BOOK REVIEWS

First Farmers: The Origins of Agricultural Societies
Peter Bellwood
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This book is one of those rarities, an attempt to cover a time period in the prehistory of the whole world. Its subject is the origins and beginnings of agriculture and its spread. I was unable to find a single definition of agriculture, but its general meaning for Bellwood is presented on two pages (12–13) where he explains the requirements of an agricultural system, including animal domestication. I quote his final paragraph of this presentation, which is sort of a definition:

> It should be added that the term *agriculture* will be used to apply in a general sense to all activities involving cultivation and domestication of plants. There has been a tendency in some archaeological literature to distinguish agriculture, as a monocropping field-based activity, from *horticulture*, as a multicropping garden-based activity, but since the two cannot often be differentiated in the archaeological record the term horticulture is only used here in documented ethnographic instances. The same applies to the term *arboriculture*, often used to refer to production systems dependent on tree product. (13)

I would agree that these two methods of farming are difficult to distinguish archaeologically, but this statement, to me, tends to remove both from being a part of prehistoric agriculture.

I do not attempt to present a brief description of each of the twelve chapters. Bellwood's chapter titles give a good idea of their contents, so I list the chapter titles and their pages: 1."The Early Farming Dispersal Hypothesis in Perspective" (1–11); 2. "The Origins and Dispersals of Agriculture: Some Operational Considerations" (12–43); 3. "The Beginnings of Agriculture in Southwest Asia" (44–66); 4. "Tracking the Spreads of Farming beyond the Fertile Crescent: Europe and Asia" (67–96); 5. "Africa: An Independent Focus of Agricultural Development?" (97–110); 6. "The Beginnings of Agriculture in East Asia" (111–127); 7. "The Spread of Agriculture into Southeast Asia and Oceania" (128–145); 8. "Early Agriculture in the Americas" (146–179); 9. "What Do Language Families Mean for

Human Prehistory?" (180–199); 10. "The Spread of Farming: Comparing the Archaeology and the Linguistics" (200–251); 11. "Genetics, Skeletal Anthropology, and the People Factor" (252–272); 12. "The Nature of Early Agricultural Expansion" (273–279); "Notes" (280–291); "References" (292–349); and "Index" (350–360).

My specialty is Southeast Asian prehistory and its relationships. I am not competent to judge those areas outside of my specialty. I have read most of the book, however, and must say that if those knowledgeable in the areas I do not cover are happy with them they would be a good introduction for anyone wishing to study those areas, time periods, and subject. As a whole I would consider the book an admirable attempt at a huge and important topic. I limit myself only to those portions of the book that involve Southeast Asia and its relationships.

Chapter 7 on Southeast Asia and Oceania begins with a statement by Bellwood which is worthy of repeating (128): "I must confess to having some degree of vested interest in the contents of this chapter since my research career has been spent in the region of concern. Hence I make no apology for presenting a basic summary of views which I have published elsewhere,[1] [which is extensive] together with acknowledgments of counter-views where such seem necessary."

Obviously his judgment of "counter-views where such seem necessary" is a matter of his personal opinion. Two of my early students, Chester Gorman and Don Bayard, and I have published numerous articles specifically on the beginnings of and early agriculture in Southeast Asia. Only some of my articles were "counter-views" to Bellwood's and most of them by all three of us had considerable data presented that are in no way "counter" to Bellwood's views. He includes none of the pertinent papers authored by any of the three of us in his references and, of course, none of us are listed in his Index as he makes no attempt to show in his text that his arguments negate anything any of us have had to say. With that I begin some of my "counter-views," which Bellwood finds not necessary to acknowledge.

