

Coastal Connectivity: Long-Term Trading Networks Across the South China Sea

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ABSTRACT

Long-distance coastal interactions have shaped much of world history, most evident in social and economic ties through sea-lanes and trade-routes that connect to other regions and potentially throughout the world. In this way, separate coastal communities on distant shores of the same sea, lake, river, or ocean can share more in common with each other than with their adjacent inland neighbors. The South China Sea presents one case in point, where cultural practices and histories have been shared across remotely separated areas but not necessarily among nearest-neighbor communities. The South China Sea has been one of the world's busiest zones of cross-regional commerce, at least since the Iron Age if not much earlier. During the operation of the so-called Sa Huynh-Kalanay Interaction Sphere, about 500 BC through AD 100, sites in both Mainland and Island Southeast Asia shared distinctive styles of pottery, precious-stone and baked-clay jewelry, and other tangible markers of a sea-crossing trading network. Upon closer examination, the evidence from Vietnam and the Philippines suggests origins of cross-regional exchange at least as early as 1500 BC. Over time, different items were mobilized into systems that emphasized the same long-distance contact nodes in shifting configurations, creating complicated and evolving

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networks. Here we consider how trading partnerships were formed and maintained over successive generations and centuries, made possible by social and economic networking across the South China Sea.

Keywords Iron Age, Neolithic, Sa Huynh-Kalanay, Southeast Asian archaeology and history, trading networks

INTRODUCTION

Historian John Gillis (2012) observed that coastal communities of the *human shore* tend to share more in common with each other than with their immediate landward neighbors (see also Geertz 1963), due to their similar coastal ecologies in conjunction with ongoing waterborne inter-connectivity. Many historians, geographers, and anthropologists have found similar inspiration in Braudel's (1949) treatment of the Mediterranean Sea, with its long-term historical connections along separate shores. Anthropologist John Mack (2011) reminds us that the history of the Mediterranean Sea has in some ways overpowered Western scholarship, and we need to consider other seas and oceans in their own right, as in Barry Cunliffe's (2001) examination of Europe's unique culture history narratives in *Facing the Ocean: The Atlantic and Its Peoples 8000 BC to AD 1500*. In a world-wide perspective, island and coastal archaeologists have come to accept that both isolation and connectivity co-occurred in varying degrees (e.g., Broodbank 2008; Callaghan 2008; Erlanson 2008; Fitzpatrick and Anderson 2008; Hofman et al. 2008; Moss 2008; Rainbird 2007; Terrell 2008), yet the actual hard evidence of coastal connectivity has not always been as convincing as some may hope to find.

We propose that the South China Sea offers an excellent example of coastal connectivity, maintained over long distances and through deep cultural history. Long-distance trading flowed across these waters as early as 2,500 years ago and perhaps much earlier (Glover 1996). These ancient traditions are known from linguistic and material archaeological traces, whereas other contemporaneous trading networks were recorded for different seas and oceans known to Roman,

Indian, and Chinese sources. Without the aid or interference of historical texts, the archaeological evidence requires a different set of mental and methodological tools for studying the origins and development of trading across the South China Sea.

Regarding the role of the South China Sea in world history, Gillis (2012:45) comments:

For some two thousand years its rim connected . . . peoples. Before the existence of territorial states capable of unifying this vast and diverse network of rivers, deltas, archipelagos, and seas, it was a kind of waterland held together by trade and migration among the multitude of ethnic groups.

Following this lead, we examined the archaeological records from both sides of the South China Sea, casting a broad net across Mainland and Island Southeast Asia. This net retrieved evidence of coastal connectivity among distant communities, but not necessarily among nearest neighbors. Here we examine the patterns in our net-catch more closely to learn how the historically durable social and economic partnerships were formed and sustained.

When discussing Southeast Asian trading networks, the Sa Huynh-Kalanay Interaction Sphere exemplifies the kind of cross-regional social-economic system that operated during the Iron Age. In the years approximately 500 BC through AD 100, a remarkable continuity is witnessed in decorated pottery, specific forms of earring, and other specialized goods found on both sides of the central South China Sea. Other interaction spheres operated contemporaneously, and some can be traced to earlier origins.

While we recognize different interpretations of the dating of Sa Huynh and Kalanay traditions (ranging 500–300 BC as the beginning and AD 100–200 as the ending), we focus here on the operation of cross-regional trading.

How did these trade-routes and sea-lanes develop over time? What were the mechanisms for people to continue using the same contacts and networks over successive generations and centuries, effective throughout ever-changing social, economic, and political circumstances? How did these networks and partnerships interface with others in the same, overlapping, and neighboring areas? To answer these questions, we examine the archaeological evidence from both sides of the South China Sea.

THE WESTERN SHORES OF THE SOUTH CHINA SEA: THE SA HUYNH CULTURE IN VIETNAM

Sa Huynh was named after a location with numerous jar burials in the coastal sand dunes of Quang Ngai province, central Vietnam. The site first was revealed in 1909 by M. Vinet and then investigated by H. Parmentier (1924), who reported a group of burial jars containing nephrite, glass and precious stone ornaments, with pottery. Since then, other sites with similar artifacts have been classified as part of the Sa Huynh cultural complex.

Today, the Sa Huynh culture is regarded as an Iron Age phenomenon dating from ca. 500 BC through AD 100, mostly along the central coast of Vietnam. Most Sa Huynh sites, including related Dong Nai Iron Age sites to the immediate south, are located along the coast between Hue in the north and the northern edge of the Greater Mekong Delta in the south. For our present purposes, we include Dong Nai sites of the latter region as part of the Sa Huynh cultural complex, although sometimes they have been regarded as a separate Iron Age entity in the lower basin of the Dong Nai River (Figures 1 and 2).

