

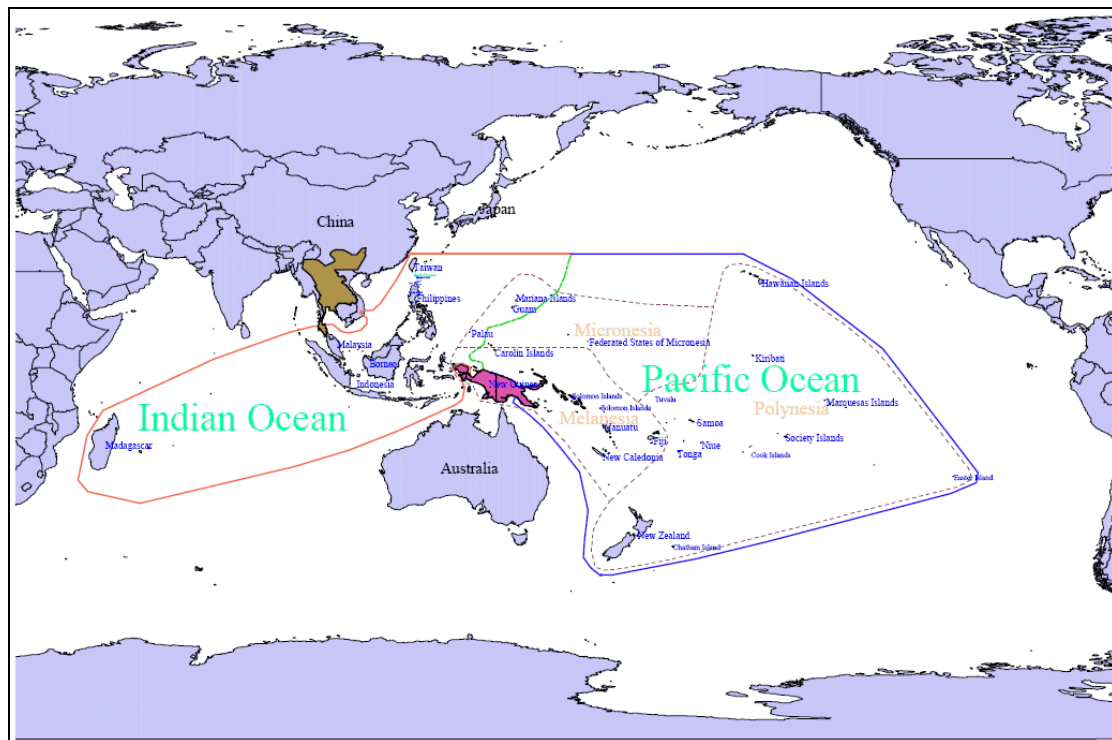
Connections between Taiwan Indigenous History and the Pacific Islands

Ts'ui-jung Liu*

This paper was originally delivered at The 2007 Taiwan Meeting of the IGU, *Commission on Islands*, held on October 29 - November 3, 2007 in Taipei.

This topic was assigned to me by Professor Chang Chang-yi, the organizer of this conference; I was quite hesitating when I was asked to give this talk because I am not an expert of history of Taiwan indigenous people. After looking for some materials related to the topic, I think it may be possible for me to try to focus on the origin of indigenous people in Taiwan and the Pacific Islands.

In general, the indigenous people of Taiwan and the Pacific Islands belong to Austronesian family. Today the Austronesian speaking people are distributed in Southeast Asia and Oceania, stretching from Taiwan in the north to New Zealand in the south, and from Easter Island in the east to Madagascar in the west, including the Philippines, Indonesia, Malaysia and New Guinea, but not Australia (see Map).



Map. Austronesian Distribution: [blue dashed line for Eastern Oceania](#), [red for non-Oceania](#). Pink region is Papuan, brown is Thai-Kadai.

Source: <http://www.beha.tcu.edu.tw/migration/>

*Research Fellow, the Institute of Taiwan History, Academia Sinica.

