THE SPANISH MISSION CHURCH IN CENTRAL NEW MEXICO: A STUDY IN ARCHITECTURAL MORPHOLOGY

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Abstract: This paper is a case study of architectural morphology: the emergence of a hybrid form from the fusion of two archetypes, the European Christian church and the Pueblo Indian kiva. The author suggests that, contrary to common perception, the Spanish mission church in the American Southwest is in some important respects formally and spatially more closely related to the kiva than to traditional church forms. The focus of the observations in this study is the family of mission churches in central New Mexico.

Résumé: Dans cet article, il s'agit d'une étude de cas de morphologie architecturale, à savoir l'émergence d'une forme hybride issue de deux archétypes: l'église chrétienne européenne et la kiva des indiens Pueblo. L'auteur suggère que, contrairement à la conception générale, l'église des missions espagnoles du sud-ouest américain est, à certains égards, plus proche des formes architecturales de la kiva que de celles de l'église traditionelle. L'ensemble des églises des missions du Nouveau-Mexique central a servi de base à ces observations.

A few churches represent almost all of what remains in New Mexico of 17th- and 18th-century Spanish colonial architecture. Four of these appear much as they did in the 17th century: Isleta (1629), Acoma (1644), Zuñi (circa 1660) and Zia (1692); five others are in ruins. Of 12 churches built in the 18th century only five have survived 20th-century efforts at modernization. Seven others from the 19th century conform in varying degrees to the conservative tradition of earlier construction. Most of the churches were built of adobe brick. The exceptions were four built of stone in the early 17th century and now in ruins: the three missions of the Salinas Valley (Abó, Quarai and Las Humanas) and the mission of San José de Jemez at Giusewa (Bunting 1976:54-59). From this family of buildings, some in ruins, some substantially altered, and from others close to their original condition, we can discern

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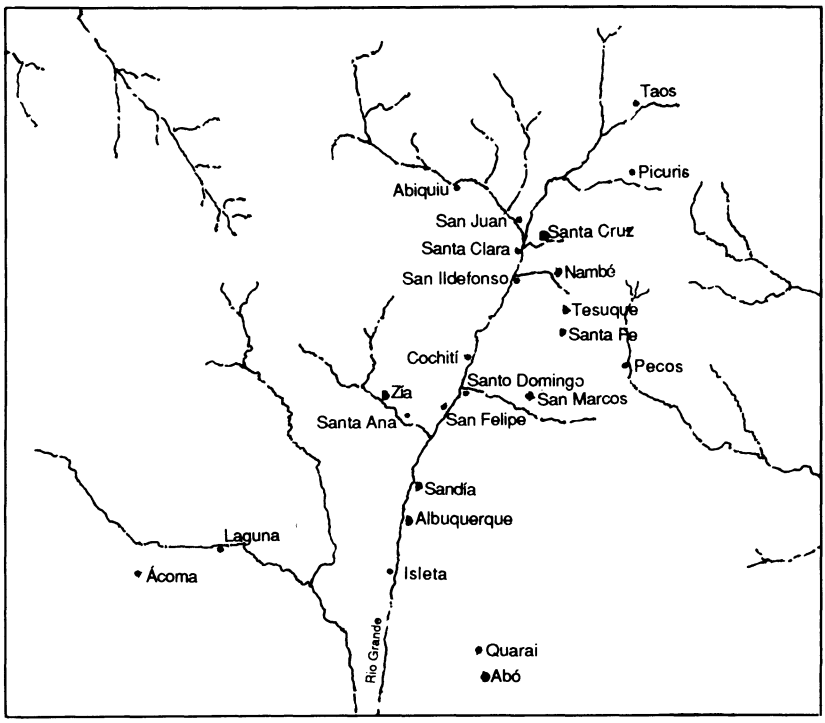
much about the intentions of their builders and methods of construction (Figure 1).

Figure 1
Locations of Spanish Mission Churches in Central New Mexico



Many studies of Spanish mission churches in the Southwest have carefully documented the history and appearance of these remarkable structures. Building on this foundation of research, my intention is to suggest why New Mexican churches are so radically different, spatially and formally, from their 16th-century European predecessors. The most common explanation is that the climate and a primitive building technology dictated a stripped-down, back-country version of a European church form. Certainly, these were major factors in the morphology of the mission church in the Southwest. But there were other factors as well: competing ideas about form and space and different ways of conveying these ideas symbolically.

If the churches are studied on the assumption of cultural parity instead of from a Euro-centric perspective, they begin to reveal some lessons in the way architecture expresses culture. Specifically, in this case, we find the creation of a new architecture as the result of cultural stress in both the Spanish colo-

nial and the indigenous Indian societies. Much of the aggressive, alien architecture of the supposed winner in the colonial contest was absorbed, subverted and irrevocably transformed by the purported loser—the native Indian vision of sacred space and form.

Illusions of Dominance

"Everywhere in this land the emblem of the Cross is raised aloft.... It is said that in no part of the Christian world is the Cross found so often, esteemed so highly, adorned so richly, and made so large." This was written in the early 16th century by Fray Toribio Motolinía and typifies numerous accounts by writers in colonial Mexico in which there appears genuine astonishment at the enthusiastic devotion to a Christian symbol by the purportedly converted pagan Indians. The devotees of the Cross seemed to find an excuse to erect it almost anywhere. By 1539 there was such a profusion of crosses across the countryside, at almost every crossroads and even in private patios, that the bishops felt it necessary to outlaw all crosses but those in places of public assembly (McAndrew 1965:247-254).

The Spanish long attributed the Indians' ardent veneration of the Cross to the inherent virtues of Christianity. They did not realize that, in fact, the Cross was a pre-conquest symbol of great antiquity. Long before the Spanish arrived, the Indians of Tlaxcala, for example, called the cross "Tonacaquahuitl," roughly translated to mean "the tree that sustains our life" (Kubler 1961:27). The highly abstract form of the cross fit easily into the Native American practice of symbolizing complex ideas simply. There is a suggestion here that many deeply rooted indigenous beliefs among the Indians subjected to the Spanish conquest were not effaced or substantially distorted.

To illustrate the point further, the church of San Xavier del Bac near modern-day Tucson, Arizona, is decorated with a great rope in sculpted plaster. The rope circumscribes the entire interior at the cornice line and was, no doubt, installed by the Franciscan friars to symbolize their order. It girds the church just as the rope around each friar's cassock ties him to his vows of the order. The Papago Indians, for whom the church was ostensibly built, see this particular design motif in a different light. To them it symbolizes the great beneficent serpent which holds the terrestrial world together and bestows water upon its thirsty denizens.[1]

Likewise, many symbols of alien European beliefs were readily accommodated and absorbed by a profoundly powerful native mythic tradition. Europeans were, and to a great extent their heirs still are, preoccupied with the superficial effect that their aggressive culture had on a relatively passive people. They have not fully acknowledged the degree to which European ideas were changed by Native American cultures.

As in the case of the Cross, imported Spanish architectural ideas were quickly assimilated by Indian builders who changed their meanings. On the evidence of an enormous body of work, they clearly approached their new building projects with zeal and imagination despite the underlying system of oppression and coercion. However, the resulting meaning of the architecture was not necessarily what the Spanish intended it to be. An appreciation for the flexibility of meaning in forms as they are transmitted across cultural boundaries is the basis for understanding architectural morphology, or the transformation of building types. The changes which took place in the meaning of the European church type in New Mexico provide us with an excellent case study of this phenomenon. A standard form, representative of a presumed cultural supremacy, was altered to the extent that it became virtually absorbed by the indigenous cultural geography. The result of such a transformation was, as in the case of the New Mexican mission churches, a hybrid form that retained throughout its own historical tradition the enormous tensions of its contradictory genesis. This phenomenon is revealed in two basic aspects of architectural physique: the spatial effect that emerges from the plan and the formal composition of the façade.

