

A MODEL OF PORTS-OF-TRADE

William L. RATHJE

University of Arizona

Jeremy A. SABLOFF

Harvard University

Anthropologists have long been interested in the processes by which social system adapt to changing environments. History, ethnohistory, and archaeology provide cross-cultural opportunities to study the structural organization of systems that respond to frequent external and internal changes. One such system is represented by ports-of-trade in which the flow of goods, services, and merchants from culturally diverse societies is in continual flux.¹

This paper will construct a basic cross-cultural model of the internal structure of ports-of-trade.² The model will be illustrated by

¹ This paper was presented at the 37th annual Meeting of the Society of American Archaeology, May 5, 1972, Miami. Keith H. Basso, T. Patrick Culbert, David A. Freidel, McGuire Gibson, David A. Gregory, Wayne Kappel, Henri A. Luebbemann Jr., J. Jefferson Reid, Michael B. Schiffer, Barry E. Thompson and Richard A. Thompson contributed ideas and constructive criticisms which have been incorporated into this presentation.

The Cozumel Archaeological project was initiated in February 1972, with Sabloff and Rathje as co-directors, David A. Freidel, Judith Connor, Anibal Enriquez Bringas, Paula L. W. Sabloff (social anthropologist) and Leigh Freidel (photographer) as staff members, and Peter Urban, Stephen Burns and Hogan Smelker as project assistants. The work is being carried out under the auspices of the Peabody Museum, Harvard University and the University of Arizona, with the cooperation and authorization of the Instituto Nacional de Antropología e Historia of Mexico. The first season of fieldwork was made possible through grants from the National Geographic Society, the Ford Foundation and the Harvard Graduate Society, as well as the generosity of Mrs. Charles Ayling and Mr. Landon Clay. We are grateful to these institutions and individuals and to all the authorities and friends in Mexico and Cozumel who made our work possible. Finally, without the enthusiastic labor of our crew members, Luis Rojas, Pastor Cocom, Edgardo Cocom, Amerigo Cocom and Marcial Castro, none of our fieldwork could have been undertaken.

² Models accounting for the location and the rise and fall of ports-of-trade will not be considered in this paper.

one of the busiest Classical Mediterranean ports-of-trade, the Aegean island of Delos and by the Island of Cozumel, Quitana Roo, Mexico, which was a port-of-trade at Spanish contact in 1517.

Ports-of-trade, as defined by observed behavior, facilitate the transport, storage, further manufacture, and exchange of non-local items by geographically dispersed wholesale merchandisers (Thoman 1956; Revere 1957). Every port where these activities occur is not a port-of-trade. There is a continuum from trading ports, where most transfer activities involve the exchange of local for non-local commodities, to ports-of-trade, where the exchanged commodities and their merchandisers are almost all non-local. Thus the port systems which have few local products and are dependent for survival upon resupply and storage services and upon facilitating exchange between merchants transporting large quantities of non-local commodities will best fit the port-of-trade model.

One of the key factors for survival as a port-of-trade is the ability to attract many diverse merchandisers and products to a single location. Consistent maintenance of the aggregation of large quantities of commodities, services, and data on the current distribution of supplies and demands, facilitates economic speculation and increases the potential for exchange, the business of the port-of-trade (Estall and Buchanan 1961: 94-100; Thoman 1956).

Embedded within the patchwork of entrepreneurs which produces profit for a port-of-trade is the potential of serious disruption of business activities. A successful port-of-trade attracts large numbers of merchants from different cultural communities which are often openly hostile. Although politics is infamous for making strange bedfellows, the variety of merchandisers intermingled during exchange transactions is even more remarkable. An example of the range of variability of entrepreneurs thrown together by fate and the potential of trade profits is provided by a contract signed at Alexandria, Egypt, in 150 B. C. The five merchants involved were all Greek, but from as far away as Sparta and Marsielle. One Carthaginian and four local soldiers guaranteed payment. The banker was a Roman (Casson 1959: 173). This kind of ethnic mixture creates the potential for conflict that could disrupt exchange procedures. The danger of disputes and violence is perhaps not excessive among professional merchants because of the profit motive; however, the potential is critically heightened among boat crews, porters, and other goods-handling personnel.

