sphere has long been recognized. If the canyon was a northern outpost of a Mesoamerican state then it should be the northern terminus of such roads. The opposite is the case; Chaco Canyon lies at the center of an extensive road system linking the canyon to outlying Chaco sites such as Aztec to the north and Kin Ya-a to the south. The roads also lead as far west as Fort Defiance (Vivian 1972:15, Lyons and Hitchcock 1977). If anything, the road network appears to be more extensive and complex north of the canyon than south of it. Vivian (1970) and Grebinger (1973) argue that Chaco Canyon society had a greater degree of stratification and regional integration than seen in ethnographic pueblo societies, and had a definite elite class. The low volume of Mesoamerican goods from Chaco Canyon — 34 copper bells (Sprague and Signori 1963), 38 macaws (Hargrave 1970:52), and a handful of pseudo-cloisonné items (Holien 1975:162) — suggests specialized trade between the elite of Chaco Canyon and the elite of northwest Mexico. The Mesoamerican-derived characteristics of Chaco Canyon could have resulted from this type of exchange with no need for pochteca domination.

Casas Grandes

The site of Casas Grandes in northern Chihuahua is an impressive ruin with marked Mesoamerican features. These features include elaborate multi-level platform mounds, clear evidence of human sacrifices, two I-shaped ball courts with platform mounds and ceremonial courts, ceramic hand drums, evidence of macaw aviculture, and copper metallurgy. DiPeso (1974) argues that the Casas Grandes area followed a developmental path similar to the Mogollon of Arizona and New Mexico during the Viejo period (A.D. 700-1150) and that pochteca intrusion into the region during the Medio period (A.D. 1150-1300) led to the advanced developments at the site of Casas Grandes. (The dates used in this report for Casas Grandes are LeBlanc's [1980] revised dates for the site and not DiPeso's [1974] original estimates.) According to DiPeso, these traders reorganized the native population into a hydraulic society and used Casas Grandes as a base for large-scale export of turquoise back to Mesoamerica. Specifically, DiPeso feels that the presence of obsidian, turquoise, marine shell, macaws, ceramics, turkeys, and certain minerals such as rhyolite and alibates at Casas Grandes indicates the extent and nature of Medio period pochteca trade. Close examination of the frequencies and sources of these trade materials at Casas Grandes does not support DiPeso's contention that Casas Grandes was the northern outpost of a Mesoamerican mercantile

institution nor that the development and collapse of Casas Grandes can be explained by events in Mesoamerica, more specifically central Mexico.

The overwhelming bulk of imported ceramic material at Casas Grandes came from the north of Casa Grandes. Accepting DiPeso's contention (DiPeso et al. 1974b:148) that Gila Polychrome was a locally made type, 17,914 of 17,946 Medio period trade sherds identifiable to point of origin came from north of Casas Grandes; the other 32 came from Mesoamerica, specifically the modern Mexican states of Durango, Jalisco,and Nayarit. If DiPeso's contention that Gila Polychrome was locally produced is rejected, then Mesoamerican trade sherds account for 32 out of 44,696 Medio period trade sherds identifiable as to source. In terms of whole or partial Medio period trade vessels, 60 were Gila Polychrome, 13 were from north of Casas Grandes, and four were unidentifiable as to source. In addition to imported sherds and vessels DiPeso recovered from Medio period deposits six spindle whorls from Durango and one ceramic hand drum from an unspecified locale in west Mexico. In summary, the ceramic evidence does not suggest strong trade connections to Mesoamerica but instead extensive trade within the Southwest.

DiPeso recovered a truly impressive amount of shell, 3,907,597 items (DiPeso et al. 1974b:170), from Medio period contexts at Casas Grandes. Based on their analysis (1974b:167, 171), this shell came from the coast of Sonora near the mouths of the Rio Matape and the Rio Yaqui and from the west coast of Baja California at roughly the 28th parallel. Also based on this analysis (DiPeso et al. 1974b:171), Casas Grandes traded this shell north into the Mimbres, Western Pueblo, Sinagua, and Rio Grande regions, not south into Mesoamerica.

The evidence of imported minerals at Casas Grandes further supports the impressions gained from ceramics and shell. Minerals from the north of Casas Grandes include one piece of alibates chert, 114.7 kg of southwest New Mexico serpentine, 2.0 kg of southwest New Mexico chrysotile asbestos, and 1.3 kg (17 objects) of southwest New Mexico sepiolite (meerschaum). Three obsidian items from Durango represented all the minerals of Mesoamerican origin recovered from Medio period context at Casas Grandes. DiPeso does not give counts or weights for other obsidian artifacts or debitage recovered at Casas Grandes so it is not possible to establish what percentage of obsidian at the site was of Mesoamerican origin. DiPeso maintains that the primary mineral the pochteca exported from Casas Grandes was turquoise. DiPeso recovered a relatively substantial amount of turquoise from Medio period deposits, 5,895 items (1.2 kg), but as he (DiPeso et al. 1974b:187) states, the distribution of turquoise indicates it was primarily used for domestic consumption, principally in offertory caches.

