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Taypi, a View from the Middle (Court) : : analysis of liminal space in provincial Tiwanaku monumental architecture (Omo M10A)

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*Taypi*, a View from the Middle (Court): analysis of liminal space in provincial Tiwanaku  
monumental architecture (Omo M10A)

A thesis submitted in partial satisfaction of the  
requirements for the degree of Master of Arts

in

Anthropology

by

Matthew J. Sitek

Committee in Charge:

Professor Paul S. Goldstein, Chair  
Professor Guillermo Algaze  
Professor Geoffrey E. Braswell

2013

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Chair

University of California, San Diego

2013

We shape our buildings, and afterwards our buildings shape us.

*Sir Winston Churchill*

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ABSTRACT OF THE THESIS

*Taypi*, a View from the Middle (Court): analysis of liminal space in provincial Tiwanaku monumental architecture (Omo M10A)

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Matthew J. Sitek

Master of Arts in Anthropology

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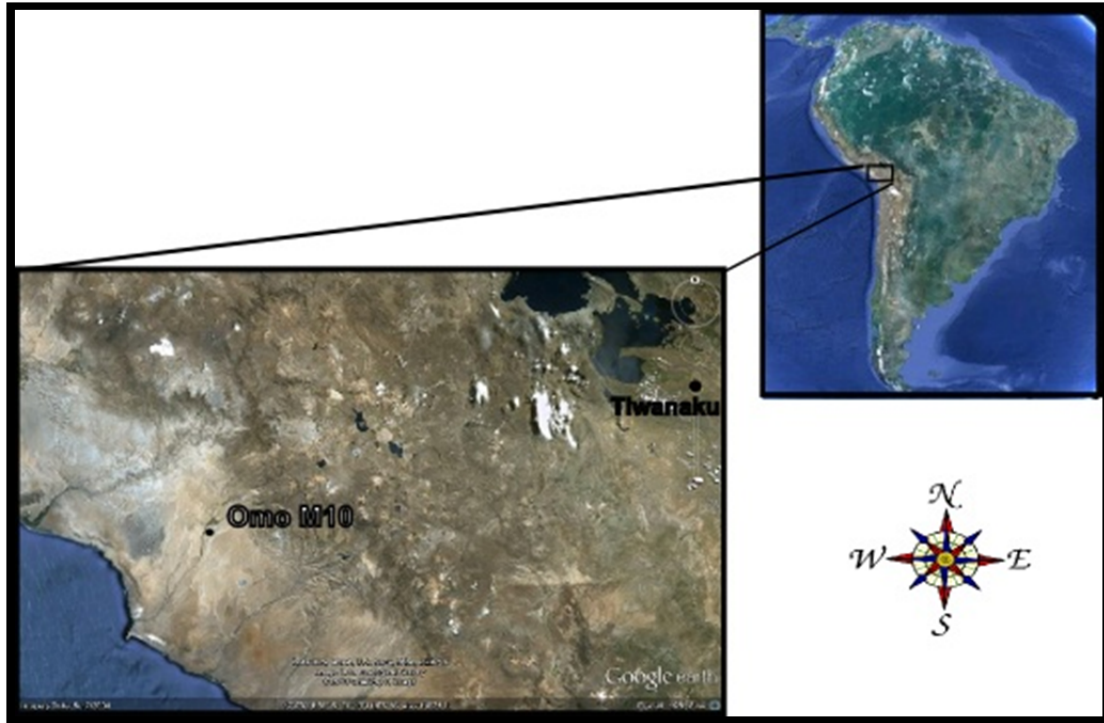
During what is now known as the Middle Horizon period (A.D. 500-1100) the Tiwanaku civilization influenced much of the south central Andes from its highland capital, situated in the southern Titicaca Basin in the Bolivian *altiplano*. The Tiwanaku established colonies in several strategic areas throughout the region – the largest enclave

located in the coastal middle Moquegua valley in southern Peru. Here the colonists constructed the only known Tiwanaku monumental architecture outside their highland homeland. The Omo Temple (M10A) is therefore critical in understanding provincial Tiwanaku power and ideological practices. Utilizing built environment theory, this thesis provides insight into these practices by focusing on the middle court, an architectural area situated between the public lower court plaza and the private upper court complex. An examination of access patterns will help situate the middle court as a liminal architectural space, in which visitors traveling through the structure would be “betwixt and between” (Turner 1964) – an area between public and private, profane and truly sacred space. This liminal aspect was emphasized by the presence of platforms at each of the three access points to the middle court. These elevated thresholds acted to privilege those transitioning from the lower to middle court space. Access patterns, supplemented with analysis of architectural elements and artifact data, indicate a tripartite processional process that contradicts the dualism-based interpretations which have dominated archaeological explanations of ancient Andean architecture and ritual practices.

## **I. Introduction**

True testaments to the accomplishments of the ancients, the study of monumental architecture has always had a place in archaeology. From William Stuckley's categorization of the monuments of ancient Britain in the 17<sup>th</sup> century, to Napoleon and his army of savants obsessing over the ancient monumental architecture of ancient Egypt; multiple generations of scholars have pondered about what exactly these impressive ancient monuments can tell us about the past. Over the years there have been a myriad of theories, concepts, and questions formulated in an attempt to gauge this question. This paper will endeavor to synthesize decades of research of ancient architecture, in an attempt to analyze elements of a prehistoric structure in the hyperarid Atacama Desert of the southern Peruvian coast.

The Omo Temple (M10A) was a three-tiered platform structure built by colonists of the Tiwanaku civilization (A.D. 600-1100) towards the end of the first millennium C.E. Originating in highland Bolivia, these colonists settled what is now called the middle Moquegua Valley in southern Peru (Fig. 1). Over 300 km from their highland homeland; these agro-pastoralist colonists lived in four major site complexes in the valley for almost four hundred years. The Omo M10A structure is located at the Omo site group, the largest of these site complexes.



*Fig. 1. Map of South America with insert of the south central Andes, indicating Tiwanaku archaeological sites - Omo M10 in southern Peru and Tiwanaku in Northwest Bolivia.*

This paper will investigate the ceremonial structure at Omo M10 as a physical manifestation of power and cosmological order, as experienced by the people of the Tiwanaku colonies in Moquegua, Peru. The temple has been defined as a structure, which facilitated movement and acted as “a transition from public to increasingly restricted space” (Goldstein 1993:42). The middle court portion of the structure is the location where this transition took place. This will be illustrated by using spatial syntax theory, to objectively assess the access patterns of the temple and situate the middle court within the context of the temple as a whole. In addition, various architectural features will be examined as elements promoting exclusion, subordination, and procession – a strategy proven successful in interpreting power structures from provincial architecture (e.g. Nash and Williams 2008). Access patterns and architectural features, supplemented



with artifactual evidence, point to the possibility that the three doorways into the middle court may have had tripartite differential, procession-based use. If true, this may contradict a theme common in interpretations of Andean ritual and monumental architecture - duality (e.g. Burger 2008; Kolata 2003; Moseley 1992). The architecture of the middle court was designed so members of the Tiwanaku spiritual elite would enter in separate groups, but continue on to the restricted upper court as a unified procession, where they would participate in private rites. The liminal middle court space was critical in defining separation, but at the same time allowing for cohesion. The Omo Temple may have been the only location where the distinct factions of Tiwanaku colonists would come together to participate in ritual activities which tied them to their mutual highland homeland. The M10A structure and specifically the middle court, represents a physical reproduction of how the colonists understood their world. It acted to legitimize and reinforce, not only the power of the religious practices which drove the Tiwanaku state, but also how the colonists related to each other in their home away from home.

## II. Background

This section will attempt to place this study in the proper theoretical and historical context. It will begin with a review of the literature which attempts to define and understand the built environment and how this study attempts to navigate this varied and complex theoretical realm. This will include a brief survey of how studies into the built environment have been used in the interpretation of ancient monumental architecture. Before moving on to the culture-history portion, it is necessary to outline some aspects of native Andean perceptions of space. The background will then situate the Omo M10A structure and the people who built and used it into the proper historical context of Andean prehistory. This will begin with a description of the Tiwanaku civilization and how archaeological understandings of this ancient highland culture have developed over time. This will lead to a characterization of the Tiwanaku presence in the middle Moquegua Valley in southern Peru. The background section will conclude with a recap of the past excavations at the Omo Temple and a brief description to the temple as it was envisioned prior to the most recent excavations.

### The Built Environment

Ancient monuments which have survived the test of time, from the Great Pyramids of Old Kingdom Egypt, to the royal estate now known as Machu Picchu in Peru, have long inspired awe and wonder. The roots of archaeology reach deep into the Enlightenment with the birth of antiquarianism and classical studies (Trigger 1989). The

vast majority of these early archaeological exploits into the past involved the study of monumental architecture. When attempting to interpret past lifeways and social systems from ancient material remains, there is good reason to study monumental architecture, as aptly noted by Moore (1996) “monuments are eruptions of the past” (94). Said another way:

Architecture, to state the obvious, is a social act – social both in method and purpose. It is the outcome of teamwork; and it is there to be made use of by groups of people, groups as small as the family or as large as an entire nation. Architecture is a costly act. It engages specialized talent, appropriate technology, handsome funds. Because it is so, the history of architecture partakes, in a basic way, of the study of social, economic, and technological systems of human history. (Kostof 1995:7).

Clear achievements of a significant amount of human labor, monumental architecture was used as the key to many of the energetic-approach strategies championed by the neo-evolutionists in the early stages of the New Archaeology movements (Binford 1962) in the mid twentieth century (see White 1959; Abrams 1989). Scholars whose work adhered strictly to laws developed using the energetics approach saw architecture as a clear indicator of social hierarchy, political centralization and economic expansion – collectively referred to as complexity (Abrams 1989; Spencer 1990). Interpretations of this sort placed architecture as a significant, but passive cultural element; viewing public architecture as passive reflections of culture, as opposed to active elements, capable of reproducing a culture’s understanding of power and cosmological order. This relationship between people (both individuals and society as a whole) and architecture is summed up well in the consistent, insightful eloquence of Winston Churchill: “we shape our buildings, and afterwards our buildings shape us” (1943).

This paper will utilize the central argument laid out by Jerry Moore in his book, *Architecture and Power in the Ancient Andes* (1996). His argument is based on four basic principles, or assumed truths regarding public architecture: (1) public architecture is a construct of a certain culture and is saturated with symbols, (2) many of these symbols are understood by the general public, (3) these symbols communicated a certain knowledge about the norms of social order within that society, and (4) archeological analysis of ancient public architecture can shed light about how a certain group, at least publically, perceived their world and their place within that world (Moore 1996:15).

This argument is derived from Lawrence and Low's more general discussion of *the built environment*. Broadly defined as "any physical alteration of the natural environment, from hearths to cities, through construction by humans" (Lawrence and Low 1990:454) the built environment is clearly a critical concept to understand when attempting to interpret monumental architecture. Studying the relationship between the built environment and the society which builds and experiences it has created discourse in anthropological discussions for some time. Lawrence and Low explain that early discussions regarding the built environment in early anthropological literature can be broken up into two basic camps. Lewis Henry Morgan postulated that dwellings represented "a direct expression of the organization of the corresponding kin group that occupied it" (Lawrence and Low 1990:460; see also Morgan 1965[1881]) – basically a functional perspective. Scholars following in this vein would soon use architecture as an index in classifying a particular site or culture in the proper evolutionary position and would later adapt it to fit White's energetics approach discussed above. Analysis of

ancient Andean monumental architecture has often followed this processualist approach (e.g. Haas 1992; Isbell and Cook 1987; Pozorski 1980).

The other theoretical camp in built environment theory is exemplified in the influential works of Emile Durkheim and Marcel Mauss (e.g. 1963[1903]). Focusing more on cognitive factors, these scholars saw the built environment as a “product of classificatory collective representations based on social forms” (Lawrence and Low 1990:456). Not only were these built forms interpreted as products of the social, but as models used to reproduce these social forms (Lawrence and Low 1990:456). Later, in his ethnographic work with the Eskimo, Mauss (1979[1906]) would propose very functional interpretations of the Eskimo residential igloos which would interestingly also influence the formulation of White’s energetic approach. However, the more influential cognitive-based studies, combined with the linguistic influences of Saussure (1916) and Jakobsen (1961) would lead to the structuralist approach, championed by Claude Levi-Strauss (see Levi-Strauss 1963). Structuralist approaches, which posited that all individuals and societies made sense of the world and each other through a series of binary oppositions in the form of symbols, would influence multiple generations of scholars and change the field of anthropology.

Following the structuralist analysis trend, some have formulated the concept of the *exemplary ceremonial center* (Wheatley 1983). Employing this concept, site plans and even settlement systems can be interpreted as cosmograms or maps of the cosmos; this is done explicitly “through the organization of public art and architecture” (Couture 2002:12; see also Eliade 1959:58-59). Often the focal point of such centers comes in the form of monumental architecture. Here, architecture can represent the “place of

transition, communication, and mediation between cosmic planes” (Couture 2002:12; see also Wheatley 1983:423) – a true *axis mundi*. A substantial amount of studies have focused on monumental architecture in this symbolic sense (e.g. Ashmore 1991; Burger 1992; Hodder 1984) and this is where the main tenets of Moore’s argument are derived. Even the ceremonial architecture at the site of Tiwanaku has been interpreted using this model explicitly. Alan Kolata has claimed that the monumental architecture at Tiwanaku (Fig. 2) “physically embodied the point of fusion of a centralizing imperial ideology with multiple regional and ethnic ideological systems” (2002:197).

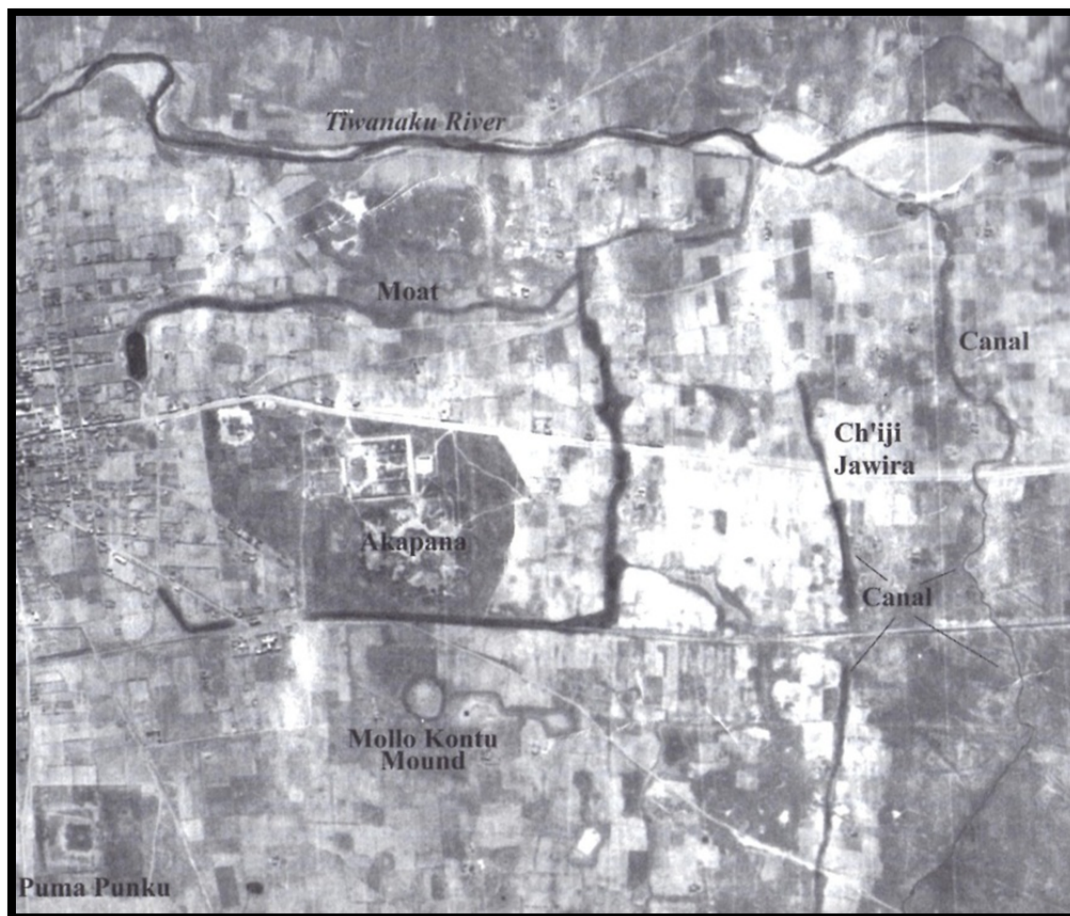


Fig. 2. Aerial view of the monumental core at the site of Tiwanaku (Kolata 2003:178).

While these types of models have been widely applied in the study of architecture, there have been some serious criticisms voiced regarding structuralism's treatment of action and time. These critiques are best understood through the lens of Pierre Bourdieu and his concept of practice (1977). Bourdieu rejected structuralism's insistence that people interpret the world around them and in turn base their actions on a subconscious comprehension of binary-opposed symbols. Bourdieu and those that followed his lead, charged these structuralist studies as synchronic –static studies which ignored change over time. Instead he formulated a symbolic study based on action, or what he called practice. The accumulation of these practices, what Bourdieu defined as habitus, represents not only the product of practice, but in turn, allows for its reproduction and at times modification (Bourdieu 1992). With these new analytical tools provided by Bourdieu, architecture, especially monumental architecture began to be interpreted not only as products of social practice, but rather as a cultural element capable of embodying and reproducing social practice (e.g. Dovey 2005). In fact, architecture could be potent mechanisms for social reproduction, as stated by Bourdieu himself, “[t]he most successful ideological effects are those that have no words, and ask no more than complicitous silence” (1977:188).

A more recent trend in the study of architecture comes in the form of phenomenological studies. While suffering from the “curse of subjectivity,” the phenomenological approach allows architecture to be studied in terms of three-dimensional spaces. Focusing on the study of ancient monuments and often ruins of ancient monuments, archaeologists often are forced to study architectural plans. Alexei

Vranich appropriately points out, this leads to analyzing two-dimensional architectural plans for “interesting two-dimensional patterns” (1999:12) which is most often not how monuments were experienced by their users and likely not how their designers intended them to be experienced. Architecture was not strictly passive; it both encouraged and circumscribed the types of activities that could and should take place. There are obvious restrictions that architecture can place on certain activities (e.g. only so many people can fit into a building or walled area, it is easier to restrict access through smaller doors, etc.).

This paper will draw on the majority of the theories discussed above, to objectively analyze the only known Tiwanaku provincial monumental architecture. As will be discussed in greater detail below, the construction, use, and abandonment of the M10A structure are believed to have taken place over a relatively short amount of time – there is little evidence of significant repairs (beyond simple cosmetic-type repairs) and there were certainly no major reconstruction or remodeling events. Therefore there is little reason to avoid the synchronic-type studies that the analyses based in structuralism have been charged with. This paper will take the stance that, like the urban capital, the provincial M10A structure does in fact represent an exemplary center – the true axis mundi for the Tiwanaku colonists in Moquegua. However, that is not to say that this paper will ignore the concepts of practice in the form of ritual action. While the architecture of the structure itself was imbued with symbols, understood by the people using the building, it was the ritual practices which took place within its walls which brought the cosmogram to life.



### Community and Space in the South Central Andes

Before continuing, a brief discussion concerning the general social structure of the Andes is necessary, in hopes of teasing out what (if anything) can be projected into the ancient past. There is a rich literature discussing the social structure of contemporary and historic indigenous groups, as well as a relatively extensive collection of colonial accounts of the mighty Inca Empire and its provinces. *Ayllu*, duality, and verticality – are concepts ubiquitous in the available ethnographic and historic literature. These three general topics will be defined and briefly discussed, as they will be employed later in interpretations of the Omo structure. It is a misconception to propose *ayllu*, duality and verticality, as distinctly separate concepts, as they are all different ways of looking at the same Andean framework.

As with all archaeological investigations, interpreting the ancient past by projecting modern and historically observed social, political, and economic practices is a dangerous convention. However, in regions like the Andes where pre-Columbian writing never developed, it is nearly impossible to flesh out certain practices solely from archeologically recovered material culture (see Schreiber 2001). Luckily for the archaeologists working in this region there is a wealth of conquest/colonial era documentation of the Inca Empire. Using the Inca as a proxy, archaeologists have utilized brilliantly analyzed systems used by the Inca (e.g. Bauer 1998; Rowe 1946; Zuidema 1972) to assist in their interpretation of the ancient Andean past. However, scholars adhering to interpretations of a timeless, unique Andean way of life, run the risk of being *lo Andino* – a term developed for this precise issue of Andean exceptionalism (see Isbell and Silverman 2002; Jameson 2005).

### *Ayllu*

The term *ayllu* has numerous meanings and connotations to the modern inhabitants of the greater Andean region. However, its most general usage refers to “distinguishable groups whose solidarity is formed by religious and territorial ties, by permanent claim to land and lineage, by affinal ties, and by work” (Bastien 1978:211). These *ayllu* groups were at their root, kin-based organizations, however, this kin-based relationship could be real or fictional (Janusek 2010:54). *Ayllus*, in general, did not have rigid formulations for their internal structure: they could be patrilineal (e.g. Abercrombie 1998) or matrilineal (e.g. Bastien 1978). Using classic anthropological terminology, *ayllus* worked as corporate groups, in controlling territory and subsistence needs. In this sense, as pointed out by Janusek (2010:54), *ayllu* essentially translates into the Western concept of “community.” *Ayllus* often operate through reciprocal exchanges and is also the venue for negotiations over issues regarding identity and gender (Van Vleet 2008).

### *Verticality*

The concept of verticality or vertical complementarity was championed by one of the most influential Andeanists, John V. Murra (1972, 1984). Using data drawn from colonial sources, Murra proposed that the dominant economic system in the Andes was developed to exploit the drastic vertical changes in environmental zone that define the Andean landscape. Verticality involved members of a community or macro-*ayllu* being

distributed over wide ranging swaths of geography in order to utilize various environmental niches. Generally groups would not control a single swath of land, but disconnected patches – giving rise to the term vertical archipelago. This dispersed vertical archipelago system allowed for *ayllus* to be economically self-sufficient. This practice is well documented as being a significant aspect of the Inca political economy and was a major motivation in developing their expansive road and *tambo* (weigh-station/inn) system (e.g. D’Altroy and Earle 1985). Detailed ethnographic accounts have recorded how modern populations continue to practice *ayllu*-based vertical complementarity (e.g. Platt 1986). This political economy based in a vertical archipelago-type system is one of the main proponents of why John Murra claimed that a market-based system, never developed in the Precolumbian Andes - economic systems remained embedded in these *ayllu*-based vertical archipelagos (see Polanyi 1957).

### *Duality*

Duality is an important concept in understanding the Andean conceptions of space and value. One of the most in-depth ethnohistoric investigations into this Andean conception of space was undertaken by Thérèse Bouysse-Cassagne, in her study of the Aymara people living in the greater Titicaca Basin region (1986). This study is ideal for adapting to interpretations regarding the ancient Tiwanaku civilization, as it was done in the exact geographical context which the Tiwanaku inhabited. A graphic representation of Bouysse-Cassagne’s findings, are illustrated in Figure 3.

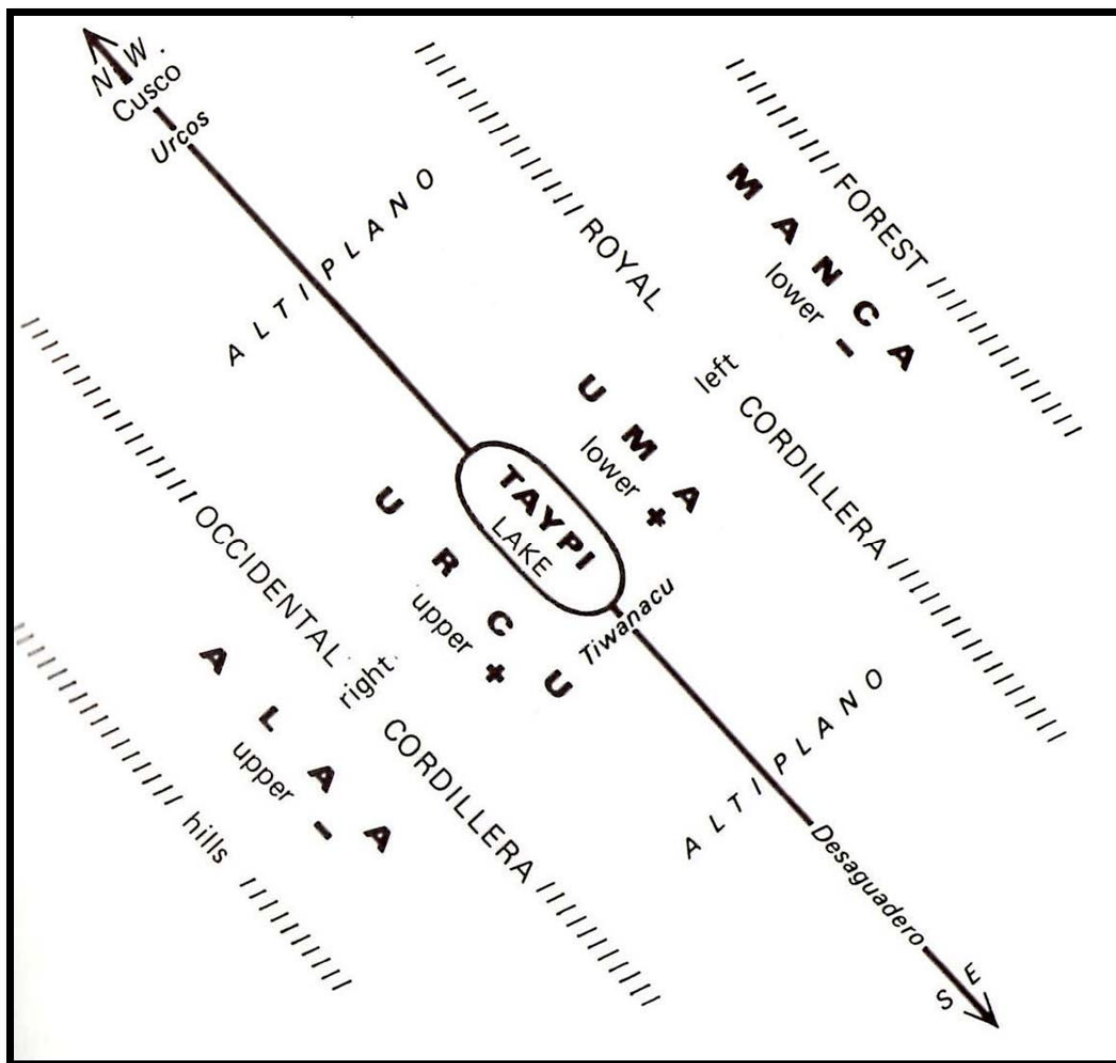


Fig. 3. Aymara Spatial Symbolism (Bouysse-Cassagne 1986:217).