Regarding the origin of the Austronesian people, there are different theories derived from studies on anthropology, archaeology, and linguistics, and in recent years, there are also findings from biological studies. Based on studies of two scholars at Academia Sinica, linguist Li Jen-kuei (李壬癸, 1979, 1999) and archaeologist Tsang Cheng-hwa (臧振華, 1995, 2001), I will try to summarize these theories according to the time sequence of the publication in below.

1. Indo-China Peninsula as the Origin

In 1889, Dutch linguist and orientalist Hendrik Kern (1833-1917) compared terms of plants (such as sugarcane, coconut, banana, bamboo, cane, taro, rice) and animals (such as shark, cuttlefish, ray, green turtle, lobster, shrimp) as well as those related to boat, sail and oar of more than one hundred languages belonging to the Austronesian family and concluded that ancestral Austronesian people lived at the coastal area of Indo-China Peninsula, around the border area between Vietnam and China, Champa (Vietnam), and Cambodia.

2. South China as the Origin

This theory has been proposed by many scholars including Austrian archaeologist Robert Heine-Geldern (1885-1968) in 1932, American archaeologist Henry Otley Beyer (1883-1966) in 1948, Japanese naturalist Kano Tadao 鹿野忠雄 (1906-1945) whose posthumous works were published in 1952 and translated into Chinese in 1955, and anthropologist Ling Shun-sheng 凌純聲 (1902-1981) in 1950 and 1952. These scholars all contended that South China or eastern coast of Indo-China Peninsula was the homeland of the Austronesian people. This theory was also supported by archaeologist Chang Kwang-chih 張光直 (1931-2001) in various studies (1959, 1964, 1987).

Ling Shun-sheng contended particularly that “Bai Yueh 百越” (various Yueh people) recorded in ancient Chinese history consisted of the ancestral group of Taiwan indigenous people. These people migrated to Taiwan in remote antiquity and thus they were isolated and were able to keep their native languages and cultures. This argument was reiterated recently by Chinese anthropologist Chen Guoqiang 陳國強 who pointed out that the group migrated to Taiwan was the branch known as “Min Yueh 閩越” (Yueh of Fujian).

Concerning Ling’s theory, Li Jen-kuei suggested that there were five doubtful points to be clarified: (1) culture can be easily borrowed and a similar cultural trait may not be a proof of the same group of people; (2) in the area defined by Ling as the Great Southeast Asia there are different language groups including Austro-Asiatic, Austronesian, Sino-Tibetan-Burman, while Taiwan indigenous languages are simply

Austronesian; (3) it is hard to convince that “Bai-Yueh” are Austronesian people without physical, archaeological or linguistic evidences; (4) to conclude that “the Austronesian people migrated to Taiwan in remote antiquity” and that “the Malay people migrated from Asian Continent to South Sea Islands” are two different matters; and (5) if the ancestral Austronesian people came from South China, why there were no Austronesian people left in that area today?

It is also notable that Australian archaeologist Peter Bellwood (1979, 1980, 1983, 1988, 1995, 1999) applying new archaeological findings with linguistic, anthropological, biological and geological references, proposed a theory of the dispersal of Austronesians. Bellwood contended that the ancestral Austronesian people were the Neolithic people living at southeast coast of mainland China. When the population increased to some extent more land was needed for cultivation and thus the people began to disperse around 4000 B.C. to islands of Southeast Asia. They migrated to Taiwan around 4000-3500 B.C. and continued to move to the northern Philippines around 3000 B.C.; the Austronesian people had occupied eastern Indonesian islands around 2500-2000 B.C. and gradually replaced the native hunter-gatherers. After 1500 B.C., the Malay-Polynesian group started to migrate to the western part of Melanesia and entered the western part of Polynesia. By 1000 A.D., most islands in Polynesia and Micronesia were occupied by the Austronesian people.

According to Tsang Cheng-hwa (1992, 1995, 1999), the earliest Austronesian people were the Neolithic people living along the coastal area of Fujian and Guangdong. They started to migrate to Taiwan round 5000-6000 BP. After arriving Taiwan they stayed and kept in contact with other groups of people living along the southeast coast of mainland China and islands of Southeast Asia. They might not move southward as Bellwood and other scholars suggested. It is also possible that other groups of people migrated to Taiwan later and thus created complicated and diversified Austronesian languages and cultures in Taiwan.

