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THE ART OF THE SPEARTHROWER:
UNDERSTANDING THE ANDEAN ESTÓLICA THROUGH ICONOGRAPHY

BY

ZACHARY R. CRITCHLEY

BA, Franklin & Marshall College, 2012

THESIS

Submitted in partial fulfillment of the requirements for
the degree of Master of Arts in Anthropology
in the Graduate School of
Binghamton University
State University of New York
2018

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Accepted in partial fulfillment of the requirements for
the degree of Master of Arts in Anthropology
in the Graduate School of
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State University of New York
2018

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Abstract

Spearthrower devices held a role around the world as a primary weapon and tool before slowly falling out of favor in certain areas for other projectile weapons. While it is widely accepted that spearthrowers were used by the people of the ancient central Andes, comparatively little research has gone into the role that they had as weapons of war, hunting tools, and objects of ceremonial reverence. In addition, the Andes developed a unique style of spearthrower and have produced many examples of spearthrowers with exceptional craftsmanship, leading me to believe that these tools were given special reverence.

This thesis compiles evidence of who in the Andes was using spearthrowers, and in what contexts, by comparing iconography to existing artifacts. It was determined that they saw the heaviest use among the coastal societies through the Early Intermediate Period and were primarily seen as a symbol in the following years.

Dedicated to Ashley, an amazing woman who moved across the country
so I wouldn't have to do this alone.

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This could not have been completed without friends supporting me the whole way; Dan Deibler, you know what you did. My friends from F&M and my crew from BU, you're too multitudinous to name individually but your influence is on every word here. Special consideration goes to Max Forton, Erin Whitson, Ben Kolb, Alex Velez, Jen Dunn and Amy Szen for long nights of much-needed unwinding; Alysia Leon, Rachael McKaig, and Sudarsana Mohanty, for being fantastic field partners; Pat Petkash and Cyle Abbey, thanks for being my boys; Lúcumá and Barnaby, for being real superlative cats, and Augusto Vásquez, I wish you could've read this. Last, but certainly not least, thanks to my parents, John and Beth, for reading me non-fiction books at bedtime, my sister, Sarah, for always letting me crash on your couch, and my grandmother June, for your constant support.

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Introduction

The spearthrower is a truly cosmopolitan weapon – a long stick with a hook on one end, it was used to throw darts farther, more accurately and more forcefully than if thrown by hand. Past humans used them on almost every continent, with archaeological and ethnographic evidence for their use in Europe, Asia, Oceania, and the Americas. Only Africa has no evidence for its use, surprisingly. Spearthrowers are typically seen as a “primitive” projectile weapon, the middle pit stop in between the hand spear and the bow, though more recent studies have shown that they have their own advantages over other weapon delivery systems (Grund 2017; Hall 2015; Okumura & Araujo 2015). Apart from delivering more force than a bow, they can be operated with one hand, allowing for the off-hand to hold a shield or stabilize a kayak. They are easier to achieve competency with, easier to make, and can function as a multi-tool. Recently, they have gained quite a bit of popularity among the sporting and hobbyist crowds, with large gatherings devoted to atlatry for fun and competition, with modern associations building and selling spearthrowers, both original and replica designs.

While the literature on spearthrowers on most continents is quite well-developed thanks to scholars like John Whittaker, Pierre Cattelain, and Ulrich Stodiek (Cattelain 1989, 1997; Stodiek 1989, 1993; Whittaker 2006, 2010, 2011, 2015), there still remains a large gap in knowledge of spearthrower use in the Central Andes. While spearthrowers (commonly known in Spanish literature as *estólica*) are known and acknowledged in

Andean literature (Custred 1979; Quilter 2008; Owen 1998; Métraux 1949; Donnan 1997; Proulx 2008), there are comparatively very few studies which seek to expand the understanding of the spearthrower as an important and culturally significant tool and weapon (Whittaker & Kamp 2016). Several decorative or ceremonial spearthrowers have been found to support the idea that the spearthrower held cultural significance; these extraordinary artifacts were sheathed in gold or carved so finely that they could not have been used. And yet they were made for some purpose.

Not that this is unique to the Andes, or even to spearthrowers in general. There is a long and well-documented tradition of weaponry being decorated and held to high esteem – after all, hunting tools provide vital sustenance and weapons of war both protect the user’s life and take other lives for cultural glory or expansion. Spearthrowers used for hunting in the circumpolar regions were often carved with designs meant to charm or attract game; indeed, there is also a long-held convention of war weapons being painstakingly decorated to both show individual skill and to dazzle enemy combatants, such as the canoe prows famously described by Alfred Gell (1992).

Spearthrower use in the Andes was documented widely in iconography and works of art, varying from simple depictions of hunting to metal figurines of atlatlists. Contrarily, apart from coastal burials there are relatively few physical artifacts and even fewer ethnographic references at the time of contact, suggesting that while use was once widespread, it fell out of favor at a certain time. There are also differences and similarities between the cultural perception of spearthrowers among coastal peoples versus those in highland communities. This project seeks to scratch the surface of spearthrower use in the Central Andes and further understand the cultural roles that they

played, their perception, and whether or not they acquired a symbolic function. I will perform this through an iconographic analysis informed by study of physical artifacts, comparing coastal to highland cultures and seeing what common threads exist and what differences rear their heads.

Research Questions

Who was using spearthrowers in the central Andes, and at what times? How, and for what? What led to the development of the unique features of Andean spearthrowers? What could they have been used for in ceremony or ritual?

Global Spearthrower Review

The goal of this global review of spearthrowers is to establish the common base characteristics of a spearthrower to assist in identifying them in potentially abstracted artwork. In most areas of the world the spearthrower is known almost entirely from archaeological evidence and fragmentary ethnography. However, people in the circumpolar regions and Oceania continued to use the spearthrower up until very recently, and is still in use among certain populations. As such, these regions have provided archaeologists with comparative data for identification and information on techniques of hunting and war in order to better understand the uses and advantages of a spearthrower. Archaeological data indicates that the heaviest utilization of spearthrowers and similar technology was in western Europe, the Americas, the Circumpolar region (including Siberia, the Arctic, and Greenland), and Oceania, particularly in Australia and Papua New Guinea. Surprisingly, there is no reliable archaeological or ethnographic evidence of spearthrower use in Africa. General studies of spearthrowers have focused extensively on the practical functions of the spearthrower, such as the projectile force, range, and accuracy, as well as the learning curve necessary for effective use (Cain & Sobel 2015; Howard 1974; Kinsella 2013; Maki 2013; Raymond 1986; Petillon & Cattelain 2005; Hutchings & Bruchert 1997; Whittaker 2010, 2013; Whittaker & Kamp 2006)

There are only three characteristics truly necessary for a spearthrower – the hook, sometimes referred to as the spur, the shaft, necessary for the “arm lengthening” that gives the spearthrower its functionality, and the handle, or grip. The design of the handle varies – it may be straight, shaped, have drilled finger-holes, or have leather finger-loops tied on. The design of the spur varies as well – there are two major forms, often referred to as male or female. Female varieties have a groove carved into the spearthrower, which ends in a hook carved out of the material itself. Male spearthrowers have a spur which is made of another material, such as bone, hardwood, stone, or shell, and lashed or hafted onto the distal end of the spearthrower. Some researchers have noted “androgynous” versions, in which a male spur also has a female groove, though these are exceedingly rare (Garrod 1955). The hook is the most diagnostic part of the spearthrower and often a focal point in iconographic representations (Walsh & Morwood 1999). The shaft can vary in width and length, though it rarely exceeds an arm’s length, or 50-60cm (Stodiek 1993; Ciofalo 2012:5). However, some are much longer, such as several types in Australia which can measure 120cm, with specimens reaching up to 200cm (Cattelain 1997:217).

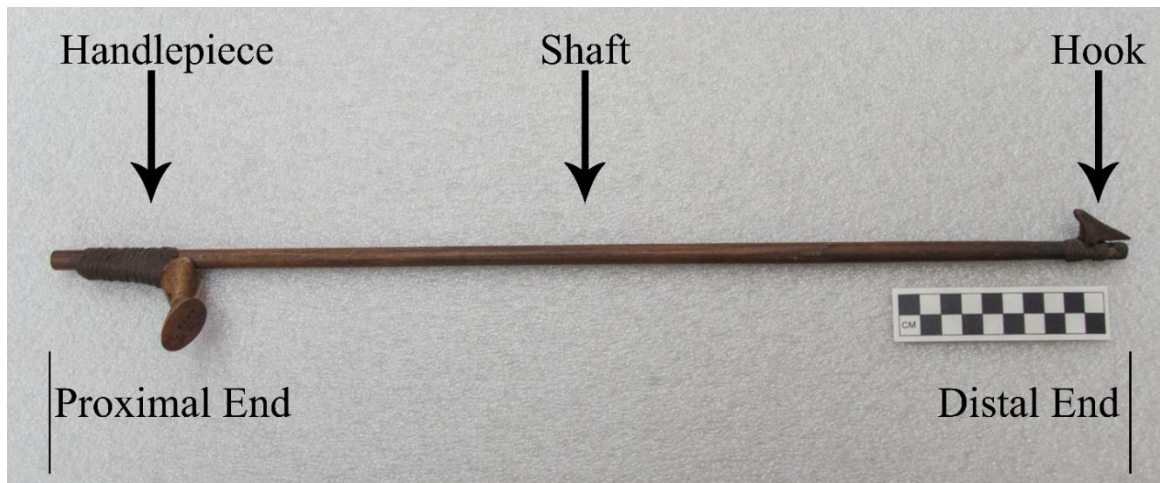


Figure 2. Anatomy of a spearthrower (Illustration and photo mine; Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University: 46-77-30/6858)

The “spears” thrown by spearthrowers are actually quite misnamed – the rigid thrusting devices brought to mind are unsuitable for throwing, and flexible darts, generally in the range of 120cm, were used instead. These often served as media for decorations as much as the throwers themselves, apparently for intimidation during warfare or as magical charms for attracting prey in hunting (Arutinoy & Fitzhugh 1988). However, as the common term in literature is spearthrower, I will continue to use it for the sake of clarity.

Europe

The first archaeologically known spearthrowers were discovered by two French archaeologists, Lartet and Christy, at Laugerie-Basse in 1862 (Lansac 2004; Whittaker 2010). Finds consist exclusively of the antler spurs that were hafted into the distal ends of spearthrowers. No examples of the wooden bodies have survived (Cattelain 1997:214). The artifacts, when not accompanied by the spearthrower itself, do not obviously telegraph their usage. Indeed, early studies did not recognize them. However, several of the more-complete specimens exhibited perpendicularly-drilled holes in the shafts. Use-wear analysis and observations inspired by known spearthrowers in Oceania (Garrod 1955; Stodiek 1988; Cattelain 1989) led to the conclusion that these unidentified artifacts from Europe were, in fact, the distal ends of spearthrowers, leading to their first identification as such by de Mortillet in 1891 (Whittaker 2010). The vast majority of European spearthrowers are associated with contexts from the Upper Paleolithic in western Europe, from the Upper Solutrean to the cusp of the Upper Magdalenian (Cattelain 1997), in areas of France and Germany, Switzerland, and Spain.

Interestingly, the people who made these spearthrowers often used this antler piece as an opportunity to decorate and personalize their *propulseur*. Many of the simple form have minimal carvings or engravings, such as parallel lines engraved below the hook (Garrod 1955; Stodiek 1988). Others have been found carved into decorative shapes, often as animal effigies, including deer, ibex, horse, or buffalo. Apart from the obvious decorative purposes, it has also been theorized that they served an additional purpose as a stabilizer or weight for the spearthrower (Raymond 1986, Garrod 1955), as they are often significantly more massive than undecorated forms. Several examples of these decorated hooks came from the excavations at Mas D’Azil, with one in particular capturing quite a bit of attention. It depicts an ungulate of some sort, likely a chamois or ibex, perched on the ground, with a large mass coming out of its rear end. The animal is looking back at the mass, while a bird is perched on it. The bird acts as the hook for the dart. Many first impressions interpreted the artifact as a bit of Paleolithic humor, assuming that the cylindrical mass is excrement in the act of being defecated (Garrod 1955). While the appeal of this interpretation is clear, it has been argued that the animal is, rather, giving birth. Bandi (1988) provides a comprehensive point-by-point rebuttal of the “*boudin*” theory – the mass is a large cylinder, while ungulates defecate in a number of small balls; and the animal is looking back at the mass, which no animal does while defecating but which they certainly do while giving birth. It seems likely that most people living in this time period would have this sort of knowledge, and would not be likely to make the sort of basic error that would result in an antelope defecating improperly. The presence of the bird is tougher to explain, though a sensible explanation would be that the bird was added simply to provide a reasonable spur for the dart.

Two other antler hooks of similar design were found in sites not far from Mas D'Azil (Bandi 1988; Garrod 1955). This would suggest that either the original craftsman went through several drafts or, perhaps more likely, that this design was prevalent and copied, suggesting small-scale production or that it represents a common symbol from popular mythology or culture.

Oceania

Spearthrower studies in Oceania have the advantage of large amounts of ethnographic data, as the inhabitants of these areas continued to use spearthrowers into the present. From these ethnographic accounts, we have wonderful information about hunting and spearthrowing tactics. For example, among the Aboriginal Australian groups which continued to use spearthrowers, emphasis is placed on learning the movements and habits of the animals to be hunted, so that children can grow up to be efficient stalkers of kangaroos and other prey animals. The hunters would be able to sneak up on animals to the effective range of their spearthrowers – approximately 20-30 meters, depending on the hunter, and dart the animal before being noticed. The spearthrower, in this case, shows one of its main advantages over a hand-thrown spear – it requires no run-up, and therefore can be used while hiding and with less chance of spooking the quarry. Spearthrower use has been depicted in rock art throughout Australia. The earliest known occurrences come from petroglyphs in the late Bradshaw period of the Kimberley rock art sequence, with associated radiocarbon dates of 16,400±1,800 years BP (Walsh & Morwood 1999:55).