According to recent studies (Lam 2011), Sa Huynh and related cultures in central Viet-

nam can be divided into three major phases: Pre-Sa Huynh (prior to 500 BC), Typical Sa Huynh (500 BC–AD 100), and Early Cham (AD 100–500). The *Typical Sa-Huynh* can be split further into early, middle, and late sub-phases (sometimes labeled 1, 2, and 3 respectively). Criteria for these divisions rely on pottery types, bronze and iron products, and other material indicators commonly found in coastal Vietnamese sites.

Jar burials are among the most notable characteristics of Sa Huynh assemblages, and they exhibit their own regional differences and chronological developments. Lam Thi My Dzung (2011) recognized two traditions for the evolution of jar burials, including Tradition I as northern Sa Huynh, and Tradition II as southern Sa Huynh. We will return to these in later discussion, but here we emphasize the existence of parallel traditions.

LOOKING ACROSS THE SOUTH CHINA SEA: THE KALANAY POTTERY COMPLEX IN THE PHILIPPINES AND LINKS WITH SA HUYNH CULTURE

Across the South China Sea, the Kalanay Pottery Complex first was described at a site of the same name in the central Philippines, where Wilhelm G. Solheim II (1957) noted that it presented many characteristics similar to Sa Huynh. In addition to a shared jar-burial tradition, the Sa Huynh and Kalanay sites shared similar styles of decorated pottery. Later, Solheim (2006:3) proposed a maritime network of interaction in Southeast Asia, based mainly on the widespread distribution of what he termed the Sa Huynh–Kalanay pottery tradition, with its associated jade earrings and animal-headed ear pendants.

During the past 50 years, the Sa Huynh–Kalanay Interaction Sphere has gained considerable attention. Many scholars have noticed similarities between Sa Huynh assemblages in Vietnam and contemporaneous Iron Age assemblages in the Philippines, Borneo, and Thailand (e.g., Bellwood 2007; Fox 1970; Glover 1996; Loofs-Wissowa 1982). To explain these widespread links, both



Figure 1. Locations of sites mentioned in the text.

population movement and trade have been suggested as driving forces (Solheim 1959a, 1959b). Choosing between these two explanations, or even a combination of both, necessarily requires a firm chronology that unfortunately has been lacking until just very recently.

Solheim (e.g., 1964, 2006) proposed that the Sa Huynh-Kalanay pottery tradition reflected the original movements of the Malayo-Polynesian (Austronesian) speakers who populated Southeast Asia. However, the Iron Age association of the Sa Huynh tradition

makes it clearly too young to have played such a role. The major Malayo-Polynesian subgroup of the Austronesian language family already had spread from the Philippines into Indonesia and western Oceania by at least 1500 BC (Hung et al. 2011), more than 1,000 years prior to the Iron Age in this region. For Sa Huynh, post-dating 500 BC, a connection with much later Malayo-Chamic migration from Island to Mainland Southeast Asia is far more likely for reasons that we will discuss later, after considering both archaeological and linguistic data.

