

## **FORTIFIED SETTLEMENTS AND THE ORIGINS OF CONFLICT IN THE ACARI VALLEY, PERU**

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*Archaeological research carried out in the Acari Valley of the Peruvian south coast region reveals that the first half of the Early Intermediate Period (ca. 50 BCE – 350 CE) marked the emergence of the first fortified settlements in the valley. Archaeological excavations carried out at one such site resulted in the unprecedented finding of several dozen human remains that exhibited multiple signs of trauma. Such evidence, in conjunction with data on settlement patterns and site configuration, indicate that the first half of the Early Intermediate Period was a time of widespread conflict in the Acari Valley. The magnitude of the violence in which the inhabitants of the various fortified settlements of Acari were involved is manifested not only in the effort invested in building defensive barriers to protect the settlements, but also in capturing prisoners who eventually were decapitated.*

A common argument is that ‘warfare has been with us for a long time’ (Allen & Arkush 2006:1). Despite such recognition, anthropologists and archaeologists continue discussing ‘how far back patterns of violence can be traced in human societies’ (Arkush & Stanish 2005:3). This question is not as simple as it appears to be, because violence occurs at different scales. Furthermore, the material manifestations left behind by such human actions are not homogeneous or straightforward, thus the archaeological interpretation of the evidence is another major problem in archaeology. Therefore, scholars disagree as to what accounts, and what does not account, as evidence of warfare.

Western South America is one of the regions where warfare is seldom discussed. This is surprising considering that the initial ideas developed by Robert Carneiro in the late 1960s regarding warfare were based on data coming from western South America (Carneiro 1970). Besides the problems faced by other researchers investigating the issue of warfare in other regions, any researcher discussing warfare in the Andes must also deal with the challenging issue of *tinku*, a kind of ‘ritual battle’ that was seemingly common at the time of Spanish conquest and during colonial times (Tung 2012:139). *Tinku* fights are still practiced in modern times, but the antiquity of these ritual battles remains unclear. Within Peruvian archaeology, warfare is seldom an issue of major discussion, leaving the impression that it played no role in the development of complex social organizations.

Here I discuss archaeological settlement patterns and biological data coming from the Acari Valley, on the south coast of Peru, to determine the evidence for, and the intensity of, conflict in the region during the first half of the Early Intermediate Period (circa 50 BCE – 350 CE). For the particular case of the south coast of Peru, warfare is discussed only when dealing with the so-called Nasca trophy heads (Drusini & Baraybar 1991; Proulx 2008; Silverman & Proulx 2002). Donald Proulx (1989, 2006:35), one of the leading researchers of the trophy heads, has argued that trophies are the heads of enemy combatants secured in battle fields. Sex and age

ratios for trophy heads coming from middle Nasca contexts, support Proulx' argument, as the heads are mainly young males (Verano 1995:214). Thus, Proulx (2006:35, 2008:579) argues that the 'Nasca were a highly warlike society.'

However, the issue of the trophy heads is not as plain as it appears to be. Indeed, several researchers have acknowledged that the Nasca culture experienced significant changes throughout its development, changes that appear to be mirrored in its art. For instance, in early Nasca times (50 BC – 300 AD) trophy heads are mainly associated with supernatural agents, such as the Anthropomorphic Mythical Being, the Killer Whale, or the Horrible Bird (Browne, Silverman & Garcia 1993:276-278; Proulx 2001:121). In contrast, in middle and late Nasca times (300 – 550 AD), painted images depict aggression among human actors and these include scenes of human decapitation.

In part because of these differences, and in part because of the lack of convincing archaeological evidence for military conquest in early Nasca times, some argue that warfare likely was not the source of the early Nasca trophy heads (Browne, Silverman & Garcia 1993: 290). Furthermore, not a single early Nasca site can be identified as being fortified; instead, studies carried out by different researchers indicate that early Nasca settlements were small unfortified villages dispersed along the course of the rivers (Silverman 2002:147; Proulx 2006: 35, 2008:575; Van Gijseghem & Vaughn 2008:117; Reindell 2009:451-452; Reindell & Isla 2006: 172). It appears that early Nasca was not a militaristic society and that trophy heads were more likely secured by means other than warfare. I must stress that scholarly research acknowledges that fortifications, in addition to nucleated settlements, buffer zones, weapons, and skeletal trauma, are regarded as one of the most obvious indicators of warfare or the threat of war (Arkush & Stanish 2005:15; Allen & Arkush 2006:7; LeBlanc 2006:443; Flannery & Marcus 2003:11803).

