

TRADE ROUTES IN THE AMERICAS BEFORE COLUMBUS

Compared with Eurasia, the development of trade routes in the pre-Columbian Americas was constrained by the fact that the largest states, such as the Aztec and Inca empires, arose in inland settings, not along major rivers, and that the hemisphere lacked domesticated pack animals, except for llamas and related camelids of the Andes. The Mississippi, Amazon and other major rivers served as important arteries for commerce and cultural exchange. Yet with no large early riverine civilizations stimulating maritime trade, as the Egyptians did in the Mediterranean and Red Sea, seafaring of the early Americas remained relatively small scale and confined to coasts. Given these limitations, pre-Columbian peoples developed ingenious means for connecting vast areas through trade networks, including the vertical economies that integrated mountainous highlands and tropical lowlands in Andean South America and

Mesoamerica, and the continental-scale exchange centred on Mississippian North America. This overview selectively highlights and compares a few of these networks, their organization and developmental trajectories.

ARTEFACTS, PATHWAYS AND CHRONICLERS

Our understanding of pre-Columbian trade routes derives more from archaeology than is the case with many of the other textually based societies found worldwide. Archaeologists reconstruct trade and exchange by documenting the distribution of raw materials and finished goods with respect to their sources of acquisition and production. This may be achieved

by comparing artefact styles or by identifying mineralogical, organic or other properties within archaeological materials in order to connect them to particular resource areas.

When applicable, archaeologists also map ancient roads, such as the elaborate Inca network, which may be done from the ground or through the use of space or airborne remote-sensing techniques. Geographical Information Systems (GIS) facilitate the study of trade networks by identifying the relative transportation costs associated with particular routes – considerations that must then be compared with the actual distributions of sites or artefacts to be supported or rejected.

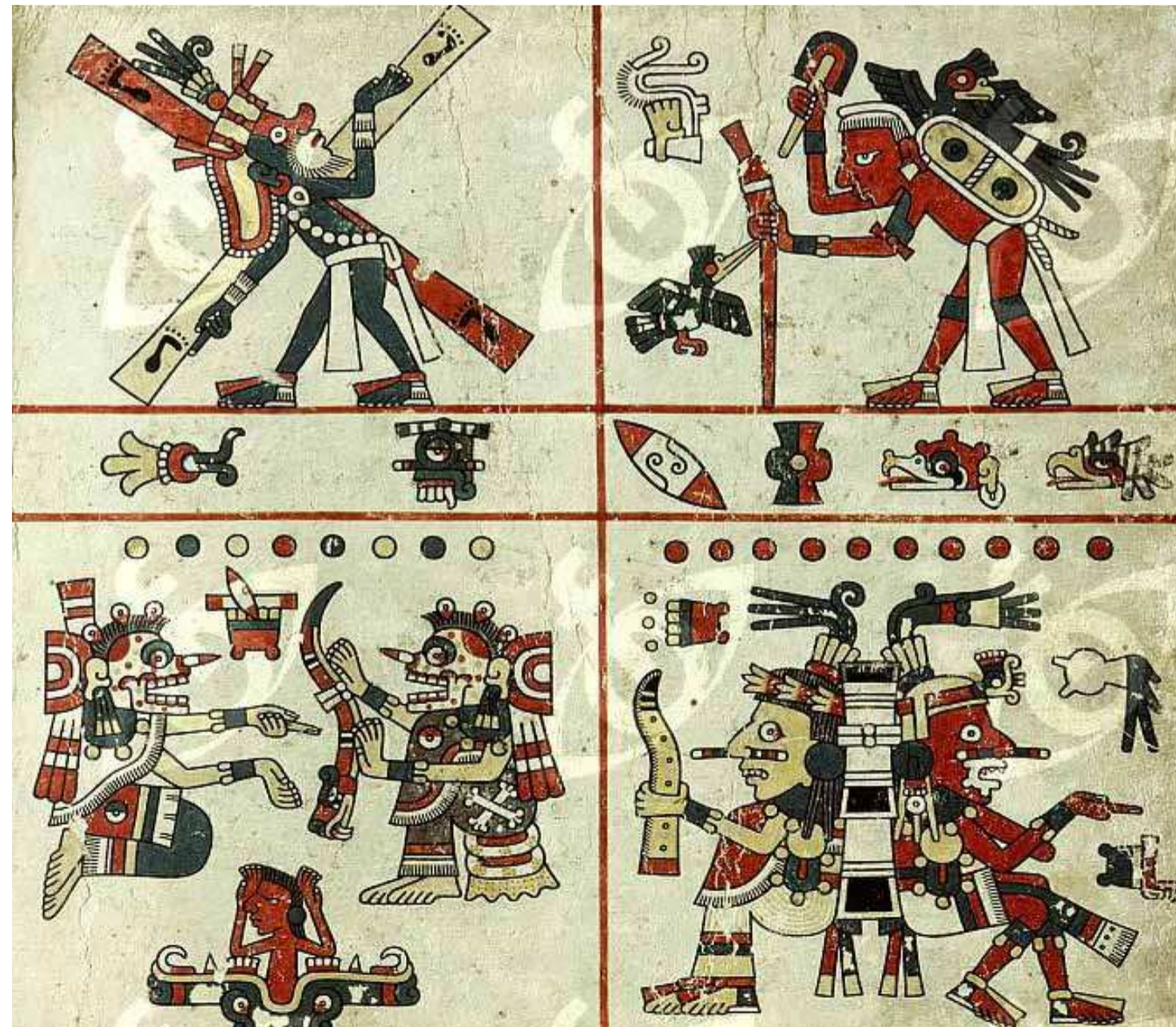
A pre-Columbian written record exists only for some Mesoamerican societies, yet these texts are primarily focused on political and religious themes, and only include glimmers of economic information such as Aztec tribute rolls and Maya murals with possible named market vendors. The textual record