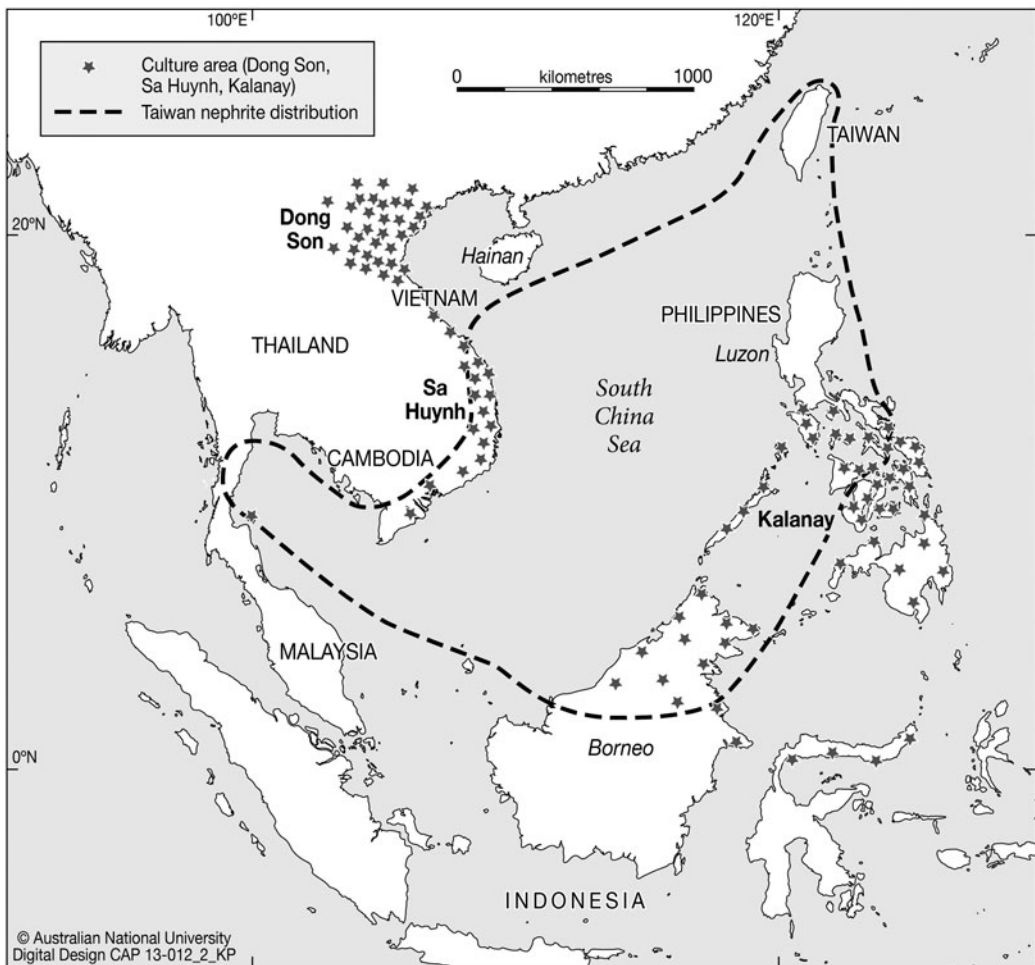


Figure 2. Notional depiction of archaeological associations and distributions, mentioned in the text. Please note that these distributions are approximate depictions, not exact measurements.

COASTAL CONNECTIONS ACROSS THE SOUTH CHINA SEA

At least two large-scale cross-regional networks simultaneously linked different shores around the South China Sea. The world-famous Dong Son culture of northern Vietnam generated far-reaching spectacular impact via export of ornate kettle-drums into Mainland Southeast Asia and the southern islands of Indonesia, including Sumatra, Java, Bali, and Nusa Tenggara (Bellwood 2007). Dong Son, however, lacked

any clear presence in the northern and central reaches of the South China Sea—in Taiwan, the Philippines, and most of Borneo. The contemporary but very distinct Sa Huynh-Kalanay network served these latter regions and was one of the main catalysts for their cultural transition into metallurgy (Figure 2).

Unlike China and the countries of Mainland Southeast Asia, the island regions such as Taiwan and the Philippines lacked a separate Bronze Age prior to the appearance of iron. Between 500 and 300 BC,

these regions received a sudden influx of new types of artifacts and new materials that were imposed directly on a Neolithic cultural background (Bellina and Glover 2004; Francis 1986, 2002; Glover 1996; Hung and Bellwood 2010). These included Indo-Pacific glass beads, siliceous stone beads, iron and cupreous metal (copper and bronze), and moulds of stone or baked clay for casting small cupreous items such as socketed adzes

and spearheads (Hung and Bellwood 2010) (Figure 3).

Within our large-scale view of South-east Asian trading networks, more details can be witnessed in sourcing of nephrite (jade), especially involving Taiwan and the Philippines. We also can see evidence of these same links as far as East Malaysia, central and southern Vietnam, and Peninsular Thailand. Between 500 BC and AD 100, two very spe-

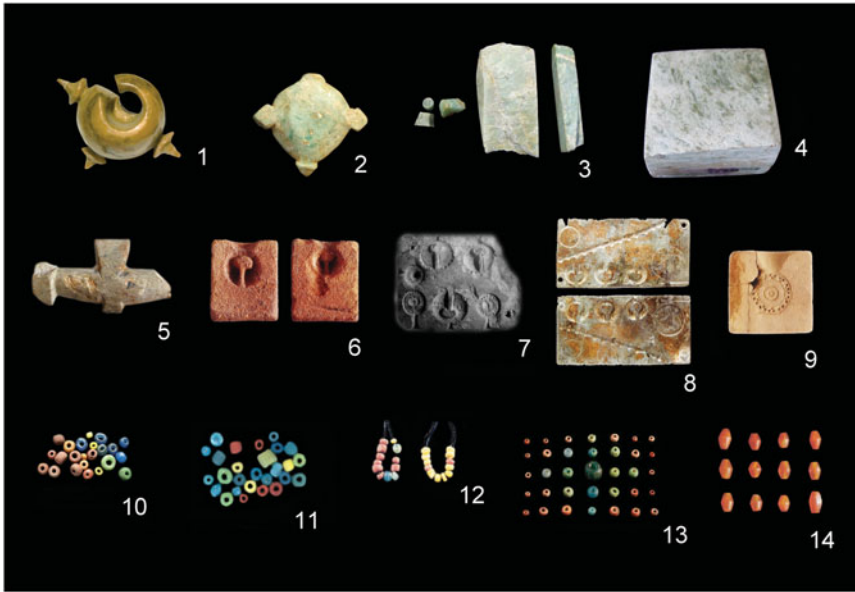


Figure 3. Major categories of artifacts or related manufacturing tools/skills distributed across the South China Sea after 500 BC (Sa Huynh and post Sa Huynh). 1. A typical three-pointed lingling-o of Taiwan nephrite from Go Ma Voi, central Vietnam (Hung et al. 2007; Reinecke et al. 2002; courtesy Museum of Sa Huynh and Champa Culture); 2. Unfinished three-pointed lingling-o of (possible) Philippine mica from Khao Sam Kaeo, southern Thailand (private collection, photo by Bérénice Bellina); 3. Worked Philippine mica from Khao Sam Kaeo (courtesy: Bérénice Bellina; Hung and Izuka in prep. b); 4. Square blank of Taiwan nephrite from Giong Ca Vo, southern Vietnam (courtesy Vietnam History Museum in Ho Chi Minh City; Dang et al. 1998:663, Hung and Bellwood 2010:237); 5. Unfinished double animal-headed ear pendant of Taiwan nephrite from Khao Sam Kaeo (private collection, photo by Bérénice Bellina); 6 and 9. Stone casting moulds from Jiuxianglan, eastern Taiwan (Li 2005:177); 7. Stone casting mould from Chansen, Thailand (Indrawooth 2004:133), similar to those found in eastern Taiwan; 8. Stone casting moulds from My Lam, southern Vietnam (Tan 2008:60); 10. Indo-Pacific glass beads from Tres Reyes, Marinduque, Philippines (courtesy National Museum of the Philippines); 11. Indo-Pacific glass beads from Nagsabaran, Cagayan Valley, Philippines; 12. Indo-Pacific glass beads from Guisban, southern Taiwan (Li 2001: plate 17); 13. Indo-Pacific glass beads from Jiuxianglan, eastern Taiwan (Li 2005:36); 14. Precious stone beads from Jiuxianglan, eastern Taiwan (Li 2005), with strong Mainland Southeast Asian affinities (color figure available online).

