

INTERRELATIONS OF MESOAMERICA  
AND THE PERU-ECUADOR AREA

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Introduction

Developments in Andean archeology may be rapid, but they are not so rapid as to give us, within the near future, a complete and settled picture of the early developments in Peru and Ecuador and the interchange between this area and Mesoamerica. My impression is that Mesoamerican archeology is lagging behind the work done in the Andean region in respect to questions of contact; and so we are getting better and more precise answers to questions about the early rise of ceramics, root crop and maize agriculture, ceremonial centers, and ceramic complexes for the Andes region than for Mesoamerica.

How Mesoamerica influenced Peru and the rest of South America is no longer the important question concerning the two areas. The important question now is of the nature of each contact, with the assumption that there have been many, and that influence went south-north as well as north-south--that is, both ways.

In the body of this paper I will attempt to give a summary of what we know about the number and nature of contacts between Mesoamerica and the Peru-Ecuador area. As this is a survey paper, no one topic is covered in detail. Boats, rafts, and canoes, despite limited pertinent data, are of special interest and may provide an interesting and rewarding focus for study in the future. In most of the recent literature, hypotheses are made about overseas contact between the two areas. What is surprising is that this important point has not been studied more thoroughly.

I. Earlier Works

Until Coe's work at La Victoria in Guatemala and recent work on the Ecuadorian coast by Meggers, Evans, and Estrada, the direction of influence had been thought to run from north to south at about the time of the Olmec style. It was thought that the Olmec preoccupation with cat-like creatures, maize, and ceremonial structures were included in the package sent south to the Chavin people who implemented the Mesoamerican ideas (Willey 1955, 1958, 1959, 1960). Willey (1962:5), though he no longer maintained that there was a close similarity between Olmec and Chavin, still maintained that the introduction of maize on the coast heralded the arrival in Peru of pottery and ceremonial structures, presumably from Mesoamerica.

Coe (1963a) has been most recent in giving an explicit elaboration of what is essentially the Spinden hypothesis. I include Coe's statement in the following because it will serve as a reference point to much of what I will discuss later.

Pottery-making may have been invented in northwestern South America (Ecuador to the Caribbean coast). Primitive maize of Mexican origin reached Peru at about the same time as did pottery (about 1200 B.C.), most likely introduced by sea-borne people. Coincident with the ascent

of Olmec, a long-range, maritime, trading network had been established between the Pacific coasts of Mesoamerica and Ecuador. This route, or an extension of it, could have been utilized by Olmec or Olmecoid missionaries and traders to reach Peru, perhaps by as early as 1000 B.C. Possibly reflecting the initial results of such contact is the complex of ceremonial courts and mounds of Las Haldas which would appear to be a close copy of the linear layout of La Venta in Mexico (Coe 1963a:104-105).

At this point evidence exists relating to nearly every point made by Coe showing that his interpretation is incorrect. Of the several points made by Coe I will first treat the question of maize and other agricultural products, traces of which have provided evidence relevant to the discussion of contact.

## II. Maize

In Mesoamerica, MacNeish's work (1962, 1964a, 1964b) at Tehuacan in Mexico provides evidence of the earliest appearance of maize cultivation. Materials thus far published present evidence that maize is found in association with man as early as 6000 B.C., and that actual cultivation of maize began during the Abejas phase (3400 B.C.), at which time agriculture provided ca. 30 percent of the food of the Tehuacan people. The following phase, Purron, for which there is as yet not much evidence (only a small number of corn cobs and other objects have been found), is characterized by the "cultivation of more hybridized types of corn and the manufacture of pottery" (MacNeish 1964a:36). Incidentally, it is not yet settled at which point in the Purron period (2300 to 1500 B.C.) pottery appeared.

In Peru and Ecuador, the earliest trace of maize in the coastlands is reported by Collier (1962) and Mangelsdorf, MacNeish, and Willey (1960 ms.) and has a date of ca. 1400 B.C. In the highlands of Peru, the Kotosh corn bottle, object of much speculation by Coe (1962), indicates the presence of maize by at least 1000 B.C., the date of the bottle set by Izumi *et al.* (1963:154). Meggers and Evans (1962:192) suggest that the Chorrera people are early maize agriculturalists in Ecuador. Chorrera is dated at about 1500 B.C. which may be sufficient to indicate that it arrived in Ecuador before it arrived in Peru. The evidence for Chorrera is circumstantial, however (no actual maize had been found in association with the complex), and thus at this time any conclusions as to where maize first appeared in northwestern South America can only be speculative.

Lanning (1964 ms., p. 2) asserts that there is evidence that the races of coastal maize in Peru are "specifically Andean, not Mexican," and thus "support the hypothesis of a center of maize dispersal in the Peruvian highlands." Lanning based his comments on the work of Grobman *et al.* (1961:41-47).

The movement of maize has not only been north to south. Wellhausen *et al.* (1957) found four types of South American maize in Guatemala and three of these four in Mexico. No mention is made of the historical occurrence of the South American maize in Mesoamerica; it may well have been post-conquest.

