Domestic Architecture, Ethnicity, and Complementarity in the South-Central Andes

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House, Community, and State in the Earliest Tiwanaku Colony: Domestic Patterns and State Integration at Omo M12, Moquegua

Paul Goldstein

Resumen

Aunque los sitios Tiwanaku se conocen en la cuenca del Río Osmore, su organización interna y su relación a la tierra patria Tiwanaku de la cuenca del Lago Titicaca aun no se comprende bien. La excavación del sitio Omo, cerca de Moquegua en el sur del Perú, nos proporciona con datos más completos. Se ocupó entre 500 a 650 D.C. (Período Tiwanaku IV) por colonistas que probablemente fueran del estado Tiwanaku. Es probable que Omo es una de las colonias Tiwanaku más tempranas de la sierra occidental.

In studies of Andean state expansion, analysis of domestic contexts has often taken a back seat to some of the more dramatic discoveries of mortuary and monumental investigations. Although such studies illuminate important aspects of public life and ceremonial practice in ancient societies, many might agree that this emphasis has provided a limited view of the processes of state integration in the Andean region. In other culture areas, a compelling argument has been made that the physical remains of settlements and their associated domestic activities directly represent the economic activities and social and political affiliations of ancient peoples (e.g., Flannery 1976; see also Stanish 1989a and this volume). In cases of state peripheral expansion, town and household plan, structure, and contents might be expected to reflect the introduction of new forms of sociopolitical organization, as represented by functional and status-related differentiation, to distant settlements (e.g., Bawden 1982). Yet the impact of Andean state expansion on domestic structures and town plan has seldom, if ever, been addressed in the south-central Andes. This volume’s focus on the archaeology of domestic contexts in this pivotal area of state development represents a long overdue first step toward addressing this problem.

In this essay, I will examine the impact of the Tiwanaku state on domestic settlement patterns in its largest and earliest known peripheral colony—the Omo site group in Peru’s Osmore valley. Tiwanaku’s state society is best known for the extensive monumental precinct of the eponymous type site and the concentrated population and vast agricultural works associated with Tiwanaku and its satellite centers in the Bolivian altiplano (Bennett 1934, 1936; Browman 1978, 1980a; Kolata 1983, 1986; Ponce 1969, 1972). However, archaeologists have only recently begun to document the nature of Tiwanaku influence and settlement in neighboring peripheries such as the oasis river valleys of southern Peru and northern Chile’s desert western sierra (e.g., Berenguer 1978, 1986; Browman 1980b, 1985; Dauelsberg 1972, 1985; Disselhoff 1968; Flores Espinoza 1969; Focacci 1969, 1980, 1981, 1983; Mujica 1978, 1985; Muñoz 1983c; Rivera 1975, 1985). One such river-watered oasis, the mid-valley zone of Peru’s Osmore valley, lies less than 300 km from Tiwanaku’s altiplano center and has long been considered one of the most likely areas for Tiwanaku “vertical control” of maize-producing irrigable lands through the direct settlement of colonists (Mujica 1985; Mujica, Rivera, and Lynch 1983; Murra 1972).

Since 1983, some twenty-eight Tiwanaku sites have been located in the Department of Moquegua (fig. 3.1;
Figure 3.1. Tiwanaku sites of the Moquegua mid-valley zone (after Feldman 1989; see table 3.1).
An independently derived ceramic sequence for the Moquegua sites has permitted a chronological reconstruction of the development of Tiwanaku influence in the area (Goldstein 1985, 1989a, 1989b, 1990a, 1990b; Moseley et al. 1989). Although the Bolivian Tiwanaku sequence is poorly documented, the comparison of Moquegua Tiwanaku ceramic types with those described in altiplano site reports and ceramic collections from stratigraphic excavations has permitted at least a rough correlation of the Moquegua sequence with the chronology of homeland Tiwanaku development (fig. 3.2).