Copper and macaws are interesting items at Casas Grandes because in the Southwest only Casas Grandes has yielded evidence for the production of

copper and the breeding of macaws. DiPeso recovered 39.6 kg of copper from Casas Grandes; 90 percent of this was raw ore, and 90 percent of this was stored in the Unit 8 warehouse area. Chemical analysis revealed that this material originated in northern Chihuahua (DiPeso et al. 1974b:189). Copper items are widely distributed in the Hohokam area before the Medio period at Casas Grandes; however, it is not until the Medio period that they begin to appear in the Mogollon, Salado, Sinagua, and Anasazi regions. Also during this time period copper items (primarily bells) become less common in the Hohokam region and disappear from the Southwest altogether shortly after the collapse of Casas Grandes (ca. A.D. 1300) (Sprague and Signori 1963, Sprague 1964). This pattern of distribution suggests that the copper items which occur in the Mogollon, Salado, Sinagua, and in the Anasazi between the A.D. 1100s and A.D. 1400 may have been produced at Casas Grandes.

DiPeso recovered remains of 503 macaws at Casas Grandes (100 *Ara* sp., 81 *Ara militaris*, 322 *Ara macao*) and both architectural and faunal evidence indicates that the occupants of Casas Grandes raised these birds between A.D. 1060 and 1340. For the Southwest at large only four macaws have been recovered before A.D. 1060, 155 have been recovered from contexts dating between A.D. 1060 and 1340, and only eight from contexts dating after A.D. 1340 (Hargrave 1970, DiPeso et al. 1974b:184). Furthermore, from A.D. 1060 to 1340 the frequency of macaws in the Southwest in general parallels fluctuations in the frequency of macaws at Casas Grandes (DiPeso et al. 1974b:184). This evidence strongly suggests that most macaws recovered in the prehistoric Southwest came from Casas Grandes and not lowland Mesoamerica. It is impossible to determine exactly how many of the 322 *Ara macao* (scarlet macaws) at Casas Grandes came from Mesoamerica but certainly enough were brought in to establish a breeding population.

Other exotic birds at Casas Grandes included one gray hawk, one lilac-crowned parrot, and one lesser roadrunner (McKusick 1974:274-75). All of these birds could have been obtained from the west coast of Sonora (DiPeso et al. 1974b:183). Turkeys at Casas Grandes are of two types, *Meleagris gallopavo merriami* (which originated in the Western Pueblo region) and *Meleagris gallopavo tularosa* (from the lower Rio Grande in New Mexico). The faunal collection included no examples of the central Mexican domestic turkey *Meleagris gallopavo gallopavo* (McKusick 1974:275). Although DiPeso recovered definite evidence that Medio period Casas Grandes raised turkeys, he (DiPeso et al. 1974b:182) and McKusick (1974:274) suggest that turkeys were traded into Casas Grandes from the Point of Pines area (Arizona) and the Tompiro pueblos on the Rio Grande (New Mexico).

The evidence of material exported from Casas Grandes reinforces the impression gained from materials imported to the site. To quote DiPeso and others (1974b:143):

> foreign trade, as judged by the variety of Casas Grandes ceramic types, appeared to be greatest in the Mimbres area located immediately N of the Paquimé province and in the area of southeastern Arizona. Both of these districts contained ruins which utilized seven different recognized wares from Paquimé. The Rio Grande area ranked second with four types; the western Pueblo third with three; and the Gila-Salt, Texas and Western Sonoran regions last with one or two varieties each.

The only probable evidence for Casas Grandes exports to Mesoamerica are a possible Ramos Polychrome bowl bought by Linné (1942:Figure 318) from "natives" near Teotihuacán and a sherd of Villa Ahumada Polychrome from the site of Cerro de la Estrella, Federal District, Mexico (Griffin and Kreiger 1947:161). DiPeso (DiPeso et al. 1974b:143) indicates that a total of 7,866 Casas Grandes exported vessels occur in museums around the world, but the only vessel they identify as having been recovered from Mesoamerica is the possible Ramos Polychrome bowl purchased by Linné at Teotihuacán. In discussing possible exported goods from Casas Grandes, a report (Weigand et al. 1977:31) of 80-odd pieces of turquoise in Durango which originated from New Mexico must be mentioned as this material may have come through Casas Grandes.