Comment. Maize is first found in Peru on the coast ca. 1400 B.C. It is hypothesized that maize arrived earlier in the highlands, but thus far we

have no evidence for this. The earliest indication of maize in the highlands is at Kotosh and dates at about 1000 B.C. Lanning, in his hypothesis, has left unsaid how maize got to the Peruvian highlands in the first place, and until we have some better idea of something that forces us to change our minds, we must assume that even the highland races of maize must have begun with Mesoamerican seeds. The existence of such specific highland Peruvian maize, however, gives impetus to the idea that maize arrived in Peru before its appearance on the coast at 1400 B.C.

My speculation on this point is that maize may have arrived either as a result of earlier sea contacts at Ecuador--during the times of Machalilla or earlier, along with the bottle gourd--and thence into the highlands of Ecuador and south to Peru; or straight overland from Mesoamerica, by-passing coastal Ecuador to the Peruvian highlands.

After the development of specifically South American races of maize, miscellaneous trade brought back some of the South American races into the Mesoamerican region. These later movements probably were not as important as the initial introduction of maize to South America.

### III. Other Agricultural Products

Coxcatlan phase (5200 B.C.-3200 B.C.) of the Tehuacan sequence is associated with water-bottle gourd, two species of squash, black and white zapotes, tepary bean, jack bean, common bean, and chili peppers (MacNeish 1964b:534). By the middle of the Coxcatlan phase, ca. 4300 B.C., tepary beans, yellow zapotes, and squash (cucurbita moschata) were used.

In Peru between 3800 and 3000 B.C., lima beans and bottle gourds are found at Chilea, Paracas and Nazca (Kidder, Lumbreras, and Smith 1963:92). At Huaca Prieta cultivation of squash, lima beans, kidney beans, bottle gourds, and cotton occurred from 2500 to 1200 B.C. (Kidder et al. 1963:92).

Comment. The probable initial occurrence of water-bottle gourds in Mesoamerica and their subsequent appearance in Peru suggests that there was contact between these two areas before that indicated by the first definite trace of maize. It is assumed that the water-bottle gourd and squash came to South America from Mesoamerica.

### IV. The Idea of Agriculture

Coe and others have supported the idea that sedentary agriculture first began in the New World in Mesoamerica. Sedentary maize agriculture may have begun in Mesoamerica, but it is clear that root-crop agriculture appeared in the tropical forest early enough to be on the Peruvian coast by 2000 B.C. Agriculture was not a new idea on the coast of Peru when maize arrived there, but the origin of the idea of agriculture could still have come from Mesoamerica at the earlier time of transmission of squash and/or the bottle gourd.

Meggors (1963:132)- says, "the difference of some 1,000 years (5000 to 4000 B.C. range of the first maize as indicated by Tehuacan sequence, and 3800 to 3000 B.C. range of the first appearance of the gourd in Peru) between these initial dates leads to the suspicion that the impulse toward cultivation may be traceable to a Mesoamerican influence." What Meggors does not venture

is her opinion of how the influence was communicated. The Tehuacan people were hardly at the stage of development that we would expect them to travel several thousand miles with cultigens.

Comment. The question of the origin of agriculture is far from settled. Though evidence now points to an earlier start in Mesoamerica of agriculture in general and maize agriculture specifically, other possibilities have not yet been eliminated. If squashes or gourds appeared in South America by 3000 or possibly 4000 B.C., was the idea of cultivation transmitted at the same time? Even the possibility of early root crop agriculture in the Amazon basin, contemporaneous with Coxcatlan or El Riego, has not been disproven.

#### V. Religious Structures

Religious structures were thought to have first appeared in Peru at the time of the Chavin horizon, along with ceramics. Recent controversy has centered around the alleged age of the Las Haldas complex which may or may not be similar in layout to La Venta as described by Drucker, Heizer, and Squier (1959). As recently as the middle of 1963 (see Meggers and Evans 1963), before the publication of the Andes 2 report of Izumi and others (1963), the Chavin baseline for religious structures was assumed to be correct. The La Venta complex, Carbon 14 dates for which average 814 B.C. but which shows one date as early as 1154  $\pm$  300 B.C. (M535 cited on p. 264 of Drucker et al. 1959) was associated with Olmec culture and was therefore thought to be a prototype for the South American structures (Drucker et al. 1959:265). Nothing in South America could be older. Kidder, Lumbreras, and Smith (1963:93) maintain that the appropriate date for this, the earliest coastal religious structure, was in the 800-500 B.C. range. Coe, in his rejoinder to Lanning (1963a:102), says that it is uncertain that GAK 107 (Lanning calls the two dates GAK 107 and GAK 606, which are equivalent to Coe's GAK 107 and GAK 106, respectively), indicating an age of 1630  $\pm$  130 B.C. is the date at which the temple at Las Haldas was completed. Coe preferred the GAK 106 dating at 730  $\pm$  150 B.C. for the date of completion. It seems to me that at issue is not when the temple was finished, but that it was started at all by the GAK 107, 1600 B.C., date.

