

The Origin and Development of Neolithic Cultures in Hong Kong

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Abstract

Based on various analyses of archaeological remains found in the Yangzi River Valley and South China, including Neutron Activation Analysis, phytolith analysis and stone tool analysis, it is argued that the earliest identifiable Neolithic residents in Hong Kong are most likely migrants from the nearby Shenzhen area, but the original 'root' of these people might have come from the Gaomiao Neolithic culture in the middle Yangzi River Valley, via western South China. However, the issues of cultural expansion and localization require further studies.

This paper is a very brief report of a RGC (Research Grant Council of HKSAR) project collaborated between the author, and the Institute of Archaeology, Chinese Academy of Social Sciences from 2005 to 2008. As many analytical works are still on going, the results revealed here are only preliminary and pending to further amendments.

1. Background, objectives and research methods

As aforementioned, in 2005 the RGC funded this research project, and the period is from 2005 to 2008. The objectives of the project are as follows:

- (1) To trace the origin of the earliest identifiable Neolithic cultures in Hong Kong (where, when, how and why)
- (2) To study the cultural development in Neolithic Hong Kong in terms of subsistence strategies, mobile pattern, social structure, cultural dynamics within and outside Hong Kong, cultural localization and outward diaspora, the role of Hong Kong Neolithic cultures in East and SE Asia and the Pacific.

The project team members and participators are as follows:

Tracey L-D Lu of CUHK as Principal Investigator, with Prof. Fu Xianguo of the Institute of Archaeology CASS, and Prof. Yuan Jiarong of the Hunan Institute of Archaeology and Cultural Relics as Co-Investigators. The Antiquities and Monuments Office of HKSAR, and the Institute of Archaeology and Relics of Hunan, Guangdong and Shenzhen, and the archaeological team of the Guangxi Zhuang Autonomous Region have also provided enormous support and/or data for the project. We are very grateful for their help indeed.

The project focuses on archaeological remains dated from approximately 7000 to 3500 years ago in Hong Kong. This is a multi-disciplinary project, and the research methods include:

- (1) Literature review and integrating previously published data;
- (2) Archaeological survey conducted in Guangxi and Hunan provinces;
- (3) Small-scale excavations at Lung Kwu Chau, Sham Wan, Lung Yan Tze, and Sha Ha for stratigraphy, chronology and sample gathering (Figure 1);

- (4) Typological analysis of pottery and stone tools to study the *chronology, cultural dynamics within and outside Hong Kong*;
- (5) Flotation, pollen, and phytolith analysis conducted at the aforementioned four sites, plus data from So Kwun Wai and Sha Po Cun, for the study of *environmental, climatic and ecological changes, subsistence strategies, and settlement pattern*;
- (6) Neutron Activation Analysis (NAA) of more than 200 potsherds to examine the *origin and cultural dynamics* between the Yangzi Valley, South China and Hong Kong, as well as the cultural dynamics within Hong Kong;
- (7) Residue analysis of potsherds and isotopic analysis of animal and human bones in Hong Kong, South China and Hunan to investigate the prehistoric *diet, subsistence strategies, resources* availability and accessibility, and *cultural dynamics* (whether farming had expanded from the Yangzi Valley, or there were localized subsistence strategies in Hong Kong);
- (8) Archaeological experiment and use-wear analysis of stone tools found in three sites for the questions of functions of tools, manufacturing *technologies* and the occurrence of professionalization and standardization, which are issues of labour division and prehistoric social structure. The result will also provide data for prehistoric resources exploitation (including *catchment analysis*), *settlement pattern, subsistence strategies, human behaviour pattern and shared "mind-set"* (Renfrew and Bahn 2008), and *group contacts*;
- (9) Archaeological experiment on pottery manufacturing (three types of vessels) to study the labour input and time, and whether there were only common items, or elite products/implements occurred. These are issues for us to understand the labour division, professionalization and social structure/complexity in prehistoric Hong Kong;
- (10) Burial analysis of two to three sites for social structures, beliefs, and physical features of the population.