The physical evidence for trade between Casas Grandes and Mesoamerica is insignificant when compared to the evidence for internal Southwestern trade, especially to the north of Casas Grandes. This evidence does not support DiPeso's position that Casas Grandes was a major trade center controlled by Mesoamerican pochteca for the purpose of shunting goods from the Southwest to Mesoamerica. The available evidence clearly indicates that Casas Grandes was a major trade center but it also indicates that the overwhelming bulk of such trade was to the north of Casas Grandes and not to Mesoamerica. The possibility exists that the goods being traded to and from Mexico were perishable and for this reason have not survived in the archaeological record. There is, however, no a priori reason to believe that predominately perishable goods should have been traded north from Mesoamerica.

Demonstrating that Casas Grandes was primarily engaged in trade within the Southwest and that there is significantly less evidence for trade with Mesoamerica does not refute the possibility that Medio period development at Casas Grandes resulted from intrusion of a Mesoamerican group. DiPeso bases his case for such an intrusion on the appearance of a hydraulic system at about A.D. 1150, on the shift from pit house to compound architecture at the same time, and the introduction of a series of central Mexican cults. DiPeso views these changes from the Viejo period development as sudden and foreign and therefore requiring the intrusion of a Mesoamerican derived group. Haury's (1976) discussion of Hohokam water control systems and Vivian's (1974) discussion of Anasazi water control systems show all aspects and features of the Casas Grandes agricultural hydraulic system appear elsewhere in the Southwest before A.D. 900. Therefore, contrary to DiPeso's assertions, the technical

knowledge for the Casas Grandes system did not have to originate from Mesoamerica. The city water system for the site of Casas Grandes is more elaborate than any other reported in the Southwest. However (as summarized by DiPeso et al. 1974a:842-45, 853), all the features of the Casas Grandes system have been reported from other Southwestern sites. And, contrary to DiPeso's (DiPeso et al. 1974a:844) assertion, definite domestic reservoirs have been excavated at Hohokam sites (Haury 1945a:42, Weed and Ward 1970:7, Raab 1975).

An architectural shift from pit house to compounds is not unique to Casas Grandes but also occurred in the Gila-Salt, Tonto, and Tucson basins, the San Pedro River and lower Verde River valleys, and in the Papaguería. Unless we wish to posit pochteca control for all these areas it appears unnecessary to posit pochteca control of Casas Grandes to explain these changes.

This leaves for consideration the large number of Mesoamerican-derived traits such as platform mounds, ball courts, iconographic elements identified with Mesoamerican cults, copper metallurgy, and macaw raising. DiPeso assumes that these traits indicate that Mesoamerican overlords came to Casas Grandes but he does not consider other explanations for their occurrence. Specifically, he does not consider that as a major trade center in the Southwest Casas Grandes may have sought to emulate high cultural centers to the south. Available data do not allow absolute confirmation or refutation of either hypothesis. Are Mesoamerican influences at Casas Grandes the cause of its development or a result of that development? However, consideration of two crucial Mesoamerican-derived traits, copper metallurgy and macaw aviculture, suggests the truth may lie between these two extremes. Due to the complexities of these activities it is doubtful they appear at Casas Grandes without individuals from Casas Grandes going south to learn them or individuals coming north with these skills. One possible explanation for their occurrence is, as suggested by DiPeso, that these skills came with Mesoamerican overlords. An alternate hypothesis is that the leaders of Casas Grandes imported these skills in order to dominate the Southwestern market for such rare and highly valued commodities. Crucial to this question is knowledge of southern Chihuahuan archaeology. There is no question that Casas Grandes was the northernmost location for such activities, but are there other sites between Casas Grandes and Durango where these skills existed?

In summary, the evidence for pochteca outposts in the Southwest clearly indicates that one such proposed outpost, Chaco Canyon, does not fit expectations and that the other proposed outpost, Casas Grandes, was not controlled by mercantile interests in Mesoamerica. Both these locations appear to be centers in their own right not provincial outposts of a Mesoamerican state. There can be no question that Casas Grandes was a trade center heavily involved in the importation and exportation of shell, pottery, and other goods within the

Southwest and controlled the production of copper and macaws at least in the region from Casas Grandes north. It is possible also that it controlled the flow of turquoise toward Mesoamerica. What cannot be determined at this time is whether Mesoamerican intruders instigated developments at Casas Grandes or if the Mesoamerican character of the site results from Casas Grandes being a trade center with far-flung connections and wealth.