Moreover, Tsang contended that the origin of the Austronesian people on islands of Southeast Asia and Oceania was not Taiwan, but rather the southeast coast of mainland China. From there these people moved along the east coast of Indo-China Peninsula and through Sunda Shelf to Palawan and Borneo, northward to the Philippines and Micronesia and southward to southern Malay Peninsula and then eastward to Indonesia, and finally to Melanesia and Polynesia islands.

3. Southeast Coast of Asian Continent as the Origin

In 1954, French linguist André G. Haudricourt (1911-1996) suggested that the Austronesian people originated from southeast coast of Asian continent at the area

between Hainan and Taiwan. His argument was based on two reasons: (1) the Austronesian languages are most diversified and has preserved most ancient phenomenon in this area, and (2) the Austronesian languages are related to those in South China, North Vietnam, and Hainan, and the relationship is probably created through kinship or borrowing.

4. New Guinea as the Origin

In 1965, American linguist Isidore Dyen published *The Lexicostatistical Classification of the Austronesian Languages* and later in 1971 he compared 371 terms among 352 languages and found that the three most diversified areas were: (1) New Guinea-Micronesia, (2) Taiwan, and (3) Sumatra and islands along its west coast. Dyen concluded that of the three areas, the most diversified one was New Guinea-Micronesia and thus this area could be the origin of the Austronesian people.

5. Taiwan as the Origin

In 1975, archaeologist Richard Shutler Jr. and linguist Jeffrey C. Marck collaborated in a study and suggested that there were three possible origins of the Austronesian people: (1) Taiwan, (2) South Sea Islands, and (3) other places (such as South China). They contended that archaeological and linguistic evidences demonstrated that the cord-marked pottery in Taiwan from around 9000 B.C. to 2500 B.C. represented the earliest Austronesian community and thus, Taiwan was the earliest homeland of the Austronesian people. At least in 4500 B.C., the Austronesian people had dispersed from Taiwan to the Philippines and further from there to Celebes, Moluccas, and New Guinea, and later on to the western Indonesia. Around 4000 B.C., the Austronesian people migrated further from the southwest Indonesia to Oceania. This is the first theory to consider Taiwan as the origin of the Austronesian people and to connect Taiwan with Polynesian.

In 1985 linguist Robert Blust also contended that Taiwan was the homeland of ancestral Austronesian and from there the Austronesian people dispersed. His argument has two bases: (1) three of the four major branches of Austronesian language are found in Taiwan and it is most likely to be the homeland because the languages are most diversified, and (2) the most recent linguistic materials reveal that many plants and animals encountered by the ancestral Austronesian people are found in Taiwan.

In 1988, archaeologist Barbara Thiel compared the archaeological materials from Luzon and Taiwan and suggested that Taiwan was the homeland of the Austronesian people. She contended that the Austronesian people in Taiwan began to migrate to the Philippines around 4000 B.C. and later from the Philippines to Oceania

and other islands in Southeast Asia.

It is also notable that in 2005, archaeologists Peter Bellwood and Eusebio Dizon summarized the archaeological results of the Batanes fieldwork undertaken between 2002 and 2005 with the following conclusion: The evidence is believed to support a Neolithic settlement of the Batanes from Taiwan before 4000 BP, followed by continuing contacts, lasting until at least 1300 BP, that involved a movement of slate and nephrite from Taiwan (possibly via Ludao and Lanyu Islands) to Batan and Itbayat. Evidence that initial Neolithic settlement of the Batanes came from the south, via Luzon, is not indicated in the assemblages so far excavated.

As for findings from recent biological studies, I would like to mention results obtained by three research teams.

1. Maori Origins

In 1998 Geoffrey Chambers, a Reader in the School of Biological Sciences, Victoria University in New Zealand, and his students published their study on mitochondrial DNA (mtDNA) of 54 New Zealand Maori. They compared three alcohol metabolism genes and found that the data for the ALDH 2 gene implicated Taiwan as an initial staging post. This finding reveals that the ancestors of Maori came originally from Taiwan and confirms with Maori beliefs about their ancestor's origins. The oral histories of Maori tell of ancestors reaching New Zealand, which they call Aotearoa (Land of the Long Cloud) after long boat journey from distant islands. Chambers believes that the Maori ancestors migrated from mainland China to Taiwan, the Philippines, the Pacific islands and eventually New Zealand.