The figure depicts an idealized map of the *altiplano* and specifically the greater Titicaca Basin. Here, we see a series of concepts and geographical zones which the Aymara associate with directions, temperament, and even handedness. To generalize, the west is associated with the *puna*, the Pacific valleys, pastoralism, the masculine, and right-handedness. The east is associated with the *yunga* valleys, agriculture, the feminine, and left-handedness. These binary-opposed concepts come together on a

northwest-southeast axis. At the core or center of this conception of space is the concept of *taypi* – which is represented by Lake Titicaca. In fact, when Bernabe de Cobo visited the site of Tiwanaku in the mid-sixteenth century, the site was known as *Taypikala* or “the stone in the center” (Cobo 1939[1653]:30). The presence of the concept of *taypi*, and the emphasis of a meeting ground, suggests less of a system based on opposition, but rather a system constantly in flux - compromising, complimentary systems; much like the concept *gumsa* as defined by E. R. Leech in his seminal study of political systems in Burma (1959). As observed by Bouysse-Cassagne “[b]ehind the appearances of Aymara dualism and in the Inca system, we can detect, as though in a palimpsest, the rules of a society that understood spatial relationships in *triadic* terms: two elements and a center” (1986:221, emphasis added).

### Tiwanaku

Even with the modern technologies available today, at over 3800 meters above sea level, the Andean *altiplano* is a difficult environment in which to make a living. With unpredictable frosts, fluctuating temperatures and frequent hail and lightning storms the harsh high plain of the south central Andes might seem like an undesirable location for agro-pastoralists to make a living. However, over one thousand years ago the Tiwanaku civilization, not only survived in the *altiplano*, but flourished and influenced much of the region for over half a millennia. The Tiwanaku accomplished this feat by greatly expanding an ingenious system of raised fields, which helped ward off frosts (Erickson 1987). They also managed massive herds of indigenous domesticated camelids (Lynch

1983), which thrived in the bitter *altiplano*. Finally, the Tiwanaku took control of pre-existing trade routes (Stanish et. al 2010) and even developed colonies in regions with warmer climates (Goldstein 2005).



Fig. 4. Gateway of the Moon, Tiwanaku. (Photo MJS).

During the Middle Horizon (A.D. 500-1100) the enigmatic state of Tiwanaku emerged from its highland capital, of the same name, just 20 kilometers from Lake Titicaca, the highest navigatable lake in the world. Tiwanaku developed from local antecedents – represented a continuation of local *altiplano* lifeways and stylistic trends in material culture. Tiwanaku architectural canons (Cohen 2010) and other stylistic canons (Janusek 2002) can be traced back the Formative (c.a. 2000 B.C. – 400 A.D.)

pan-*altiplano* style, known as Yaya-Mama (Chavez and Chavez 1975). Throughout the Middle and Late Formative, various centers like Pukara, rose to achieve regional dominance (see Bandy 2001) and local influence, but by A.D. 600 Tiwanaku rose to the position of a major regional center and began its five hundred year domination of the south central Andes. Tiwanaku was not the only up-and-coming state – the Middle Horizon also saw the rise of the great Wari civilization, which dominated the central Peruvian highlands. The relationship between these peer polities has been the subject of much debate (Fig. 5).



Fig. 5. Spheres of Influence of Middle Horizon Polities (after Schreiber 2001).

Early in its development, during what is known as the Tiwanaku IV period (A.D. 500-750) (Fig. 6) the site of Tiwanaku saw dramatic growth and urbanization. At this time the building of the massive monumental structures of the Akapana step-pyramid, Kalasasaya platform, and others were initiated. This monumental district was the core of a rapidly expanding urban settlement, which likely attracted visitors from all over the south central Andes. During this period the Tiwanaku polity developed major secondary centers in the Titicaca basin, most notably Lukurmata (Bermann 1994) and settlements on the Island of the Sun (Bauer and Stanish 2001). By the end of this period the site of Tiwanaku likely reached urban population levels of 30,000 to 60,000 inhabitants, with an estimated site size of four to six square kilometers (Kolata and Ponce 1992:332). Settlement pattern studies have shown that during this period settlements began filling out the valleys around the urban capital (Albarracin-Jordan 1996; McAndrews et al. 1997). This period also saw the establishment of the first small-scale Tiwanaku settlements outside the *altiplano* (Goldstein 1993).



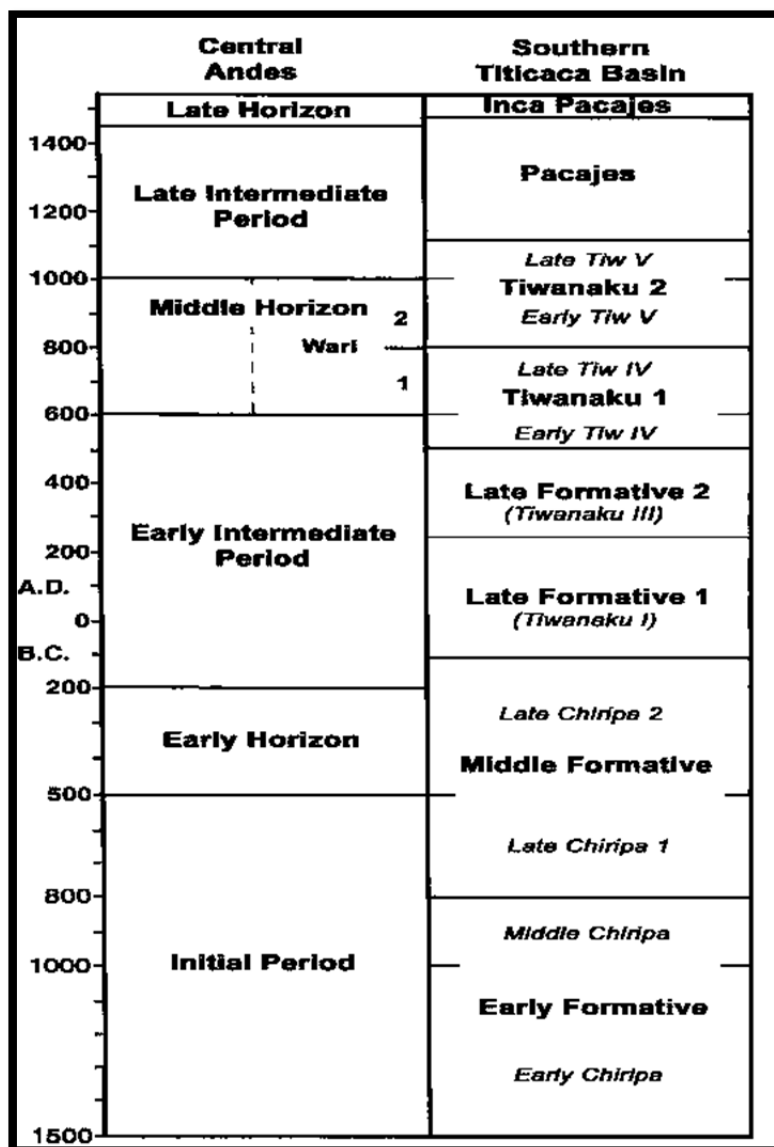


Fig. 6. Chronology for Prehispanic Central Andes and Titicaca Basin (after Janusek 2010:19).

By A.D. 750, Tiwanaku began to greatly expand its influence throughout the south central Andes (Fig. 7). Evidence from the urban capital indicates “that Tiwanaku society was now supremely class-driven and hierarchical” (Janusek 2010:23). Studies outside the Titicaca Basin show a dramatic increase in Tiwanaku-style material culture during this period. This period also saw the establishment of large Tiwanaku colonies in

several regions, including: Moquegua (Goldstein 2005), Cochabamba (Anderson and Cespedes Paz 1998), and likely Azapa (Rivera 2002). Other areas appear to have been in direct contact with the Tiwanaku polity, but do not appear to have been colonies (e.g. San Pedro de Atacama). Tiwanaku maintained this dominant status in the region for over three centuries, but eventually collapsed around A.D. 1100. The cause of this collapse is still fiercely debated and likely was due to a combination of a number of factors. Some of the foremost theories of collapse involve dramatic environmental changes (e.g. Binford et al. 1997) and shifts in various ideological systems (see Janusek 2002).

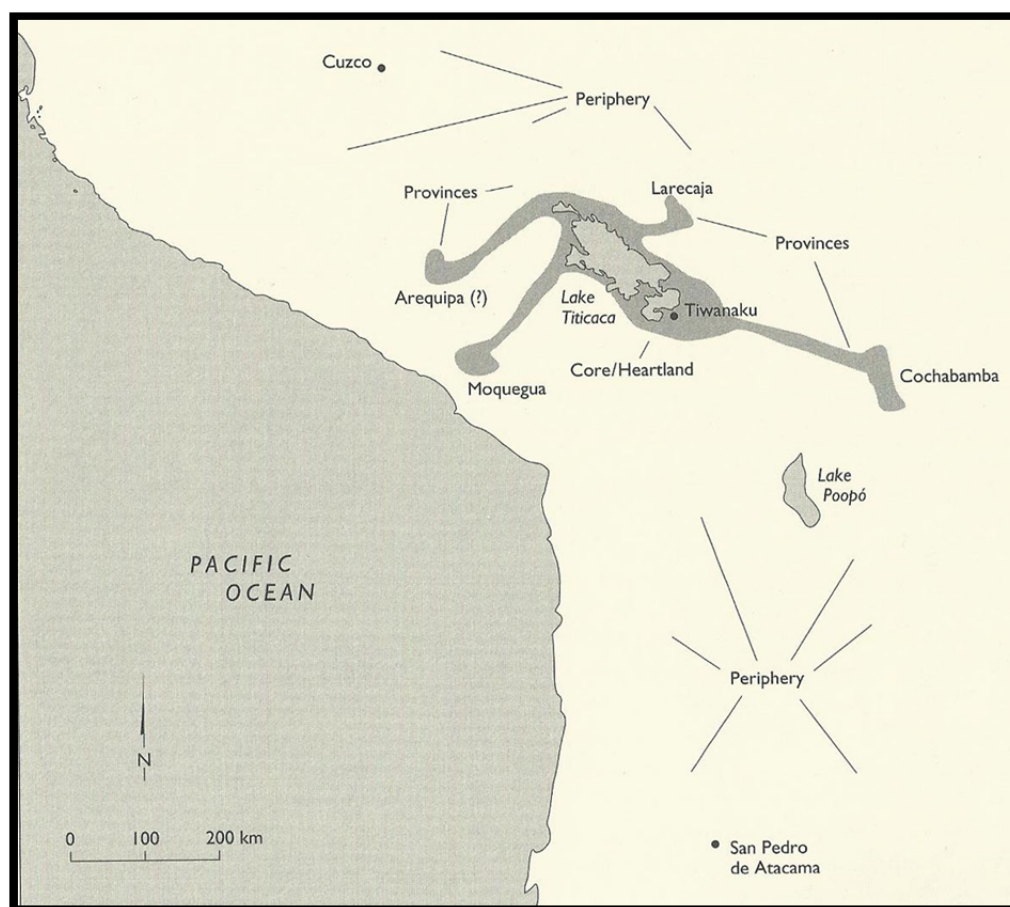


Fig. 7. Tiwanaku territory at peak, A.D. 750-1000 (after Stanish 2010:10).

### *Understanding Tiwanaku*

The understanding of Tiwanaku has struggled through entrenched views of its organization and incorrect cultural evolution-based chronologies (Ponce 1972) based on incomplete ceramic seriations (Bennett 1934). The site of Tiwanaku (or Tiahuanaco) has been looted since Inca times, systematically destroyed by the colonial priesthood and as recently as the late 1800s, literally blown to bits by dynamite in the name of “progress” and “development.” This has led the Middle Horizon and its material correlates to be “hazily understood” (Matthews 1991:64) and has led to many of the contentions found in current research (Isbell and Burkholder 2001). Western scholars, explorers, and travelers have long speculated about the origins of the now stone skeleton of the Tiwanaku monumental architectural complex and of the people who built it. Given the focus of this paper – interpreting a provincial Tiwanaku monumental structure – a brief discussion of the history of research at Tiwanaku is necessary. This will help weed out some of the biases regarding the nature of Tiwanaku expansion and possible inconsistencies in defining its monumental architectural canons.

The first non-indigenous person to see the ruins of Tiwanaku (or at least record their visit), was conquistador Pedro de Cieza de Leon. Cieza de Leon visited the ancient city only seventeen years after the final defeat of the Inca at the hands of the Spanish, in 1549. He marveled at the stonework of the architectural blocks and stone stelae, noting that they were “beautifully carved, so much so that they seem the work of great artists or masters” (Cieza 1959[1553]:283). Cieza would later learn that the Inca claimed that their mythical origins could be traced back to Tiwanaku. This origin myth was recorded, in

detail, by Jesuit priest turned New World historian, Father Bernabe Cobo, in the early seventeenth century. Cobo even recorded the apparent inspiration the Inca took from the stonework at Tiwanaku.

[Pachicuti] saw the magnificent buildings of [Tiwanaku], and the stonework of these structures amazed him because he had never seen that type of building before, and he commanded that his men should carefully observe and take note of that building method, because he wanted the construction projects in Cuzco to be of that same type of workmanship (Cobo 1984[1653]:141).

The reason for including quotes from early conquest-era visitors to Tiwanaku is that theories surrounding the ancient site did not progress much further for over three hundred years. In fact, Tiwanaku was hardly mentioned again until the mid-nineteenth century. When the ancient ruins crept back into the eyes and minds of westerners, theories surrounding the origins of the ruins and the people who were behind their creation were frequently based on non-scientific concepts and racism. As they did with most New World monumental architecture, Western visitors often assumed that ancient Egyptians, the lost tribes of Israel, or survivors of Atlantis must have been behind the creation of the great stonework at Tiwanaku (e.g. Chalan 1939 [1882]:87). Others were more direct in their racist assumptions. Referring to the local Aymara as “imbecilic”, Francis de Castelnau (1939:56) insisted that ancient Egyptians were responsible for the monuments of Tiwanaku.

It was not until the eve of the twentieth century that any legitimate, systematic archaeological survey and excavation took place at Tiwanaku. Some of the earliest “scientific” excavations on Tiwanaku monumental architecture took place at the turn of the century, as part of a multidisciplinary French expedition in the region. Voicing

concern for the intentional destruction of the site, the French team excavated in some of the sites most iconic structures: the Kalasasaya, the Semi-subterranean Temple and the Putuni (Créqui-Monfort 1904). Despite their good intentions this project (which lacked an actual archaeologist) proved to be a harmful venture. Years before traveling to Tiwanaku, Max Uhle, along with Alphonse Stubel defined a Tiahuanaco Style (Stubel and Uhle 1892) based on ceramic collections which would later become the bases for the Middle Horizon period in John Rowe's (1960) horizon-based chronological sequence for Andean prehistory. This widespread style was later determined to be that of two related, but very different civilizations (see Menzel 1968; Lumbreras 1974); the Tiwanaku of the south central Andes and the Wari of the central Peruvian highlands. Despite incorrectly identifying the Tiwanaku as a pan-Andean style, Uhle was the first influential scholar to claim the Tiwanaku as ancestors to the indigenous inhabitants of the region. Other early researchers that focused on Tiwanaku, continued to take steps in the right direction. Wendell C. Bennett and Stig Rydén were some of the first to carry out systematic excavations at the site. While far more systematic in their studies than any previous researchers, both Bennett (e.g. 1934) and Rydén (e.g. 1947) misidentified the site as "a major [vacant] ceremonial center, rather than a city or large village" (Bennett and Bird 1964:138). Adolph Bandelier was the only scholar of this period to correctly identify Tiwanaku as an urban settlement. Not only did Bandelier (1911:221) correctly agree with Uhle that the Tiwanaku represented far distant ancestors to the indigenous people of the *altiplano*, but in an unprecedented insightful observation, noted that the site was likely inhabited by large populations living in structures constructed from erodible materials (Janusek 2010:5).

Major strides were made in Tiwanaku research in the mid-twentieth century (ca. 1940-1980). Two figures dominated this era: Austrian foreign-national Arthur Posnansky and Bolivian Carlos Ponce Sanginés. Posnansky, while not a trained archaeologist and a racist, was obsessed with Tiwanaku. He aggressively sought to conserve the site of Tiwanaku from further destruction and organized several museums in the Bolivian capital of La Paz – this allowed for the preservation of a number of collection which otherwise may have been lost.

Carlos Ponce became the chief archaeologist of Tiwanaku after the sweeping Bolivian agrarian reforms of the late 1950s – when nationalist powers took control of the country. While work under Ponce and the nationalist Bolivian government accomplished excellent research – they also undertook a challenging project of consolidating and reconstructing Tiwanaku’s monumental ceremonial core. Unfortunately this was done with the intention of creating a national monument (Ponce 1978) and not necessarily with goals of accurately reconstructing the architecture. Overcoming visual bias projected by the reconstructed monumental core, architecture has been a major challenge in modern studies (see Vranich 2008).

With the re-opening of the site to multinational, collaborative efforts in the 1980s there has been a flood of new researchers, high-tech methodologies, and new theories revolving around the ancient state and how it may have been socio-politically organized. No longer is the dominant interpretation of the site a vacant ceremonial center or a fierce empire (e.g. Posnansky 1945). Even the interpretation that Tiwanaku was an “aggressive, predatory state” (Kolata 1993:243) has fallen out of favor. There is no doubt that by the Tiwanaku V period, evidence of Tiwanaku influence can be found throughout much of

the region. However, the nature of this influence is still up for debate. Some have claimed the influence to have been religious in nature (e.g. Albarracín-Jordan 1999), seeing the spread of Tiwanaku iconography as its only significant impact. Others identify Tiwanaku as a segmentary state citing the presence of Tiwanaku material culture outside the Bolivian *altiplano* as evidence of the civilization's economic dominance and strong social relations, with little evidence of political control (e.g. Browman 1981).

Over the past three decades major archaeological projects, both at the capital site and throughout the surrounding hinterland, have answered many questions, but have also raised many in their place. One of the earliest and to date the most comprehensive modern projects undertaken at Tiwanaku, was Proecto Wila Jawira. Directed by Alan Kolata, this interdisciplinary project took place over several seasons and produced two edited volumes (Kolata 1996; 2003). Both through this project and since, great strides have been taken in gaining a more complete archeological understanding of the Tiwanaku. This has included studies into household life both at Tiwanaku proper (Janusek 2003) and at other major Tiwanaku sites in the valley (e.g. Bermann 1994). Settlement survey both in the central Tiwanaku Valley (e.g. Albarracin-Jordan 1996) and throughout the Titicaca Basin (Stanish 1999) has revealed much about the Tiwanaku political economy.

The picture these archaeological studies have revealed is a complex one. As opposed to the monolithic ceremonial center which dominated the Tiwanaku literature up until the late twentieth century, researchers now interpret Tiwanaku as a bustling cosmopolitan city – a true urbanized settlement. Janusek sees the city of Tiwanaku as “highly dynamic, pulsating in population and activity according to calendrical and

periodic rituals and shifting with changing sociopolitical and pan-regional conditions” (2010:167). The Tiwanaku likely employed a diverse set of strategies both in the Titicaca Basin heartland and an even more diverse set of strategies for spreading its hegemony throughout the south central Andes.

#### Tiwanaku in Moquegua

Approximately 300 km southwest of the Tiwanaku capital, and just 90 km from the Pacific coast, lies the middle Moquegua Valley. This section of river in the greater Osmore river drainage systems sits at 900-1500 meters above sea level, over 2300-2900 meters lower than the Bolivian *altiplano*. This low level climate was ideal for growing many crops ill-suited for the harsh highland climates. Due to the constant temperate climate, with the employment of irrigation, agriculture is fruitful all year - despite minimal rainfall.



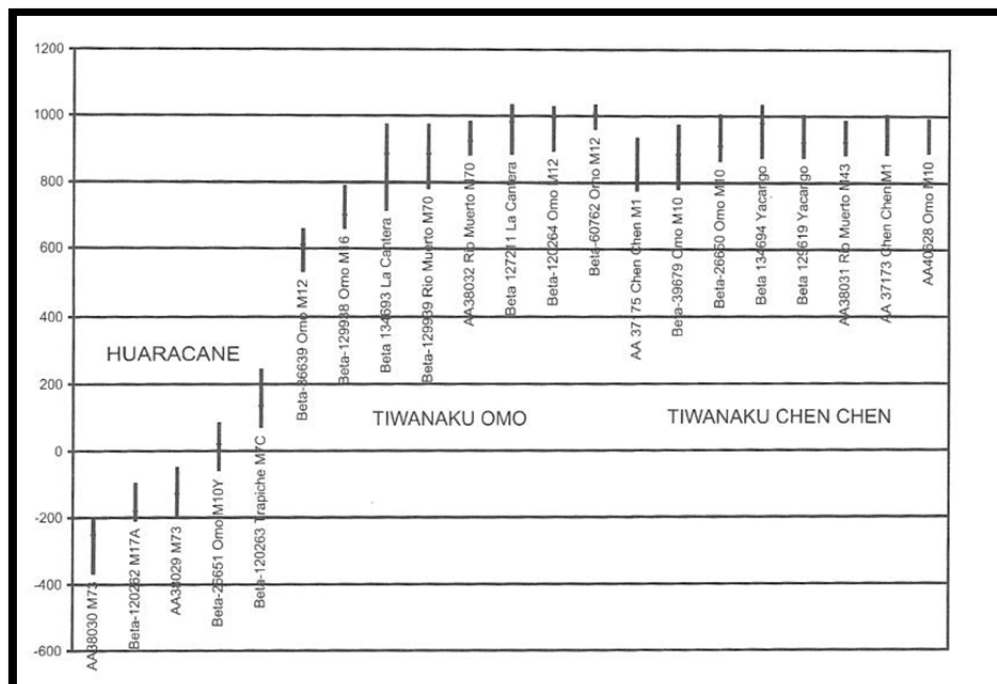


Fig. 8. Calibrated radiocarbon dates for Formative and Middle Horizon occupations in the middle Moquegua Valley, Peru (after Goldstein 2005:132).

The valley was densely settled by agriculturists throughout the Formative period (380 B.C. - A.D. 250). These agriculturists, known as the Huaracane, lived in relatively small villages, traded often with the coast and by trace elements of Pukara ceramics and textiles, appear to have had some contact with the highlands. However, the lowland valley did not see significant influence from the highlands until the arrival of Tiwanaku affiliate groups, beginning around A.D. 550 (Fig. 8).



*Fig. 9. Omo-style redware and blackware vessel drawings (right) (Goldstein 2005:151); blackware portrait-head keros found at the Omo type site, Omo M12 (left) (Photo courtesy P. Goldstein).*

The first Tiwanaku settles to establish a permanent presence were likely camelid herders affiliated with the Tiwanaku-controlled llama caravans which traveled to the coast. As such, these early settlements were located relatively close to identified prehistoric roadways. The material culture associated with these early Tiwanaku settlers has been deemed the Omo-style (Fig. 9). This Omo style included a polished blackware –type of ceremonial serving vessels.

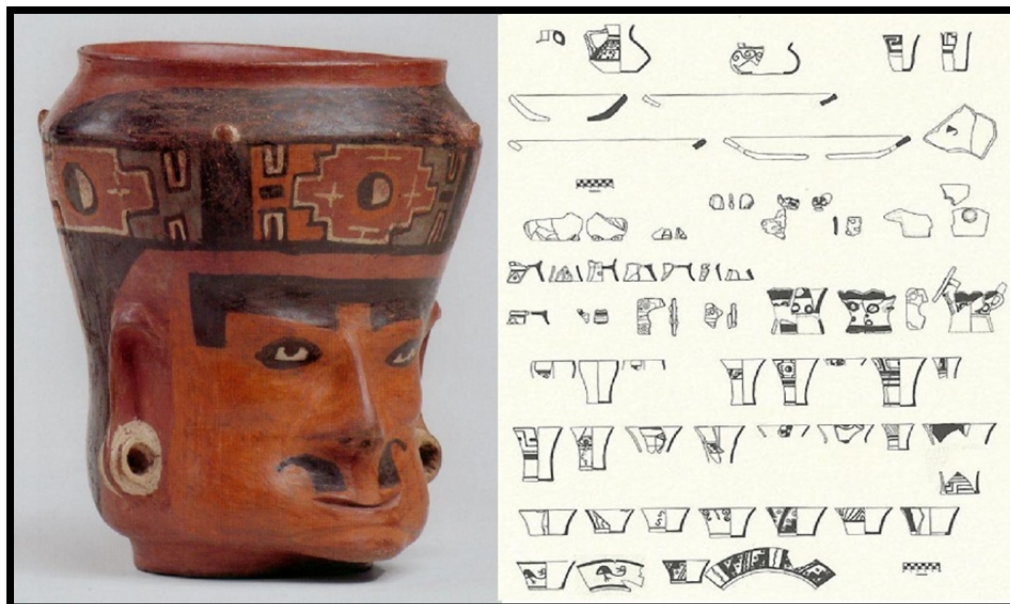


Fig. 10. Chen Chen-style redware vessel drawings (right) (Goldstein 2005:159); Chen Chen portrait-head kero (left) (Photo courtesy of Museo Contisuyu).

These early settlers were later (Figure 8) followed by significantly larger groups of Tiwanaku agriculturalists; who have been defined by their use of the Chen Chen style material tradition (Fig. 10). In terms of settlement sizes the Chen Chen colonists would come to dominate the middle Moquegua valley; covering a total of approximately 60.9 hectares (Goldstein 2005:158). In total approximately 89.7 hectares of the middle valley was occupied by Tiwanaku domestic or mortuary components (Figure 11). Interestingly these Tiwanaku colonists, who eventually formed four major site complexes, did not seem to displace any of the local Huaracane inhabitants. The Huaracane material tradition appears to have disappeared by the zenith of the Tiwanaku occupation of the middle Moquegua valley, but there has been no evidence recovered, that points to a violent demise. Supporting a peaceful colonization of the valley is the fact that most

Tiwanaku settlements in the valley were unfortified and on bluffs located relatively close to the valley bottom.

