Who: Alberta Bair Theater Department of Education and Community Outreach

What: Art, Architecture, History, Music and Culture in the Central Andes

When: Friday, March 18, 2014 from 6:00 to 7:00 p.m.

Where: Barjon Books

Why: Teachers will receive 6 OPI Credits to study the culture, art, architecture, music, spirituality and history of the Pre-Columbian People of the Central Andes

Options: $10.00 audit/non-credit workshop only, $15.00 for workshop plus evening performance and $25.00 for 6 OPI credits, including evening performance

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History of the Central Andes by Dr. William Mouat

Introduction

The term “Americas” is broad; however, for the purposes of this presentation and seminar, and to provide context, we may divide “The Americas” into four major regions. These regions are North America, Central America, the Caribbean, and South America. In the present day, these large divisions are further split into sovereign nations, which include Canada, the United States, Mexico, Brazil, Peru, Chile, and numerous other principalities. The sovereign nation that will receive our direct focus is Peru. We will study the history, architecture and culture of the ancient Andean civilizations that occupied the land mass now known as Peru.

Ethnic Heritage

Between the years of 50,000 B.C. and 10,000 B.C. a large group of *homo sapiens* migrated from the Bering land-bridge in, what is now Russia, to the Americas. Almost all indigenous people of the Americas – excepting the Eskimos, who arrived in a later migration – are descended from the original Bering land-bridge diaspora.

Columbian Age

The Columbian Age, as the name indicates, is marked by the 1492 arrival of Columbus to the New World, specifically, in his case, the Bahamas. Within a few decades after the arrival of additional Spanish Conquistadors – specifically Hernán Cortés, Francisco Pizarro, Sebastián de Benalcázar and de Quesada – the Aztec and Inca Empires were annihilated by war, famine, cultural and religious persecution and assimilation into the Spanish culture – the culture of the conquistadors (conquerors.)

Andean Civilization

Pre-colonial Central and South America can be segmented into relatively clear zones of occupation according to levels of advancements. Agriculture emerged in Central America and Peru in 2,000 B.C. Surrounding areas remained in hunter-gatherer mode, while beautiful Andean cities sprang to life.
Cities also came into existence in Central America, and technologies that Western Europeans would consider relatively advanced also emerged – specifically – agricultural implements, weapons, utensils, cups, glasses, surgical tools and other devices comparable to those used by Egyptians of that same era (2,000 B.C.). In the regions of the Southern Andes and the Amazon basin, society remained at a standstill, with hunter-gatherers and fishermen in occupation. However, at its greatest extent, the pre-Columbian Andean culture encompassed modern-day Peru and a portion of Western Bolivia.

**Turning Topography from Disadvantage into Advantage**

The Andes is the longest mountain range on the face of the planet. It extends down the South American Continent’s West Coast. Although it could be surmised that the limited fertility of the Andean soils were a disadvantage, the indigenous Andeans turned this disadvantage into an advantage. They developed ingenious terrace-farming technologies, complete with underground channels.

Andeans may, in fact, owe their entire agricultural industry to one animal and this is the Llama. It was the only domesticated animal in Central and South-America prior to the conquistadors. Unlike their Central-American cultural counterparts, the Andeans could obtain meat and clothing by growing these items. They did not waste human and material resources in the task of hunting wild animals. Andeans preserved food via natural refrigeration, meaning that they left food outside at night. This process resulted in the method of meat preservation which the English called “jerky.” But the word “jerky” comes from the Andean root “Ch’arki” which means, loosely, “pickled Llama.”
Incan Metallurgy

Though the Andeans, in contrast to their Central American counterparts, did not develop what we understand to be higher mathematics, a calendar, or a clear written language, they surpassed Central America in one very significant area, and that was metallurgy. This technology allowed them to reach the Bronze age.