Mesoamerican Cults in the Southwest

The pochteca theorists place great importance on the appearance in the Southwest of iconographic traits which they believe represent central Mexican deities or cults (DiPeso 1968, 1974:301-08, Kelley and Kelley 1975:211). A basic problem with such an inference is that the symbolic association of meaning and form is arbitrary. As Watson Smith (1952:168) has pointed out, "While every symbol is expressed in the form of a design or tangible object, it does not follow that every usage of those same designs or objects carries the same symbolism, or that in every case is symbolic at all." In addition, many of the iconographic traits, such as the bird-serpent motif, are distributed from Peru to the Southwest (DiPeso 1974:303) so it is difficult to see how their appearance in the Southwest represents introduction of a central Mexican cult rather than the existence of a widespread set of symbols and beliefs the central Mexican cults were built from. The feathered or horned serpent motif, found throughout the Southwest and Mesoamerica, is a good example of this phenomenon. Snake symbolism in general has a great antiquity in the Southwest as shown by Desert culture intaglios in the Papaguería (Hayden 1967). DiPeso (1968, 1974) and Kelley and Kelley (1975) argue that the introduction into the Southwest of a certain type of snake symbolism, the horned or feathered serpent, indicates the introduction into the Southwest of the Toltec Quetzalcoatl cult. Parsons (1939:184-86, 214) indicates the horned or feathered serpent is found in all Pueblo religions except the Tewa and represents the water serpent. This serpent can be a collective being which lives in springs or a single being, a god of terrestrial waters. The water serpent controls floods, earthquakes, and landslides and is a fearsome and punitive personage. Zuni and Hopi tales include reference to the sacrifice of children to placate the water serpent. As indicated by Krickeberg's (Krickeberg et al. 1968:18-42) review of prehistoric Mesoamerican religion, these Pueblo beliefs parallel symbolic associations of the feathered serpent seen in Classic period Mesoamerica. At this time the feathered serpent was associated with water symbolism and was apparently thought to represent the waters of the earth. The Toltec Quetzalcoatl cult, however, brought together a wide variety of symbols, among them the feathered serpent, and gave them new meanings. The Toltec and Aztec in their Quetzalcoatl cult associated the feathered serpent not with water symbolism, but with sky symbolism (Krickeberg et al. 1968:18-42). Given that ethno-

graphic Pueblo beliefs parallel more closely Classic period Mesoamerican associations of the feathered serpent with water symbolism than the Toltec and Aztec Quetzalcoatl myth, it appears highly unlikely that Toltec pochteca introduced the feathered serpent to the Southwest as part of the Quetzalcoatl cult.

More important than the feathered serpent motif is the fact that the central Mexican cults the pochteca theorists present as the religion of Mesoamerica are a complex synthesis of earlier beliefs and symbols. As Krickeberg (Krickeberg et al. 1968:43) indicates in reference to the Aztec gods, Texcatlipoca and Quetzalcoatl, "these two gods, the most prominent in the Mexican pantheon, appear in so many guises that it is impossible to define them from this or any other single point of view." Also of equal importance is that the gods of central Mexico are not the gods of all Mesoamerica. The Maya, Mixteca, Zapotecs, Tarascans, and Totonacs all had deities, beliefs, and customs different from the Aztec and Toltec, yet they often utilized similar symbolism and ritual. Although there is no question that Mesoamerican-derived symbolism, such as the feathered serpent, and Mesoamerican-derived beliefs, such as the Zuni new fire ceremony, occur in the Southwest, these symbols and beliefs all have wide distribution in Mesoamerica. The appearance of these symbols and beliefs in the Southwest does not indicate proselytizing by missionaries of specific central Mexican cults but does indicate the northernmost extent of a basic set of beliefs and symbols that were variously combined in different cults.

One such cult is the kachina cult which appeared in the Southwest during Pueblo IV (A.D. 1300-1540) times (Brew 1943). Kelley and Kelley (1975) have recently proposed that this cult arose as as result of pochteca fleeing the collapse of the Guasave and Chalchihuites cultures at roughly A.D. 1340. The Mesoamerican influences in this cult have been extensively discussed (Beals 1943, Brew 1943). Brew (1943:244) concludes that in terms of the kachina cult's Mesoamerican influences "the Southwestern manifestations referred to above are not obviously similar to Mexican traits." He concludes that these influences reached the Southwest through a steplike diffusion. Beals (1943:248) notes that there is no evidence of the kachina cult between the Valley of Mexico and the Pueblos and concludes that it did not result from direct contact but from an earlier shared cultural stratum. The rapid appearance in the Southwest of brightly colored and narrative kiva murals signals the appearance of the kachina cult at the beginning of Pueblo IV (A.D. 1300). Many iconographic traits originating from Mesoamerica, including jaguars, macaws, and feathered serpents, appear on these murals. Although the Southwestern kiva murals have much in common conceptually with Mesoamerican murals at Bonampak, Monte Albán, and Teotihuacán, there also exist considerable differences (Brody 1968:8). The Mesoamerican murals are far more naturalistic than Southwestern murals; volume is often clearly indicated by a free-

flowing calligraphic line totally different from that used by Anasazi painters. The clearly defined geometry that characterized and formalized Anasazi murals is not an important factor in Mesoamerican mural art. I concur with Brody (1968:8) that Mesoamerican mural art could be the prototype for the Pueblo IV kiva murals, but a large stylistic gap separates the two. In terms of the kachina cult and its accompanying mural art, there is strong suggestion of Mesoamerican influence, but the differences between it and any Mesoamerican cults or art are too great for the direct simplistic mechanism that the Kelleys advocate.