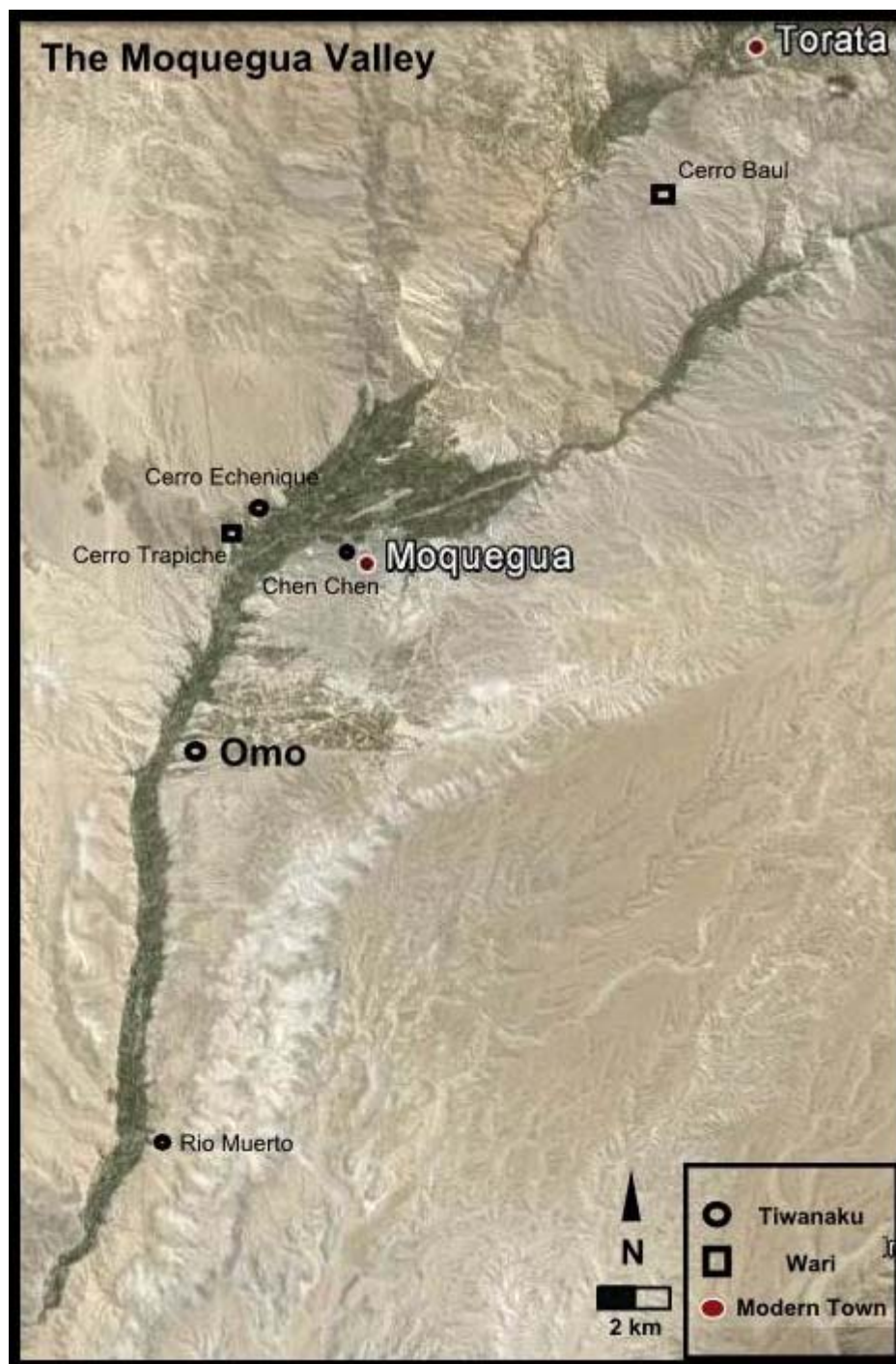


Fig. 11. Middle Horizon (A.D. 600-1100) archaeological sites in the Moquegua Valley.

The nature of the relationship between the Chen Chen and Omo Tiwanaku settlers is not entirely clear. The people using these different material traditions appear to have

kept separate settlements and cemeteries, but always were situated in associated site groups. However, despite using stylistically different material traditions, the Omo and Chen Chen groups were both firmly Tiwanaku. While the Omo and Chen Chen styles used unique local variants of the Tiwanaku canon they maintained their highland identities through several generations of living far outside the homeland. This has led some to define the Tiwanaku settlements in Moquegua as a diaspora (Goldstein 2005; Owen 2005; see also Clifford 1994).

The motivation for the migration of Tiwanaku people to the Moquegua valley is still unclear. As alluded to above, the original Tiwanaku occupation may have served as a “pit-stop” for those traveling with the llama trade caravans. However, the Moquegua valley is approximately 2000 meters lower in altitude than the Titicaca Basin. Here, lowland crops significant to the highland Tiwanaku (e.g. maize, coca, chilies) could be grown year round. There is also some evidence to suggest that environmental factors may have driven some Tiwanaku people from the draught-ridden *altiplano*, to the recently flooded lower Pacific valleys (Magilligan and Goldstein 2001). If the Tiwanaku’s entrance to the Moquegua valley has become more clear with recent research, their exit is still a mystery. Around A.D. 1100 most Omo and Chen Chen style Tiwanaku sites had been largely abandoned. A transitional style, known as Tumilaca, has been defined a derivative of the Tiwanaku style, and is found at numerous sites in the Moquegua Valley. These sites tended to be located on isolated blufftops and often were accompanied by a defensive wall. Likely, as the Tiwanaku polity collapsed and the extensive regional political economy they had cultivated disintegrated, local competition would have increased; necessitating a new form of protection for the former Tiwanaku

colonists in Moquegua. Many of these former colonists and their descendants came to occupy these hilltop sites whereas others appear to have migrated to coastal regions (Owen 2005).

*The Omo Site Complex.*

The Omo site group is one of the four major Tiwanaku site complexes in the valley. It is composed of four distinct sites: M10, M11, M12, and M16. Omo M12 is the type site for the Omo style occupation, also present at M16. Omo M11 appears to be a Tumilaca affiliated site. Omo M10 is a Chen Chen style settlement, and boasts the M10A monumental structure and will be the focus of this paper. The Omo M10 site contains 17 distinct archaeological sectors (Goldstein 2005:138): M10 sector A is the monumental structure, sector C is the habitation sector, and all other sectors are cemeteries (Fig. 12).



Fig. 12. The Omo M10 site – M10C domestic area, M10A monumental architecture, and cemeteries).

### *Past Excavations at Omo M10A*

An extension of the Moquegua Archaeological Survey (MAS), which took place over several seasons beginning in the early 1990s, Proyecto Omo set out to thoroughly investigate the Omo M10A monumental structure. The project also had a significant mortuary component, in which sample excavations were undertaken in each of the 15 cemeteries associated with the Omo M10 site. Proyecto Omo took place over the 2010, 2011, and 2012 field seasons, although excavations in the middle court were only carried out in the final two seasons. The results from these excavations will be the focus of this paper.



Excavations during Proyecto Omo built on prior excavations at the temple which took place in 1990. These excavations, also directed by Paul Goldstein, concentrated on the central axis of the temple structure in general, but focused on the upper court portion of the structure. This investigation involved the excavation of 27 2x2 meter units, and recovered a great deal about the overall architectural layout of the structure. However, only one of these units (Unidad 121) was excavated in the middle court. During the most recent excavations it was sometimes necessary to re-excavate these 1990 units.

Additional excavations, mostly in the form of sounding trenches, took place in 1984, as part of the greater Programa Contisuyu which was directed by Michael Moseley. One of these trenches (A-3) was excavated through the northeastern middle court gallery. The data used in this paper will not draw heavily on material collected during these earlier excavations, although some data from the 1984 and 1990 excavations will be utilized in some of the more general discussions.

### *The Omo Temple*

After the 1984 and 1990 excavations a great deal was revealed regarding the overall architectural layout of the M10A structure. These excavations confirmed the presence three-platform courts (lower, middle, and upper) which were built “on a stepped terreplane that ascends a small hill” (Goldstein 1993:32) just east of the M10C domestic sector. The lower court, also the largest (42 x 57 meters), appeared to be free of any internal architectural divisions, and was therefore interpreted as an open plaza. The middle court, the smallest of the courts (20 x 30 meters), was approximately a half meter higher in elevation than the lower court and also appeared to be relatively free of internal

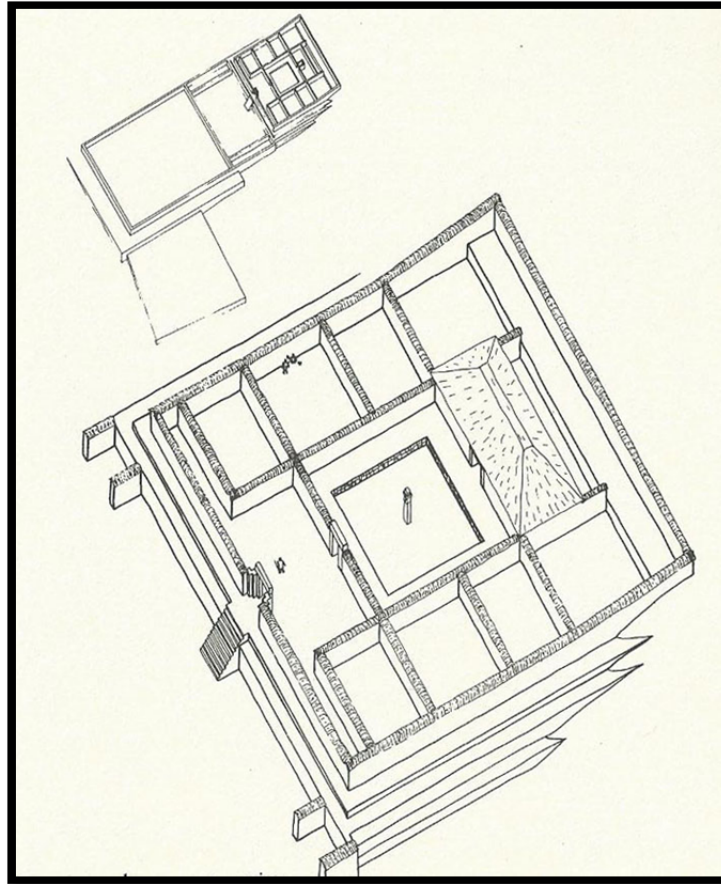
divisions. The exception here was the presence of two narrow galleries one, on each side (southwest and northeast), of the middle court area. Finally, at almost three meters above the middle court was the upper court. This area was by far the most complex, architecturally, and was interpreted to possess at least eleven distinct rooms - including at least one internal roofed structure and a sunken court (see Goldstein 1993 for extended description). Interpretation of the upper court was assisted by studying the Omo *maqueta* model, which was found at the M10 site in the 1970's (Fig. 13).



Fig. 13. The Omo M10A *maqueta* – architectural model of the M10A structure (after Goldstein 2005:293).

This *maqueta* was believed to be a fragment of a small model of the M10A structure – with only the upper court and fragment of the middle court remaining. The 1984 and

1990 excavations, supplemented with the M10 *maqueta* resulted in the reconstruction drawing of the Omo Temple in Figure 14.



*Fig. 14. Reconstruction of the Omo Temple (top) and upper court (bottom) as interpreted after 1990 excavations (after Goldstein 2005:288).*

### **III. Methodology**

The methodology section will layout the modes of analysis employed in this study. This includes the methodology utilized in survey and excavation of the middle court and the greater M10A archaeological sector. This will begin with a brief description of Proyecto Omo – the project under which all data was collected. Here, there will be a short summary of the strategy used to excavate the M10A structure and specifically the middle court – incorporating an idealized Harris Matrix for the middle court architectural area. The methodology section will then move on to an in-depth discussion of the methodology developed for the analysis of the middle court architectural section. The methodology incorporates a myriad of other studies of the built environment and monumental architecture. However, first I will briefly outline the overarching research questions this thesis is attempting to answer.

#### Research Questions and Hypotheses

As part of a larger research project (Proyecto Omo) this thesis is attempting to contribute to past and present research into the form and function of the Omo Temple and its role in the greater Tiwanaku colonial presence in Moquegua. More specifically this paper explores the role the middle court architectural area played in the activities which took place within the M10A structure. Listed below are several questions and hypotheses developed to help direct investigations into these issues.

- Did the middle court play an intermediary role between those traveling from the lower to upper courts?
  - a. If so, was the middle court merely a “staging area” for more important private rites in the upper court or more public rites in the lower court?
  - b. Or did it have its own discrete set of activities?

My initial hypothesis was that the middle court did indeed represent a transitional architectural space for those traveling from the open lower court space to the more restricted upper court space.

- What was the architectural connection between the middle court and the upper and lower courts?
  - a. Were there multiple points of access between these architectural spaces?
  - b. Or was there only a single line of access along the central access, as past investigations had suggested?
- Are there architectural or artifactual elements in the middle court which would indicate it as a transitional space?

Driven by these questions, described below is the methodology devised for answering these questions and testing these hypotheses.

### Field Methodology

The architectural, ceramic, and stratigraphic data analyzed and discussed in this paper were collected during selective excavations in the 2011 and 2012 field seasons as part of Proyecto Omo. The project, directed by Paul Goldstein (UC, San Diego) and

Patricia Palacios F. (Museo Contisuyu), intended to extensively excavate the Omo M10A structure in order to clarify its architectural layout, identify activity areas, and in turn determine the structure's uses to the Tiwanaku colonists. This section will cover methods of excavation, artifact collection and sampling, and how architectural elements were identified and recorded.

### *Proyecto Omo Excavation Strategy*

The excavation grid system was setup during the 1990 excavation season. Due to the northwest-southeast orientation of the temple (bearing of 316 degrees magnetic (Goldstein 2005:282)) and nature of excavations, a grid, internal to the temple was arranged. In this grid system, what is called Temple North (TN) is oriented roughly to the northwest. The starting point to the grid (TN0 TE0) is the southern corner of the structure. All discussion in this paper will use true magnetic directions in describing architectural orientation, feature location, etc., but most unit maps will use the temple north designation.

In an attempt to reveal as much of the architectural layout as possible, and in hopes of exposing activity areas in their entirety the standard unit size in this project was 4x4 meters. Due to various constraints, at times it was necessary to excavate 2x4 meter units. Each 4x4 meter unit was given an arbitrary number designation (Unidad 202, 345, etc.) based on its location on the temple grid (based on the SW corner). As will be noted below, several of the middle court units include an "amp1" (an abbreviation for amplificacion 1) in their number designation (e.g. Unidad 340 amp1). This is due to the fact that the middle court is approximately four meters wider than the upper court on the

southwest side and two meters wider on the northeastern side, and the temple grid was set up for the upper court. Therefore amplification units, which were technically outside the temple grid were needed to expose the lateral edges of the middle court.

Within the first two to three levels, units would often be split into areas. When accurately possible, areas, in the form of rooms, would be designated and excavated separately (designated Cuarto 1, 2, etc.). This was often possible by using the known layout as defined by the 1990 excavations, and as Proyecto Omo progressed this became easier and far more accurate. However, when this was not possible, units would often be separated into 2x2 meter quadrants (designated a, b, c, d) in order to make the excavation space and material collections more manageable. Finally, levels known to be directly associated with architectural floor surfaces were excavated in 1x1 meter units in order to ensure specific context information for floor deposits.

The strategy employed for the placement of excavation units was varied. In the upper court the goal was to establish complete access patterns and to determine room affiliation and function. This required a strategy as near as possible to total excavation to delineate all walls and doors and obtain complete room fill and features for analysis. In the end, 59 units were excavated covering 908 square meters or approximately 83.4 percent of the upper court. While total exposure was not achieved, the majority of areas left unexcavated were either intentionally left as testimonials for future projects or were believed to be architecturally simple (i.e. open patio spaces). It is important to note here that very little of the M10A structure is standing. However, surface topography indicates areas with more or less adobe wall fall. It was assumed, and later validated through

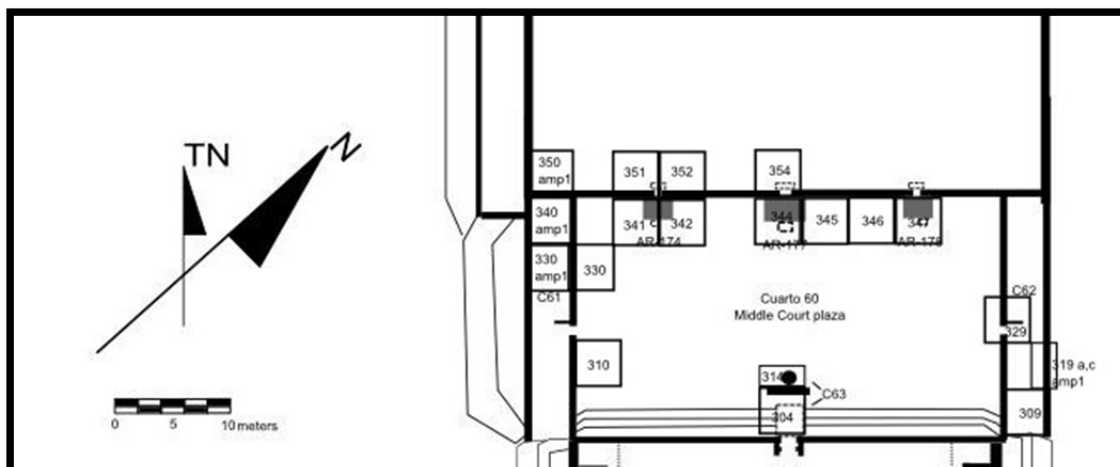
excavation, that those areas which appeared on the surface as mounds or rises were architecturally more complex, as marked by fallen wall sections.

### *Middle Court Excavation Strategy*

Excavations in the middle court were far more limited. As mentioned above, excavation in the middle court did not begin until the second year of the project, and in general only a small portion of the excavation crew was designated for this area. In 2011 four 4x4 meter units were excavated in the middle court. These four units (Unidades 310, 330, 330 amp1, and 340 amp 1) were meant to investigate the southwestern gallery of the middle court, and were limited to this side of the middle court (Fig. 15).

The 2012 season saw far more extensive excavations in the middle court. Fifteen units were excavated (thirteen 4x4 meter units and two 2x4 meter units) in various locations of the middle court (Fig. 15). In addition to the general project goals these units were excavated with the intention of investigating two separate questions: 1) what were possible areas of access both in and out of the middle court? and 2) were there any similarities/differences in the function of the two middle court galleries?

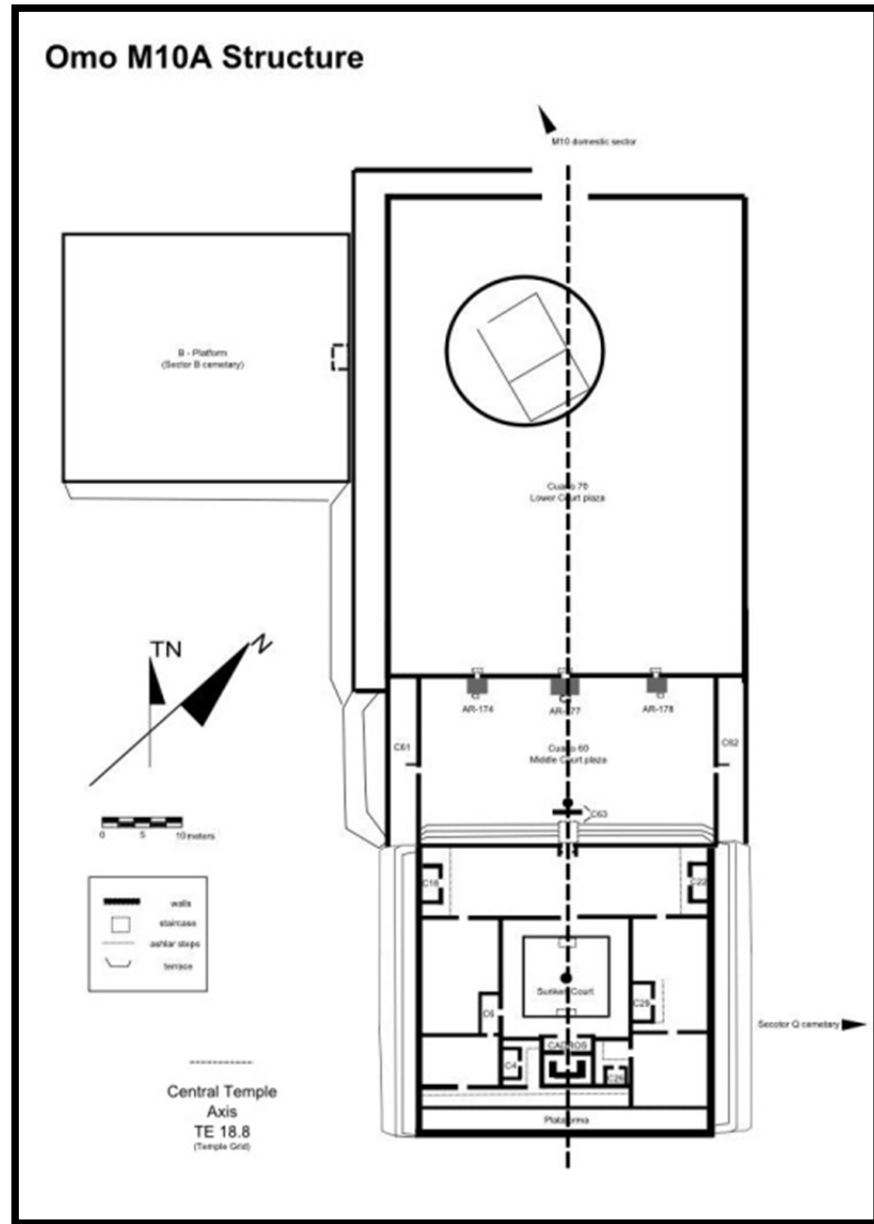




*Fig. 15. Map of middle court showing 2011 and 2012 excavation units.*

To investigate these questions, locations for excavation units were strategically placed in specific locations throughout the middle court. These locations were selected based on a variety of factors. In 2011 the units placed in the southwestern gallery focused on exposing the northwest half of the room. Therefore, it was decided to expose the southeast half of the northeastern gallery in 2012 (Unidades 309, 319 amp1, and 329).

Excavation strategies for investigating the first research question were more complex. Prior interpretations assumed doorways along only one presumed single axis of doors and stairs (Fig. 16).



*Fig. 16. M10A architectural map with central axis marked.*

However, there was some question of the possibility of side entrances – flanking the central entrance. This hypothesis was primarily based on the presence of very small mounds roughly in the same location on either side of the central axis. The possibility of

three doorways was also supported by the triple staircase depicted on the Kantatayita *maqueta* at the site of Tiwanaku (Fig. 17).



*Fig. 17 – The Kantatayita maqueta at the capital site Tiwanaku – note the three staircases (Photo MJS).*

As mentioned above slight rises or mounds were relatively accurate indicators of an area with greater architectural complexity. Units were strategically placed along the interface between the middle and lower courts – focusing specifically where were believed the entrances should have been (Unidades 341, 342, 344, 345, 346, 347, 350 and 351, 352, 354).

The final focus of 2012 excavations was the relationship between the middle and upper courts – specifically the base of the central staircase leading to the upper court. A

single 2x2 meter unit (Unidad 121) was excavated in this area during the 1990 season. This unit exposed the base of the central staircase – including the three massive basalt stone slabs which represent the lowest step in the staircase. The two 2012 units excavated in this area (Unidades 304 and 314) included the re-excavation and expansion of the 1990 unit (Unidad 121). It is also important to note here that the possibility of side staircases (possibly lining up with the side entrances to the middle court) were also tested for in the 2012 season. No evidence was found for additional access points to the upper court.

In sum nineteen excavation units were dug in the middle court over the course of two field seasons – with a total area of 624 square meters or just over forty-six percent of the total middle court area (Table 1). These excavations provided enough material evidence and exposed enough of the middle court architecture to engage questions regarding how this section of the temple may have been experienced, and what this might tell us about the Tiwanaku colonists who built and used this structure.

*Table 1. Middle court architectural areas and percent of area excavated in 2011 and 2012 field excavations.*

<b><u>Field Designation</u></b>	<b><u>Type</u></b>	<b><u>Dimensions</u></b>	<b><u>Area (m<sup>2</sup>)</u></b>	<b><u>Area Excavated (m<sup>2</sup>)</u></b>	<b><u>Percent Excavated</u></b>
Cuarto 60	plaza	22 x 20	420	151.2	36.0%
Cuarto 61	gallery	3.75 x 20	75	34.4	45.9%
Cuarto 62	gallery	3.75 x 20	75	24	32.0%
Cuarto 63	landing	5 x 4	20	16	80.0%
Cuarto 70	plaza	42 x 57	2394	54.4	2.3%

### *Middle Court Excavation Methods and General Stratigraphy*

The excavation methods employed under Proyecto Omo followed the now standard form of excavation levels, feature designations, and the like, as defined by Edward Harris (1979). Excavation levels were based on the content of the fill and varied greatly in depth and volume. While the number of excavation levels in the middle court varied greatly from unit to unit an idealized stratigraphic description will be presented below. All sediment removed during excavations was sorted using ¼ inch screen - with floor deposit levels screened using an additional fine screen mesh (< 1/16 in.). In attempt to avoid confusion with these idealized stratigraphic levels and actual excavation levels numbered in the field, letter designations (e.g. A, D1, etc.) are used in the brief description below. It is important to note that any one of these idealized stratigraphic levels may have been excavated in multiple excavation levels, and often were, depending on the material encountered and the discretion of each individual excavator. This description will also serve as an explanation of the general site formation process in sector A at the site Omo M10.

- A. *Surface Sediment* – The surface sediment consisted of anywhere from 1 cm to 20 cm of fine pale brown (10YR 5/3 - brown), silty sediment. Often including modern debris or bullets, this level seldom held any significant prehistoric cultural material.
- B. *Colonial/Historic* – Contexts disturbed or redeposited in historic or recent times were at times encountered, but by no means ubiquitous. Colonial material was seldom recovered, but when it was it came in the form of colonial ceramics (*tinaja* sherds) or iron objects, usually associated with looting pits. This “strata”

was generally only found in isolated areas and was generally excavated as features, as opposed full excavation levels.