For the remainder of this talk, I would like to present evidence coming from Acari, a valley regarded as being the southern boundary of the region known as the Peruvian south coast. The available archaeological information points that, in contrast to the valleys to the north, in Acari decapitation was carried in the midst of widespread violence (Valdez 2009).

In 1954 Dorothy Menzel and the late Francis A. Riddell carried out the first archaeological research at Tambo Viejo and immediately observed its fortified nature (Valdez 2012). As they surveyed the lower section of the valley, they also came across other similar sites. More importantly, at all these sites they observed the presence of a similar type of ceramics, suggesting that all belonged to the same time period. In their 1954 field report, Menzel and Riddell noted that the western side of Tambo Viejo was protected by two large parallel walls. In addition, they pointed out that several mounds, some about 5 m high or higher were present at crucial corners or turns in the ridges.

At the time Menzel and Riddell were conducting field work at Tambo Viejo, John H. Rowe visited Acari and inspected the surrounding walls of the site. Along with Menzel and Riddell, Rowe also visited the other sites with similar features to Tambo Viejo. In his 1956 report that appeared in *American Antiquity*, Rowe described in some detail the walls of Tambo Viejo, noting that the site was protected by a large fortification wall built of cobble stones and adobes. The other sites were only briefly mentioned, but Rowe (1956) stressed that these were equally fortified.

In the following years, Rowe returned to Acari on several occasions and revisited the fortified settlements. On the basis of evidence gathered in the course of those field trips, Rowe

discussed his main findings in a seminal paper published in 1963. In that paper Rowe (1963:11-12) interpreted the surrounding walls of Tambo Viejo (and of the other sites) as 'fortifications.' In addition, Rowe identified a local ceramic style that he named the 'old local tradition.' Rowe concluded that the fortified sites of Acari were due to the Nasca invasion. Later research did not find support for an invasion, however.

Current research indicates that a total of eight fortified settlements existed in the lower section of the Acari Valley (Valdez 2009:403). One of them was never occupied or was deserted shortly after. All these sites are associated with the 'old local tradition' ceramic style earlier identified by Rowe, now named the Huarato ceramic tradition (Valdez 1998). Some early Nasca artifacts are present at some of these sites and thus indicate that they were contiguous with early Nasca.

Without exception, all these settlements were completely protected by large walls, and when possible natural barriers, such as cliffs, were also incorporated into the defensive system (Valdez 2012). In some instances, the walls still stand over 2.5 m in height and about 2 m in width. In an effort to learn more about these large constructions, small sections of three of these sites were excavated. Excavations revealed significant variation in wall construction from site to site, although the same construction materials were used in all the cases. More significant is that initial available absolute dates indicate not only that these sites were built around the same time, but more importantly that the walls were established early during the Early Intermediate Period.

The walls were erected using cobble stones and adobes. In two cases, the walls consist of a combination of an outer wall, usually built of two alignments of cobble stones set in mud mortar, and an inner wall, usually built of two alignments of adobes also set in mud mortar (Valdez 2010). On average, the width of the walls was about 1 m. In between the outer and inner walls there was a small gap that was subsequently filled with dirt or organic remains, thus transforming the two smaller walls into a single but much larger wall. Because cobble stones are available along the course of the river, they were the preferred construction material. However, to complete the massive walls it was necessary to transport a large number of cobble stones, a task that undoubtedly required a huge investment of human labor. Such an effort strongly suggests that the construction of the walls was critical, the most likely reason being the urgent need for security (Elliot 2005:299).

It is extremely difficult to determine exactly how much time and energy were invested in establishing the surrounding walls. Acknowledging such difficulties, some estimates can be put forward to gain some sense of the overall labour cost of building these defensive barriers. If for a wall of one meter long and 2.5 meters high a total of 20 cobble stones are needed, to complete a wall 1500 m long – such as the wall of the western side of Tambo Viejo – an estimated of 30,000 cobble stones had to be transported. Considering that the total length of the several walls present at Tambo Viejo is 4,150 m, an estimate of 83,000 cobble stones had to be transported. Most cobble stones used in erecting the walls of Tambo Viejo are of large size and weigh on average about 30 to 40 kilograms. This implies that on every trip a person would carry only a single stone. Assuming that one person would transport 20 cobble stones per day, the necessary cobble stones to build the walls of Tambo Viejo had to be transported by approximately 4,150 individuals in a day.