Kiva as Church and Church as Kiva

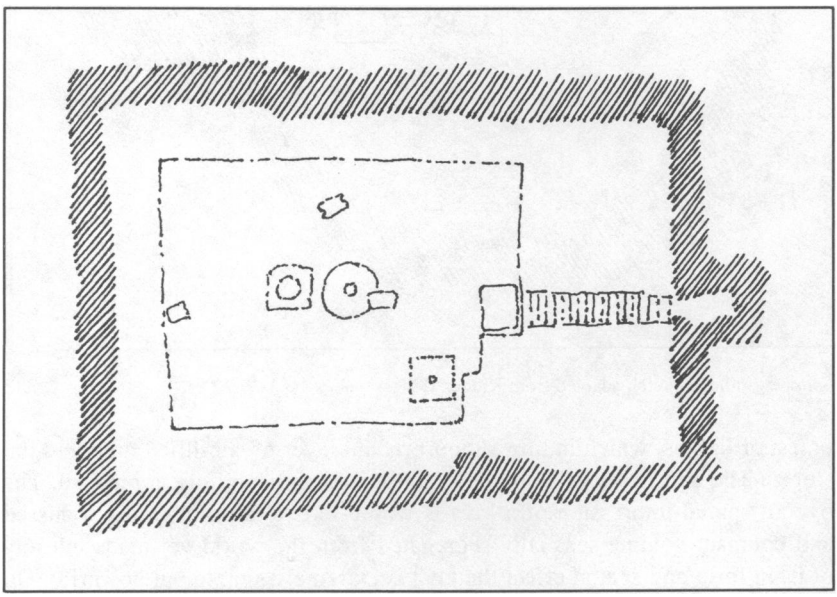
In the construction of mission churches in New Mexico the severe limitations imposed by available materials (mud brick and timber) and by native labour necessitated a divergence from that of the original European church model. This is indisputable since we can easily observe a close affinity in material and building technique between the mission churches and nearby pueblo architecture. However, the emergence of a church form suited to the specifics of life in the Southwest is rooted in something even more fundamental than material and technique. It is conceptual in nature, a sense by the people of that time and place of what was appropriate for sacred space in a traditional Indian culture.

From the Indian point of view, the typical mission church in a pueblo conveys a binary message. On one level the church is a monument to Spanish colonial oppression; it was purposefully built entirely out of scale with nearby buildings and arrogantly assumes the central position in its pueblo. However, on a more subtle level, and not by accident, the churches share certain spatial qualities with the indigenous ritual architecture of the kiva.

Kivas are special rooms which clan, kachina and curing societies of many Southwest Indian communities still use for initiation, healing and other rituals. Elsie Clews Parsons described many first-hand accounts of the use of kivas in various ceremonies (Parsons 1939:137-44, 367, 553-860). They originated from pit houses of the earliest Indian settlers in the region. As the Anasazi and their descendants developed more sophisticated domestic build-

ings above ground, they retained the subterranean house form of their ancestors for sacred rites. A variety of kiva plans can be found in the Southwest. The Anasazi kivas found on Antelope Mesa in northeastern Arizona, for example, are rectangular or D-shaped. But the kivas of Mesa Verde and Chaco Canyon are cylindrical (Figures 2 and 3). These prehistoric types are semi-subterrranean and built of stone. However, many of the kivas used today in the pueblos of central and eastern New Mexico are built above ground with cylindrical adobe walls. In some cases, such as at Acoma, the kivas are incorporated directly into the rectilinear matrix of dwellings. The only exterior features which distinguish them from neighbouring dwellings are a lack of windows and a single entrance through the roof.

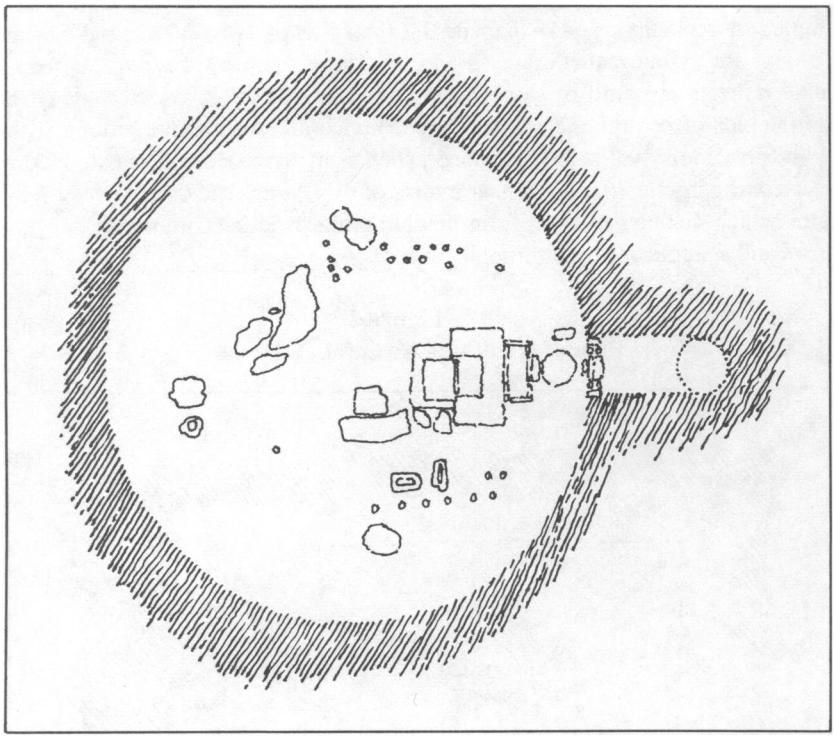
Figure 2
Plan of Kiva A at Awátovi, Arizona



Source: Author's sketch adapted from Smith 1972.

The prehistoric kivas often had roofs made of cribbed logs used as beams built up in four layers to represent the four levels of the sky. The Hopi, for example, retain this custom in the construction of modern kivas (Parsons 1939:213). The beams created a shallow, corbelled dome of wood. The very large kivas, such as Rinconada and Chetro Ketl in Chaco Canyon, used log columns within their interior to help support the roof. Many modern kivas use a lighter system of roofing by which beams, or vigas, support a mat of slender

Figure 3
Plan of Kiva 16 at Pecos



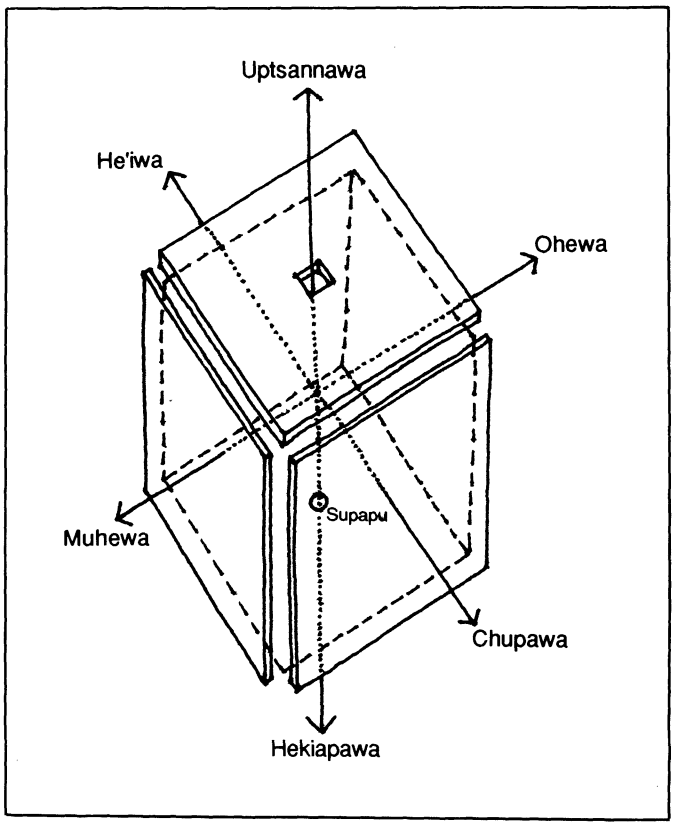
Source: Author's sketch adapted from Kidder 1958.

poles, or latillas, which in turn support a final layer of sun-dried mud and flat stones. The admission of sunlight is minimized and carefully controlled. The overall spatial impression of a kiva is womb-like: a dark, inwardly focussed and compact volume sensually segregated from the world yet made entirely of it. In form and spatial effect the kiva is extremely simple but powerful. On a conceptual plane it approaches an archetype in the Jungian sense: an idea about form which is so basic to human experience that it may be preserved and transmitted through a collective unconsciousness.