- C. *Volcanic Ash* – A thin layer (or at times only small patches) of volcanic ash was encountered in every excavation unit. This ash served as a convenient horizon-marker, with a precise date. This fine volcanic ash was deposited after the Huaynaputina volcanic eruption on February 19, 1600. Prior to 1600 there was little to no documented colonial presence in the Moquegua region – making the Huaynaputina ash lens a wonderful historic separation between colonial and pre-colonial disturbances and activities at the site. This ash lens was often very thin (less than 1-2 cm), however some pockets were as thick as 20 cm.
- D1. *Adobe Chunks and Ichu Grass* – This strata would often be encountered directly below the ash layer, and represents the first Tiwanaku-associated level. As the toppled adobe walls of the M10A structure laid exposed they would gradually crumble which eventually created this strata of very fragmented adobes (chunks). In addition, the *ichu* grass roof thatching and wall cover was also often mixed in this stratum. Levels in this stratum ranged from 5 cm to 20 cm in depth. It is important to note that the vast majority of Huaracane sherds collected in M10A excavations were encountered in this and the following two strata. The M10A Tiwanaku builders used Huaracane (Formative Period) midden deposits as one of the primary materials for adobe brick construction. As adobes weather these Huaracane ceramic sherds and various other durable materials (beads, etc.) are deposited in the archaeological record (Goldstein 1993:35).

D2. *Adobe Wall Fall* – This stratum, when present (obviously absent from most open patio areas), contained large amounts of adobe bricks from the toppled walls of the M10A structure. Some sections of wall fall were amazingly well articulated – to the point which wall heights could easily be reconstructed. Other sections were completely fragmented, but still often contained anywhere from 10 cm to 40 cm of adobe debris. This stratum was often excavated in a series of levels which attempted to first expose and define any articulated sections of wall fall and then removal of all adobes. A select few portions of articulated wall fall were left as testimonials - defined, but not removed.

D3. *Adobe Melt and Ichu Grass* – This stratum also not ubiquitous, but extremely common, represented deterioration of the adobe superstructure of the structure. Often a very thin level (1-10cm), but at times relatively thick (10-25 cm) - this stratum formed as the result of one or possibly several rain events. These rain laminations appear to have taken place after the temple fell out of disrepair and was likely (more or less) abandoned. Rain would melt small adobe fragments and created these deposits just above the structures floor (generally light brown - 10YR 6/2). This stratum also often contained bundles of *ichu* grass thatching.

E. *Wind-Blown Sediment* – Extremely similar in texture and color to surface deposits, this stratum represents natural wind-blown, silty sediment or fine adobe dust which collected inside the standing structure – this would have occurred before the wall had completely collapsed. The majority of the recovered *ichu* grass roof thatching was recovered in this stratum – indicating the deterioration of the temple's roofing before the collapse of the adobe walls. This level was almost

always extremely shallow (< 10 cm), and was often removed in one excavation level. This final excavation level was referred to as the *super piso*, as it was the level directly above the temple's floor surface. As such, this level was excavated in 1x1 meter units to preserve floor contexts when possible. Depending on the area (e.g. room context), various strategies were employed in collecting soil samples for future micro and chemical analysis.

- F. *Floor* - This is not an excavated stratum but the actual M10A structure's architectural floor. As mentioned above most cultural materials were collected in the *super piso* stratum (Stratum E.), but artifacts directly on the floor would be left and recorded as such. The compositions of floors varied greatly, but in the middle court were almost always some form of prepared clay surface. Floor levels also exposed the foundations of various architectural elements, most commonly in the form of impressions left in the clay floor. These impressions were often all that was left from wall foundations and their ashlar façades. Specific examples of this will be discussed in greater detail in discussions below.

### *Architectural Elements and Feature Designations*

As mentioned above, the vast majority of the M10A architecture is no longer standing. Most of the adobe walls were toppled in prehistoric times and many of the stone ashlar were destroyed or removed from the site entirely. Luckily, the construction methods of the structure have allowed for the preservation of “negative architecture” – in the form of impressions left in clay floors.



A detailed analysis of the construction of the structure will not be given here, but a brief description is necessary. The M10A structure appears to have been built in a single construction event. The platforms, representing the lower, middle, and upper courts were built up and leveled - prepared clay floors were then laid down. While the clay floors were still wet the location of walls were laid out using “snap-lines.” This was done by stretching a twisted cord in a straight line, in the location where a wall would be located, then pulling it taught and snapping down into the wet clay. This would leave an impression in the clay (Figure 18).



*Fig. 18. Cord snap-line (note the two-ply cord) marking used in architectural construction planning (Project Omo photo, P. Goldstein).*

Walls were then constructed on top of these snap lines – preventing people from walking on sections of them and therefore preserving some of these snap-lines to the present day. In addition to snap-lines, the location of no longer present architecture was indicated by impressions left by ashlar blocks which served both as foundations of walls.

Impressions of this type were by far the most common and accurate indicators of the location of former architecture (Fig. 19).

In addition to indicating the intended location for architectural elements these snap-lines also appear to have served as measurement markers or at the very least references for the layout of certain architectural elements (i.e. platform entrances). While far from conclusive these type of construction techniques indicate the use of a standardized measurement system. Others have attempted to determine a standard unit of measure used in the construction of stone architecture at the Tiwanaku capital with inconclusive results. Using measurements between the surviving pillars of the Kalasasaya, Posnansky hypothesized that a 161.51 centimeter unit was “the unit which was to the people of that [Tiwanaku] period, what the meter is to us today” (1945:89) – others made similar conclusions, even claiming a similarity to the local unit of measurement, the luk’a (e.g. Escalante 1997). In their recent study of Tiwanaku construction techniques Protzen and Nair (2000:368) did not find clear evidence of a standardized unit or “module” but rather concluded that the “Tiwanaku had set specific proportions for individual elements and motifs” and “they applied these proportions not stubbornly, but dependent on an overall composition or specific context.” Future research into the measurements or proportions denoted by the cord snap markings throughout the M10A structure will prove fruitful in this ongoing study.



*Fig. 19. Impression left behind from ashlar wall foundations (Omo Project photo, P. Goldstein).*

Architectural elements, mostly in the form of wall impressions, were given feature designations. Other common features, included: post holes, various types of sub-floor pits, and various other disturbances. A single temple-wide feature list was kept with no internal separations. Temple features were numbered and referred to using the Spanish term – *rasgo* (e.g. AR-37 to indicate sector A, *Rasgo* 37). Therefore, at various times in this paper architectural features will be referred to using these numbers.

#### *Artifact Collection and Recording*

All materials found in situ or recovered during screening were collected, recorded, and are now curated at the Museo Contisuyu in Moquegua, Peru. Materials in each specific context (e.g. excavation level or feature) were separated by material (e.g.

ceramics, botanics, lithics, etc.) – with each material category given a specimen number (e.g. M10=1234). Artifacts found in situ, especially in floor associated contexts, would be given their own specific specimen number and piece-plotted. Even select sections architectural materials were collected, often in the form of painted adobe bricks and well preserved bundles of *ichu* grass thatching.

### Methods of Analysis

As indicated by the discussion on anthropological investigations into the built environment above, the study of monumental architecture has developed from a diverse set of theories and studies. This section will outline the methodology employed in this study's analysis of the Omo M10A structure, specifically the middle court section. This methodology draws on both quantitative and qualitative approaches to identify significance in architecture and attempts to interpret both types of meaning in the built environment as defined by Rapoport (1982:15-19) – user meaning and designer meaning. For Rapoport, meaning can be defined in terms of reaction, with designers reacting to perceptual terms or to the actual intended meaning. Users, on the other hand, react in more associational terms (Rapoport 1982:15-19; see also Rapoport 1990). While the methodology employed in this study utilized a number of different sources most of the essential concepts were drawn from Jerry Moore's methodology for public architecture analysis, outlined in his book *Architecture and Power in the Ancient Andes* (1996).

### *Access Patterns and Designer Meaning*

The first stage of architectural analysis will follow Moore's (1996) adaptation of graph theory (Steadman 1972) and spatial syntax theory (Hillier and Hanson 1984) to analysis of ancient Andean monumental architecture. This model uses access patterns to break down architecture into a series of connections and provides a framework for objectively investigating a structure's system of spatial relations. Many archaeologists have successfully utilized various forms of access analysis, similar to Moore (e.g. Brewster-Wray 1983; Foster 1999; Regev 2009). This method allows for a glimpse into designer meaning, as defined by Rapoport (1982) in his study of understanding of the built environment. It does this by breaking down a structure into a two-dimensional space and allowing archaeologists to essentially create a blueprint of a structure. This two-dimensional aspect of access analysis is also the source of warranted criticism (e.g. Parker Pearson and Richards 1994) – to return to the point made by Vranich, two-dimensional studies encourage looking for “interesting two-dimensional patterns” (1999:12) - which is not how public buildings were experienced. However, with supplementary sources of data, access graphs can illuminate interesting aspects of how a structure was designed and its spaces connected.

Moore uses spatial syntax theory, and specifically access analysis (as defined by Hillier and Hanson (1984)), and terminology and equations borrowed from graph theory (Steadman 1983) to graphically illustrate structures as a series of circles (vertices) and connecting lines (edges). Vertices represent open spaces or rooms and edges are any architectural elements which facilitate interconnectedness (e.g. doorways and passages). These access graphs do not take into account the size of rooms or length of hallways –

they simply show connections. They allow for the comparison of rooms within a structure, by allowing for the quantification of room depth. Hillier and Hanson (1984:148-149) provide a vocabulary for qualitatively describing different forms of access graph networks (Fig. 20). These range from chain-like access graphs, called nonsymmetrical-nondistributed graphs to completely interconnected graphs, called distributed-symmetrical access graphs (Moore 1996:185).

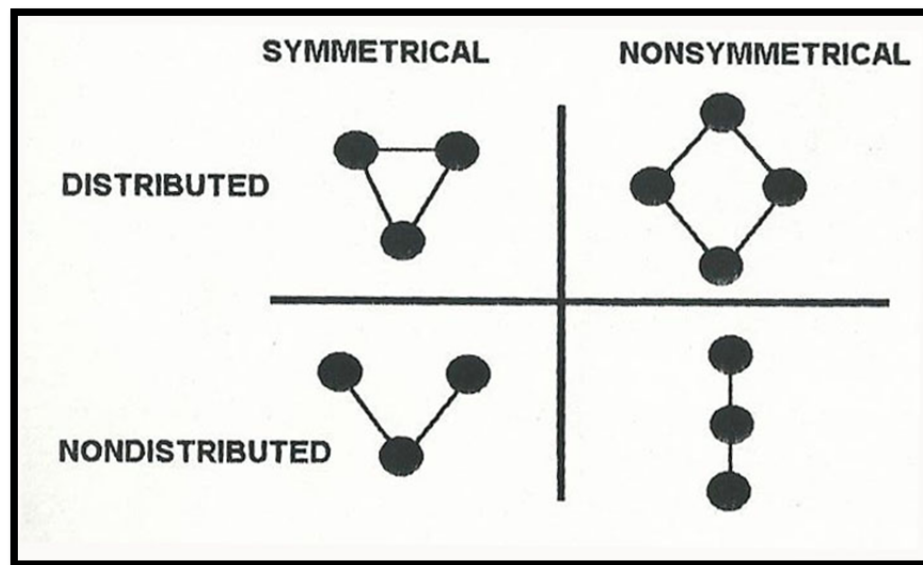


Fig. 20. Moore's qualitative descriptions of access graphs (Moore 1996:185).

Access graphs can then be quantified through a series of equations – allowing for comparisons to be made, objectively, between various structures. Figure 21 is a graph, created by Moore (1996) showing the maximum slope for edges and vertices within a network (i.e. a distributed-symmetrical network) and the minimum slope (i.e. a

nonsymmetrical-nondistributed network). Moore (1996:187) determined the simplest index for measuring the overall complexity of networks is the *beta index* (b):

$$b = E/V$$

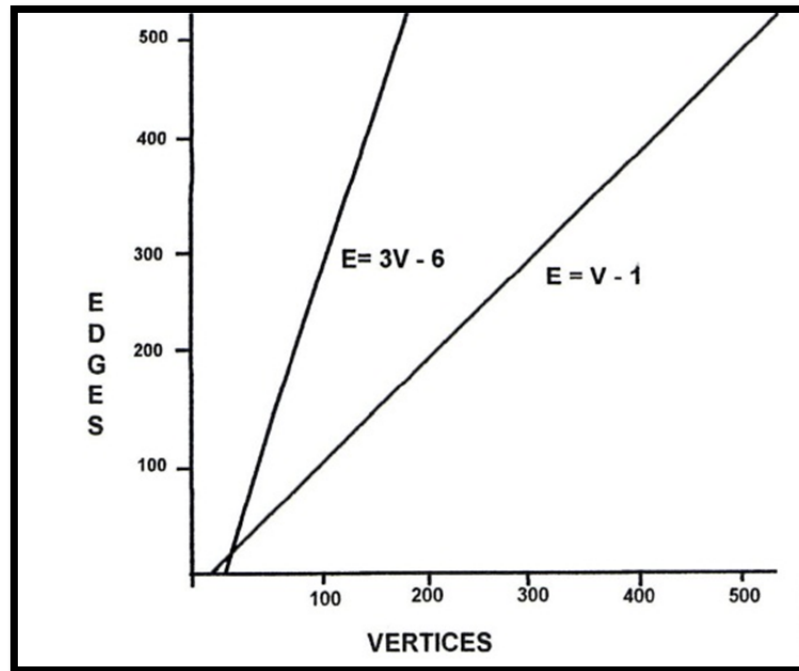


Fig. 21. Moore's maximum and minimum slopes for access networks (vertices and edges) (1996:186).

While it is not applicable to the M10A structure, Moore (1996:187) also determined a *cyclomatic number* (N) – which indicates the complexity of a network which possesses subgraphs:

$$N = E - V + G$$

Access analysis, as it has been adapted by Moore, will be utilized in this study to illuminate spatial relationships within the M10A structure, and specifically place the middle court in the context of the structure as a whole.

### *Analysis of Ritual and Power in Architecture*

The second stage of the analysis will fall into the realm of phenomenological studies. I will attempt to study the structure as a three-dimensional space – an attempt to experience the temple from the user-perspective (Rapoport 1982). Here, I will return to a methodology laid out by Jerry Moore (1996) regarding thresholds of human perception. In addition, I will also use a strategy detailed by Nash and Williams (2005) for their analysis of architecture in the Wari colony, Cerro Baúl – located less than 20 km away from the Omo M10A structure. Nash and Williams outline three “architectural manifestations of power” that can be detected in ancient monumental architecture: subordination, exclusivity, and procession (2005:157).

The study and understanding of ritual has been a key focus of anthropology since the late nineteenth century. One of the earliest systematic studies of ritual behavior was undertaken by Arnold van Gennep. In his study, van Gennep (1960 [1909]) focused on rites of passage, specifically of those rites surrounding and individual or group moving from one life stage or societal position to another. He observed a reoccurring tripartite division to these rites. The first stage, *preliminal* rites, involved the participants being separated from the rest of society – rites of separation. The second stage, or the *liminal* stage, was a purely transitional state, in which participants occupied a world outside of society. This stage was the focus of the seminal studies undertaken by Victor Turner. He



would call participants in the liminal stage “betwixt and between” – where “the state of the ritual subject (the ‘passenger’) is ambiguous; he passes through a realm that has few or none of the attributes of the past or coming state” (Turner 1964:47). The third stage, *postliminal* rites, would involve the participants to be consummated or reincorporated into society. While these concepts were developed to understand ritual action they have a strong symbolic connection to architecture. Van Gennep’s use of the term *limen* is in fact an architectural metaphor – Latin for threshold – a point which will be returned to later.

Moore outlines what he calls a theoretical argument for the ability of archaeologists to decipher the types of ritual activities which an architectural structure may have facilitated. He bases this argument on four central principles.

(1)[R]itual ceremony is communication; (2) communication is shaped by a wide range of variables, but is *fundamentally limited by thresholds of human perception*; (3) different rites involve distinct sets of perception as they appeal to different-sized audiences and transfer information of various levels of detail and complexity; and (4) *ceremonial architecture materially reflects those different social contexts and ritual patterns* (Moore 1996:135-136, emphasis added).

Based on these principles Moore (1996) suggests five variables in which architecture can be interpreted by archaeologists: permanence, scale, centrality, ubiquity, and visibility (139-140). Because the variables ubiquity, centrality, and permanence are best suited for comparing entire structures only a very brief discussion is necessary in the analysis of the middle court. The variables visibility and scale will be the focus here.

The variable scale examines the general size of the structure. Again, the discussion regarding the M10A structure in its entirety will be kept brief.

However, the scale of the middle court will be the focus here - as Moore points out “given the differing complexities of ritual structures, it is important to measure scale for different units within the structure” (1996:140).

Moore’s ritual architecture variable, visibility, will be the focus in this paper. Analysis of visibility attempts to quantify the thresholds of human perception (vision, speech, hearing) within ritual architecture (Moore 1996:140). Moore’s method builds upon the work of Edward T. Hall; who developed a proxemics model for measuring the effects of architectural features on human perception and therefore possible ritual experiences (see also Gibson 1960).

	0	1	2	3	4	5	6	7	8	9	10
Informal distance classes	Intimate personal	Social		Public							
Oral/ aural	Soft voice whisper	Casual or consultative voice		Loud voice when talking to group			Full public-speaking voice, frozen style				
Detail vision	Details of skin, teeth, face visible	Fine lines of face fade; wink visible		Eye color not discernible; smile vs. scowl visible			Difficult to see eyes, subtle expressions				
Scanning vision	Whole face visible	Upper body; can't count fingers		Upper body & gestures			Whole body has space around it in visual field				
Peripheral vision	Head & shoulder	Whole body movement		Whole body visible			Other people become important in vision				

Fig. 22. Table showing distance and perception (after Moore 1996:154; data from Hall 1966).

Hall (1966) developed a model which defines a series of thresholds, based on the distance between the “speaker” and “viewer.” These thresholds, while flexible, delineate boundaries of communication (Fig. 22). Hall’s categories of communication range from intimate/personal to social and finally all-out public communication. As is evident in the table, Hall defines an intimate distance between individuals as less than one meter apart – where details in a person’s face can be easily discerned and whispers can be heard. He defines social distance as anywhere from one to four/five meters apart. From a social distance, two people interacting could speak with a casual voice volume and could make out most expressions on one another’s face. Finally public distance begins with about five meters of separation and continues to the “maximum carrying distance of voice” (Moore 1996:154, after Hall 1972:147). At this distance the speaker must raise his or her voice, only exaggerated facial expressions and gestures are easily discernible, and other people (e.g. in a crowd) become significant for the visual experience. At the furthest extent of public communication distance Hall sees “contact with [the speaker] as a human being begin to diminish” (1972:148).

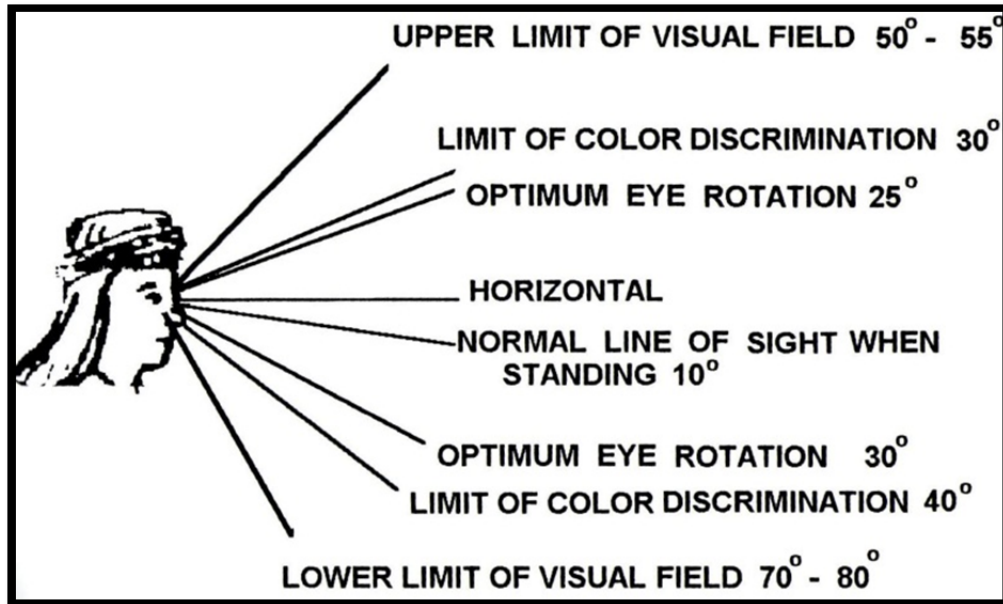


Fig. 23. Angles illustrating ranges in human visual perception (Moore 1996:99; redrawn from Gibson)

Moore (1996) also incorporates Higuchi's (1983) *The Visual and Spatial Structure of Landscapes* – a study of the natural landscapes of Japan. Again, harkening back to Rappaport's (1982) concept of designer vs. user meaning – Higuchi's models allow for a relatively objective examination of users' perception of monumental architecture. Like Hall, Higuchi's model appraises thresholds of human perception – specifically ranges of vision. Illustrated in Figures 23 and 24 are Moore's (1996:99) re-drawings of Higuchi's (1983) and Gibson's (1960) concept of angles of visual perception. The optimal eye rotation, in which vision is unrestricted, is between +30 degrees and -30 degrees (Fig. 23), and anything plus or minus 40 degrees is outside “normal lines of sight” (Moore 1996:99) – past this range people lose the ability to discriminate colors. Finally, anything +50-55 degrees and -70-80 degrees is outside a person's visual field (Gibson

1960). This concept of visual fields will be incorporated into Nash and Williams' (2008) discussion of subordination.

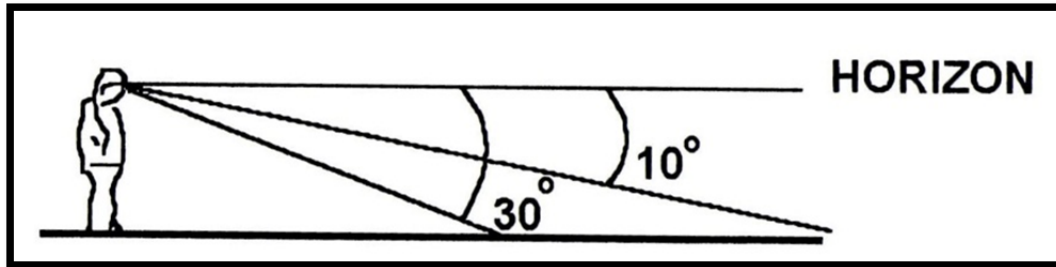


Fig. 24. Average lines of sight – standing up looking straight forward (after Moore 1996:99).

Subordination refers primarily to the reflection in architecture of “asymmetrical social interaction” (Nash and Williams 2005:157). This often comes in the form of an architectural feature that allows certain people to be elevated above others (i.e. platforms). However subordination can also define an area restricted to high status individuals, such as large recesses or a niche, or even a portable structure, such as a litter (Nash and Williams 2008). The visual benefits of elevated positions are also noted by Higuchi:

A downward view is free and open whereas an upward view is limited and apt to be closed because the process of looking up at an object tends to limit the mobility of the human body and to cut off the line of vision at a point above the horizontal. With the most stable line of vision for the average person being about 10 to 15 degrees below the horizontal, it follows that the very process of looking up involves a certain amount of stress. Presumably this is why the term “look up to” connotes the idea of paying respect or reverence. “Looking up to” someone or something requires visual effort (1983:46, quoted in Moore 1996:99).

The manifestation of subordination is also often emphasized by exclusive elements.

Nash and Williams define exclusivity as the “restriction of entrance or observation of certain settings where participation promotes group cohesion” (2008:159). The obvious architectural feature promoting exclusivity is the use of walls. Walls are an effective medium to segregate those with the status to participate in certain activities and those who are not, and in doing so “binds members of those groups together through participation and shared experience, either in the special space or in activities segregated from it” (Nash and Williams 2008:159). It is important to note that there can be various levels of inclusion; illustrating complex social hierarchy and different levels of participation (e.g. Goldstein 1993).

The third manifestation of power in ancient architecture is through procession. Procession has been documented as an important aspect of contemporary and historical Andean ceremony (e.g. Radcliffe 1990) and has been commonplace in interpreting ancient Andean architecture and other features such as the famous Nasca Geoglyphs (Lines) in Peru (Reinhard 1988). Procession can be defined as “movement from one location to another” (Nash and Williams 2008:159), and can often be used as a legitimizing action (Morris and Thompson 1985).

As may be obvious the methodologies described above deal primarily with architectural layouts and features, however they also encourages the incorporation of various other classes of material culture analysis. While architecture may provide evidence for the type of activities *could* have taken place – artifacts represent material remains left from the activities which *did* take place. These remains may be extremely limited and tell a fragmentary story, but when various classes of artifact classes are examined together they can reveal “spatially restricted areas where a specific task or set

of related tasks has been carried on” (Flannery and Winter 1976:34) – activity areas. An argument will be made using the frequencies of ceramics associated with each of the three middle court entrances as well as the base of the central staircase. This working hypothesis suggests that ceramic frequencies point to differential ritual use of each of these points of access – possibly in the form of differential use of the structure by Chen Chen and Omo colonists.

#### IV. Results

This section will present the results produced from the excavations in the Omo M10A structure, and the subsequent analysis – which followed the methodology discussed above. These results will then be discussed in a comparative manner in the section to follow. As indicated by the methodology description these results will be reviewed in separate sections. The first will be in the form of an access graph of the M10A structure, and a discussion of this graph, using terms presented by Moore and others (Moore 1996; Hillier and Hanson 1984). Second, various architectural features of the middle court will be analyzed in terms of their reinforcement or prevention of the social power elements of exclusivity, subordination, and procession. Finally various classes of artifacts will be discussed in hopes of illuminating possible activities and ritual use of the middle court architectural space.

##### *Access Patterns*

The image below (Fig. 25) depicts an access map – following the spatial syntax method (Hillier and Hansen 1984).