THIS AZTEC CODEX (opposite) depicts *Yacatecutli*, the god of merchants and travellers (top left). Also known as 'Long Nose' he carries a cross, as a symbol of crossroads. Aztec merchants, or *pochtecas*, would use a walking stick to make an effigy of *Yacatecutli* at each night's stop, to protect their camp.

proliferates with European contact in the late fifteenth century, and the best historical sources for the Caribbean, southern United States, Mesoamerica, Central America and Andean South America are found in the sixteenth-century letters, memoirs and accounts written by Spanish *conquistadores* and friars, often working with native scribes and translators.

ROAD SYSTEMS

Pre-Columbian road systems are found in diverse regions of the Americas, but how intensively they were used for trade is a topic of debate. Extremely straight roads that climb mountain ranges or traverse dense rainforest without meandering may have served more religious functions, such as pilgrimage, or symbolic – rather than practical – functions, such as linking communities. Examples include the desert roads associated with Chaco Canyon, New Mexico (c.AD850–1150), or Nasca, Peru (c.AD1–750). Elevated causeways through the jungle were built by both Amazonian peoples and the Maya. The latter constructed their *sacbeob* ('white roads') out of limestone and



Incomparable highways

Pedro de Cieza de León, 1554, on the Inca road system:

'In the memory of people I doubt there is record of another highway comparable to this, running through deep valleys and over high mountains, through piles

of snow, quagmires, living rock, along turbulent rivers; in some places it ran smooth and paved, carefully laid out; in others over mountains, cut through the snow; everywhere it was clean-swept and kept free of rubbish, with lodgings, storehouses, temples to the Sun.'

FROM THE ORIGINAL DOCUMENT IN PART 1, CHAPTER 41 OF CIEZA DE LEÓN, PEDRO. *THE INCAS OF PEDRO CIEZA DE LEÓN*. TRANSLATED BY HARRIET DE ONÍS AND EDITED BY VICTOR W. VON HAGEN. UNIVERSITY OF OKLAHOMA PRESS: NORMAN, OKLAHOMA, 1976, PAGE 138.

A STONE INCA ROAD NEAR MACHU PICCHU IN PERU.

Fine stones for feathers

Álvar Núñez Cabeza de Vaca, 1542, discussing people of northern Mexico who mediated the exchange of birds from tropical Mesoamerica for turquoise from the Puebloan region in the south-western United States:

'They also gave us many beads and some coral that is found in the South Sea [Pacific Ocean] [and] many very fine turquoises that they acquire from toward the north. And seeming to me that they were very fine, I asked them where they had obtained them. And they said they had brought them from some very high mountains that are toward the north and they bought them in exchange for plumes and parrot feathers. And they say that there were villages of many people and very large houses there.'