Cundy (1989) provides a comprehensive look at the differing types of spearthrowers in Australia in his book *Formal Variation in Australian Spear and Spearthrower Technology*. He uses archaeological and ethnographic evidence to describe the different shapes and uses of spearthrowers throughout Australia. The best-known and best-documented type is the woomera, most heavily used in the central regions of Australia (Cundy 1989:87; Davidson 1936). This spearthrower is made from a carefully-selected slab from the trunk of a mulga (*Acacia aneura*) tree (Gould 1970; Thomson 1964), which gives it a characteristic leaf-like shape that curves upward at the edges. These are also traditionally made with a hook lashed to the distal end and a circular piece of stone at the end of the handle, to keep the hand from slipping off. As all Australian Aboriginal groups were nomadic, the spearthrower was made to function as a multi-purpose tool to conserve the number of objects that needed to be carried. In addition to throwing spears, the woomera could be used as an ochre mixing tray, digging stick, club, shield, reaching hook, area scraper, haft for an adze, and musical instrument, as well as having mnemonic maps of watering holes and other important locations painted or carved on the body (Cundy 1989:91; Gould 1970:22; Thomson 1962:274).

Cundy also describes the cylindrical and notched lath spearthrower forms found in Northern Australia. These are much less wide than the woomera and lack the noted curvature. The cylindrical form is also differentiated as the hook is carved from the wood rather than lashed to the spearthrower. “Sabre” spearthrowers are flat, though still thin, but much longer, denser, and capable of throwing more forcefully than other forms (Cundy 1989:79). “Goose” spearthrowers, conversely, are much smaller and thinner than the other forms, and made to throw spears of low mass. These are recorded as being used

in duels (Cundy 1989:119; Basedow 1907:33; Gould 1970) in which two quarreling parties would stand at some distance from one another and throw and dodge spears until one party is struck. Afterwards, their argument would be considered settled. The use of high-velocity low-force projectiles kept the fights engaging, but with reduced danger of serious injury.

Spearthrower use is also well-documented among the people of Papua New Guinea. These devices are unique in that the hook is mounted on the thin edge of a flat board, effectively rotating the spearthrower when compared to others. It is unclear if this gives the spearthrower any sort of benefit, or was just the result of cultural preference and tradition. Darts from Papua New Guinea were remarkably decorated, providing a medium for folk magic and dazzling enemies.

Circumpolar

As with Australia, the circumpolar region saw continued spearthrower use into the modern era, as indigenous populations used it to throw harpoons while hunting seals and other marine mammal game. In fact, some traditionalist hunters today still continue the practice in some areas of Alaska (Hall 2015), as they need to harpoon the seals instead of simply shooting them with a rifle. Hall claims this is due to the salinity of the water – in salt water, the seal’s carcass will float, but in fresh water, it will sink. Therefore, a thrown harpoon with a cord attached will allow hunters to easily retrieve the animal’s carcass. The circumpolar spear thrower, called the *nuqaq*, is of a slightly unique design, particularly in the handle. The entire device is shorter than average and has a single finger-hole drilled into the handle along with a complementary notch on the other side.

This forms a comfortable grip, keeping the thumb and forefinger in an ideal position to hold a dart in place (Mason 1884; Vaughan & Holm 1982; Holm 1988; Arutinov & Fitzhugh 1988). The spearthrowers themselves possess intricate tooth and bead inlays, paint, and are also carved with elaborate, magical designs intended to attract animals (Rousselot, Fitzhugh, and Crowell 1988). The Eskimo spearthrowers seem to have been adopted by the Tlingit groups of the Pacific Northwest. These are similarly shaped and also exhibit elaborate carving, though they lack the finger-notch. Furthermore, they are not as easy to throw or even hold and are so short between the handle and the hook that they perform poorly (Holm 1988:282; Vaughan & Holm 1982:76-79). Holm suggests that this is due to the differences in watercraft preferences – the Eskimo often hunted in single-man kayaks where the ability to load and throw a harpoon with one hand while steadying the craft with a paddle in the other was a phenomenal advantage. The Tlingit, on the other hand, hunted in two-man dugout canoes, in which one hunter could keep the canoe steady while the other used both hands to shoot a bow. Consequently, it seems these Tlingit spearthrowers were made for use by shamans in ceremonies.

Eskimo harpoons were as much a work of art as the spearthrowers themselves. The tips and foreshafts of the harpoons were carved from ivory, in intricate designs containing animals hidden in geometric patterns (Arutinov & Fitzhugh 1988:122). These weighed a considerable amount, and were counterbalanced in the back by “winged objects” which were also carved out of ivory, attached to the proximal end of the harpoon, and designed with a socket to fit onto the spearthrower.

North America

While it is often theorized that spearthrower use in the Americas seems to have arrived along with the earliest settlers on the continent, the earliest hard evidence for its use comes from a shell spur and weight found at Warm Mineral Springs, Florida (Clausen, Brooks & Wesolowsky 1975; Royal & Clark 1960) and a weight found at the Marmes Rockshelter site (Hutchings and Bruchert 1997). Hunters and warriors in select regions, most notably the Aztecs in Mexico, continued to use spearthrowers through the arrival of European colonists, though they were drastically less common by the time of the advent of modern anthropology. As such, few modern ethnographic accounts exist.

Archaeological and anthropological studies of spearthrowers became popular in the late 19th century, with studies by Frank Cushing, Zelia Nuttall, and Otis Mason. Cushing pioneered the topic and he, Nuttall, and Mason are largely responsible for the common usage of the term “atlatl” in American literature to this day. His seminal work *The Arrow* (1895) highlighted his use of early experimental archaeology to attempt to determine the chronological development of the spearthrower.

In North America, archaeological evidence suggests that the spearthrower was once spread throughout the entire continent. While the eastern regions of the country have infamously acidic soil and no wooden spearthrowers have themselves survived, actual remains include hooks and spear points, as well as stone weights implying their use.

While the stone weights, often referred to as bannerstones, remain indecisive as far as their purpose, their *in situ* occurrence in line with hooks and points at sites such as

Indian Knoll suggests that at least some forms of these object were mounted on spearthrowers. They are common in the northeast, Michigan, and as far south as Georgia, suggesting widespread spearthrower use in the past (Knoblock 1939). In other parts of the United States, climate conditions facilitated the preservation of spearthrowers in caves. This is exemplified by the Broken Roof Cave Basketmaker spearthrower, found in Arizona by Guernsey (Palter 1976:504). Made of Gambel Oak and 53.4cm in length, this is a female-type spearthrower with two leather finger-loops and was found with two stones lashed to the body – a polished “dark red stone” about halfway down the shaft and a small “cat’s eye or moonstone” much closer to the handle (Guernsey 1931, Palter 1976). The smaller stone was likely a charm of sorts, while the larger one down the shaft was more likely a weight.

The Mexican atlatl played an important role in Aztec culture. Zelia Nuttall’s seminal piece, “The Atlatl or Spear-thrower used by the Ancient Mexicans” (1891) provides an interesting early overview of this, through analyses of its inclusion in myth and art, as well as a well-done appendix of different style of depiction in the known Codices. The atlatl was known to have served as a symbol in official iconography, often shown being held by kings and deities, particularly the god Huitzilopochtli (Nuttall 1891, Slater 2011, Finegold 2017). The atlatl was often observed by Spanish chroniclers as a fishing implement, while it was perhaps most infamous for its use in warfare. The chroniclers, particularly Bernal Diaz and Garcilaso de la Vega, made references to hails of darts being sent out as the first stage of battles and claimed that it was capable of penetrating Spanish steel breastplates (though this was likely an exaggeration) (Whittaker 2015). The Aztec atlatl was similar in construction to the Basketmaker atlatl mentioned

above, with the most distinctive feature being the pair of finger-holes on the proximal end – though Aztec atlatls were often made with stone finger-holes lashed to the shaft or with the finger-holes carved directly into the wood. Iconographic depictions also suggest that most spearthrowers in use were embellished at least somewhat, a common form appears to be a tail of feathers. Decorative specimens were common, such as a particular atlatl which currently resides in the British Museum and was recently studied in-depth by Whittaker (2015). This atlatl is made of a highly-polished dark hardwood, elaborately carved, partially gilded, and colored with gypsum-based white paint and cochineal red, an extremely expensive pigment. Whittaker noted no evidence of use-wear, suggesting that this was created specifically as a ceremonial or design piece.

South America

Spearthrower use in South America seems to have been most prevalent in the Andes. Métraux (1949:245) defines three main types of spearthrower, all male, used in the entire South American region, though he does not provide them with catchy names, unlike Cundy. The first type is the common Peruvian type; long and cylindrical. These spearthrowers have a fingerpeg attached to the proximal end which distinguishes it from most other spearthrower types. The fingerpeg is often made of wood, stone, or bone, and the hooks are made from shell, bone, stone, or copper – occasionally in effigy shapes. These seem to be the predominant type throughout Peru (as well as some later Chinchorro burials in northern Chile) by a very wide margin, and will be discussed at length in their own section following this. The second type Métraux identifies with “the shaft widen[ing] near the grip to allow for a hole for the forefinger.” Métraux (1949:246) goes on to say that only two of this type have been found in Peru at the site of Nieveria

(outside modern Lima), though they were used more widely by the tribes around the Xingú river in the Amazon. This is not necessarily proof of cultural contact, and may be simply convergent designs. This type is generally around 70cm in length and cylindrical, though the grips are 5-6cm wide and flat. The people who used these spearthrowers are said to have used them to hunt (only turtles are mentioned, meaning they must have thrown hard enough to pierce the shells) as well as in warfare and against initial Spanish explorers. The existence of this second type was later reinforced by Bittman and Munizaga (1984:419) who identified these spearthrowers in Chinchorro burials on the Chilean coast. The third type is extremely long and hermaphroditic; the only known specimen, from Brazil, is 88cm and has both a long groove down the shaft to receive the dart and a lashed-on hook at the end.

The Andean *Estólica*

The first type of South American spearthrower, with the proximal fingerpeg or handlepiece, is commonly referred to in Andeanist literature as an *estólica*, though it is also called a *tiradera* and *propulsor* on rarer occasions. Proulx (2006:174) mentions that they first appear associated with the Nasca culture, though this is incorrect. Physical specimens of the Peruvian style spearthrower have been found dating back to the Chinchorro culture (Arriaza 1995:89). Though I was unable to find an absolute associated date, it can likely be placed in the latter portion of 7000-2000 B.C.E. (Arriaza 1995, Bittman & Munizaga 1984) Many depictions have been seen on Moche ceramics (Donnan and McClelland 2009; Whittaker 2006, Whittaker & Kamp 2016), Wari textiles and figurines (Lavalle 1984; Arriola Tuni & Tesar 2011), and Nazca ceramics (Proulx 2006), among others. Ethnographic evidence of its use in the Andes is sparse, with few

mentions in the chronicles. In fact, it seems to have played such a small role in the Andes at the time of Spanish contact that no chroniclers recorded its name in Quechua. Many complete specimens have been collected from the coastal regions, from the Moche area on the north coast as far south as northern Chile. The highlands have produced a relative paucity of spearthrowers, though trace remains have been found which reflect their presence. The wooden body is prone to decomposition, but the hooks were often made of stone or metal and, while rare, have been found at several highland sites, such as Cerro Baúl (Owen 1998). Spearthrower hooks are rather distinctive items and are generally quite easily identifiable. As such, identifying decomposed spearthrowers by their hooks is a common tactic in the eastern United States, Europe, and other regions which do not facilitate wood preservation. Another technique often used for identifying spearthrowers is through the lithic points on the darts themselves. However, Andean darts were often tipped with metal points or not at all, relying on fire-hardened points carved into the foreshaft of the dart. Owen (1998) has mentioned that the points found on arrows, associated with bows, are often impossible to differentiate from dart points, especially on the coast, meaning that the presence of points is not necessarily indicative of spearthrower use.

Utilitarian *estólica* were generally around 50cm in length and cylindrical. They were constructed from a dark palm wood which gave it a hardness with a very slight flex. The distinctive handlepiece on the proximal end was generally carved from stone, wood, or bone, with several coastal examples having been carved from killer whale teeth. Some early descriptions of the Andean *estólica* suggest that the handlepiece was intended to serve as a rest for darts in the ready position; however, the handlepiece is always canted

at an angle to the hook, which would make it impossible to use as a rest and still throw – even less so if accuracy was needed. It has been suggested, instead, that it was meant to have the index finger wrapped around it in order to force the hand into an appropriate position and provide leverage for the throwing action. Perkins (1990), offers an alternative interpretation in which the handlepiece functioned as a “dart guard”, allowing the user to hold the dart against the inner edge in order to prevent miscuing – when the butt of the dart slips off of the hook during the throwing motion. This theory is supported by a small figurine from Pikillacta, which will be expanded on further in the section on Wari depictions.

The estólica makers took the opportunity to carve these handlepieces into unique shapes, with known examples including humans (some even with carved hats and clothing), felines, birds (see Lommel 1968:656 for a fine example), phalluses, and abstract figures. The hooks for engaging the darts were made from shell, bone, stone, or cast copper, with a few even carved from sperm whale (*Physeter microcephalus*) tooth. Many were in simple pragmatic shapes, though some were shaped as lizards or elaborate carved points. While it is not nearly as common, there are examples of Andean estólica which lack the handlepiece or even evidence of one; these are primarily decorative. While it seems contradictory that decorative estólica would lack the most obvious part for embellishment, perhaps some artists took this as a differentiator between the functional and the ceremonial. Some estólica have been found with no handlepiece at all; these may have predated the introduction of the handlepiece or have been expediently made without a handle.