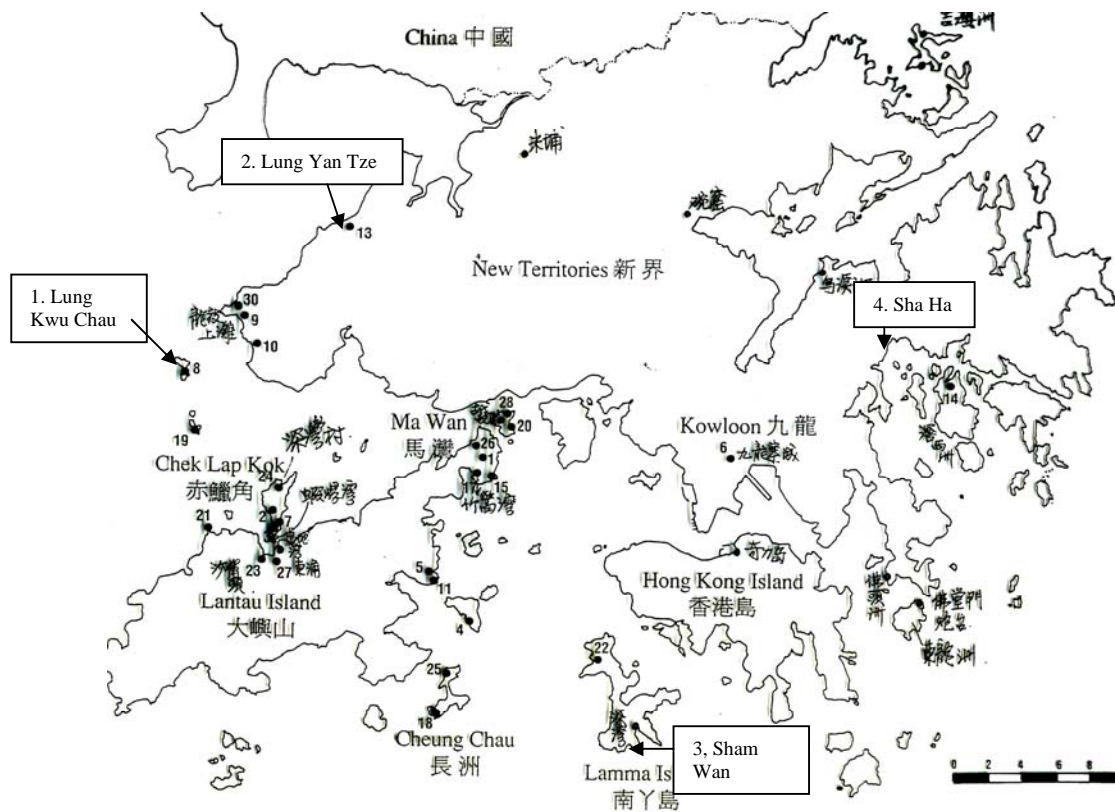


Figure 1. Archaeological sites being excavated for this project: Lung Kwu Chau, Lung Yan Tze, and Sham Wan.

2. Preliminary results:

Based on preliminary results of some of the works, we have the following tentative conclusions:

(1) The Neolithic Chronology in Hong Kong

The Neolithic begins at approximately 7000 years ago in Hong Kong. It is not sure whether there is a pre-pottery phase due to the lack of absolute dates at Tungwan and Sha Tau Kwok New Village. The second phase of Neolithic is dated to approximately 6500-6000 BP, with white (fired in high temperature) and painted chalky ware, ground adzes and axes, as well as flaked points as typical artefacts. The third phase is dated to about 6000-5000 BP, characterized by white chalky ware with incision and fired in lower temperature, and shouldered stone implements. The final phase is from about 5000 to 3500 BP, characterized by pottery with geometric patterns fired in low temperature, stepped adze, shouldered and stepped adzes and more ground stone implements, some of which could be used for initial cultivation (Fu 2006).