It is easy to suppose that the imposition of an axially symmetrical, longitudinal plan imported from Europe destroyed the indigenous sense of sacred space found in kivas; that the Indian architectural tradition could not survive the alien requirement for processions down the centre of a nave toward a distant altar. However, though prehistoric and modern kivas have more compact plans than do churches, the organization of their interiors is nevertheless similar in one way to that of the typical mission church. In most cases, the place-

ment of several important features of the kiva interior, such as the ventilation shaft, sacred stones, storage cysts, the hearth and the sipapu (a hole symbolizing the place of emergence from the underworld), together create a major axis through the centre of the plan from one side to the other. Stone benches on the perimeter of the space also reinforce the main axis. There is a clear sense of internal orientation, even in cylindrical examples, which denotes the positions of the four terrestrial directions plus the zenith through the entrance/smoke hole and the nadir through the sipapu. The six cardinal directions comprise the spatial framework of the kiva (Figure 4). North has ceremonial primacy in most cases since it is the home of Lightning.

Figure 4
A Schematic Drawing of Space Organized by the Six Cardinal Directions Denoted in a Kiva at Zuñi



Source: Author's sketch after a description in Parsons 1939.

Both men and women still use the kivas together but segregation of the sexes is required. Placement of men on the right side of the space relative to a south to north axis, with women on the left, is traditional and serves to further reinforce the axiality of the interior. Though friars tried to seat families together, the custom of gender segregation persisted in mission churches also, with men and women choosing to sit on the right and left sides, respectively, of the nave. At Zuñi and Santo Domingo, burials in the "Christian" cemetery follow the same pattern (Parsons 1939:367). This indicates one of several significant linkages between the two ritual spaces of kiva and church from the Indian view.

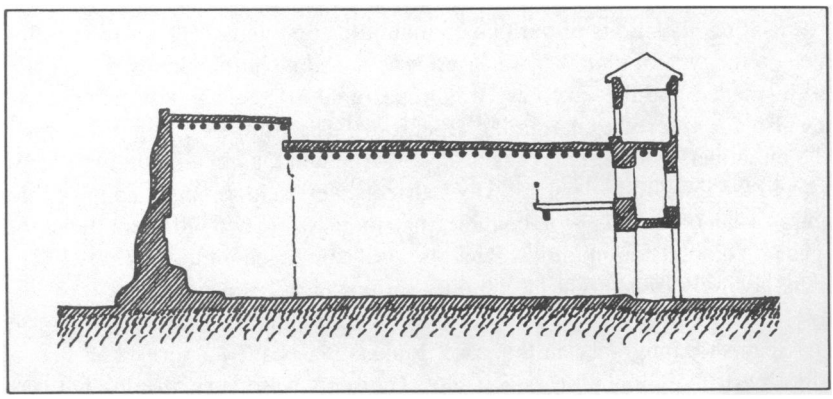
In 1569 the Franciscan Chapter in Mexico ordered that all new churches be built on a standard plan. The order was enforced periodically with instructions to build "plain, strong and without any novelty" (McAndrew 1965:125). There were European precedents, most notably the Rule of St. Benedict which governed the austere design of Cistercian buildings. However, the plan type and building form which resulted from the absorption of Spanish ideas into the continuing Indian vernacular in the Southwest went further. The construction of mission churches exhibited an extremely simple plan and uncompromisingly utilitarian spatial vision. From a European perspective, this was not just primitive; it was a radically pure aesthetic.

The typical mission church, like the kiva it was meant to replace, had thick adobe walls which supported heavy wooden vigas. A lattice of latillas and a layer of mud completed the roof. The floor was customarily of beaten earth. Natural light was limited to only one or two small windows on a single side of the nave. These created a lighting effect closely resembling that produced by the small openings which admitted shafts of daylight into dark kiva interiors. Aside from the exaggerated longitudinal axis, the strongest European influence was a relatively high ceiling. But this feature also is very different from European models. One does not find, for example, ceilings in the original New Mexican mission churches that exceed in height the width of the nave. The width of the nave was constrained by the maximum length of available timbers for vigas capable of carrying the heavy wood and mud roof. The widest nave in New Mexico surviving up to the 19th century was that of San José de Giusema, which was 33 feet and 10 inches (Kubler 1972:31). The only larger church was the one built at Pecos by Fray Andrés Suárez in the early 1620s which measured 41 feet across at its east end (Hayes 1974:20). Though the ceilings of these churches were built higher than the Pueblo tradition would have preferred, they nevertheless created, in conjunction with the limited lighting, an extremely heavy, box-like interior volume which hugged the ground and shunned the heavens.

Another unusual feature of mission churches was their orientation. The nave, chancel and sanctuary in New Mexico normally formed a single space

differentiated only by an altar rail. A distinctly local innovation was the use of a clerestory at the junction of the nave and chancel which admitted a shaft of light to illuminate the altar. The use of this device in some of the churches compensated for the lack of light from a dome or from transepts. A clerestory was created by building the flat roof over the chancel slightly higher than that over the nave. The narrow slot which resulted was left open, was later filled with selenite, a transluscent gypsum, and eventually with glass. This was not a Spanish device but an Indian one. Clerestories were often used in pueblo construction to illuminate rooms which otherwise had no exterior exposure. The roof of an adjacent room was built lower to allow for a small clerestory to illuminate and ventilate the interior room (Figure 5). Whereas a dome could admit light from all directions, the use of a clerestory led to the practice of orienting the churches on a north-south axis. This, of course, contradicted one of the customary planning devices of Christian church planning, an east-west orientation. The orientations of the large churches at Abó and Quarai were slightly east of north to permit the maximum sunlight to enter through their clerestories at noon on the winter solstice, December 22. On that date at Abó the light fell on the floor in front of the altar, while at Quarai it illuminated the area directly above the altar where the tabernacle would have been placed. By the summer solstice no light at all entered the churches through their clerestories (Ivey 1988:213-214). The winter solstice was close enough to Christmas to be useful to the friars. However, the use of the building to signify the precise dates of the winter and summer solstices was of far greater significance to the Indians. The solar cycle had no particular importance in respect to the Christian calendar but it was basic to the Indian one.

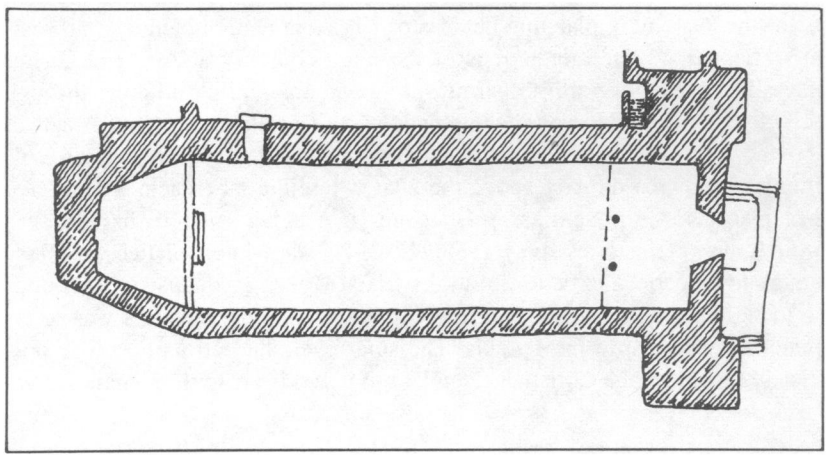
Figure 5
Section of San Miguel in Santa Fe Showing the Clerestory



Source: Author's sketch.