Figure 3. Moche (left) and Chimù gilded spearthrowers (Museo Larco ML100186 and Dumbarton Oaks PC.B.454)



Several examples of decorative *estólicas* exist in museum collections and others are found in sites to this day, often in burial contexts, such as an extremely fine specimen found in tomb 2 at the famed site of Sipàn (Alva & Donnan 1993:fig.188) and a cache of 23 decorative spearthrowers from the “*Señora de Cao*” found at Huaca Cao Viejo (Whittaker & Kamp 2016). Often they are made of wood, though sometimes plated in gold to give the appearance that they are solid gold. A phenomenal example of this exists in Lima’s Museo Larco, a Moche *estólica* which has a black handlepiece acting as a pedestal for a golden effigy of an Andean condor (*Vultur gryphus*) eating a dead human. The shaft of the *estólica* has been wrapped in gold plating and a golden post on the distal end serves as a hook for the dart. Nevertheless, simply from looking at the available photos of it, it is apparent that this was not intended for any sort of real use. It was likely meant for ritual or ceremonial events. Dumbarton Oaks has in its collection another golden *estólica*, this

one attributed to the Chimú (Lothrop 1954). This specimen is black wood with two golden sheaths, one short sheath behind where the hand would grip it, with beautiful detailing, and another longer one which extended past the hook and to the distal end. This one lacks a handlepiece, surprisingly, but has a golden hook in the shape of a bird. The Chimú seem to have experimented with other metals, as an *estólica* with silver wrap occurs in the collections of the Metropolitan Museum of Art. At only 24.9cm, this may have been some kind of staff or baton intended for ceremony, as it was too short to use. Nevertheless, it has a clearly-identifiable hook and handlepiece, both of which are cast silver bird effigies. The same museum also has several other copper and silver objects which are clearly meant to resemble the *estólica*, but are almost comically small – none exceed 13cm and the shortest is only 9.2cm long. Sadly, none have precise provenience; all are attributed to the “north or central coast.” While I am loath to speculate on their purpose, these small *estólicas* may have been ornaments or, perhaps, childrens’ toys to teach hunting techniques through play.

Decorative *estólicas* need not be made of precious metal. Another Moche example in the Museo Larco possesses an uncovered wood shaft – though uncovered for good reason. The shaft is carved into elaborate designs depicting caimans devouring a man, bordered with geometric flourishes. The handlepiece is bone carved into a feline, and the hook is metal cast into a hollow diamond on a circular pedestal. It is incredibly elaborate, though the actual handle below the handlepiece is much too short to allow it to be thrown, and it must have been for ritual purposes. An example from Vilcahuara, in Lima, has the entire shaft carved into four interlocking serpents with feline heads. Each head has shell inlays for the teeth and eyes. This one, as well, is missing the handlepiece, and it

has a shell hook on a pedestal. A unique example, attributed to late Paracas/early Nasca, from the Cleveland Museum of Art, has no wood in it at all – it was carved entirely of bone. The craftsman behind this *estólica* has turned a long bone into an ornate spearthrower – clearly made with extraordinary skill. The shaft has long strips cut out of it, with rings carved between the strips. The marrow cavity has been hollowed out, allowing one to look entirely through the shaft. A polished hematite hook has been lashed to the distal end, and a bone handlepiece is depicting a skeletal figure with a trophy head.

The Chaviña Collection

For this study, I was allowed the opportunity to examine eight Peruvian *estólica* in the collections at the Peabody Museum of Archaeology and Ethnology at Harvard University. All but one (the aforementioned feline-serpent piece) was found in a single grave consisting of seven cists at Chaviña, on Peru's southern coast. Information about their collection was recorded by Lothrop and Mahler (1957) who acquired the items and notes from “two amateurs, who fortunately took some notes, measurements and photographs,” while looting the specimens (Lothrop and Mahler 1957:v). As such, the individual spearthrowers cannot be sourced to a single cist, but the excavators did note which cists held spearthrowers. Two of the spearthrowers were uncovered from a cist containing children, and Lothrop interestingly used these artifacts to sex the childrens' skeletons as male. Lothrop also mentions that the cists were contemporaneous, based on a bisected mouse whose halves were found in separate cists. The textiles from the burial were radiocarbon dated by the Yale Geochronological Laboratory in 1956, producing a date of 1320 ± 60 (A.D. 576-696), which can be attributed to the later Nasca period. This date is supported by the style of ceramics associated.

The Chaviña spearthrowers are all the same type; they are thin cylinders (approximately 1.0-1.3cm in diameter) of dark hardwood with attached hooks and handlepieces. They are also all very similar in length, with all specimens measuring between 45 and 55 cm. The materials vary; two of them appeared to be made of a different wood than the others, for example, though they were stained to resemble chonta wood, perhaps indicating that the color of the spearthrower was important, or chonta wood had a symbolic status. The handlepieces and hooks were made of different materials as well; the handlepieces were made of stone, bone, and wood. The hooks were primarily cast copper with one example having a bone hook. The cant of the handlepiece was always offset from the hook, as it is in all spearthrowers of this type. This also means that the direction of the cant can be used to determine the handedness of the spear thrower, since a handlepiece would have to be fit between two fingers. Using this criterion, I was able to determine that one of the spearthrowers, identified with the catalog number 46-77-30/6858, was actually made for a left-handed user.

This left-handed *estólica* had probably the finest cast copper hook; it was free of the roughness and corrosion present on the others. The handlepiece was carved from bone in an abstract shape resembling a mushroom, though not closely enough to assume that it was meant to represent one. The handlepiece was, like the others, adhered to the handle with some sort of resin and lashed into place with cordage. This one showed a fair amount of use-wear, especially in the handlepiece; not only was there some polishing on the side of the handlepiece, but the surface of the bone on one side was worn away to expose the cortical bone, as well. This piece was also broken in half and finely restored at some point, to the point where it took very close observation to even notice the break.

Unfortunately, the museum had no record of when this break occurred. The area of the shaft where the break is visible is also not represented in Lothrop's published photos. It may have occurred during its original use period, but it also may have been broken in shipping or at any time after excavation. The hook was very finely cast copper, in a strong triangle. It was cast with a small bracket on the bottom, which fit into a groove cut into the shaft. This was then glued into the groove with resin and lashed into place with cordage over the arms of the bracket. The hook had small striations on the side of the



Figure 4. Sampling of Chaviña spearguns; Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University. From the top down: 46-77-30/6858; 6836; 6827; 6835; 6855)

proximal end, as well as some marking where the tip met the butt of the spear, suggesting use.

Another exceptional example from the Chaviña assemblage was 46-77-30/6827, which is made distinct by its stone handlepiece depicting a human figure with remarkable inlays. The front face of the handlepiece is carved to resemble the head and neck of a human, or at least humanoid, with an identifiable nose and chin. The features of the head are defined through inlays; small carved-out areas have been filled with shell affixed with what appears to be tar. There is one piece of pink spondylus directly under the nose, representing a mouth, as well as five small circular pieces of greenstone around the nose: two on either side, and one on the top. The rear face of the head has four long, baguette-shaped inlays of a purple shell or stone. These are likely meant to represent the



Figure 5. Comparison between discs on Anthropomorphic Mythical Being and handlepiece of 46-77-30/6827; (Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University)

individual's hair. The entire handlepiece has a tenon projecting backward from the bottom of the neck, which is fastened to the grip and lashed into place with cordage. The cordage was also colored with alternating black and red stripes. The five-eye motif may be simply an aesthetic choice, though it may have been meant to represent a Nasca deity or supernatural figure. While I have not found any corresponding figures in the iconography, there is a tradition of blank eye-shaped ornaments which seem to dangle from headdresses on Nasca figures such as warriors, priests, and the Anthropomorphic Mythical Being. These inlays may be meant to represent these ornaments.

Object 6827 has two "sister pieces" with a similar handlepiece; these both have human effigies on their handles with inlays representing the features. 44.77.30/6857 is particularly detailed; it has a very naturalistic carving which cannot be mistaken for anything but a human – in particular, a human wearing a round hat. The eyes are represented by small circular shell inlays with a small circle missing from the center to represent the pupil, as well as an oval piece of turquoise inlay for the mouth. The figure also has triangular inlays on the cheeks, a series of small greenstone circles circumferencing the hat, and a large circular orange inlay, most likely spondylus, on the top of the hat. This piece is also exceptional in the collection as the shaft has been wrapped in eleven copper bands spaced out along the shaft, with staining suggesting that at least three more were present at some time. 6857 has a unique method of attaching the hook, as well, as it was not held on with adhesive but rather by the copper bands. The hook has a small bracket protruding from the bottom which is kept in place by a tightly-wrapped copper band. Despite this apparent weak point, it does have several instances of use-wear suggesting it was used. The tip has been dulled from dart-nocking and the

handlepiece has polishing around where the thumb would rub against it, on the “neck” and “nose”. 44.77.30/6828 is also in the shape of a human effigy, with shaping more like 6827. It has a carved open mouth, prominent nose, and similar purple baguette inlays on the back as 6827. The front has eyes made from shell inlay, though these are more detailed as they have an inlay within the inlay representing the iris. The entire handlepiece was carved from bone, specifically a marine mammal tooth, likely a killer whale. It has a hole drilled through the tenon and cordage tied through it as well as lashed around the tenon to connect it to the grip. This spearthrower has a cast copper hook in the shape of a lizard with a short head and long tail, possibly an iguana. However, due to the rough corrosion covering the hook, it was impossible to tell if there was use-wear on the tip of the hook. This copper lizard motif repeats itself on the hooks of two of the other spearthrowers, as well, though one is tailless and the other has had the tail broken off, revealing a hollow interior.

The final spearthrower from the Chaviña assemblage I would like to discuss was more utilitarian, having a handlepiece made from wood and a hook made from roughly-carved bone. The handlepiece is long and slender, projecting approximately 4cm from the shaft, and terminates in a round head, giving the entire handlepiece a phallic shape. The bone hook has much cortical bone exposed and use-wear around the tip. The shaft has some uneven staining and is scuffed and split. The scuffs seem analogous to damage caused by misfired darts, though the splits are more likely the result of age. Overall, however, this piece seems to have been made more roughly than the others in this assemblage, suggesting that it was either intended for more regular use, was a beginner's,

or owned by someone of lesser social status. The phallus, however, does suggest an association with masculinity.

The clear majority of physical spearthrowers originated in coastal regions, with large numbers coming from the Nasca and Moche areas, where they have most often been found as grave goods. While it may appear to be a clear-cut case for the preservation conditions on the dry desert coast and Nasca burial practices, the remainder of this paper will explore whether this coastal bias is accurate in reality or if the spearthrower had comparable representation in the highlands, as well.



Figure 6. Handlepiece from 44.77.30/6828 (Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University)

ICONOGRAPHY REVIEW

Studying Art & Iconography

For many of the cultures around the world, and especially those in the Andes, the art they left behind is the only form of documentation we have for important aspects of their daily life, mythology, and practices. Thankfully, several Andean culture groups left us with canons of art that are not only aesthetically wonderful, but also full of detailed and consistent symbols. From these we can use cultural and contextual clues to infer with a reasonable level of accuracy some aspects of their lifeways that may not necessarily be represented in the archaeological record, or which may expand archaeological interpretation.

Obviously, these records are, and will remain, incomplete. At times it can feel like trying to piece together a movie from only a few frames here and there, mixed between the opening, the rising action, the climax, and the dénouement. Careful and measured analysis of the iconographic elements of the art can, however, not only determine the seriation of the art but the meaning and significance of depicted activities. Proulx (2006) and Pang (1992) defined several interdisciplinary methods for interpreting iconography, four of which I found particularly applicable to this study: Art History, Archaeology, Ethnographic Analogy, and Comparative Mythology.

Art history focuses on the changing patterns and development of the art itself through study of style. Style, defined as “the distinctive organization of formal properties that characterizes the art of a place, group, individual, or period” (Pang 1992:8), is itself defined and studied through attribute analysis (the different design features and how they can combine) and iconics, which is essentially how design motifs can be amalgamated into new forms. Art history studies are often concerned with determining the meaning of the artworks through categorization of recurring icons and their variants. Donnan and McClelland’s studies into Moche fineline artwork, resulting in the Moche Archive at the University of California Los Angeles, are often cited as comprehensive studies into Moche art from the perspective of art history. Their book *Moche Fineline Painting: Its Evolution and Its Artists* provides a grand overview of style in Moche fineline, even identifying individual artists through their personal idiosyncrasies, such as a predilection towards elaborate wings (Donnan & McClelland 1999:253) or showing runners with their elbows stuck in their belts (Donnan & McClelland 1999:254).

Archaeological contributions to iconographic analysis largely focuses on the confirmation of design elements through physical evidence, or vice versa. This could include the discovery of San Pedro cactus elements around stone panels depicting shamans holding what could be inferred as the hallucinogenic San Pedro cactus, though not confirmed until it was determined for a fact that this cactus was an important part of ritual. Proulx also cites the discovery of personal ornaments and elements of costumes found to have been worn by shamans, which lend credence to the theories that some of the Nasca anthropomorphic chimeras were representative of shamans in their ritual garb. Archaeological investigations are also responsible for seriation for many artistic canons

in the Andes, such as John Rowe's early seriation of Chavín art (1962) and its further exploration and clarification by Peter Roe (1974).

Ethnographic analogy relies on ethnographic data to infer the meanings of symbols. In the Americas, this often means relying on the data collected by Spanish and Mestizo chroniclers in the years after the Spanish conquests. These accounts are often strongly influenced by bias toward the Catholic values held by the Spanish, and any interpretation of them has to be done with this bias in mind. In addition, many Andean societies developed, flourished, and collapsed before the first chroniclers were born. It can be dangerous to assume that the same symbol might mean the same thing to the Moche that it did to the Inca, and ethnographic and ethnohistoric approaches should be conducted with caution.

Comparative mythology relies on many of the same processes and caveats as ethnographic analogy, using known aspects of mythology to make sense of similar symbols and motifs. For these interpretations to be reasonably correct, geographical and chronological proximity must be considered, with closeness in both areas much preferred. However, Amazonian ethnography has been used a great deal in the interpretation of Andean archaeological remains, from inferences about "trophy heads" to arguments about the use of hallucinogenic plants.

