

JOHN WYMER BURSARY 2016

WAR OR PEACE? ASSESSING THE RISE OF THE TIWANAKU STATE THROUGH PROJECTILE-POINT ANALYSIS

Di Hu¹

A common assumption about warfare is that it is a necessary component of state formation (e.g. Tilly 1985). However, recent research in the southern Titicaca Basin in Bolivia showed a lack of inter-group violence and warfare during early multi-community polity formation, the precursor to state formation (Hastorf 2003). This project traced the evolution of multi-community polity formation in the Taraco Peninsula, Bolivia, before and during the rise of the Tiwanaku state through the analysis of projectile points recovered by the Taraco Archaeological Project. As Tiwanaku's influence rose, the ceremonial centres of the Taraco Peninsula declined in importance. Did Tiwanaku's early rise involve violent expansion?

This project used lithic analysis to help understand an important transition in the southern Titicaca Basin (400 BCE–CE 100) that was accompanied by increased agricultural intensification, larger population centres and, in the northern Titicaca Basin, what is now modern day Peru, warfare (Hastorf 2008; Stanish & Levine 2011). During this transition, the Tiwanaku polity began its rise to regional power. In the northern Titicaca Basin, evidence of organised conflict and warfare appeared around CE 500 during the Middle Formative (Stanish & Levine 2011). Until this project, there was no clear evidence of organised conflict on the Taraco Peninsula in the southern Titicaca Basin during the same time. Based on evidence of the intensification of projectile point production after CE 500 when hunting was at its most infrequent,

Giesso (2000) argued that Tiwanaku warfare did not begin until after CE 500. According to Klink & Aldenderfer (2005), the 4E projectile point appeared in Tiwanaku IV period around CE 400–500 and was an elite style associated with the Tiwanaku. However, from excavations carried out by the Taraco Archaeological Project, we find that the 4E style was present on the Taraco Peninsula at the end of the Middle Formative (*ca* 250 BCE) (Table 1). Does this mean that warfare was a part of Tiwanaku state formation much earlier than previously thought?

I spent three weeks in Bolivia extensively recording the formal variations of the 4E projectile point and verifying the chronological sequence of the different projectile-point styles. I photographed and made detailed measurements of all available projectile points. A Bolivian archaeology student, Daniel Vera, assisted with the analysis. Of the 113 projectile points, 24 were of the Tiwanaku style (4E); five of the 24 Tiwanaku-style projectile points were from contexts with good chronological control, out of which three were from the Tiwanaku I-III period. Thus, we verified that Tiwanaku-style projectile points appeared much earlier than previously thought. The analysis confirmed that Tiwanaku-style projectile points were functionally distinct from the contemporaneous concave-base projectile points. The Tiwanaku projectile points were much more standardised in width and also had a narrower range of thicknesses

Table 1. Titicaca Basin chronology (after Bandy 2004 and Hastorf 2008).

<i>Calendar years</i>	<i>S. Basin Phasing</i>	<i>Basin Phasing Greater Titicaca</i>	<i>Rowe Chronology</i>
1500–1000 BCE	Early Chiripa	Early Formative I	Initial Period
1000–800 BCE	Middle Chiripa	Early Formative II	Early Horizon
800–250 BCE	Late Chiripa	Middle Formative	Early Horizon
250 BCE–CE 300	Tiw. I Qalasaaya	Late Formative I	Early Intermediate
CE 300–475	Tiw. III Qeya	Late Formative II	Early Intermediate

¹Department of Anthropology, 65 Kroeber Hall, UC Berkeley, CA 94720-3710, USA. dihudi@gmail.com

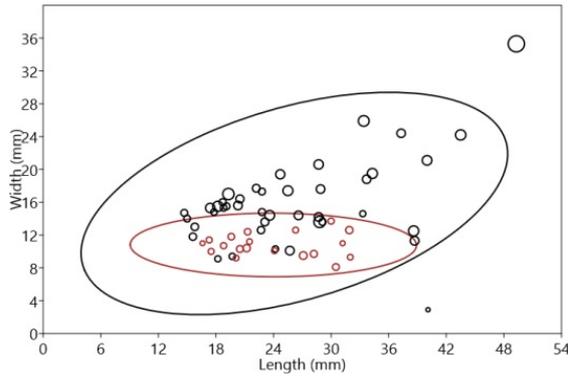


Figure 1. Length, width and thickness of Tiwanaku-style projectile points compared with other style projectile points. Red: Tiwanaku-style points; black: all other points. The size of the open circles is proportional to thickness.