The reconstruction of Moquegua Tiwanaku’s culture history has been most sharply focused in site-specific studies at the Omo site group, a multicomponent occupation site in which each of the three-phase Moquegua Tiwanaku sequences is represented at distinct blufftop occupation components. With over 40 ha of occupied area, twenty associated cemeteries, and a large ceremonial structure, Omo has been recognized as the probable regional center for Tiwanaku influence and control in Moquegua (fig. 3.3).1

The Moquegua valley was first directly occupied by settlers from Tiwanaku during the Omo Phase, which is represented at Omo site component M12. The Omo Phase is contemporary with the latter part of Tiwanaku Phase IV (Classic Tiwanaku), and Omo Phase ceramics correspond with types that tend to predominate in mid to lower levels of published excavations at altiplano Tiwanaku sites. The unprecedented early dating of the

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Table 3.1. Sites in Moquegua with Tiwanaku Components

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Description</th>
<th>Primary Affiliation</th>
<th>Secondary Affiliation</th>
<th>Third Affiliation</th>
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<tr>
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<td>Tumilaca</td>
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<td>Omo</td>
</tr>
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<td>Habitation, terraces</td>
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</tr>
<tr>
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<td>Habitation, ceremonial?</td>
<td>Chen Chen</td>
<td>Tumilaca</td>
<td>Tumilaca</td>
</tr>
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<td>Tumilaca</td>
<td>Trampeche</td>
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<td>Wari</td>
<td>Inca</td>
<td>Colonial</td>
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<td>Omo</td>
</tr>
<tr>
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<td>Chen Chen</td>
<td>Omo</td>
</tr>
<tr>
<td>T9 Yacango, flank Co. Baul</td>
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<td>Estuquiña</td>
<td>Tumilaca</td>
<td>Chen Chen</td>
</tr>
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<td>Habitation, cemetery</td>
<td>Chen Chen</td>
<td>Tumilaca</td>
<td>Omo</td>
</tr>
<tr>
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<td>Habitation</td>
<td>Estuquiña</td>
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<td>Chen Chen</td>
</tr>
<tr>
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<td>Habitation</td>
<td>Estuquiña</td>
<td>Tumilaca</td>
<td>Chen Chen?</td>
</tr>
<tr>
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<td>Habitation, cemetery</td>
<td>Tumilaca</td>
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</tr>
<tr>
<td>P5 Porobaya Kilometer 8</td>
<td>Habitation</td>
<td>Tumilaca</td>
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<td>Chen Chen?</td>
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The Omo Phase saw the introduction to Moquegua of Tiwanaku architecture, town planning, and material culture that indicate direct residence by colonists affiliated with the altiplano state. I will argue that domestic activities introduced to Omo M12 by Tiwanaku IV settlers directly reflected the political and social order of the Tiwanaku state’s earliest productive colonies in the western sierra.

Architecture and Town Plan at Omo M12

Mapping, systematic surface collection, and excavation at the Omo M12 site indicate that its 16.25 ha of occupied area represent the largest single settlement of the Omo Phase occupation of Moquegua. As are all the Omo sites, the M12 site is situated atop one of several open, flat bluffs that rise above the eastern margin of the irrigated valley. The eroded quebradas that separate the Omo bluffs are the site of Moquegua’s most productive natural springs. These springs to this day supplement river-fed irrigation canals and must have represented a significant additional source of irrigation and drinking water for the Tiwanaku settlements.

Because of conditions of exposure and preservation, the architectural remains and domestic scatter at Omo M12 have offered an unprecedented opportunity for examining the residential plan of a Tiwanaku IV settlement through mapping and surface collections, as well as excavation. The site’s relatively brief occupation and its abandonment with only minimal reoccupation and post-depositional disturbance have permitted the examination of what appear to be primary domestic deposits in situ.

M12’s domestic structures were concentrated in three community groups which together comprised some 133 buildings divided into 369 rooms. The three community clusters have been designated as the West, North, and South communities (fig. 3.4). Each community group was focused about a cleared central plaza area. Conditions of extreme wind deflation at M12 have left plazas and house platforms exposed, distinguishable in air photos and on the surface as rectangular areas that had been cleared of the naturally patinated stone desert pavement, leaving lighter-colored, slightly depressed level surfaces. Stones removed from house sites and plazas were mounded in low piles on their exterior borders.

In the three structures excavated at M12 in 1986 and 1987 by the Omo Project, preserved wall foundations were found to closely parallel the inner boundaries of

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Figure 3.2. Comparative chronology for the Moquegua mid-valley and the Titicaca basin.