Identification of elements based on these four disciplines still must be undertaken with a careful eye and a holistic understanding of the context of the image, especially in regards to common objects and animals. Andean art, with some exceptions, tends to lean toward elaborate abstractions. John Rowe, in his seminal seriations of Chavín art (Rowe

1967), defines these as *kennings*. This term originates in a tradition of Icelandic saga authors to replace certain aspects of their stories with abstracted allusions which required some sort of previous cultural knowledge and thought. The tradition led to deeper layers of kennings, with kennings of kennings becoming common, and it was a tradition to try and work in the most elaborate or obscure kennings into ones' story. Rowe gives an example in which "the seal's field" is alluding to the sea, which is in itself alluding to waves of enemy attackers (Rowe 1967:79). This term is applied to Andean art to refer to such traditions as the artistic canon of Chavín, for example, which famously uses eye and mouth imagery to denote bodily axes – fanged mouths are commonly used to define the spinal column of a figure or the joints. These can complicate already complex images and make identification of exactly what type of animal they are representing difficult. However, some scholars have argued that the concept of kenning does not apply as well as Rowe suggests (Urton 2006; Knight 2013) as Chavínoid kennings are highly standardized and repetitious, instead of novel and inventive. However, as it is an established term in the literature, the original meaning of kenning is less important than the meaning it has today in iconographic study of pre-Columbian Andean art.

Since human expression in the form of art is often synthesized and adapted from familiar sources, a large amount of Andean art is sourced from the natural world around its producers – from the mountains and plants to the multitude of different animal species that shared the world with them. Representations of animals, in particular hybridized versions, are a common sight in Andean art, and for good reasons. They are living beings on their own, and have their own interactions with each other and the natural world far away from human eyes. They interact with humans as well, some even being necessary

for human survival, such as the marine life on the coasts that supported remarkably complex civilizations so early on. However, the behavior of many animals is remarkably uniform. They live in their ecological niches, and a sea lion on the south coast acts the same as a sea lion on the north coast (in fact it may even be the same individual); a condor eats carrion on the outskirts of Trujillo the same as one would outside Arequipa. This uniformity of behavior makes animalistic symbols more ripe for cross-cultural analysis than other icons – while the Andean ontology ascribes an animistic life to landscapes that the average Western viewer would describe as a simple inanimate mountain, mountains do not assert their own behavior as overtly as a pampas cat or fox, making them more susceptible to differences in symbolic interpretation from one culture to another.

The practice of hybridizing animals in iconography, shared by many of the cultures in the Andes, can also assist in interpreting their societal roles. Peters (1991) suggests that animals whose attributes are combined are viewed as either serving the same cultural niche, or having complementary characteristics. One particular example she cites is a tendency among Paracas iconography to combine aspects of killer whales (*Orcinus orca*) and sea lions (*Otaria flavescens*) or fur seals (*Arctocephalus australis*), marine animals which could be considered apex predators. The Paracas likely observed the ferocity of these animals while hunting and saw them as two animals cut from the same cloth, so to speak. They also could have simply not seen an ecological difference between them, both being large predators of the sea. The study sample featured a multiplicity of animal species associated with spearthrowers and their use, which I will describe in detail below.

Identifying Andean *Estólica* in Art

Several iconographic studies on spearthrower use and history have been undertaken by archaeologists. For example, Walsh and Morwood (1999) used Australian petroglyphs to track the development of spears and spearthrower technology. These representations often held a surprising amount of detail within their relatively simple images, allowing Walsh and Morwood to extract and sequence several different types of spearthrowers (Walsh & Morwood 1999:50-53). Donald Slater (2011) used depictions of atlatl use in Mesoamerica to conclude that they were used as symbols of power, often identifying the holder as a king, great warrior, or deity. Slater had the advantage of interpreting iconography rendered with much greater fidelity, allowing for more finite identification of atlatls, as well as having reasonably congruent ethnographic data to draw from – such as the ethnographic knowledge that the Aztec deities used atlatls to throw thunderbolts (Slater 2011:381). Ciofalo (2012) expands on this in his study on Maya atlatls, mentioning that Maya depictions are often associated with Central Mexican characters, suggesting that they were used to signify Mexican identity, as opposed to Maya. In terms of the Andes, very few studies have been done on spearthrower depictions in iconography. Whittaker (2006) wrote a short piece on depictions of use on Moche pottery, speculating on its role in warfare. He notes that their use is depicted far less often than other weapons, such as clubs, and that while the spearthrower may have made great contributions to warfare, perhaps it was not as glorified as melee weaponry in captive-focused Moche warfare. Other papers have touched upon the spearthrower in

iconography, but only as part of a larger discussion on warfare or weaponry, without great detail (Quilter 2008).

Luckily, the Andean spearthrower possess a unique diagnostic characteristic which makes it easy to identify in art – almost all known examples have a fingerhold on the handle, offset from the spur, which is translated into its depictions. The purpose of the handlepiece is not readily apparent (Whittaker & Kamp 2016), as there are multiple interpretations of its benefits or detractions. However, there is a great deal of variation in the shape of the fingerhold, leading researchers to believe that it is a sort of charm element. The known shapes vary from simple geometric projections, to bird or other animal effigies, to minimalist sacrifice scenes and phalluses. Thanks to this fingerhold, a depiction of a spearthrower is easier to differentiate from other objects of similar shape, such as a staff, club, or cane, as none of them would conceivably have a hook on either side. This is most often depicted as a simple shape at the proximal end of the spearthrower, as in this particular Nasca depiction, though some interesting examples actually depict the proximal end as a living animal. In addition, the shape of the spur serves as a diagnostic component in its own right (Walsh & Morwood 1999) and is often drawn quite true-to-life, either as a short billet or as a projecting hook shape, which serves to further differentiate spearthrowers from globular clubs or straight staves.

Even still, there are examples of spearthrowers in art which are completely abstracted or, in the opposite direction, quite simplified. They can also be portrayed in media which are not capable of the fidelity needed to accurately portray a hook or handlepiece, such as woven tapestry. These must be identified using context clues, such as the surrounding elements or by similarly-portrayed objects on other pieces of pottery or textile. For

example, a spearthrower would not be held in two hands, but a mace would. As another example, what may appear to be a simple stick or staff can be reasonably inferred to be representative of a spearthrower if the only other weapons in the image are a handful of darts. Conversely, if the image shows several individuals holding a staff that questionably resembles a spearthrower alongside an individual holding an object with the diagnostic characteristics of a spearthrower, it can be concluded that fidelity of imagery was not an issue in representation and the staffs can be definitively identified as an object other than a spearthrower.

Study Sample and Methodology

The primary analysis of this project involved a thorough study of spearthrower representations in the major pre-Columbian Andean traditions of art. These were gathered from a multitude of sources, primarily through archival combing but also through opportunistic picking from various books, chapters, and articles. The bulk of the corpus was acquired from the online collections of museums of art and ethnography, with large or valuable amounts of data provided by the Museo Larco in Lima, Peru, as well as the Metropolitan Museum in New York, the Peabody Museum in Cambridge, and Dumbarton Oaks in Washington, D.C. In addition, the study was conducted using several books focusing on Pre-Columbian art of the Andes and several which focused on the Americas as a whole (Anton 1972, Bushnell 1965, D'Harcourt 1950, Lavalle 1984, Lommel 1968, Lothrop et. al. 1959, Pang 1992, Proulx 2006, Stierlin 1984, Townsend 2016, Wasserman-San Blas 1938, Young-Sánchez 2003). This method was not entirely ideal; photographs and drawings in publications are often only done from one angle, or design elements are presented in isolation. Museum online collections, while an astounding modern resource, can often be low-resolution images or lacking multiple angles. However, these resources still provide a wealth of information, and are easy to take advantage of as a researcher. I recognize that my data is likely incomplete and, as such, I have taken steps to avoid making absolutist statements.

The spearthrower representations were logged into a database with sources and several analytical criteria, in addition to the associated culture, period, location, medium, and style. I interpreted the context for the representation, such as hunting, warfare, or ceremony (though not limited to those three), based on contextual clues and established knowledge about the associated cultural tradition, as well as other weapons or important design components such as trophy heads. I noted whether the spearthrower was in use, held, or simply present. “Present” was used to refer to depictions in which a spearthrower was simply depicted in the image without an associated figure in contact with it. “Held” was used in situations when a figure had a spearthrower in their hand, but without a dart in place or in the motion of throwing. It was common to see figures in the art gripping a spearthrower by the middle of the shaft, for example. “In use” was reserved for situations in which it was clear that the user was readying a throw or had just thrown a dart, such as if they had a dart nocked and in aiming position or if they had an empty spearthrower but a dart was portrayed in flight or having pierced a target.

I also noticed in performing this research that spearthrower portrayals were not uniform, and as such I also noted the portrayal: simplistic, naturalistic, or stylized. “Simplistic” was used for situations in which the spearthrower was missing diagnostic features such as the hook, handlepiece, or both, but it could be confidently inferred to be a spearthrower based on context, such as a dart clearly nocked or in the opposite hand. This could be the result of constrictions with fidelity, for example, as woven textiles may prevent a true naturalistic portrayal or when the user was painted too small or in too crowded of a scene to accurately draw the spearthrower. “Naturalistic” was used when the spearthrower was portrayed with a clear intent for realism, depicting the hook and

handlepiece as a hook and handlepiece. This was necessary as many depictions, especially by the Moche, needed to be classified as “stylized.” This category was reserved for situations in which some part of the spearthrower was clearly abstracted or portrayed in a supernatural manner; commonly, the handlepiece will be portrayed as a living animal protruding from the bottom of the *estólica*, for example.

I noted the presence of supernatural figures, defined as characters with zoomorphic or hybridic features, as well as the presence of animals, if any. Finally, I added a section for descriptions of the art pieces as well as any miscellaneous information. The count at the time of this writing is 228 individual representations. Many sources were light on representations; some had only one or two, while others had none at all and others still had over a dozen. The Museo Larco contributed the most representations, with 104.

Major Themes in Coastal Art

This chapter, along with the following, will present the results of the study sample, divided into coastal and highland specimens. While this separation is slightly outdated due to the amount of evidence for constant interaction between the coastal and highland regions, the terms will prove useful for the scope of this paper, and the noted interactions will provide for points of comparison between the two regions. This chapter will start with a brief culture history of the region, before going into the results of the study with more detail.

The coastal peoples of Peru learned to make due with a desiccated and temperamental environment. The famed Humboldt current, running south-to-north along the Pacific coast of Peru, brings with it massive amounts of cold water as well as microorganisms such as plankton. This has two major effects – cold water means low humidity in the air, drying out the coastline and leading to it being one of the oldest deserts in the world. The plankton, however, attract a large amount of marine wildlife to feed on said plankton and their own respective predators, resulting in high levels of biodiversity and animal life. Most of the people who lived on the coast, therefore, learned to exploit this valuable resource, relying heavily on a maritime lifestyle. As such, maritime imagery is a large part of the art and aesthetics of coastal life, including depictions of animals such as the Peruvian pelican (*Pelecanus thagus*), South American

sea lion (*Otaria flavescens*), orca (*Orcinus orca*), or Requiem sharks (*Carcharhinidae* sp.), to name only a few.

The coastal region altogether provided the bulk of examples in my study, of both spearthrower depictions and the artifacts themselves. This chapter will begin with a brief culture history of the coastal region which will introduce the major societies featured in this study and relevant aspects of their culture featured in the interpretation.

A Brief Culture History of the Major Featured Societies

The Moche culture were the first archaic state to emerge on the North Coast of Peru, occupying river valleys in the 500-km region between Piura and Huarmey during the Early Intermediate period (approx.. 200-750 CE). While the exact nature of their social structure is not entirely understood, it is generally agreed upon that they lived in villages and urban complexes focused around large monumental structures while subsisting on the vast bounty of the Pacific ocean and diversified agriculture (Bourget 2016:6). The Moche are famed for their artistic traditions, including murals, friezes, molded ceramics, and fineline painting, which provides detailed representations of all sorts of everyday themes, from warfare and ritual to crafting and sex. The preliminary work was kickstarted by the collections and research of Rafael Larco Hoyle, but a large amount of our modern knowledge of Moche art and iconography is thanks to the work of Christopher Donnan and Donna McClelland, who created the Moche Archives at UCLA in the 1970s and published countless works on the subject. Moche society collapsed around 750 CE.

The Moche region was succeeded by the Chimù, great craftsmen and architects centered around the citadel complex of Chan Chan, in power from approximately 900-1470 CE. The Chimù exhibited a complex social hierarchy and controlled large portions of the North Coast before being absorbed by the Inka empire. They interacted with and, in some occasions, conquered territory belonging to the other main North Coast polities during this time, the Lambayeque and Casma (Covey 2008:308).

The central coast of Peru was controlled by several cultural groups throughout the years, often centered around the thousand-year habitation of the oracle site Pachacamac. Pachacamac was an important point of pilgrimage and housed several important religious objects including a famed wooden idol depicting Pachacamac himself. The site changed hands several times throughout its history, being associated with the Lima culture, controlled by the Wari, the Ychsma, and the Inka, who built an even larger temple complex to their Sun God next to the original.

Peru's southern coast is largely defined by the Paracas-Nasca cultural tradition, two temporally distinct styles that shared a continuous cultural tradition, although the exact level of continuity is debated. The Paracas culture, which extended across six river valleys on the south coast of Peru from approximately 800-100 BCE, is best known from several extensive cemetery sites on the Paracas Peninsula (Paul 1991:8). These cemeteries are responsible for the bulk of knowledge about Paracas, containing hundreds of mummy bundles wrapped in multiple layers of unusually well-preserved textiles and other burial goods. The first of these sites, the Paracas Cavernas, was originally documented by Julio C. Tello and Toribio Mejía Xesspe in 1925 after Dr. Tello spent years attempting to track down the site of looted textiles appearing in the art market

(Daggett 1991:36). In the Cavernas, Tello found a large number of shaft tombs containing textile-wrapped mummy bundles, which had been opened and added to periodically. The second major cemetery site was the Necrópolis of Wari Kayan, discovered shortly after and generally dated somewhat later. These finds consisted of large numbers of mummy bundles, buried in tight clusters among earlier structures. Over 400 mummy bundles were removed from the site and have since been stored at the Museo Nacional de Arqueología, Antropología e Historia del Perú (MNAAHP). 160 have been opened by various researchers under varying conditions, while approximately half have not yet had their contents catalogued by the museum (Peters & Elsa L. Tomasto-Cagigao 2017:376)

The Nasca inhabited the desiccated southern coast of Peru from approximately 100 B.C.E. to 650 C.E., centered in the Nasca and Ica valleys (Proulx 2006:1), particularly at the site of Cahuachi, though their influence radiated outward as time went on. The Nasca developed a stunning tradition of polychrome ceramics with elaborate chimeras and supernatural figures alongside representational imagery, described by Proulx (2006). Nasca art relied on kennings, particularly in their famed trophy head imagery, as the body parts of various supernatural figures were replaced with trophy heads and similar motifs. While the art style of Paracas and Nasca is very similar, particularly on ceramics, they can be differentiated through their finishing and decorating techniques. Paracas ceramics have incised designs, which were painted immediately post-firing, while the clay was still hot. In contrast, Nasca pots were not incised but painted pre-firing (Proulx 2006).

