

BELLWOOD AND SOLHEIM:

Models of Neolithic movements of people in Southeast Asia and the Pacific

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The explanation of origins has always been considered as a subject of great interest. In Southeast Asia in particular, hypotheses attempting to explain the observed similarities in certain aspects of different cultures have been the focus of discussions for decades. Although majority of scholars on the subject would agree that the origins of these similarities can be traced back to the Neolithic age (Early Holocene), views on how these came about and/or the agencies responsible vary.

At present, there are two major models/hypotheses attempting to explain Neolithic movements of people in the Pacific and the subsequent cultural similarities among different groups in the region: Peter Bellwood's *Out-of-Taiwan* (OOT) hypothesis, and Wilhelm Solheim's *Nusantao Maritime Trading and Communication Network* (NMTCN). This paper aims to provide only a brief overview or basic background on these two models.

BELLWOOD'S OUT-OF-TAIWAN (OOT) HYPOTHESIS

Of the two major hypotheses on the Neolithic movements of people in the Pacific, Peter Bellwood's *Out-of-Taiwan* (OOT) hypothesis is perhaps the more dominant or widely accepted. Central to this hypothesis is the concept *Austronesian*. The term derives from the Latin *auster* for "south wind" and the Greek *nêsos* for "island" (*Wikipedia*, 2006), thus giving the approximate meaning "south islander".

Originally, the term *Austronesian* referred to the family of languages spoken in the region of Southeast Asia and Oceania, stretching as far as Easter Island on the east and including Madagascar on the west. It was, however, later extended by Bellwood (among others) to refer also to populations who speak, or whose ancestors at least spoke, an Austronesian language.

Having said this, it thus comes as no surprise that the OOT leans towards linguistics as the main source of evidence for explaining Neolithic movements of people in the Pacific. In particular, the OOT very much resembles Robert Blust's model reconstructing the differentiation of the Austronesian language family through time and space [see Fig. 1], but supplemented by data derived from archaeology (e.g. the distribution of types of pottery, stone tools, plants, etc.).

In a nutshell, Bellwood's OOT model can be summarised as follows [see also Fig. 2]:

1. **ca. 4500 BC - 4000 BC:** Settlement in Taiwan of Pre-Austronesian-speaking peoples moving from mainland China as a result of population pressures arising from developments in agriculture. This is evidenced by the similarities between the pottery assemblages of the local Tapenkeng culture (TPK), characterised by cord-marked globular pots with incised everted rims and occasional lug handles or perforated ring feet, and those from sites in Fujian and Guangdong, characterised by potsherds decorated with incised lines, rows of impressed semicircles, and stamped dentate patterns inside incisions. The period is also saw the local development of Proto-Austronesian as a language.
2. **ca. 3000 BC:** Differentiation of TPK into three or four regional complexes one of which, the Yuanshan (dated between 2500 BC and 1000 BC), is significant for the later settlement of the Philippine and Indonesian islands. The Yuanshan pottery is characterised by globular vessels with ring feet and strap handles, decorations which are either incised or punctuated/stamped, red or brown slips, and the absence of cord-marking [Plate 1]. The last three characteristics are also present in the earliest pottery assemblages found in Indonesia and the Philippines.