cific forms of nephrite ear ornament made of Taiwan nephrite occur in sites that connect these distant communities. These two forms are: 1) the so-called *lingling-o* penannular earring with three pointed circumferential projections; and 2) the double animal-headed ear pendant. Despite the large distances involved, many of the recovered earrings and pendants are virtually identical in size and shape, suggesting cross-regionally shared and standardized traditions of manufacture.

Jade Ear Ornaments

As mentioned, our studies (e.g., Bellwood et al. 2011; Hung et al. 2007, 2012; Iizuka and Hung 2005; Iizuka et al. 2005a, 2005b, 2007) have revealed that the nephrite used for making many of these ear ornaments, especially those of green jade, originated from the Fengtien nephrite source in eastern Taiwan. The interesting fact is that the raw material itself came from Taiwan,

while the ear ornaments themselves were often produced locally in the Philippines, southern Vietnam and southern Thailand, using Taiwan raw materials, especially sawn square tablets of Fengtien nephrite. We conjecture that these were blanks, carried by sea from Taiwan to local workshops in other regions of Southeast Asia (Hung and Iizuka in press, in prep).

The most numerous and geographically widespread *lingling-o* penannular earrings have three pointed circumferential projections (see item 1 in Figure 3). These occur primarily in Taiwan and the northern Philippines, and extend into coastal Vietnam. At Savidug, on Sabtang in the Batanes Islands, red-slipped pottery and clay earrings occur that are similar to specimens dated about 700–500 BC in certain Vietnamese sites (see more discussion below). There is also a possible prototype for the three-pointed *lingling-o*, of nephrite, dated about 500 BC, from Savidug (Figure 4; Bellwood and Dizon in press). Similar prototypes for



Figure 4. A possible prototype shape for the *lingling-o* penannular earrings with three pointed circumferential projections, dated to c. 400 BC or earlier, from Hengchun, southern tip of Taiwan (2); Lanyu Island (3) (courtesy: National Museum of Prehistory, Taiwan); Savidug Dune site, Sabtang (1); and northern Luzon (4, 5) (courtesy: National Museum of the Philippines) (color figure available online).



Figure 5. Another possible prototype for lingling-o penannular earrings, from Bai Coi, Ha Tinh Province (courtesy: Ha Tinh Museum, Vietnam) (color figure available online).

the three-pointed *lingling-o*, all made of Taiwan nephrite, come from Hengchun (southern tip of Taiwan), Lanyu Island (southeast of Taiwan), and Arku Cave (northern Luzon, Philippines).

Another possible prototype for the penannular linglingo earrings with projections might be an example of Vietnamese black nephrite from Bai Coi, Ha Tinh Province, central Vietnam (Figure 5). This has no projections and is flat on one side, like many of the clay lingling-o from Vietnam and the northern Philippines, which it resembles in both shape and size. It comes from a context with Binh Chau style pottery that appears to be slightly older than Sa Huynh proper (see discussion below). However, more dating is needed to identify the original homeland of this particular type of artifact.

Mica Ornaments

Greenstone artifacts were made not only of Taiwan nephrite, but also of mica. This green muscovite is popularly called *Mindoro jade* and is sourced generally to Mindoro Island in the central Philippines. Occurring mostly in Iron Age sites spread widely in the Philippines, East Malaysia, southern Vietnam and Peninsular Thailand, green mica was fashioned into earrings, beads, perforated

pendants, and *lingling-o* with three pointed projections (Hung and Bellwood 2010).

On opposite sides of the South China Sea, we see ornament workshop sites at Khao Sam Kaeo in Peninsular Thailand and at Anaro in the Batanes Islands (Hung and Iizuka in prep, in press). Both contain debitage from Taiwan nephrite and green mica (Mindoro jade). The chemical characteristics of this mica, together with its color and geological origin, would appear to be unique, although the precise source remains uncertain. It is remarkable that these two types of raw material were selected and transported across the South China Sea for jewelry production at such distant locations.

Baked Clay Ear Ornaments

In Vietnam, baked clay ear ornaments occur in Sa Huynh and Dong Nai sites in southern Vietnam, such as Dong Cuom, Go Ma Voi (Reinecke et al. 2002:98), Giong Ca Vo (Dang et al. 1998:663) and Dai Lanh. The same baked clay ear ornaments occur in Pre-Sa Huynh sites such as Binh Chau (Ngo 1980:71). Some occur even earlier, in Neolithic sites such as Thach Lac in Ha Tinh Province (Figure 6).