Moche

The Moche made up the bulk of the study sample, representing 140 of the 214 records. This may not necessarily indicate a higher level of use or importance, but could simply be the result of the sheer size of the Moche corpus – the vessels are well-documented and portray many different aspects of their lifeways. Moche art is also the most representational of the cultures in this study; that is, Moche vessels display their practices more frequently than others and with more accuracy.

Ceramics made up almost the entirety of the Moche sample, with the exception of eight metal objects. Scenes with supernatural figures are a large portion of the sample, featured on 70 of the vessels, in combat and hunting scenes, as well as simple depictions without surrounding scenes. A large number of these comprise the story of Wrinkle Face and Iguana, as Wrinkle Face uses a spearthrower in several different contexts. Hunting makes up a large portion of the sample as well, almost but not entirely exclusively deer hunts. There is a relatively small number of items depicting ceremony, though the spearthrower does seem to play an important role in these scenes. The Moche also have a curious game which is represented in a small portion of the sample which has been dubbed “ceremonial badminton” by some (Donnan & McClelland 1999). The spearthrower is in use for 56 Moche depictions, held in 50, and present in 12. Scenes with darts, but no spearthrowers, made up the remaining 21 examples, usually as part of a weapon bundle. Spearthrowers are often drawn with thin, exaggerated hooks and with living effigy heads as handlepieces – almost all of which are birds, though one fox, one feline, one serpent, and one plant effigy are present in the corpus.

HUNTING

One of the primary uses shown for spearthrowers by the Moche was in hunting, specifically deer hunts. Many of the portrayals of deer hunts are done in a repeating style; that is, the primary design on a vessel repeats itself on the other sides. Occasionally there are variations between the figures on opposite sides, such as a change in weaponry or dress. In the case of the Deer Hunt, often only one of the depicted figures is using a spearthrower, as the other one is holding a mace. It seems likely from these depictions that the spearthrower was used to debilitate the deer, and the mace to finish them off. Many of the deer hunt depictions show spears in the deer being struck with the mace, suggesting the mace-wielding hunter was delivering coups de grâce. Each deer hunt depiction shows the hunters wearing elaborate garb, though there is little continuity of individual elements between respective depictions.

Donnan (1997) theorizes that the Moche deer hunt was primarily an act of ceremony. In several notable instances, warriors are depicted in headdresses often shown on hunters, and vice versa, as well as the hunter occasionally being shown with the warrior's distinctive back-flap, a trapezoidal piece shown trailing behind Moche warriors. Several vessels have also been found in the shape of anthropomorphized deer as warriors as well as prisoners – in some, the deer is wearing warrior's garb and holding a club, while in others the deer are shown bound and with exposed genitals. This suggests that



Figure 7. Moche deer hunt (from Donnan & McClelland 1999)

deer were seen as on par with other human combatants, and the hunt is an allegorical battle. A contrasting theory is that the deer were depictions of human opponents as deer, increasing the fighting spirit of their warriors by transforming their opponents into prey to be hunted. However, while the number of vessels with deer hunts would suggest that deer was a primary part of the Moche diet, almost no deer bone is found at Moche sites (Donnan 1997:55, Shimada 1979). It may have been burned and ritually disposed of in the river, a treatment otherwise reserved for sacrificed animals, as was observed being practiced by the Inca at the time of Spanish contact. This would suggest that deer were held to an elevated status and not seen as mere prey to be hunted, but as warriors with vital force to be sacrificed.

WARFARE

Despite some surprising claims to the contrary, the Moche are often depicted as carrying spearthrowers into battle, making the spearthrower a weapon of war as well as a hunting tool. More often than in use, they are seen being carried as part of a weapon bundle, along with a small shield, a large mace, and two to three spare darts. However, in

the full-on combat scenes, there will generally only be one or two warriors with spearthrowers, and very rarely will anyone be using them in the middle of a *mêlée* (though it does occur, see Donnan & McClelland 1999:133 for an example). From the way that they are depicted, it would seem as though spearthrowers were either assigned to a specialized regiment of warriors or were used at the beginning of a battle to thin out the opposing ranks, then dropped as hand-to-hand combat began. Some battle scenes show spearthrowers cast off to the side, which could have been the spearthrowers that were unnecessary past that initial stage of battle.

Quilter (2008) suggests sensibly that Moche depictions of battle may not have been truly representative of what a battle was like. Of course, it would be impossible to accurately portray the chaos of a battlefield on a ceramic vessel, but the purpose of these vessels was likely more in the vein of military propaganda. The depicted warriors were likely the upper ranks, engaging in *mêlée* combat for the glory of it all. One of the dominant theories for years has been that Moche combat was highly ritualized and prioritized the taking of prisoners for sacrifice, so perhaps the battle portrayals were biased towards the actions that resulted in that prisoner capture rather than the opening volleys which served only to cut down the opposition.



Figure 8. Moche profile warrior from Loma Negra (Metropolitan Museum of Art 1987.394.70)

The Metropolitan Museum of Art has in its collections four Moche copper ornaments, from the site of Loma Negra. These are flat profile depictions of warriors holding spearthrowers, with three of them getting ready to throw a dart. The three in ready position are made of gilded copper and adorned with sequins, while the fourth is made of silvered copper instead. The three gilded copper profiles must have been revered objects to have been gilded and decorated in such a fashion. The museum's collection only has one other profile warrior in this style not holding a spearthrower, though the original context of the items is unknown.

CEREMONY

In the corpus of Moche art are several pots which portray elaborate burial scenes, presumably of high-ranking individuals. These burials, which correspond with archaeologically excavated tombs of Moche nobles (Donnan & McClelland 1999), depict with detail the processes of gathering together the grave goods and sacrifices necessary for laying these individuals to rest. One of the prominent features of these scenes is Wrinkle Face, sometimes standing on top of a small pyramid, holding a spearthrower as though he was about to launch a dart straight into the air. This position of prominence –

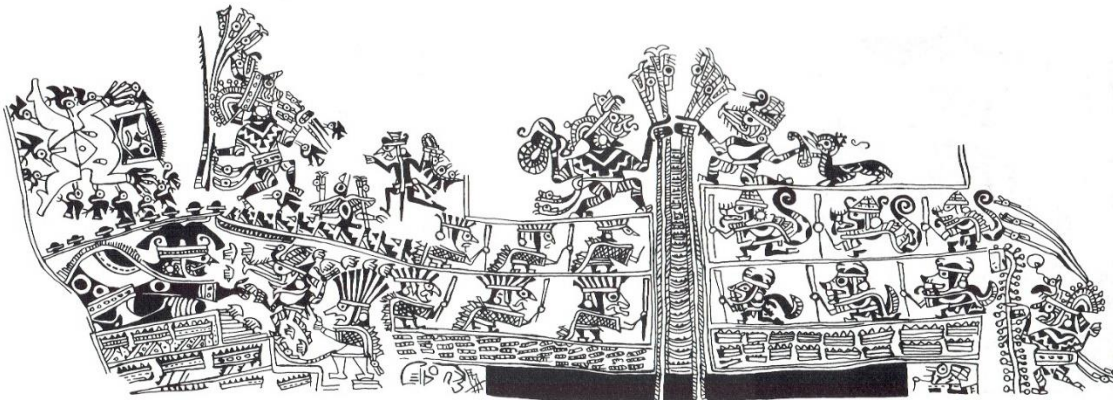


Figure 9. Moche burial ceremony. Spearthrower user is in the top-left. (from Donnan & McClelland 1999)

in use by a mythic hero (or perhaps, in reality, a person assuming his role) standing in a grand position, throwing a dart into the air – suggests a great significance for the spearthrower. I would argue that this would be one of the most likely uses for the gilded spearthrowers that come from so many elite burials; perhaps they were thrown as a salute of sorts to the fallen warrior and then buried with him, a practice analogous to the “twenty-one gun salute” tradition in modern American military funerals.

There is also the repeating motif of the “ceremonial badminton” game. First identified and named by Kutscher (Donnan 1985, 2016), the game was a mystery for decades. Donnan (2016) has recently written a new consensus, based on new iconographic examples and experimental reconstruction, which determined that the game was played by two teams, one of whom was using spearthrowers to throw flower-staves into the air while another team threw darts with attached cross pieces in an attempt to ensnare the flowers as they floated down. The peculiar cross-bar darts depicted in the iconography have been found in burials at Huacas de Moche (Donnan 1985). It is clear, though, that the game was of elevated importance, as supernatural figures are shown engaging in the play that was likely the focal point of festivals. Vessels depicting ceremonial badminton date from Moche Phase III to Phase V, spanning roughly 300 years.

WRINKLE FACE

Wrinkle Face, also referred to as Ai Apaec, was one of the major supernatural figures of Moche myth. He can be identified by his wrinkled face, fangs, feline headdress, and serpent-headed “tentacles” that originate from his belt. Wrinkle Face

appears in many different scenarios which lead researchers to believe that he, along with his frequent counterpart, an anthropomorphic iguana, was a mythic hero of sorts, and that these portray different stages of his narrative. While not exclusively using spearthrowers in his exploits, Wrinkle Face is seen using them to hunt deer, though his method is slightly unconventional, as he is depicted leaping towards a deer while holding a spearthrower and darts in one hand. This scene makes six appearances in the corpus, in an embossed design. The design is exactly the same in each instance, and was likely mass-produced using a mold. He is also shown engaging in a duel with an anthropomorphic bird figure using a spearthrower as his primary weapon against his opponent's mace, accosting another mythical figure named Split Top with Iguana's help, participating in a burial, and leading a game of ceremonial badminton with Iguana.



Figure 10. Wrinkle Face emerging from strombus shell (Museo Larco ML003208)

Wrinkle Face appears in an extraordinary piece in which he is climbing his way out of an enormous strombus (*Strombus galeatus*) shell (Museo Larco, Lima, Peru, Inv. no. ML003208; see figure 9). The serpent tentacles on his belt are visible as they slither out of the opening and he is wearing his signature feline headdress. He is also carrying a spearthrower and two darts with feline-serpent heads on the tips. The spearthrower has a naturalistic handlepiece, in that it is shaped like a rectangle with a design carved onto it rather than a living effigy as the handlepiece. This piece must have been highly significant, as the detail belies a great amount of effort put into it. This is likely due to the strombus shell's clear significance in Moche ceremony, as the passing of the shell, with Wrinkle Face involved, is a major part of the sacrifice ceremony as depicted in art. This is likely an associated symbol, and it could be that the spearthrower Wrinkle Face is holding is one of the decorative models.

This is not the only known example of the “Wrinkle Face as Hermit Crab” motif, as I am aware of at least one other example (Kutscher 1955:pl.63; Staatliche Museen zu Berlin, Berlin, Germany, inv. no. VA 18032). However, in this case Wrinkle Face emerges unarmed – so it seems that Wrinkle Face, the strombus shell, or both are the operative symbols in this motif, not the spearthrower. The shells themselves were commonly used as instruments by the Moche, associated with most major ceremonies, including battles, burials, and sacrifices, as well as with the figure of Wrinkle Face. Bourget (2016:218) theorizes that his emergence from the shell may symbolize that he was summoned by or associated with the sound of shell trumpets playing – popping out to say hello when he hears the shells.

Paracas

Paracas culture made use of spearthrowers, though the exact extent is not readily apparent from their artwork and artifacts. Paracas artwork is widely known from the incredible embroidery and textile work found at the Paracas cemeteries, as well as an established ceramic tradition, which often depicted zoomorphic humans and hybrid figures thought to represent shamans and performers in costume. These were usually in the form of small embroidered figures along the borders of funerary mantles or *fardos*. Images of these mantles and textiles are widely reproduced and featured in many art books and on museum webpages, but due to their size they are often presented in incomplete and out of context detail shots, leaving many of the figures undocumented or in photos without specific bundle associations. This made it difficult to determine a complete and accurate count of spearthrower depictions among Paracas art. Ultimately I was able to find two definitive portrayals of a spearthrower; both from funerary wrappings. The first is a figure on the “Paracas Textile,” currently housed in the collections at the Brooklyn Museum (accession number 38.121) and detailed in *Paracas, Primera Parte* by Julio C. Tello (1959, fig. 49). The spearthrower is held by the shaft by a human figure; he is wearing a headdress with yellow plume-like projections, a reddish band and white hanging discs. He has two darts in the same hand and a staff in the opposite – as such, it must not be a portrayal of anyone in a battle scenario as he would need a free hand to nock the darts. The spearthrower has a double-headed billet-style hook and a projecting handlepiece with a face carved on it.

The other portrayal comes from a detail from bundle 290 at the Wari Kayan cemetery (Tello 1959:pl. LXXVI). It shows a humanoid figure with a spearthrower in his

left hand and two darts in his right; the spearthrower has a simple rhombus hook and a stepped handlepiece, the tip of which resembles a bird's beak. The figure has large mustache-like projections from his upper lip which resemble cactuses or centipedes and an elaborate serpentine headdress.

While relatively few of the Paracas Necrópolis mortuary bundles have been unwrapped, documented, and catalogued, at least six spear-throwers, two with handlepieces, were found with the bundles.