Credence in the earlier date for Las Haldas would have it pre-ceramic in that region by some 400 years, according to Lanning (1963:101). Lanning also mentions the existence of pre-ceramic ceremonial complexes in the northern Chillón Valley and north of the Chancay Valley (Lanning 1964, ms., p. 3). He gives no dates for these but they cannot have been too late. The existence of these pre-ceramic ceremonial complexes certainly give added credence to the earlier Las Haldas date.

In the highlands of Peru at the Kotosh site the Templo de las manos cruzadas is dated as some time before the construction level H dated at 1840 B.C. (Izumi et al. 1963:153-154). This means, of course, that this structure is the earliest known ceremonial center in South America or Mesoamerica. It is not stated how much earlier the temple was than level H, but it is abundantly clear that the temple could not be any younger than 1800 B.C.

Comment. Until the discovery at Kotosh of the very early ceremonial structure the idea for such structures was thought to have originated in Mesoamerica. The resistance to accepting the earlier Las Haldas date was due

in great part to the attempt to preserve this idea. Now we may ask whether La Venta was a copy of Las Haldas. La Venta-Chavin or La Venta-Las Haldas parallels may exist, but the direction of influence is not so certainly from the north to the south.

Kotosh itself is somewhat of a problem. Where did the idea for the Kotosh temple come from? Was it indigenous to the region, or did the idea come from somewhere else, perhaps Ecuador?

## VI. Boats, Canoes, Rafts

What most impresses me about all discussion in which overseas communication is assumed is the ease of the reference, the finality of the assumption that these craft existed. Rarely is it assumed that there might not have been craft with which to carry on all the contacts assumed. In view of this faith in their existence, it is remarkable that archeologists have spent so little time and effort in the search of proof of their assumptions. Recent study of the question of boats has been done by three or four investigators (Heyerdahl, West, Ryden, Edwards), but it is inadequate in relation to the importance of the question. According to Edwards (1960:385), there are no direct archeological traces of craft other than some quaras (centerboards) at Paracas and Itca dating at about 1000 A.D. Heyerdahl and West both refer to historical accounts of sea craft as reported by Spaniards, but for earlier traces we must rely on circumstantial evidence.

Heyerdahl mentions the report by Saamanos of how, in 1526, Bartolomo Ruiz, pilot of Francisco Pizzaro, met another sailing vessel while sailing southward along the Ecuadorian coast. The other vessel, traveling northward, was almost equal in size to the forty-ton caravel of the Spaniards (Heyerdahl 1955:252). The Zacatula natives, residing near the north of the Rio Balsas in Guerrero, Mexico, said in 1525 that they knew of Indians "from certain islands toward the south" who came to Guerrero from time to time in "large canoes" (West 1961:133).

Both the thirty to forty ton raft and the canoes could easily have served as the means of communication between Mesoamerica and the Peru-Ecuador area. However, belief that craft existed earlier than conquest is based solely on circumstantial evidence. As Edwards (1960:385) puts it, ". . . no pictorial material has been found by archeology which can be confidently identified as representing sailing rafts." Even the idea of Guara navigation in conquest times has been challenged.

Stig Ryden (1956) does not believe that the sticks called guaras ever served the purpose of centerboards. He bases his reservations on the fact that some guaras that he had access to sank and he believes that no sailor would use such a guara, for without a guara a raft becomes quite un navigable. His arguments are unconvincing, because the guara is effective precisely because it will remain underwater, that is, not afloat. Variable immersion is basic to guara navigation. Steering of rafts is accomplished by varying the position of the guara. If the guara floated, then it would not be possible to push it down into the water beyond a certain depth without elaborate mechanisms. We may find out whether guaras in use today float or not by

simply going to the north Peruvian coast. Unfortunately Edwards (1960) did not report whether the guaras he saw in use floated.

Guara navigation still occurs today on the west coast of South America, probably occurred at conquest times, and possibly occurred earlier. With the evidence we now have we can only say that rafts such as Heyerdahl said existed as early as 500 A.D. were not beyond the technological resources of the people of that time. But as I have said before, the evidence for guara-navigated rafts or other craft is only circumstantial.

### Circumstantial Evidence

Early archeological evidence that suggests that coastal peoples in Ecuador did more than surf fishing comes from the work of Zevallos Menendez and Holm (1960) and Evans, Meggers, and Estrada (1959) in which shell fishhooks of large sizes are illustrated. The largest hook at San Pablo shown by Zevallos Menendez and Holm is some three and one-half centimeters wide, the diameter taken from the point of the hook (1960: Lamina 25). Evans, Meggers, and Estrada show a three centimeter hook for their period C (1959:20). These are large fishhooks, but it is not certain that these coastal peoples actually left the shore to use them. There are no other traces of deep-sea activity other than some fish bones which are of larger fish and the presence of these bones do not necessarily indicate the occurrence of deep-sea fishing (Zevallos Menendez and Holm 1960:7). Alternate possibilities include that the deep-sea fish were caught in the relatively calm bays, or that they were washed up on shore, dead or dying. And even if the people at the two sites did do some deep-sea fishing, this does not mean that they had long-distance navigational capabilities or inclinations.

