By around 600 cal AD, people from around Lake Titicaca were spreading out to the eastern and western slopes of the Andes, carrying the culture of the Tiwanaku heartland with them. This Tiwanaku expansion, along with a parallel process among the Wari to the north, was unprecedented in scale. It was one of the defining features of the development of complex society in the south-central Andes. If we want to understand Tiwanaku, we need to understand Tiwanaku's expansion.

One good place to look for clues about the Tiwanaku expansion is in the middle Osmore drainage, near Moquegua. By 850 cal AD, if not earlier, the middle Osmore was evidently the most populous Tiwanaku province on the western slopes of the Andes.

The Tiwanaku sites in the middle Osmore fall clearly into three distinct categories, each with its own style of decorated ceramics, plainwares, domestic architecture, and other characteristics (Goldstein 1989a,b). The Omo style of ceramics is marked by finely made blackwares, although there are also distinctive black on red and polychrome wares. The Chen Chen style is characterized by a different set of polychrome motifs on red to tan slips, with almost no blackware. Finally, there is a locally variable derivative of the Chen Chen style called the Tumilaca style.

In his pioneering initial studies of the region, Paul Goldstein (1989a,b) developed the ceramic chronology used for all subsequent research on Tiwanaku in the Osmore. In this model, the three styles were considered to be sequential. The Omo style corresponded to Tiwanaku IV in the altiplano, representing the initial colonization of the drainage. The Chen Chen style corresponded to Tiwanaku V, representing the later, fully developed occupation of the region. Finally, the Tumilaca style represented a local, derived tradition dating to the collapse of
the Tiwanaku state and the division of the drainage into competing chiefdoms at the dawn of the Late Intermediate Period (Bermann et al. 1989; Owen 1993). The differences between the Omo and Chen Chen styles were so marked that Goldstein suggested a break in the Tiwanaku occupation of the valley, such that the intermediate stages of stylistic change were missing. This break might have corresponded to a temporary Wari intrusion into the region, focussed on the flat crest of Cerro Baúl (Moseley et al. 1991).

The data I am presenting today build on Goldstein’s survey and excavations (Goldstein 1993, 1994), add new radiocarbon dates from Chen Chen, and focus on excavations at La Cantera and Cancha de Yacango, both located at the foot of Cerro Baúl (Goldstein and Owen 2000; Owen 1994, 1996, 1997, 1998, 1999; Owen and Goldstein 2000). The results parallel the growing impression in the altiplano (Janusek and Alconini 1994; Goldstein 2000) that the ceramic styles are not simply sequential. Revising the ceramic chronology changes the whole nature of the Tiwanaku occupation of the Osmore, and raises new possibilities for understanding Tiwanaku itself.

The first site I will focus on is Cancha de Yacango, which was a Chen Chen style village located on the floor of a wide dry wash. Around 1000 AD, it was buried by a massive debris flow. It was uncovered in 1997 during a project to enlarge a soccer field. The work resulted in a long profile in which part of the settlement appeared as an ash layer with hearths and postholes. To one side was a cemetery, while to the other was a thick, stratified midden. All the other Tiwanaku sites in the region are deflated, and many were badly disturbed in prehistoric times. The stratified midden at Cancha de Yacango promised to finally reveal some of the chronological development of the Chen Chen style.

The other site I will discuss is La Cantera, an Omo style village on a spur at the foot of Cerro Baúl. It is deflated, with a typical domestic surface scatter of ceramics, flaked lithics, and groundstone on eroded shallow terraces. In the middle of this scatter is a complex of well-built stone wall bases. These foundations, 50 to 60 cm wide, are two-faced, rubble core, mortared walls of unmodified local rock. Some parts reach a meter in height, but the minimal wallfall suggests
that they were bases for taller adobe walls. Numerous irregular walls of unmortared stones were added later, and were probably not part of the original design.