Nasca

The Nasca made use of spearthrowers and the artifact certainly is depicted in their artwork. They appear predominantly on human effigy jars, in depictions of hunting, and associated with the Anthropomorphic Mythical Being, an important figure from their canon of supernatural chimeras. Nasca art yielded only two depictions where the spearthrower is actually in use, in one combat and one hunting scene. The remainder were depictions of the spearthrower being held, with no depictions where it was merely present, and six containing only darts.

HUMAN EFFIGIES

The corpus of Nasca art produced vessels shaped into human effigies holding spearthrowers. All of these spearthrower-wielders can be inferred to be warriors, as they have trophy heads or other weapons along with them, such as several examples with a



Figure 11. Nasca effigy jar (Courtesy of the Peabody Museum of Archaeology and Ethnology: 09-3-30/75658)

though three of them are wearing very similar red mantles with a proliferating disc pattern, and three others have falcon eye marks. Falcon eye marks are a symbol often seen on figures of importance, both mimicking those found on falcons as well as invoking the shape of a falcon's head in profile (Proulx 2006). The larger size of these effigy jars and the generally clean Nasca style allows for detailed portrayal of spearthrowers, and as such they are usually portrayed naturalistically and with notable variation in hook shapes that are backed up by the physical specimens, including triangles and two-sided billets. One has a spearthrower with a condor's head effigy, one of the few examples of living effigy handlepieces in Nasca art.

sling worn as a headband. These representations are often clutching a spearthrower in one hand and either a set of darts or a trophy head in the other. Proulx (2006) mentions that these human effigies encompass most spectrums of Nasca life, and so these are meant to be representations of living people. Their clothing and makeup varies, for the most part,

HUNTING

Hunters in Nasca art primarily use spearthrowers, though bolas and slings are also shown being used, occasionally in conjunction. One example shows a hunter in profile throwing darts at camelid prey. The background is a seemingly random pattern of darts and sling stones, far more than would be necessary for a natural representation. Interestingly, on many occasions hunters are shown accompanied by a bird, specifically a parrot. This parrot is not the quarry, as it seems to be perched on the

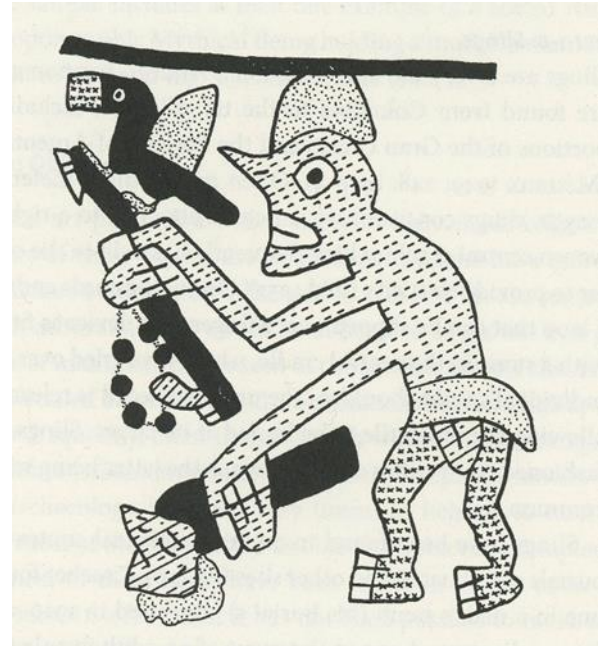


Figure 12. Nasca Hunter with spearthrower, bolas, club, and companion parrot (from Proulx 2006)

spearthrower that the hunter is holding or the hunter himself. The bird is identifiable as a parrot mainly due to the shape of its beak, which is quite distinctive. The presence of parrots is slightly confusing at first, as no species of large parrot are native to the Peruvian coast. The Pacific parrotlet (*Forpus coelestis*) and mountain parakeet (*Psilopsiagon aurifrons*) do live on the coast, though the Pacific parrotlet only lives on Peru's far northern areas and the mountain parakeet is far too small and has the wrong shape of beak (Schulenberg et al. 2007). However, there is evidence that the Nasca participated in some sort of pet trade. The mealy parrot (*Amazona farinosa*) is the most likely candidate for this role, as their skeletons have been found at the Nasca site of Cahuachi and their feathers were used in garments (Benson 1997:73; Candler 1991). This trade was not exclusive to the Nasca region as several

parrots have been found at least as far north as Pachacamac on the central coast; including macaws (*Ara* sp.) wrapped in mummy bundles (Schmidt 1929:561; Reina & Kensinger 1991:8) They may have been bred and maintained on the coast, or imported through trade. Proulx mentions that the Nasca imported monkeys as well, from Ecuador, and kept them as pets (Proulx 2006:143), based on monkey effigy jars showing them with bowls full of food.

ANTHROPOMORPHIC MYTHICAL BEING

The Anthropomorphic Mythical Being (AMB) is a common motif in Nasca phases 2-7, resembling a humanoid feline with a long, thick tail holding some kind of staff in its hand. It is thought to have originated as a stylized representation of a masked performer, evolving later into much more. The AMB comes in many forms, resembling everything from a feline to a killer whale. In some incarnations, it has a body lined with darts, running down its back like spines. I recorded instances of the dart-bodied AMB, as they were also often holding staves which resembled spearthrowers, though somewhat abstracted. Some have what clearly seems to be a billet-style hook, while others have a projecting handlepiece which terminates in a curl. The dart body, however, does show some reverence for the weapon. The dart-bodied AMBs also often have trophy head motifs running down the length of the tail, along the back, or are holding one in their hand. One example has a human lower body at the end with a dart emerging from the groin. This, combined with the phallic spearthrower from Chaviña, would bolster the idea that darts or spearthrowers may be a masculine identifier.

Other Coastal Areas

Ghezzi (2006; 2016) has noted several occurrences of warrior figurines at the Early Horizon site of Chankillo. Chankillo, located in the Casma valley, is widely associated with an early explosion of Andean warfare in the Early Horizon. The hilltop construction of the site is one of many facets of its design as a defensive fortification, including walls, bafflements, and parapets. Excavations revealed a large number of clay figurines, particularly warriors in extravagant garb with varying types of weaponry. Spearthrowers were well-represented in the collection of weaponry, making up 36% of the sample, alongside darts, maces, slings, and shields (Ghezzi 2016:300). Spearthrowers were often simple, and when paired with a nocked dart were often just differentiated by an incision in the clay. More detailed depictions were seen in the dartless depictions, in which the hooks were well-defined but handlepieces are absent. The spearthrowers at Chankillo were likely advantageous when defending the structure, especially when throw



Figure 13. Spearthrower from Chankillo and warrior figurine (Archi.pe)



from atop walls and parapets. The simple design of the spearthrowers at Chankillo is backed up by a physical specimen from the site (see object 01.000519.001 at the MALI *Archivo Digital de Arte Peruano* (www.archi.pe), which is a simple stick with a wooden hook and no handlepiece. This may be a piece that was built in a hurry for war with little regard for aesthetics or indicative of an earlier style, the handlepiece may have become a standard feature in the area at a later date.

Major Themes in Highland Art

While this chapter will show that the highlands did not produce as many works of art featuring spearthrowers, they were certainly present and in use, and may have held a symbolic role. Some of the earliest depictions of spearthrowers, in fact, come from rock art drawings in the Cusco region showing several hunters using spearthrowers to hunt camelids (Hostnig *sinus data*). However, the lack of representations in highland art is not entirely indicative of a lack of spearthrowers. Rather, it is a result of the differing priorities and aesthetic preferences of highland artists – highland art has always been more abstracted than coastal art and, as time progressed, turned away almost entirely from the narrative and representational approach to artwork seen in the coastal regions.

Chavín

The Chavín artistic tradition is famous as one of the first major artistic movements to rise in the early Andes. Named for and seemingly radiating from the ancient pilgrimage site of Chavín de Huántar (Urton 2008), the Chavín art style is noteworthy for the intricacy of each image, the extremely apparent skill that went into the planning and execution of the art pieces, and the elaborate cosmology behind them, especially when considering the time period (ca. 850-200 B.C.E.). Pieces are characterized by an elaborate system of “kennings” defined by Rowe (1967), in which common elements are replaced by visual metaphors, such as a row of crocodilian teeth meant to represent a humanoid spine. While the semantic term “kennings” is not as generally accepted as it once was (Knight 2013), the concept still rings true much of the time.

The corpus of Chavínoid art examined for this study did not unveil a great many representations of spearthrowers, only four. These examples are from large sculptures of significance. The first example comes from a relief carving at Chavín de Huántar, a naturalistic representation of a warrior holding a trophy head in one hand and a spearthrower and three darts in the other. The spearthrower is an interesting example; the handlepiece we would expect to see is present, though in a completely unexpected shape. Rather than the projection that became the de facto shape for handlepieces later on, this Early Horizon example is portrayed with a donut-shaped handlepiece that seems to complicate the purpose. Perhaps it was indeed the dart rest that the Moche or Nasca handlepiece is often erroneously argued to be, or it could be representative of the leather finger-loop occasionally seen on Chinchorro spearthrowers. Roe (1974:14) mentions that the motif of weaponry begins in Period C of the relative chronology of Chavín (in a scale consisting of periods A-F, though with no absolute dates), with spearthrowers specifically as the first known examples.

Roe (2008) has also asserted that two figures in one of the most prominent pieces of art at Chavín de Huántar are holding an *estólica* and dart – the Black and White Portal Were-Raptor figures. These are two pillars, one of white granite and the other of black limestone, forming a gateway leading to the New Temple. Each is carved with a were-raptor figure, humanoid hybrid birds of prey. The white column is commonly argued to represent a male hawk while the black is often interpreted as female. Each is holding some kind of toothy tool, clearly a kenning of something but not clearly identifiable. Roe argues that these tools are a spearthrower and dart – the female holding the spearthrower and the male, the dart. Roe makes note of the fact that, unlike previous interpretations

stating that each figure was holding two horizontal weapons, each is holding one long weapon horizontally, and each is different. The female figure's staff has a distinct proximal and distal end with complementary leaping fish motifs; these fish are said to represent the hook and handlepiece of the spearthrower. The dart, held by the male figure, is mostly identified by the "Cat-Snake" head on the end. This particular explanation Roe bases on Shipibo (an Amazonian culture group often used for Chavín parallels) ethnohistory and linguistics – a mythical dart known as the Ino Roni ("Jaguar-Boa") which is analogous to the "Cat-Snake" dart present in this image (Roe 2008:208-209). While his explanation relies on horizontally rotating the head of the dart ("it points inward to avoid cutting the borders of its enclosing cartouche. To correct for this constraint, I horizontally reflect its head." (Roe 2008:207)), once it is rotated it does provide a compelling case. The tooth of the "Cat-Snake" head does seem analogous to the tip of a dart, especially when combined with the Shipibo word for projectile points being the same as "tooth."

Wari

Wari depictions of spearthrower use are sparse, but not unheard of. Unlike the coastal art traditions, the Wari preferred to relegate their depictions of humans or humanoid figures using spearthrowers to textiles and figurines, with no examples of ceramics in the study sample. Textile designs tended to be highly stylized, a conceit insisted upon by the medium, often reducing the subject into a difficult-to-interpret series of rectangles.

One particular example is a fragment of a poncho in Wari style, with a woefully lacking attribution to the "coast of Peru" (Lothrop, Foshag & Mahler 1959, plate CXLIV;

object PC.B.496 at Dumbarton Oaks). This piece depicts figures in profile with a staff in each hand. While some of the staves are topped with common *A. colubrine* symbols, several of the figures appear to be holding spearthrowers. The abstraction does leave the shape up to interpretation, though the hook and handlepiece do seem to be distinguishable. In addition, both the hook and handlepiece are stylized with bird heads and feathers, a feature it holds in common with other cross-Andean depictions of spearthrowers, including other Wari examples.

Wari depictions of spearthrower users are usually supernatural. Lavalley (1984) details two Wari textiles, one mistakenly attributed to the site of Huari and the other from Moquegua. The first depicts a group of Winged Guardian figures with multicolored spearthrowers and darts nocked (Lavalley 1984:80); the second is a repeating design of



Figure 14. Warrior figurine from Pikillacta (from Arriola Tuni & Tesar 2011)

humanoid felines with spearthrowers (Lavalley 1984:58). There are also depictions of the Front-Faced Deity carrying spearthrowers, such as in a detailed appearance on a jar from Conchopata, which will be expanded upon shortly.

An exceptional specimen worth expanding upon is an 87mm-tall metal figurine found at the Wari site of Pikillacta

depicting a human warrior holding a spearthrower, dart nocked and ready to throw (Arriola Tuni & Tesar 2011:13; see figure 12). In his opposite hand he holds a large shield and three spare darts. The figurine was uncovered as contents of an offering pit, as part of a level containing six figurines of similar size and make. The other five figurines were in the shape of one other warrior, with winged helmet and mace, two felines, and two supernatural figures, one with a trophy head and one standing over a sacrificial victim. These were over two meters below the occupation level. Excavations also unveiled a large cache of 50 smaller figurines below, made of cast metal, carved stone, or carved *Spondylus* shell. These particular figurines range between 21 and 46 millimeters tall; some seem to be holding spearthrowers, but the small size has a lack of fidelity that makes conclusive identification quite difficult. This main figurine has a feature which may confirm a theory on the functions of Andean handlepieces – there is a finger in place pressing the dart against the inner side of the handlepiece, using it as a dart guard to prevent miscuing the dart during the throw.