On page 2 concerning agricultural beginnings he states, "These developments occurred at many different times between about 12,000 and 4,000 years ago." Richard MacNeish *et al.* (1998) clearly show that rice had been domesticated in southern China by 13,000 years ago. Bellwood lists the book above in his references, but apparently considered this dating counter to his views and so not necessary to mention. Bellwood, Charles Higham and Ian Glover were all present at MacNeish's presentation of a paper on this excavation in the hills south of the Yangtze at the IPPA Congress in Malacca in 1998. I strongly suspect they had not been acquainted with his work at that time. I heard the three talking together after the session remarking in no uncertain terms that his early dating was nonsense because the dating was on shell from limestone caves. They did not realize that MacNeish was a very senior American archaeologist who had had

much experience with dating materials from limestone caves. He had tossed out a number of dates from the sites in South China, but his dating was based on dates associated with non-shell artifacts that had similar dates from Chinese excavated non-cave sites. Bellwood (116), in referring to early Chinese rice dates, mentions the dates without reference in saying, "Claims for very early Holocene agriculture associated with pebble tools in southern Chinese limestone caves have not been convincing to date...." I have found them fully convincing when taking them in conjunction with Pamela Vandiver's abstract and paper (1998a–b) on the dating of early pottery from several sites to the period 10,000 to 13,000 B.P., including the original site associated with this early rice I will mention this early dating several times again, below.

A major error that I will also refer to several times is Bellwood's considering South China as a part of China during prehistoric times. I had thought that it had been well established that South China either from the Yangtze south or the Yangtze drainage was culturally and linguistically (and thus archaeologically as well) Southeast Asian until the major movement of Chinese population south during the Tang dynasty (Solheim 1967, 1973, 1975, 1984 and agreeing comments by Chinese archaeologists in *JHKAS*). I note just a few of Bellwood's listing something from prehistoric South China as being Chinese.

On page 42 in noting major regions of the beginnings of agriculture he states: "2. The middle and lower courses of the Yangtze and Yellow river basins of China (rice, foxtail millet, many tubers and fruits, pig, poultry)." This is not China, but Southeast Asia. Some may not be fully aware that chickens were definitely domesticated in Southeast Asia. "A single subspecies of jungle fowl, *Galllus gallus gallus*, was domesticated in Southeast Asia more than 8,000 years ago, and that it is the maternal ancestor of all Western and Asiatic breeds of domestic chicken. The researchers [a team of Japanese and Americans] analyzed DNA samples from several breeds to reach this startling conclusion. Before, scientists thought Western domestic chickens descended from several Asian fowls that were domesticated in northeast China. The new finding corroborates other recent evidence that Southeast Asia may have been a nucleus of agricultural innovation" (Anon 1995:20–21).

From page 67 for the period 6,500 to 4,000 B.C. in China: "East Asian agricultural systems were also on the move by this time, reaching toward Southeast Asia and eastern India." This statement should be the other way around, i.e. "from Southeast Asia to East Asia and India."

Chapter 6 on "The Beginnings of Agriculture in East Asia" Bellwood (111–114) is constantly referring to the areas along the Yangtze as being the source of Chinese agriculture. This naturally should read "Southeast Asian." On page 88 he

states, "The third group of crops is of East Asian origin. The most important is Asian rice, *Oriza sativa*, domesticated first in the Yangzi Basin by about 7,000 BC."

On page 111 he states: "Interestingly, Fujian and neighboring Guangdong are known to have been significant sources of population dispersal not only from Neolithic times onward, but especially during the recent centuries of the 'Southern Chinese Diaspora' to Southeast Asia and further regions." Both Fujian and Guangdong during Neolithic times were culturally Southeast Asian during prehistoric times.

Pages 124–125 finds a statement that the earliest pottery at all sites in the lowland Yangtze is cord-marked. This may well be correct, but reference should be made to the considerably earlier bound pottery (vine-wrapped paddle) south of the Yangtze described by MacNeish and Vandiver (1998). At least he is moving towards the right track in talking about the site of Hemudu. He states:

> The oldest Hemudu pottery (from the basal layer) is fairly unusual in the Chinese contexts since it lacks ring feet and tripods. [Not at all unusual as it is pottery of the Southeast Asian tradition.].... Interestingly, portable pottery stoves occur in this culture, similar to a more recent tradition of pottery stoves still used on boats by 'sea nomads' [Nusantao] in the islands of Southeast Asia (especially in the southern Philippines and northern Borneo). Hemudu people therefore had links with the coastal maritime cousins. Sites of Hemudu type occur on offshore islands in northern Zhejiang, attesting a raft or canoe technology (wooden paddles have been found in Hemudu itself). [I have suggested that Hemudu was itself an early Nusantao site. And so it goes.]