In reaction to a constant need to maximize diversity among cons-

tinent merchants but at the same time minimize the threat of disruption it can be hypothesized that: the component elements that form ports-of-trade will be organized into systems that maximize potential flexibility and dampen conflict. Simply stated the port-of-trade model proposes that what is good for business is good for a port-of-trade and vice versa. The dominant themes of organization in a port-of-trade will emphasize:

(1) *Information and capital procurement*: Organizations of elements will be developed that maintain a constant influx of goods, services, capital, information and merchants into the speculation and exchange system.

(2) *Flexibility of cultural norms*: Pragmatic, culturally non-specific norm structures that maximize political and military neutrality (cf. Revere 1957), the potential for cross-cultural interaction, and the ability to adapt rapidly to political and economic changes will be emphasized in and provided for by the ideological systems found in ports-of-trade. A culturally non specific mercantile ethic based upon principles that maximize profit and minimize disruption provides a useful medium through which exchange between a wide range of merchants can be efficiently and peacefully accomplished. Such a pragmatic ethic would also produce few obstructions to experimental attempts to react to changes inside and outside the system. In addition, the structure of the system should incorporate the potential for reconciling conflicts between "cultural" norms brought to the port by different merchants and conflicts between "cultural" norms and adaptively advantageous modifications in the system itself.

(3) *Cultural conflict*: To avoid disruptive conflict between merchants and goods-handling personnel from countries which are often openly hostile to each other, the flow of men and material will minimize or strictly formalize contact between individuals or groups from different ethnic backgrounds.

The inability or unwillingness to develop systems that implement these themes and a resultant inability to attract new business, to maintain peace, or to be hospitable to a new economic trade power might well ruin a port-of-trade.

There are several ways that an influx of new business and flexibility of cultural norms can be developed as an integral part of a system. Two parameters of potential structures for component elements in successful ports-of-trade will be proposed and illustrated in this paper. The first requires that mythic-religious elements be organized into

a system of sacredness and neutrality that provides: (1) an emphasis upon fluid or readily adaptable norms (through the role of a sanctuary or religious innovation center), (2) a means of maintaining a constant influx of travelers (pilgrimage-tourism), (3) an atmosphere conducive to exchange (fairs), and (4) a supra-political sanction against violence (god's law). The second organizational principle requires that groups from different ethnic backgrounds be segregated spatially to minimize cultural conflict among labores. Phrased in terms of the mythic-religious system, the structures that serve as foci of worship for different ethnic groups should be spatially dispersed.

In the second and third centuries B. C., the Aegean island of Delos was a barren rock that supported a major port-of-trade crossroads in Mediterranean commerce. It catered to Italians, Greeks, Egyptians, Persians, Phoenicians and a grabbag of other ethnic extractions ((Deonna 1948). Without local resources Delos was completely dependent for subsistence upon facilitating exchange of foreign items and, therefore, provides an especially good example to illustrate the port-of-trade model. As expected, the myths and religious sanctions surrounding Delos incorporate elements which are organized to encourage the pragmatic norms of commerce and the dampening of conflict.

According to one myth, Zeus, in the form of a swan seduced Leto. As Leto became heavier, Hera, Zeus wife, became more jealous and spiteful. Hera threatened to destroy anyone or anything that offered aid and comfort to the hapless unwed mother. Leto fled from country to country and from port to port, but no one would shelter her. Finally, in desperation she turned to a barren rock floating in the ocean. Although all the rest of the world had rejected her, the island of Delos welcomed Leto and on Delos Leto gave birth Apollo. Delos was rewarded for its hospitality, given in direct defiance of Hera's threat, by pillars that rose from the bottom of the sea and bolted Delos firmly in place (Hamilton 1940: 239, 294). Thus, the first myth about Delos sets the island up as a sanctuary. This implication of the myth was elaborated in the religious system.

Unlike most greek cities where a god was tied to both territory and people, Delos was Apollo's personal island-a temporary sanctuary for all, belonging to none. By custom and law no one was allowed to be born or to die on Delos. Expectant mothers and elderly or sick individuals were shipped to the nearby island or Rheneia to be delivered one way or the other (Mackendrick 1962: 162). Twice during its history Delos was "purified". All the individuals who had

managed to arrange their burial on Delos were exhumed and shipped to Rheneia. This feature of the myth and religious system assured that no territorial affiliations developed, either through birth or burial, that would give one or another group a territorial claim. The supernatural sanction against dying on Delos was an additional constraint against violence.