The question posed by these figurines is simple – whose forces do these represent? Arriola Tuni & Tesar (2011:30) suggest that they may have been images of a people whom had been subjugated by the Wari, while the larger figurines represent Wari heroes, mythic and real. In particular, the presence of the sacrificial figure supports the argument that the larger bronze figures were meant to represent the Wari side of the narrative while the smaller figurines may have been an attempt at presenting a fictive kinship to the subjugated. However, representations of spearthrower use in Wari art is rare – even in depictions of warrior processions, bows and axes will be present while the spearthrower is conspicuously missing (Tung 2012:116; Bergh 2012:178). In addition, my research for

this project only turned up two spearthrowers and three handlepieces attributed to the Wari. Both spearthrowers were a complete specimen, but of suspect origin. The first comes from the archives of an online auction site (The Webb Collection), while the other has a reversed handlepiece possibly originating from misguided restoration (Patrimonio Cultura de la Nación, object 162983). The handlepieces, exhibited by the Cleveland Museum of Art (objects 1954.389, 1955.58, and 2017.58), were finely carved and decorated with shell and stone inlays, and may have been intended for more decorative or ceremonial uses. While it would be a bit of a stretch to assume that this means spearthrowers were never used by the Wari, it may suggest that the Wari used spearthrowers to identify foreign forces or ancestor figures. The bias toward portrayals of supernatural figures in the Wari corpus might also suggest that the spearthrower could be a symbol denoting a supernatural presence. Tung (2012:102) also notes that evidence of wounds caused by projectile weapons is rare throughout the Wari population, as well as the entire Andes. Projectile weaponry tends to cause more flesh wounds than bone injury, though this is also indicative of a preference toward blunt-force trauma in chosen weaponry, such as slings and maces.

Inka

The Inka, while making grand impacts on the cultural and ecological landscape of the Central Andes, had few contributions to this study. There were no examples of Inka artwork portraying the presence or use of spearthrowers, nor were there examples of spearthrowers from Inka sites. The absence in artwork can be explained, as the Inka preferred non-representational styles of artwork on ceramic vessel and textiles, which were otherwise common forms of iconographic transmission.

Other Observations

The staff god, also often referred to as the front-face deity, is a widespread recurring icon that is best known from multiple appearances on materials from the Tiwanaku and Wari states. The deity is depicted as a being with a rayed head, facing forward (in contrast to the more common profile depictions of other beings as well as the deity's own attendants), and holding a staff in each hand. Often the staves are ambiguously detailed, in a zig-zag shape or containing *Anadenanthera colubrina* imagery (Knobloch 2000, 2012). While the chronology, origins, development, and spread of the icon are complex, it is generally agreed that it has origins in a rayed head being in Pucara iconography, an antecedent of Tiwanaku (Isbell & Knobloch 2002). It is also a key diagnostic characteristic of the Southern Andean Iconographic Series (SAIS) defined by Isbell & Knobloch (2009). The SAIS encompasses the majority of the southern Andes and is defined by the presence of the rayed head, staff god, and one or more profile attendants. On several prominent portrayals of the staff god in the SAIS, one of the titular staves is clearly depicted as a spearthrower. Two of these originate from Tiwanaku – carved onto the Ponce monolith and the Gateway of the Sun. The Ponce monolith (see Isbell & Knobloch 2009:185 for a detailed rollout) contains a carving of a staff god

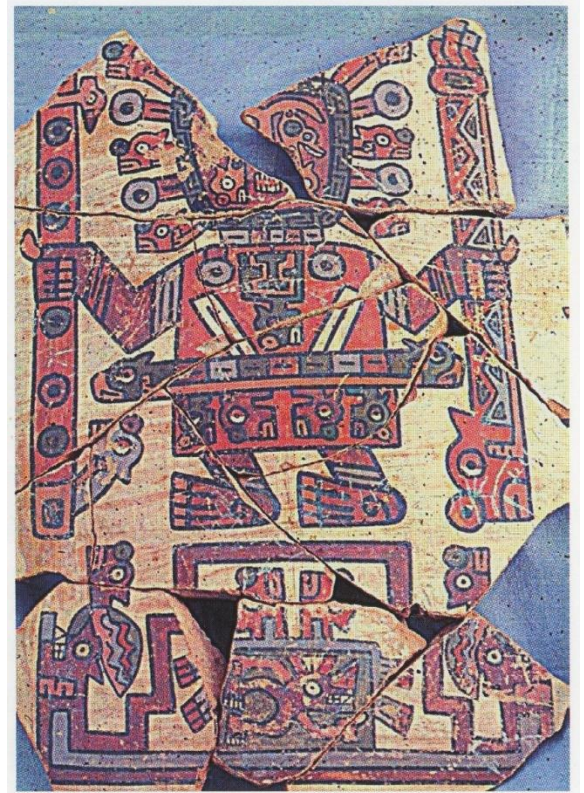


Figure 15. Conchopata Jar (from Isbell & Knobloch 2009:194)

surrounded by profile attendants on the back. This staff god is clearly grasping a spearthrower in its right hand, complete with an avian hook and canine or feline handlepiece. The example from Tiwanaku's Gateway of the Sun (see figure 16), likely the most well-known example of the staff god, was carved in the center position of a massive stone gateway. Interpretations of its staves have varied, from the claim that it was a depiction of Viracocha holding thunder and lightning to the simple explanation of generic scepters. Several researchers have claimed that it is a spearthrower (Donnan 1992:82, Young-Sanchez 2004:36), though rarely giving reasons for this interpretation. The staff in the right hand clearly possesses the diagnostic hook and handlepiece, both stylized with avian features. Avian imagery has been previously established in this study as a common feature of spearthrower depictions, bolstering the argument that the staves held by these staff gods were indeed spearthrowers. This suggests that the object in the Gateway figure's left hand might be a quiver of darts to accompany the spearthrower. Another example from the Tiwanaku canon comes from a tapestry tunic featured by Young-Sánchez (2004:46), showing a large rayed head surrounded by rows of small staff gods. One of them holds a staff which seems to represent a spearthrower, though the fidelity of the image makes it slightly ambiguous, as well as a handful of darts in the opposite hand. If it is a spearthrower, the distal end possesses a double-sided hook which appears similar to the double-sided hook often seen in Nasca portrayals of spearthrowers. Figure 15 is a comparison of this figure with a Nasca bowl depicting the common "Flying Hunter" motif, on the right. The double-sided hook on the Tiwanaku figure is visible towards the top of the image, in the figure's left hand. Compare this to the distal end of the spearthrower in the Nasca figure's right hand, towards the top-right of the image. This

may be a result of contact between the Nasca and Tiwanaku cultures or a convergent design.

A very similar depiction of the staff god with a spearthrower was also found on a collection of jars uncovered at the Wari site of Conchopata in 1977 (Cook 1984-1985:54; Isbell & Knobloch 2002, 2009), along with the avian hook. The handlepiece resembles a canine or feline more than a bird, but still strongly evokes the classic Andean handlepiece in its shape. The companion staff on the Conchopata jar differs strongly from the Gateway of the Sun's, and much more representative of the *A. colubrina* iconic tradition, but strongly resembles the companion staff on the Ponce monolith. In fact, the Conchopata staff god shares the same arrangement of rays, clothing accessories, number



Figure 16. Comparison of Tiwanaku figure (detail from Young-Sánchez 2004:46) and Nasca flying hunter (British Museum AM1937.5)

of heads suspended from the belt, and staves. The only real difference between the images is that the Conchopata staff god is standing on a three-stepped pyramid, suggested to be a Wari-Conchopata innovation (Isbell & Knobloch 2009:195) Based on the SAIS seriation provided by Agüero et al. (2003), the jars from Conchopata are synchronous with the Ponce monolith (SAIS Phase 3), while the Gateway of the Sun belongs to SAIS Phase V, suggesting that there was enough contact between the two early on for this to be drawn from some kind of common or shared model, while the spearthrower icon maintained its significance many years later.

If the deity on the Gateway of the Sun indeed holds a quiver of darts in its off-hand, the lack of the quiver here means the spearthrower is the operative icon. The iconic adaptation of the left staff could have also been changed as a form of syncretism – adapting religious icons for different audiences to ease their acceptance of a new religious tradition.

Results and Comparison

This next section will engage in a comparison of the coastal cultural regions to the highland. As the brief cultural histories alluded, these areas shared common threads and had contact and relations in both directions; they were not necessarily discrete cultural areas. However, the inhabitants of the coastal and highland regions did have to contend with greatly differing ecosystems for their lifestyles; the arid deserts of the coasts demanded a distinct lifeway from the vertical environment in the highlands. As such, the cultures developed in different ways and had different challenges to face in their existence. This comparison would not necessarily be valid in all contexts, however, it is appropriate when dealing with a weapon and hunting tool such as the spearthrower.

Art traditions of the highland Andes produced far fewer examples for this study than the coastal canons; this is not necessarily an indicator that spearthrower use was less widespread, though it may seem that way when taken at face value. Highland traditions simply prioritized different types of artistic expression; purely representational art was not the trend as it was with the Moche, hence why they made up such an overwhelming proportion of the study. Rather, most examples from the highlands came from abstracted and kened spearthrowers, and plenty of non-ceramic media. The more representational styles of art in the highlands were found on friezes and carvings, as well as textiles and figurines. Ceramic art was more likely to prioritize depictions of static individuals or

deities rather than scenes of action; in addition, there are far more examples of pots decorated with elaborate geometric designs, particularly in the case of the Inca.

While each culture seemed to place importance on different uses of spearthrowers, avian imagery was incredibly common. Whether it was a depiction of a companion parrot with Nasca hunters or a handlepiece shaped like a bird, representations of birds went hand-in-hand with spearthrower depictions from all cultures included in the survey.

Of course, the simple term “bird” is incredibly general. There are as many species of bird as there are fish in the sea, each filling their own ecological niches and, likely, serving different cultural roles. When possible, depicted morphological differences were used to differentiate between avian families, often through the shapes of the beak and wings, length of the neck, plumage, and markings. The large curved beak of a parrot, for example, can be easily distinguished from the sharp, pointed beak of a raptor, the small, downturned beak of an owl, the pouch of a pelican, the short beak of a finch or tern, or the exceptionally long beak of a heron or ibis.

Moche spearthrower imagery most often depicts spearthrowers as having the living head of a bird emerging from the handle, rather than showing a carved handlepiece. This could very likely be a symbol indexing the flight given to the dart when thrown; the flier becomes the flight-giver. One would also expect that the birds represented might be those often associated with similar contexts as weapons – fast flight, violence, predation, strength, or sacrifice. This would lead one to expect to see raptors most commonly, birds that hunt prey on the wing or swoop down at blistering speed to catch their prey, such as falcons, hawks, and owls.

One would expect the birds depicted to be a hawk, falcon, or other raptor, however, it is most often a depiction of a bird with a long, curved neck and beak. This may be representative of a species of ibis or heron, though it

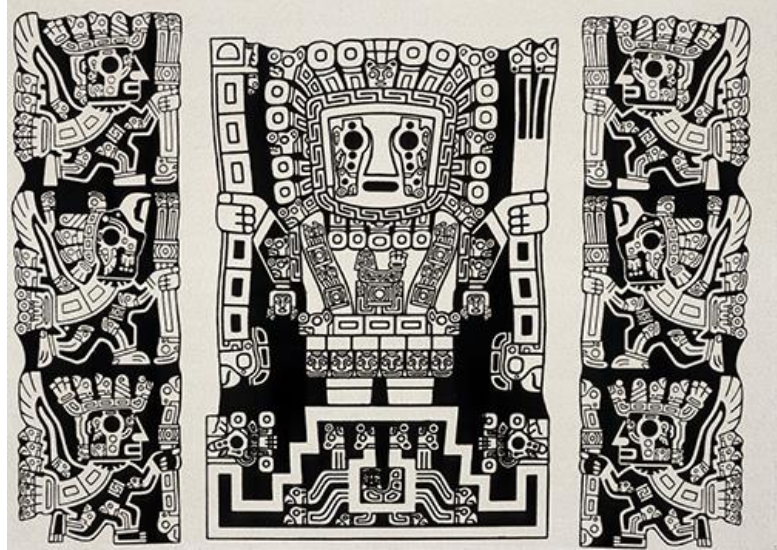


Figure 176. Being from Tiwanaku Gateway of the Sun (Moseley 1992:220)

also bears resemblance to a hummingbird, which is a known symbol of importance in Moche art and thought to index quick movement and action, an appropriate connection for this context.

Surprisingly, the Andean condor, while serving an undeniable and important role as a cultural symbol, was not often represented in conjunction with spearthrower imagery. My study sample produced two spearthrowers with condors on their handlepieces, both decorative; one is from a Moche decorative example in the Museo Larco's collections. It is sheathed in gold and has a small figurine of a condor consuming a sacrificial victim on the handlepiece. The other is from the burial of the *Señora de Cao* from the Moche site of Huaca Cao Viejo. This is another example of a spearthrower sheathed in gold, seemingly very fragile, and far too long to be of actual use. The handlepiece depicts a condor's head. The only depictions in art I am aware of are on the

Gateway of the Sun in Tiwanaku, which has a handlepiece with the distinctive crest and overbitten beak of a condor, and a Nasca effigy vessel with a living condor head as the spearthrower handlepiece. The Gateway of the Sun figure also has a short-beaked bird's head representing the hook. This was possibly a



Figure 187. Nasca effigy jar with condor-head spearthrower (Museo Larco ML040367)

kenning based on the shape, as a beak bears more than a passing resemblance to the hook of an Andean spearthrower. Condors are often seen in pre-Columbian Andean art as representative of death and sacrifice due to their important ecological role as carrion eaters, and their 10-foot wingspan and distinctive plumage likely contributed to their prevalence in iconography (Benson 1997; Proulx 2006). They disposed of the dead all across the Andes, whether it be human or animal. Sacrificial remains found at Moche sites show signs of being left out in the open for extended periods of time after death, possibly to be consumed by condors (Hocquenghem 2008:35).