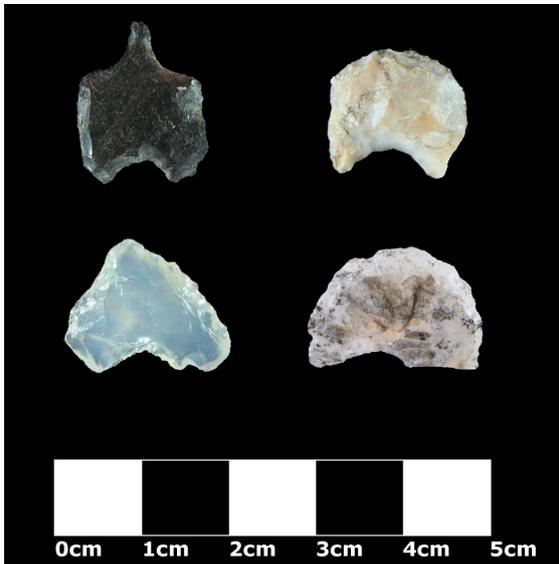


Figure 2. Concave-base projectile points refashioned into other tools.



Figure 3. Tiwanaku-style projectile points exhibiting serrated edges.

(Figure 1). The Tiwanaku projectile points also showed more control and skill in manufacture. The concave-base projectile points, unlike the Tiwanaku-style points, were sometimes refashioned into other tools, highlighting the more utilitarian nature of these artefacts (Figure 2). The traits that make a projectile point suited for killing people and not for hunting are present in the 4E style. Specifically, the projectile point was hafted on the stem, which could be to allow the point to slip off the shaft more easily during extraction from a wound. Projectile points that slip off the shaft during extraction would be less suitable for hunting (Keeley 2014, 24). Projectile points used in warfare generally remain inside the body, increasing the chance of infection and eventual death. Some of the Tiwanaku projectile points also exhibit serration and combined with the stemmed- and barbed-form of the base, would have been ideal for penetrating and remaining in human flesh and bone (Figure 3). The traditional 5D style, on the other hand, is wider, never serrated and more securely hafted, decreasing the chance remaining inside the target when one pulls out the shaft.

ACKNOWLEDGEMENTS

I gratefully acknowledge the financial assistance of the Lithic Studies Society and the Taraco Archaeological Project. Christine Hastorf, Maria Bruno, Daniel Vera, Vanessa Jimenez and Karina Aranda also provided assistance during data collection and Bruce Bradley aided in research design.

REFERENCES

Bandy, M.S. 2004. Fissioning, scalar stress, and social evolution in early village societies. *American Anthropologist* 106(2): 322–333.

Giesso, M. 2000. Stone Tool Production in the Tiwanaku Heartland: The Impact of State Emergence and Expansion on Local Households. PhD Dissertation, University of Chicago.

Hastorf, C. 2003. Community with the ancestors: ceremonies and social memory in the Middle Formative at Chiripa, Bolivia. *Journal of Anthropological Archaeology* 22(4): 305–332.

Hastorf, C. 2008. The Formative Period in the Titicaca Basin. In Silverman, H. & Isbell, W.H. (eds) *Handbook of South American*

- Archaeology II*. Springer, New York, 545–561.
- Keeley, L. 2014. War Before Civilization—15 Years On. In Shackelford, T.K. & Hansen, R.D. (eds) *The Evolution of Violence*. Evolutionary Psychology. Springer, New York, 23–31.
- Klink, C. & Aldenderfer, M. 2005. A Projectile Point Chronology for the South-Central Andean Highlands. In Stanish, C., Cohen, A. & Aldenderfer, M. (eds) *Advances in Titicaca Basin Archaeology – I*. Cotsen Institute of Archaeology, University of California, Los Angeles, 25–54.
- Stanish, C. & Levine, A. 2011. War and early state formation in the northern Titicaca Basin, Peru. *Proceedings of the National Academy of Sciences*: 108(34): 13901–13906.
- Tilly, C. 1985. War Making and State Making as Organized Crime. In Evans, P., Rueschemeyer, D. & Skocpol, T. (eds) *Bringing the State Back*, Cambridge University Press, Cambridge, 169–187.