Omo Phase colonization to between A.D. 500 and 650 has recently been confirmed by a radiocarbon date from excavations at Omo M12.2

Later, during the subsequent Chen Chen Phase, which corresponds chronologically to Tiwanaku Phase V (Expansive Tiwanaku), Tiwanaku control would reach its apogee in Moquegua with a hierarchically organized settlement system, the reclamation of desert lands through extended canal systems, large cemetery populations, and the construction of monumental corporate architecture at the Omo M10 site (Goldstein 1989a, 1989b, 1990a, 1990b). Finally, following the collapse of Expansive Tiwanaku’s political and economic system sometime after A.D. 1000, Tiwanaku cultural influence persisted at Omo M11 and elsewhere in Moquegua in the Tumilaca Phase, a politically fragmented constellation of Tiwanaku-derived local traditions.

This paper will concentrate on domestic innovations of the Omo Phase, the earliest part of this sequence, and the onset of Tiwanaku’s long dominion in Moquegua.
Figure 3.3. The Tiwanaku site group at Omo.
these precleared house platforms (e.g., figs. 3.9 and 3.10). Generally, domestic architecture was quite consistent among the three community groups, with relatively little variation in construction technique or plan. Buildings of the Omo Phase utilized a skeletal structure of closely spaced thin posts to support both walls and roof. These posts were relatively small, averaging only 3 to 5 cm in diameter, and were evenly spaced at intervals of between 60 and 70 cm, suggesting a tentlike framed structure with an A-frame or vaulted roof. The structures’ walls must have been suspended from this closely spaced skeletal framework. Wall panels may have consisted of prewoven vegetable fiber mats, textiles, or skins. No evidence was found of substantial wall trenches or cane foundations, contrasting sharply with houses of the later Tiwanaku settlement phases at Omo, which were built with non-load-bearing walls of quincha (vertical cane and daub with wall trench foundations) and separate roof structures supported by heavy posts (Goldstein 1989a).
Household Activities, Domestic Life, and Tiwanaku Cultural Identity

Homes of the Omo Phase consisted of from two to eight contiguous rectangular rooms, usually arranged linearly. No structurally obvious single function activity areas were evident in the M12 structures themselves. Most rooms were equipped with one or two hearths. These were relatively informal shallow pit affairs, contained with two or three large stones. Although some kitchen activities were represented in most rooms, the preponderance of features, metates, plainware ceramic storage and cooking vessels of medium size, and organic and faunal remains suggests that such activities were more concentrated in one room in each structure. There is evidence that some craft production took place on the household level at M12. Though textile preservation was poor, unspun camelid wool, spun threads, and tools such as cactus spine needles and ceramic spindle whorls were found in most rooms of all structures. This suggests that spinning and other textile work were not assigned to a specific activity area but were carried from place to place.

Artifacts from M12 household contexts strongly suggest that a substantial and well-regulated system of exchange between the mid-valley of the Osmore and altiplano Tiwanaku was fully in place by late Tiwanaku IV. Most impressive at M12 is the presence in quantity of Tiwanaku fine ware ceramics (figs. 3.5 and 3.11). In the 1986–87 structure excavations at Omo M12, Tiwanaku decorated redware and polished blackware sherds constituted a consistent 10 percent of the household sherd count. These sherds exhibit close similarities to examples from Tiwanaku and are likely to be direct imports. House contents consistently included ceramic vessels often thought of as ceremonial in nature, such as keros (Tiwanaku's flared drinking goblets) and small incensarios (often zoomorphic vessels believed used for burning incense). Pigments presumably used for face painting, flamingo feathers, and even elaborate wooden, metal, or stone objects were also represented in most houses to some extent (fig. 3.6).

One example of such sumptuary goods, a silver tupu (brooch pin) excavated in Structure 7, a typical four-room domestic structure, was found in a context that suggests that imported Tiwanaku objects were used in household rituals. The tupu, identical to Tiwanaku prototypes, had been deliberately torn into three separate pieces, which had been rolled up and buried in this house's entryway. The apparently intentional destruction of the tupu would seem to represent the ritual killing of a valuable Tiwanaku object, perhaps as a household dedicatory offering. The presence and use of imported sumptuary materials on the common domestic level suggest that all households, and not merely an elite, participated to some extent in Tiwanaku's exchange system and ceremonial practices. Clearly, the maintenance of Tiwanaku cultural identity through the redistribution and ritual use of imported material symbols was an important aspect of Tiwanaku IV colonial life.