Charles Q. Choi, of the Live Science Magazine, wrote on April 18, 2007, “Metals found in lake mud in the central Peruvian Andes have revealed the first evidence for pre-Colonial metalsmithing there. These findings illustrate a way that archaeologists can recreate the past even when looters have destroyed the valuable artifacts that would ordinarily be relied upon to reveal historical secrets. For instance, the new research hints at a tax imposed on local villages by ancient Inca rulers to force a switch from production of copper to silver. Pre-Colonial bronze artifacts have previously been found in the central Peruvian Andes dating back to about 1000 AD, after the fall of the Wari or Huari civilization, the largest empire in the Andes before the Incas. However, it has been unclear how metallurgy had developed there, or whether or not these artifacts even came from the Andes, instead perhaps coming from trading with coastal villages.

‘There’s a lot you can’t tell about history from the metal artifacts here because there’s been a lot of looting, during both modern times and when the Spanish first arrived to melt down what silver and other metals were there to send back to the Spanish crown,’ said researcher Colin Cooke, an environmental scientist at the University of Alberta in Canada. To recreate a millennium of metallurgical history, the scientists measured the concentrations of copper, lead, zinc, antimony, bismuth, silver and titanium in sediments from Laguna Pirhuacocha, a lake in the mining region of Morococha in Peru that metal pollutants from furnace smoke contaminated. Collecting these samples over two summers in the extremely high, remote Andes was physically challenging, Cooke recalled, ‘with the occasional blown tire and truck getting stuck for a day.’

The metals that Cooke, University of Pittsburgh environmental scientist Mark Abbott and their colleagues focused on are each linked with certain metallurgical practices. For instance, a large rise in zinc and copper levels relative to lead concentrations suggest copper smelting, while increases in lead, antimony and bismuth hint at silver metallurgy. They used carbon dating and lead isotope dating to figure out when the metals inside mud samples from the bottom of the lake were deposited. The scientists found the earliest evidence for metallurgy dated back to between 1000 and 1200 AD, after the fall of the Wari but well before the rise of the Inca. Metallurgy then seemed aimed toward copper and copper alloys. ‘It’s very curious. You normally associate metals and technological development with large states and empires,’ Cooke told Live Science. ‘It’s rather strange that the onset of metallurgy occurred just as the Wari Empire disappeared from the scene.’

Transition to silver

The Wari collapsed at the same time as the Tiwanaku, another empire in the Andes, both due possibly to a massive drought that, among other things, dropped Lake Titicaca by 20 feet. ‘Ideas and technology concerning metallurgy might have spread after these collapses, but it’s still a mystery of where metallurgy came from here,’ Cooke said. After 1450 AD, the villages switched from copper to silver, according to findings to be detailed in the May 15 issue of the journal Environmental Science & Technology. The researchers noted this coincided with Inca control, when rulers imposed a tax, payable in silver. The precious metal had ceremonial status among the Inca. ‘We’re hoping to really help
reconstruct the history of metallurgy in the New World, ‘Cooke said. ‘They have so far collected samples from some 30 other sites throughout the Andes that await further analysis.’”

**Epochs and Periods of Andean Culture: A Timeline**

In general, experts on South American History divide pre-colonial Andean history into five epochs or ages. Ages one, three and five are called “Horizons” because a “horizon” signifies a time of political and cultural unity. Ages two and four signified periods of unrest, and a fractured city-state mentality that can be loosely compared to the post-Pericles Greek City states of Sparta and Athens. The five epochs or ages fit into two distinct periods as follows:

- **Ancient Period:** 1,000 B.C. to 500 A.D. encompasses the First Horizon and the Second Epoch.
- **Medieval Period:** 500 A.D. to 1,530 A.D. encompasses the Third Age or Horizon, the Fourth Epoch and the final (Fifth) Horizon.