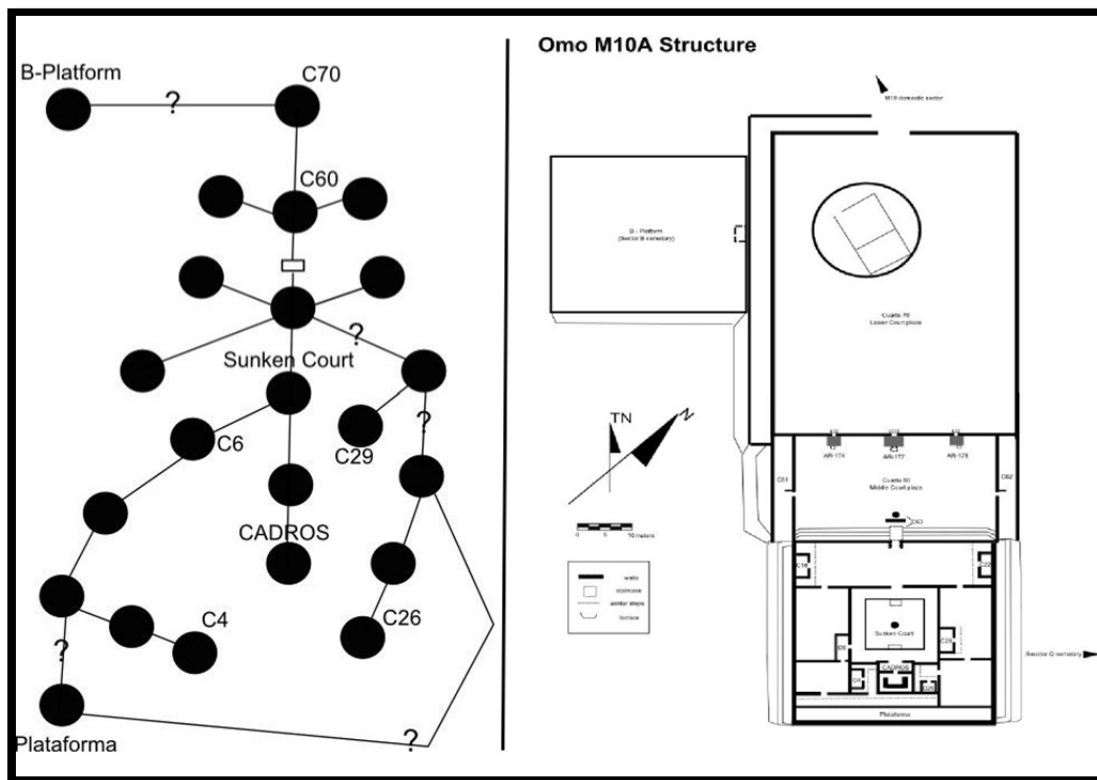


Fig. 25. Access graph (left) and map (right) of the Omo M10A structure.

To review, each filled in circle represents an open space (i.e. a room) and lines represent doorways/passages connecting these rooms. Unfortunately excavations did not reveal clear evidence for every connection or doorway. For this study it was necessary to hypothesize where these connections were most likely located (depicted by lines with “?”). In total the M10A structure was composed of 23 rooms (vertices) connected by 22 doorways/passages (edges).

It is evident that the Omo M10A structure is relatively linear in its access patterns. Entering into the lower court plaza (C70) visitors wishing to continue deeper into the structure only had one choice in direction. Things become more complex in the middle court (C60) – here a visitor could enter either of the two side galleries. Access becomes

far more complex in the upper court. The upper court held 18 of the total 23 rooms and 17 of the 22 total doorways of the structure. Here, those allowed in the upper court would have a number of choices in access. Overall the various rooms in the upper court were discretely separated with very little connection. For instance to reach Cuarto 4 (C4), one of the small roofed structures, beginning in the lower court plaza a person would need to pass through nine separate rooms – giving Cuarto 4 a room-depth of 9 (Hillier and Hanson 1984:149-150) - whereas, the side galleries of the middle court only have room-depths of 3. While nowhere near definitive, the fact that Cuarto 4 has three times the room-depth of Cuarto 61 alludes to the exclusive nature of these upper court spaces.

The Omo M10A structure, when viewed as a whole, is difficult to define using the qualitative properties of access patterns, as described by Moore (1996) and Hillier and Hanson (1984). It appears to be composed of two distinct access patterns. The lower and middle courts appear roughly “tree-like” or as a symmetric, non-distributed graph. The upper court, however, produces its own pattern. The access graph of the upper court roughly resembles three “chain-like” graphs which are connected in the front gallery area. In this sense the access graph produced by the upper court is a non-symmetrical, non-distributed graph. Again, this descriptive analysis indicates that control and exclusivity were important elements in the upper court as opposed to the more accessible and “shallow” depth of the lower and middle courts.

This is a useful exercise for a general look at the access patterns of the structure, however as noted by Moore: “a point is quickly reached, where descriptive terms are unwieldy and inspection is insufficient” (1996:186). At this point the beta index, as

described in the methodology section, becomes a useful tool which allows for an objective indication of the relationship between vertices (rooms) and edges (connections). Again, beta indices of less than 1.0 represent disconnected graphs (non-symmetrical – non-distributed), and the more symmetrical the graph the closer beta indices will approach the maximum of 3.0. The M10A structure has a beta index of  $b = 1.09$ . In other words the beta index supports the visual assessment – overall the Omo M10A structure produces a disconnected access graph.

A final useful visualization of this figure is depicted below (Fig. 26) in which the access graph information of the M10A structure is placed into Moore's graph depicting the maximum and minimum slopes possible in a structure. The maximum slope represents an idealized structure in which all rooms are completely interconnected ( $E = 3V - 6$ ). A structure in which each room leads into only one other room, essentially a chain of rooms ( $E = V - 1$ ).

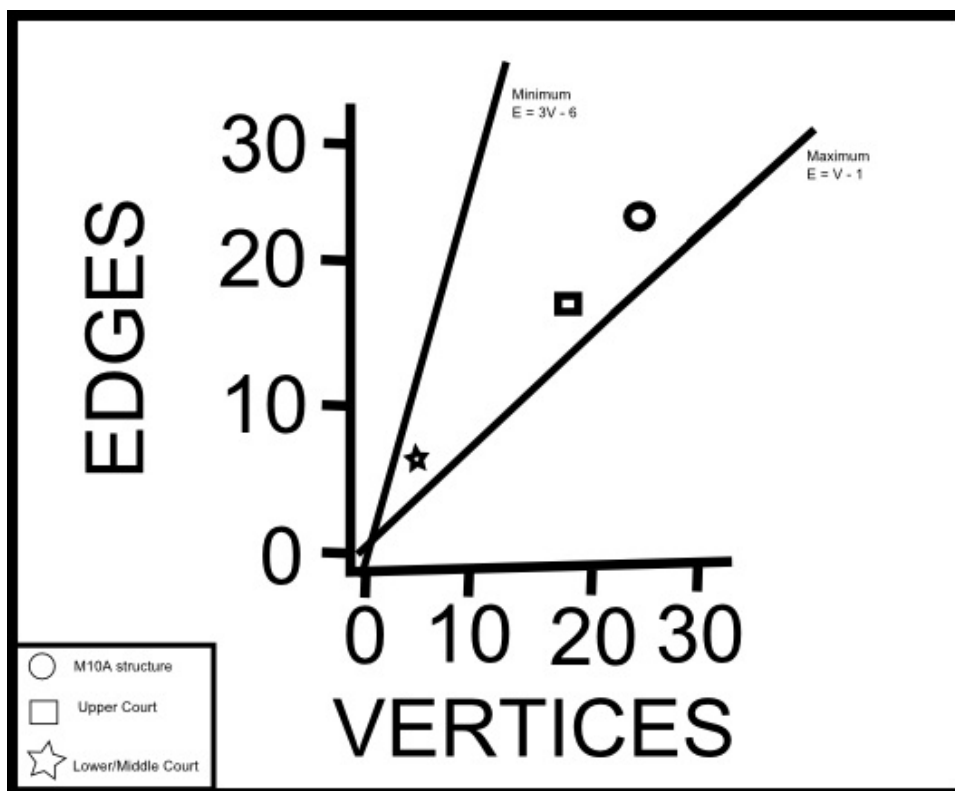


Fig. 26. Graph showing maximum and minimum vertices vs. edges with Omo M10A architectural ratios (after Moore 1996).

It is clear that the M10A structure sits relatively close to the minimal slope line. However, if the structure is split into subgraphs, one representing the lower and middle courts and the other representing the upper court, slightly different patterns emerge. The first subgraph produces a beta index of  $b = 1.4$  for the lower and middle courts. The upper court subgraph, however produces a beta index of  $b = 1$ . This comparison makes it apparent that while the two subgraphs do not represent extremes of the spectrum they are significantly different – the upper court clearly represents a more non-distributed pattern of access. These results will be discussed in greater detail below, when the access patterns in the Omo M10A structure will be situated in the greater context of Tiwanaku monumental architecture.

### Analysis of Architectural Areas and Features

This section will present the results produced from the second stage of architectural analysis discussed in the methods above. Here, the architecture of the Omo M10A structure, and specifically the lower and middle court, will be separated into distinct features which helped define the ritual activities which took place within the structure. These architectural features will be described as they pertain to each architectural manifestations of power; specifically looking for elements which may have facilitated experiences expressing exclusivity, subordination, or procession. This section will also integrate the ritual architectural variables of scale and visibility as described by Moore (1996). Later these descriptions will be incorporated to a more general interpretation of the middle court as a built environment.

#### *Lower Court Plaza (Cuarto 70) and Associated Features*

In attempting to identify the access points into the middle court a small section of the lower court was excavated in 2012 the results of those excavations will be described briefly here. The walking surface of the lower court is was level grade of well-packed clay, and contained very little cultural material.

*AR-171*. The only architectural feature uncovered in the lower court (that was not also directly associated with the middle court) was a circular hearth feature dug directly into the temple floor in southern corner. This hearth was approximately seventy centimeters

in diameter and relatively shallow (just over ten centimeters deep). The hearth contained a very compacted mass of charred wood fragments, ash, and burnt clay. The relative compactness of the hearth contents implies repeated use and the fact that the contents were well contained in the feature imply attentive use.

### *Middle Court Plaza (Cuarto 60) and Associated Features*

Cuarto 60 represents the central open plaza of the middle court. This space was 20 x 26 meters, and with the exception with the features described below, did not possess any internal divisions. According to the proxemics chart (Fig. 22) the middle court plaza is well within the public spectrum, but a just over a fifth the area of the 2394 square meter lower court plaza, and was by default a much more intimate space.

**Walls.** Walled off spaces are some of the most obvious examples of exclusivity, and a note should be made on the general wall construction technique in the temple. As described above, the Omo M10A structure is composed of three discretely walled off platform areas. The three platform levels, or “courts,” are surrounded on three sides by two meter high adobe walls with various interior walls dividing these platforms into rooms. Due to the ascending stepped nature of the structure, with each of the three courts higher than the previous, the southeast enclosure wall to each court, though only two meters in height, appears much taller to the visitor standing on the ground. There were four different techniques employed in constructing these various walls.

*Enclosure walls* were those which formed the exterior temple walls. These walls were constructed by depositing a thin clay mortar base. The wall foundation was

composed of at least two rows of rounded river cobbles or roughly shaped volcanic tuff boulders set into the mortar with the open space filled in with flakes of volcanic tuff (presumably debitage from the manufacture of the ashlar used in the temple construction) – this construction technique can also be observed in the construction of the portal platforms of the middle court (see description below). The rest of these enclosure walls were composed of standardized adobe bricks (50 x 40 x 8 cm) (Goldstein 1993:35) and are believed to have been two meters in height. Many of these walls were believed to have been topped with bundles of highland *ichu* grass – a construction technique necessary in the rainy *altiplano* but not for the arid coastal desert occupied by the Omo Temple. It has been hypothesized that this may have been “a vestigial continuation of [the builders’] *altiplano* tradition” (Goldstein 1993:36). It is difficult to determine, but it appears at least the interior of some of these walls may have been plastered over and possibly painted tan.

*Interior Walls* divided the interior architectural areas into discrete spaces. Ashlar blocks were used as the foundation for this type of wall. These ashlar blocks were carved from a locally found volcanic tuff, known as *calicanto*. The dimensions of these blocks varied significantly as did the precision of edges and leveling of the sides – some were impeccably smooth on the majority of sides (these were often used as steps or “benches”) and at the other end of the spectrum some were roughly carved and at times could be rounded. Most ashlar used in the construction of interior walls fell somewhere in the middle of this spectrum – often with only the visible face showing signs of considerable smoothing. Two rows of these ashlar were set into the prepared clay floor – frequently there was a small gap left between the ashlar (~ 1-3 cm); which was then filled with

rubble (various materials – volcanic tuff fragments, chunks of adobe, small amounts of botanic material). Like the enclosure walls, the superstructure of the wall was composed of adobe bricks, and likely reached a standardized two meter height. The majority of interior walls appear to have been plastered over and then painted either red, green, or tan (see below for specific examples).

*Retaining Walls* were not standardized but had similar construction methods. These walls were only employed in a few locations in the M10A structure (the *plataforma* in the upper court and the AR-170 wall in the middle court). Retaining walls were used to face certain elevated surfaces – cobbles were stacked to varying heights and then plastered over and sometimes painted.

*Quincha Walls* were only found in one specific context in the temple, but were common construction technique for Tiwanaku Chen Chen-style domestic structures (Goldstein 2005:212). These walls involved setting medium sized cane stalks into a relatively shallow trench – creating a vertical wall.

*AR-170*. This was the retaining wall which separated the lower and middle courts. The top of the wall dividing the lower and middle courts (AR-170) rose at least 2.4 meters above the lower court plaza floor. All of AR-170 was plastered over and at least part of northwest face of the wall was painted red. This wall was unique in that linear markings appear to have been etched into the paint – this is the only painted surface which indicates such a practice. In addition to being painted the top of the wall was adorned with a decorative curving cornice, which was also painted red.



Like the majority of the interior walls of the structure this wall was constructed with a foundation of volcanic tuff, ashlar blocks. Based on the impressions left in the clay floor of the lower court (C70) these ashlar appear to have been finely carved – with sharp, 90 degree angles. Given the high quality of the AR-170 ashlar they may well have been exposed and served as a façade – visible to all visitors in the lower court.

### **Platforms**

Platforms are one the most common elements of Pre-Columbian Andean monumental constructions – from the Preceramic Period through Incan times (Goldstein 1993; Hyslop 1990; Morris and Thompson 1985; Moseley 1992). Platforms are also one of the most commonly cited architectural expressions of subordination – as discussed above, the act of standing above someone automatically places the person looking up in a subordinate position. Clearly, the Omo M10A structure is no exception to this trend. The overall structure of the M10A building is a three-tiered stepped platform mound. However, the focus here will not be the superstructure platforms, but the three platform entrances of the middle court. Connecting the open, public space of the lower court and the more intimate middle court, these platforms likely figured prominently into the ritual activities in this transitional area (Fig. 27).

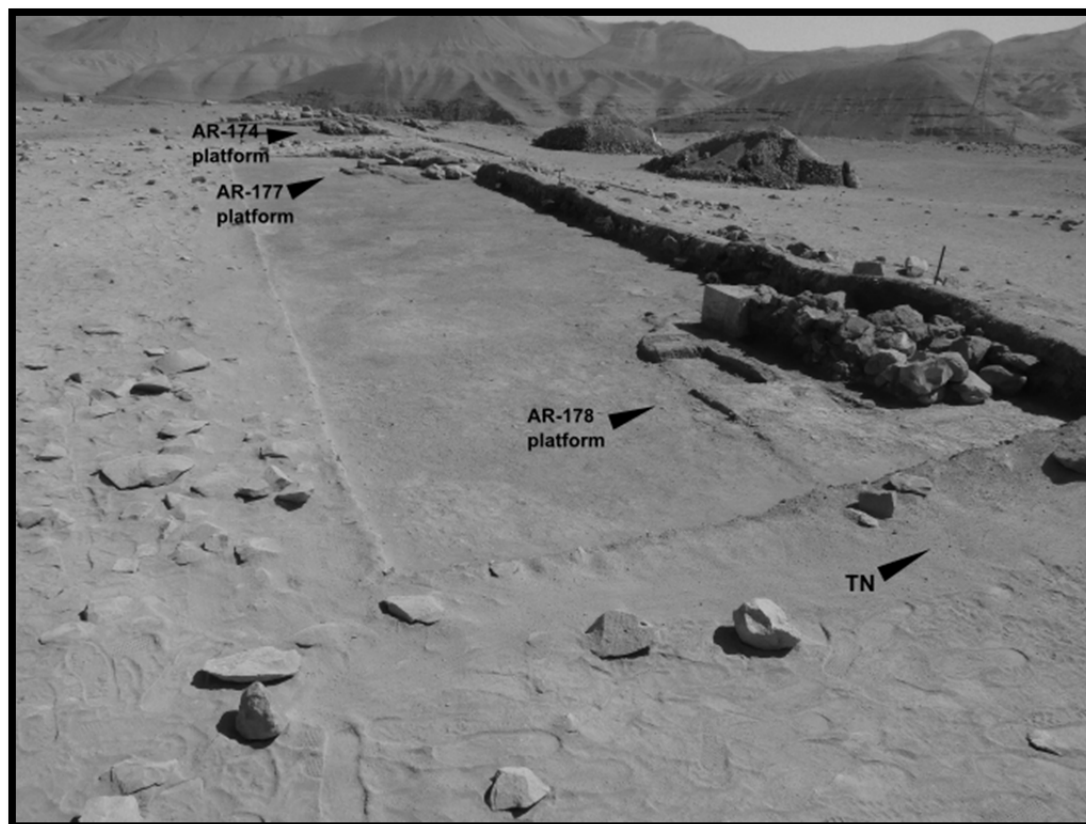


Fig. 27. Photo of the middle court portal platforms exposed after 2012 excavations (Project Omo photo, P. Goldstein).

*The central portal platform (AR-177).* AR-177 was the central platform entrance to the middle court – centered directly on the central structure axis of the Omo temple (TE 18.8). Approximately 85 percent of this platform was exposed in three 4 x 4 meter units (Unidades 344, 345, and 354). The platform was approximately 3.6 x 2 meters, abutting the southeast face of the AR-170 wall. The surface of the platform no longer exists, but the estimated height of the platform (from the middle court plaza surface to the top of the platform) was approximately 40-50 cm. AR-177 was constructed by first laying down a 4 cm hard clay foundation. Large stone cobbles and roughly shaped volcanic tuff blocks (likely unfinished ashlar which were abandoned for various reasons) were placed on top

of this clay foundation (Fig. 28). Then fine, homogeneous mud sediment (10YR 4/2 – dark greyish brown) with small volcanic tuff fragments (likely ashlar construction debitage) was used to fill in the spaces between the large cobbles/blocks. This sediment was packed down until the cobbles were completely covered. It is likely that a prepared clay surface was then laid down to serve as the walking floor surface (although no example of this surface survived).

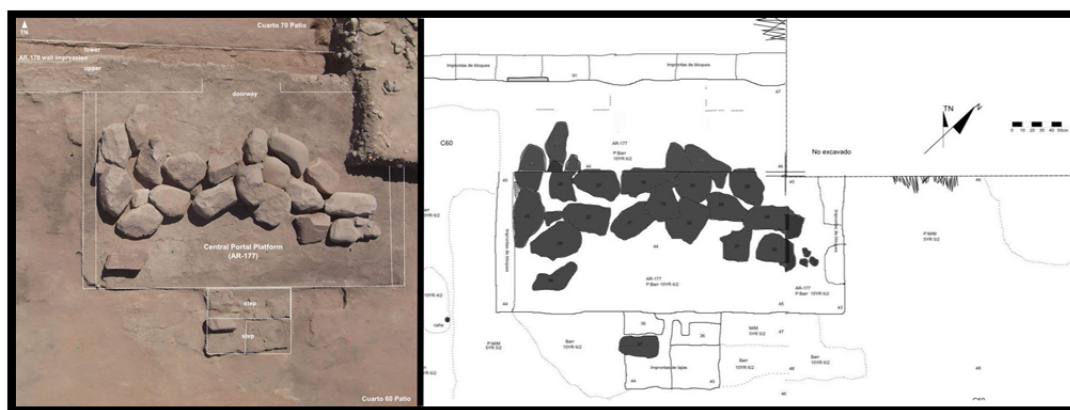


Fig. 28. Aerial photo (left) and map (right) of the central portal platform (AR-177) (Project Omo photo, P. Goldstein).

Floor impressions indicate that both the southwest and northeast sides of AR-177 appear to have been lined with finely cut ashlar. Evidence also suggests that the top of the platform was decorated with a row of green-painted adobes – which ran along each of the exposed sides.

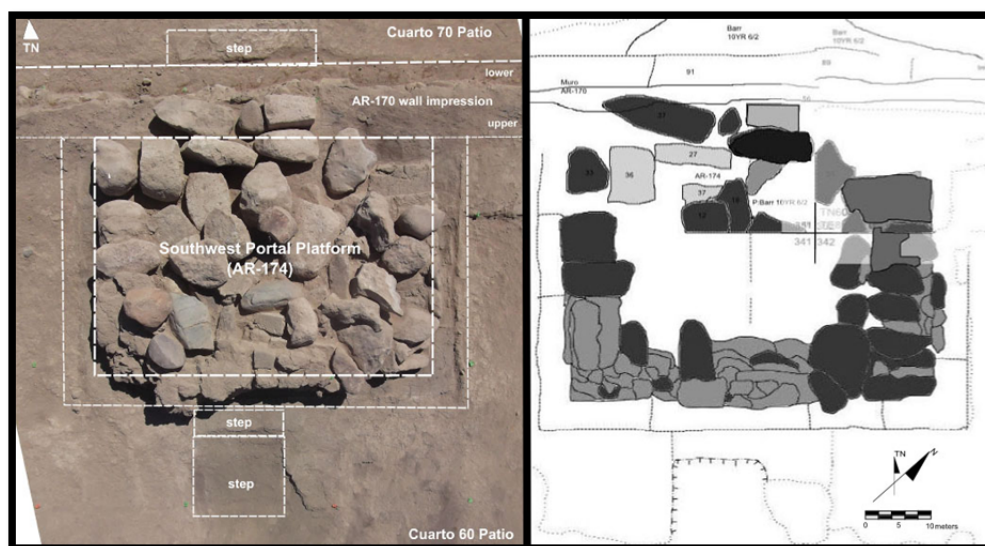
It is unclear how many steps led up to the platform surface from the lower court floor, as any stones were removed and impressions erased. However, as was indicated earlier, this would have involved stepping up 40 cm to the middle court plaza surface and

then stepping up an additional 40-50 cm to the platform surface (80 cm to 90 cm in total). Conversely, there is clear evidence in the form of block impressions in the floor that two steps composed of overlapping stone slabs led from the platform surface to the middle court plaza (C60) below.

Evidence provided by preserved cord snap-lines on clay foundation suggests the central portal opening in AR-170 was only 85 cm in width – a tight squeeze for any full grown adult. This narrow doorway would have effectively hidden any actions undertaken in the middle court from those standing in the open lower court plaza below. However, there is no evidence that the openings were obstructed by doors, possibly allowing short glimpses into the space beyond the wall.

*The southwestern portal platform (AR-174).* AR-174 is the southwestern platform entrance to the middle court. Roughly 10 percent smaller than the central platform AR-174 was roughly 2.6 x 1.9 meters in size. The construction of this platform was very similar to that of the central platform – a container built of fine ashlar blocks, filled with stone cobble/volcanic tuff blocks with the same fine sediment fill – resulting in a 40-50 cm high platform (Fig. 29). However, adobe bricks were also used in construction of AR-174. These adobes formed a squared “U” shape which was then filled in with the cobbles and other fill. All available evidence suggests that the surface of AR-174 was identical to AR-177 – including a prepared clay floor surface with decorative, green-painted adobes lining the outside border of the platform surface. Impressions in the floor indicate that all three exposed sides of AR-174 were faced with finely cut ashlars, and

again similar to AR-177, a double step down to the Cuarto 60 floor. Interestingly this step down was roughly 50 cm to the southwest of the center of the platform.



*Fig. 29. Aerial photo (left) and map (right) of the southwestern portal platform (AR-174) (Project Omo photo, P. Goldstein). Note the maps depiction of the partial removal of cobble construction fill – exposing the cord-snap line in the direct center of the platform feature.*

The southwestern portal was the only platform entrance that was 100 percent exposed during excavations – involving the excavation of four 4 x 4 meter units (Unidades 341, 342, 351, and 352). Excavation of this platform was also unique in that all the platform fill, including the large cobbles, was removed from the interior of the feature. This allowed for a detailed examination of the clay surface which served as the foundation of the platform. This fill removal exposed a cord snap-line running down the exact center of the platform – again, indicating the precision of the construction techniques employed by the structure’s Tiwanaku architects.

*AR-175* was a feature which was associated with the southwestern portal platform (*AR-174*). This feature was a dark (10YR 4/2 – dark brown), roughly rectangular-shaped stain directly on the middle court plaza floor, and surrounded the platform. A sounding trench was excavated in order to investigate the nature of this stain. The profile of the sounding trench revealed a small rectangular mound of a fine, dark sediment that was surrounded by later fill of red clay in the rest of room C60. It is difficult to determine the function of the mound, as well as whether the feature was contemporary with the platform or if it predated its construction.

*The northeastern portal platform (AR-178).* *AR-178* denotes the northeastern platform entrance to the middle court (Fig. 30). With dimensions of 2.7 x 1.9 meters, *Ar-178* was roughly the same size as the *AR-174* platform – also yielding a similar height estimate (40-50 cm). Roughly 65 percent of this platform was excavated in a single 4 x 4 meter unit (Unidad 347). Construction techniques and fill content was almost identical to the *AR-174* platform. Like *AR-174*, the step down to the middle court was roughly off-center – this time situated towards the northeast. Amazingly, one of the ashlar façade stones was left in situ – justifying the assumption that the impressions in the clay floor were left by similar stone blocks.

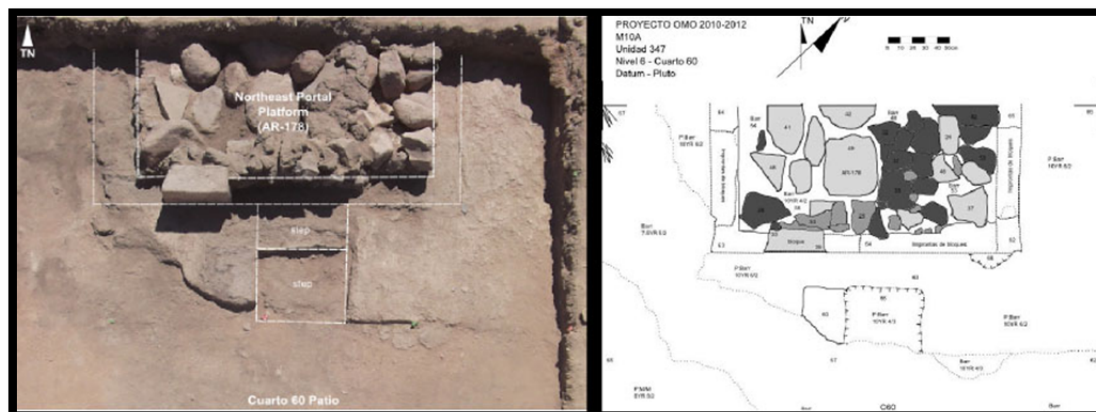


Fig. 30. Aerial photo (left) and map (right) of the northeastern portal platform (AR-178) (Project Omo photo, P. Goldstein).