To this one must add the effort to dig dirt, transport water, prepare the mud mortar, and finally erect the stone wall. All these tasks probably would easily double (8,300 individuals in a day) the total energy invested in transporting the cobble stones. Finally, the adobe walls also

required labour to dig dirt, prepare mortar, to make bricks and the actual wall construction. The effort to build the adobe walls probably was as costly as building the stone walls, thus duplicating (16,600 individuals in a day) the overall cost. The total amount of human labor needed in order to build the surrounding walls of a site such as Tambo Viejo would be approximately that of 33,200 individuals or about 550 individuals working for 60 days. If these estimates are correct, for a small scale society with stone-age technology, building defensive barriers was clearly a huge investment of time and energy. Such effort clearly indicates a non-peaceful situation.

To comprehend the pressing needs to invest such an effort, between 2005 and 2006 I carried out archaeological excavations at Amato. Excavations took place inside a centrally located rectangular enclosure and resulted in the unprecedented finding of the single largest concentration of human skeletal remains coming from any known Early Intermediate Period settlement of the Peruvian south coast (Valdez 2009:393). First, excavations uncovered the remains of an elderly male individual who likely died due to natural cause. The body was placed in a seated position, with his lower limbs flexed toward the chest, and the entire body wrapped in a plain textile and tied with a long rope. Several offerings were found in association, including worked *Spondylus* shell artifacts, a necklace, and five sacrificed camelids. Second, at the level of the elderly individual's head, the body of a middle-aged adult male had been placed lying in ventral position, with the legs slightly extended and the arms next to the chest. An intriguing aspect of this finding was that the individual was decapitated.

Finally, elsewhere in the rectangular enclosure several concentrations of skeletal remains of many other individuals were uncovered. In most cases, bodies had been piled one on top of others without any care, and in one instance remains were thrown directly over fire. The most salient aspect yet was that all of them had been decapitated. In several instances, rope was found still tied to the wrists and ankles. This evidence strongly indicates that victims of decapitation were prisoners and that decapitation was a forceful act.

In addition, all the remains were found in an excellent condition; however, textiles or anything than can be recognized as clothing occur only sporadically. This suggests that individuals were naked or partially naked prior to decapitation. The total count of the skeletal remains with evidence of decapitation represents 72 individuals who include all ages and both sexes (Valdez 2012). Absolute dates secured for these contexts indicate that decapitation took place very early during the Early Intermediate Period.

Because no similar finding has been uncovered anywhere in the region, the finding from Amato is the single largest concentration of decapitated human skeletons. Confirming that the absence of the skulls is due to decapitation, there are several cut marks in the uppermost cervical bones (Valdez 2009:400). The presence of cut marks indicates that the heads were removed when the soft tissue was still present (Millner 1995:230; Verano 2001:168; Stodder 2005:240). Furthermore, broken ribs, broken lower limbs and arm bones with parry fractures (Tung 2007) clearly illustrate a violent scenario (Tung 2012). Trauma manifested in the form of unhealed bone fractures also indicates that injuries were sustained shortly before death. Such evidence also stresses resistance and face-to-face combat prior to capture and decapitation. Therefore, available evidence coming from the Acari Valley strongly indicates that severely injured and defenceless individuals, many of them with their wrists and ankles tied, were the ones who were decapitated.

Osteological analysis of the skeletal collection from Amato also indicates that the entire population was targeted (Valdez 2012). This included the elderly, individuals with reduced

mobility due to advanced arthritis, as well as very young individuals, some of whom were newborns or fetuses. This evidence suggests that victims of decapitation likely were secured by sudden attacks and the purpose more likely was to capture as many individuals as possible, regardless of age and sex. In other words, the main purpose may have been to eliminate the entire population of a settlement.

