

THE ENIGMA OF WHISTLING WATER JARS

IN PRECOLUMBIAN CERAMICS

By Brian Ransom

In 1978, during one of my frequent visits to the library at the New York State College of Ceramics at Alfred University where I was studying at the time, I happened upon a book (its title by now forgotten) on preColumbian ceramics. In it, I read a paragraph which briefly described an ancient Peruvian artifact referred to as the whistling water jar. My curiosity about how this invention worked and how it fit into the larger picture of its culture/s in terms of history, use and distribution, left me with a burning need to investigate further. Fortunately, I got my chance to do just that the following year when I was granted a Fulbright/Hays Congressional Fellowship for research of ancient musical instruments in Peru. The article which follows has been excerpted from a larger work which I presented at the conference Influences of Art and Architecture in preColumbian Peru at Columbus University in 1984. As you read this, try to imagine the thrill I experienced when I first tipped one of these fluid instruments which, by and large, had not been played since before they had been placed in their graves; their mysterious and haunting sounds cracking across eons of time.

The data I used in writing this article is taken largely from a sampling of eighty-two whistling vessels which I photographed, measured, played and recorded in Peruvian museums and collections between 1978-79 (Fulbright/Hays Fellowship) and in 1982 (Oregon Arts Commission Fellowship).

The whistling water jar is an intriguing technological phenomenon within the complex conceptual structure of preColumbian ceramics which pertains to the development of both musical and ceramic art forms in the new world. This device has a long history of production. Starting as early as the formative periods in South America, we find examples of whistling jars in a wide range of cultures as far north as Mexico and as far south as southern Peru. Several hundred years after the arrival of the Spanish conquistadors in South America, whistling jars ceased to be made. Little is known of what role these jars played within the context of the ancient societies which produced them. Although most aspects of life, including ceremonies, war, sports and sexual activities, are depicted in painted and sculpted scenes on the pottery from most preColumbian cultures (most typically the Mochica of Peru), not a single known representation showing the use of a whistling water jar has been recorded. Archaeologists have long acknowledged the presence of this eccentric ceramic invention, yet little in-depth research has been done to document their development or use.

The physical appearance of whistling vessels, which are partially differentiated by whether they are the fluid type or blown type (discussed later in more detail), went through many stylistic changes during the various phases of their development in the preColumbian Americas. There is evidence suggesting that whistling vessels may have been made as far north as Mexico in Mayan times. Early whistling vessels employed only one container with two conical spouts joined by a flattened bridge (see figure 1), usually smudged grey or black by a smoky firing atmosphere, and were decorated with incised geometrical lines.

Preceding stylistic developments include the creation of whistling water vessels which were sculpted in a great variety of inventive forms. From the cultures discussed in this article, many of the most important religious deities, animals, architectural forms and scenes from life are represented. Brilliant polychromatic slip painting was used on double vessels joined by hollow tubes through which water passed, displacing air to create sound and whistles. Usually a solid clay strap supported the two or sometimes three vessels above, and a number of examples presented a stirrup spout (a horseshoe-shaped tube with another tube exiting from its apex) (see figure 2). Eventually, whistling jars became quite elaborate both in form and decoration, although their vessel size consistently ranged between eight and twenty-two centimeters. A common attribute among all of the design elements which I observed in this sample was the use of anthropomorphic and zoomorphic representations suggesting the ideology of animistic beliefs still prevalent among indigenous peoples in South America today (Borja 1951).



figure 1

Chavin (1200-200 BC)
Blowing-type double-spout-
and-bridge whistling jar,
smudge fired with incised
lines.



figure 2

Mochica (circa 100 AD)
Fox playing drum. Single
vessel with stirrup spout.

HOW WHISTLING JARS WORK

There are two principal types of whistling jars. The first type usually has only one vessel though it may have more than a single whistle, and must be blown to produce a sound. The whistle or whistles are normally attached in an inconspicuous fashion and may be covered or exposed (see figure 1). The makers of these jars used simple physical variations of whistle design to create precise effects of sound. Considerable changes in the whistle sound can be brought about by differences in the internal air pressure created by enclosing of the whistle and the number and size of holes in the

cap allowing air to escape. Other variations such as whistle chamber size, sounding hole size and angle of air delivery were also used to produce a variety of sounds.

The second type, usually employing two or more vessels, works on the principle that fluid moving from one chamber to another displaces air in the second chamber which is forced across the sounding edge of a whistle or whistles (see figure 3). The same subtleties of sound production apply to this fluid-type whistling jar as were mentioned above in the blowing type. They appear with enclosed as well as exposed whistles. The principle difference in the sound produced by the second fluid-type jar is that the air is pushed across the sounding edge of the whistle in a very delicate manner by the moving fluid, resulting in a wavering and almost eerie sound.