In the face of such meager evidence supporting the existence of craft we must resolve the several questions raised by evidence of contact between widely separated areas on the west coast of Mesoamerica and South America. I will only note the specific instances of alleged contact involving sea transport and will explain why contact is asserted in the following section on ceramics.

The Valdivia complex, though not strictly speaking an example of contact between Mesoamerica and the Peru-Ecuador area, may be a very early example of long-distance sea navigation. Estrada and Evans (1963:79) and Meggers (1963:132) suggest that the Valdivia complex may be related to Jomon of southern Japan. The extreme age of the fairly complex ceramic tradition of Valdivia, ca. 2500-3000 B. C., and the lack of any traces of a less sophisticated ceramic tradition earlier than Valdivia in the area make the idea of a Japanese origin more plausible. And as there are no traces of Valdivia along a land route in the United States or Mesoamerica and as Japan Northwest Airways wasn't flying then, sea transport is indicated for the person or persons who initiated the Valdivia complex. On the other hand, Valdivia is not so close to Jomon that it had to have its beginning there.

Chorrera-Ocos is the first definite likely communication between Mesoamerica and the Peru-Ecuador area and occurs at about 1500 B.C. There is a lack of evidence of similar styles on the land areas between La Victoria

and the coast of Ecuador which suggests that the two regions were in seaborne communication with each other.

Meggens (1963:133) mentions the appearance of "a number of early Ecuadorian ceramic traits in Mesoamerica around 1200 B.C." and suggests that a regular trading route between the two areas was established by this time. The creation of the controversial "corn bottle" of Kotosh mentioned by Coe may have been influenced by this early trade.

Olmec-Tlatilco linked to Chavin-Cupisnique provides the next suggestion of contact. Though Willey discounts any extensive similarity of Chavin with Olmec, he does enumerate a number of traits shared by the two areas at about 800 B.C. (1962:5). These traits may have diffused by means of sea communication.

The Bahia phase (500 B.C. to 500 A.D.) on the west coast of Ecuador is more likely to have initiated continuous trading between the Mesoamerica and the Andean region (Estrada and Evans 1963:83). "The resemblances [between Bahia and Mesoamerica] are so numerous and detailed as to suggest maintenance of direct contact over a period of time" (Estrada and Evans 1963:83). Also during this time there was an almost certain arrival in Ecuador of a complex of traits with Asiatic provenance. A ca. 200 B.C. date for this complex is suggested (Estrada and Meggers 1961:915).

Tihuanaco materials found on the Galapagos Islands were reported by Heyerdahl and Skjolvold and date between 500 and 1000 A.D. (1956).

From 1000 A.D. to the time of Conquest, the Manteño people are thought to have participated in long-distance trade. West (1961) believes that it was the Manteño who figured in the accounts of the Zacatula people. During this time the Cueva Indians of the Coclé culture may also have engaged in long-distance communication.

Comment. The South American area of Ecuador and Peru seems to have had far more active dealings with the sea than did the Pacific Coast Mesoamericans. Because of this I believe that the southern area initiated most of the exchange which occurred between the two areas. The Ecuadorians remain even today skillful sailors, and it is likely that in earlier times they were also skillful sailors. It is likely that the Spaniards who found a trading raft on its way north in the early 15th century interrupted something that had been going on for over two thousand years, and perhaps three thousand. Traits may have gone both ways, north-south and south-north, but it is almost certain that the goods were carried by Ecuadorians.

Navigation between Mesoamerica and the Peru-Ecuador area is not impossible, either way. Coe (1960:385) mentions one possible route and documents his work with ocean charts. Bushnell (1962) also makes mention of the possibility of navigation between the two areas noting that the north-bound Peruvian current is displaced each year by a south-bound Niño current which often reaches "a little north of the Peruvian coast" (Bushnell 1962:596). So it was possible.

One cannot help but remain uneasy, however, at the paucity of archeological evidence of craft. To be sure, the ocean is a corrosive element and thus artifacts giving indication of sailing craft would not likely survive; however the question remains, and will remain open until more work is done specifically oriented to finding traces of craft.

### VII. Ceramics

Ceramic comparisons have been the basis for most of the tracings of influence between Mesoamerica and the Peru-Ecuador region. Most discussed has been the connection between Chavin and Olmec, and I will comment briefly on the alleged connections for these two complexes as well as for Ocos-Chorrera. I included in the appendix a listing with comments of the ceramic shapes and decorations which have figured prominently in discussions of trait diffusion and which are relevant to the discussion in this section.