Because the DNA blueprint in mitochondria is passed exclusively by mothers to their children, Chambers and his team decided to study the male y chromosome and they got a shock. They found that while the female line is entirely Asian, most of the males came from Melanesia. In fact, the men appear to come from Papua New Guinea, and the women from Taiwan.

The story goes like this. "Around 6,000 years ago, a small group of people migrated from mainland Asia and settled in Taiwan. They became a great seafaring culture, and from there they traveled down past Papua New Guinea, they met and took on board local Melanesian guide. The guides were male. And clearly, they must have married and had children. This mix of seafarers reached Fiji, and then eventually moved on again, finally settling in New Zealand just 700 years ago."

As for the number of founding female of the Maori population, it was calculated in 1998 at between 50 and 100. But it was recalculated in 2005 at approximately 190 (170-230) women. Moreover, it is pointed out that the large Maori

founding population fits well with Maori oral history and has additional support from Maori paleodemography studies based on fertility estimates. An increasing body of data supports the concept of planned multiple settlement voyages to Aotearoa by Polynesian navigators and that theories for an “accidental discovery” of Aotearoa can be now completely discarded. This finding also supports the “slow boat” model of Pacific origins.

2. Polynesian Origins

In 2000, Su Bing, Li Jin, Peter Underhill et al. published their study on the Polynesian origins. This paper analyzed 551 Y chromosome of males from 36 groups of indigenous people in Taiwan, Southeast Asia, Melanesia, Micronesia, and Polynesia. It is found that the haplotypes of the Austronesian people in Taiwan does not appear in Micronesia and Polynesia while the haplotypes of Taiwan, Micronesia and Polynesia all appear in the Austronesian people living in Southeast Asia. This result reveals that the Austronesian people in Polynesia did not originate from Taiwan as some scholars has conjectured previously; instead, they originated in the Great Southeast Asia, including South China, with the islands of Southeast Asia served as midway stations.

3. Indigenous Taiwanese Origins

In 2005, Jean A. Trejaut et al., a team of the Transfusion Medicine Laboratory at the Mackay Memorial Hospital, published their study on the mitochondrial DNA (mtDNA) of 640 individuals from nine aboriginal tribes of Taiwan. These nine tribes are Saisiat, Tsou, Rukai, Paiwan, Atayal, Amis, Bunun, Puyuma, and Yami (Tao). I will try to summarize the findings of this paper here.

- (1) Phylogenetic analysis clustered the 96 observed haplotypes into 20 distinct haplogroups and subgroups whose distribution among the nine tribes was compared to available information from other Asian populations. Four basic haplogroups – B, E, R9, and M7 – accounted for more than 90% of the variation observed in aboriginal Taiwanese, while in China these four haplogroups averaged less than 40%. Among these four basic haplogroups, haplogroup E was nearly absent in continental Asia. On the other hand, haplogroups A, D4, G, and M8-M10 accounted for 38.3% of the sequences from the mainland, whereas it was rare or absent in Taiwanese aborigines.
- (2) Principal components analysis revealed a high level of differentiation among Taiwanese aborigines as compared with other Asian populations. In particular, Taiwanese aboriginal populations appeared closer to island Southeast Asian populations (Luzon, Philippines, Moluccas, and Indonesia) than to populations

from mainland East Asia (Fujian, South Vietnam, Malaysia, and Thailand). In other words, Taiwan aboriginal populations are more closely related to island Southeast Asian populations than to those from mainland East Asia.