Summary of Critique

Having reviewed the four major lines of evidence used to support the pochteca theory — Mesoamerican influences, pochteca burials, pochteca outposts, and central Mexican cults — the case for the theory appears dubious. The pochteca theorists have overemphasized the extent and nature of Mesoamerican influence in the Southwest. The presence of such influence cannot be questioned, but it is not possible to connect Mesoamerican-derived traits with any specific Mesoamerican culture or sociopolitical group such as the pochteca. The pochteca theorists have not confirmed the existence of pochteca burials in the Southwest. No Mesoamerican goods were located with any of the burials proposed as pochteca and the Anasazi burials fit well with the existing interpretation that they were Pueblo ceremonial and political leaders.

Of the two areas proposed as pochteca outposts, Chaco Canyon and Casas Grandes, Chaco Canyon must be rejected outright as a pochteca outpost and as a development resulting from Mesoamerican intervention in the Southwest. The case of Casas Grandes is not as clear-cut. The proposition that the site was a pochteca outpost is not supported by the physical evidence of trade connections and trade volume. It is clear that Casas Grandes was a center in its own right and not simply the far northern outpost of a Mesoamerican mercantile concern. It is also clear that Casas Grandes commerce was directed primarily to the north and that in comparison the physical evidence for commerce to the south is insignificant. The hypothesis that Casas Grandes arose as a center because of intervention by a Mesoamerican group cannot be confirmed or refuted on the basis of this analysis. However, an equally defensible hypothesis is that the extensive list of Mesoamerican-derived traits at Casas Grandes resulted from attempts by an established native elite to emulate the high cultures to the south and to exploit northern markets by importing the technology of copper metallurgy and macaw aviculture.

The evidence for central Mexican cults in the Southwest is extremely tenuous. The basic arbitrariness of the association between form and meaning makes such inferences extremely hazardous. Beyond this, the symbols and beliefs that ethnographic and prehistoric Southwestern cultures shared with

these cults are part of a basic set of symbols and beliefs which are variously combined and synthesized in a large number of Mesoamerican cults. The presence of these symbols and beliefs in the Southwest, therefore, is not evidence for the import of any specific cult or group of cults into the Southwest. The basic proposition of the pochteca theory, that the development of specific Southwestern cultures resulted from intervention by Mesoamerican pochteca-like groups, cannot be supported by the available evidence. The broader proposition that the ebb and flow of Mesoamerican cultural evolution explains the general development of the Southwest is also unsupported.

TOWARDS AN ALTERNATIVE EXPLANATION OF THE MESOAMERICAN CONNECTION

Now that I have risked being labeled as a "card carrying" Southwestern isolationist, I must point out that isolationism is not the only alternative to the pochteca theory. Rejecting the pochteca theory does not require adopting the view that Mesoamerican influences on the Southwest are either absent or negligible. More specifically, rejecting the pochteca theory does not preclude viewing trade between Mesoamerica and the Southwest as an important force in Southwestern cultural evolution. Trade cannot, however, be treated as a prime mover which explains all, nor as an autonomous phenomena. Trade is dependent on two factors, production and demand. For trade to occur one party must have the technological means and resources to produce or secure a commodity which a second party wants and this second party must have the technological means and resources to produce or secure a commodity the first party wants. Trade is not therefore a one-way passage of influence, but instead establishes an economic relationship which affects all participants. Trade interrelates not only with technology and resources but with social organization. As discussed by Renfrew (1975), different types of trade relationships are dependent on different degrees of social complexity. Furthermore, since trade requires the movement of goods over the earth's surface, a society's participation in trade is dependent in part on that society's geographical relationship to natural corridors of transportation. All of these characteristics of trade make it imperative that an alternate explanation of Mesoamerican influence in the Southwest incorporate: (1) a clear definition of the specific region and archaeological cultures of Mesoamerica involved in the trade, (2) definition of the natural corridors of communication and their relationships to archaeological cultures, (3) changing patterns of production and demands, and (4) consideration of the interrelationship of trade and social complexity.