At this point I change my procedure and instead of trying to relate my remarks to one or two general "counter views." I simply bring a number of them up in the order that I noted them when reading the book:

Page 5, Fig. 1.1: On a map of the major language families he does not include Cham, an Austronesian language, along the central eastern coast of Viet Nam. I suppose this is left out because he considers it to be a late arrival in that area while I consider it is probably the coastal Austronesian language which was the language of the Sa Huynh Culture going back in that area for over a thousand years and its ancestry for several thousand years He lists "Austroasiatic" as one of the major language families. I suppose that is what I call Austric.

Page 7. Fig. 1.3 lower map: This shows a very narrow region running North to South from Taiwan through the Philippines into eastern Indonesia where red-slipping was found. This leaves out much more than half the area of red- slipping associated with lime-inlayed incised decorations along the east coast of Viet Nam and to the east into Western Micronesia and into Melanesia with the Lapita pottery.

Page 21, end of 2nd paragraph: "Indeed, we now know that agriculture did not begin at all in a primary sense in either Egypt or Southeast Asia." I would certainly consider the domesticated rice found in the hills of South China south of the Yangtze around 13,000 years ago as agriculture in a primary sense. It is the earliest date I know of for early agriculture.

Pages 27–28: This covers the lack of mixture in cultures of both agriculture and hunting and gathering. When I was first working in northeastern Thailand in the 1960s agriculture was everywhere, but every small village had at least two or three full-time hunters who hunted wild game in the area and sold it in the local market. This was an important, though small, source of protein. Bellwood says, "This suggests, in terms of the Old World cultural trajectory, that hunting-gathering and agricultural modes of production cannot be indiscriminately mixed." Bellwood apparently had not seen the book edited by Kathleen O. Morrison and Laura L. Junker (2002) titled *Forager-Traders in South and Southeast Asia.* This goes into great detail showing the very strong likelihood that trade between mountain hunter-gatherers and lowland farmers goes back in both South and Southeast Asia to early Neolithic times, integrating the two "distinct" cultures to a considerable degree as each dependent on the other.

Page 35, 2nd line last paragraph: "...but here we perhaps must accept that seamen and farming knowledge do not easily travel together." This is just the opposite of what I have shown before that the Nusantao maritime men and families always were adept at both farming and fishing; the one could not do without the other. This was a great advantage when moving out into the Pacific to new islands with no inhabitants and plenty of small wild game, particularly birds. They had domesticated plants with them, which they planted, but until they had killed off most of the small land animals they did not really start farming. When the local wildlife, land or sea, was no longer adequate they then expanded their agriculture. This still goes on today in the Visayan Islands of the central Philippines and in areas in eastern Indonesia, the maritime fishermen families can not do without their land-agricultural base (Solheim n.d.). James Eder (2003) has presented a paper titled "Of fishers and farmers: Ethnocity and resource use in coastal Palawan." What he presents here applies equally to Nusantao fishermen as a whole. He notes that fishing and farming are treated by authors as two different subjects and the two are not covered together. He states:

> Viewed against the reality of everyday Philippine life, however, these two bodies of scholarly literature are considerably more separate than are the economic activities that they respectively address. Indeed, fishing and farming do not merely co-exist in coastal regions, communities, and even...households. Rather,

> between these two activities and the people that pursue them lie a variety of interrelationships and interdependencies that merit, I believe, systematic attention if we are to better understand the wider coastal economies and human ecosystems in which both kinds of activities are embedded. (207)

He adds as an "Endnote":

> Among ethnographic accounts of fishing people elsewhere in Southeast Asia, Firth's (1966) classic *Malay Fishermen*, while overwhelmingly devoted to various aspects of the fishing economy, contains an entire chapter (pp. 282–297) that locates fishermen 'in general peasant economy.' The chapter begins by emphasizing that the Malay fisherfolk are 'not a race apart' but (more often than not, apparently) have some sort of on-shore supplementary economic pursuit such as farming (1996:282).

