

A "CATECHISM" FOR  
THE PRE-COLUMBIAN-TRANSOCEANIC-CONTACTS DEBATE

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The question as to whether there were significant interinfluences between the Old and the New worlds before Christopher Columbus and Leif Ericson has generated debate, often rancorous, for generations. Having examined the evidence and the pro and con arguments and having given that evidence and those arguments a great deal of thought over half a century, I have firmly concluded that transoceanic contacts between the two hemispheres go back millennia in time and had profound impacts on the cultures (and habitats) of both, especially the Western. Resolving this question is one of the most important tasks for culture historians, because the issue has profound implications not only for reconstruction of the true history of humankind but also for our overall understanding of the nature of human creativity and of how culture change occurs.

Those of us who have proposed that these kinds of ancient travels across the wide waters really took place and that their impacts were substantial are frequently confronted by extreme skepticism on the part of those who adhere to the mainline academic and popular supposition that such interaction between the peoples of the two sides of the Atlantic and the Pacific was impossible, and who may also object to the concept on other grounds. Accordingly, I have developed a "catechism" consisting of the isolationists'/independent-inventionists' objections and by the transoceanic diffusionists' appropriate responses. (The factual bases for these responses are not documented in this short note.) It is hoped that presenting these thoughts in this organized form will be useful for those debating the issue.

WHY EARLY TRANSOCEANIC CONTACTS "CAN'T"  
HAVE TAKEN PLACE

The traditional fact-based objections to transoceanic influences (with my responses) are:

1. **Objection:** The oceans are too wide and dangerous to have permitted early crossings.

**Response:** Maps exaggerate the oceans' widths in the more poleward latitudes. North America can be reached from both Europe and Asia by sea without the sailor ever being more than 120 miles from land. Further, the *effective* breadths of even the wider parts of the oceans are much less when traveling in the direction of the prevailing winds and currents than when contrary air and water movements are involved. Modern accidental drift voyages of thousands of miles, including across

both oceans, have been recorded. Ancient voyagers are known to have regularly undertaken Indian Ocean crossings whose lengths were comparable to the width of the Atlantic.

2. **Objection:** Owing to Native Americans' lack of immunity, if pre-1492 contacts had occurred, then introduced Old World infectious diseases would have decimated American Indian populations, as they did *after* Columbus arrived, and these diseases would have been present among Natives when Columbus landed, which they were not, and the indigenes would have evolved significant immunity to these diseases, but they hadn't.

**Response:** Old World tuberculosis was certainly, typhus probably, and yellow fever possibly present in the pre-Columbian Americas. There *were* mysterious episodes of population collapse in the New World's past that could have been foreign-disease-caused, although this remains unproven. Such diseases would have died out following initial epidemics, because New World populations were too small to allow the maladies' maintenance. Some of the post-Columbian killer diseases did not yet exist in ancient times, were absent in potential contact source areas, or involved less virulent strains than do modern versions. The long durations of transoceanic voyages, the small crews involved, and the crewmembers' adult immunity to acute infectious diseases contracted in childhood would have inhibited transoceanic transfers of such illnesses until large-scale post-Columbian immigration began.

3. **Objection:** If important contacts had occurred, certain supremely useful Old World technologies such as the vehicular wheel, the plow, and iron-making would have been adopted in the Western Hemisphere, but they were absent before 1492.

**Response:** Contact does not guarantee across-the-board transfers. Despite being known of, these technologies were also absent in large areas of the *Old World*, including some from which putative voyagers originated. Most of these absent technologies are complex and the domain of specialized technicians, who were seldom taken on exploratory or trading voyages; any specialists who did participate would likely have kept their technological knowledge secret in the new hemisphere, to retain advantage; too, complex technologies would not have been easily learned by the natives. There were no large New World draft animals to pull plows or full-sized wheeled vehicles. Diffusion is always selective; cultural absences prove nothing regarding whether meaningful contacts occurred.

4. **Objection:** Had transoceanic interaction taken place, valuable staple crop plants such as wheat, rice, and maize would have been exchanged between the hemispheres, but they were not.