Many considerations of Mesoamerican influence in the Southwest have stressed trade to central Mexico (Ferdon 1955, DiPeso 1968, 1974). The evidence for contact between the Southwest and central Mexico is slight. The

only sherds of definite central Mexican origin reported in the Southwest are three sherds of Aztec Black-on-red (DiPeso et al. 1974b) located in an historic context in northern Chihuahua. Kidder (Kidder 1932:309, Kidder and Shepard 1936:382) identified a single spindle whorl and a single redware sherd from Pecos as coming from central Mexico, but at the time he wrote the ceramics of northwestern Mexico were unknown. These Pecos ceramics may, therefore, be of northwest Mexican origin and not central Mexican. The only other ceramic of central Mexican origin reported from the Southwest is the "Toltec" sherd from Pueblo Bonito. As Holien (1975:163) indicates, this artifact is not a sherd at all but a piece of pseudocloisonné-on-sandstone and probably not of central Mexican origin. Southwestern goods in central Mexico are also limited, only one vessel and a handful of sherds having been reported (Griffin and Krieger 1947) and with no evidence at this time of Southwestern turquoise (Weigand et al. 1977). It is possible that some of the macaws located in the Southwest were traded through central Mexico. As already discussed, the vast majority of macaws recovered in the Southwest probably originated from Casas Grandes. Remains of four macaws dating from before the occupation of Casas Grandes and eight birds dating after the abandonment of Casas Grandes have been located. Needless to say, these birds could not have been raised at Casas Grandes. These birds and some of the 477 birds located from the time period of Casas Grandes occupation may have originated from the Mexican lowlands. However, it seems highly unlikely that Casas Grandes was the only site outside of the lowlands at which macaw aviculture was practiced. Excavations by Mesoamerican archaeologists outside ceremonial districts may, in the future, give us a better idea of the distribution of this practice. In summary, the evidence for direct contact between the Southwest and central Mexico is markedly unimpressive. Even allowing for central Mexican transhipment of macaws, an indirect exchange of goods from region to region easily accounts for this evidence. No current data from either area warrant models of direct and regular trade links between central Mexico and the Southwest.

A more impressive body of evidence exists for direct and periodic trade between the Southwest and northwest Mexico (the modern Mexican states of Durango, Sinaloa, Nayarit, Zacatecas and Jalisco). The total number of northwest Mexican sherds recovered from sites such as Casas Grandes (DiPeso 1974) and Snaketown (Haury 1976) approaches 100. Copper bells recovered from the prehistoric Southwest number between 576 and 596, depending on how the counts of Sprague and Signori (1963) and Sprague (1964) are interpreted. These copper objects are generally thought to be of northwest Mexican origin although many were probably also produced at Casas Grandes. In terms of turquoise, as already indicated, Weigand (Weigand et al. 1977) has identified 80-odd items found in northwest Mexico as originating from the Southwest. In addition, to these items should be added many, if not all, of the

pseudocloisonné items in the Southwest and the 75-80 iron pyrite mirror backs from Hohokam sites such as Snaketown (Haury 1976:299, Gladwin et al. 1937:133) and the Grewe site (Woodward 1941). The quantity of goods present suggests the possibility of periodic trade between northwest Mexico and the Southwest. The quantity and nature of these goods do not, however, suggest a large volume of trade nor the existence of a highly formalized pochteca system.

One problem with the type of analysis presented here is in dealing with perishable goods which may have been exchanged between central Mexico or northwest Mexico and the Southwest. The results gained from the distribution and quantity of durable goods are spurious only if perishable goods were traded in a disproportionately large amount to durable goods. If this were the case and a disproportionately large amount of perishable northwest or central Mexican goods were traded into the Southwest, some evidence of such goods could be expected in dry sites with good preservation or in prehistoric Southwestern art. Out of the literally dozens of Southwestern sites which have yielded perishable materials, no perishable materials of Mesoamerican origin have been found. This is particularly significant at sites such as Pueblo Bonito which have yielded durable Mesoamerican goods and perishable artifacts but no perishable Mesoamerican goods. In terms of art there are no clear representations of definite perishable Mesoamerican goods such as cacao. This is not to suggest that perishable goods were not traded from northwest Mexico or central Mexico, but that the available evidence does not indicate large amounts of perishable goods relative to durable goods were exchanged.

Haury (1945b) stressed the importance of two routes for the diffusion of Mesoamerican traits into the Southwest, one running up the coast of Sonora and the other up the east flanks of the Sierra Madre in Chihuahua. These two routes follow the natural communication corridors running north to south in western Mexico. Following the Spanish entrada the Sonoran corridor was the route to southern Arizona while the Chihuahuan corridor led to New Mexico and the Santa Fe colony. An examination of the distribution of Mesoamerican trade goods, temporal relations, and archaeological cultures in relation to these corridors give a number of insights which, when combined with the evidence of internal Southwestern trade, allow development of an explanatory sketch of the importance of Mesoamerican trade to Southwestern development.