- (3) Among the Taiwan aboriginal populations, the three southernmost populations (Puyuma, Paiwan, and Rukai) and, more distantly, Yami from Orchid Island clearly differentiated the southern population from the northern and central populations (Tsou, Saisiat, Atayal, and Amis) with the Bunun sample emerged as an outlier.
- (4) Haplogroups B4b, B5a2, E, F4b, and M7b covered more than 80% of the mtDNA variation observed in Atayal, Saisiat, and Bunun populations in north and central Taiwan. Haplogroups B4a, D5, F3b, M7x, and N9a characterized 72.2% of the mtDNA variation of the populations of south and southeast Taiwan.
- (5) More than half of Taiwanese mtDNA lineages fall into clades B4a1a, B4c1b, E1a, F1a1, F3b, M7c1c and M7b3 that show, with a broad range of standard errors, average coalescence times between 7.7 and 16.1 thousand years. The dates for clades M7c1c and M7b3 are similar to those of M7b1 and M7b2 previously reported in Southeast Asia. It is likely that these four M7b daughter clades, together with other subclades of haplogroups B4, E, and F3b, began to diversify at the time of the rise of sea levels after the end of the Younger Dryas cold spell approximately 11,000 years ago in distinct islands close to mainland Southeast Asia.
- (6) The clustering pattern within B4a1a provides a unique link between Polynesian, Papuan, and Taiwanese lineages, supporting their common origin around the Younger Dryas period somewhere in island Southeast Asia, possibly in Taiwan.

Concluding remark

As I am not an expert of anthropology, archaeology, linguist, and biology, I have no expertise to decide which of the theories and findings mentioned in my talk is correct. But I enjoy getting the information for presenting here today, and I think for further study on this topic, it apparently needs an interdisciplinary approach.

References

- 李王癸，1979，〈從語言的證據推論臺灣土著民族的來源〉，《大陸雜誌》59.1: 1-14。
- 李王癸，1999，〈南島語系與臺灣原住民〉，「1999年台東南島文化節」學術演講，見 http://tour.taitung.gov.tw/festivity/web_6-8.html。2007/9/15 查詢。
- 凌純聲，1950，〈東南亞古文化研究發凡〉，《民族學研究專刊》第3期，又見於《主義與國策》44 (1955): 1-3。

- 凌純聲，1952，〈古代閩越人與臺灣土著族〉，《學術季刊》1.2: 36-52。
- 鹿野忠雄著，宋文薰譯，1955，《台灣考古學民族學概觀》，台中：台灣省文獻委員會。
- 張光直，1959，〈華南史前文化提綱〉，《中央研究院民族學研究所集刊》7: 43-73。
- 張光直，1987，〈中國東南海岸考古與南島語族起源問題〉，《南方民族考古》1:1-14，成都。
- 臧振華，1999，〈中國東南沿海史前文化的適應與擴張〉，《考古與文物》3: 20-33。
- 臧振華，2001，〈從“Polynesian origins: Insights from the Y chromosome”一文談南島民族的起源和擴散問題〉，《LANGUAGE AND LINGUISTICS》2.1:253-260。
- ABC Online, 27 March 2003, “Maori Origins,”
<http://www.abc.net.au/catalyst/stories/s823810.htm>. (searched 2007/9/15)
- BBC News, August 11, 1998, “World: Asia-Pacific Maris may have come from China,” <http://news.bbc.co.uk/1/hi/world/asia-pacific/148892.stm>. (searched 2007/9/15)
- Bellwood, Peter, 1979, *Man's Conquest of the Pacific*. Oxford: Oxford University Press.
- Bellwood, Peter, 1980, “The peopling of the Pacific,” *Scientific American* 243.5:174-185.
- Bellwood, Peter, 1983, “New perspectives on Indo-Malaysian prehistory,” *Bulletin of Indo-Pacific Prehistory Association* 4:71-83.
- Bellwood, Peter, 1987, *The Polynesians*. London: Thames and Hudson.
- Bellwood, Peter, 1988. “A hypothesis for Austronesian origins. Asian Perspective,” 26.1:107-117.
- Bellwood, Peter, 1995. “Austronesian prehistory in Southeast Asia: Homeland, expansion and Transformation,” in *The Austronesians*, ed. by Peter Bellwood, James J. Fox and Darrell Tryon, 96-106. Canberra: The Department of Anthropology, Research School of Pacific and Asian Studies, The Australian National University.
- Bellwood, Peter, 1999, “5000 Years of Austronesian History and Culture: East Coast Taiwan to Easter Island,” Festival of Austronesian Culture in Taitung 1999: Speech on Austronesian Cultures – a series.
http://tour.taitung.gov.tw/festivity/web_6.6.html. Search on 2007/9/15.
- Bellwood, Peter, and Eusebio Dizon, 2005, “The Batanes Archaeological Project and the ‘Out of Taiwan’ Hypothesis for Austronesian Dispersal,” *Journal of Austronesian Studies* 1.1: 1-32.
- Beyer, H. Otley, 1948, “Philippine and East Asian Archaeology and its Relations to the Origin of the Pacific Islands Population,” *National Research Council of the Philippine Bulletin* 29.