The mother culture of the Andean civilization is the Chavin Culture, which corresponds to the First Horizon on the timeline depicted above. It is named after Chavin de Huantar, who founded the first large city. The Second Epoch brought about the rise of the Moche, who were superb artisans and craftsmen. During Moche Age, Andean pottery reached its zenith. In the Middle Horizon, two large groups of people rose to dominance, but co-existed peacefully. These were the Kingdoms of the Wari, to the north and the southern Tiwanaku Empire. Most of the great Andean cities were born and flourished during this horizon. The Fourth Epoch followed, as did cultural and political division, but the Chimu people of what is now Northern, coastal Peru held dominance. The Chimu were the “Romans” of the Andean civilizations. They were masters of civil engineering, with complex road systems, massive temples and vast irrigation systems. The Final Horizon is synonymous with the Incan Civilization, with its capitol city of Cuzco. In 1530, the Incans fell to Pizarro, and with them all of the Andean civilizations vanished from existence under the iron will of the European Spaniards.
Music in the Ancient Andes by Hélène Bernier and edited by William Mouat

Detailed accounts written by Spanish chroniclers of the sixteenth century emphasize the importance of music and dance in Inka celebrations and festivals. They describe musical instruments such as flutes and panpipes made of bone, reed, and fired clay, shell trumpets called pututos, ceramic whistles, ocarinas, trumpets, and drums, as well as rattles made with a variety of materials. These objects are sometimes portrayed as delicate instruments played with solemnity and virtuosity, sometimes as instruments generating meaningless sounds during pagan or diabolic rituals. The Inkas (Incas) and their predecessors used music to communicate with the ancestors, heal the sick, and bury the dead. Music followed them in war and pilgrimages, perhaps providing them with “supernatural power” according to their legends.

Inka (Inca) musicians drew their knowledge from a millenary tradition. During the third millennium B.C. well before the adoption of ceramic technology in the Andean area, groups of musicians used wind instruments made of bone at the ceremonial center of Caral on the central coast of Peru. Caral was the seat of various ritual activities, as evidenced by the discovery of sunken circular plazas suitable for mass public assemblies, shrines with ceremonial fire pits, and caches of offerings. Thirty-two tubular horizontal flutes were discovered in Caral. These instruments, made with pelican and condor bones, could produce seven different sounds. Most flutes were decorated with engravings representing stylized monkeys, snakes, birds, and anthropomorphic figures. The discoveries at Caral proved that music was an integral part of the ritual life of Andean people 5,000 years ago, or 3,000 B.C.

Evidence of music in rituals is abundant in sites dating between 1000 and 200 B.C. and later. At the ceremonial center of Chavín de Huantar, engraved stone slabs surrounding a sunken circular court show elaborately dressed figures walking in procession and carrying ritual objects such as spondylus shells, hallucinogenic cactus stalks, and shell trumpets. The recent discovery of twenty shell trumpets (pututos) proved that these instruments were actually used in the monumental core of Chavín de Huantar. The trumpets are made with strombus shells obtained through long-distance trade. The shells are highly polished, occasionally engraved with complex designs, and cut at the extremity in order to form the mouthpiece. The trumpets discovered at Chavín de Huantar are worn and their engravings are polished away by repetitive use.

Shell trumpets were not the only musical instruments associated with processions in Andean cultures. On the south coast, the Nazca people used ceramic drums, whistles, trumpets, and panpipes in ritual contexts (100–700). Nazca panpipes were made of a single row of vertical, tubular pipes made with reeds or fired clay. According to scholars, they were produced with a precise tuning
in mind. Trumpets were composed of a straight ceramic tube flaring outward at the end. As panpipes, they are often decorated with supernatural zoomorphic creatures executed with the polychrome slip technique. Nazca ceramic drums often represented anthropomorphic figures with a bulbous body forming the sounding chamber of the instrument. The mouth of the drum, which was once covered by a stretched skin, is located under the figure that had to be placed upside down or sideways in order to play. A few centuries earlier, Paracas people used similar instruments. Archaeological investigations suggest that Nazca musical instruments were important ritual objects used during group performances at the ceremonial center of Cahuachi. They were also played during processions along the great Nazca geoglyphs, which were suitable to be used as ritual pathways.