Hohokam shell trade is a matter of great antiquity beginning in the Pioneer period (300 B.C.-A.D. 550) (Haury 1976, Hayden 1972). This trade peaks during the Colonial and Sedentary periods (A.D. 550-1150) with Hohokam pit houses and ballcourts located in the midst of foreign cultural areas at Winona near Flagstaff and the Stove Canyon Site at Point of Pines (Neely 1974). It appears likely that these far-flung Hohokam manifestations are trade outposts established among foreign groups to peddle Hohokam goods. In the Papaguería at this time there is evidence of large habitation sites which appear to have

specialized in the production and export of shell (McGuire and Mayro 1978). It is also during the Colonial and Sedentary periods that the greatest number and variety of northwest Mexican goods are found in Hohokam sites (Haury 1976:346). This is especially true of copper bells, with as many as 165 copper bells from Hohokam deposits of this time range (Sprague and Signori 1963, Sprague 1964), but it is not limited to copper bells as it was from this time period that 75 to 80 pyrite mirror backs have been recovered. The Hohokam were in a position between A.D. 1 and 1000 to dominate shell exportation to the Mogollon and Anasazi and controlled the north end of the Sonoran corridor. By obtaining high value items such as turquoise from groups to the north for shell the Hohokam could then trade these goods south for highly valued northwest Mexican goods such as pyrite mirrors and copper bells as well as goods transhipped through northwest Mexico such as scarlet macaws. During the time period from A.D. 500 to 1000 there is little evidence of such northwest Mexican goods in the Anasazi and Mogollon areas in marked contrast to the Hohokam region (Schroeder 1965, 1966). Also during this time period is the greatest evidence of Mesoamerican-derived traits among the Hohokam with markedly less evidence of Mesoamerican-derived traits in the Mogollon and Anasazi (Schroeder 1965, 1966). Between A.D. 500 and 1000 the Hohokam achieved their highest artistic development in shell and stone, far exceeding Anasazi or Mogollon developments along these lines (Haury 1976:290, 319-21). Hohokam trade relations both within the Southwest and with northwest Mexico were not static from the Pioneer to Sedentary periods but dynamic. The major mode of trade through most of this period was probably a down-the-line system (Renfrew 1975:41-43), while the possible trade outposts at Winona and Stove Canyon suggest the development of at least part-time trade specialists freelancing goods around the Southwest and possibly into northwest Mexico (Pilles and Fish 1978).

The 150 years between A.D. 1000 and 1150 brought a number of changes which altered this situation. The local cultures in Sinaloa rapidly increased in social complexity starting around A.D. 1000 (Meighan 1971:757). At the south end of the Chihuahuan corridor the Chalchihuites culture reached farthest north between A.D. 950 and 1150 at the site of Zape in northern Durango (Kelley 1971:795). In Chaco Canyon the development of large Chaco towns and interpueblo integration started between A.D. 990 and 1030 (Vivian and Mathews 1965:108), and in northern Chihuahua the Buena Fe phase began about A.D. 1150 with greatly increased evidence of trade (DiPeso 1974). This spread of more complex societies in northwest Mexico and the Southwest created new markets and production centers. Trade within the Southwest and with northwest Mexico may have reinforced and accelerated this increase in social complexity through the establishment of emissary or middleman trade (Renfrew 1975:43) between elites.

The increase of trade in the Buena Fe phase at Casas Grandes appears to have been in response to demand from the booming Chaco Canyon area putting Casas Grandes in competition with the Hohokam for the Anasazi shell market. The evidence for this competition is clearly visible in Chaco Canyon where shell species found only in the Hohokam region and shell species found only from Casas Grandes occur. This is true even after DiPeso's (DiPeso et al. 1974b) list of shell species unique to Casas Grandes is reduced by reference to Haury's (1976) more recent Snaketown species list. Casas Grandes was at the northern end of the Chihuahuan corridor and by exporting the techniques of copper metallurgy and macaw aviculture, possibly from the northward expanding Chalchihuites culture, provided highly valued exotic goods to the Anasazi in quantities the Hohokam were unable or unwilling to supply. By about A.D. 1150 Hohokam culture had retreated to the Papaguería, Gila-Salt Basin, and the Tucson Basin (Haury 1976). I do not wish to assert that this retreat was solely a result of trade competition from Casas Grandes but the parallels in timing do suggest such competition was a factor. If some of the Hohokam enclaves in other culture areas such as Winona and Stove Canyon were trading outposts, this competition was probably causal to their abandonment. Following A.D. 1150 the number and variety of Mesoamerican trade goods as well as the introduction of new Mesoamerican-derived traits decreased in the Hohokam region (Haury 1976). Also at this time the volume and extent of the Hohokam shell trade appears to have decreased and the complexity of Hohokam shell and stone work decreased (Haury 1976:354). I suggest that these changes resulted directly from competition by Casas Grandes decreasing the flow of shell export and the import of goods such as turquoise which would have previously been passed south for northwest Mexican goods. In contrast to the situation among the Hohokam, in the Mogollon and Anasazi southern trade goods and Mesoamerican-derived traits increased markedly between A.D. 1000 and 1400 (Schroeder 1965, 1966). This is especially true of goods such as copper bells and macaws which may have originated from Casas Grandes. Casas Grandes trade relations between A.D. 1000 and 1300 were not static but dynamic. By A.D. 1200 the Anasazi abandoned Chaco Canyon and the Classic Mimbres manifestations of southwest New Mexico ended. By A.D. 1300 the Anasazi abandoned the Mesa Verde region and by A.D. 1400 the Mogollon region was largely abandoned. In northwest Mexico the Guasave area collapsed at about A.D. 1350 (Meighan 1971:757) although a little farther south in Sinaloa the Culiacán culture continued to Spanish contact. In the modern state of Durango the Chalchihuites culture collapsed at about A.D. 1350 (Kelley 1971:799). This general pattern of abandonment and collapse, culminating in the 1300s, had its effect on Casas Grandes. DiPeso (1974:320) indicates that by the time raiders sacked Casas Grandes in the 1300s the city's economy had deteriorated. The collapse of the Chalchihuites culture in Durango and the