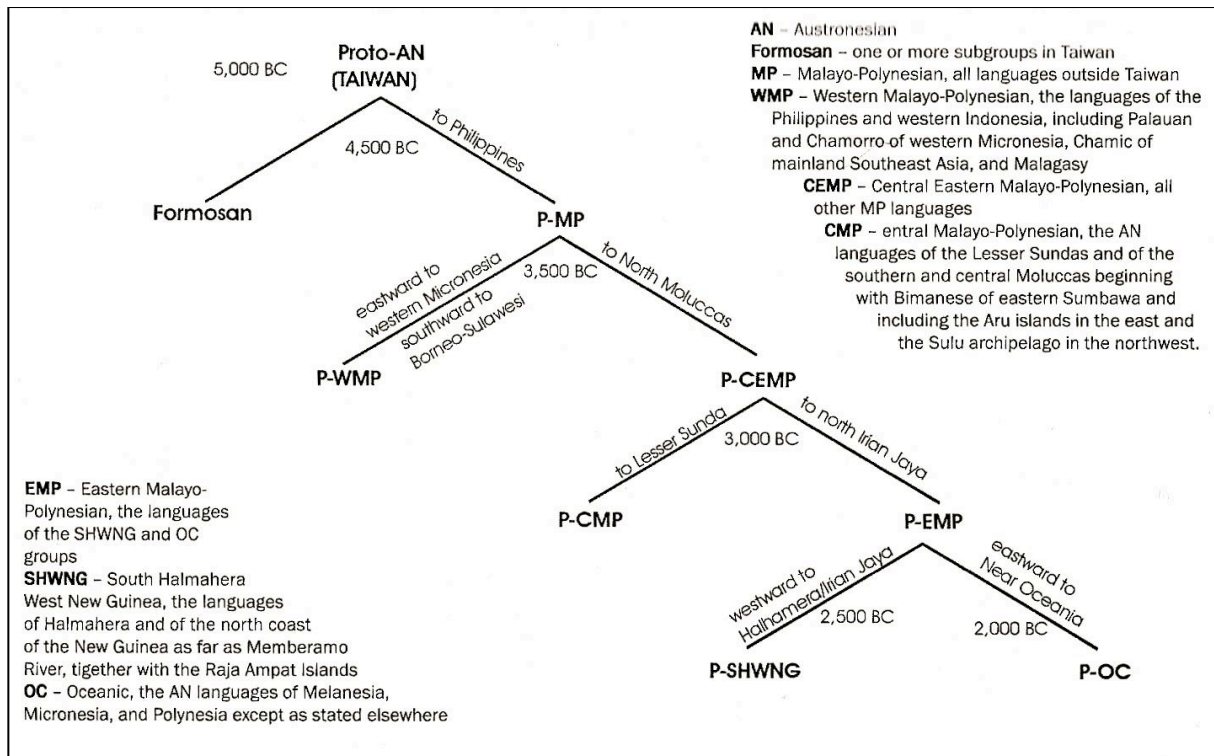


Fig.1. Blust's model reconstructing the differentiation of the Austronesian language family through time and space. [taken from Tanudirjo 2004:85]