It is interesting to note that though there appears to have been no rigid rule in respect to orientation of the principal axis in kivas either, the majority of the pre-historic kivas on Antelope Mesa as well as in Chaco Canyon, for example, are oriented toward the north. Most of the excavated kivas on Antelope Mesa were oriented within 30 degrees west of true north (Smith 1972:108). This was probably to direct the limited amount of sunlight penetrating the roof opening toward the north end of the space which was, as in the churches, the focus of ritual.

Figure 6
Plan of San Estévan Rey, Ácoma, Showing the Characteristic Coffin-shape of Mission Churches in New Mexico



Source: Author's sketch.

Racial compositions of various communities may have had a strong influence on the type of plan that was used. The mission church plan was typically coffin-shaped and the sanctuary was trapezoidal to create a false perspective but also for ease of roof framing (Figure 6). The use of transepts was rare. The monumental stone churches of Pecos, Abó and Quarai are notable exceptions to the rule. To understand why transepts were seldom included in pueblo church plans, one has to recognize that there were two different types of Spanish colonial communities. Pueblos were comprised almost entirely of Indians; a single friar might be the only European in residence. However, villages such as Albuquerque and Santa Fe were populated mostly by Mexican and Spanish immigrants; in this case, Indians may have comprised at most a minority of the population as servants. Transepts were very rare in churches built in Indian pueblos perhaps because of a custom brought from Mexico. There, transepts were used in churches to help segregate parishioners by race.

The Spanish sat close to the altar in the chancel and transepts behind a wooden screen while the Indians sat in the more distant nave. In Indian pueblos of New Mexico, such segregation was unnecessary. But in villages which had a mixed racial population, such as Santa Cruz, one finds transepts. These articulate the chancel as a space distinctly separate from both the nave and the sanctuary (Kubler 1940:132).

Another possible reason for the omission of transepts may have been to deny an enemy the protection of re-entrant corners in the event the church needed to be defended either from marauding Apaches or from the pueblo residents themselves, as was the case in the great pueblo revolt of 1680. The fortress-church type was a common precedent in Mexico in the 16th century (McAndrew 1965:134). Though defense may have been one reason for the friars to design churches without transepts, there is no record of any mission church in New Mexico having been successfully defended. The mission church of San José de Jemez, begun in 1617, was a fortified church with stone walls eight feet thick rising five feet above the level of the roof (Sanford 1950:101).

The omission of transepts, in any case, was coincident with the Indian ideal of a compact, unitary design for sacred space, the kind of space the Franciscans could easily see in the kivas. The pragmatic factors of construction, a largely homogeneous congregation, and possibly defense may have each contributed to the elimination of the transepts. However, the provision of a sacred space that was familiar and continuous with the indigenous spatial tradition may also have been an important consideration of the friars who had to enlist the cooperation of Indian builders. In some cases, the pueblo authorities did not permit the construction of a church within the pueblo. For example, the church built at Pecos before 1620 was sited about 1 000 feet northeast of the pueblo (Hayes 1974:2-5). In another example, Fray Francisco Letrado was refused permission to build on a commanding site at the west end of the mesa, on which the pueblo of Cueloce stood (called Las Humanas by the Spanish), and was given instead the more difficult site along the south hillside below one of the principal kivas (Ivey 1988:167).

The principal resource of New Mexico during Spanish colonialism was Indian labour. In many cases the Franciscans were a countervailing force to the depredations of the Spanish colonial government and Mexican immigrants. The Church's paternalistic evangelism was often a direct challenge to the governors' exploitation of the Indians (Scholes 1937: 78-106).

Though some friars were as ruthless as conquistadors, the Indians usually saw the Church as the lesser of two evils, even if it remained simply one part of the whole system of oppression. While the governors used enslavement (the system of encomienda) to attain their objectives, the Franciscans' principal tool was a mixture of intimidation and persuasion. Though outright coer-

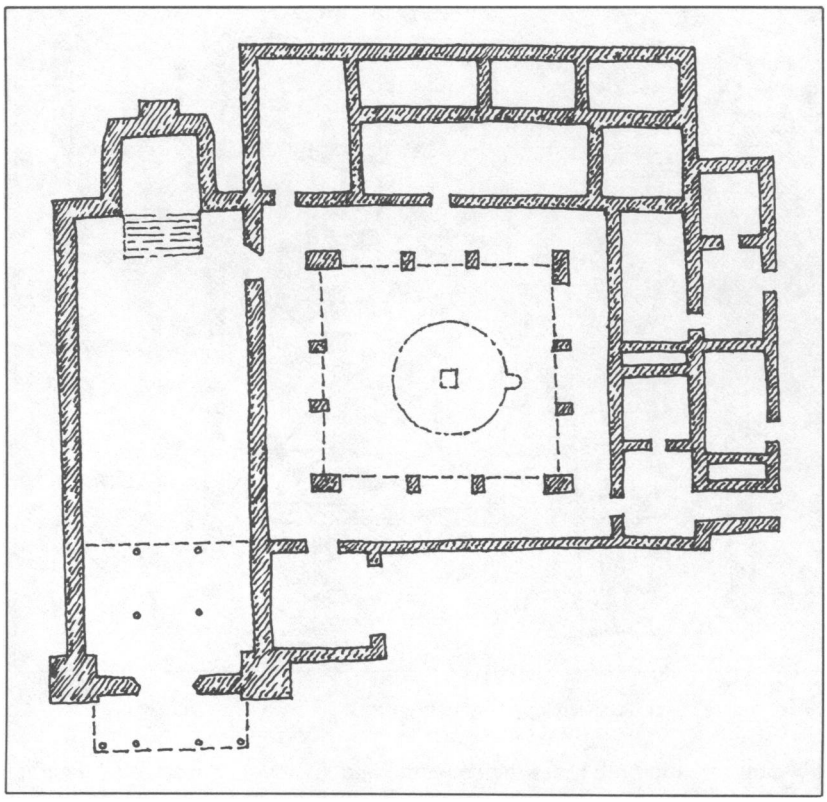
cion in one form or another was probably the rule of the missions, in many cases friars were in extremely tenuous positions, dependent upon a minority faction of the pueblo population to marshal help and defend them. At times this was not enough. For example, according to the eyewitness account of Miguel de Noriega, Fray Francisco Letrado was murdered at the mission of Hawikuh in 1632 because he called the Indians to Mass on one of their festival days (Hackett 1937:184). The friars' tenuous position in the pueblos perhaps inspired them to use architectural forms which were compatible with both traditional Indian beliefs and Catholic faith.

The most compelling evidence for the hypothesis that mission churches were, in a sense, an extension of the kiva tradition comes from the archaeological research of the ruins of Abó and Quarai (Figures 7 and 8). The missions of Abó (established in 1621) and Quarai (1626) were sited in existing pueblos east of the Monzano Range in the Salinas region of central New Mexico. Their planning was very similar and included a convento attached to the south side of the church. The convento included small residential cells, storage rooms, a kitchen and a refectory arranged around a small rectangular courtyard or patio. The simple convento scheme followed that employed in the European monastic cloister plan, which was in turn rooted in the Mediterranean atrium archetype. However, Abó and Quarai shared one additional unusual feature. In the centre of each patio was a kiva.

Various explanations have been offered for the presence of a kiva in the centre of an otherwise purely European plan. Some historians have suggested that the missionaries were practicing a form of "superposition" such as that which apparently occurred at the mission of Awátovi (Montgomery et al. 1949:64-67). By this argument the convento was used to surround the older kiva and thus dramatize Christian domination. Other historians and anthropologists have argued that the kivas could have been constructed during periods in which Christian control of the pueblos was lax or after the missions had been abandoned. Both of these explanations, however, are flawed (Ivey 1988:415).