FROM ORIGINAL DOCUMENT/FOLIO F55R IN CABEZA DE VACA, ÁLVAR NÚÑEZ. *THE NARRATIVE OF CABEZA DE VACA*. EDITED AND TRANSLATED BY ROLENA ADORNO AND PATRICK CHARLES PAUTZ. UNIVERSITY OF NEBRASKA PRESS: LINCOLN, NEBRASKA, 2003, PAGE 152.

lime-plaster, with the longest examples cutting 62 miles (100 kilometres) through the Yucatan Peninsula (c.AD500–1519).

Although these road systems may have possessed strong symbolic and ritually sacred dimensions, they also likely connected far-flung communities through webs of trade and reciprocal exchange. Imperial Aztec and Inca roads were used for moving armies as well as merchants. While Aztec roads (c.AD1325–1519) show a minimal investment in infrastructure, Inca roads (c.AD1400–1532) were often elaborately paved

and connected with bridges. The Inca road system as a whole spans some 25,000 miles (40,000 kilometres). In both cases, these empires built on earlier civilizations that forged exchange networks involving distinctive art styles, such as the Olmec of Mexico (c.1200–600BC) and Chavín in Peru (c.800–200BC), as well as states or smaller empires that first formalized road systems, including the Toltec (c.AD1050–1200) and Teotihuacan in Mexico (c.100BC–AD550), and Wari and Tiwanaku in Peru and Bolivia (c.AD400–1000).

NORTH AMERICAN ROUTES

In North America, apart from the Chacoan sphere, formal roads are not a conspicuous feature of archaeological landscapes. Yet pre-Columbian trade routes of the North American Midwest and other temperate environments are more difficult to detect due to their having been ephemeral constructions, such as dirt paths, which are now covered in dense vegetation. Trade surely flowed along the large rivers of the midcontinent – the Mississippi, Missouri, Ohio, St. Lawrence and others – and the Northwest, including the Columbia and Frazier, both on watercraft and over footpaths tethered to these permanent water sources. Through the plains and prairies, trade often followed the well-trod paths of migrating buffalo: routes known as buffalo traces, which were also used by Anglo-American pioneers on their journeys west.

THE CENTRAL PLAZA AT CAHOKIA (below) was at the heart of a city that thrived between AD600 and AD1300, and which by around 1250 may have had 15,000 inhabitants. Situated at a strategic confluence of rivers, Cahokia was the hub of a network of North American long-distance trade routes.



A marketplace for all needs

Hernán Cortés, writing to Emperor Charles V in 1520 regarding Tlaxcallan, a rival state to the Aztec Empire in Mexico:

'There is in this city [Tlaxcala] a market where each and every day upward of thirty thousand people come to buy and sell, without counting the other trade which goes on elsewhere in the city. In this market there is everything they might need or wish to trade; provisions as well as clothing and footwear. There is jewelry of gold and silver and precious stones and other ornaments of featherwork and all as well laid out as in any square or marketplace in the world.'

FROM THE SECOND LETTER WRITTEN TO EMPEROR CHARLES V IN HERNÁN CORTÉS: *LETTERS FROM MEXICO*. TRANSLATED AND EDITED BY ANTHONY PAGDEN. YALE UNIVERSITY PRESS: NEW HAVEN, CONNECTICUT, 1986, PAGE 67.

HOPEWELL AND CAHOKIA

Two cultural spheres of the North American Midwest stand out for their extensive trade networks. The Hopewell sphere (c.200BC–AD400), centred primarily in southern Ohio and Illinois, involved trade over distances that cover much of the continental United States. Hopewellians acquired marine shell from the Gulf of Mexico, sheet mica from the Appalachian Mountains, copper from the Great Lakes, and obsidian and grizzly-bear teeth from the Rocky Mountains, located some 1,200 miles (1,930 kilometres) away.