#### *The Central Staircase Landing Architectural Suite (Cuarto 63) and Associated Features.*

The most definite exclusive architectural features were associated with the passage from the middle to the upper court. These features included a short adobe wall or altar of unknown height, likely accompanied by a sizeable monument (Fig. 31), a steep staircase ascending the terraced northwest face of the upper court, and finally an impressive swinging door at the top of these stairs. Taken as a whole these architectural elements were clearly designed to ensure the restricted nature of the activities taking place in the secluded upper court. This area was excavated in two units in 2012 (Unidades 304 and 314 a, b) – covering 24 square meters. Additional data was collected from a 2 x 4 meter unit (Unidad 294 b, d) – which uncovered the remains of a portion of the central staircase. In addition to this, data discussed here also came from two units excavated in the 1990 season (Unidades 121, 123). These units first exposed the base of the central staircase in the middle court and the threshold of the axial gateway at the top of the stairs.

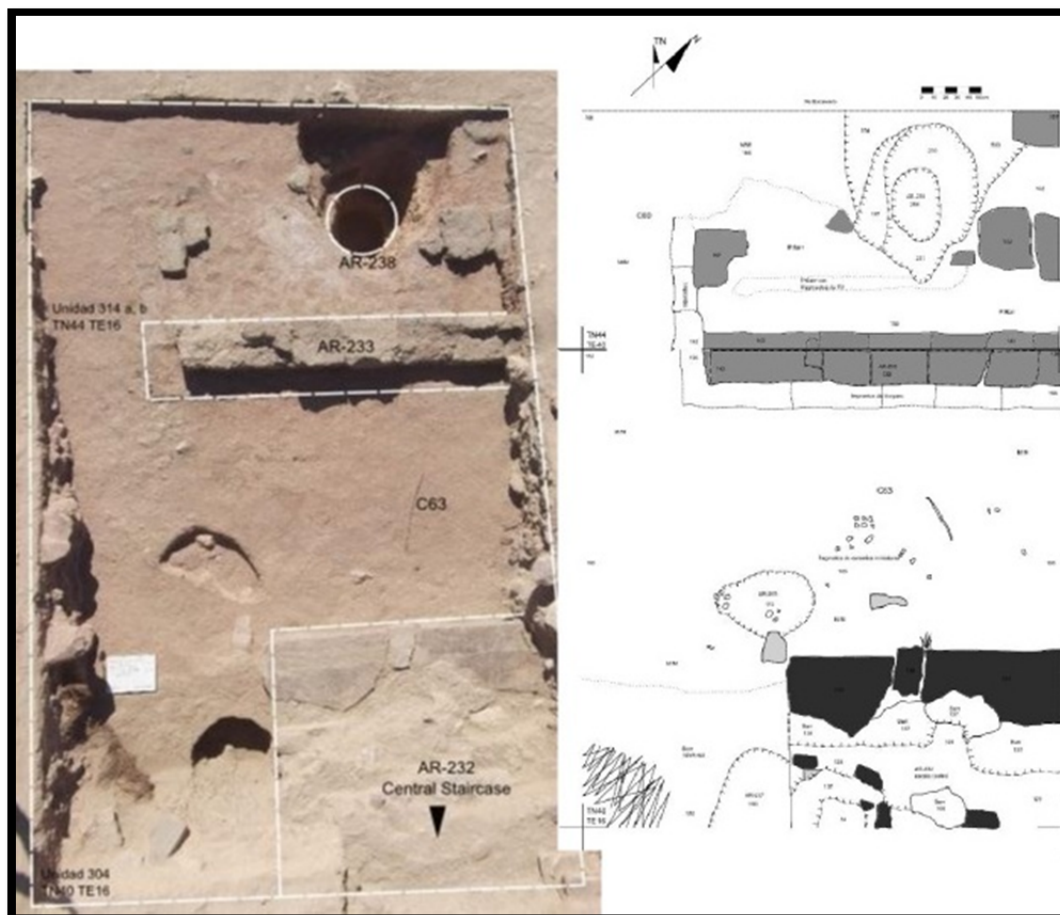


Fig. 31. Aerial photo (left) and map (right) of the central staircase landing architectural suite (C63) (Unidades 304 and 314 a, b)(Project Omo photo, P. Goldstein).

AR-233. One of the biggest surprises of the 2012 excavations was the exposure of an intact adobe wall (AR-233) sitting exactly two meters in front (northwest) of the base of the central staircase. Prior to its discovery it was thought that there were no obstructions along the central temple axis. Therefore in addition to being an example of exclusivity, the AR-233 architectural feature also greatly affected the ability of procession along the central axis of the structure. This wall appears to have been much shorter than the standard two meter high walls of the M10A structure – likely rising only 30-50 cm off the



middle court floor surface – this assumption was based on the lack of adobe wall fall associated with this feature.

Because of the unusual effect on access, we considered the possibility that AR-233 represented a structure closing event – effectively sealing off the upper court. However, once the floor was exposed it became clear that this wall was constructed in the same manner as other adobe architecture features throughout the structure. This was made evident by the presence of ashlar impressions left in the clay floor on three sides of the AR-233. However, there were no stone ashlar used as the wall foundation. Also there was absolutely no evidence that there were any flanking walls – making it possible to simply step around this wall and continue on to the staircase.

AR-238. This was a pit feature, with a depth approximately 92 cm below the middle court floor surface. The pit sits directly to the northwest of the AR-233 wall, and is centered directly over the central axis of the structure. The feature appeared on the surface as a shallow depression and was originally thought to be some sort of Pre-Columbian or colonial period looters pit. However, the discovery of Huyna Putina (A.D. 1600) volcanic ash was found within the first few centimeters of excavated sediment ruled out colonial looting. Two additional factors allowed for a rejection of a looter related feature. First, it became clear that the pit was too carefully dug – forming a slightly elongated circular shape, and while the walls of the pit were not plastered they appeared to have been intentionally packed. Moreover neatly stuffed down in the bottom of the pit there was a small bundle of *ichu* grass, in what appeared to be an intentional

placement. Finally, as noted above, the pit was precisely centered on the central structural axis – too carefully placed to be a random looters pit.

This feature has been interpreted as a foundational pit for a sizeable statue or monument. Based on Tiwanaku ritual tectonics, this could have been some sort of monolithic anthropomorphic statue – similar to the famous Bennett and Ponce monoliths found at Tiwanaku. However, there is no evidence to suggest that this monument could have been wood or some other material. Another, similar pit feature was found centered in the sunken court of the upper court.

Whatever, the material or images portrayed by the middle court monument were, we will never know. However, it is known that the base of the object was approximately 40 x 60 cm. It was likely quite tall – in that it need an almost one meter deep foundational pit for support. Sitting directly on the central axis of the structure this monument was the first (and one of the only) features to block procession on this central line. Less than three meters to the northwest of the central staircase this statue essentially stood guard over the access to the restricted upper court. In doing so, adding an additional exclusive element to the access patterns of the highest tier of the structure. It is likely that the monument stood taller than the average person, and therefore added an element of subordination - as those passing by had to look up at the monument.

*AR-232*. This was the 2012 feature designation given to the central staircase – which connects the middle court to the upper court. Little remains of this staircase, except for the massive stone slabs which were the lowest steps in the staircase. These stones, which likely were not removed by looters due to their massive size were first exposed in Unidad

121 of the 1990 excavation season, but were re-excavated in 2012 in order to get a better understanding of greater Cuarto 63 area.

Due to centuries of looting and natural erosion little can be discerned from the remains of the staircase. One thing that is certain is that it was relatively steep covering three meters of vertical incline in less than two meters of horizontal distance. The steep nature of the staircase likely conveyed significant exclusive and subordinate elements. Steepness often used a defensive mechanism, was likely, in this case, an additional element of exclusivity in regards to access to the upper court. Likewise, the steep staircase, like a tall platform, would evoke concepts of subordination – allowing those climbing to the upper court to look back and more importantly down, on those in the middle and even lower courts. Conversely, those standing below, either waiting to proceed up the stairs themselves or observing from the middle and lower courts would have the subordinate task of looking up at those proceeding into the sacred upper court.

*Upper Court Gateway.* While a significant architectural feature of the Omo M10A structure as a whole, as this feature does not directly pertain to an analysis of the middle court architectural features, the discussion of this gateway will be kept brief here. Upon reaching the top of the central staircase one would come face to face with an impressive *chambranle*-style recessed gateway. Adorned with a large lintel and likely decorated with red and green painted plaster this gateway would have been an impressive element. However, what makes this gateway truly exceptional is that it possessed a swinging door – which effectively barred the entrance both to those wishing to literally pass through to

the space beyond, and even barred individuals below from visually passing thought to observe what happened behind the upper court walls.

While the door was recovered, evidence for its existence is clear in the three in situ threshold stones. One stone has a circular depression carved into it where the weight of the door would have been held. The other stones have semi-circular groove – created when the door would be opened and closed. Like the base of the staircase, this feature was first discovered and recorded in the 1990 excavation season, but was re-excavated in the 2012 season – in order to expose as much of the central axis as possible (Fig. 32).



Fig. 32. Image showing threshold stones for the upper court swinging door and the central staircase (Omo Project photo, P. Goldstein).

## **Galleries**

The final discrete architectural areas in the middle court were the two flanking galleries – one on the southwest side and the other on the northeast side. These narrow galleries, Cuarto 61 and Cuarto 62, appear to have had the same dimensions – approximately 4 x 20 meters. As described in the excavation methods above – with restricted excavation time a sampling method was developed so each of these rooms could be investigated. In 2011 the majority of the northwest end of the Cuarto 61 gallery was excavated, and in 2012 the southeast end of the Cuarto 62 gallery was exposed. Therefore, assuming symmetry and combining the exposed layout of each gallery a reconstruction of these spaces can be developed. Here, the galleries and their associated architectural features will be described separately, but will be discussed later as similar built spaces.

### *The Southwestern Gallery (Cuarto 61) Construction*

The southwestern middle court gallery was first excavated in the 2011 excavation season. Investigations into this area involved the excavation of two 4 x 4 meter units placed in the interior of the room (Unidades 330 amp1 and 340 amp1) and two 4 x 4 meter units (Unidades 310 and 330) which exposed a portion of the interior gallery wall (AR-93) and a section of the Cuarto 60 open patio. The gallery is quite narrow (approximately four meters) and runs the entire length of the middle court. The room was surrounded on all sides by two meter high adobe walls, and possessed a prepared clay floor. While the access point for this room was never excavated – excavations on

the opposite gallery revealed a doorway in the direct center of the wall shared with the middle court plaza and a similar location may be inferred.

*AR-93.* This feature was the interior wall which separated the gallery from the Cuarto 60 open plaza. Estimates based on adobe wall fall indicate that this wall was likely the standard two meters in height. This wall was also constructed using the standard interior wall technique – a foundation of two rows of *calicanto* ashlar (foundation was approximately 59cm thick), topped with several rows of adobe bricks, and plastered over. Preservation of the impressions left from the toppled wall was poor.

*AR-172.* AR-172 represents the southwestern enclosure wall. The exterior structure walls differed in construction style from the interior walls. This wall was constructed in the typical enclosure wall technique. This was done by using a durable clay mortar to seal together a foundation 3-4 cobbles wide (approximately 60 centimeters wide) and 2-3 cobbles high; with any empty space being filled in with a fine sediment which was also full of small *calicanto* (volcanic tuff) stone fragments (likely debitage from ashlar construction). Finally, adobe bricks would be used to create the majority of the wall. Height has been difficult to estimate for the exterior walls, given the elevated nature of the platforms, when portions of the wall fell outward, adobe fragments were crushed and long since eroded into nothing. However, this exterior wall was likely at least two meters in height.

*The Southwestern gallery (Cuarto 61) Occupation and Features*

*Coprolite Holes.* One of the most interesting set of features uncovered in Cuarto 61 were 33 small pits (see appendix for feature designations) – all of which contained human coprolites. Dug directly into the prepared clay floor these shallow pits were of varying dimensions – ranging from 8x8 cm to 14x14 cm. Depths varied as well but they were generally between 4 and 6 cm deep – with the deepest pit reaching 11 cm below the floor surface. While dimensions varied an interesting pattern did occur – with few exceptions, each pit was dug with equal dimensions (e.g. 8x8 cm, 11x11 cm, 14x14 cm, etc.). This gives some indication that these pits were dug with some care.

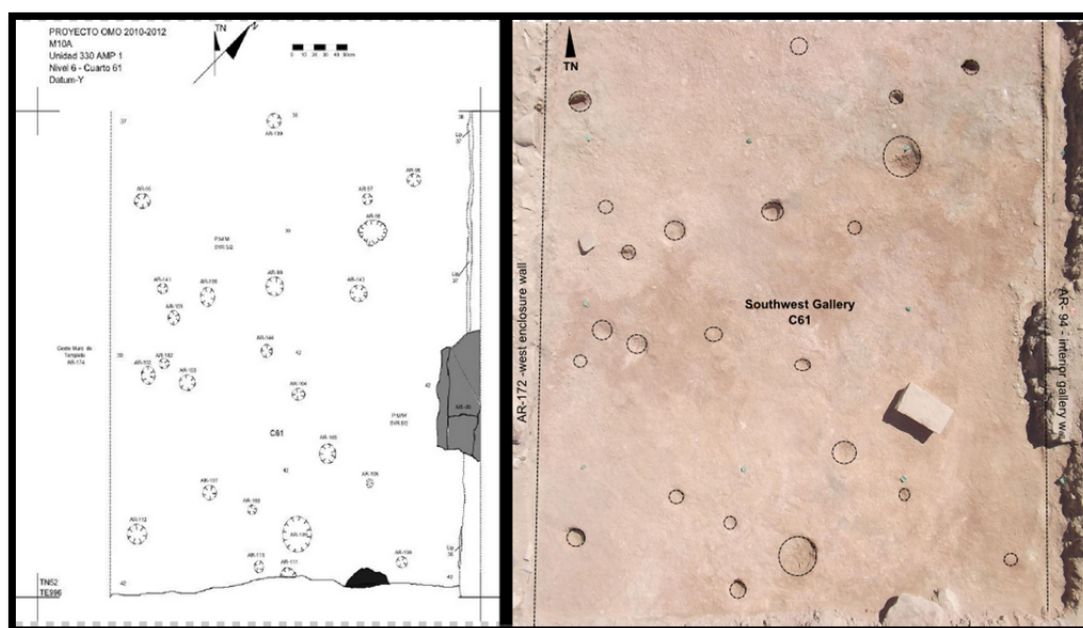


Fig. 33. Aerial photo (right) and map (left) of a portion of the southwestern gallery (C61) – showing circular coprolite holes (Project Omo photo, P. Goldstein).

As stated above, each of these pits contained preserved human feces. The amount varied greatly (Fig. 33). Some pits gave some indication of multiple uses, although most

appear to represent a single use event. The possible implication of these coprolite holes will be discussed in greater detail below, but to state the obvious – at least the northwest end of this room was used as a bathroom at some time, by at least some of the individuals who used the structure.

#### *The Northeastern Gallery (Cuarto 62) Construction*

Cuarto 62 was the designation given to the northeastern middle court gallery (opposite Cuarto 61). This area was investigated in the 2012 excavation season with three excavation units (Unidades 309, 319 amp1, and 329). These units were all clustered in the southeast side of the gallery – this was done in an attempt to expose the opposite side of the gallery space as the 2011 excavations in Cuarto 61 and to avoid a disturbed area that may correspond to a 1984 excavation of Program Contisuyo.

Like its mirror gallery Cuarto 61, the northeastern gallery (Cuarto 62) was surrounded on all four sides by two meter high walls. The floor in this room appears to have been of lower quality than that of its opposite. It is possible that there was only a thin layer of prepared clay deposited as the sterile soil appears to have been compacted as a walking surface during the structure's use. This is a pattern throughout the M10A structure – the southwestern side was built up above the natural grade far more with greater care given to the flooring.

*AR-170.* This is the interior gallery wall which separates Cuarto 62 from the open middle court plaza. Unlike its opposite (*AR-93*) the impressions left from this wall were well preserved and confirmed that this was constructed in the typical M10A structure style –



two rows of ashlar with adobes stacked on top. Also like most walls in the structure the top of this wall was covered with bundles of *ichu* – protecting the wall from the elements.

*Gallery Entrance.* The access point to the gallery was exposed in Unidad 329. Here, directly in the center of the AR-270 internal gallery wall was a doorway (Fig. 34). This doorway had an interesting construction style. Forming the foundation for the door jamb was an unusually large ashlar block with a large U-shaped groove carved into it. Here a large post was placed forming the vertical door jamb. A portion of one of these posts was still in situ (AR-270) on the southeast side of the doorway. A well-defined post hole (AR-171) signifies the presence of an identical post on the opposite side (posts had a diameter of approximately 18cm). Several micro-layers of compacted sediment in the doorway indicate that this might have been a well-used access point.

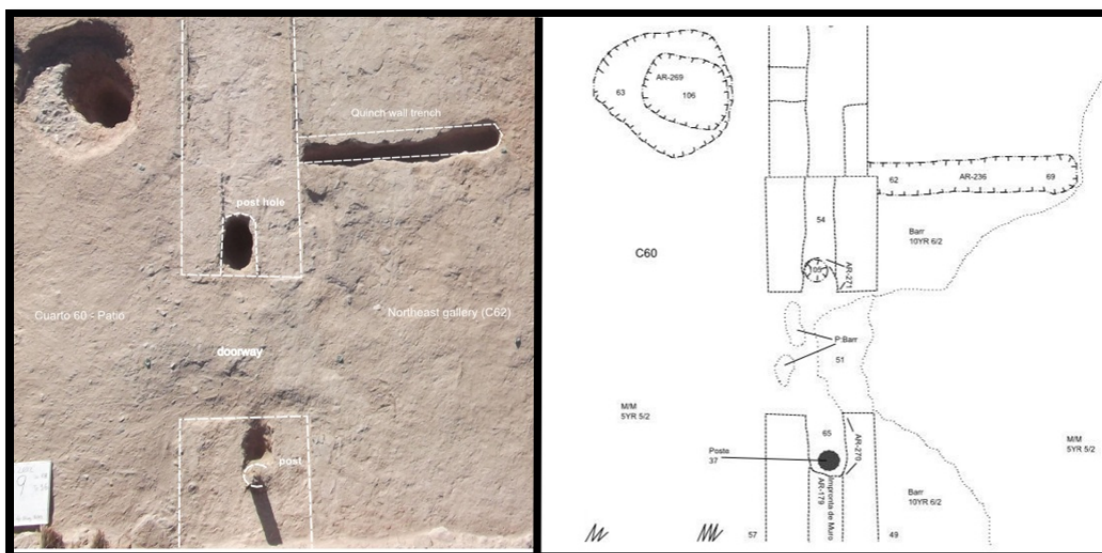


Fig. 34. Overhead photo (right) and map (left) of Unidad 329 – showing the northeastern gallery doorway (Project Omo photo, P. Goldstein).

*The Gallery Doorway Partition AR-236.* This feature was directly associated with the AR-270 wall. Just to the northwest (50 cm) of the doorway described above was a narrow trench, approximately 18 cm deep (Fig. 34). This trench directly abutted to the AR-170 ran for just over a meter. While the trench contained very little cultural material it did contain a significant amount of botanic material. The function of the trench is unknown; however it does closely resemble a wall trench used in the construction of *quincha*-style cane walls employed by the Moquegua Tiwanaku in their domestic structures (described above). If this does represent a foundation for a cane wall it may have acted as a partition – dividing the gallery into two distinct spaces.

#### Artifact Analysis and Possible Activity Areas

This subsection will present the results from the examination of frequencies and densities of ceramics in the middle court of the M10A structure. Specifically, it will compare and contrast the discrete architectural areas in regards to their association with these ceramics. The areas which will be considered here include the three platform entrances (AR-174, AR-177, and AR-178), the Cuarto 63 central staircase landing area, and the two galleries (Cuarto 61 and Cuarto 62). The open middle court plaza (Cuarto 60) will not be examined here as a unity – this is due to the difficulty in contextually separating this area from some of the more significant architectural features (i.e. the platform entrances). This discussion will incorporate other artifact material types as well (textiles, fauna, etc.), but as in depth analysis has not been completed on these materials they will not be the focus here.

Table 2. Total middle court ceramics counts and frequencies.

	<u>Tiwanaku</u>			<u>Other</u>		<i>No. i.d.</i>	<u>TOTAL</u>
	<i>Plainware</i>	<i>Redware</i>	<i>Blackware</i>	<i>Huaracane</i>	<i>Colonial</i>		
<i>Counts</i>	3151	192	12	233	3	139	3730
<i>%</i>	84.48%	5.15%	0.32%	6.25%	0.08%	3.73%	100%

As indicated by Table 2 there were six general ware types uncovered in the middle court. Three of these types of ceramic wares are distinctly Tiwanaku, these are referred to as Plainware (*Llana*), Redware, and Blackware. The non-Tiwanaku wares include Huaracane (Formative Period), colonial, and non-identifiable sherds. Non-identifiable sherds were too small for sufficient analysis. All colonial sherds, which represent less than 0.1% of the assemblage, were recovered in the top two excavation levels. Finally Huaracane sherds, which make up 6.25% of the middle court ceramic assemblage, are mostly believed to have eroded out of the adobe bricks which were constructed using mud and old Huaracane cultural deposits (Goldstein 1993:35). For these reasons the latter three ware categories are often omitted when discussing possible activity areas based on ceramic distributions. Therefore, it can be assumed that any mention to plainware, redware, or blackware is referring to Tiwanaku ceramics.

Table 3. Middle court Tiwanaku ceramic counts and frequencies by ware – based on architectural area/feature.

	<b>Plainware</b>		<b>Redware</b>		<b>Blackware</b>		<b>Totals</b>
<b>Southwestern portal platform (AR-174)</b>	197	85.3%	22	9.5%	12	5.2%	231
<b>Central portal platform (AR-177)</b>	299	96.1%	11	3.5%	1	0.3%	311
<b>Northeastern portal platform (AR-178)</b>	198	97.5%	5	2.5%	0	0.0%	203
<b>Southwestern gallery (C61)</b>	332	97.9%	7	2.1%	0	0.0%	339
<b>Northeastern gallery (C62)</b>	325	85.3%	56	14.7%	0	0.0%	381
<b>Central staircase landing (C63)</b>	1311	96.5%	48	3.5%	0	0.0%	1359
<b>Middle court patio (C60)</b>	317	88.3%	42	11.7%	0	0.0%	359
<b>Lower court patio (C70)</b>	554	99.5%	3	0.50%	0	0.0%	557
<b>TOTAL</b>	<b>3533</b>	<b>94.5%</b>	<b>194</b>	<b>5.2%</b>	<b>13</b>	<b>0.3%</b>	<b>3740</b>

*Southwestern portal platform (AR-174).* The southwestern platform entrance had one of the most interesting ceramic assemblages (Table 3). The area had one of the lowest frequencies of plainware sherds (only 84.2%) – this leaves 15.5% of the assemblage as comprising the two finer serving wares – redware and blackware. The most interesting aspect of the southwestern portal platform is the frequency of blackware. Blackware is extremely rare in Chen Chen style ceramic assemblages (generally less than 0.5%) and as the M10A structure is thought to have been a Chen Chen dominated space, it was a surprise to find Omo-style polished blackware. In the middle court ceramic assemblage only thirteen blackware sherds were identified – twelve of which (92%) were associated

with the AR-174 platform (Fig. 35). At least 3 of these sherds were diagnostic – belonging to the classic Omo-style portrait head keros (Fig. 28).



*Fig. 35. Aerial photo of the southwestern portal platform (above) with insert of an in situ polished blackware, Omo-style portrait head kero fragment (note the modeled eye – a diagnostic Omo-style feature) (Project Omo photo, P. Goldstein).*

Other materials recovered associated with this architectural feature include fragments of camelid bone, various macro-botanical remains, small fragments of textile, and vegetable fiber cord. Also uncovered here were 18 fragmented lithic beads and 2 fragments of *spondylus* beads.

*Central portal platform (AR-177).* Excavations of the central platform entrance yielded the most ceramics of any of the three platforms (Table 3). Unlike AR-174, this entrance had very little of the Tiwanaku serving wares – with less than 5% of the assemblage being redware or blackware. It is important to note, however, that a single sherd of blackware was found associated with the southern corner of this platform. Other artifacts recovered from excavations of this feature include fragments of camelid, macro-botanics, textiles, and carbonized material. Several fragments of intricately woven baskets were recovered as well. In addition, over 40 fragmented lithic and shell (spondylus) beads were found associated with this platform.

*Northeastern portal platform (AR-178).* This architectural feature possessed one of the lowest frequencies of serving wares (redware or blackware) with only 2.5% of the assemblage being redware (Table 3). Overall AR-178 had the lowest amount of ceramic material – with only 203 sherds. In fact very little cultural material was associated with this platform at all.

*Southwestern gallery (Cuarto 61).* The southwestern gallery had the highest frequency of plainware ceramics – with just under 98% of the assemblage being represented by this ware-type (Table 3). As described above, this was the area which was dominated by the small coprolite holes, and perhaps this might explain the small frequency of finer wares. Cuarto 61 contained significant amounts of textile-related materials – including textile manufacturing materials. These materials included two fragments of spindle whirrs, large

amounts of raw and semi-processed camelid wool and cotton, hundreds of small fragments of various types of thread/string, and several fragments of various fine and roughly woven textiles. These textile-related materials may be some indication of textile manufacturing in this area.