Musical instruments were also an integral part of ritual processions in the Moche culture (1–800). Moche ceramic imagery shows human priests and warriors as well as skeletal individuals walking in line or dancing while playing panpipes, flutes, rattlepoles, trumpets, drums, and pututos. There is a strong connection between music and death in Moche iconography. Diverse instruments appear in a great variety of scenes related to death and the afterlife such as macabre dances, funerary processions, and erotic scenes involving skeletons. Moche whistles do not appear in ceramic imagery; however, these instruments were discovered in funerary contexts related to human sacrifice and the offering of children. Many categories of familiar objects were equipped with rattles in order to produce sound when used. They included ornaments and pieces of warrior attire such as back-flaps. Ceramic objects were drinking cups and flaring bowls with empty bases. Vessels able to produce sounds were also made by Paracas, Sicán, and Chimú people. These vessels are equipped with a mechanism that whistles when the liquid inside the bottle is poured out.

The Chimú (1100–1470) represented musicians through vessels and miniature sculptures. Chimú artisans created detailed maquettes staging funeral processions and ritual celebrations within walled plazas. These delicate sculptures, made with joined silver sheets or wood inlaid with shell pieces, represent multiple characters carrying mummy bundles or offerings, serving or drinking corn beer, and playing music. Musicians play drums, rattles, flutes, or panpipes. Chimú sculpted vessels made of sheet silver also occasionally represent musicians.

Music was an essential part of life in ancient Andean cultures. People played music in their homes, for entertainment or as part of domestic rituals. Music was also at the center of political and religious activities such as processions, burials, feasts, festivals, and staged ceremonies involving large groups of people.

Hélène Bernier
Arts Integration Topics for Educators Seeking Academic or OPI Credit: relative to your content or subject area, please choose one topic and expand on it. (You may also CREATE your own topic.)

1. **Visual Arts and Sculpture Teachers:** Describe the most striking similarities between the ancient Andean Culture vs. Ancient Egypt, Greece and Rome. Using a separate column or list, repeat this procedure and describe the differences. How can the similarities and differences be taught to your students within the parameters of an arts-education model? In other words, create a timeline that employs visual art or sculpture from both ancient Europe and the Middle East and contrast this with Andean visual art and/or sculpture. Employ a timeline that stretches from 3,000 B.C. to 1,540 A.D.

2. **Science and Mathematics Teachers:** Given the assertion that calendars and written language seem to be less advanced in South American than in Central America, how could the Andeans have developed metallurgy to a “Bronze Age” level of sophistication? Or is the linguistic assertion incorrect? How would this culture be able to quantify melting points of metals vs. the durability of their encasements and molds with a reasonable degree of success? How can you include this into your curriculum planning and implementation?

3. **Music Teachers:** Can you develop a time-line of musical instruments using two basic eras and genres? (Hint: start with pre-Columbian Andean Music as the first era or genre and use post-Columbian music for the second era or genre.) Is it possible for your students to create pre-Columbian instruments and a pre-Columbian orchestra and system of tuning? Can you do the same for a South-American, post-Columbian orchestra?

4. **History, Literature and Social Science Teachers:** Could there be a possibility of an alternate time-line rather than the Spanish Conquistadors of the 15th and 16th Centuries? Why or why not? Consider the following scenarios:

   A. Imagine a premise that Columbus is not funded and the Americas are perhaps discovered and/or subjugated by Great Britain, France, Germany or another 16th or 17th Century European culture. Imagine and create an alternate timeline.

   B. Given a premise that the Americas are not discovered and conquered, what advances might have the Inca peoples made and developed in the 16th and 17th Centuries? Might the Meso-Americans have eventually gone to war with the South-Americans? Why or why not?

   C. Imagine a third timeline where the Roman Empire does not fall, but instead flourishes and spreads beyond the Mediterranean region into the New World, OR use the Han Dynasty or even the Mongol Empire (under Kublai or Ghengis Khan) with the same scenario. What are the possible outcomes?