violent destruction of Casas Grandes in northern Chihuahua appear to have virtually closed the Chihuahuan corridor while the collapse of the Guasave culture in Sinaloa appears to have closed the Sonora corridor. By A.D. 1400 little in the way of Mesoamerican trade goods appear in the Southwest, about the only items being a bare handful of scarlet macaws. Also at this time the kachina cult with its brightly painted macaws on kiva murals and clay bells appeared in the Rio Grande.

The particulars of this scenario of Southwest to northwest Mexican trade are based on a multitude of choices between often conflicting interpretations of the data. Much further work is needed to understand the impact of this exchange in specific situations. First and foremost, we must gain knowledge of prehistoric developments in southern Chihuahua and Sonora. The geographical gap in our knowledge gives intuitive favor to independent invention or the need for intrusion by highly organized trading groups to explain Mesoamerican and Southwestern parallels. In establishing connections between the Southwest and Mesoamerica we must identify and distinguish between traits of generalized Mesoamerican nature and traits originating from specific regions. We must make this distinction because these two different types of traits tell us different things about the impact of Mesoamerican influence on Southwestern development and the mechanisms of diffusion connecting the Southwest and Mesoamerica. Finally, we need greater documentation of the evidence for connection between the Southwest and Mesoamerica. Studies such as Holien (1975) on the distribution of pseudocloisonné, Sprague and Signori (1963) on copper bells, and Hargrave (1970) on macaws are extremely helpful in this regard. Potentially even more important than these studies are Weigand's (Weigand et al. 1977) efforts to identify to source Mesoamerican and Southwestern turquoise. In all studies such as these it is important to quantify both the spatial and the temporal dimensions of the particular material considered. Often such quantification needs to go beyond counts to giving weights as well. For example, in dealing with macaws, one bird is pretty much equivalent to another; however, in dealing with a material such as turquoise, a piece of tessera does not equal a frog fetish. Counts alone of such material can give an inflated impression of quantity. The report of 5,895 pieces of turquoise from Casas Grandes is very impressive until it is realized that most of these artifacts are tesserae and amount to only 1.2 kg of material.

Despite the multitude of problems with accepting the particulars of this scenario, the basic proposition underlying it provides a useful framework for studying the Mesoamerican connection in the Southwest. To summarize this proposition the Mesoamerican influence in the Southwest resulted from interaction between northwest Mexican and Southwest societies rather than domination by any single social group such as pochteca. This interaction encompassed not only the exchange of goods but also of ideas, accounting for

shared beliefs, symbols, and architectural forms in the two regions. Furthermore, this interaction both influenced and changed due to changes in social complexity, markets, and access to natural corridors of communication in both regions.

ACKNOWLEDGEMENTS

A number of people assisted me in the preparation of this paper by sharing their knowledge of Southwestern and/or Mesoamerican archaeology and by supplying critical reviews. These include Tony Andrews, John Molloy, David Philips, Michael Schiffer, and J. Jefferson Reid of the University of Arizona and Sandra Marshall of the University of Texas. Conversations with Edward Ferdon of the Arizona State Museum were both greatly informative and highly enjoyable. R. Gwinn Vivian, also of the Arizona State Museum, critically reviewed the paper and shared with me his knowledge of Chaco Canyon. Charles DiPeso and Carlos Caraveo of the Amerind Foundation and J. Charles Kelley of Alpine, Texas, reviewed the paper. I must also thank Dr. DiPeso for the detailed description of data contained in volumes five through eight of the Casas Grandes report which made much of this analysis possible. Last, but by no means least, I wish to thank Dr. Emil Haury for his comments, criticism, and willingness to share his great knowledge of Southwestern archaeology.

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