(2) Settlement patterns

To date, more than two hundred archaeological sites have been identified in Hong Kong (AMO 2007), some of them had been continuously occupied, but others were not (Figure 2), showing both cultural continuity and discontinuity in this region. The majority of these sites are coastal settlements, and many of them are quite small, although we don't know the exact size of many sites. Thus, whether the settlers were mobile, and were they mainly foraging societies? These are remaining questions.

On the other hand, there are some large (over 10,000 m²) sites, and sedentary settlement occurred by 4000 BP at Sha Ha, Sai Kung, NT. Results of phytolith and floatation seem to suggest that both foraging and initial cultivation occurred there (Lu et al. 2006). Therefore, would it be possible that remains of different sites were of "collectors" and "foragers" (Binford 1980), or even "foragers" and "foragers and cultivators"? Or these are remains of different cultures/groups? These questions require more studies.

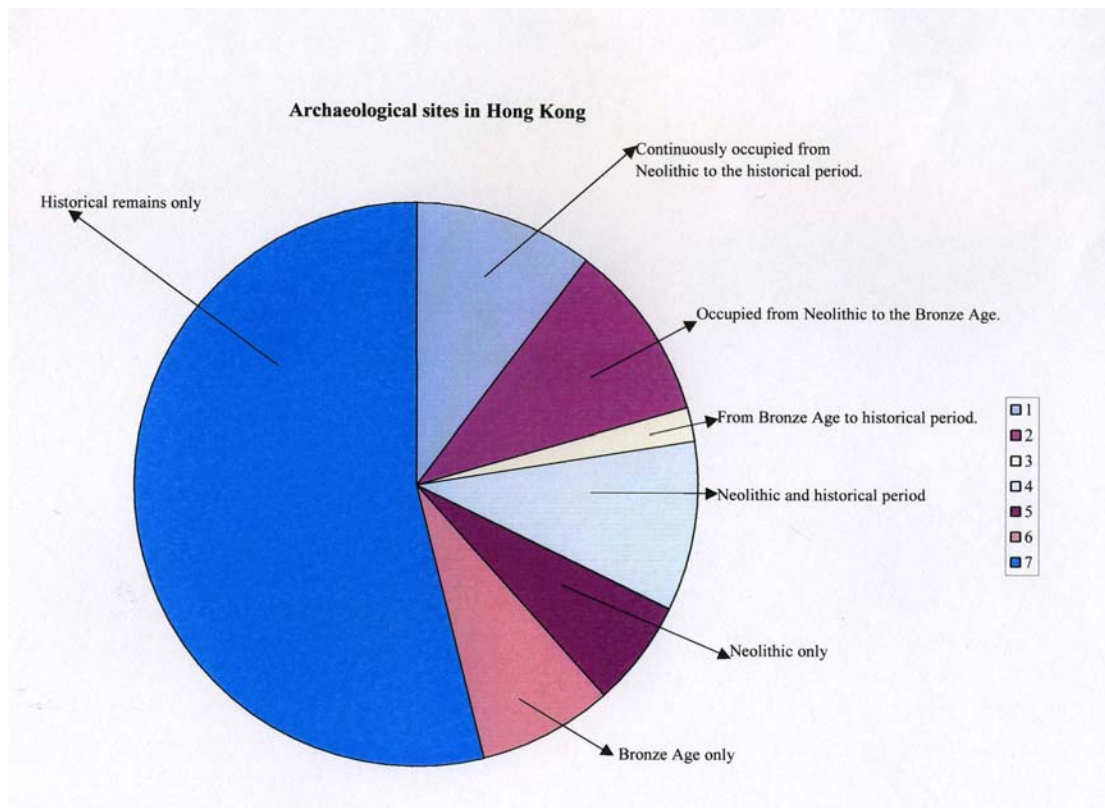


Figure 2. Archaeological sites in Hong Kong (based on data from Antiquities and Monuments Office, HKSAR, at www.amo.gov.hk)

(3) Subsistence strategies

The discovery of rice and gourd at Sha Ha (Figures 3-5) (Lu et al. 2006) indicates a change from foraging to a mixture of foraging and farming by 4000 BP, or co-existence of foragers, and foragers and cultivators. This may further suggest the diversity of subsistence strategies/cultures in prehistoric Hong Kong.