- Blust, Robert, 1985, "The Austronesian Homeland: A Linguistic Perspective," *Asian Perspective* 26.1:45-67.
- Chang, Kwang-chih, 1964, "Prehistoric and Early Historic Culture Horizons and Traditions in South China," *Current Anthropology* 5.5:359, 369-375.
- Dyne, Isidore, 1965, *The Lexicostatistical Classification of the Austronesian Languages*, Supplement to IJAL Vol. 31 (1), Memoir 19, pp. 64.
- Dyne, Isidore, 1971, "The Austronesian Languages and Proto-Austronesian," in Thomas Sebeok (ed.), *Current Trends in Linguistics* 8:5-84. The Hague: Mouton.
- Haudricourt, André, G., 1954, "Les origines asiatiques des langues malayo-polynésiennes," *JSO* 10:180-183.
- Heine-Geldern, Robert, 1932, "Urheimat und Früheste Wanderungen der Austronesier." *Anthropos* 27.3-4:543-619.
- Kern, Hendrik, 1889, "Taalkundige gegevens ter bepaling van het stamland der Maleisch-Polynesische volken," *Verlagen en Wededeelingen der Koninklijke Akademie van Wetenschappen, afdeling letterkunde*. 3de reeds 6:270-287. (Reprinted in *Verspreide Geschriften* 6:105-120. The Hague, 1917). "Linguistic evidence for the determination of the original homeland of the Malay-Polynesian peoples," *Oceanic Studies--Linguistics, Anthropology, and Sociology*, 1:60-81 (1976). Tokyo. Translated by Curtis D. McFarland and Shigeru Tsuchida.
- New Zealand Science Monthly Online, October 1998, "Maori Migration," <http://nzsm.spis.co.nz/article1834.htm>. (searched 2007/9/15)
- Time Magazine International, September 7, 1998, No. 36, "History in Their Blood," http://www.time.com/time/magazine/1998/int/980907/south_pacific.history_i9a.html. (searched 2007/9/15)
- Shutler, Richard Jr. and Jeffrey C. Marck, 1975, "On the Dispersal of the Austronesian Horticulturalists," *Archaeology & Physical Anthropology in Oceania* 10.2: 81-113.
- Su, Bing, Li Jin, P. Underhill, J. Martinson, N. Saha, S. T. McGarvey, M. D. Shriver, J. Chu, P. Oefner, R. Chakraborty, and R. Deka, 2000, "Polynesian Origins: Insights from the Y Chromosome," *Proceedings of National Academy of Sciences of the United States* 97.15:8225-8228.
- Thiel, Barbara, 1988, "Austronesian Origins and Expansion: The Philippine Archaeological Data," *Asian Perspectives* 26.1:120-129.
- Trejaut, J.A., Toomas Kivisild, J. H. Loo, C. L. Lee, C. L. He, C. J. Hsu, Z. Y. Li and M. Lin, 2005, "Traces of Archaic Mitochondrial Lineages Persist in Austronesian-Dwelling Formosan Populations," *PLOS Biology*, August 2005, Vol. 3, Issue 8, e247, www.plosbiology.org.
- Tsang, Cheng-hwa, 1995, "New archaeological data from both sides of the Taiwan straits and their implications for the controversy about Austronesian origins and

expansion,” in *Austronesian Studies Relating to Taiwan*, ed. by P. J-K. Li et al., 185-225. Symposium Series 3. Taipei: Institute of History and Philology, Academia Sinica.

Whyte, Adele L. H., Stephen J. Marshall, and Geoffrey K. Chambers, 2005, “Human Evolution in Polynesia”, *Human Biology*, 77.2: 157-177.