These Vietnamese baked-clay ear ornaments are identical to specimens excavated in the Philippines, dated to the same period or earlier, and bear further witness to ancient

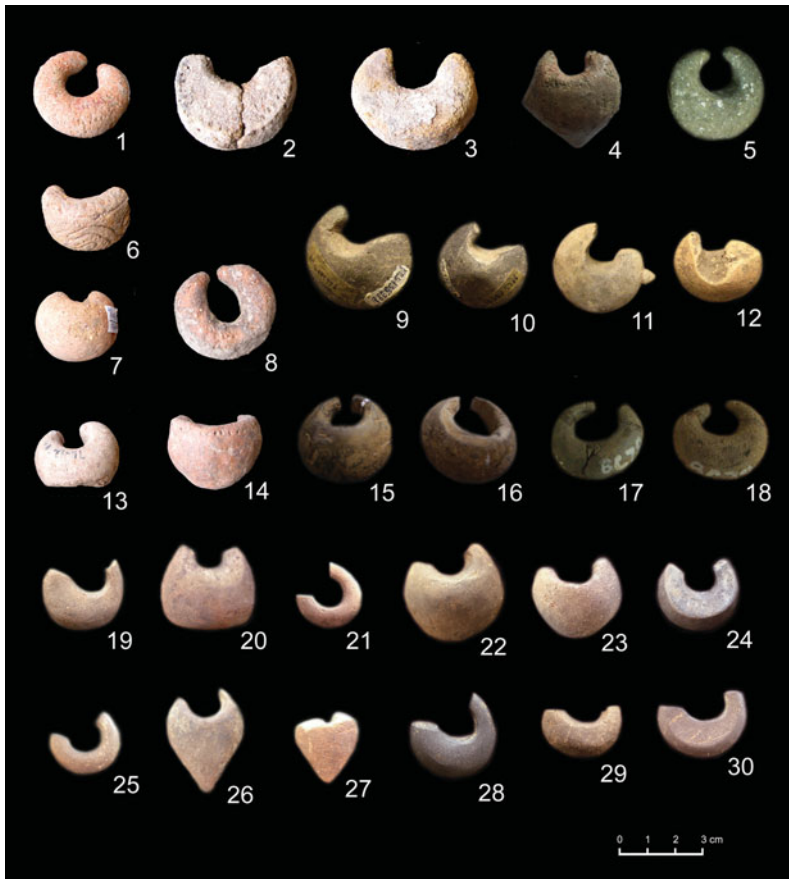


Figure 6. Clay earrings from Vietnam (1-18) and the Philippines (19-30); 1-3, 6-8, and 13-14 from Thach Lac, Ha Tinh Province, central Vietnam; 4. Dong Cuom; 5. Dai Lanb; 9-12. Giong Ca Vo; 15-16. Go Ma Voi; 17-18. Binh Chau; 19-30. The lower silts at Nagsabaran, northern Luzon (courtesy: Ha Tinh Museum; Da Nang Museum; Quang Ngai Museum; Binh Dinh Museum; Museum of Sa Huynh and Champa Culture; Vietnam History Museum in Ho Chi Minh City; National Museum of the Philippines) (color figure available online).

cross-regional interaction across the South China Sea. The examples from Nagsabaran and Magapit in the Cagayan Valley of northern Luzon are dated roughly between 1500 and 500 BC. Others were present during the first millennium BC at Anaro and Savidug Dune Site in Batanes (Bellwood and Dizon, in press), and the Tabon Caves on Palawan. The distance between Thach Lac and the Cagayan Valley is about 1,600 km. The journey may have been longer if it involved multiple

way-stations and trading-posts, for example in friendly settlements scattered along accessible coasts.

IRON AGE POTTERY: SA HUYNH AND KALANAY CONNECTIONS

The diagnostic Sa Huynh pottery has been identified across a rather broad geographic

range, much larger than its original definition in coastal Vietnam, and larger also than Solheim's original Sa Huynh-Kalanay formulation. Solheim (1964, 2006) noted that pottery found in Ko Din Cave on Samui Island, Gulf of Thailand, was identical in form and decoration to some of the Iron Age incised and stamped pottery excavated by him from Kalanay Cave in the central Philippines. Recently, more of the same type of pottery has been found in Ko Din Cave (Bellina et al. 2012), and in Thung Tako on the coast of peninsular Thailand (Aude Favereau, personal communication, 2013). Moreover, the discovery of identical pottery at the southern Sa Huynh site of Hoa Diem in Khanh Hoa Province has strengthened this trail (Ya-

magata and Bui 2008; Dinh Manh personal communication) (Figures 7, 8, and 9). Pottery vessels similar to those in Figures 8 and 9 also appear in peninsular Thailand (Aude Favereau, personal communication, 2013).

As many scholars have noticed (e.g., Lam 2009; Momoki 1999:71; Sakurai 1999:28; Southworth 2004), the Indianized polity of Champa in central Vietnam provides functional parallels for its Sa Huynh predecessor, in that it served as a gateway to the Indianized world for the Philippines and Vietnam, and also a gateway to the Chinese world for Malaysians and Indonesians. During the Han dynasty, the Chinese historical documents *Discourses on Salt and Iron* (鹽鐵論) and *Book of Han-Treatise of Geography*



Figure 7. Highly similar pottery forms and designs within the Sa Huynh-Kalanay network. Group 1 from Ko Din Cave on Samui Island, southern Thailand; group 2 from Hoa Diem, southern Vietnam; and group 3 from Kalanay Cave, Central Philippines (revised from Solheim 2006:136, Hoa Diem pottery courtesy: Khanh Hoa Museum, Vietnam; and see Yamagata 2008; Yamagata and Bui 2008) (color figure available online).



Figure 8. Pottery with modeled breasts from Hoa Diem, Khanh Province of southern Vietnam (courtesy: Khanh Hoa Museum, Vietnam) (color figure available online).



Figure 9. Pottery with modeled breasts from the central Philippines (courtesy: National Museum of the Philippines) (color figure available online).