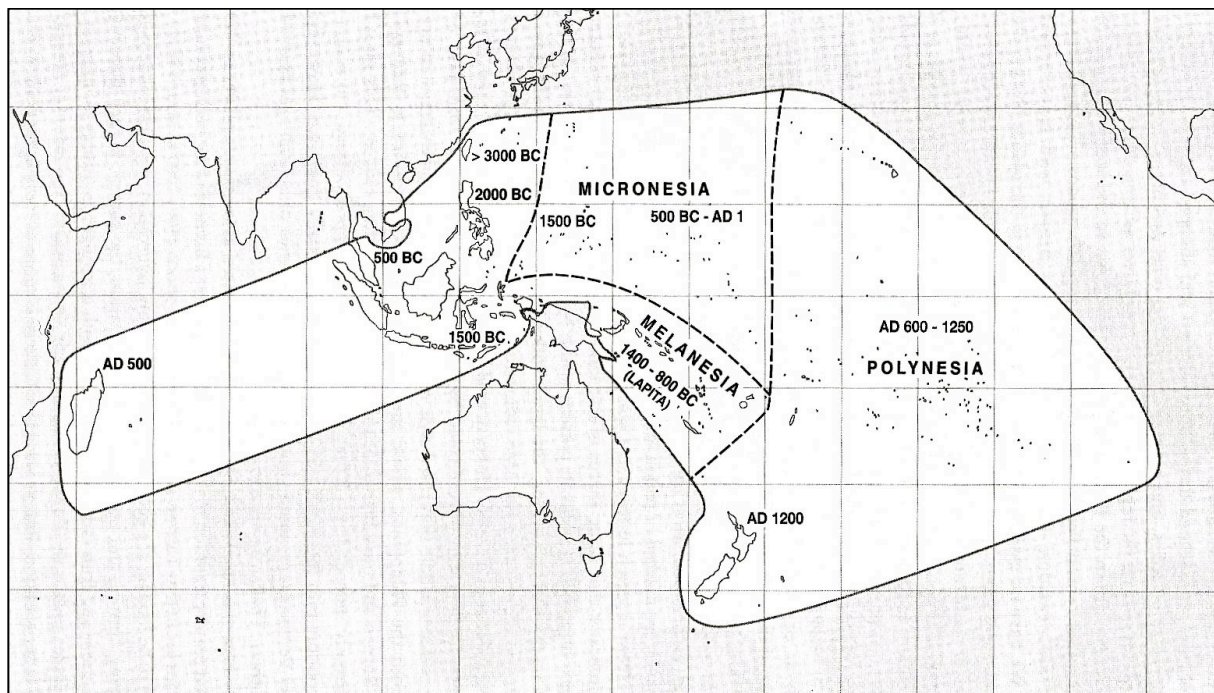


Fig. 2. Summary of Bellwood's Austronesian expansion model (OOT hypothesis). [taken from Bellwood 2005:140]