Judging by the physical and iconographic evidence, the spearthrower became a pure symbol to some cultures. This, I believe, is embodied by the Chimù. First, I was only able to find two representations of spearthrowers in Chimù art, and both are ambiguous – in that the resolution of the online images and coloring of the vessels made it difficult to even determine that they were, in fact, spearthrowers. Furthermore, both



Figure 19. Miniature speargunner, 24.9cm (Metropolitan Museum of Art 1987.394.244)

were depictions of the Staff God, indicating that if the staff in question is a speargunner, it was likely being represented as a symbol or, at least, in use by a deity. The paucity of iconographic depictions is backed up by a lack of functional speargunners – I was not able to find one from a reputable source. The only example that appeared usable was a listing from the Webb Collection, an auction house. Instead, I was able to find several decorative or non-functional speargunners and parts – 12 in total. This includes the previously mentioned gold-wrapped speargunner, items which are identifiable as hooks but lacking distinct points of contact as well as small (3.2-24.9cm) speargunners made of copper and silver. The gold-wrapped speargunner, discovered in a grave near Huarmey, has no handlepiece, but it does have a bird-shaped hook. However, the hook is facing at an angle that would make it needlessly difficult to nock and throw a dart; in addition, it is far too fine to have been intended for actual use. The small speargunners may have been intended as some sort of ceremonial baton – I believe this can be analogous to the Eskimo and Inuit speargunners described in Chapter 2. The Inuit adapted Eskimo designs of speargunners for use in ritual while never actually using them in hunting – the Inuit adapted designs were, in fact, too small to throw and carved in a shape which made them

difficult to hold in proper throwing position – a distinct difference from the ergonomically carved Eskimo handles. This may mean that the Chimù adapted spearthrowers from the earlier Moche habitation without actually using them, as they seem to have fallen out of favor in many areas by the Chimù florescence in the Late Intermediate Period.

Discussion

Handlepieces

The oft-discussed handlepiece, a distinctive characteristic of the Peruvian spearthrower, seems to have been the vessel for the artisan's creativity or the culture's symbolism. They were frequently carved or cast into elaborate designs, often incorporating incisions, inlays, and multiple materials. If these were purely a functional addition to the spearthrower, they would be usually in simple geometric shapes such as arches and nondescript projections; however, crafters took the opportunity to weaken or complicate them through decoration. Clearly these were meant to be some sort of expression, whether it was cultural identity or an expression of the user's favored animal or a "totem" of sorts.



Figure 20. Sampling of Nasca handlepieces from the Chaviña collection (Photograph mine, courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University. From left to right: 46-77-30/6836; 6858; 6827; 6835; 6855)

The most common motif, by a wide margin, was a humanoid figure. These were occasionally devoid of features beyond the head shape and nose but were occasionally lavishly detailed and came in a variety of shapes. Paracas humanoid handlepieces tended to be circular and flat, with the facial features incised onto the surface. Nasca examples preferred the featureless type, though exceptional specimens, such as some from the Chaviña assemblage, had inlays of spondylus and turquoise representing the eyes, mouth, jewelry, and hair. I do not believe the exact nature of these humanoid handlepieces will be revealed - the featureless ones, especially, would be impossible to tie to any

HANDLEPIECE MOTIF	N=
Ambiguous/Indeterminable	7
Avian	6
Camelid	1
Feline	8
Geometric/Simple	6
Humanoid	40
Multiple Figures	2
“Mushroom”	8
Phallus	2
Missing Handlepiece	2
No Handlepiece	18
TOTAL	100

Table 1. Breakdown of handlepiece motifs in physical specimens

individuals. This is also complicated due to the fact that many of these lack exact provenience. They may be meant to represent an ancestor, giving his ancestral blessing to the user. Others may have been carved to represent the individual they were buried with, though this is still speculation.

Nasca spearthrowers also showed a predilection toward the “mushroom” motif, so named as the simple wooden handlepiece blossoms widely at the top, resembling the fungus. These usually showed some amount of use-wear, indicating that they may have been examples of more utilitarian spearthrowers. The choice of design, from a pragmatic point of view, may have been because it is recognizable, yet easily carvable,

allowing the crafter to “spice up” his *estólica* with relative ease. Their shape may have facilitated use as a dart rest, though this theory will require experimentation to confirm or deny. Ultimately, they comprised 8 specimens in the sample.

Feline figures on the handlepieces comprised 8 specimens in the study. This is not surprising given the important symbol that they represent in the Andes (Saunders 1998). Conversely, avian handlepieces were a noticeably small part of the sample, especially when considering the breadth of avian imagery associated with spearthrowers in the iconography.

Two handlepieces displayed multiple figures. One, a previously-mentioned Moche spearthrower, had a sculpture of a condor eating a dead human on the handlepiece. The other was an image of multiple figures consuming a dead person, also Moche. The selection of sacrifice imagery may suggest that these spearthrowers, as both were decorative, may have been used as part of a sacrificial ceremony.

Gender

There is a history in archaeology of using spearthrowers to gender individuals – when found in grave goods, for example. Lothrop and Mahler, in the Chaviña excavations, used the presence of a spearthrower to identify the skeleton of a child. Androcentric interpretations of spearthrowers as grave goods at Indian Knoll in Kentucky and the Annasnappet Pond site in Carver, Massachusetts were provided by Webb and Winters, as several spearthrowers were found in identifiably female burial contexts. Doucette (2001) describes their interpretations and seeming bewilderment at the inclusion of hunting tools with buried women, their interpretations suggesting everything from a

“platoon of Amazons” to ornamental use, not taking seriously the idea that women might be hunting. While the Western and androcentric projection is obvious, it is also important to consider that spearthrowers act as an equalizer, allowing someone of lesser strength to throw a spear with effective power. Grund (2017) used contemporary data to determine that new users of spearthrowers picked up the skill relatively quickly, especially when compared to the self-bow, which took longer to achieve competency and, according to Grund, exacerbated societal differences. However, spearthrower users, including men, women, and children, quickly reached similar levels of competency and would all be considered adequate users.

The gender relations of spearthrowers in the Andes are similarly complex. An argument can be made that spearthrowers were associated with masculinity among the Nasca – multiple depictions of the Anthropomorphic Mythical Being, particularly the dart-bodied iteration, feature a dart protruding from the being’s groin. This seems quite overtly phallic, much like the phallic handlepiece on one of the spearthrowers from Chaviña. While my study sample includes no examples of identifiably-female humans wielding spearthrowers, there are suggestions that certain supernatural figures are females and using spearthrowers such as the female figure from the Black and White Portal, if she is indeed holding a kened spearthrower as Roe (2008) suggests. It is also worth considering the Lady of Cao, an elite woman in her late twenties found at the Moche site of Huaca Cao. She was buried with a bundle of 23 gilded-copper-wrapped spearthrowers at her feet (Scher 2017:475), objects assumed by many to be used exclusively by men.

Value and Status

Based on their decorative qualities, metallic elements, and use as grave goods, it can be established that spearthrowers were items of great value and may have been markers of individual status among certain Andean societies.

Often, as has been noted throughout this thesis, spearthrower specimens have been wrapped in gold or gilded in some other fashion. This was a clear expression of value in the Andes, in which gold had huge aesthetic and spiritual value. While it had no monetary value (DeLeonardis 2012), the incorruptible shine of gold led to its association with the sun and its desirability across the Andes. The Moche gilded their spearthrowers more often than other Andean societies, bestowing that solar shimmer onto these objects, though two factors are also worth noting: First, that they did not gild only spearthrowers. The Lady of Cao was also found with exceedingly long gilded maces, as well, though they do not seem to have been as common among the Moche as gilded spearthrowers (Scher 2017:475), especially considering that the Lady of Cao herself was found with only two maces and twenty-three spearthrowers. Second, that the gilding on these items was not pure gold, but a gold-copper alloy. This is a common occurrence among Andean golden objects, showing that the gold itself was not the valuable or desirable part of the object, but rather the shine that it bestowed. The Moche also valued natural forms (Donnan 2012), shown through their predilection towards vessels shaped as animals and fruits, as well as precious jewelry shaped as octopuses or peanuts. This transfers to the spearthrower as the handlepiece provides a convenient, customizable space for the maker or user to display their dedication to or preference toward certain valued forms.

Even the less overtly decorative examples provide evidence for valued materials, particularly in the form of colored stone, shell, and copper. Many handlepieces from all over the Andes, such as the example featured in figure 4, were decorated with inlays of precious greenstone, sodalite, and turquoise, materials that Burger (2012) suggests were especially valued due to their color contrasting against the drab Andean landscape and were often imported from long distances if necessary. This same principle applies to shells of the *Spondylus* genus, which have a brilliant red-orange coloration and thorny projections which could be broken off to make jewelry and inlays. *Spondylus* comes from the warmer waters in Ecuador, was traded for across the Andes, and was an item of extreme value since at least the Early Horizon (Burger 2012:302).

The copper hooks present on the majority of the Nasca spearthrowers are clear indicators of both economic and cultural value. Copper mining, which has been practiced in the Andes since at least the third millennium B.C.E. (Van Gijseghem et al. 2011), is a well-documented tradition on the coastal Andes, including a desiccated copper-infused mummy from approximately 550 C.E. found at the Chuquicamata mine in northern Chile (Bird 1979; Maldonado 2016). Copper Man, as he was informally named, was found with several well-preserved tools providing information on indigenous mining techniques. The very process of extracting ore in the Andes was highly valued and based on the Andean ontology, though it varied from place to place. The Quechua concept of *camaquen*, the vital animism that gives life to the landscape (in a very simplified definition), relates to the worship of important and unique landmarks known as *huacas*. Mines, and the mountains that contained them, were among the most important *huacas*. Some people saw the ores within the mines as vital “seeds” or similar to agricultural fields. Others, like

some Aymara groups in Bolivia, viewed the ores as the flesh of the earth – ethnohistoric linguistic studies of the Aymara recorded that the words for a vein of precious metal are the same as the words for a vein of blood (Zori 2016:171; Bouysse-Cassagne 2004). As written by Gose, mining is the “culminating violation of the most central manifestation of the *apu*: the mountain itself. It represents a quantum leap beyond any other productive activity in the intensity of relations between people and *apus*, and constitutes a definite strain on both” (1986:303). As such, mining was not an activity taken lightly. During the period of Inca rule, many mines were only worked for a period of four months per year, so as not to overwork the earth and enrage the *apu* or the spirits living in the mine. In addition, festivals were held in the mines to provide offerings for the spirits, which they would transmogrify into ore (Van Gijseghem 2011). While there may not be evidence that these practices were shared to the letter by the Nasca or other pre-Incaic polities, the general sentiment behind them was likely present.

The social value of copper as a component in these spearthrowers could reflect a value in the object itself – even when the spearthrower was built for use (rather than display), the presence of a copper hook signifies a great importance in the spearthrower. Perhaps it was even intended as a valuable charm for luck in hunting, much in the way that Eskimo hunters would carve magic designs into their spearthrowers to attract and avoid spooking their prey. Either way, as many spearthrowers from the entire Central Andean region were manufactured from valuable material, it is likely that they were seen as valuable objects and these may have been indicators of status for many individuals.

Conclusion

Based on the evidence from the corpus of iconographic and physical data, some conclusions can be made as to who was using spearthrowers in the Pre-Columbian Central Andes, when, and for what. Based on their overwhelming majority among the representations, it can be logical to conclude that spearthrowers saw their heaviest use in the Andean coastal societies, likely from the Formative Period up through the Early Intermediate Period, and falling off in use after the collapse of the Nasca and Moche cultures. While there are plenty of depictions of its use in warfare, this was not backed up by physical evidence, leading me to believe that these were primarily a hunting tool before it was a weapon of war. This may indicate that its dropoff in use was due to changes in hunting strategies or lifeways. While the utility of the spearrower may not have been recognized any longer, it does seem as though it remained an important symbol on the coastal areas, as the later Chimú culture produced non-functional and over-decorated versions for other use.

In the highlands, the use of the spearrower can be traced back to its depictions on carvings at Chavín de Huantar with the strange “donut” shape that may represent a leather loop in place of the handlepiece. However, the spearrower may have never truly caught on as a widespread tool or symbol in the highlands regions, as indicated by its lack of representation in iconographic and physical contexts. This may have been due to its perception as a hunting tool first and foremost, incompatible with the widespread

preference for capturing live combatants in warfare. The traditionally agropastoralist lifeways of the High Andes may not have had any use for such a hunting tool, and physical evidence shows an overwhelming bias toward blunt force trauma and away from any sort of pointed projectile wounds, even during times of heightened warfare such as the Late Intermediate Period (Tung 2014) – though it is worth noting that, when sequestered in a hillfort, sling stones would have been a much more available source of ammunition. However, it is incredibly important to mention its role as the inspiration for the righthand staff of the staff god at Tiwanaku and Conchopata – this is definitely a significant depiction, though the connections and possible origins need to be studied further.

The handlepieces are a clear diagnostic feature that makes the Andean *estólica* unique, a feature that I am not aware of on any other spearthrower type. While spearthrower technology in general likely came with the initial Native American migrations across Beringia, the handlepieces must have been an Andean innovation, likely by people of the coastal regions. Arriaza shows a spearthrower with handlepiece from a Chinchorro collection (Arriaza 1995:89) and, while not given an exact date in the Chinchorro sequence, implies development before 2,000 BCE. While the sole spearthrower from Chankillo that I am aware of does not display the handlepiece, this may have been a hastily-constructed weapon for defense. The handlepiece saw an explosion in popularity in the Paracas region, as they began to be represented on more spearthrowers. As the example from Chinchorro is singular and of uncertain provenience, I would propose Paracas as a secondary candidate for the innovators of the handlepiece. From there, it was likely spread to the north, either before or during the early Moche

inhabitation. The later Nasca may have introduced it to the Wari through their interactions, as one of my few Wari spearthrowers has a handlepiece representative of the common Nasca “mushroom” shape, while none share the common Paracas depiction of a flat human face. While the fine details may remain unknown, I believe a strong case can be made that the handlepiece was a coastal Andean innovation that spread in a northerly direction from the Chinchorro area, if not the Paracas peninsula.

Regardless of the individual preferences toward forms of weaponry, the Andeanist literature moving forward needs to give these objects the important role that they deserve – they were hunted with, they were fought with, they were symbols. The *estólica* was an object of great importance for centuries and its multifaceted, though still slightly murky, role is one that deserves far greater recognition. With further research, particularly experimental studies to suss out the exact purpose of the enigmatic handlepieces, this role can be understood even better and its contributions to the Andean lifeway fully realized.

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