This complex was probably a ceremonial structure. The main spaces are too large to have been roofed, and have no obvious domestic interpretation. The construction is much too fine for a corral, and corrals usually have a more economical, rounded plan. Goldstein (1993) excavated a larger and more elaborate structure associated with Chen Chen style ceramics that was clearly a temple. Although the Omo style structure at La Cantera is smaller, less regular, and more rustic, both share a strikingly similar tripartite plaza plan. It is worth noting that although there is no doubt about the Tiwanaku affiliation of either of these sites, the tripartite plaza plan is unlike any of the ceremonial structures at Tiwanaku itself.
The structure at La Cantera was used for some of the same activities known from temples at Tiwanaku: ceremonial drinking and feasting, with the smashing and burial of fine ceramics. In the uppermost room of the complex were two pits packed with fragments of at least ten Omo style blackware keros, two blackware portrait vessels, camelid bone, and charcoal. The keros’ irregular coloration suggests that they were burned, probably in the process of being broken. Some of the keros clearly formed matching sets of two to four nearly identical vessels. The two pits were part of a single event, because joining pieces were found in both. Many pieces are missing, so the event probably involved at least one other pit. A different, larger pit was found in a corner of the uppermost plaza, stratigraphically later than the stone wall base. This pit contained almost no blackware, but was full of big sherds of at least one very large cooking vessel, plus camelid bone and charcoal. Charcoal from one blackware pit and from the plainware pit was radiocarbon dated, and the ages match. These pits might represent a single event, perhaps a dedicatory offering ceremony, or they could reflect different moments in the ongoing use of the structure, with the finest wares and presumably most important activities focused on the smallest, uppermost room.

Oddly enough, the surface ceramics in the temple are no different from those further away. This suggests that the walls may have been built on an existing Omo style domestic site, and that the activities in the temple did not leave much new material on the surface. Fortunately, the pits are well associated with the walls, so even if the temple was built on former house terraces, it was definitely used by people with Omo style ceramics. There may be a somewhat lower density of ceramics overall inside the wall complex, which might mean that the adjacent areas continued to be occupied while the temple was in use.

The analysis of over 16,000 sherds from Cancha de Yacango, La Cantera, and a Tumilaca style site
called Cerro San Miguel confirms the clear differences between the three styles. They vary in proportions of wares, slip colors, body thickness, line thickness, color combinations, and so on, largely as Goldstein originally proposed. The ceramic typology is sound.

Also as expected, the radiocarbon dates from the Chen Chen style site of Cancha de Yacango came out between about 800 and 1000 cal AD. Two additional dates from the type site of Chen Chen fall in the same range. Simulations using Oxcal 3.4 suggest that a Chen Chen style occupation from 850 to 1000 cal AD would produce the observed distribution of calibrated dates.

The two dates from the Omo style site of La Cantera were a surprise. Instead of being centuries earlier, they proved to be completely contemporary with the Chen Chen style (720-980 cal AD; 890-1030 cal AD). Combining these with three recent dates collected by Goldstein (Owen and Goldstein 2000), it is clear that the Omo style can no longer be considered to mark an earlier period of time. Instead, the radiocarbon dates suggest that Omo style sites and Chen Chen style sites were occupied at the very same time.

Of course, radiocarbon dates are not very precise. The two styles might represent a sequential development that was just too rapid for radiocarbon dating to resolve. If so, we might expect to find a developmental trend in the stratified midden at Cancha de Yacango, grading from an earlier, Omo-like assemblage, to a later, Chen-Chen-like assemblage. The radiocarbon dates suggest that the Cancha de Yacango midden accumulated over a short period of time. Bayesian statistics calculated using Oxcal 3.4 indicate a 68% chance that most of the midden accumulated in less than 65 years, and a 95% chance that it was used for under 170 years. The midden might record too short a period to capture a detectable change, but on the other hand, the only way the styles could have been sequential is if they changed quite rapidly. It is interesting to note that this is the only Tiwanaku site in the Osmore for which it is possible to estimate the duration of occupation, and it was probably inhabited for less than a century.

The result of the stratigraphic analysis is that there was simply no directional change in ceramic style during the accumulation of the midden. The ceramics simply do not indicate any trend from Omo-like to Chen-Chen-like, nor from Chen-Chen-like to Tumilaca-like. That is, this fine-grained stratigraphic evidence suggests the same conclusion as do the radiocarbon dates: the styles were not portions of a continuum of change.
We have to revise the ceramic chronology of the Osmore. Some of Goldstein's dates suggest that the Omo style may have appeared in the Osmore fairly early, but from about 850 cal AD or so, people using the Omo style of ceramics shared the region with others who used the Chen Chen style. Ryan Williams' team (Williams et al. 2000) has recently reported a much longer, overlapping period of Wari occupation on Cerro Baúl, placing a third distinct cultural group within shouting distance of the Omo and Chen Chen sites for perhaps a century before 1000 cal AD.

