



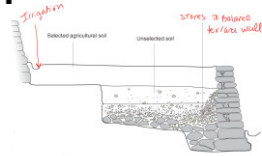


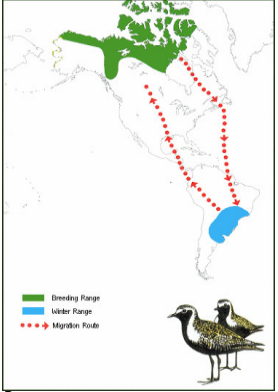



<p>Incan Construction</p> <p>Stone gables</p> <p>Eye-bonders</p>	<p>“Soon, however, they (Incan ruling family) were all killed off and by the end of the century scarcely one was to be found anywhere.” (Kindle Location 694)</p> <p>Cuzco, the ancient capital of the Empire of the Incas. (Kindle Locations 709-710).</p> <p><b>Sacsayhuamán.</b> “Larger blocks are estimated to weigh 200 tons.”(Kindle Locations 712-713).</p> <p>“...they (Incan ruling family had thousands of patient workers. (Kindle Location 717).</p> <p>“Since instruments of precision were lacking, everything had to be done by the trained eye of the artistic architect.” (Kindle Locations 721-722).</p> <p>“In the gable ends of some modern Indian huts wooden pegs similarly placed are used as points to which the thatched roof is tied.” (Kindle Locations 730-731).</p> <p>“The Incas did not use tiles or shingles to cover their roofs, but had to depend on thatch made of grass or bushes. The thatch was tied to the purlins and was kept from blowing away by being tied to the ends of the projecting roof pegs while the purlins themselves were fastened to the gables by being tied to the eye-bonders.” (Kindle Locations 741-743).</p> <p>“Since they had no derricks or pulleys it is believed that they raised a monolithic lintel to its place by building a mound of earth and stone in front of the door. Then by using levers made of hard wood, and possibly rollers of the same material, and the principle of the inclined plane, they brought the heavy lintel to the top of the door without serious trouble.” (Kindle Locations 752-754).</p>	<p>Who or what killed the Inca royal family off?</p>  <p>Why didn't Hiram Bingham know the name of Sacsayhuamán?</p> <p>How does he reach the conclusion that the workers were patient?</p>   <p>Eye-bonder</p> <p>Video: Incan Stone working Theories.</p>
<p>Incan construction is massive in structure and relies on numerous human labors, workers pulling together to assemble buildings made of stone with thatch roofs. Little is known about Incan architectural technique, which may in part be due to the disappearance of the Incan ruling class.</p>		

<p>Inca Engineering</p>	<p>Incan doors were secured with a simple bar-hold. They apparently did not fear theft. Spanish chroniclers state: “When they saw that we placed locks and keys on our doors they understood that it was from fear of thieves and when they saw that we had thieves amongst us they despised us.” (Kindle Locations 764-765).</p>	
<p>Highways and Irrigation</p>	<p>Incan civil engineering helped connect far expanses of the empire by means of stone highways. They also built large scale irrigation systems to bring melting snow water to more arid zones. These irrigation canals fed into terraces designed to help cultivate crops. The highway system also allowed the Incans to import guano from the coast to be used as a fertilizer. Fertile soil was also imported.</p>	<p>Bar-hold</p>
<p>Chasqui and Quipu</p>	<p>Runners (<b>chasqui</b>) were used to relay information of goods on the highways.</p>	<p>The presence of a bar-hold indicates some need for security. How could thievery be prevented? Was benevolent despotism enough?</p>
<p>Tambos</p>	<p>Quipu were used to keep inventory records of the empire.</p> <p>Tambos, or roadside storage houses, provided supplies for the Incan government workers.</p>	
<p>Domesticated Crops</p>	<p>“Mr O. F. Cook, the distinguished authority on tropical agriculture who was the botanist on one of my Peruvian expeditions, tells me that the Incas and their predecessors domesticated more kinds of food and medicinal plants than any other people in the world.” (Kindle Locations 854-856).</p> <p>The Incans domesticated corn.</p> <p>“All over <b>Polynesia</b> it bears virtually the same name, kumala or kumara.” (Kindle Location 877).</p> <p>Incan Crops: maize, canihua, quinoa, sweet potato, cumara, quinine, coca leaves.</p>	<p>Terrace Construction</p> <p>Corn is proof of botanical experimentation.</p> <p><b>Bingham did not know about Thor Heyerdahl's trip on the Kon Tiki in 1947</b></p>

Incan rulers used large scale engineering projects to create a network of highways and irrigation canals. This allowed them to control and organize the natural resources of an immense geographical area. The effective administration of this highway and food system was made possible through Tambos (food storage) and the quipu (stringed accounting/memory instrument). Domesticated food and the use of guano (fertilizer) demonstrates that the Incan rulers applied principles of botany to enhance food production.