**Response:** There *is* good evidence for the transoceanic sharing of a sizable number of crop species (see below) – including maize, although not wheat and rice. Even after 1492, many American Indians failed for centuries to adopt some or all of the Old World crops offered to them (including wheat and rice), and their ancestors presumably would have done likewise. Local environments and farming methods were unsuitable for some foreign domesticates. Crops (e.g., grains) of which there was an established, ceremonially embedded native equivalent (like maize) tended to

be rejected. Novel specialty plants were accepted more readily. Most pre-Columbian ocean-crossing ships probably did not carry surplus seed or cuttings for planting at the destination, colonization seldom being the aim.

5. **Objection:** Only artifacts can prove contact. Had important interactions occurred, we would find significant numbers of extrahemispheric artifacts in archaeological sites, but (except for a few late-pre-Columbian Norse objects in Canada and Maine) we do not.

**Response:** Visitors would not likely have brought and then lost, discarded, or traded away very many diagnostic imperishable artifacts, and expecting to discover one of these few is like expecting to locate a needle in a haystack. Some Old World artifacts would be indistinguishable from American Indian ones and would go unrecognized as alien. One second-century-A.D. Roman artifact *has* been found in-situ in a late pre-Cortesian Mexican pyramid, and other—if poorly provenienced—pre-Columbian Old World objects have been reported here and there. There also exist, in America, inscriptions in Old World scripts and languages. Non-artifactual evidence (linguistic and biological) can also demonstrate contacts (see below). Since such evidence does prove exchanges, lack of artifacts cannot *disprove* them.

6. **Objection:** Had there been pre-Norse transoceanic discoveries, their significance would have resulted in their being noted in the Old World historical record, but none was.

**Response:** Many potential Old World source areas kept no written records. The great majority of ancient documents from areas that did maintain records have not survived, and those that have are usually not informative regarding voyaging. Still, there *are* some Greek-language and Chinese-language accounts that may reflect transoceanic voyages. In any event, prior to state-sponsored explorations like Columbus's and the claiming of territory by right of discovery, the very great majority of distant voyages were private and unrecorded, and in fact were usually kept secret in order to maintain commercial advantage or for strategic reasons.

7. **Objection:** Cultures create themselves. Local convergent and parallel adaptive cultural evolution can fully account for intercultural similarities, especially long-distance ones; outside influences need not be invoked.

**Response:** Evolution tends overwhelmingly to be *divergent*, not convergent or parallel, so detailed cultural similarities suggest historical connection. In any case, adaptive evolution cannot account for shared highly arbitrary culture traits, much less for shared domesticates, non-adaptive distinctive human genetic markers, etcetera (see below).

#### MEANS: AVAILABILITY OF WATERCRAFT AND NAVIGATION

Watercraft are the means by which transoceanic crossings would have been effected. A revolution in thinking concerning the antiquity and capabilities of watercraft is currently occurring. Archaeology now shows that humans were settling islands of Near Oceania earlier than 40,000 years ago and were probably voyaging much, much earlier in Island Southeast

Asia; during succeeding millennia, craft continued to improve and humans to travel ever farther over water. However, a number of entrenched myths about nautical matters have inhibited acceptance of the possibility of pre-Columbian transoceanic contacts.

- 1. Objection:** Water transport was, as compared to land transport, much more difficult, hazardous, and costly, and thus vast oceans were insuperable barriers.

**Response:** Water transport is, to the contrary, far easier, faster, cheaper, and safer, and capable of conveying much larger loads, than is traditional land transport, especially where no terrestrial roads or bridges exist.
- 2. Objection:** Deep-water voyages far from land are especially hazardous.

**Response:** The opposite is true; being blown onto a lee shore is a ship's greatest hazard. Outside of the hurricane season, tropical storms at sea are rare. Waves in shallow water are more dangerous than are deep-water swells. The farther a ship is from land and the deeper the water, the safer the vessel is, from both natural hazards and piracy.
- 3. Objection:** Pre-Renaissance ships were too small to be safe, had insufficient capacity for food supplies, were too poorly designed, were too slow, and were insufficiently maneuverable to accomplish crossings; crossings awaited fifteenth-century European advances in nautical architecture and rigging as well as sail multiplication, plus the sternpost rudder.