We can safely reject the possibility that the Omo and Chen Chen styles represent different functional assemblages used by a single group. First, there are clearly domestic, residential sites of both types. Second, there was also a temple site of each type. Both assemblages were used in domestic and ritual settings; neither represents mortuary goods or ritual items. Nor do the styles seem to mark groups of higher or lower status. It seems unlikely that people of different status would live in completely separate settlements unless the status differentiation was extreme. Yet neither style of ceramic is obviously more labor intensive or sophisticated than the other, and neither type of settlement is obviously wealthier or better situated than the other.

It seems unavoidable that the two styles represent two different groups of people. Those using Omo style ceramics had one settlement pattern with several concentrations of domestic occupation and a temple. Those using Chen Chen style ceramics also had several areas of domestic occupation and one temple. This pattern forcefully recalls Murra's (1972) model of vertical archipelagos with multiethnic settlement, in which different highland population centers maintained productive enclaves in the same lower elevation valleys, sharing the same region but exploiting it independently and maintaining their own distinct identities.
But Murra's model does not fit this case, for one important reason: the two groups were anything but independent. Superimposing the two settlement patterns illustrates that the two groups chose almost without exception to live right next to each other. There were plenty of other places that they could have picked, but did not. Two independent groups would be expected to settle a bit apart, to ensure easy access to their own fields and canals, and to minimize conflict with their neighbors. But instead, wherever there is an Omo style site, a Chen Chen style site is right nearby. The two groups in each cluster must have depended on the very same canal for domestic water, and probably for irrigation as well. The two groups must have coordinated on the construction and maintenance of the canals, and the division of water rights. Most conflicts must have been resolved peacefully, since they did not select defensible sites or build defensive walls until the later Tumilaca style came into use. Yet, for all their interdependence and cooperation, there was no sign of mixing. They did not exchange enough ceramics to blur the sharp differences in their material cultures.

What kind of society could this be? The evidence does not quite fit the ethnohistorical models commonly used in the Andes. The Tiwanaku occupation of the Osmore was not an ordinary example of Murra's multiethnic settlement, since the two groups were intimately related and cooperating on construction projects and water distribution. Nor was it a unitary society divided into two allyus or parcialidades in the usual sense, since the separate village sites and separate temples imply a much deeper division than those terms usually suggest.

I suggest an alternative model of Tiwanaku as a “multicomponent” society, comparable to Blanton’s (1978) model of Zapotec Monte Albán in Oaxaca. In this model, the Tiwanaku polity was a federation or alliance between two or more distinct altiplano groups, perhaps originally from different parts of the Titicaca basin. These groups might have come together for shared projects, such as exploiting the middle Osmore through canal building, land reclamation, and coordinated surplus production; or erecting monuments such as the Akapana or Puma Punku; or constructing and managing raised field systems. In these projects, they
collaborated to do things that no single federation member group would do independently. At the same time, the groups remained distinct, perhaps even accentuating their identities through symbolic boundary maintenance practices. At the cooperative level, they built and used a single ceremonial center at Tiwanaku itself: a new type of ceremonial construct that made sense only in the context of the alliance, perhaps subsuming the local ideologies under a shared umbrella of supernatural and secular relations. At the provincial or local level, they maintained separate, parallel, perhaps older ritual practices, such as the two temples in the Osmore that bear little resemblance to the shared monuments at Tiwanaku.

This model of Tiwanaku as a federation of distinct but cooperating groups should have plenty of material correlates. It will be interesting to see if not only the western periphery, but also the eastern slopes and the altiplano might make sense if we think of Tiwanaku as a federation.

References

Bermann, M., P. Goldstein, C. Stanish, and L. Watanabe

Blanton, R.E.

Goldstein, P.
1989a Omo, A Tiwanaku Provincial Center in Moquegua, Peru. Ph.D. dissertation, Department of Anthropology, University of Chicago.
2000 “Communities without Borders - The Vertical Archipelago, and Diaspora Communities in the Southern Andes.” In The Archaeology of Communities: A New World Perspective, Jason Yaeger and Marcello Canuto, editors, Pp 182-209, Routledge Press.

Goldstein, P., and B. Owen
Janusek, J., and S. Alconini

Moseley, M., R. Feldman, P. Goldstein, and L. Watanabe

Murra, J.

Owen, B.

Owen, B., and P. Goldstein

Williams, P.R., M.E. Moseley, y D.J. Nash