(漢書.地理志) record that the Chinese exported gold and silk to the lands around the South China Sea in exchange for glass-making materials, crystal, agate, rhinoceros horn, aromatic woods, and spices. It was also recorded that Champa people were expert traders and sailors (Maspéro 1928). We can imagine that the Sa Huynh ancestors of Champa probably traded on many geographic scales, all with considerable impact on neighboring countries.

EARLIER POTTERY TRADITIONS:
COMMUNITY CONNECTIONS
PRE-DATING SA HUYNH AND KALANAY

At least some pottery traditions were shared across the South China Sea prior to the appearance of diagnostic Sa Huynh and Kalanay pottery forms. These earlier connections may have created the contacts, channels, and contexts that facilitated other networks, such as we can trace more abundantly with Sa Huynh-Kalanay.

Curvilinear Scrolls Filled With
Punctations

Flavel (2006) has listed the distribution of a specific curvilinear scroll motif filled with punctations (labeled by her types 41a, b, and c) in Southeast Asia. The motif occurs in many sites in Indonesia and Malaysia, including Batu Ejaya, Leang Buidane, Ulu Leang 2 and the Kalumpang sites in Sulawesi; Kalanay, Tabon, and several Visayan sites in the Philippines; Gua Cha in Peninsular Malaysia; and Ban Chiang in northeast Thailand. Most of these are Iron Age jar burial sites, similar to Sa Huynh (Flavel 2006:222-223).

In Vietnam, similar incised spiral motifs with punctate infilling occur at Go O Chua (Reinecke et al. 2009) (Figure 10) and many other sites, from the Pre-Sa Huynh through Sa Huynh phases, at ca. 800-500 BC. The same decorative expressions can be found in the younger Hoa Diem assemblage of the late Sa Huynh phase. These traditions also resemble the “three-color ware” pottery from Lubang Angin and Niah in western Borneo



Figure 10. Pottery from Gò Ô Chùa (courtesy: Long An Museum, southern Vietnam) (color figure available online).

(Ipoi 1993), as well as some of the pottery from the Tabon Caves in Palawan (Fox 1970: frontispiece—Manunggul jar).

Binh Chau Pottery

Regarding the Pre-Sa Huynh to Sa Huynh transition, many Vietnamese archaeologists accept a continuous *in situ* chronological development from Long Thanh through Binh Chau to Sa Huynh. Others, however, stress the differences in pottery style between Long Thanh and Binh Chau (Pham 1994). Based on excavations at Bau Tram (Nui Thanh, Quang Nam Province), Bui and Yamagata (2005) have suggested that Long Thanh and Binh Chau were not continuous and successive cultural periods at all, but were instead independent of each other. We agree that some discontinuities are evident in the pottery types, deserving closer attention. We propose that the Long Thanh pottery of the Pre-Sa Huynh Period derived from a northern Vietnamese Neolithic source related to Phung Nguyen, whereas the Binh Chau and Sa Huynh pottery types were linked in part with the Philippines and other regions. Both can thus be traced to contemporary and earlier Neolithic traditions within Vietnam itself, but in the case of Binh Chau extra cultural linkages are evidenced across the South China Sea.

The Long Thanh pottery is quite different from that of Binh Chau and Bau Tram (Vu et al. 1993) in terms of its vessel forms and decoration. The decoration of the high-necked Long Thanh vessels bears a strong resemblance to the presumably older northern Vietnam Phung Nguyen Neolithic, especially in the curvilinear scrolls and wave-like designs created by punctuation between curved incised lines (Figure 11).

The most common vessels in Binh Chau and Bau Tram have everted rims, round bottoms and carinations, and there are also ring-footed bowls (Figure 12). Incised and impressed punctate decoration is fairly common (Ha 1984–1985:144). In terms of rim and vessel shapes, especially the everted and internally concave rims, and the rims with inner projecting sharp angles, the Binh Chau and Bau Tram assemblages resemble

assemblages from northern Luzon, as well as Middle Neolithic assemblages in eastern and southern Taiwan to a certain degree, all dated prior to 1000–1500 BC (Hung 2008) (Figure 13).

The earliest Neolithic pottery traditions around the South China Sea conceivably may have shared distant origins about 2000 BC or earlier, but they soon thereafter developed mostly independently in Vietnam, the Philippines, and elsewhere. We begin to see stronger connectivity again after 800 BC, and most especially after 500 BC, with the successive Binh Chau and then Sa Huynh pottery traditions in Vietnam bearing close relations with contemporary traditions such as Kalanay in the Philippines.

Jar Burial

Jar burial is one of the diagnostic markers of the Sa Huynh culture, but it also developed from Pre-Sa Huynh traditions in Vietnam (Lam 2011). Tradition I (Northern Sa Huynh) was characterized by egg-shaped and cylindrical jars, traceable from the last few centuries BC through about AD 100. Tradition II (Southern Sa Huynh) was characterized by spherical jars, can be traced back much earlier to 1500 BC, and continued through to AD 200–300.

In the southern Sa Huynh sites, the burial jars closely resemble those found eastwards across the South China Sea in the Tabon caves, as well as in the opposite direction westwards on Samui Island (Lam 2011). Further north, similarities are noted with the burial jars of Savidug Dune Site in the Batanes Islands (500 BC to AD 1) and the Huagangshan sites in eastern Taiwan (1500–500 BC).