#### Dating

The oldest known ceramics in South America are found in Ecuador and date between 2490  $\pm$  200 B.C. and 2000  $\pm$  200 B.C. and belong to the complex known as Valdivia (Estrada 1958; Evans, Meggers, Estrada 1959). Machalilla, also in Ecuador, probably runs from 2000 to 1500 B.C. (Meggers and Evans 1962:186). An age of 5,000 years B.C. is often alleged for Valdivia, but thus far I've not seen a C 14 date for it. The older date may be the age that Valdivia must have had in order to develop such a complex repertoire by the certain date of 2490 B.C.

At Tehuacan south and east of Mexico City there is a definite suggestion that the first ceramics were simply the old stone vessels done in a new material--clay. The Purron phase (2300-1500 B.C.) was typified by "very crude, crumbly pieces of broken pottery" in the same forms as some bowls and ollas of the previous Abejas phase (MacNeish 1964b:536). These early Tehuacan wares were extremely crude and cannot be compared in degree of sophistication with the work of Valdivia. Along with the crude pottery were found manos, metates, scrapers, and fine obsidian blades. No indication has been given by MacNeish just where along the 800 years-long Purron phase pottery appeared and so it remains a moot question just exactly how old ceramics are at Tehuacan.

Other reports of quite early ceramics in Mesoamerica have been made by Piña Chan (1963:19) who suggests that Coxcatlan people made crude pottery as early as 3500 B.C. and by the Brushes' thus far unpublished work on the coast of Guerrero. These assertions are not as convincing as the hard data developed for the Valdivia complex, however, and so proponents of the Spinden hypothesis are put to saying, "While the idea behind ceramic manufacture might have come from elsewhere, such as Ecuador or Colombia, the vessel shapes (at Tehuacan) were indigenous to Mexico" (Coe 1964:525).

Evidence from the Peruvian coast (Ancon-La Florida, Acari-Hacha), most of it to my knowledge not yet published, suggests that fairly complex ceramic traditions with double spout and bridge bottles, tall pedestals, resist painting, and neckless ollas existed around 2000 B.C. in Peru at a time when we can find no similarly developed ceramic tradition in Mesoamerica.



At Tehuacan the potters were just beginning to shape out of clay what had formerly been made out of rock (Lathrap, class lecture December 18, 1964).

The date for the earliest known ceramics in Peru was until recently ca. 1200 B.C. (Lanning 1962; Kidder, Lumbreras, Smith 1963:93). Guanape in the Viru Valley has been dated at 1148 and 1849 B.C. (Strong and Evans 1952: 253-256), but the older date was not taken seriously. The earliest date for ceramics at Kotosh of 1800 B.C. makes the early Guanape less unlikely (Izumi 1963:186). Ceramics did not spread evenly throughout Peru and so while it is likely that several areas in Peru had ceramics by 2000 B.C., pre-ceramic shell middens were found dating to 1200 B.C.

Comment. In summary, the oldest ceramics in South and Mesoamerica are the ones found in the Ecuador area. Ceramics from Mesoamerica which might approach Valdivia in age are much cruder in execution and in ceramic quality. If contact between the two areas is to be considered, we can only assume that the idea of ceramic work was communicated northwards either from Ecuador or from some other area in northwestern South America.

#### Contact, Ocos-Chorrera

The work of Coe (1960, 1961) provides the best documented case of contact, but I believe that further work must be done before the direction of trait movement is settled. In many cases it may be that traits have been reexported southwards from Ocos sometime after their initial movement up from South America; the neckless ollas may provide an example of this kind of movement.

Of the Ocos traits mentioned by Coe (1960:366), rocker stamping with shell have a much earlier dating in Ecuador than we have thus far for Mesoamerican appearance (see appendix). Iridescent painting has a much wider distribution in Ecuador, suggesting its origin there. Cord-marking may have an earlier appearance in the United States than in South America, suggesting that the trait moved south.

Later in the La Victoria sequence the north to south movement of traits is pronounced. Pottery napkin-ring earplugs and small obsidian blades, both of Conchas II (ca. 500 B.C.), and "cuspidor"-shaped bowls of Conchas I (ca. 700 B.C.) likely moved from La Victoria to Ecuador as Coe (1960) and Estrada and Evans (1963:81) assert. Estrada and Evans (1963) are probably wrong when they say that iridescent painting, zoned red and black painting and annular bases also moved from north to south (see appendix). If Machalilla is earlier than Chorrera, and the example of annular bases found in Machalilla actually belongs in that complex, then its appearance in Ocos must post-date its first appearance in Ecuador.

#### Contact, Chavin-Cupisnique/Olmec-Tlatilco

Contact between these two complexes has been the most celebrated of any to this point. But most of the evidence adduced to support contact and influence has not stood up well in the face of new evidence. It was originally thought that Olmec gave to Chavin many features; later the direct statement of north-to-south influence was modified: ". . . Tlatilco and the analogous

Chavin culture of Peru show a number of highly suggestive similarities which are probably not parallelisms . . . " (Coe 1960:364).