James E. Ivey of the National Park Service has conducted extensive and detailed archaeological research at the two sites and has developed a hypothesis which more closely fits the available physical and documentary evidence. First, Ivey points out that superposition was not likely at either Abó or Quarai. When the missionaries arrived at the pueblos, they typically had little or no military support and no real authority over the Indians. According to accounts by the missionaries, they had to negotiate with leaders of the existing social power structure and gradually develop a following. The success or failure of missions in New Mexico depended to a great extent upon the struggle between pro- and anti-Spanish factions within the pueblos (Brugge 1969: 191-193). Despite any ideas the friars may have had about the ill effects of

Figure 7
Plan of the Mission Church and Convento at Abó, ca. 1630

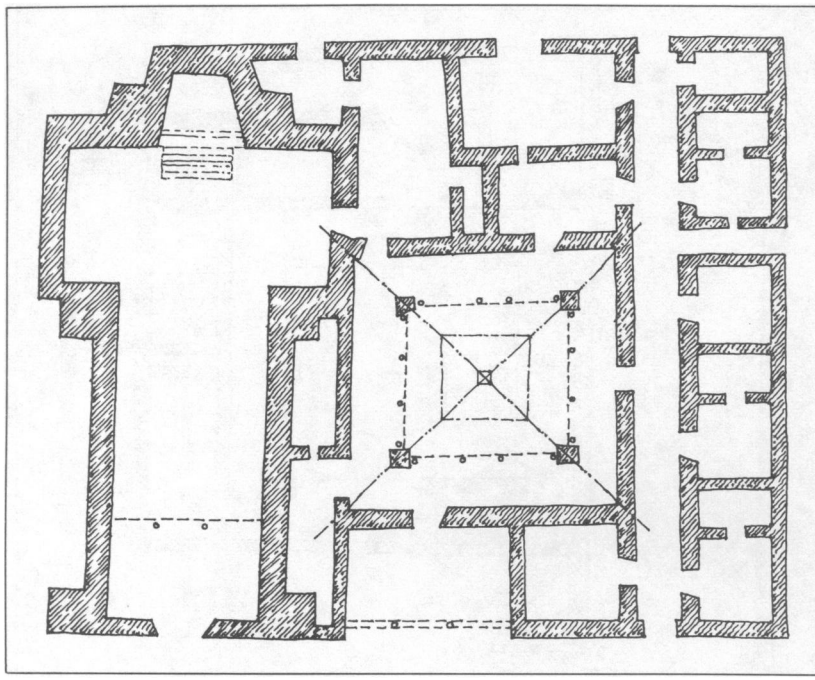


Source: Author's sketch adapted from Ivey 1988.

paganism, most of them wisely adopted a somewhat conciliatory attitude toward the use of kivas, at least at the outset. Only later, during the kachina wars after 1661, did intolerance dominate Franciscan relations with the indigenous religions (Vivian 1979: 29). For example, there is evidence to suggest that the founding missionary at Las Humanas apparently chose the site of the church and convento to avoid kivas (Hayes et al. 1981:7, 36). Likewise, in contrast to what superposition might attempt to achieve, at Abó and Quarai the careful siting of the kivas in the patio centres without any part of the Christian buildings touching them suggests a composition intended to highlight the importance of the kivas rather than to diminish them (Ivey 1988:416).

Excavation of the ruins of both the kivas and the conventos at the two missions has revealed evidence that the intent was one of coexistence. Stratigra-

Figure 8
Plan of the Mission Church and Convento at Quarai, ca. 1632



Source: Author's sketch adapted from Ivey 1988.

phy shows that in both cases the convento and kiva were constructed together on an artificial platform at the same time prior to the construction of the adjacent church. Not only does this contradict the theory that the kivas were built after the Franciscans left, but it strongly suggests that the kiva was intentionally built to be used in conjunction with Catholic ritual, perhaps even as a church itself. This possibility is not so shocking when one considers the variety of "profane" buildings which Christianity has adopted for use throughout its history from the Roman market basilica to the Moorish mosque in Spain. The latter example was even used by Diego de Vargas, the governor of New Mexico in 1693, to justify the adaptation of a kiva for use as a church in Santa Fe (von Wuthenau 1935:178-179). The Franciscans were rather eclectic in their choice of buildings used as churches. When missions were initiated, for example, a tent with a wooden table or a pueblo storeroom was suitable until more permanent accommodations could be built (Ivey 1988:420).

The kiva at Abó has another unusual quality which suggests its use as a church. First, though the layout of the interior features, such as the firepit, de-

flector, ventilator shaft and sipapu, as well as its structure were much like that of a conventional kiva, its interior height was not. Whereas kivas of the Salinas Valley were typically about five and a half feet high from floor to ceiling, that in the patio at Abó is about seven feet (Toulouse 1949:11). This was apparently an accommodation to European comfort. Raising the ceiling height strongly suggests that the founding missionary, Fray Francisco Fonte, not only permitted the use of the kiva by the Indians but actually used it himself.

The second unusual feature of the kivas at Abó and Quarai is their placement. At Abó the kiva is cylindrical and its roof is perfectly level with the surrounding patio pavement. Furthermore, its centre is within one foot of the centre of the square patio. The kiva at Quarai is even more remarkable. Unlike all others in the Salinas region, it is square and positioned exactly in the centre of the patio. Ivey points out that, following Spanish procedures for siting buildings, lines extended diagonally from the corners of the patio intersect precisely at the centre of the kiva. This kind of "compulsive" design was entirely uncharacteristic of the indigenous pueblo Indians but common among Europeans. Ivey concludes that the available evidence best fits the hypothesis that the Franciscans not only adapted existing kivas for their use (as in the Santa Fe example) as unconsecrated churches but in some cases even went so far as to build slightly modified kivas themselves until a church closer in form to European precedents could be constructed (Ivey 1988:421).

European Precedents

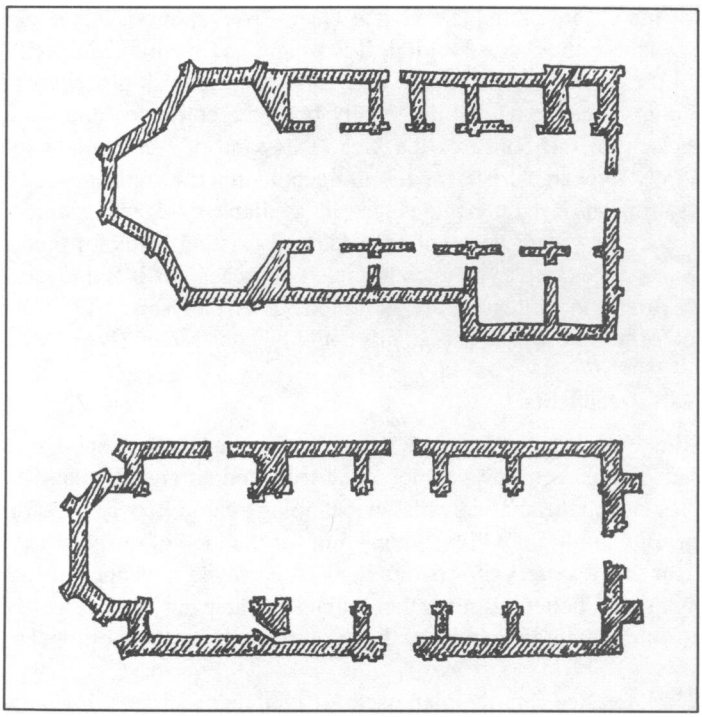
When the Franciscan missionaries eventually marshalled enough help to build their churches in the pueblos, they followed an austere plan devoid of side aisles and chapels. The available technology certainly was a factor in this decision. But another possible explanation for the lack of chapels may be the friars' fear that a variety of separate images displayed in chapels could rekindle polytheistic beliefs among the Indians. Whatever the cause, their extremely simple plan distinguishes these churches from their European predecessors.

Kubler suggested that the plan used for churches in New Mexico was derived from that of the Gesù in Rome, designed for the Jesuits by Vignola during the Counter-Reformation (Kubler 1940:54, 75). The Gesù was more compact in plan than most other large churches in Europe because its side aisles and transepts were absorbed into a series of side chapels.