The similar characteristics include:

1. settings frequently in coastal sand dunes (Huagangshan, Savidug, southern Sa Huynh sites);
2. the rims of most burial jars were cut off intentionally by chiseling from inside the jar (Huagangshan, Savidug, and southern Sa Huynh sites such as Giong Ca Vo); and
3. association with nephrite jade production, especially using Fengtian raw



Figure 11. *The Pre-Sa Huynh assemblage from Long Thanb, c. 1500–1000 BC. Photos by Nguyen Kim Dung and Peter Bellwood, courtesy of the Quang Ngai and Ninh Binh Provincial Museums, Vietnam. These items are not reproduced to the same scale.*

- A–D.* Four wide-mouthed beakers with incised and impressed decoration, 7–12.3 cm in mouth diameter, found at Long Thanb inside a large lidded burial jar with Phung Nguyen style decoration on its lid;
- E.* Vessel of very similar shape and decoration in Phung Nguyen style from Man Bac, Ninh Binh Province, c.1900 BC (Nguyen et al. 2011);
- F.* Long Thanb pedestal base with scroll decoration of incised lines and stamped circles (color figure available online).

material from Taiwan (Huagangshan, Savidug, Giong Ca Vo).

These specific kinds of jar burials reveal a geographic distribution and chronology that are similar to those of Taiwan nephrite artifacts in Southeast Asia. The oldest of these jar burials can be traced at least as early as 1500 BC, yet the overall popularity and widespread distribution across the South China Sea strengthened significantly after 500 BC. The coastal areas of northern Dong Son Vietnam and southern China were

outside this particular region of contact, and instead engaged in a different network of interaction.

Within the Austronesian-speaking world, the oldest jar burials occur in Taiwan and the Philippines, but other equally ancient occurrences can be found in regions as far apart as China, India, and Thailand. Southward, Ian Glover noticed that Anyar (in Java) and Roti (in eastern Indonesia) have jar burials of similar age, and he suggested that jar burials were invented independently in separate regions (Glover 1998).



Figure 12. Vessels from Binh Chau displayed at the Quang Ngai Museum (courtesy: Quang Ngai Museum, Vietnam) (color figure available online).

RECONSIDERING THE LINGUISTIC EVIDENCE

The Chamic languages bear an Austronesian ancestry, linked with other parts of Mainland and Island Southeast Asia, but certain aspects suggest a rather shallow time-depth

when compared to other Austronesian languages. Could this language history relate to the archaeological chronology of strengthened connections across the South China Sea after 800 BC, and especially after 500 BC?

The Chamic languages of central Vietnam (Bih, Chru, Rade, Haroi, Krung, Noang,



Figure 13. Red slipped restricted carinated jar with everted rim (1) and unrestricted footed bowl (2) from the lower silts at Nagsabaran, northern Philippines, c. 1500-1000 BC (courtesy: National Museum of the Philippines) (color figure available online).

Phan Rang Cham, Rai, Roglai) belong to the Malayo-Polynesian subgroup of the Austronesian language family (Blust 2009; Grant and Sidwell 2005; Thurgood 1999). They are closely related to the Malayic languages of western Borneo, Sumatra and Peninsular Malaysia, as well as to Acehnese of northern Sumatra (Blust 1994, 2005; Marrison 1975; Sidwell 2005). The ancestor of the Chamic languages (Proto-Chamic) was introduced into Vietnam from Island Southeast Asia, probably from somewhere along the 1,300-kilometer-long northwestern coastline of Borneo. This massive island lies directly across the South China Sea, about 900 km from the coast of central Vietnam. With Palawan, it is the closest portion of Island Southeast Asia to the Chamic heartland between Hue and Cam Ranh Bay, both geographically and linguistically.

As for the date of Chamic arrival in Vietnam, Thurgood (1999:5) states:

The linguistic record attests to the relatively recent arrival of Chamic speakers in Vietnam: proto-Chamic, the immediate ancestor of all the Chamic languages [was] a single unitary language . . . with an obviously short time depth. . . . The linguistic evidence alone establishes unequivocally that the Chamic speakers of Vietnam represent an incursion of Austronesian speakers from the islands, not the remnants of Austronesian speakers left on the mainland from the initial expansion . . .

The actual Chamic spread to central Vietnam can be dated to about 2,000 years ago (Adelaar 1992; Blust 1984–1985:57, 1994, 2006), prior to the arrival of substantial numbers of Sanskrit loan words into Southeast Asian languages, but after the common inheritance of an innovated word for iron (Proto-Malayo-Chamic **besi*—Blust 2005) into both the Malayic and Chamic linguistic subgroups. The Malay and Cham languages of the early Indic inscriptions of Sumatra and Vietnam respectively (mid-first millennium AD) are quite close in their shared non-Sanskrit vocabulary (Marrison 1975).

Thus, there is no linguistic evidence to suggest an ultimate Austronesian or even Malayo-Polynesian homeland in Vietnam, and this is supported by the major stylistic separation in Neolithic (pre-1000 BC) archaeological assemblages between Vietnam and the Philippines. But was Proto-Chamic the only Austronesian language ever to reach Vietnam in prehistoric times, or were there predecessors?

The Chamic migration to Vietnam certainly involved substantial numbers of people, or else the Chamic languages could not have replaced native Mon-Khmer languages so extensively. Prior to 1471, the Chamic languages were far more widespread than they are today, and their current distribution has been seriously circumscribed by historical-era Vietnamese expansion. Peng et al. (2010) challenge the idea that Chamic languages spread with their speakers by pointing out that a majority of modern Chamic speakers have inherited mtDNA lineages that are indigenous to Mainland rather than Island Southeast Asia. But, in the absence of autosomal DNA analysis and any data on the non-recombining portion of the Y chromosome, it would be premature to suggest purely from modern mtDNA samples how the Chamic languages arrived in Vietnam more than 2,000 years ago. Comparative observations of world language history (Bellwood 2005, 2008, 2010) suggest that any population movement from Island Southeast Asia to Vietnam must have been large enough to establish the Chamic languages throughout an area previously inhabited by numerous Mon-Khmer speakers with a developed rice-growing economy. Language shift alone would have been insufficient to explain such major consequences, and there is no reason why the mtDNA profile of a sample of Chamic speakers today should be the same as that of their ancestors more than 2,000 years ago.