Figure 3. Rice found in Sha Ha, N.T. Hong Kong (Lu et al. 2006)



Figure 4. Rice phytolith found in Sha Ha, N. T. Hong Kong (Lu et al. 2006)



Figure 5. Phytolith of Cucurbitaceae sp. found in Sha Ha (late Neolithic) and identified by Dr. Piperno of Smithsonian Institute (Lu et al. 2006).

(4) Pottery analysis using typological and NAA approaches

Potsherds from several archaeological sites have been collected and sent to a laboratory in USA for NAA (Table 1). The preliminary result indicates that potsherds found in certain sites in Hong Kong are very close in terms of their chemical elements, and some potsherds from the Xiantouling archaeological site in Shenzhen are also close to potsherds found in western Hong Kong (Ferguson and Glascock 2007). More potsherds from Hunan and Guangxi are being analyzed at the moment.

Table 1. Potsherds subjected to NAA analysis and preliminary grouping

Site Name	Group 1	Group 2	Group 3	Group 3a	Unassigned
Sha Tou Kok Sun Cun			7	2	
Lung Kwu Chau		4	10	4	1
Lung Kwu Tan		3	10	4	
So Kwun Wat		5	6	3	1
Yung Long North			6		
Yung Long South			8		
Cha Kwo Ling (soil samples)	2				
Tai Wan			1	1	
Sham Wan	1	1	1		
Ho Chung			1		
Sha Ha		1	17	3	
Cheung Shu Tan			3	1	5
Fu Tei, Chak Lap Kok		1	6		
Kwo Lo Wan		1	1	1	
Kwo Lo Wan (upper)		3	8	3	

3. Summary and questions

Based on results of the aforementioned works, as well as data collected by Prof. Fu in his survey in Guangxi and Hunan, it is proposed that the origin of Hong Kong Neolithic is most likely from the Gaomiao Culture in western Hunan Province, via the Shamaoshan archaeological finding place in Guangxi, then enters western Guangdong through the Xijiang River, reaches the Xiantouling archaeological site in the present Shenzhen, and finally arrives at Lung Kwu Chau, western Hong Kong at around 7000 years ago (Figure 6).

After settling in Hong Kong, these prehistoric migrants adapted to the local environment and created local culture, indicated by diversified subsistence strategies, different firing temperature and manufacturing skills of pottery, and the cultural/exchange network in regional level. There are also continuous cultural dynamics between South China and HK after 7000 years ago, illustrated by the high similarity of pottery and stone implements found in these regions.



Figure 6 Possible route of cultural influences from western Hunan (middle Yangzi Valley) to Hong Kong via Guangxi, the Pearl River Delta (Shenzhen).

However, there are still many remaining questions. For example, the Gaomiao people in the western Yangzi Valley are basically ‘influential foragers’ *in stead of farmers* (He and Chen 2007), so the expansion of their culture to South China and Hong Kong raises question on whether foraging society can also cause human diaspora, as in the last decades it has been argued that farming societies dominated prehistoric human diaspora (i.e. Bellwood 2005). This is a theoretical issue not only in the archaeology of China but also in the archaeology of Asia and the Pacific. Further, the dynamics between environment, resources, subsistence strategies and other technology, mobility and social structures, the localized and diversified cultural development in prehistoric Hong Kong, as well as the impacts and relation between Neolithic cultures in Hong Kong, Taiwan and other regions, also need to be investigated.

The team of this project will continue to work on other analyses and plan to publish a monograph on the origin and development of prehistoric cultures in Hong Kong by 2012.

Acknowledgement

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