However complete the picture of altiplano Tiwanaku ritual practices, the maintenance of Tiwanaku identity by Omo Phase colonists is perhaps most evident in the material culture of mundane daily life represented at Omo M12. One example is a peculiarly Tiwanaku bone tool type fashioned of a camelid mandible ramus, attached by wool cordage to a wood handle (fig. 3.7). The working edge of this tool type was the rounded and polished section of solid, dense bone left by snapping the toothed section off from the mandible. Numerous identical mandible tools have been unearthed by the Wilajawira Project in domestic excavations at Tiwanaku and Lukurmata (Marc Bermann, this volume and personal communication 1989; Alan Kolata, personal communication 1989; Webster 1989). Although the exact function of these idiosyncratic Tiwanaku household tools is as yet unknown, the similarity of the Omo M12 example to altiplano Tiwanaku ones suggests a commonality in the daily pursuit of ordinary domestic activities.

This same sort of identity at the low end of material culture is particularly striking in everyday plainware ceramic categories such as the large cooking and storage vessels, which account for 90 percent of excavated ceramics at M12. Apparent differences in paste and temper suggest that these vessels of quotidian use, unlike the decorated redware and polished blackware serving vessel forms, were probably not direct imports from altiplano Tiwanaku. Nonetheless, the Omo Phase domestic plainwares display a formal and functional identity with altiplano Tiwanaku prototypes, such as those collected by Bennett and Rydén at the type site (fig. 3.8), that indicates their manufacture by Tiwanaku-trained ceramicists for the needs of Tiwanaku consumers. The absence of any non-Tawanaku plainware forms at Omo M12 suggests a situation of direct settlement of Tiwanaku colonists, rather than an integration with local groups with a distinctive material culture.

In sum, there is no indication of within-site cultural or
Figure 3.5. Omo Phase Tiwanaku redware and blackware ceramics: (a) handleless vase, continuous volute motif, M16, surface; (b, c) everted bowls, M12, surface; (d) hollow-base libation bowl, M12, surface; (e) blackware kero, M12, Structure 7; (f) redware banded kero with Y-shaped postfiring engraving, M12, Structure 1; (g) redware spouted pitcher, M12, Structure 1; (h) Front Faced God motif, ceramic kero, M12, South Community, surface.
Figure 3.6. Ritual objects from domestic contexts: (a) wooden *kero* with projecting eagle head and Front Faced God headdress ensemble (M12 = 3151, Structure 7); (b) intentionally killed silver *tupu* (M12 = 3329, Structure 7); (c) ceramic figurine head with turban and lip plug (M12, surface).
Community Specialization

Several distinctions noted in surface collections and excavations point to a degree of community specialization by segments of the Omo M12 settlement. There is evidence that the West Community (148 rooms arrayed in 56 structures around the West Plaza) enjoyed preferred access to maritime resources which were seldom found elsewhere at M12. The only fish vertebrae found at M12 were found in the two excavations in this community, as were the site's only examples of fish teeth and most of the M12 site's minimal inventory of marine shell. Although Omo is located in an intermediate position on likely caravan routes between the resources of the Pacific coast and the altiplano Tiwanaku homeland, the site group's location 90 km from the littoral places it beyond the likely range of direct maritime exploitation, an economic niche most likely already occupied by a highly specialized indigenous coastal tradition (Bawden 1989b). It would appear that Omo M12's West Community may have enjoyed a unique, if extremely limited, access to coastal resources during the Tiwanaku IV colonizations.

The majority of the minimal quantity of marine shell found at M12 was olive shell (Oliva peruviana), a species not believed to have much subsistence value (Daniel Sandweiss, personal communication 1987). Indeed, many olive shell fragments were drilled, sawn, or otherwise worked and may represent the residue of specialized lapidary craft activity in the West Community. The West Community also was the location of numerous reworked ceramic sherds that had been carefully ground into rectangular and ovoidal shapes. These objects, which appear to have been used as polishing tools, were not found elsewhere at the site. Their unique presence suggests that the West Community engaged in some industrial pursuit not present in the other communities.