*Northeastern gallery (Cuarto 62).* Excavations in the northeastern gallery produced the highest frequency of redware of any area in the middle court (Table 3). Redware represents 14.7% of the Cuarto 62 assemblage – making it over 5% greater than any other area. However, it is important to note that over 41% of the total Cuarto 62 ceramic assemblage, and exactly half of the redware assemblage, were associated with the AR-230 midden-type deposit in the southeast end of the gallery. This feature was dense with various materials. These materials included several fragments of silver and copper, a camelid-fiber sling, large amounts of textile fragments, camelid bone, camelid coprolites, and various other unique artifacts. Originally, this midden was thought to be associated with activities which took place in northeastern gallery. However, it was later determined that these materials likely originated in the upper court and eroded down the deteriorating northwest terraced face of platform and were deposited in the Cuarto 62 space.

An important find was recovered in this galley from the sounding trench excavated in 1984. This find was a relatively small fragment of a Tiwanaku tapestry tunic – a very rare and labor intensive textile product. This fragment depicts a common Tiwanaku icon – the kneeling “sacrifice figure” (e.g. Oakland 1987). This is the only such textile yet identified in the M10A artifact assemblage (Fig. 36).



*Fig. 36. Fragment of Tiwanaku tapestry tunic recovered in the 1984 excavations in the northeastern gallery (A-3 trench) (Photo courtesy of P. Goldstein).*

*The central staircase landing architectural suite (Cuarto 63).* When viewed by ware-type the ceramic frequencies associated with the central staircase landing area appear to be relatively average when compared to the other middle court areas – with exactly 95% of the assemblage being plainware and 5% being represented by redware (Table 3). However, this area did produce some of the finer decorated redware sherds found anywhere in the temple (Fig. 37).



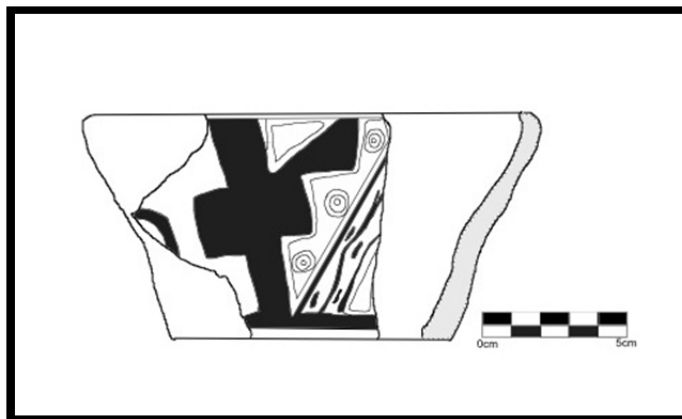
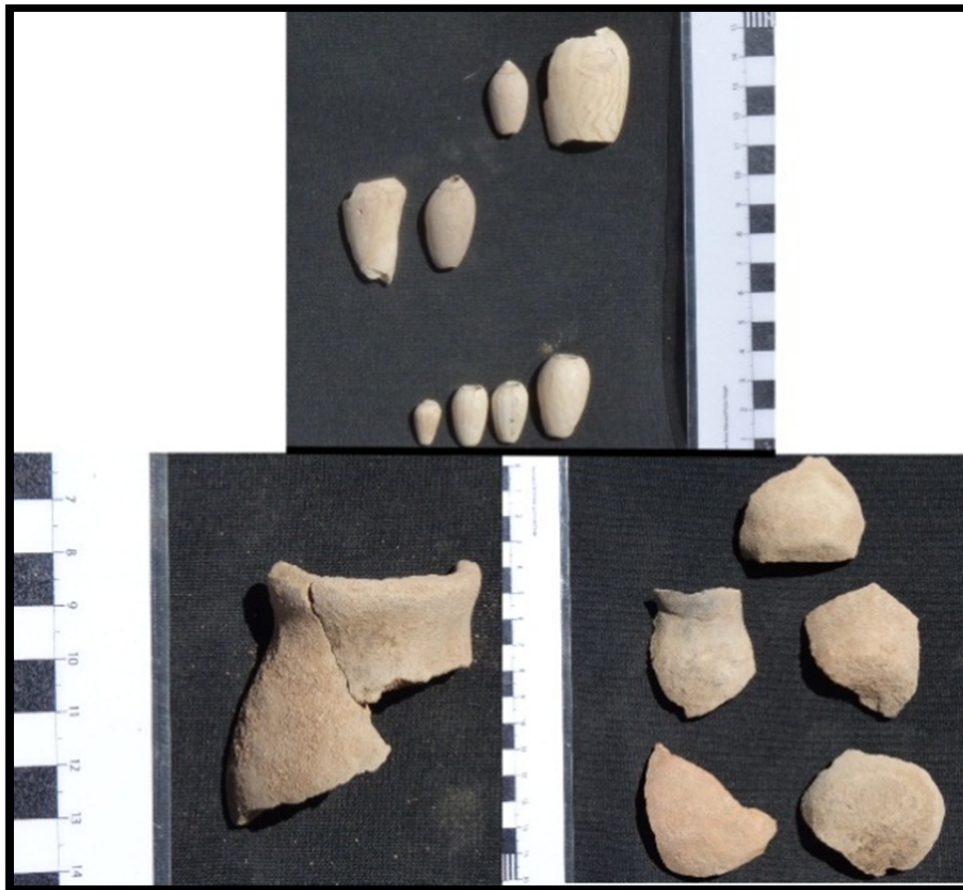


Fig. 37. Decorated Tiwanaku tazón sherd found in the C63 staircase landing area.

The assemblage from the central staircase landing architectural suite (Cuarto 63) becomes interesting when plainware is separated by vessel type. 926 sherds, or over 68% percent of the plainware sherds were of a unique miniature vessel type. Some of these miniature plainware vessels, appear to be miniaturizations of actual Tiwanaku vessel types, however others appear to be simple pinch-pots; most have been at least briefly fired, but others (approximately a fourth of the assemblage) appear completely unfired. Miniature vessel sherds are found in significant quantities in only one other location in the structure - Cuarto 6, one of the small roofed structures in the upper court (directly adjacent to the sunken court). The fact that the distribution of this vessel type is concentrated in two discrete areas, and that in these areas they are found in relatively high frequency has possible implications for ritual association of these areas. Associated with the miniatures, at least in the central staircase landing area, were dozens of fragments of olive shell (*Olividae-sp.*) – a marine shell found in Pacific coastal waters (Fig. 38).



*Fig. 38. Artifacts from the central staircase landing (Cuarto 63): Olive marine shells (top); miniature plainware vessel sherds (bottom).*

## V. Discussion

This section will work to synthesize the high-level theory presented in the background and methodology section with the low-level data presented in the results section. This section will also attempt to compare the findings at the Omo M10A structure with the monumental architecture at the Tiwanaku capital in the *altiplano*.

### Access Patterns

To review, the spatial syntax breakdown of the M10A structure's access patterns depicts a building which progressively becomes less and less distributed as you travel deeper into its layout. Using terminology from graph theory, the M10A structure as a whole represents a non-symmetrical, non-distributed graph. However, the Omo structure could be separated into two distinct access graphs. The lower and middle court areas form a more interconnected, symmetric spatial graph – while the greatly divided upper court produces a chain-like, unsymmetrical graph.

This section will build on this access pattern data and expand on the spatial syntax analysis already utilized. In developing spatial syntax theory Hillier and Hanson (1984) developed a useful set of terms for contrasting spatial systems which promote various types of social solidarity (Fig. 37). One type promotes strong boundaries and internal organization, with small, divided segments. These spaces are what Hillier and Hanson see as global-to-local systems, which use ideology to promote a mechanical-type solidarity (to use a dated Durkheimian term) and power. These are opposed to a form of

local-to-global system which uses spaces with more flexible boundaries to promote a more organic solidarity. The latter system is the realm of political control, and is where the social is produced – the former uses ideological systems to reproduce these social systems (Hillier and Hanson 1984:20-22).

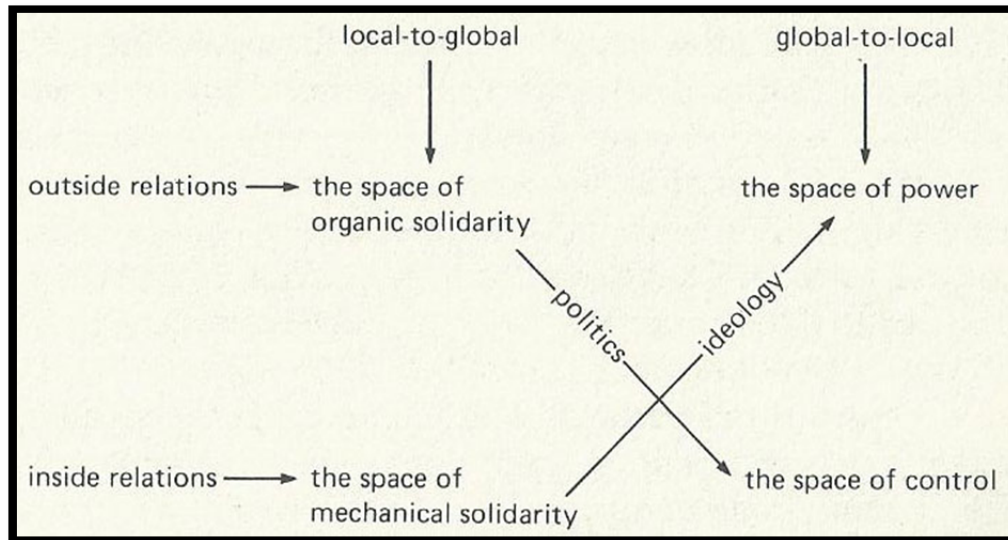


Fig. 39. Diagram illustrating the social potential of built space (Hillier and Hanson 1984:22).

Interestingly the Omo M10A structure seems to have facilitated both types of solidarity and possibly even an area which facilitated each. The wide open lower court plaza clearly represents an area of weak internal spatial boundaries – this is the nature of large, open plazas. Here the Tiwanaku colonists could gather en masse to witness whatever type of ritual events took place in this space. This undivided, level space would allow for everyone to be physically standing on the same level. Solidarity would have been amplified by the fact that walls surrounded those in the lower court on all sides – here the colonists could celebrate rites together – isolated from the domestic site and the

rest of the world. This may have been a location where the Tiwanaku colonial elite, or possibly even representatives from the Tiwanaku state could address the Moquegua colonists – an area of integration, but ripe for political control. This would promote a local-to-global type solidarity in that the local were many and the state was represented by a few; this does not necessarily mean state representatives – it could also mean a space less dense with symbols of the state.

The upper court appears to fall at the opposite end of the spectrum. The architecture and accessibility internal to the upper court, effectively divides the space into numerous discrete areas. The few who were allowed into this space likely had a specific path they were forced to take. These paths likely utilized ideological concepts to create a physical manifestation of the power inherent in this ideology. Here, symbols of the state were dense – to the point that the very path which was chosen likely had significant implications for one's identity. This is the space which represents a true representation of the Tiwanaku cosmos – and where this understanding of the world would be reproduced.

The lower and upper courts represent the extremes of the spatial syntax spectrum. However, they were connected by a more transitional space – the middle court. The middle court facilitated both separation, through spatially discrete elements, as well as more free-flowing organic-type solidarity. Access into the middle court likely produced certain social concepts of separation. Standing in the lower court one would witness individuals entering one of three doors into the middle court space. This was likely done in some sort of procession or ritual (this will be discussed in greater detail below) in which specific people had to enter through a specific doorway – this likely correlates with the three route possibilities in the upper court.

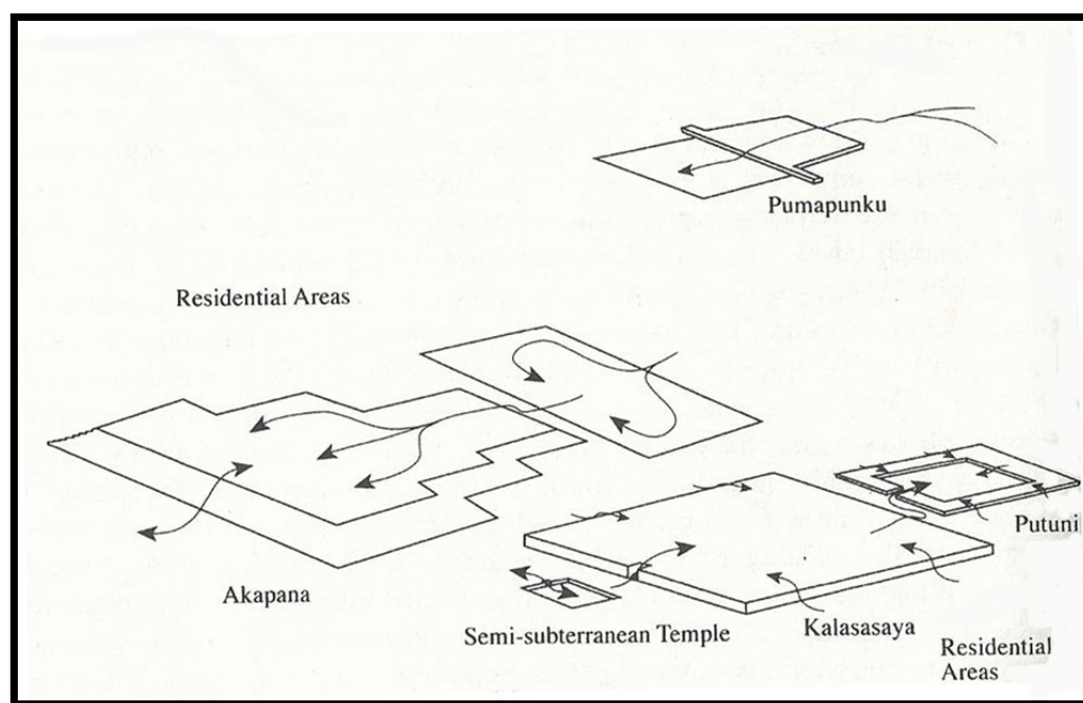
Upon entering the middle court one would enter a much more integrated space. While not as large in terms of scale as the lower court plaza, the Cuarto 60 middle court plaza was relatively free of internal boundaries and could have supported a more organic-type solidarity. The spatial relations between the upper and lower courts would have supported this cohesion in that once in the central staircase landing area (C63) there was a single path into the restricted upper court. This allowed for all those ordained to take the same path to the most secluded area of the structure and once again become a single group.

When taken as whole, the Omo Temple appears to have facilitated both types of spatial relations as defined by spatial syntax theory. The lower court, with its non-existent internal boundaries, supported a local-to-global-type, organic solidarity where the Tiwanaku colonists could witness and participate in ritual used to produce group identity. The upper court used small discrete spaces and disconnected access patterns perhaps to reproduce state-run ideological balances of power. The middle court allowed for both organic and mechanical solidarity. It reproduced social spatial separation through differential access through doorways. The interior open plaza and single access point for the upper court allowed for a more free-flowing group solidarity.

#### Access at Tiwanaku

Unfortunately it is almost impossible to reconstruct detailed access patterns for the monumental structures at the site of Tiwanaku. Centuries of erosion, looting, and failed reconstructions have left precise architectural layouts an elusive product of the excellent recent studies undertaken at the site (see Vranich 2008). This makes a

comparison of access patterns, at the level undertaken at the Omo M10A structure, nearly impossible. This difficulty is amplified greatly by the ever-changing nature of Tiwanaku monumental architecture. This architecture appears to have been constantly under construction – with some buildings never being truly completed (e.g. Isbell and Vranich 2007).



*Fig. 40. General access points for monumental structures at Tiwanaku (after Isbell and Vranich 2007:170).*

However, some attempts have been made to generate models of how movement may have been directed through the Tiwanaku monumental core structures. These models generally omit spatial patterns internal to these structures, but depict relatively accurate estimates for how these structures may have been accessed from the exterior

(Fig. 40). Again, while this model does not allow for a detailed comparison with the Omo M10A structure it does allow for general patterns to be observed. One pattern that seems clear is that all of the structures at Tiwanaku, with the exception of the semi-subterranean temple, appear to have had multiple exterior access points. Here, the Omo Temple diverges greatly, with its single exterior access point. Procession through the M10A structure would inevitably lead to returning along the path you used to enter. At Tiwanaku, access at least allowed for (not necessarily determined) the ability for procession to pass through a structure (i.e. in one side – out the other (e.g. the Akapana) or at least enter one door and leave through another (e.g. the Kalasasaya).

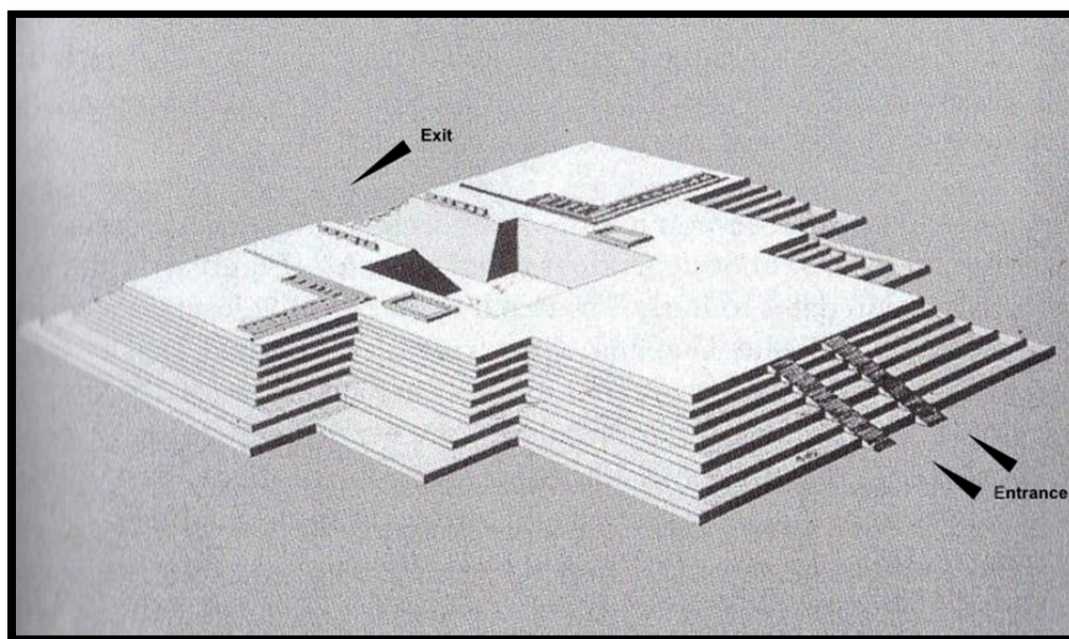


Fig. 41. *Reconstruction of the Akapana Pyramid at Tiwanaku (after Janusek 2010:117, adapted from Manzanilla 1992).*



It is difficult to determine what implications can be drawn from this difference in access. Perhaps control in the provincial Tiwanaku system was weaker and demanded more organic-type solidarity. Elites utilizing the Omo M10A structure were allowed to participate in restricted, exclusive rites in the upper court, but eventually had to return to the masses in the lower court. Whereas the Akapana pyramid (Fig. 41), whose summit was presumably a restricted space (see Manzanilla and Woodard 1990), could have been accessed by elite through the open plaza space in one direction and then these elites could have exited opposite the masses, on the other side of the pyramid. Similarly Alexei Vranich has interpreted the architecture at the Pumapunku Complex as a gateway to the greater Tiwanaku monumental core – with pilgrims entering in the west and exiting in the east, facing the city (Fig. 42).

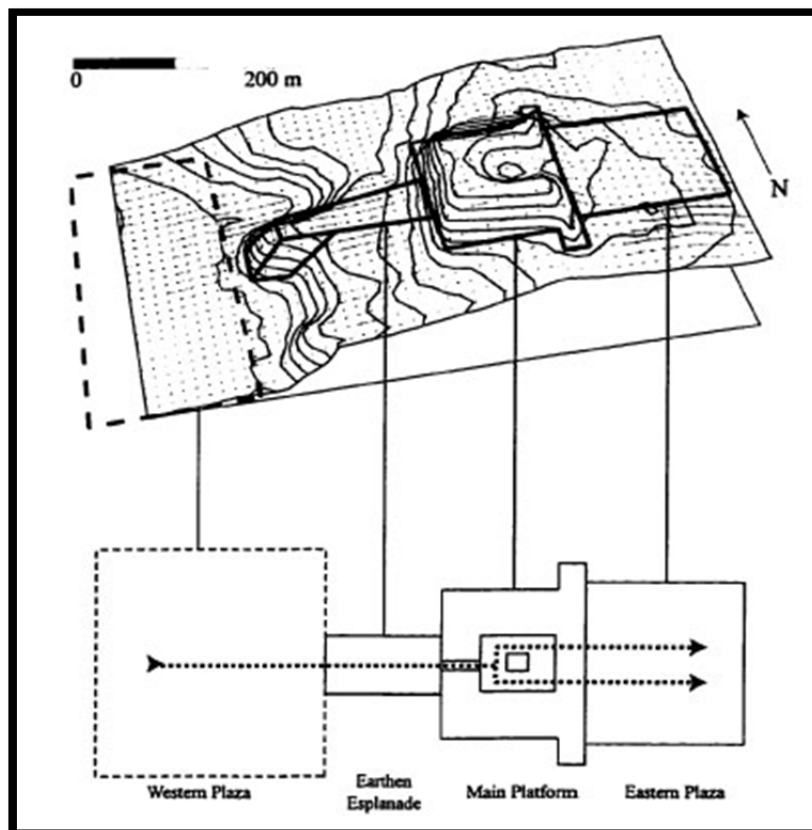


Fig. 42. Schematic drawing of the Pumapunku Complex at Tiwanaku – illustrating the west to east ritual movement (after Vranich 1999:419).

However, the Tiwanaku seem to have employed differing access styles for their numerous monumental constructions and the Omo M10A structure likely represents a local variant of one of these types.

### Architecture

This section will attempt to integrate the bulk of the data presented in the results section in a discussion of how the liminal middle court space facilitated the architectural manifestations of power: exclusivity, subordination, and procession.

### Exclusivity and Restriction

The exclusive nature of the M10A structure is exemplified in its walls. Each discrete space in the structure is separated by two meter high walls. The highest walls, at least in how they were experienced, were the walls dividing the levels of the structure or courts. The AR-170 wall stood 2.4 meters (when standing in the lower court plaza) – effectively hiding any activities taking place beyond. The only way through this wall was through three very narrow doorways. In fact, with the possible exception to the main structure entrance in the lower court, all doorways and passages in the structure appear to have been extremely narrow – amplifying the element of exclusivity produced by walled off spaces.

The two flanking gallery rooms of the middle court also appear to have been exclusive spaces. These narrow rooms appear to have been partially divided internally by the construction of *quincha* cane wall partitions. This division may have been an attempt to provide privacy if part of these galleries were used as a bathroom (implied by the coprolite-filled holes in Cuarto 61). If the southwestern gallery was indeed used as a bathroom either as a simple functional bathroom or some ritual purpose it was done selectively.

The most exclusive area of the structure was clearly the upper court, and architectural elements in the middle court ensured this restricted exclusivity. Cuarto 63 (central staircase architectural suite) confirmed the exclusive nature of the upper court. The tall monument and short adobe wall (AR-233) blocked an axial approach to the

extremely steep central staircase. Finally, entrance to the upper court was barred by a swinging door which also acted to prohibit any view of the activities taking place inside.

### Subordination and Viewpoint

The overall structure of the M10A structure is a prime example of subordination. The further one travels into the interior of the structure, the higher up one travels in elevation (i.e. someone standing in the middle court is elevated above someone in the lower court).

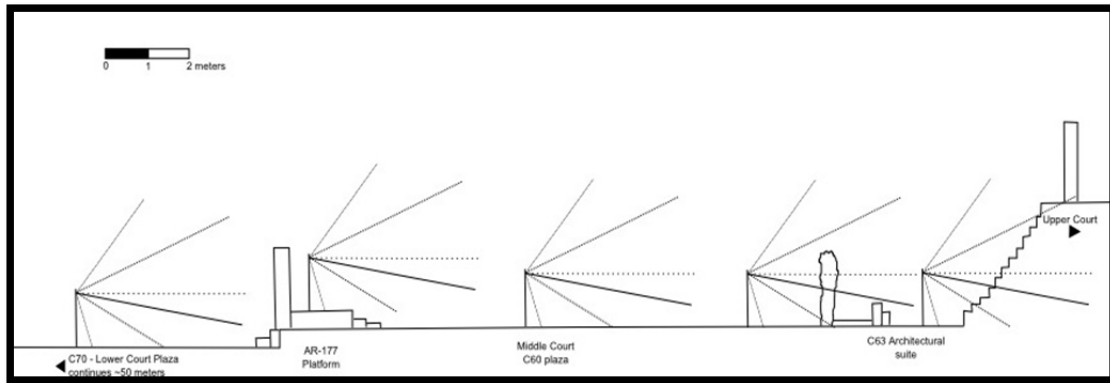
This upward transition from the lower to middle court is exaggerated by the three portal platforms to the middle court. These platform entrances are interesting, regarding subordination, for a number of reasons. Obviously the added height of the platform would elevate one entering the middle court that much further above those still in the lower court. However, more interestingly is the fact that someone standing on one of these platforms would also be elevated above those standing in the middle court. This would seem to indicate that a higher emphasis was placed on the transitional action of entering the middle court space, as opposed to the actions taking place in the open plaza space of the middle court.

The portal platforms into the middle court appear to have acted as extended thresholds which brought visitors into the transitional middle court architectural space. Upon entering the middle court it may be said that visitors were “betwixt and between” (Turner 1964) - positioned in an architectural space between the public lower court below and the private upper court above. Here van Gennepe’s (1960[1909]) rites of passage can be seen physically manifested in the middle court architecture. Stepping up onto the

portal platforms and out of the lower court would act as a *preliminal* rite of separation – as visitors were transported out of the public space below. Stepping down into and traveling through the middle court space would act as a *liminal* rite of transition. Upon exiting the middle court the portal platform would again act as rite of passage this time as a *postliminal* rite of reincorporation - as one stepped back down into the public space of the lower court.

There are also prominent elements of subordination manifested in the design of the Cuarto 63 central staircase landing architectural suite. Here, the likely tall monument and the extremely steep staircase seem to promote subordination. A person approaching the staircase landing area would first come into visual contact with the monument – likely taller than the average person. Next one would reach the central staircase – which was extremely steep (greater than a 55 degree incline).

Elements promoting subordination are better understood using Moore's (1996) method for conceptualizing scale. Figure 41 shows a profile schematic of the central axial line of middle court architectural area. Depicted on the profile are five figures representing possible locations to stand in the architectural space. The figures are shown with the angles of vision ranges, including: upper and lower limits of vision, optimal eye rotation, normal line of site, and the direct 90 degree horizontal.