The religious system also included large annual and biennial festivals which attracted tourists, pilgrims and merchants from the whole Mediterranean world. At least as early as 700 B. C. Delos was the site, along with Olympia and Delphi, of international religious games (Mackendrick 1962: 153). There is little doubt that there was a direct symbiotic feedback between piety and profit. For example, the "treasuries" at Delos which were built and supplied by cities like Athens ostensibly to honor Apollo, functioned as banks, storing and managing the capital necessary for large-scale transport and wholesaling activities.

The final feature of the mythic-religious system underscores the organizational link between it and Delos' port-of-trade activities. After the island ceased to be a major trade center, Delos and its associated cults were both completely abandoned (Casson 1959: 115).

Following the port-of-trade model the settlement pattern of Delos is expected to minimize cultural conflict. Instead of one or two large temples, as found at ceremonial centers like Delphi and Olympia, there were over forty small shrines on the island of Delos holding the likenesses or inscriptions of hundreds of gods (Bruneau 1970). The temples occurred in six main clusters. Most of the shrines of the traditional Greek gods (Apollo, Artemis, Zeus, and even Hera-another sign of flexible cultural norms) were found on the west coast. The gods as Sicon, Tyre and other Asia Minor trading cities were enshrined in a group of structures on the south side of the island. A synagogue was located at the northeast end of Delos. Docking and storage facilities were, likewise, not confined to one area. They were attached to shrine complexes (including office-rest house buildings) scattered around the island (Bruneau 1970; Mack 1962: 366; Casson 1959: 184). Thus, although Delos was a focus of resource concentration and contact between anxious and careful business men, the settlement pattern on the island minimized contact between different crews, porters and other factory officials. In sum, both the mythic-religious and the settlement systems of Delos maximized support for pragmatic, culturally non-specific norms and against cultural conflict.

On the other side of the world is the island of Cozumel, Quintana Roo, Mexico. Conquest sources indicate that Cozumel like Delos, was a port-of-trade without any major exportable local resource. Like Delos, Cozumel was also a focus of religio-tourism. The shrine of Ix Chel on the island was one of the three most important pilgrimage centers in Post-classic Yucatan (Thompson 1954: 114). The mainland road to Xcaret (Pole) and from there across the channel to Cozumel bore a constant flow of pilgrims to the shrine.

The nature of the Ix Chel shrine, which included a "talking" image of Ix Chel (Thompson 1970: 189), was critical to Cozumel's port-of-trade functions. In most religious systems gods and their commandments, "truths" and ritual requirements are viewed as eternal and unwavering. Because of this "eternal" ethic built into the structure of religious ideology, dogma is rarely modified rapidly to cope with dynamic aspects of the environment. From the port-of-trade model it follows that the ability to reconcile conflicts between environmental realities and "cultural" norms, or between "cultural" norms held by different merchants, is especially important to a port-of-trade. A priest who communicates with his god in dreams, trances, or divination activities is one potential source of change. However, the ultimate form of embedding adaptability into a mythic-religious structure is to have the god, itself, speak at will from its idol directly to its parishioners. Based upon the preceding rationale, it is significant that the Ix Chel "talking" idol was one of a kind in Late Postclassic Yucatan and that it was housed on Cozumel.

Even though a single cluster of large temples, on the order of Izamal or Chichen Itza, might be a logical organization for a shrine center, such a settlement pattern would not be practical on Cozumel. A number of sites, each with a few shrines and temples would be expected from the port-of-trade model. If shrines occur away from settlements, they would not cluster, but should be spaced for maximum dispersion. This pattern has been identified on Cozumel for Late Postclassic time (fourteenth through sixteenth centuries A. D.) by David Freidel during the 1972 season of the Cozumel Project. The temples at each of the sites on Cozumel are relatively few in number and small in size. The east coast of the island is lined with shrines, spaced several kilometers apart.