The Gesù was a product of the Italian Renaissance and, though no doubt influential throughout Europe, its highly refined decorative style and complex structure made it inappropriate as a model for small, inexpensive parish churches. More likely, the friars in New Mexico recalled a plan type common in Spain and elsewhere around the Mediterranean. The plans of San Juan de los Reyes in Toledo and El Parral in Segovia are typical of a simpler design.

In these parish churches, side chapels replaced side aisles. In El Parral the restricted openings to the chapels reinforce the unity of nave, chancel and sanctuary. The side chapels were incorporated into massively deep walls. In addition, the plan of El Parral utilizes the simple trapezoidal sanctuary to produce the characteristic coffin shape found in later New Mexican mission church plans (Figure 9).

Figure 9
Plans of San Juan, Toledo (bottom), and El Parral, Segovia (top)

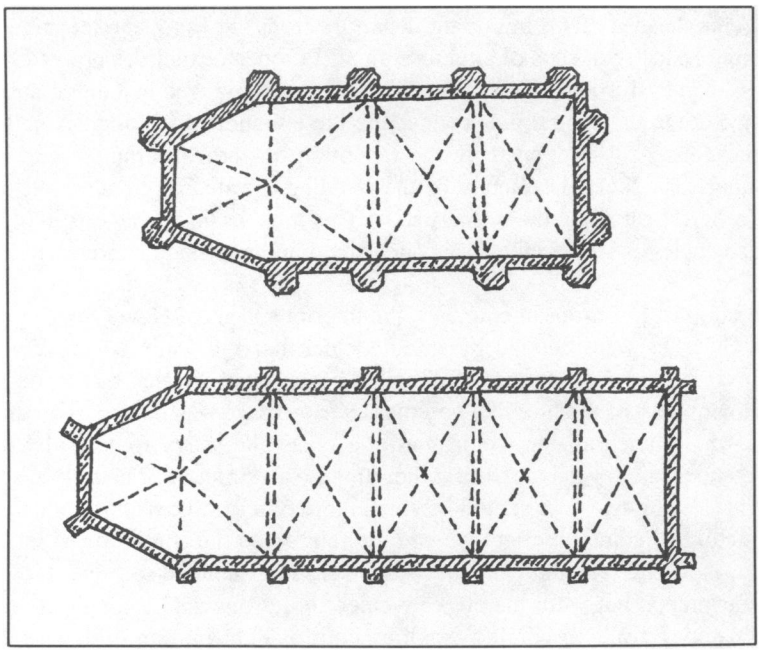


Source: Author's sketch adapted from Weise 1933.

A close relation to New Mexican churches can also be found in a medieval plan type which predates the Gesù. For example, two parochial Latin churches on Cyprus built by Cistercians resemble in plan those in New Mexico, though in other respects they are very different. St. George of the Latins in Famagusta (built in the early 13th century) and St. Catherine of Nicosia (late 14th century) each have a short nave without aisles leading to a polygonal apse. This plan is spatially economical and simple to build because it has no columns or interior walls. The two churches, though, are products of the

Gothic Rayonnant style of northern France. Therefore, their builders used ribbed vaults to span across the nave and the vaults rest on exterior buttresses to allow for extensive glazing (Panagopoulos 1979:142-148) (Figure 10). The New Mexican churches have a similar plan but their structural system led to a radically different way to define architectural space with mass and light.

Figure 10
Plans of Two Cistercian Churches on Cyprus: St. George of the Latins in Famagusa (bottom) and St. Catherine in Nicosia (top)



Source: Author's sketch adapted from Panagopoulos 1979.

Cellular and Seamless Space

The way in which sunlight is used to define the character of architectural space sets the mission churches distinctly apart from their European ancestors. Late Medieval and early Renaissance examples discussed above relied on large amounts of sunlight to achieve the desired architectural effect. Even the builders of the relatively simple Cistercian churches strove toward the ideal of transcendental space with high, airy volumes dramatically saturated with sunlight. The goal was to evoke spiritual salvation by escaping from the material grip of the Earth. In contrast, kivas are devoted to fixing the individual in the Earth; the Earth surrounds, bears down upon and protects the space

within. While European churches typically represent heaven as a promise of eternal life outside the body, kivas assert the powerful presence of a spirit world to be found deep within the corporeal reality of the natural world.

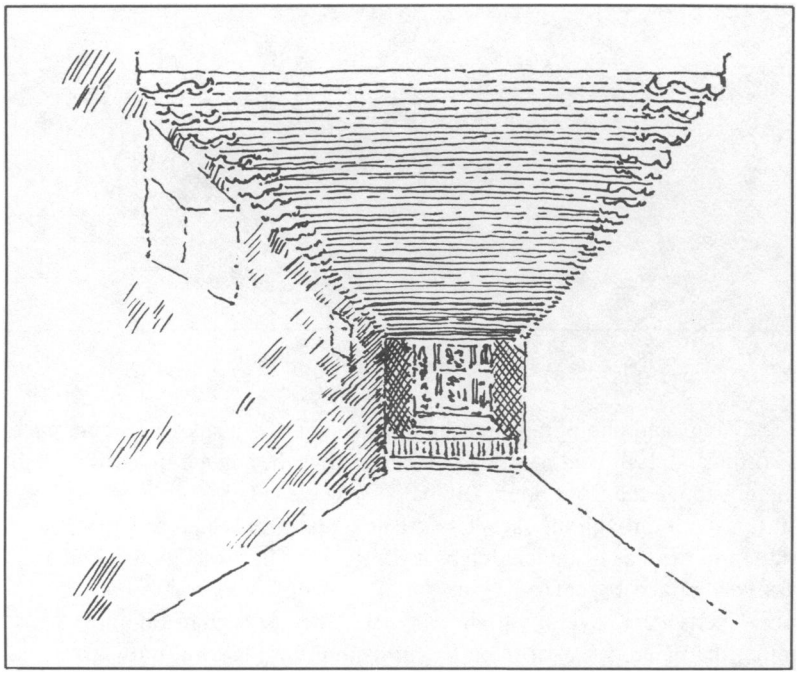
Though it was on a scale totally alien to Native Americans, the mission church maintained some of the effects of light and space familiar within kivas. Light was restricted to a few small punctures in the massive body of the building and space was kept unified and smoothly continuous. This compromise between European and Pueblo precedents can be seen in the plans of the churches in New Mexico. Though some geometric similarities in plan may link the Spanish mission churches of New Mexico to Europe, the mission churches reveal an important departure from the European technique of defining space by means of structure. In all European examples derived from the Roman basilica archetype, units of space were arranged in a hierarchic sequence down the central axis connecting the entrance to the altar. A cellular spatial concept was defined by the repetition of vertical structure and roof vaulting. The skeletal structure of the building dictated a relentlessly rhythmic progression along the primary axis. This most basic characteristic of European ecclesiastical architecture is not found in the mission churches of New Mexico.

In contrast to European churches, the interior spaces of New Mexican mission churches were defined by smooth, thick bearing walls which offer no sense of rhythm and no sense of direction beyond that dictated by the longitudinal geometry of the box-like volume. Interior space was treated as a continuous whole much as one would find in a kiva. The heavy roofing vigas did not compensate for the lack of rhythm in the wall structure. Their close spacing (usually on two-foot centres) created more of a surface pattern rather than a structural rhythm, an effect which only reinforced the continuity of interior space. Apertures for light in side walls were not intended to break the plan into segments, but were merely convenient holes punched through the massive flanking walls to admit a small amount of light into an otherwise dark space (Figure 11). This kind of space is unprecedented in the European Christian tradition. In its time, the idea of a seamless interior space set the small mission church of the Southwest apart from other European buildings devoted to a religious function. The unique quality of this architecture is the result of a cultural encounter in which Europeans contributed the generalized plan which the Indians then modified to achieve a specific spatial effect.