Significantly, the North Community (114 rooms arrayed in 40 structures) was not separated from the West Community by any natural feature. Nonetheless, the two communities were segregated by a 60 m wide unoccupied area that displays no trace of construction or artifacts. In the absence of any physical division, this appears to be a socially defined boundary. In the North Community, a high frequency of stone projectile points (fig. 3.7) was found on the surface and in structure excavations, particularly in six longhouse platforms in the southern subsection of the community. As the absence of lithic debitage suggests that the community was not engaged in lithic manufacture per se, a specialization in

Ethnic diversity that would suggest any contemporary non-Tiwanaku population component at M12. Instead, a general consistency in house form and structure and in both the sumptuary and mundane aspects of the domestic material inventory implies shared concepts of household organization and, presumably, common ethnicity with altiplano Tiwanaku. Nonetheless, systematic surface collection and excavation support the obvious physical segmentation of the M12 site and suggest several important social differences among the three communities.

Figure 3.7. Domestic utensils, Structure 7: (a) projectile points (M12 = 3199, white quartzite; M12 = 3297, obsidian; M12 = 3302, rosy quartzite); (b) camelid mandible tool with wooden handle (M12 = 3103); (c) wooden spoon with engraved cross (M12 = 3102); (d) small ceramic spindle whorl with possible reconstruction (M12 = 3050).
Figure 3.8. Tiwanaku IV and Omo Phase plainware, Tiwanaku and Omo: (a) slope-shouldered jar, nubbed, M12, surface; (b) cylindrical neck jar, Bennett Collection, Tiwanaku, American Museum of Natural History 41.1-700; (c) slope-shouldered jar, two-handle, Bennett Collection, Tiwanaku, American Museum of Natural History 41.1-675 (courtesy Barbara Conklin); (d) slope-shouldered jar, two-handle, M12, surface; (e, f) cylindrical neck jars, M12, surface.

hunting, warfare, or the control of distribution of imported lithics might be inferred.9

Ritual and a Nascent Hierarchy in the South Community

If M12’s three plaza-centered communities reflect social divisions in the town plan, the strongest evidence suggests a status of paramount, or at least primus inter pares, for the South Community (107 rooms in 37 structures). Perhaps because of its circumscription by natural topography, the structures of the South Community are noticeably more congested than those of the other communities. The corners of some of the structures appear to overlap, suggesting a higher value on space that engendered some crowding and the reuse of building sites for reconstruction. Similarly, despite the South Plaza’s size, which is considerably smaller than the other communities’, more care is evident in its layout and it is flanked by no fewer than three smaller subsidiary courtyards bounded by double course stone bench structures.

The South Community’s much higher frequency of the most elaborate ceramics is the strongest indication that its residents may have been of privileged status. Generally, in the North and West communities, access to fine Tiwanaku IV decorated redware and polished blackware ceramics seems to have been limited to a few vessels per household and seldom included the most elaborate types. In contrast, the South Community enjoyed nearly exclusive access to several types of elaborate Tiwanaku artifacts, such as modeled zoomorphic figures and portrait head ceramics.9
Beyond this disproportionate representation of the most elite ceramic categories, separate spatial correlates within the South Community were noted for at least six specific elite drinking vessel types. Structure 2, a small two-room building, was excavated to represent these unique loci of specific imported fine ceramic types (figs. 3.9, 3.10).

The remarkable nature of ceramics and features in Structure 2's southern room qualitatively distinguishes this structure from purely domestic buildings at the site and suggests that it was, in addition to its domestic role, the location of ritual beverage consumption. Some twelve reconstructable polished blackware portrait vessels are the most telling evidence of this relatively small structure's special significance (fig. 3.11). These remarkably naturalistic vessels, which seem to represent actual personages, are clearly of Tiwanaku IV affiliation, appear to be the work of a single artisan or shop, and are part of a set that was exclusively limited at M12 to Structure 2. The fragment distribution of these portrait vessels suggests that they were part of a use assemblage associated with the structure as a whole and not an offering cache.