Through ethnohistoric documents the resulting behavior of the Cozumel system can be examined. Between 1517 and 1520 three separate Spanish expeditions led by Cordoba, Grijalva and Cortes landed fifteen times at various spots in Yucatan. From the model

of ports-of-trade, it follows that pragmatic mercantile norms and conflict dampening devices would have ensured the Conquistadors a safe harbor at Cozumel. In the other areas much more trouble could be expected. Following the trails of the three expeditions will provide a measure of how well Cozumel's reaction to a radical new stimulus fits the port-of-trade model.

At Ecab, his first stop, Cordoba was invited ashore by smiling Indians bearing gifts and then savagely ambushed. At Campeche the Spaniards were not attacked, but they were warned not to remain. When Cordoba attempted to land at Champoton his soldiers were driven back into their boats. Having lost half of his men Cordoba turned the remnants of his expedition back to Cuba where he died of his 37 wounds (Blom 1936).

Grijalva mounted his expedition in 1518. His first stop was Cozumel where he was invited ashore. Because of Cordoba's experience, Grijalva expected to be attacked. Instead he was treated to a ceremonial banquet complete with after-dinner cigar (*cañas*) (Stephens 1843: 367-8; Thompson 1970: 108). After filling his stomach and water casks Grijalva sailed south. He did not land, and on his way back north he stopped once again at Cozumel to resupply. The second stop was as peaceful as the first. The next landing brought Grijalva to Campeche, on the Yucatan mainland, where he found himself in a pitched battle. When he arrived at Champoton in need of water, Grijalva tried to fill his casks at night to minimize conflict. The water party was ambushed and he personally left the fight carrying three arrows, but minus two teeth (Blom 1936: 20-21). At the town of Tabasco, near the river that bears his name, Grijalva finally managed to establish friendly relations with the inhabitants. On his way back north he put in once more at Campeche where he was again attacked. From there he led his battered men home.³

In 1519 Cortes outfitted his first expedition. When he landed at Cozumel, the infamous Spaniard easily won the natives' "friendship and confidence". This feat was not due to Cortes's innate tact. At one point during a ceremony, he had his men throw down the idols from several temples and construct Christian altars. The strongest reaction from the natives was reference to a religious sanction that would only affect the spaniards at sea, once they had left Cozumel (Stephens 1843: 670-671). After the altar was finished Cortes's priest, Juan Dias, gave a sermon to which the natives listened

³ We have not considered his landings outside of Yucatan.

in rapt attention. During the same visit Cozumel's inhabitants, using pan-Yucatan information networks, succeeded in putting Cortes in touch with Aguilar and Guerrero, two shipwrecked Spaniards living on the mainland. After leaving Cozumel, Cortes moved non-stop to the Grijalva River. He again tried his personal charms to win native friends where Grijalva had had previous success, but the magic was gone and Cortes fought three savage battles. In one engagement he captured the town of Tabasco and in the third on the Plain of Cintle he broke the natives' attempted resistance. At this juncture, Cortes sailed out of our area of interest (Chamberlain 1948).

Thus, between 1517 and 1520 three Spanish expeditions made fifteen separate landings in Yucatan. Eight times the Conquistadors were lured ashore and ambushed or were attacked as they disembarked. At one town the Spanish were not attacked, but they were told to leave. The five remaining landings were totally congenial. The Conquistadors formed alliances, resupplied stores, and even threw down a few heathen idols—all without a single threat or act of physical violence directed against the natives. As expected by the port-of-trade model, four of these landings were made at Cozumel.⁴

The components, internal structure and behavior of a social system are conditioned to some degree by the local external environment, ecological or cultural, to which the system is adapted. The specific forms of component elements, like shrines, are constrained by available construction materials, known construction techniques, and the specific historical roots of the local ideological system. The temples on Delos and Cozumel are dissimilar in construction material, construction techniques, size, decoration, and contents. However, there seem to be similarities in their patterned spatial distribution that can be deduced from a general model of ports-of-trade. In the case of the mythic-religious systems, Delos emphasized sanctuary aspects while Cozumel employed a "talking" idol. The result was the same for both. The ports-of-trade of Delos and Cozumel were pilgrimage centers in which there was a high potential for solving conflicts between cultural norms and modifying them to cope with an extremely

⁴ Cozumel, until its abandonment, continued to be a refuge and resupply depot for the Spanish. In fact, only the last minute resupply of Montejo's first colony handled personally by the *cacique* (headman) in Cozumel, saved the Spaniards there from certain disaster. In addition, the good will effects of the *cacique* found the colony its first inland refuge (Chamberlain 1948: 46).