Form and Façade

Though the churches of central New Mexico appear superficially alike as bulky, simple prismatic forms, there is an important difference between two types. As the original racial composition of pueblos and villages, pure Indian or Mexican immigrant, determined to some extent the use of transepts, so did

Figure 11
San Estévan Rey, Ácoma – Interior Perspective

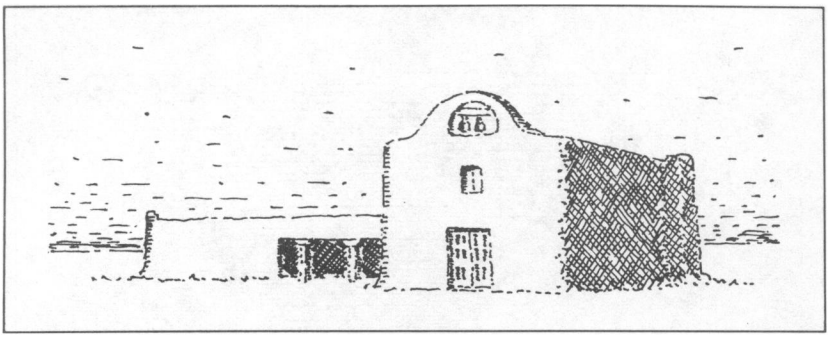


Source: Author's sketch.

it also influence the design of church façades. In Mexican villages the first churches normally had flat, unadorned façades with a small belfry. Often the only puncture in the façade was the front door, though occasionally there may have been a small window above the door to illuminate the choir loft. Examples of this type are the original churches at Santa Fe and Albuquerque (Figure 12). In contrast, churches in Indian pueblos generally have a balcony stretched across the façade. In some cases, the balcony dominates the entire exterior building form.

The use of balconies on European church façades is extremely rare, but a balcony as the dominant feature of a church façade is unprecedented in Europe. A morphology of the mission church which assumes the domination of European forms over indigenous ones will fail to yield a reasonable explanation for the development of large balconies on the church façade. However, if this anomaly is studied from the perspective of a dynamic cultural encounter, one explanation for the appearance of large balconies on the façades becomes plausible.

Figure 12
Façade of the Mission Church at Albuquerque, ca. 1776

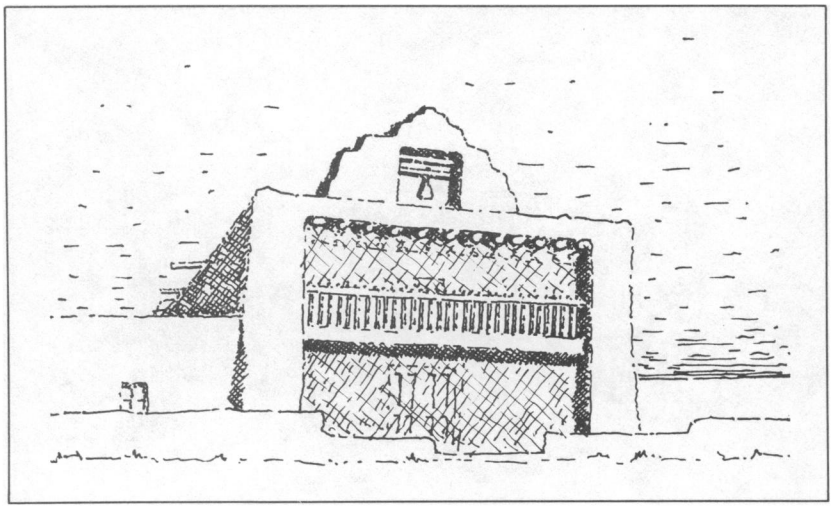


Source: Author's sketch adapted from Pierce and Dominguez 1956.

Drawings and photographs of the original church façades in Indian pueblos by 18th- and 19th-century travellers show that they generally had a shallow balcony above the front door. The balcony was made by projecting the choir-loft joists out through the façade to create a platform which was quite large in relation to the size of the church as a whole. A railing was then added and access was gained by enlarging the small choir loft window to become a low door. There were several variations on this theme. At San Ildefonso, for example, the balcony was formed by projecting the platform outward and also by indenting a portion of the façade inward. At Santo Domingo the indentation of the façade became the commanding design motif to the extent that the balcony as a whole appeared to be a separate piece set into a large opening of the elevation (Figure 13). The balconies at Picuris, San Felipe and Zia, together with their narrow roofs, are stretched between two vestigial pieces of the façade which are then enlarged to become corner towers. In the 18th century, the façade of Santa Ana was dominated by a large balcony in three segments which rested on four buttresses (Figure 14). San Estévan at Acoma is unique since its balcony is not on the church façade (which faces a cemetery) but displaced to the corner of the adjacent convento so it can face the open plaza of the pueblo.

In the context of an extremely spare and utilitarian building form, the consistent appearance of these relatively elaborate balconies, often decorated with colourful Indian designs, cannot be attributed simply to capricious formalism. A specific use must have required them. The fact that they appear on the original churches and their derivatives in Indian pueblos and very rarely on churches in Mexican villages suggests a difference in the use of the church in these two types of communities. Las Trampas is a notable exception in which a community of mixed Indian and Mexican residents built a church

Figure 13
Façade of the Mission Church of Santo Domingo

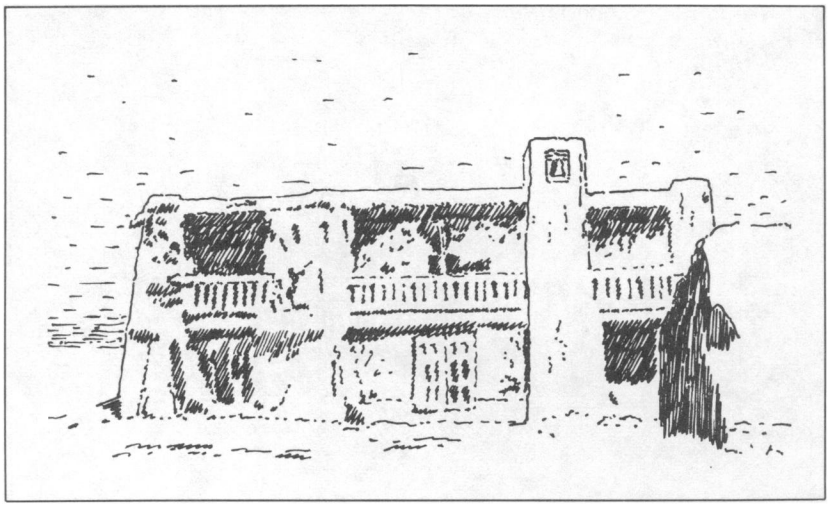


Source: Author's sketch.

with a prominent balcony. In the past, the choir sang from the balcony while celebrations took place on the plaza below (Sanford 1950:142).

If missionaries tried to create architectural plans which could mediate at least temporarily between indigenous and alien rituals, then perhaps the use of a balcony across the façade had a purpose similar to that of adapting the kiva to use as a church. Throughout the history of the pueblo missions, the Indians stubbornly maintained their traditional religious rituals in the kivas and outside on the plazas. Today it is common, for example, for Indians on their way to Mass to gather for about an hour on the plaza in front of the church to celebrate a native ritual under the leadership of an Indian priest. Similarly, in Mexico, most churches included an atrio or large forecourt in which the great Catholic dramas, or autos sacramentales, as well as the native ritual dances, called mitotes, were performed. The latter were entirely Indian in character but were nevertheless considered compatible with the liturgical and architectural form of the church. In addition, it was common practice in Mexico to say Mass outdoors for Indian congregations beneath a jacal, a temporary, light-weight, open structure of cloth or sticks. This practice was even institutionalized in church doctrine. The Council of 1585 decided to allow secular priests to say Mass only within consecrated churches and oratories but not to apply this rule to friars. McAndrew has suggested that the use of atrios and jacals in Mexico was a conscious effort on the part of the friars to provide

Figure 14
Façade of the Mission Church of Santa Ana, ca. 1880



Source: Author's sketch adapted from a photograph by A.F. Bandelier.

some continuity with the Indian custom of outdoor religious ritual (McAndrew 1965:342-343). The same could be true of the balconies on New Mexican mission churches which faced the pueblo plazas.