CONCLUSIONS

How was the Sa Huynh-Kalanay network structured across and around the South China Sea? Who exactly were the participants? Did they share related identities,

Malayo-Polynesian languages, and cultural traditions? The archaeological evidence shows us that certain people shared pottery styles, personal jewelry, and jar-burial practices across the South China Sea. Meanwhile, linguistic history shows us that all these regions were settled by Malayo-Polynesian-speaking populations, including some who evidently migrated cross-regionally at different times.

The Pre-Sa Huynh assemblages and earlier Neolithic assemblages in central coastal Vietnam reflect a certain degree of cultural relationship with the Austronesian island world to the east, commencing most likely around 1500–1000 BC, demonstrated for instance by the similar baked clay earrings from Thach Lac, Savidug, and Nagsabaran. These relationships long preceded the Iron Age arrival of the ancestral Chamic-speakers in central Vietnam, and they were perhaps correlated with earlier contacts between other (non-Chamic) Malayo-Polynesian-speaking peoples. Current linguistic knowledge derives the Malayo-Chamic languages from Borneo, not the Philippines, reminding us that people very likely sustained a number of connections without currently documented archaeological or linguistic outcomes.

The classic Sa Huynh culture of Iron Age central Vietnam expressed considerable internal variation in pottery shapes and covered a very large area, and this diversity appears incongruent with a single and tightly defined ethnolinguistic entity such as Proto-Chamic. Modern linguistic distributions, and especially the recent discovery of Sa Huynh sites in the inland regions of the Thu Bon River Valley (Lam 1998, 2009), make it likely that both Malayo-Polynesian and Mon-Khmer populations played important roles in the development of Iron Age Sa Huynh culture. From a longer term archaeological perspective, we see in central Vietnam an *in situ* native Neolithic culture of northern Phung Nguyen affinity (expressed in the Long Thanh assemblage), that received putative Island Southeast Asian cultural influences from about 1500–1000 BC onwards.

In many ways, the conspicuous archaeological record of the Iron Age has dis-

tracted our attention away from the likelihood of older cultural links across the South China Sea. In fact, the Iron Age connections very likely followed much older searoutes and trade-routes, but new materials and attendant social practices were introduced into the long-running system during the Iron Age. New materials, such as glass, metal, precious stones and large burial jars arguably became dominant in the archaeological record, but most importantly the associated cultural practices became and remained pervasive throughout the Iron Age communities. For whatever reasons, people in widely separated locations began following many of the same cultural traditions and expressions, seen in their persistent choice of the same types of jewelry, pottery, and burial practice. We might ask what other less tangible activities and beliefs accompanied these material records?

We propose that the frequency and pervasiveness of contact probably were enhanced during the last few centuries BC, reflected in the abundant and widespread appearance of *lingling-o* and double animal-headed ear pendants of nephrite (often Taiwan nephrite), iron, glass beads, and the specific Kalanay pottery and burial jar similarities that link Sa Huynh with the Philippines and Borneo. Tellingly, these kinds of objects perpetuated deeper cultural linkages, beliefs, and traditions shared by people living on distantly separated shores of the South China Sea. The archaeological record alone does not inform us in which direction the contacts were being driven, so it may be best to see them as reflections of ongoing reciprocal situations.

The seaborne networks are inferred from on-land discoveries, but what do we know about the boats and crews who transported cargo between distant ports? Both archaeological findings and ancient Chinese documents indicate that people used simple canoes, as well as more complicated boats with mortise-and-tenon jointed technology in Vietnam and southern China by about AD 1 (e.g., Bellwood and Cameron 2007; Wu 2008). According to historical and ethnographic records, bamboo rafts carried sails for sea-crossing around Taiwan (Ling 1956,

1969, 1970). The technology certainly existed to support intensive trading networks across the South China Sea by 500 BC and perhaps much earlier.

Mobility across the South China Sea created just one of many trading spheres, while other routes connected communities over land and through the vast river systems of Southeast Asia. During the operation of the Sa Huynh-Kalanay network, the Prohear Site in southern Cambodia contained bronze and other objects dated about 100 BC that can be linked to the Kele Site, 1,740 km distant in Guizhou of southwestern China (Reinecke et al. 2009:166–167). Moreover, Dong Son drums and Han mirrors occur in Sa Huynh sites in central and southern Vietnam, so relations existed among Chinese Han, Dong Son, and Sa Huynh communities (Yamagata et al. 2001). Geographically, these connections were most plausible through river systems and following coastlines, in addition to the contacts that ranged fully across the South China Sea.

We can look to the South China Sea as a model example of how coastal communities along separate shores of the same large body of water could share long-term cultural experiences and histories. In this case, we note that the deep historical connectivity was in large part due to both migration and to exchange of materials and ideas, mobilized in far-reaching waterborne networks. At least some individuals must have been mobile with their long-distance shipments, and the early Chamic speakers in particular undertook sufficient migration to ensure the successful implantation of a major linguistic subgroup in Vietnam. However, the majority of people at any one time would have remained as stay-at-homes, linked by trading and commerce. We may note that one-third of the world's shipping today transits the South China Sea, further enhancing shared traditions among its numerous populations.

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