*Fig. 43. Profile of the middle court architecture showing several standing locations along the central axis – with angles of visual perception.*

As explained in the methodology section, while elements within 30 degrees upwards are within the optimal eye range – anything above 10 degrees of the normal line of sight involves some stress (i.e. it becomes more difficult to walk and look upwards). This stress is how others, like Nash and Williams (2008), identified subordination in architecture. Here, we can see the central portal platform forcing those in the lower court to look upwards – this is also true for those standing in the middle court plaza looking towards the portal platforms. It also creates a useful depiction of how the Cuarto 63 monument may have been experienced – from a distance it would have been well within the normal line of sight; however as distance is closed between the viewer and the monument, it would become necessary to upwards and assume a subordinate position. Based on this visualization, standing at the base of the central staircase would be the most subordinate position in the middle court. At the base of the staircase one would have to crane one's neck upwards (an angle greater than 55 degrees), only to possibly see the top step. From this position, looking straight forward, the upper court walls would likely be out of sight – manifesting an aura of mystery as well as subordination.

### Procession and Legitimization

Archaeologically, the actual architecture only tells part of the story- a skeletal outline. Rituals performed within these built environments fleshed out powerful experiences, evoking social memory and reproducing certain social forms. Procession has been well documented as an important element in Andean ritual – past and present. Tiwanaku is no exception. Many have interpreted Tiwanaku architecture and iconography as facilitating and depicting procession. William Conklin has argued that Tiwanaku architecture was meant to be viewed from eye-level, through procession – emphasizing the horizontal (1992:282). Goldstein has already shown that the Omo Temple facilitated ritualized movement (Goldstein 1993, 2005). However, the exact nature of this procession, especially as it pertains to the middle court, has yet to be identified.

Doorways are crucial architectural elements for ritual and particularly processional activities. Michael Moseley suggests that “people are expected to change their attitudes and behavior upon converging and passing through gateways, and portals divided mundane from sacrosanct space” (1992:206). Recent psychological studies have even suggested that transitional spaces, representing changes in environment (i.e. doorways), can affect event cognition and specifically memory (Radvansky et. al 2011) – essentially altering your perception and memory of events in a given space. Gateways have long been identified as an essential element in the Tiwanaku architectural cannon (Goldstein 1993; Protzen and Nair 2002).

The three doorways into the middle court represent a transitioning from the very public lower court space into a more private sized space and one passage closer to the exclusive upper court. Ceramic densities (Table 3) and frequencies indicate possible differential use of these doorways.

*Table 4. Density of Tiwanaku ceramic sherds (# of sherds per cubic meter) in middle court areas which facilitated procession.*

	<u>Units excavated in area</u>	<u>total area excavated m<sup>2</sup></u>	<u>% of area excavated</u>	<u>volume m<sup>3</sup></u>	<u>total Tiw. sherds collected</u>	<u>avg. sherd density</u>
<b>AR-174</b>	4	64	100	9.59	234	24.4
<b>AR-177</b>	3	48	85	9.59	311	32.4
<b>AR-178</b>	1	16	65	2.52	203	80.5
<b>C63</b>	2	16	80	7.91	1359	80.03

The density table (table 4) does not show much difference between the southwestern and central platforms – whereas the northeastern platform produced a particularly high density of ceramics. A significant difference can be observed in the central staircase landing area (C63). Here ceramics sherds were four times as dense as the other access points in the middle court – with almost seventeen ceramic sherds per cubic meter. As noted above over 65% of this Cuarto 63 assemblage was composed of fragments of miniature plainware vessels. It is difficult to know what the function of these vessels may have been. However, it is not likely that the primary use of these vessels were to be deposited at the base of the central staircase; while fragmented, the miniature vessels do not appear to have been crushed under foot traffic.

A very interesting pattern observed in the ceramic assemblage is the distribution of the recovered blackware sherds. As noted earlier, there is a significant concentration



of blackware associated with the southwestern portal platform. The high density of Tiwanaku blackware associated with this platform (AR-174) could imply a differential use. Blackware, generally associated with the Omo-style material culture has been extremely rare in the M10A context – which has been defined as a Chen Chen-style structure (Goldstein 1993).

Kolata has interpreted iconography on the Bennett stela (Fig. 44) as evidence that the Tiwanaku “ruling elite, ideally, harmonized the potentially disruptive competition between farmer and herder by formally synchronizing productive strategies” (2002:197). Perhaps the differing platform ceramic frequencies, indicate *ayllu* affiliation; or as Kolata suggests, subsistence-based identities. One possibility is that this differential use involved participation by the Omo colonists. The Omo and Chen Chen style colonists appear to have maintained separate settlements, cemeteries, and identities, but perhaps the M10A structure is where they came together to use Kolata’s words “formally [synchronize] productive strategies” (202:197).

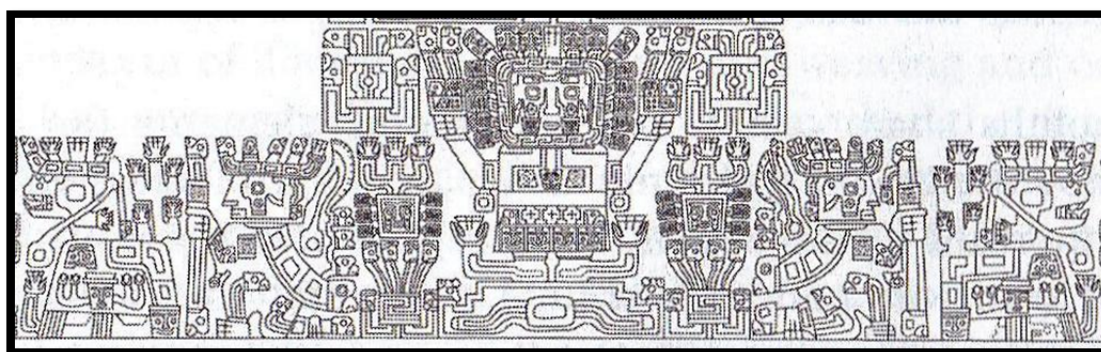


Fig. 44. Iconography from the Bennett monolith – depicting procession (after Janusek 2010:139, adapted from Posnansky 1945).

Clearly, this is but one possible explanation for the blackware distribution; however, there are some interesting correlations with the Aymara conceptualization of spatial organization and symbols as outlined by Bouysse-Cassagne (1986). According to Bouysse-Cassagne, for the Aymara, the southwest is associated with right-handedness, the *puna*, and therefore pastoralism. Conversely, the northeast is associated with left-handedness, the eastern *yungas*, and agriculture. This type of spatial understanding would seem to support the claim that higher blackware densities indicate that the southwestern entrance was used by Omo pastoralists.

### **The Omo Temple – a Phenomenological Walk-Through**

This description is meant to give the reader some understanding of how the temple architecture would have been experienced during its peak use, in the latter half of the first millennia A.D.

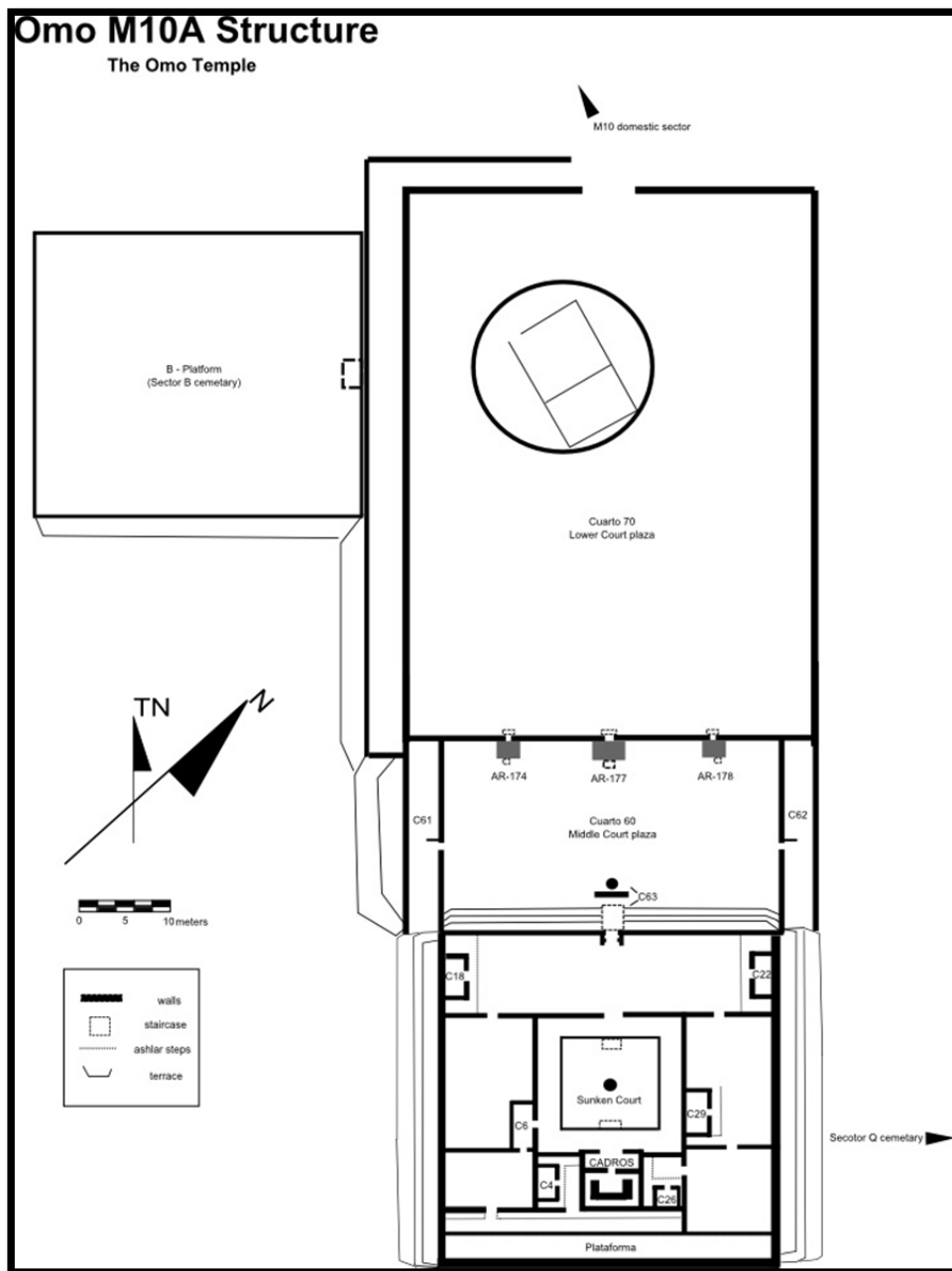


Fig. 45. Updated schematic map of the Omo M10A monumental structure.

The M10A structure would have been visible from anywhere in the Omo M10 habitation sector. The three-tiered structure would have been an impressive sight – it’s red-painted, two meter high walls standing out against the dulled desert landscape behind it. Standing at the southeast edge of the habitation sector, inhabitants and visitors would

have an unobstructed view of the structure. Although there is no surviving evidence, there was likely a manicured path or road leading from the village or possibly skirting around it, to the central entrance of the lower court plaza – the sole entrance to the temple. There have been no excavations or subsurface examinations of the lower court entrance, so little is known about the exact form of this doorway, in addition, much of this part of the lower court has been badly damaged by water-caused erosion. However, the entrance appears to have been relatively wide (3-5 meters), and was likely an open gateway. If this gateway was anything like other doorways in the structure it was likely spanned by a large lintel. These lintels were made to look like stone and were constructed by stringing together 2-5 wood beams and then coating them with layers of plaster, which was then smoothed over to look like a finely carved stone lintel. The importance of these architectural elements will be discussed in further detail below.

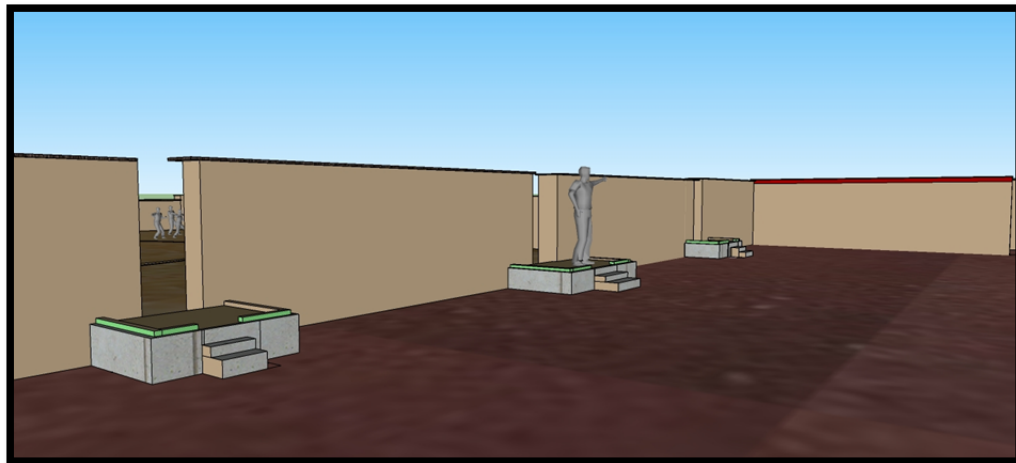
Upon crossing through the lower court gateway visitors would be thrust into the microcosm of Tiwanaku provincial ideology. The lower court was a 42 x 57 meter open plaza (Cuarto 70). While there were no rooms or even walls in the lower court, there are some internal architectural features. Set into the floor in the center of the lower court are a series of field stones roughly set into a diamond shape. It is difficult to interpret the function of these stones; however they do not appear to have served as foundation stones to a structure. Stretching in a circular ring around these stones is a shallow depression with a diameter of approximately twenty-three meters. Like the stones it surrounds, the exact function of the depression is unclear, however it has the appearance of a well-worn trail and has been hypothesized to be a processional or dance path used in public rituals (Goldstein 2005:289).

Continuing on from the architectural features in the center of the lower court, visitors would approach the impressive wall which separated the lower and middle courts. This wall was approximately 2.4 meters in height, and was composed of the 0.4 meter high middle court platform and an approximately two meter high adobe wall. Like the majority of the wall in the temple, this wall was plastered over, with at least a portion painted red. The side of the wall facing the lower court was also adorned with a finely cut ashlar façade – which formed the foundation of this wall. None of these stones are remaining today, but they have left clear impressions in the prepared mud floor. In addition a hearth was placed directly into the floor in the southern corner of the lower court – assuming symmetry, there was likely a hearth placed in the opposite corner of the lower court as well. These hearths were also likely incorporated into the public lower court rituals.



*Fig. 46. View of AR-170 and middle court doorways from the lower court plaza.*

This wall was punctuated by the presence of three separate entrances (Fig. 46) – the three portal platforms. One was aligned with the lower court entrance on the center axis (AR-177) and symmetrically placed doors on either side - to the right, the southwestern portal platform (AR-174) and to the left, the northeastern portal platform (AR-178). To enter any of these doorways, visitors would have to proceed upwards to two distinctive levels. The first would be to the middle court floor surface (approximately 40cm). The second would be onto a 40cm – 50cm platform which sat behind each of the three doorways. At this point visitors would effectively be separated from the public space below. These rectangular platforms directly abutted the middle court side of the wall. It appears that the three remaining sides were plastered and painted with green pigment and faced with finely cut ashlar. The two flanking platforms had approximately the same dimensions (3 x 2.4 meters). The central platform was a bit larger (3.6 x 2.4 meters), and approximately the same height as the other platforms (Fig. 47). As with the lower court entrance no fragments of lintels, like those found in the upper court, were recovered during excavation of any of these entrances – so it is unclear if these entrances were capped gateways or open entrances.



*Fig. 47. Portal platform entrances as seen from the middle court interior.*

Proceeding through one of the three entrances visitors would have a clear view of the 20 x 26 meter central patio of the middle court (Cuarto 60) – standing almost half a meter above it. Like the lower court, the central patio of the middle court was surrounded on all sides by approximately two meter high adobe walls and boasted a prepared clay floor. Flanking both right and left sides of the middle court plaza were two narrow gallery rooms – to the right the southwestern gallery (cuarto 61) and to the left, the northeastern gallery (cuarto 62). These galleries ran the entire length of the middle court, but were only roughly four meters wide. A quinchacane wall ran partway across each gallery, just to one side of the doorway, effectively dividing each gallery into two spaces. The function of these galleries is still unclear, but at least one side (northwest) of the southwestern gallery (C61) was used as a bathroom at one point in time and some evidence suggests this room may have been involved in textile manufacturing.

Visitors entering through the central portal platform and continuing along the structure's central axis would quickly come face-to-face with an imposing monumental

post or monolith statue. While no such monolith is present now or noted historically, a prepared pit situated precisely on the central axis likely served as the foundation in which a monolith would have been placed. This monolith stood guard over the central and sole entrance to the restricted upper court. To enforce this restriction a short (approximately 50 centimeters in height) adobe wall was erected behind the monument. There is some evidence that this retaining wall may have been “U”-shaped – very similar to the CADROS altar feature in the inner sanctum of the upper court (brief description below). The monument and adobe wall effectively blocked any procession along the temple’s central axis - which until this point was an unbroken path.

Upon reaching the opposite side of the monument and adobe wall, visitors would face the impressive central staircase leading to the upper court. Little of this feature still exists, save for the three, massive stone slabs which composed the lowest steps in the staircase. Unlike the vast majority of the stones which composed the M10A architecture these stones were large slabs of igneous stone – an extremely rare local resource (possibly imported). Either side of the staircase was adorned with an additional totem, post or statue (indicated by carefully prepared foundational pits) – long since removed from the site. The extremely steep staircase ascended the three meters to the upper court. With the exception of the staircase, the southeast face of the upper court platform was composed of three terrace levels – likely also each adorned with an ashlar façade.

Reaching the summit of the staircase, visitors would be faced with the central gateway to the upper court. This doorway was constructed using a classic *chambranle*-style, double-recessed frame (Goldstein 2005:290; see also Protzen and Nair 2002) – making the entrance set back, past the front face of the upper court wall. The most



impressive feature of this entrance was that it possessed a swinging door – which effectively blocked the viewing of any activities taking place within the upper court. While the door itself is no longer present – evidence of its existence is. The three threshold stones are still in situ, one possesses a “deep circular pivot hole” with the remaining two bearing “semicircular grooves” (Goldstein 2005:290). Passing through this doorway, visitors would enter the inner sanctum – the upper court. Interestingly the central staircase also offered access to the terrace facing of the upper court. This evokes images of historic and contemporary celebrations in Cusco; where thousands gather on the terraces of the mighty Inca fort, Sacsayhuaman, during the annual *Inti Raymi* festival (Fig. 48).



*Fig. 48. Spectators gathering on the terraces and walls of Sacsayhuaman during Inti Raymi festivities (Photo R. I'Anson 1986).*

Recent excavations on the terraces of the Akapana pyramid at Tiwanaku also support ritual utilization of this type of architectural space - including, ritual pot smashes (Alconini 1995) and even human sacrifice ( Knudson et al. 2004).

Given the complexity of the upper court's architectural layout and that the focus of this paper is primarily the middle court platform, the description of the upper court will be abbreviated – only describing crucial elements. After entering through the central gateway visitors would pass through a narrow gallery which spanned almost the entire length of the front (southeast side) of the upper court. Continuing through this gallery, along the central temple axis visitors would pass through another recessed doorway and would be standing on the elevated surface which surrounded the sunken court, facing another impressive monolith. The sunken court (approximately 10.5 meters square), was likely one of the focal points of the Omo M10A structure. As with many *altiplano*-derived architectural complexes (Cohen 2010; Goldstein 1993) the sunken court was likely the location for some of the most important ritual activities that took place within the temple.

Passing through or walking around the sunken court visitors would reach a third impressive *chambranle*-style gateway aligned on the central temple axis. This doorway led to a very small chamber-style room – the true inner sanctum of the structure. This small, restricted chamber held a “U”-shaped adobe feature (CADROS, AR-37). This feature was approximately 0.58 meters in height and impressions left in the clay floor show evidence that it was encased in a double-row of finely cut *calicanto* ashlar. The exact nature of this feature is unclear, but it may have served as an altar or throne. The small chamber and U-shaped structure represent the end of the line in the central axis

processional path, and one can imagine the most sacred and restricted of spaces within the structure.

While the architectural features aligned on the central axis may have been the focus of processional-type activities, there are many other important architectural features in the upper court. There were six roofed structures scattered throughout the upper court – of varying size and ease of access (Cuartos 4, 6, 18, 22, 26, and 29). In addition to these small roofed structures the rest of the upper court is composed of a series of small open patios, narrow corridors, and a raised platform which runs the entire length of the very back (southeast) of the structure. It is possible, if not likely, that different people had differential access to sections of the upper court and that a very diverse set of activities were undertaken in these restricted areas.

It is important to note here that there appears to have been three possible routes through the upper court space – the central axial path would take visitors through the sunken court and end in the CADROS alter chamber. The two flanking routes would take visitors through a series of small patios – each with access to at least two of the small roofed structures. It is not clear what the function of these different routes may have been or if certain individuals had access to certain routes. However, it does seem apparent that these three possible routes through the upper court correspond with the three entrances to the middle court – at least in organization of procession.

Rituals and activities in the upper court complete, visitors would retrace their steps down the central staircase and through the middle court portal platforms would be reincorporated into the public lower court space below.

## VI. Conclusion

As the study of the built environment and monumental architecture has evolved and its complexities realized, it has become a difficult field to negotiate – especially as it plays out in the archaeological reality. The understanding of Tiwanaku architecture is no exception – as Goldstein (2005) suggests, “a more complex tension between public spectacle and private ceremony was the principal theme of Tiwanaku public architecture, and it is seldom possible to separate these two ideal types in architectural reality” (275). I propose that in the provincial Tiwanaku M10A monumental structure, the middle court represents one of these rare examples of a constructed space in which the collision between private and public can be observed in architectural reality. Here, visitors would transition from the open public space of the lower court plaza to the liminal social space in the middle court before traveling to the intimate upper court. Here visitors were “betwixt and between” (Turner 1964) – occupying a space between public and private, profane and truly sacred. Those allowed into the middle court entered one of three possible doorways. Ceramic distributions suggest that these entrances had differential use. Perhaps each of the flanking entrances was associated with *ayllu* identities of the Omo and Chan Chen colonists – as the distribution of Tiwanaku, Omo-style blackware seems to indicate. Following this line of reasoning perhaps then the central entrance represents something similar to the ethnohistoric Aymara concept of *taypi* – or the center. This would appear to contradict the dominant dualism-based interpretations of ancient Andean monumental architecture. However, as noted by Bouysse-Cassagne “[b]ehind

the appearances of Aymara dualism and in the Inca system, we can detect, as though in a palimpsest, the rules of a society that understood spatial relationships in triadic terms: two elements and a center” (1986:221). Perhaps then, the access patterns to the middle court do not represent an exception to Andean dualism, but a clear example of an underlying tripartite understanding of space that has been overlooked in this region.

Architectural elements in the middle court supported a relatively intimate space, promoted the exclusivity of the upper court and facilitated procession. The middle court also possessed a significant subordinate element; those transitioning from the lower court would stand above all those in not only the lower court but the middle court as well – by the employment of portal platform entrances. The Omo Temple represents the space where the Tiwanaku colonists of Moquegua would come to together; both to negotiate local identities and reproduce their highland values. The middle court represents the liminal space where visitors would both define their differences and confirm their allegiance as colonists in a faraway land.

**Appendix A**

<b><i>Unit</i></b>	<b><i>Northing</i></b>	<b><i>Easting</i></b>	<b><i>m<sup>2</sup></i></b>	<b><i>m<sup>3</sup></i></b>
<b>304</b>	40	16	16	6.588
<b>309</b>	40	36	16	7.102
<b>310</b>	44	0	16	2
<b>314</b>	44	16	8	1.552
<b>319 amp1</b>	44	36	8	0.716
<b>329</b>	48	36	16	3.241
<b>330</b>	52	0	16	1.173
<b>330 amp1</b>	52	996	16	2.586
<b>340 amp1</b>	56	996	16	3.466
<b>341</b>	56	4	16	1.995
<b>342</b>	56	8	16	2.013
<b>344</b>	56	16	16	3.491
<b>345</b>	56	20	16	2.325
<b>346</b>	56	24	16	2.122
<b>347</b>	56	28	16	2.527
<b>350 amp1</b>	60	996	16	5.943
<b>351</b>	60	4	16	2.471
<b>352</b>	60	8	16	3.12
<b>354</b>	60	16	16	3.783
<b>AR-174/175 (internal)</b>				0.247
		<b>Total</b>	<b>288</b>	<b>58.46</b>
<b><u>Total Area in Middle Court</u></b>				
<b>624 m<sup>2</sup></b>				<b><u>%Excavated</u></b>
<b><u>Total Area Excavated 2011-12</u></b>				<b>46.15%</b>
<b>288 m<sup>2</sup></b>				

## **Appendix B**

<b><u>Feature</u></b>	<b><u>Type</u></b>
AR-93	wall foundation (interior)
AR-94	pit
AR-95	coprolite hole
AR-96	coprolite hole
AR-97	coprolite hole
AR-98	coprolite hole
AR-99	coprolite hole
AR-100	coprolite hole
AR-101	coprolite hole
AR-102	coprolite hole
AR-103	coprolite hole
AR-104	coprolite hole
AR-105	coprolite hole
AR-106	coprolite hole
AR-107	coprolite hole
AR-108	coprolite hole
AR-109	coprolite hole
AR-110	coprolite hole
AR-111	coprolite hole
AR-112	coprolite hole
AR-118	coprolite hole
AR-119	coprolite hole
AR-120	coprolite hole
AR-121	post
AR-137	coprolite hole
AR-138	coprolite hole
AR-139	coprolite hole
AR-140	coprolite hole
AR-141	coprolite hole
AR-142	coprolite hole
AR-143	coprolite hole
AR-144	coprolite hole
AR-145	post
AR-148	cist/shaft
AR-170	wall foundation (retaining)

<b><u>Feature</u></b>	<b><u>Type</u></b>
AR-171	hearth
AR-172	wall foundation (enclosure)
AR-174	portal platform
AR-175	stain
AR-177	portal platform
AR-178	portal platform
AR-179	wall foundation
AR-230	midden deposit
AR-232	staircase
AR-233	wall (free standing)/alter
AR-234	wall foundation (enclosure)
AR-236	wall ( <i>quincha</i> )
AR-237	monument pit
AR-238	monument pit
AR-270	post
AR-271	post hole

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