The table shows the traits most commonly enumerated in support of the hypothesis of connection. In the first column I note the earliest appearance of the trait in the New World. As can be seen, all of the traits for which we have information occur earlier in South America than in Mesoamerica, suggesting that Olmec-Tlatilco was influenced by Chavin-Cupisnique rather than the other way around.

Porter's Tlatilco study (1953) is most often referred to by proponents of the Spinden hypothesis and Olmec influence over Chavin is often misleading (Lanning 1964, ms., p. 3).

Table

	Earliest noted appearance of trait	Coe (1960)	Coe (1963a)	Willey (1962)	Kidder et al. (1963)
1. Figurines	Valdivia	?		?	
2. Animal effigies	?		N-S		
3. Stirrup spout bottles	Valdivia	S-N	N-S	?	N-S
4. Jaguar or were-jaguar as cult motif	2000 B.C. Peru	?	N-S	?	
5. Split-face dualism (dualism)	?	?	N-S		
6. Flat-bottomed, gently flaring-sided bowls				?	N-S
7. Color-zoned ware	2000 B.C. coastal Peru	?	N-S	?	
8. Zoned incision	Valdivia			?	N-S
9. Rocker-stamped	Valdivia			?	
10. Zoned dentate rocker stamping	Valdivia	?	N-S		
11. Flat and roller clay stamping	Ocos Chorrera	?			

Legend:

A question mark (?) means that the trait was mentioned in the work but that no direction was indicated.

A blank means that the trait was not mentioned in the particular article.

N-S means north-south direction of trait stated; S-N, the opposite.

The Kotosh corn bottle is suggestive and confusing: the design on the bottle could mean that Olmec is influenced by Kotosh-Chavin because Kotosh-Chavin is earlier than Olmec, but as the design appears uniquely at Kotosh it may be considered intrusive and therefore as having come from Mesoamerica. Further, the dating of Olmec and Chavin is too close to give any security to any assignment of priority of a trait in one area or another (Drucker et al. 1959:263; Lanning 1963:100; Izumi 1963:133, 154-156; Coe 1962a:579-580, 1963; Kidder, Lumbreras, Smith 1963:94; Smith 1962). This issue is far from settled and more questions remain than have been answered thus far.

#### Contact, Bahia and Later

Other examples of contact are not as well studied as the two previous cases, that is, they are hardly studied at all in a systematic way. Contact in later times was probably extensive and deserves concerted study. Isolated bits of proof of contact are provided by Estrada (1957:142) in his comparison of a Tolita dog and an "Aztec I" dog, by Borhegyi (1959) who gives several illustrations of elements common to highland Maya sites and Ecuador, and by Estrada and Evans (1963:83) who note "numerous and detailed" resemblances between Bahia and Mesoamerican areas.

Metalworking techniques have provided useful focus of study for noting some probable contacts between the two regions (Lothrop 1950; West 1961; Easby 1962), and may provide further useful data in the question of contact.

#### Contact, Odd Topics

I was unable to find discussion of the provenance of the Juave (Guave?) Indians of southern Chiapas other than the primitive account by Starr (1899); it is likely that these people are intrusive from somewhere, perhaps Ecuador.

Though discussion of the geometric or cogged stones found in the Topanga area of southern California and the Coquimbo site in Chile is at present scarce (Iribarren 1962), these stones may sometime provide important information relating to the nature of contact between North and South America in early (ca. 4000 B.C.) times.

Several figurines figure prominently in the formulation of hypotheses of contact. The Las Haldas figure (Ishida et al. 1960:103; Lanning 1962:594) is used to support the idea that Las Haldas resulted from Mesoamerican influence. At the Kotosh site a figurine was found whose form suggests that the Kotosh people had a Haniwa potter in residence (Izumi 1963:Plate 100d on p. 129 and Plate 100 on p. 152).

Though not exactly a figurine similarity, the Valdivia modeled face on the outside face of a sherd shown by Estrada (1958:36, Fig. 16, No. 3) is more than reminiscent of the Kotosh five-faced concave bowls (Izumi 1963: Plate 130). The resemblance between the two pots are striking as their placement in time would not indicate direct connection.

Comment. Though far from conclusive, most evidence provided by ceramic vessel shape and decoration suggests that diffusion occurred primarily south-to-north, with secondary diffusion of some traits north-to-south. I believe, however, that the data developed thus far is more suggestive than conclusive and that a clear picture of contacts through time between Mesoamerica and the Peru-Ecuador area will come only after we know a good deal more.

#### VIII. Diffusion

In all of the recent discussion of diffusion of traits between Mesoamerica and the Peru-Ecuador area, little mention has been made of the different possible explanations of trait similarities in the two different regions. Lanning suggests four. He says that traits may be similar because of "movements of individuals or groups of persons (traders, preachers, soldiers, migrating populations) over long distances," because of "village by village diffusion in one or both directions or into the Andean and Mesoamerican areas from a third center," because of "parallelisms based on similar technologies or mythologies" (psychic unity of man), or last, because of "convergence from quite different culture and stylistic backgrounds--that is, coincidence" (Lanning 1963:100).