<p>Animal Domestication</p>	<p>Domesticated animals: cuy, three types of dogs, native American camels (llama, alpaca, and vicuña).</p>	<p>Can abstract ideas be expressed without abstract words?</p>
<p>Linguistic Evolution</p>	<p>“It is interesting to note that the Incas and their influence throughout the Andes apparently did not extend any further north than the known limits of the llama.” (Kindle Locations 919-920).</p> <p>The two most important aboriginal languages in the Andes are Quechua and Aymara. Quechua was spoken by the Incas. It has few abstract words.</p>	<p>Does this mean they were any more drunkard than Germans or other beer drinking Europeans?</p>
<p>Cultural Practices and Objects</p>	<p>“An interesting sidelight on manners and customs is the abundance of expressions in Quichua for all stages of drunkenness.” (Kindle Locations 950-951). Orion. Kindle Edition.</p> <p>Grinding stone technology points to a separate cultural evolution in South America as opposed to Central America.</p> <p>Incan pottery was sophisticated, although costal indigenous groups produced more elaborate works and also more “degenerate” works.</p> <p>Incan Kero</p>  <p>Mochica Erotic Ceramics</p> 	<p>Why were S. America and C. America separated in terms of cultural evolution?</p> <p>Cultural Push and Pulls?</p> <p>Birds manage this:</p>  <p>Hiram Bingham fails to name the Mochica culture; it was their pottery.</p> 

The domestication of the Andean camels as well as the use of a common language helped frame the boundaries of the Incan culture. Although the Incan culture inherited technologies and practices from earlier cultures, the distinctness of its pottery reveals a clear separation of cultural identity. Bingham seems to believe that the Incan culture applied the practices and technologies of those people it had conquered but rejected the use of the human form in decoration.

Ceramic Decoration



The Incan Arivalo depicted a beast to scare evil away from the wine.

“In a mountain region where there is little fuel for open fires and where the drinking of cold water frequently brings on mountain sickness which is often disastrous, it is natural that the craving of the body for additional heat and liquid should be gratified by soup and beer.” (Kindle Locations 1004-1006).

Bingham is amused by the animal decorations on Incan ceramics.

Why does the mountain water bring on sickness?



Bronze Technology

“They (Incan braziers) were undoubtedly used in the manufacture of bronze knives, axes, chisels, and shawl-pins in which repeated heating and annealing were necessary.” (Kindle Locations 1031-1032).

“Professor Charles H. Matthewson of Yale University was the first modern metallurgist to make an exhaustive study of Inca bronzes.” (Kindle Locations 1041-1042). The Incans knew that bronze with high tin content allows more detail in casting.

“It was only after a metallographic study of Inca bronzes, involving the mutilation of the pieces examined, that Professor Matthewson learned the structure of such objects, the methods of their manufacture, and the reasons for the variation that has been found to exist.” (Kindle Locations 1055-1057).

Pottery was used in metallurgy. Brazier below:





Pre-Incan Sican Tumi



Anthropologists not only write their names but destroy pieces.

Bingham sees two values in Incan pottery. First, their ceramic decorations demonstrate cultural values (no nudity, value of clothes) and a sense of humor (animal figures). Second, pottery enabled the Incans to perfect intricate designs in bronze works (Incan brazier).

Uses of Bronze	Bronze was essentially used to manufacture weapons (bolas, axe) and not used to carve stone but rather to lift stone (champi). "Some writers have assumed that the Incas used bronze implements to a large extent in finishing their best stone work. It seems to me, however, that even their best bronze was too soft to last long in such activities." (Kindle Locations 1076-1077).	 <p>ΕΛΛΗΝΟΒΕΝΟΙΩΝ ΝΥΡΑΙΩΝ</p> <p>Incan bolas</p>
Andean racial characteristics	"Inca bronze included not only such tools as axes, knives, chisels, and crow-bars but also such domestic utensils as tweezers, shawl-pins, and large needles, as well as such articles of adornment as rings, bracelets, spangles, and bells." (Kindle Locations 1085-1087).	 <p>Incan weaving</p>
Textiles	"ancient Andean weaving, as developed by the Incas, was one of the greatest textile arts the world has ever seen." (Kindle Location 1108).	If polygamy was allowed, why did the emperor need concubines?
Origin of the Andean race	"Highland Indians seldom have any hair on their faces. The Incas were probably anxious to remove any stray hairs that did appear." (Kindle Locations 1100-1101).  "Physical anthropologists assure us that the bony structure of the American Indian is closely related to that of the people of North East Siberia." (Kindle Locations 1122-1123). The origin of their migration is debated. The lack of wheat in America and the lack of the potato in Europe and Asia, nevertheless, point to a very early migration.  The physiological features of the Incan race excluded grey hair, baldness, beards, and freckles. Few Incans were fat, although syphilis was present before the Europeans arrived.	
Sexual Practices	"Polygamy was general among the upper classes and was regarded as a desirable state for those who could afford it." (Kindle Locations 1150-1151).  "Our knowledge of the Chosen Women, or Virgins of the Sun, is derived, in part, from the writings of Cieza de Leon, the greatest and most illustrious of the contemporary historians of the period of conquest." (Kindle Locations 1168-1170). Orion. Kindle Edition.	

Bronze was used to create decorations, construct weapons, and enhance stone construction.

Andean textiles are some of the greatest woven art works in the world.

The racial characteristics and social practices of the Incans were very different from those in Europe. No one knows for sure if the ancient Americans migrated to Asia or visa versa. Nevertheless, lack of consistent domesticated foods on both continents proves this migration was very early in Earth's history.

	<p>Incan religious practices were tied to natural phenomena, the sun being the most important phenomenon.</p> <p>The Incan "intihuatana" served as a religious sanctuary for the sun, stars, and moon. This was present at Machu Picchu.</p>	