**Response:** By at least Roman times in the West, there were sea-going ships much larger than Columbus's and they were sometimes multi-masted, as was also the case in pre-Columbian China and some other parts of Asia. Quarter rudders (steering oars) were as effective as stern rudders for steering ancient ships. In any event, smaller craft are safer than large ones because they experience less swell- and wave-generated strain and are less vulnerable in shallows; myriad modern small-boat voyages and experimental voyages with small to modest-sized traditional craft have shown that large size is unnecessary and that traditional craft are capable of crossings. Adequate wild foods and rainwater were obtainable along likely transoceanic routes.
- 4. Objection:** Before Columbus, Earth was believed to be flat; no one dared go far out on the oceans, for fear of falling off the edge.

**Response:** By 1492, the spherical-earth theory had been in circulation in the West for 2,000 years, and for some 1,500 years in China. Almost all Classical thinkers and those of the European, Southwest Asian, and Chinese Middle Ages considered Earth to be a sphere and, therefore, circumnavigable, and a number said as much in their writings.
- 5. Objection:** Before the late medieval development of good charts, the magnetic compass, and other navigational instruments, no one could navigate far from land without getting lost.

**Response:** Non-instrumental celestial navigation, aided by study of wind and swell direction and of other natural signs, was entirely adequate for guiding sailors to

almost anywhere – as is demonstrated by the far-flung intentional voyages of Pacific Islanders and others.

### MOTIVES FOR OCEAN CROSSINGS

Various motives have generated human movements. These include “**push factors**” such as war, despotism, resource scarcity, natural disaster, and so forth, as well as “**pull factors**” such as anticipation of political, economic, or spiritual gain, religious proselytization, and adventure- and prestige-seeking. Low-bulk, high-value potential New World commodities included precious and other metals and stones, furs, spices, and psychoactive drugs.

### PROOFS OF CONTACTS: BIOLOGY, LINGUISTICS, ARBITRARY CULTURAL TRAITS, AND COMPLEX TECHNOLOGIES

If contacts can be demonstrated by non-cultural, **physical or biological evidence** or by evidence of **kindered languages**, then *opportunity for cultural influence* will likewise be demonstrated and cultural transfer will be the economical explanation of specific commonalities. Such biological and linguistic evidence exists:

1. **Domesticated plants and animals.** Critics claim that there was little or no pre-Columbian interhemispheric sharing of domesticates. But in fact, a multitude of domesticates (originating in one or the other of the hemispheres but not in both) were found in both hemispheres before 1492, most of which were clearly incapable of crossing oceans without human carriage or of surviving without human intervention. In addition to actual archaeological specimens of over a dozen plant species and one or two species of fowls, there are unequivocal depictions and historical records of other cultivated plants. What is more, residues of cocaine and nicotine (from American coca and tobacco) appear in ancient Egyptian mummies, and THC from Old World *Cannabis* in Peruvian ones.
2. **Human intestinal parasites.** Several species of Old World tropical/subtropical intestinal parasitic worms are pre-Columbian in the Western Hemisphere. They could not have been introduced via the cold Bering Strait region, but only via ocean crossings or rapid coastal movements.
3. **Human biology.** There are pre-Columbian American depictions of Negroid and Caucasoid faces and there are ancient Negroid- and Caucasoid-looking archaeological skeletons in the New World. Physically, living Amazonian Indians closely resemble Indonesians of interior Borneo. Beyond this, geneticists have identified, in several independent human genetic systems (mainly, blood factors), a considerable range of Old World markers in certain contemporary Native American populations. These genes suggest post-initial-settlement inputs from Southwest Asia/North Africa, from southern Asia, and from East Asia, especially in the American regions of high culture, the same regions in which cultural and linguistic resemblances most suggest influences.