The balcony could allow a friar to be a symbolic part of Indian ceremonies but also allow him to remain physically detached. The presence of a friar on the balcony during an Indian ceremony on the plaza below would confer a formal linkage between the church and the community while also maintaining a necessary separation. The balcony thus became a sign representing a tenuous intersection of two systems of belief. The church could retain its formal dignity but acknowledge and even include, to some extent, the separate reality of Indian belief.

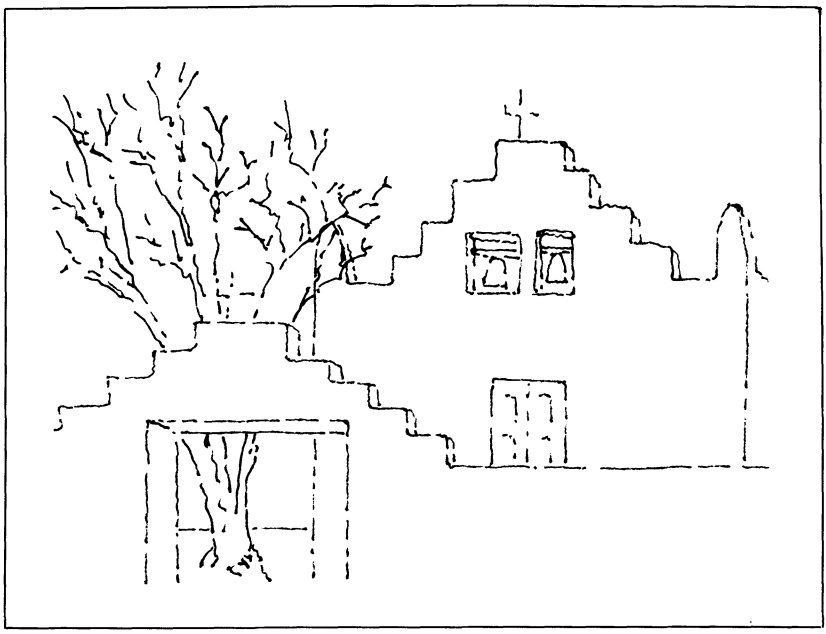
The design of mission churches and conventos was highly insular. Thick walls with very few apertures surrounded dark interior spaces. Doors and shutters of heavy timber added to the overall defensive character of the buildings. The single feature of this architecture which conveyed any sense of openness was the balcony. It was, in effect, a partially enclosed outdoor room exposed entirely to the community but inaccessible from it. The spatial transparency of the balcony was in extreme contrast to the densely packed and closed spaces of the mission. The balcony thus appears to be a specific architectural gesture of controlled vulnerability and conciliation.

The situation was entirely different in villages of New Mexico dominated by Mexican and Spanish immigrants. There, congregations were confined by

doctrinal law to church interiors and were thoroughly conditioned to the European use of interior architectural space for religious purposes. As a result, there was no need for devices like the extravagantly balconied façade of Zia. All ritual was contained within the dark, sombre space of the interior.

The friars made other concessions to Indian ideas and customs besides the use of outdoor space for sacred ritual. On the level of symbolism, the Franciscan friars and the Indians found an architectural middle ground in the overall form of the church façade. The Spanish relished sharply delineated silhouettes of their façades against the sky. The Baroque and Rococco façades of Europe, which the Spaniards in America used as models, were characterized foremost by an elaborate articulation of their silhouettes. The complex interpenetration of the building mass with its surrounding void seemed to lock the architectural composition into the sky above. Many examples in Mexico attest to the successful translation of this aesthetic device to America.

Figure 15
Façade of San José at Laguna



Source: Author's sketch.

In a rudimentary way the designers of New Mexican mission churches accomplished a similar effect. Instead of ornate towers, scrolls and brackets, however, adobe construction limited mission builders to a simple modelling

of the edge of the façade. Within this severe limitation, Indian ideas about appropriate symbolism became influential. The most common motif found on the façades of mission churches in New Mexico is a central parapet in the shape of a stepped pyramid. San José at Laguna is a good example. This form is easy to build and maintain in adobe. It satisfied the Spanish taste for a crisp, complex silhouette against the sky, but it was also acceptable to the Indians because the stepped pyramid is the symbol for the sacred mountain[2] (Figure 15). By incorporating the mountain symbol in the façade, Indians could subvert the power of the church and neutralize its corrosive influence on the carefully nurtured spirits which determined the fate of the pueblo.

Similarly, another motif commonly used is a pair of short horn-like towers at each end of the church façade along the top edge, For the Spanish these were vaguely reminiscent of the towers on churches they had seen back in Mexico and Spain. Furthermore, they could be easily interpreted by Europeans to be merlons, similar to the crenellations found along battlements of fortress churches in Mexico. However, to Pueblo Indians these are symbols of spirit guardians for the dead. In addition to being found today on the façades of some churches such as San José, they can also be seen painted on that church's interior and arrayed along the parapet wall surrounding the graves in front of San Estéban Rey at Acoma.

Conclusion

Architectural morphology traces the way in which a building form changes in response to shifting cultural and environmental conditions. In the case of Spanish mission churches in New Mexico we can see the transformation of a European building type pressured by a persistent Indian tradition.

Archaeological evidence has raised the possibility that the first stage in this particular morphosis was the mutation of an Indian building form, the kiva, for use as a church. In two important cases, the kiva was apparently adapted to Christian use by changing its interior dimensions and locking it into a typically European planning grid.

The second stage was the mutation of the church archetype to more closely resemble the space and form found in Indian ritual. The European penchant for defining space through structure, which results in a succession of cellular volumes, was abandoned in favour of a unitary concept more typical of Indian ideas about sacred space. The Christian spatial narrative of an extra-corporeal, transcendental religious experience became, in the hands of Indian builders, a densely compact volume which dramatized, above all, its intimate union with forces of the earth.

Indian sensibilities adjusted to new European ideas about building scale and emphasis, such as an exaggerated longitudinal axis and a higher ceiling. But the church also became an extrapolation of an indigenous sacred archi-

tecture of ancient origin. On the one hand, Indian builders submitted to the friars' architectural dictates based on European models. However, those models were subverted to more closely resemble Indian architectural customs. The result is a hybrid building type which is familiar in some respects, and strange in others, when viewed in relation to two different cultures. Climate, landscape and, most of all, the indigenous cultural idea of sacred space within the kiva irrevocably transformed the European basilica archetype. Similarly, the European ideal of the church façade as an elementary plane, which sealed the mysteries of the sacred liturgy within, was turned inside-out by the use of balconies to ensure the continuity of an indigenous Indian custom of outdoor rather than indoor religious celebrations. Therefore, the architectural morphology which resulted in Spanish mission churches of New Mexico cannot be considered exclusively from a single cultural perspective. It needs to be studied as an encounter between equal cultural forces.

Notes

1. Author's interview with Bernard Fontana, anthropologist at the Arizona State Museum, Tucson, Arizona, August 12, 1991.
2. Every pueblo is tied to the earth through a system of geographic references, the most important of which are nearby mountains. Vincent Scully suggests that part of the system is the pueblo's mission church façade. According to Scully, the façade is designed to "lock the building into" the silhouette of a sacred mountain. He compares the phenomenon to conditions at Knossos, Phaistos, Mycenae and Athens (Scully 1989:101). This probably applies too strong a European vision to the situation. I doubt that the Franciscan friars had such pretensions and the Indian way of making reference to significant objects is not through a direct visual correlation of mass or profile but rather by means of symbolism. If needed, reference to a sacred mountain was accomplished simply by the application of the symbol for mountain, the stepped pyramid, on whatever was at hand, whether it was a church or a pot.

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