Who were the victims of decapitation is a question that still awaits further studies. However, from the available evidence it can be argued that victims more likely were brought from some adjacent settlement and thus they were locals to the Acari Valley. Another possible scenario is that Amato may have been attacked and its residents defeated, imprisoned, decapitated, and their heads taken away. In either case it seems that conflict was among peoples living in the same valley (Valdez 2009:409). What may have triggered such a violent scenario is a difficult issue to address; nonetheless, considering the settlement data and that Acari is a narrow coastal valley, a possible reason appears to be the shortage of resources, particularly of arable land. Indeed, it is possible that in such a narrow valley the carrying capacity of local resources was exhausted (Rappaport 1967; Read and LeBlanc 2003:74; LeBlanc 2006:438), forcing local residents to take over the already limited arable land of neighbouring settlements. Likewise, years of drought may have resulted in food shortages, thus encouraging unexpected violent attacks. Such action likely found resistance and thus violence. Thus, available evidence suggests that one strategy to overtake the resources of adjacent settlement appears to have been to eliminate the inhabitants by means of sudden attacks, capturing prisoners, and finally decapitating the prisoners.

To deter attacks and/or minimize casualties, defensive barriers had to be established (LeBlanc 1999:65). I believe this is the reason that forced the residents of each Acari settlement to invest so much time and energy in completing such massive projects. Ultimately, available absolute dates not only confirm that all these sites were established sometime at the beginning of the Early Intermediate Period, and thus they are contemporaneous, but also indicate that these are the earliest fortified settlements of the entire region. In summary, the iconography and trophy heads of the Nasca appear to indicate a fascination with violence, but the Early Intermediate Period inhabitants of the Acari Valley had to deal with the consequences of actual conflict.

## References Cited

- ALLEN, M.W. & E.N. ARKUSH, 2006. Introduction: archaeology and the study of war, in *The archaeology of Warfare: Prehistories of raiding and conquest*. Edited by E.N. Arkush & N.W. Allen, pp. 1-19. Gainesville: University Press of Florida.
- ARKUSH, E N. & C. STANISH, 2005. Interpreting conflict in the Andes: implications for the archaeology of warfare. *Current Anthropology* 46:3-28.
- BROWNE, D. M., H. SILVERMAN, & R. GARCIA, 1993. A cache of 48 Nasca trophy heads from Cerro Carapo, Peru. *Latin American Antiquity* 4:274-294.
- CARNEIRO, R.L., 1970. A theory of the origins of the state. *Science* 169:733-738.
- DRUSINI, A.G. & J.P. BARAYBAR, 1991. Anthropological study of Nasca trophy heads. *Homo* 41:251-265.