4. **Linguistics.** Skeptics claim that there are no identifiable relationships between any Old and New world language families. However, recent work has indicated imports of Old World tongues or massive linguistic inputs to certain American Indian languages: Yeniseian of western Siberia (yielding Na-Denean), Finno-Ugrian (yielding Penutian), Afro-Asiatic (into Uto-Aztecan and yielding Quechumaran, Mixe-Zoquean, etc.), Austronesian (into Amazonian languages), Sino-Tibetan (yielding Mayan), and so forth. As mentioned above, there are also a number of pre-Columbian American sites that display inscriptions in ancient Old World scripts and languages.

Although less certain than biological or linguistic proofs, shared “**arbitrary**” **culture traits** also provide strong evidence of cultural exchanges. These traits are “odd” – that is, not elicited or particularly favored by environment, pragmatics, logic, etcetera – and are sufficiently peculiar as to have a low probability of having arisen more than once. Examples include specific cosmologies, calendar systems, myths, games, artistic and iconographic forms, musical instruments and forms, and symbols of rank and rulership.

Development of **technologies** is channeled by pragmatic constraints and by the results being sought, but some technologies are so difficult and/or complex as to seem likely to have emerged but once, under unique combinations of circumstances, and to have then spread to all areas of eventual occurrence, including to the New World from the Old. Examples include lacquer use, bark-cloth manufacture, weaving and dyeing, pottery-making, the blowgun complex, metallurgy, and use of magnetism.

#### SUBJECTIVE REASONS FOR RESISTANCE TO THE NOTION OF TRANSOCEANIC CONTACTS

Fact-based (if inadequately informed) objections to the idea of early trans-oceanic contacts and answers to those objections have been provided above. In addition, resistance also derives from subjective, often irrelevant stances:

1. **Objection:** If we admit important cultural interaction between the hemispheres, we lose independent cases of cultural evolution from which to make nomothetic generalizations about culture change, which is the ultimate goal of the study of human history.  
**Response:** If there were interinfluences, there were interinfluences: the intellectual desirability of independent cases does not alter facts and should not control theories. Too, human history is characterized by a plethora of unique circumstances and events, so generalizations are suspect.
2. **Objection:** It is racist and insulting to American Indians and other native peoples to suggest that they required outside help to create their cultures/civilizations.  
**Response:** *All* cultures, not just Native American ones, owe most of their contents to external sources, so racism is not a valid issue; the key variables affecting cultural

elaboration are access to resources and to outside ideas. In any case, whether or not a theory is politically palatable does not determine the truth or falsity of that theory.

3. **Objection:** Most transoceanic-contact proposals are forwarded by naive, over-excited and ill-informed amateurs; by those of odd religious or mystical persuasions; or by cynical exploiters of public gullibility, rather than by sober professional scholars, and such proposals are not to be trusted. Those who believe in transoceanic contacts are of a kind with believers in flying saucers and space aliens, the Loch Ness monster, and the sasquach.

**Response:** There are, in fact, a fair number of respected professional scholars, in several fields, who have studied the matter and who have found the evidence for transoceanic influences to be persuasive, even overwhelming. And amateur status or religious affiliation does not abnegate the merits of one's evidence and arguments; nonspecialists have often made major breakthroughs. When the evidence is seriously studied and well understood, it is clear that there is nothing intrinsically implausible about transoceanic contacts and that, in fact, transoceanic transfer is the only explanation that can account for the various convergent independent lines of evidence.

#### IMPLICATIONS OF TRANSOCEANIC INTERINFLUENCES

If, as the evidence is coming strongly to imply, massive pre-Columbian transoceanic interinfluences occurred, then global culture history will need to be rewritten and anthropological theory will require drastic revision. The high cultures of the pre-1492 world will need to be seen as having been linked in a kind of "world system." Too, it will be necessary to discard the contemporary view that internally generated adaptive changes are largely responsible for individual cultures' development, and to revive the previous perception: that cultural transfer is the main engine of change. Access to new ideas from outside will have to be recognized anew as the *sina qua non* of cultural elaboration, with cultural hybridization spawning cultural hybrid vigor. This, plus physical-environmental differences, provides the best explanation for the uneven geographic distribution of degree of cultural elaboration in the pre-1492 world and even in today's.