Many of the portrait head vessel fragments were found in association with one of several very large plainware vessel bases that had been cemented in place in Structure 2 (fig. 3.12). A 10 cm deep deposit of dark organic sediment in the bottom of this vessel is believed to be the dregs from evaporated chicha, or maize beer. The locations of vessel bases found in situ and numerous fragments indicate that at least three and probably four similar vessels had been present in Structure 2. These large storage vessels, each holding up to 90 l, had a capacity for liquid storage far beyond any imaginable demand of a two-room household.

Additional finds in Structure 2 included a puma-headed incense burner (fig. 3.12) and an unusual quantity of red ochre pigment and, perhaps most significantly, M12's only preserved examples of coca leaf. Modern Aymara ethnographies suggest that coca chewing and burnt offerings might be expected to accompany maize beer in the performance of any of a variety of ch'alla (libation) rituals (Abercrombie 1986; Platt 1986). Despite evidence of normal domestic activities in Structure 2, it therefore appears that its material assemblage was most likely devoted to the processing and ceremonial serving of maize beer.

Thus, in certain houses of M12's South Community one finds all the accoutrements of ceremony: ochre face paint, coca, an incense burner, large vessels for the storage of vast quantities of maize beer, and an elaborate set of matched drinking vessels. It would appear that certain households in M12's South Community were at least part-time specialists in ritualized hospitality, operating chicherias, or beer houses, in which segments of the community met for activities that may have had combined economic, political, and ritual meanings.

In his explication of K'ulta Aymara ch'alla rituals, Abercrombie has described how a ritual's sponsor "takes the place of the gods in provisioning bounty": "This kind of fetishized understanding in which relations among men are objectified in the cosmos at large... is not mere mystification, as it... makes expressible the cultural ordering which gives specific form to the relations of social production" (Abercrombie 1986: 164, emphasis added). Indeed, Structure 2's naturalistic portrait vessels suggest a part of Tiwanaku's belief system that supported some very human relationships of power, even some distance removed from Tiwanaku center. Each of the M12 portrait head drinking vessels depicts a turban-wearing figure with the characteristic pipchu, or bulging cheek with a coca quid—most likely an allusion to both rank and access to the precious leaf. Moquegua's Tiwanaku citizens were invited to drink, literally as well as figuratively, the maize beer that flows from the head of a coca-chewing authority. This is, of course, in keeping with the "feasts and drinking bouts" that several scholars have suggested accompanied the redistribution of goods as essential mechanisms of state provincial administration in other Andean states (e.g., Isbell 1986; Morris 1986).

The presence of domestic functions and activities in separate rooms of M12's chicherias and the absence of any public buildings of entirely governmental nature suggest that these administrative mechanisms were still developing in the Moquegua Tiwanaku IV colonies of the Omo Phase. In a context where both the "bounty" of ritual and the "bounty" of everyday life were inextricably linked to the Tiwanaku state, I would propose that a traditional role of leader/spawner had only begun to take on more bureaucratic tones as a more permanent administrative position during Omo Phase M12. If this is correct, the ceremonial concerns of the proprietors of Structure 2 and the other M12 chicherias may have increasingly coincided with those of a maturing colonial administration, reinforcing an ideology that was increasingly state-centered as well as state-supported. However, it would not be until the construction of massive monumental architecture during the Chen Chen Phase (Tiwa-
Figure 3.9. M12, Structure 2, excavation plan.
Figure 3.10. M12, Structure 2, surface indications, excavated post locations, and elite ceramic distribution.
naku V, or the Expansive Phase) that the religious and administrative roles of Tiwanaku’s colonial elite were separated from the domestic sphere.

In summary, investigations at the Omo Phase domestic site of M12 have demonstrated the direct identity of its inhabitants’ material culture and domestic activities with those of altiplano Tiwanaku as early as Tiwanaku IV (A.D. 600). This is consistent with conceptions of Tiwanaku productive colonies in the maize-growing irrigable valleys of the western sierra. However, in addition, several aspects of Tiwanaku state administration discerned in domestic patterns at M12 suggest a level of scale and peripheral integration quite apart from Murra’s famed Lupaqa model. These aspects include indications of occupationally specialized groups reflected in residential segregation, the emergence of a provincial elite distinguished by differential access to wealth and power, and the part-time specialization of some domestic structures in the public ceremony that reinforced that power. Although the expression of centralized Tiwanaku control in the Moquegua periphery would not come to its fullest fruition until the Expansive integration of Tiwanaku V, these innovations, already in process in the Moquegua Tiwanaku colonies by the latter part of the Tiwanaku IV
era, represent a period of transition in Tiwanaku’s periphery: from a far-flung network of pioneering colonies to the hierarchically administered province of a hegemonic state.