Following the adoption of Mexican maize as a primary domesticated crop, a Mississippian trading system began to flourish within fertile alluvial lands known as the American Bottom, headed by the site of Cahokia (c.AD1000–1300). Like its historical counterpart St. Louis, the 'gateway to the West', Cahokia was located near the confluence of the Missouri, Illinois and Mississippi rivers, where prairie and woodland ecosystems meet. From this vantage point Cahokians traded regularly with a network spanning from Wisconsin to the Gulf of Mexico north-south, and the Atlantic seaboard to Oklahoma east-west. This sphere of cultural and economic exchange is illustrated particularly nicely by the distribution of chunky stones, which were used for a sport that involved hurling a javelin at rolled discs of this name. Chunkey stones were made from a quartzite local to the Cahokia region and are found throughout regions of the North American Midwest, Southeast and Plains that Cahokians traded with.

MESOAMERICAN MERCHANTS

Long-distance trade is well attested to in Mesoamerica. Multiple cultural traditions recognized a god of merchants and trade routes, who was called Yacatecutli in Nahuatl, the language of the Aztecs. Among the Aztecs, the *pochteca* were professional

merchants who undertook distant expeditions, usually carrying low-bulk, high-value goods. Jade, turquoise and other blue-green stones, precious metals, feathers from tropical birds and cacao are some of the goods that travelled great distances.

A particularly illustrative example comes from evidence of trade between Mesoamericans and Ancestral Puebloans of the United States Southwest, groups separated by 1,200 miles (1,930 kilometres) and a large desert. In return for turquoise, often used by Mesoamericans as mosaic inlays for masks and other adornments, Puebloan groups received tropical birds, which they depicted on pots and wall paintings, and cacao for making a chocolate beverage, the existence of which was discovered only recently through the detection of residual theobromide in cylindrical vessels from Chaco Canyon. Sixteenth-century Spanish chroniclers report that some of this trade was mediated by peoples of the desert region of northwest Mexico, just as it had been roughly a century earlier involving the Casas Grandes cultural sphere (see map, page 170). In fact, this trade route was so efficient on its own that when the Aztecs conquered regions of southern Mexico with existing acquisition networks for turquoise they simply required tribute from those destination points rather than attempting to acquire the material for themselves from closer to the source.

INTERCONTINENTAL TRADE

Distant trade contacts may have also taken place between coastal peoples of the northern Andes, including parts of modern Ecuador and Columbia, and west Mexico, though these may have been even more sporadic than connections between Mesoamericans and Ancestral Puebloans. Most telling in this regard are the appearance of Andean metallurgical traditions in west

A MOCHE STIRRUP JAR from the north coast of Peru (below) in the shape of a fisherman paddling a reed boat. Dating from around AD 100 to 500, the jars take their names from the stirrup-shaped spout used for pouring.



OLD MEETS NEW: COLUMBUS'S DISCOVERY OF THE AMERICAS

A BEAUTIFUL GOLD PENDANT (right) from the tomb of the Aztec ruler Ahuitzotl (reigned 1487–1502), who began a new phase in the expansion of the Aztec Empire. He conquered the Oaxaca Valley, which dominated important trade routes, and the province of Xoconochco in southern Mexico, which was the source of tropical products such as cacao and exotic bird feathers.



- More formal road or route
- Less formal land or river route
- Coastal or maritime route
- gold Resource
- MAYA Culture region

TRADE ROUTES IN THE PRE-COLUMBIAN AMERICAS were centred on three principal networks: in Peru, in Mexico and the Mississippian culture of the eastern and southeastern United States. Smaller and less formal trade routes extended these networks into the southeastern United States, the Caribbean and even to the Amazon Basin.

Mexico and the presence of maize and Mexican hairless dogs in the northern coastal Andes. Depictions of Andean boats on painted ceramic vessels and other objects portray seaworthy vessels that show people and goods being shipped along the Pacific coast.