It has been hypothesized that boats carried the idea of various traits back and forth across the ocean intervening between the two areas, but no mention is made of who the people on the crafts might have been. We can note with interest that in no case of contact between the two areas has it been thought that the relationship between the two cultures has been that of conqueror and conquered. There may have been material similarities, but to this point we have no proven similarities of social organization or religion. This may be a long time before we can say who was going where for what reason during pre-Columbian times, but it is definitely an ideal to aim for.

#### IX. Summary: Interrelations of Mesoamerica and the Peru-Ecuador Area

Despite the limitations in our present knowledge of the nature of contact between the two areas, I would like to state my ideas of the process of the interrelated development of the two areas. I do not make this hypothesis merely to add my bit; I believe that what I suggest will be useful in guiding the focus of future research in the two areas and in the region intervening.

Sometime around 3000 B.C. Asians, perhaps from Japan, arrived on the Ecuadorian coast. They may have come on a raft which used guaras and sails along the north equatorial countercurrent which moves eastward just north of the equator. These travelers left ideas of ceramic manufacture, perhaps of some form of organized religion, and Asiatic cotton. Before setting off to the west back home, the travelers probably moved along the coast northward, touching points along the Colombian and Panamanian coast, at Monagrillo, for example, leaving there the beginnings of ceramic manufacture. The idea of agriculture probably developed independently in the two areas--Mesoamerica and South America. In South America it is likely that cultivation began in tropical areas in the Amazon basin and then moved westward over the Andes to the Pacific Coast, arriving there before 2000 B.C.

Before the arrival of the Asians, early maize and other agricultural plants were carried overland from the highlands in Mexico to the highlands of Peru. Maize in particular was not extensively cultivated as it was not the later Mesoamerican hybrid which gave impressive yields. The date of this movement was probably between 4000 and 3000 B.C.

Beginning at about 2500 B.C., the idea of ceramic manufacture was carried up into the highlands of Ecuador and down along the river valleys into the Amazon basin. It spread from there down along the Amazon to Marajo Island--and down along the western edge of the Amazon basin as far as Acre in Brazil and Pando in northern Bolivia. Possibly the south coast of Peru and the Titicaca basin were influenced by this movement of ceramic tradition and may account for the differences between the south coast and north coast styles in Peru. The idea of religious ceremonial structures may have remained in the highlands or close along the Andes in the Amazon basin after leaving the coast of Ecuador, traveling southward to Peru where we find Kotosh at around 2000 B.C. We are likely to find other structures between Ecuador and northern Peru highlands. They should be in association with ceramic wares.

In Mesoamerica, the idea of ceramic manufacture developed independently, especially in the Gulf of Mexico area at sites such as Tehuacan. The Pacific coast of Mexico and southwards may have enjoyed the more advanced technology and styles of Ecuador.

The coastal Ecuadorians probably began their history of extensive trade with movements both to the north and to the south. At around 1500 they brought maize of the more productive sort down to Ecuador and caused the tremendous expansion characteristic of the Chorrera peoples at that time and from there reexported it south to coastal Peru. Exchange of ceramics occurs at this time also.

The Ecuadorians (Chorrera?) may have acted as intermediaries in carrying ceramic ware back and forth between Mesoamerica and Peru, or the northern Peruvians themselves may have developed a maritime technology sufficient to allow them to trade back and forth during Chavin times. The idea of complex religions may have sprung up independently in Mesoamerica, but it is likely that it was carried northwards along with trade objects between 1500 and 1000 B.C.

From 1000 to 500 B.C. up to the Hispanic times trade between north coast Ecuador and Mesoamerica was probably extensive and continuous. Some reexport of some trade goods and ideas may have gone south to Peru during these times.

The independent development of ceramic styles in the two areas is likely. Chavin-Cupisnique is not very similar to Olmec Tlatilco. Specific decorative techniques or tricks may have been traded between the two areas, but the final style of the two areas was the result of independent creativity.

Ecuador was an easier place to get to from Asia as it was on the equator and so around 200 B.C., and perhaps at other times, contacts were made from Asia. The Galapagos Islands probably figure importantly in all of this sort of contact as it is the first land in some 4,900 miles of eastward

travel from the Palmyra Islands at 160 degrees west longitude and six degrees north latitude, which itself may have provided a landfall for east and west-bound traders. If we accept the possibility of Chinese influence on Peru during Chavin times, it is likely that the route taken by the individuals involved in contact was that which I've outlined. The initiators of Valdivia may have used this route as well.

### The Future

I believe that research along the Mesoamerican coast from Manzanillo in the state of Colima, Mexico, south all the way to Lima might yield much important material relating to contact between the Mesoamerica and the Peru-Ecuador area. However, funds and time often being in short supply, a more efficient focus of study would be along the northern coast of Ecuador, the Gulf of Panama and islands therein, and the Mexican coast from the mouth of the Rio Balsas in Guerrero, Mexico, down to the Guatemalan and San Salvadorian coasts.