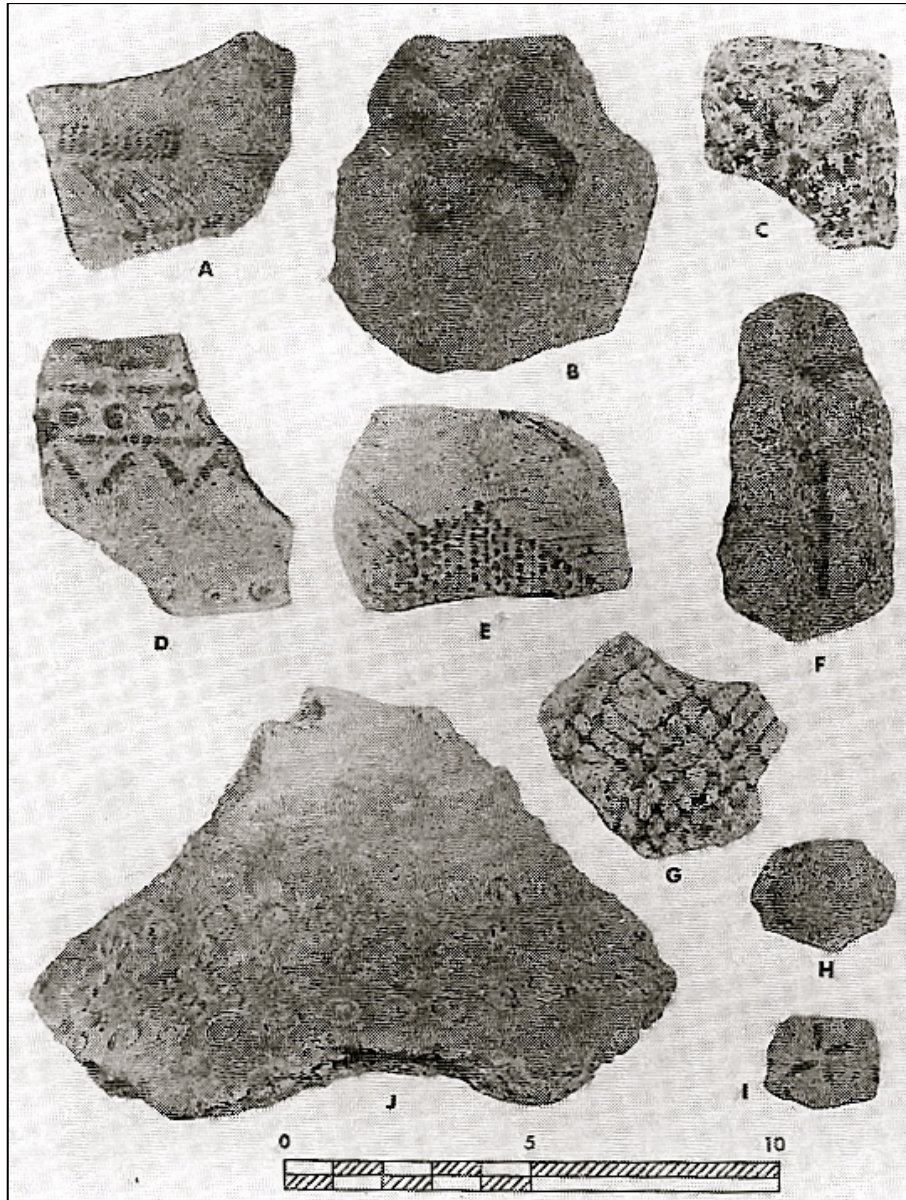


Plate 1. Yuanshan incised and stamped potsherds. [taken from Bellwood 1997: Plate 30]

3. **ca. 2500 BC - 1500 BC:** southward movement of peoples from Taiwan into the Philippines and Indonesia, reaching the area between Borneo and the Moluccas by 1500 BC. This is evidenced by the appearance in various sites [Table 1] of pottery assemblages similar in characteristics to the Yuanshan pottery mentioned above, as well as imprints of rice husks on some of the potsherds.¹ The period may also be marked by the differentiation of the Proto-Austronesian language into Formosan (for populations remaining in Taiwan) and Proto-Malayo-Polynesian as it entered the Philippines, the latter further differentiating into Proto-Western Malayo-Polynesian and Proto-Central-Eastern Malayo-Polynesian as it reached the Indonesian islands.

site	dating	pottery assemblage characteristics
Dimolit site (Isabela, Northern Luzon, Philippines)	(site was probably occupied between 2500 BC and 1500 BC)	globular or carinated vessels, some on ring feet with small clustered perforations; either plain or red-slipped
Andarayan site (Cagayan Valley, Northern Luzon, Philippines)	ca. 1500 BC	red-slipped pottery similar to Dimolit, but with rice chaff as temper
Magapit shell midden site (Cagayan Valley, Northern Luzon, Philippines)	ca. 1000 BC	red-slipped pottery with dentate-stamped and incised decorations
Edjek site (Negros, southern Philippines)	ca. 2000 BC	plain, slipped, and incised sherds
Leang Tuwo Mane'e shelter (Talaud Islands, Indonesia)	possibly around 2500 BC	plain and red-slipped sherds from thin-walled globular vessels with everted rims
Bukit Tengkorak rock shelter (Indonesia)	lower layer dated between 1000 BC and 300 BC	red-slipped pottery with plain or incised pedestals

Table 1. Sites in the Philippines and Indonesia containing pottery similar to the Yuanshan.

4. **ca. 1500 BC:** The somewhat linear route of Austronesian movement bifurcated with one arm heading west towards Java, settling parts of Mainland Southeast Asia (Vietnam and the Malaysian Peninsula) by 500 BC and reaching as far as Madagascar around the first millennium AD, and the other eastwards into the Pacific, settling as far as Easter Island by the mid-thirteenth century AD. The latter is marked by the gradual disappearance of red-slipping in the pottery assemblages, perhaps signalling development into the Lapita pottery complex, as well as a shift from rice cultivation in favour of fruits and tubers.

