

PRE-COLUMBIAN TRANSOCEANIC CONTACTS: THE PRESENT STATE OF THE EVIDENCE

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During the ten years since NEARA's 1992 Across Before Columbus (ABC) conference, the evidence concerning pre-Columbian transoceanic contacts has advanced mightily, including through the appearance of the second edition of John Sorenson and Martin Raish's (1996) massive bibliography on transoceanic contacts. I propose today to review these developments.

CULTURAL COMPARISONS

The tradition in transoceanic contacts studies has been to make cultural comparisons; that is, to describe cultural similarities shared by pairs of cultures in the two hemispheres on the opposite sides of the ocean. This fits well with the aim of determining the true culture histories of these various areas.

On the other hand, such comparisons have not been overly successful in convincing non-diffusionists of the desirability of considering contact as an explanation for commonalities. Isolationists can and do continue to assert that if humans could invent something in one area, they could do the same in another, and so contact need not be invoked to account for what is more likely a consequence of independent invention. No amount of purely cultural evidence seems to be convincing to such individuals, because they approach the data from a diametrically opposed theoretical position.

Therefore, the present paper stresses non-cultural—that is, biological—evidence. Still, we may take a few moments to consider the cultural approach since it tends to be convincing to those of us who can be called diffusionists.

Over the years, several kinds of cultural phenomena have been forwarded. Highly arbitrary ones provide the best evidence. Of these, language is the most arbitrary, and I will deal with it a bit later. But also arbitrary—that is, not called for by the nature of the materials used, the functions to which the item is put, simple logic, and so forth—are things such as games (e.g., the classic patolli-pachisi comparison); myths and folktales, which in a number of instances are shared in detail between the hemispheres; art styles and iconography, which have received the greatest attention in comparisons; calendar systems, to the study of which the two David Kelleys have made the greatest contributions, including in the pages of the *NEARA Journal* (Kelley); music, dance, posture, and gesture; and symbols of rank and status such as thrones, litters, parasols, and so on.

But having mentioned all these hoary comparisons, we must observe that few great strides have been made over the last decade in amplifying the cases for transfer in these areas of culture, with the brief exception of Paul Shao's (1998) new findings with respect to Neolithic Chinese and formative Mesoamerican art and iconography in the premier issue of *Pre-Columbiana: A Journal of Long Distance Contacts* that I edit.

Then there is the study of involved technologies, technologies so complex that their invention in the first place is rather astounding, but for which the notion of their having been invented more than once would seem to pass all plausibility. In this line, we have, for example, bark-cloth manufacture, the blowgun complex, and metallurgy, all studied in transpacific context in past years, but not much added to in the last decade. There have, however, been a few advances in other technological realms. At the ABC conference, I gave a paper on four dyestuffs shared by the two hemispheres (Jett 1998a), and followed that up with a survey of resist-dyeing methods in the Old and New Worlds. The latter paper was first published in a festschrift volume honoring John Sorenson (Jett 1998b) and later, with minor amplification, was reprinted in the *NEARA Journal* (Jett 1999). In the piece, I showed the presence, in Nuclear America, of three complex and labor-intensive southern Asian methods of obtaining pattern on cloth: by batikking, tie-dyeing, and ikatting.

Another technological area that has received some additional attention is that of lacquer and lacquerware. Celia Heil (1999) has studied lacquer use in East Asia and West Mexico, and in *Pre-Columbiana* postulated an Asian introduction to America followed by West Mexican influence on Japan. This mention of Japan inevitably reminds us, too, of Nancy Yaw Davis's (2000) intriguing recent book *The Zuni Enigma: A Native American People's Possible Japanese Connection*.

But these studies are about it, as far as I am aware, concerning recent significant contributions in the realm of complex-technology comparisons.

THE EVIDENCE OF HUMAN GENETICS

For over a century, various workers have pointed to depictions, in Nuclear American art, of faces that look wholly or partially Negroid, Caucasoid, and East Asian. Intriguing and suggestive as these are, today racial assignments on the

basis of visible and measurable phenotypic traits presents problems, and has largely given way to direct study of genotype. Huge advances have taken place here during the last 15 years, especially in the realms of molecular and biochemical genetics. Although these fields are at an early stage and are fast-developing, they have already yielded highly relevant data and have the potential of answering many of our diffusionist questions.