Study of the Isla de Malpelo (Colombia) which would have been directly in the path of any long-reach oceanic contact between the two areas is of prime importance, as well as is further study of the Galapagos Islands west of Ecuador. This latter group of islands stands directly between the west-bound and eastbound currents north of the equator, and would likely have been a landfall.

In Ecuador, I think that study of some of the river valleys draining into the Amazon basin might provide a clearer picture of the impact, if any, of Valdivia, Machalilla, and other possibly Ecuadorian complexes on the development of ceramics in the Amazon basin and along the rivers in the Andes in Peru and northern Bolivia which drain into it.

### Summary

I believe that there has been contact and diffusion between Mesoamerica and northwestern South America, especially in regard to agricultural products. I also believe that the state of our knowledge is such that it prevents us from making more than extremely tentative hypotheses about the rest of the details, such as defining the direction of trait diffusion between Olmec and Chavin. In all of our attempts at getting some clear picture of influences, our problems may be complicated by the probable existence of a monthly balsa raft to the north, based either in Ecuador or northern Peru, which began its trips to the north around 500 B.C. or earlier.

## APPENDIX

### Ceramic Shapes

(Note: Time slope only is indicated in the notation of direction. A blank means uncertainty.)

1. Neckless ollas

(S-N)

Found in Peru around 2000 B.C. (Lathrap, personal communication reporting on Lanning's work, December 18, 1964) and at Ocos in Mesoamerica (Coe 1960:366).

2. Mold-manufacture, ca. 500 (?) B.C. (N-S)

3. Tetrapods and tripods (S-N)

"These types arrived in Ecuador only during the time of the Valdivia culture" (Estrada 1958:104). If Estrada is right about these traits being present in a Valdivia context, then it is quite likely that they occur much earlier in Ecuador than in Mesoamerica. I can't imagine what he means by "only during the time of Valdivia." Perhaps there was no secure date at the time of that writing, or that the Spinden hypothesis was such gospel that Estrada could not imagine that the Valdivia ceramics could antedate Mesoamerican ware.

4. Annular base (S-N)

One example in Machalilla, many examples in Chorrera, and almost absent in Peru: "there can be no doubt that it is a Mesoamerican invention" (Estrada 1958:102). But if the Machalilla association is correct, then it is quite likely earlier in Ecuador.

5. Basal flange

Period Chicanel in Mesoamerica and may have originated in Mesoamerica (Estrada 1958:106). Tutishcainyo and other early tropical forest examples may be earlier.

6. Whistling jars (S-N)

In South America at Chorrera and Cupisnique in the Mesoamerican area at Playa dellos Muertos and Tlatilco (ca. 600 B.C.) (Estrada 1958:101). Porter supports hypothesis of independent invention in two areas (1953:77).

7. Stirrup jars (S-N)

Parsons (1963:387) believes the doughnut (lying down) form of the stirrup jar originated during the Chavin period on the north coast, arriving later at Tlatilco and elsewhere. Stirrup jars found in Machalilla, Chavin, Cupisnique, and Ancon-Supe in South America and at Playa del los Muertos and Tlatilco in Mesoamerica (Estrada 1958:100).

#### Ceramic Decoration

8. Iridescent paint (S-N)

" . . . iridescent paint has a longer history in Ecuador than in Middle America where it is found only in Ocos and Mirador I . . . " (Coe 1960:369).

9. Negative painting (S-N)

" . . . negative painting . . . makes its earliest appearance (in the New World) in Peru on the south coast, where it appears in a demonstrably pre-Chavin context, and is as old--on the evidence of radiocarbon dates--as any known Peruvian pottery" (Lanning 1963:100).

10. Color zoning (S-N)

" . . . color zoning occurs in central Peru long before zoned dentate rocker stamping or stirrup spout bottles [and is] apparently related to extremely ancient painted pottery, without incisions, of Qaluyu and Marcavalle,

and to the recently discovered black design pottery which precedes incision and slip zoning at Ancon" (Lanning 1964, ms., pp. 3-4).

11. Nail impression (S-N)

Late Valdivia		
Machalilla		
Chorrera		Ocos
	Chavin	La Venta

(Estrada 1958:102)

12. Rocker stamping

(a) Shell rocker stamping within incised lines at Valdivia before 2000 B.C. (Estrada 1958:46-50).

(b) Zig-zag (rocker stamping) at Tlatilco and Valdivia (Evans, Meggers, Estrada 1959:84).

(c) Rocker stamping at Ocos with shell, with a dentate stamp, and with a plain stamp (Coe 1960:366).

13. Excision (S-N)

At Kotosh during the Kotosh and Waira-jirca periods (Izumi 1963:139). Excised pottery dated at Valdivia and Monagrillo 1,000 years before it is dated in Mesoamerica suggests that some traits moved south to north (Lathrap 1960:127).

14. Cat-like decoration

" . . . condor, serpents, and very possibly large cats were depicted [in Peru] as early as 2000 B.C." (Kidder, Lumbreras, and Smith 1963:94).

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