SOLHEIM'S NUSANTAO MARITIME TRADING AND COMMUNICATION NETWORK (NMTCN)

Less well-known and somewhat less widely accepted than Bellwood's *Out-of-Taiwan* hypothesis is Wilhelm Solheim's *Nusantao Maritime Trading and Communication Network*, or NMTCN. As indicated by the terminology, central to this hypothesis is the concept of the Nusantao. The term derives from the Austronesian root words *nusa* for "south" and *tau/tao* for "man" or "people", thus giving it the overall meaning "people of the south islands". The term came about as a result of the need for an independent name to call the group(s) of people speaking an Austronesian language. However, these two terms, Nusantao and Austronesian, should not be used interchangeably as Solheim (2006) eventually modified the former's definition to exclude non-maritime Austronesian-speakers and include maritime non-Austronesian-speakers:

"... I now define Nusantao as natives of Southeast Asia, and their descendants, with a maritime-oriented culture from their beginnings, these beginnings probably in southeastern Island Southeast Asia around 5000 BC or possibly earlier.

Most of the Nusantao probably spoke a related or pre-Austronesian language, but there were likely some who spoke a non-Austronesian language as well... I did not

consider non-maritime Austronesian-speakers as Nusantao." (Solheim 2006:60-61)

In essence, the Nusantao would thus refer to groups of people in Southeast Asia who have or at least had a maritime-oriented culture in their beginnings.

At this point it is perhaps necessary to point out that Solheim does not view the word "people" in a biological sense but in a cultural sense—"as bearers of a living, evolving, variable culture" (Dizon 2004:295). Thus, the Nusantao would also encompass groups in Southeast Asia that may not be biologically (genetically) related to one another, but share similarities in some aspects of their respective cultures. In effect, by conceptualising the Nusantao and subsequently, the *Nusantao Maritime Trading and Communication Network (NMTCN)*, Solheim was finding the agency responsible for the shared aspects of culture found widespread not only in Southeast Asia, but Asia in general out into the Pacific.

The term Nusantao Maritime Trading and Communication Network (NMTCN) is actually one which Solheim has only coined quite recently. The concept, however, has been in his mind almost the same time he formulated that of the Nusantao. The NMTCN, as the term connotes, is a trade and communication network that has been in place in the Asia-Pacific region for the past 10000 years or so. It is this concept that Solheim puts forward as an alternative to simple migration theory in explaining why shared aspects of culture are found widespread in the Asia-Pacific region. He points out that if "elements of culture were spread by migrations, then the spread would have been primarily in one direction" (Solheim 2006:77); but since the observed shared elements of culture in the Asia-Pacific region were spread in all directions, the logical explanation is that they have been carried thus through some sort of trading network.

Solheim divides the NMTCN into four lobes: central, northern, eastern and western lobes [Fig. 3].



Fig. 3. Map showing the extent of Solheim's *Nusantao Maritime Trading and Communication*

Central lobe. The Central Lobe of the NMTCN is further divided into 2 smaller lobes—the Early Central Lobe and the Late Central Lobe. The Early Central Lobe is considered the homeland of the early NMTCN; it is located in eastern coastal Vietnam and is also dated earlier than the development of the Austronesian language. The Late Central Lobe, on the other hand, constitutes "the area where Austronesian became the original language family and Malayo-Polynesian developed" (Solheim 2006:68). It includes southeastern Taiwan and South China from south Fujian, and may extend westwards including the Cambodian coast, both sides of the Gulf of Thailand, the eastern coast of Peninsular Malaysia, as well as some islands of western Indonesia.

Northern lobe. The Northern Lobe extends from Taiwan and Fujian to include coastal China, an unknown distance up the Chinese rivers that drain into the China Sea, coastal Korea and

eastern Japan, possibly including the west coast and northern end of Honshu and extending further on to the Americas.

Eastern lobe. The Eastern Lobe is also further divided into 2 smaller lobes—an Early Eastern Lobe and a Late Eastern Lobe. The former includes the Moluccas in eastern Indonesia and the Bismarck archipelago in northwest Melanesia. The latter, on the other hand, extends from the Moluccas eastward to Wallacea, and from there outwards throughout the Pacific (except the interior and much of the coast of New Guinea) as far as Easter Island.