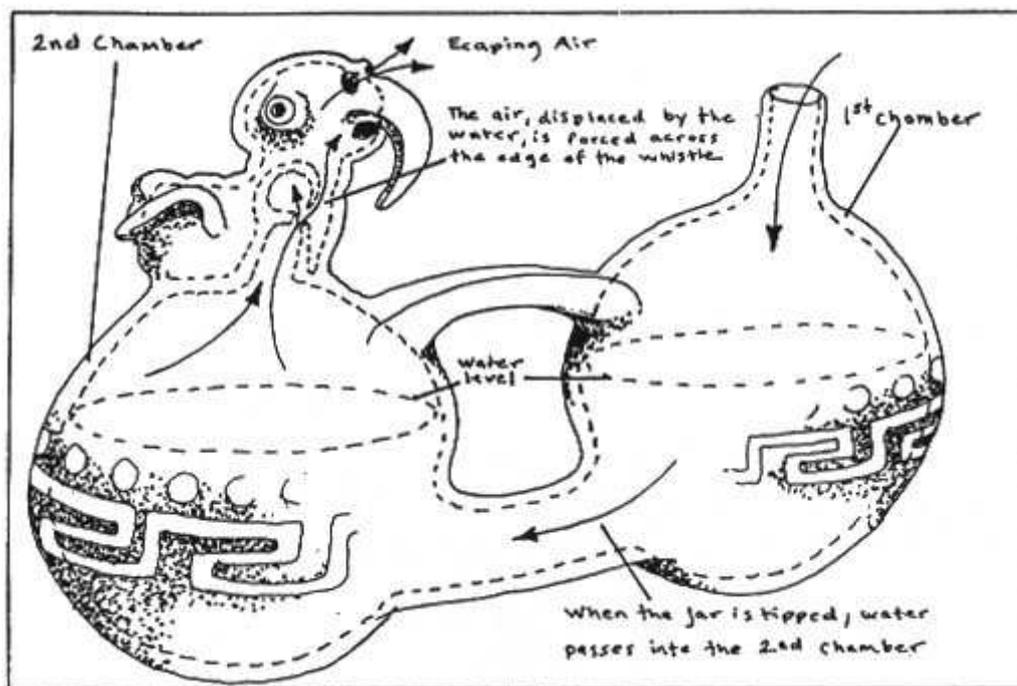


figure 3

Drawing of Vicus double-chambered whistling water vessel.

An incredible variety of realistic as well as highly abstracted bird images are among the fluid-type whistling water vessels which I sampled. Surprisingly, in the vessels where sculpted bird forms appear, a warbling sound, which has an uncanny resemblance to the sound of the actual bird represented, is produced by rocking the piece back and forth. Specifically, when fluid is leaving the primary chamber and entering the secondary (whistling) chamber, a constricted air flow (as is consistently seen in these bird-type vessels) in the primary chamber forces a back draft of air returning through the whistle to the primary chamber drawing air because of the displaced water. The result is a bubbly interruption to the sound being created by the whistle/s producing sound which is very bird-like (see figure 4).

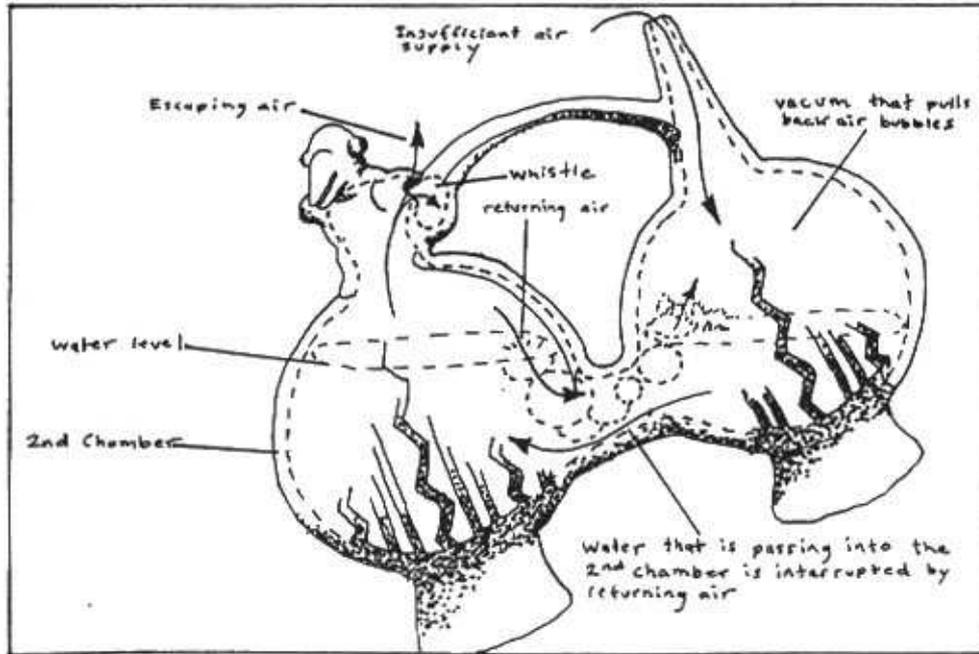


figure 4

Drawing of bird water vessel (Chancay culture).