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Notes

1. Archaeologists from Arequipa were aware of some of the Tiwanaku V cemeteries of Omo M10 from denuncias related to looting and construction in the mid-1970s (Romulo Pari and Rene Santos, personal communication 1986). However, there are no published reports on the Omo sites and it appears that the existence and scale of the domestic sites, particularly the Classic Tiwanaku IV occupation at M12 discussed below, were entirely unknown until initial survey in 1983 by R. Feldman and M. Moseley.

2. An in situ wooden wall post removed from M12 Structure 2 produced a calibrated date of A.D. 600 (sample M12 = 1617, Beta Analytic-36639, uncalibrated radiocarbon age b.p. of 1470 ± 70; calibration with two sigma range of A.D. 420 to 670). The date was calibrated with Calib 2.0 using the ATM10.14C calibration file (Stuiver and Reimer 1986).

3. Botanic and faunal remains in each of the communities encompassed the full diversity represented at the site, including maize, pumpkin and squash seeds, aji, and various beans.

4. The 10 percent frequency of the two Tiwanaku finewares in M12 excavations is lower than percentages recorded in altiplano Tiwanaku excavations (Bennett 1934, 1936; Rydén 1947). Moreover, the Omo Phase inventory tends to emphasize the smaller and less elaborate forms of Tiwanaku IV. This suggests a limited assemblage of vessels selected for export.

5. Engraved Y-shaped (bird talon) symbols found on virtually all fine ware ceramic vessels recovered at M12 are identical to engravings present on vessels found in Cochabamba, Copacabana, Arica, and San Pedro, as well as Tiwanaku itself (Goldstein 1989b; Rydén 1947). These cannot be simply classified as makers’ marks, as their postfiring engraving may associate them as closely with the process of distribution as the moment of production. It would appear that these were instead notational symbols of state approval or regulation of exchange.

6. Tupus from Tiwanaku with similar flat disk heads may be found illustrated in Posnansky (1957, vols. 3–4, plates 84–86) and on display at the Museo de Metales Preciosos Precolombianos, La Paz.

7. The apparent absence of Tiwanaku settlements on the littoral comparable in scale to those of the agricultural middle and lower valleys suggests that Tiwanaku’s access to coastal resources was always through intermediary exchange with indigenous maritime specialists rather than direct exploitation through colonization. Nonetheless, the tenuous nature of these contacts in Tiwanaku IV evidenced by M12’s minimal inventory of marine shell (0.53 percent of total excavated faunal weight) contrasts markedly with the greatly heightened representation of shell in the Tiwanaku V settlement at Omo M10 (3.53 percent of faunal weight, including seven edible species; see Goldstein 1989b).

8. Most projectile points found at M12 are narrow triangular and stemmed and probably were arrow points. Except for two obsidian examples, all were of a white or rosy white siliceous material. They are identical in form to examples in the Tiwanaku site museum (also Posnansky 1957; plate 78b, 3d, 4th, 5th, 7th, 8th, and 9th examples).

9. For example, of twenty-six surface finds of modeled portrait head vessel fragments, twenty-five were collected in the South Community.

10. These are “Type 2” blackware portrait vessels found southeast of Structure 2, keros with rectangularized Front Faced or Gateway God figures found in and around the four-room longhouse in Unit L5, skull-shaped “trophy head” drinking vessels found in a three-room longhouse in Unit L6, duck-shaped zoomorphic vessels concentrated northeast of the South Plaza, and a type of redware portrait head vessel with horizontally pierced nose concentrated in Units K7 and K8.

11. The colonial representatives of such authority may have arisen from the ranks of the colonists themselves. Among modern Aymara, leaders achieve a metaphorical elder brother status through the sponsorship of ritual activity and the organization of successful llama caravan expeditions (Abercrombie 1986: 156).