Western lobe. Last but not the least is the Western Lobe. This extends from Malaysia and western Indonesia, along coastal India and Sri Lanka up to the western coast of Africa and Madagascar.

All of the three latter lobes overlap with the Late Central Lobe. As the names for the subdivisions of the Central and Eastern Lobes imply, all these four lobes of the NMTCN did not appear simultaneously, but developed as the Nusantao extended their trading network out from their original homeland in Vietnam. The possible order of expansion is thus also somewhat concentric and may be summarised as follows (Solheim 2006:71):

- 1. From the Early Central Lobe eastwards to start the local development of the Early Eastern Lobe.** This is dated approximately between 5000 BC, when the Early Central Lobe (in place since ca. 9000 BC) expanded eastwards to form the Late Central Lobe, and 3000-4000 BC, when the latter expanded from Northern Luzon in the Philippines into western Micronesia to form the Early Eastern Lobe.
- 2. From the beginning of the Late Central Lobe northwards including northern and western Taiwan, coastal China from Fujian north to Korea and Japan.** This dates to approximately 5000 BC based on a sample of rice excavated from Guah Sireh in Sarawak (AMS date of 3850±260 BP). Probably an early variety of *Oryza sativa javanica*, a similar variety is also found (Sato 1992, mentioned in Solheim 2006:82) to have been introduced in Japan before the Yayoi period (ca. 300 BC - 250 AD), suggesting a south-to-north movement of peoples.

3. From the Central Lobe to the west. This expansion of the Central Lobe into the Western Lobe probably dates earlier than 2000 BC, as attested by the presence of decorated pottery belonging to the Sahuynh-Kalanay² pottery tradition in sites like Gua Cha in northern Malaysia, Kok Phanom Di in southeastern Thailand (both from the second millennium BC) and Laang Spaan in western Cambodia (dated 1990-1550 BC).

4. The Late Eastern Lobe from the Central Lobe to the east.

EPILOGUE

As we can see, there are fundamental differences between the models put forward by both Bellwood and Solheim. These differences may be attributed, in whole or in part, to their respective orientations, as well as their individual experiences. Bellwood, on the one hand, is presumably a linguist by background, judging from the amount of linguistic discussions that he incorporates into his publications. This probably explains the linear and somewhat unidirectional tendency of his OOT model, as these characteristics are also often observed in linguistics especially in the reconstruction of language histories. Solheim, on the other hand, is basically an anthropologist, what with archaeology being considered as an anthropology sub-discipline in the U.S. where he had his training. Thus, he makes use not only of data gathered from excavated material culture, but also incorporates his actual experiences and observations of human behaviour in his explanations of how things are or were—his concept of the Nusantao, for example, is based on his observation of present-day maritime cultures such as the Badjao and the Semang living in the seas surrounding the Indonesian and Philippine islands.

Both Bellwood's and Solheim's hypotheses have their own merits and weak points. I have not discussed them here as I am reserving them as topic for another essay. However, I can say that at this point in time, it is difficult (if not altogether impossible) to ascertain which of the two approximates what really happened during the Southeast Asian Neolithic without first paying

more attention to the maritime aspects. The region of Island Southeast Asia has always been archipelagic in nature since the end of the Pleistocene; hence, any movement of peoples within the region afterwards would have been over bodies of water. Thus, the ascertainment of which model best reflects what happened in the Southeast Asian Neolithic in terms of movements of peoples and cultures, would depend on such questions as:

- *What were the conditions at sea (sea-level height, direction of currents, weather patterns, etc.) during those times?* and
- *Does man already have the means, the technology, to make sea-crossing possible at the time?*

NOTES:

¹ Rice is thought to have been introduced into Taiwan from the Chinese mainland. Consequently, its appearance in Island Southeast Asia meant that it was introduced there by the migrating Austronesians coming from Taiwan.

² characterised by red-slipped pottery decorated with impressed circles inlaid with lime; its “homeland” is the area between Vietnam and Central Philippines.

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