The virtue of molecular genetics is that a variety of kinds of genetic variants are so numerous and independent of one another and seem not to be adaptive that, assuming correct interpretation, they offer as close to absolute proof as could be hoped. The works of Mourant (1956) and of Cavalli-Sforza, Menozzi, and Piazza (1994) have provided an enormous reservoir of data on this subject. Most useful for our purposes are genetic markers: uncommon genes that have no adaptive value or phenotypic function but that exist as “trace elements” that allow us to conclude historical connections, even for fairly minor encounters. Jim Guthrie (2000/2001; also, Fahey 2000/2001) has synthesized and analyzed many of the data in an article in the most recent issue of *Pre-Columbiana*. I can mention only a few highlights here.

It was once contended that all American Indians other than the Blackfoot (who were high in A) were of blood type O. Asian B was said to be absent. Now, however, we know that B occurs in over half the samples of American Indians, particularly among Nancy Yaw Davis’s (2000) possibly Japanese influenced Zuni, and that all four ABO blood types were present in pre-Columbian Peru, especially in earlier times.

As early as the 1950s, it was noticed that the Diego blood factor, an East and Southeast Asian type, also occurred among American groups but was absent in the North. Other blood factors are showing comparable patterns. These include the Rhesus and Kell factors, plus transferrins, GM immunoglobulins, and human lymphocyte antigens or HLAs. In addition, there are the glucose-6-phosphodehydrogenase deficiency and mitochondrial DNA. I cannot cover the details here, but suffice it to say that a variety of “foreign” genes, especially from Afro-Asiatic and southern Asian parts of the world, occur again in the Western Hemisphere, not randomly, but with definite concentrations, especially in Mesoamerica and in the Central to Southern Andean region. This seems impossible to assign to mere happenstance, and Mediterranean/ Middle Eastern and greater Southeast Asian/ Oceanian inputs appear to be the only believable explanation.

I may mention, as well, Asian HLA links with Ecuador and Colombia, links also supported by presence there of an uncommon type of human Tlymphotropic virus also found among the Ainu of Japan, and the absence of the normal Asian and American mtDNA 9-by deletion. All this is congruent with Betty Meggers’s Jomôn-in-Ecuador proposals (Meggers, Evans, and Estrada 1965).

INTESTINAL PARASITES

Although Old World worms intestinally parasitic on humans were once generally thought to have been absent in the pre-Columbian Americas, during the 1980s and 1990s paleopathologists—especially Brazilians—have not only verified the presence of such worms among isolated South American tribes, but have also archaeologically demonstrated the pre-A.D. 1492 (sometimes, strikingly early) presence of certain species in burials in the Western Hemisphere (Reinhard 1992; Verano 1997). These now include hookworms, the whipworm, the hairworm, and the giant roundworm. As far as tropical and subtropical species are concerned, the Bering Strait region acts as a cold screen for transmission, and leaves only the possibility of humans traveling to the New World by boat.

THE EVIDENCE OF CULTIVATED PLANTS

George Carter (1950,1953) was a pioneer in utilizing the evidence of cultivated plants in tracing transoceanic movements. Carl Johannessen then took the baton and has carried it even farther forward. He and John Sorenson are currently putting together a book, which identifies scores of cultivated plants that appear to have been shared between the pre-Columbian hemispheres (Sorenson and Johannessen 2003).

The beauty of this kind of evidence is that cultivated plants are genetic entities and can be domesticated only where the appropriate wild ancestors occur; that is usually strictly limited geographically. Further, very few such plants can cross oceans or establish and maintain themselves without human help. Thus, along with the indications of human genetics described above, cultivated plants comprise the “smoking guns” of transoceanic evidence.

Only a few prominent examples can be described here. One is the seedless South American sweet potato, discovered archaeologically in Polynesia shortly before the ABC Conference (Hather and Kirch 1991), and for which there is good nonarchaeological indication of presence in pre-Columbian Asia. Another is the amazing archaeological presence of the South American peanut in Neolithic China at about 2000 B.C., first reported in the 1960s and verified by Carl Johannessen (1998:22-25) with Wang in the 1990s.

Readers of the *NEARA Journal* and *Across before Columbus* are aware of Johannessen’s work (1998) on the thousands of carvings of ears of maize on temples in India, especially of Karnataka in the south. As far as I am concerned, this ends any controversy as to that plant’s pre-Columbian presence in Asia. Since that time, Carl has also found temple sculptures that appear to show other American crop plants, including sunflowers and annonas (Johannessen with Wang 1998). Carl’s identifications have been confirmed and added to by Shakti M.

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