Other vessels with representations of animals had similarly affected whistles allowing them to create sounds reflective of their images. One of the surviving pieces from the Vicus culture (+-1,000 BC- 300AD, Peru) takes the form of a man in the prone position with his arms resting on a pillow-like object. When this piece is filled with water and tipped, gurgling and bubbling sounds are emitted. Thus, one's impression of a reclining man is changed to that of a swimmer with a float (see figure 5).



figure 5

Vicus. Single vessel with chambered division inside. Swimmer.

THE ORIGIN & SPREAD OF THE WHISTLING JAR

The earliest known whistling jars came from the late Machalilla and early Chorreran cultural complexes in Ecuador ranging from between 1200 and 900 BCE (Ladirap1975). Both of these cultures are developments of the previous Valdavia style of the same region (Feldman and Mosely1978), which in turn show influences from earlier Amazonian styles. Typically these vessels were single forms with simple -

decorations and double spout and bridge handles. Similar whistling vessels were made in the Chavin culture of northern Peru as early as 800 BC (see figure 1). Evidence suggests trade and idea exchange between the Chavin and Mayan civilizations. The most apparent leap in whistling jar technology after the developments in Chorreran ceramics seems to have taken place in the Vicus culture of northern Peru as observed in pieces at the Brunning Museum in Lambayeque, Peru Little is known of this culture save the findings from a small number of excavated graves in the great sandy regions of northern, coastal Peru (Lumbreras 1964). The production of whistling jars developed progressively in Vicus times, from crude, single vessels with exposed whistles to enclosed and multiple whistles, and finally to double fluid-type vessels with enclosed whistles which are capable of creating precise animal sounds. In the time period from 0 - 1500 AD whistling jars spread cross-culturally throughout wide geographical areas evolving uniquely distinctive decorative features within the context of each culture which produced them. A rough itinerary of the cultures which have been observed creating this unique whistling artifact include Chorreren, Chavin, Vicus, Mochica, Nazca, Salinar, Nepena, Chimu, Lima, Chancay and Inca (many additional subcultures could be added to this list).



figure 6

Nepena "Lobo del Mar" (+ -100 BC). Whistling water vessel with enclosed whistle.



figure 7

Chimu(+ -1200 AD)
Monkeys carrying deity in hammock. Whistling water vessel with exposed whistles.

MUSIC AND MAGIC

Primitive Amazonians, and certainly inhabitants of many societies in which whistling jars were created, perceived the role of music, rhythm and reality in very different ways than we, as contemporary Americans, do today. Musical instruments were thought of as life-like. Their power resided in their voice more than shape, color or form (Borja). An example of this is found in a scene engraved on a conch shell from the Chavin epoch (circa 800 BQ showing a warrior blowing a shell trumpet; from the shell's opening a giant serpent emerges. The Spanish chronicler Huainan Poma wrote that in warfare the Incas believed that powerful demons and spirits were

emitted from the instruments they carried with them on the battlefield (Borja). If the images depicted on the ceramics of these preColumbian cultures were thought to have the ability to exert power through contact with the deity they represented, then how natural it must have been to give that deity a voice through which to speak in the form of a whistling vessel.



figure 8

Lambayeque (circa 1,000 AD). Single vessel whistling jar with exposed whistle.



figure 9

Mochica (+ - 200 AD)
Skeleton playing drum.
Single vessel with enclosed whistle and stirrup spout.

Among primitive Amazonian societies, whistles are thought to have the power of conjuring spirits (Grieder 1982). The use of whistling jars in modern-day Ayahuasca ceremonies in the upper Amazon (Ayahuasca is a powerful hallucinogen made from the Banisteriopsis vine) has been well documented (Dobkin de Rios 1972). In general, it is likely that hallucinogens serving as a medium for contact with the supernatural played an important role in the ceremonial life of the cultures in which whistling jars were used. We might conjecture that affinity for hallucinogenic contact with spirits, animistic beliefs and the making of whistling vessels were all related.



figure 10

Inca (circa 1,400 AD).
Double vessel whistling
water jar with exposed
whistle.

SUMMARY

With the limited hard data available concerning whistling jars, we can only postulate as to the use and function of these musical artifacts. Music, ritual and contact with more-than-human realms via hallucinogenic substances as well as in everyday belief systems are prevalent among indigenous South Americans today. We can speculate that these mystical religious beliefs were also prevalent in ancient times. With these thoughts in mind, we can theorize that whistling jars were used as a means of spiritual contact. It is unlikely, though, that they were used as receptacles for hallucinogenic substances as no organic stains in the vessels have been found. The disappearance of whistling jars in colonial times suggests, though it does not prove, the theory that whatever finitions or ceremonies with which the jars were associated at the time they were made were discontinued.

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