dynamic mercantile environment. Both port systems tentatively confirm the cross-cultural utility of the above port-of-trade model.⁵

REFERENCES

- BLOM, FRANS
1936 *The Conquest of Yucatan*. New York.
- BRUNEAU, PHILIPPE
1970 *Recherches sur Les Cultes de Délos a L'Époque Hellénistique et a L'Époque Impériale*. Paris.
- CASSON, LIONEL
1959 *The Ancient Mariners*. New York.
- CHAMBERLAÍN, ROBERT S.
1948 *The Conquest and Colonization of Yucatan: 1517-1550*. Carnegie Institution of Washington, Pub. 582.

⁵ A model of structural interrelationship between components can be useful in many ways above and beyond providing a framework in which to view early Spanish-Indian contacts. It can be extremely valuable to archaeologists in search of specific but rare, types of data. For example, written records are of great interest to scholars attempting to reconstruct complex social systems. Archaeologists and linguists who find written inscriptions, however, often cannot "translate" the language represented without a key. The most famous key was the Rosetta Stone which has the same text recorded on it in three writing systems-Greek, Egyptian demotic script and Egyptian hieroglyphics. For every untranslated writing system, archaeologists are always hoping to find a similar multi-lingual text.

To begin a search, an area must be located where two or more different languages are spoken and written. Almost every large city has enclaves of foreigners who do not speak a local language. The next step is to look at the contextual interrelationships of the languages. To be a "Rosetta Stone" an object must have the same or similar statement written in two or more languages. This type of document is, perhaps, most likely to occur in areas where a high frequency of agreements or contracts are made and other kinds of communication and interactions occur, between individuals or groups of different ethnic and linguistic extraction. Thus, ports-of-trade are excellent areas to search for multi-lingual inscriptions.

The archaeological record underwrites this expectation. The Rosetta Stone itself was discovered where it had been reused in the wall of an Arab fort built near the famous port-of-trade at Alexandria. Many of the inscriptions on Delos are trilingual-Greek, Latin and Semitic (Bruncau 1970). Punic and Etruscan inscriptions were found together at the sanctuary port of Pyrgi, Italy (Colonna 1966). At Ugarit, identified as an early Near Eastern port-of-trade (Revere 1957; 53-54), archaeologists have located a scribe school, which taught four languages and a dictionary written in three languages. A bilingual text in classical Cypriot script and Phoenician, which came from a port on Cyprus, was critical to the ultimate decipherment of Linear B (Chadwick 1959: 22). Thus, if a multi-lingual text exists as such in Mesoamerica, the place to look for it is a port-of-trade like Cozumel.

- COLONNA, GIOVANNI
1966 "The Sanctuary at Pyrgi in Etruria". *Archaeology*, 19; 1: 11-23.
- DÉONA, WALDEMAR
1948 *La Vie Privée des Délines*. Paris.
- ESTALL, R. C. and R. O. BUCHANAN
1961 *Industrial Activity and Economic Geography*. London.
- HAMILTON, EDITH
1940 *Mythology*. New York.
- MACKENDRICK, PAUL
1962 *The Greek Stones Speak*. New York.
- MURRAY, ALEXANDER S. and WILLIAM H. KLAPP
(revised by) (n.d.) *Manual of Mythology*. New York.
- REVERE, ROBERT B.
1957 "No Man's Coast: Ports of Trade in Eastern Mediterranean," in *Trade and Market in the Early Empires* (eds K. Polyani, C. M. Arensberg, H. W. Pearson). Glencoe.
- SCHOLES, FRANCE V. and RALPH L. ROYS
1948 *The Maya Chontal Indians of Acalan-Tixchel*, Carnegie Institution of Washington, Pub. 560.
- STEPHENS, JOHN L.
1843 *Incidents of Travel in Yucatan*, 2 volumes. New York.
- THOMAS, RICHARD S.
1956 *Free Ports and Foreign-Trade Zones*. Cambridge, Maryland.
- THOMPSON, J. ERIC S.
1954 *The Rise and Fall of Maya Civilization*. Norman.
1970 *Maya History and Religion*. Norman.