Combined with the highland caravans of llamas and other camelids, Andean cultures integrated an immense region along the coastal and mountain axes, with the Inca road network representing the final pre-Columbian manifestation of imperial trading systems. These parallel axes, generally north–south, with connections through east–west roads and river valleys, makes a ladder with multiple rungs an appropriate analogy for Andean trade networks. Other large trading cultures of the Americas – such as Cahokia, Teotihuacan and a number of Maya city-states – are more analogous to wheel-hubs with spokes emanating from them, or, based on their irregularities, octopuses consisting of a core area with meandering tentacles extending to access particular resources. Compared to the Andes, these trade networks were less efficient at moving goods, but cultural adaptations such as market and tributary systems did much to knit together extensive interaction spheres. When the Spanish arrived they were duly impressed by the large trading canoes of the Putun Maya (whom the Aztecs knew as the Chontal people), moving along the Caribbean and Gulf coasts; the bustling Aztec markets, which they estimated to be equivalent to or larger than any they had seen in Europe; and the extensive road and caravan system of the Inca. These historical accounts (see boxes, pages 167–169), and the archaeological record of exchange during earlier periods of the Americas, attest to the novel ways that native peoples interconnected large areas of the pre-Columbian world through trade.



In 1476, a young Genoese sailor named Christopher Columbus was washed ashore in Portugal after his ship was wrecked. He joined his brother Bartholomew, a chartmaker in Lisbon, which was then a centre of cartography and navigation. Columbus continued to sail the Mediterranean and Atlantic maritime routes on merchant vessels as far north as Iceland and as far south as western Africa while he developed his grand scheme: assuming the world was a sphere, it must be possible to reach the fabled Spice Islands of Cathay by heading west across the Atlantic Ocean, and he would be the one to do it. Columbus called it the 'Enterprise of the Indies'.

This was not a new theory, geographers and cartographers since the time of the ancient Greeks knew the world was spherical, but it was believed to be too great a distance and too dangerous for ships to make the journey safely. Columbus, who had little formal education but was remarkably persistent, compiled a selective collection of documents from cosmographers and geographers to bolster his claim that Asia extended further east than supposed, and that the distance between Portugal and Japan was merely 2,500 miles (4,000 kilometres). The actual distance between Europe and Asia is closer to 6,500 miles (10,460 kilometres), in a direct line, with North and South America blocking the route.

A MAN IN SEARCH OF A SPONSOR

In 1484 Columbus managed to secure an audience with Portugal's King Joao II and he presented his documents and elaborate arguments in favour of a state-sponsored voyage. Joao II and his specialists debated the proposal but ultimately turned down Columbus, not because they thought the world was flat, as is commonly reported, but because they knew the world to be much larger than Columbus claimed and that maritime technology was insufficiently advanced for tiny sailing ships to cross such a distance safely. Perhaps more importantly, after decades of voyaging, Portuguese mariners were already on the verge of completing a sea route to India by rounding Africa and they had little interest in a rival route. Columbus then famously left Lisbon and moved to Spain, where in 1486 he presented his proposal to the Catholic Monarchs King Ferdinand II of Aragon and Queen Isabella I of Castile.

Years passed while a committee of 'learned men and mariners' studied and debated Columbus's proposal, and while Spain waged war on the Moorish kingdom of Granada. Columbus

again offered his services to Portugal and to the kingdoms of England and France as well, but to no avail. However, in 1492, Ferdinand and Isabella finally agreed to support Columbus and by the summer he had assembled his famous trio of ships, the *Santa Maria*, the *Pinta* and the *Nina*, with a total crew of less than 100 and a year of supplies. The fleet departed Palos, in southwestern Spain, and headed towards the Canary Islands before hoisting sails and turning west into the unknown – beyond the coasts of Europe – Atlantic Ocean, with good winds, on 6 September.

LAND SIGHTED AND FAME GAINED

On 12 October, after weeks at sea, they spied land, the tiny island of San Salvador in the Bahamas, where they encountered the Arawak people. For the next several months, Columbus's ships cruised along the coasts of Cuba and Hispaniola searching for evidence of the land of the Great Khan and the spices of the Orient. They departed for home in January, leaving about 40 men behind on Hispaniola (modern-day Haiti and the Dominican Republic).

Columbus was hailed as a hero when he returned and toured the towns of Spain, displaying several captive Arawak natives, colourful squawking parrots, screeching monkeys, exotic fruits



THIS LATE NINETEENTH-CENTURY PRINT (right) gives a dramatic representation of Christopher Columbus's first landfall in the Americas. As he kneels, clutching the royal banner of Spain, he declares his sovereigns' possession of the New World. Whatever the reality of the actual event, its effect on the continent he had encountered would be extraordinarily profound.