- ELLIOT, M. 2005. Evaluating evidence for warfare and environmental stress in settlement pattern data from the Malpaso Valley, Zacatecas, Mexico. *Journal of Anthropological Archaeology* 24:297-315.
- FLANNERY, K.V. & J. MARCUS 2003. The origin of war: new C14 dates from ancient Mexico. *Proceedings of the National Academy of Sciences (USA)* 100:11801-11805.
- LeBLANC, S.A. 1999. *Prehistoric warfare in the American Southwest*. University of Utah Press, Salt Lake City.
- LeBLANC, S.A. 2006. "Warfare and the development of social complexity," in *The archaeology of warfare: prehistories of raiding and conquest*. Edited by E.N. Arkush & N.W. Allen, pp. 437-468. Gainesville: University Press of Florida.
- MILLNER, G.R., 1995. An Osteological perspective on prehistoric warfare, in *Regional Approaches to Mortuary Analysis*. Edited by L. A. Beck, pp. 221- 244. New York, Plenum Press.
- PROULX, D.A. 1989. Nasca trophy heads: victims of warfare or ritual sacrifice? in *Cultures in Conflict: Current Archaeological Perspectives*. Edited by D.C. Tkaczuk & B.C. Vivian, pp. 73-85. Calgary: Archaeological Association of the University of Calgary.
- PROULX, D.A. 2001. Ritual uses of trophy heads in ancient Nasca society. In, *Ritual Sacrifice in ancient Peru*, edited by E. Benson & A. Cook, pp.119-136. University of Texas Press, Austin.
- PROULX, D.A. 2006. Nasca society and culture. In, *Nasca, Wonder of the World: messages etched on the desert floor*, edited by. I. Shimada, H. Baba, K. Shinoda & M. Ono, pp. 25-35. TBS, Tokyo.
- PROULX, D.A. 2008. "Paracas and Nasca: regional cultures on the south coast of Peru," in, *Handbook of South American Archaeology*. Edited by H. Silverman and W. Isbell, pp. 563-585. New York: Springer.
- RAPPAPORT, R. 1967. *Pigs for ancestors*. New Haven: Yale University Press.
- READ, D.W. & S.A. LeBLANC, 2003. Population growth, carrying capacity, and conflict. *Current Anthropology* 44 (1):59-89.
- REINDEL, M. 2009. "Life at the edge of the desert – archaeological reconstruction of the settlement history in the valleys of Palpa, Peru," in *New Technologies for Archaeology*. Edited by M. Reindel and G.A. Wagner, pp. 439-461. Heidelberg: Springer – Verlag Berling.
- REINDEL, M. & J. ISLA, 2006. Reconstructing Nasca social and political structures: a view from Los Molinos and la Muña. In, *Nasca, Wonder of the World: messages etched on the desert floor*, edited by. I. Shimada, H. Baba, K. Shinoda & M. Ono, pp. 165-173. TBS, Tokyo.
- ROWE, J.H. 1956. Archaeological explorations in southern Peru. *American Antiquity* 22:135-151.
- ROWE, J.H. 1963. Urban settlements in ancient Peru. *Ñawpa Pacha* 1:1-27.
- SILVERMAN, H. 2002. *Ancient Nasca Settlement and Society*. Iowa City: University of Iowa Press.
- SILVERMAN, H. & D.A. PROULX. 2002. *The Nasca*. Malden, MA: Blackwell.

- STODDER, A.L. W. 2005. The bioarchaeology and taphonomy of mortuary ritual on the Sepik Coast, Papua New Guinea, in *Interacting with the Dead: Perspectives on Mortuary Archaeology for the New Millennium*. Edited by G.F. M. Rakita, J.E. Buikstra, L.A. Beck, & S.R. Williams, pp. 228-250. Gainesville: University Press of Florida.
- TUNG, T.A., 2007. Trauma and violence in the Wari Empire of the Peruvian Andes: warfare, raids, and ritual fights. *American Journal of Physical Anthropology* 133:941-956.
- TUNG, T.A. 2012. *Violence, ritual, and the Wari Empire: a social bioarchaeology of imperialism in the ancient Andes*. University Press of Florida, Gainesville.
- VALDEZ, L.M. 1998. *The Nasca and the valley of Acari: cultural interaction on the Peruvian south coast during the first four centuries AD*. Ph.D. Dissertation, Dep. of Archaeology, University of Calgary, Calgary.
- VALDEZ, L.M. 2009. Walled settlements, buffer zones, and human decapitation in the Acari Valley, Peru. *Journal of Anthropological Research* 65:389-416.
- VALDEZ, L.M. 2010. "Circunscripción medioambiental y decapitación humana en la costa sur del Perú," in *Arqueología en el Perú: Nuevos aportes para el estudio de las sociedades Andina prehispánicas*. Edited by R. Romero and T. P. Svendsen, pp. 131-150. Lima: Universidad Nacional Federico Villareal.
- VALDEZ, L. M. 2012. The earliest fortified settlements of the Acari Valley, Peru. Paper delivered at the 40<sup>th</sup>. *Midwest Annual Conference on Andean and Amazonian Archaeology and Ethnohistory*. The Field Museum of Chicago.
- VAN GIJSEGHNEM, H. & K.J. Vaughn. 2008 Regional integration and the built environment in middle-range societies: Paracas and Nasca houses and communities. *Journal of Anthropological Archaeology* 27 (1):111-130.
- VERANO, J.W. 1995. Where do they rest? The treatment of human offerings and trophies in ancient Peru, in *Tombs for the Living: Andean Mortuary Practices*. Edited by T. D. Dillehay, pp. 189-227. Washington, D.C.: Dumbarton Oaks.
- VERANO, J.W. 2001. The physical evidence of human sacrifice in ancient Peru, in *Ritual Sacrifice in Ancient Peru*. Edited by E. Benson & A. Cook, pp. 165-184. Austin: University of Texas Press.