Pages 93–96: The subject here is "The Ganges Basin and northeastern India." where Bellwood considers that there was very little Southeast Asian influence in northeastern India. He uses none of the good and well-known sources on eastern and northeastern India which indicate otherwise. He should consult Worman (1949a–b), Dani (1960) and Dilip Medhi (1990; 2003:335). Dani (1960:223), referring primarily to surface finds of stone tools, states: "Their appearance does not prove any cultural affiliation of Eastern India with South East Asia, but at best establishes contact and borrowings, natural to countries so close to one another." One paper that Bellwood probably would not have come across was presented by Gudrun Corvinus titled "The Patu industry from the foothills of the Himalaya in Nepal." The artifacts she describes and illustrates are obvious Hoabinhian tools. In her abstract she noted, "The bifacial and unifacial tools show certain resemblances to unifacial and bifacial axes from Hoabinhian caves in North Vietnam This is noted in the paper she presented at the Hoabinhian conference in Hanoi in 1993–94. Most unfortunately the proceedings of this very important conference were never published (Solheim1994a–b).

Pages 107 and 109: On eastern Africa. In 1965 I took part in Nairobi, Kenya in a conference on East Africa and the Orient. Again, my memory is very bad, but I do not know of any general proceedings of that conference. One of the strong suggestions from papers presented at the conference was that there may have been considerable influence from Southeast Asia including the introduction of iron and pottery (Solheim 1965). Bellwood notes, "Chifumbaze-style pottery, distinguished by its horizontal zones of incised and stamped patterns, has several local substyles." This is the common style of decoration of the Sa Huynh-Kalanay Pottery Tradition of Southeast Asia. This pottery and iron working developed in the Kenya area between about 500 B.C. to mid 1st millennium A.D. "Evidence for

iron working is widespread, and of great importance since iron tools would have allowed very rapid forest clearance for agriculture. Furthermore, by the mid-first millennium AD, the Kenyan coast was coming within the range of trading networks across the Indian Ocean to Southwest Asia and India..., a circumstance which might have played no small role in the arrival in Africa of Southeast Asian crops such as bananas, taro, and the greater yam." This trading network was a part of the Nusantao Maritime Trading and Communication Network, and it was not "across the Indian Ocean to Southwest Asia and India" but from Southeast Asia to India and the east coast of Africa (Solheim 2006). Glass beads were also involved in this trade. Information on this can also be found in Francis (2002) and Sleen (1958).

Pages 130 and 131: Again the confusion in not recognizing that South China until the Tang Dynasty was prehistorically Southeast Asian and not Chinese. "Nowhere in Southeast Asia is there currently any good evidence for a presence of any form of food production before 3500 BC. This is significant, given that rice was well domesticated by at least 6500BC along the Yangzi."

Pages 135–136:

> In the Philippines, northern Borneo, and many regions of eastern Indonesia the oldest Neolithic pottery is characterized by simple forms with plain or red-slipped surfaces, sometimes with incision or stamped decoration and sometimes with perforated ring feet. This phase has no very clear internal divisions at present and it seems to date overall to between 2000 and about 500 BC, when it transforms into a series of more elaborately decorated Early Metal Phase ceramics. In the light of recent research in the Batanes Islands and the Cagayan Valley of northern Luzon, the origins of this red-slipped pottery can be traced to eastern Taiwan assemblages of about 2000 BC, still only hazily reported but presumably the immediate ancestors of the later second millennium Beinan and Zhangguang cultures of the east coast and the Yuanshan of northern Taiwan.... The Fengtian nephrite source in Eastern Taiwan was also a source of Neolithic jade (Lien 2002), used not only in Taiwan but also exported to the Philippines, where bracelets and earrings of Taiwan jade have been found in Neolithic and Early Metal Age sites (dating overall to 1500 BC to early AD) at Anaro on Itbayat Island in the Batanes, at Bagsabaran in the Cagayan Valley, and in Uyaw Cave on Palawan Island.[7]

There are so many errors in this paragraph it is hard to believe. At least one of them Bellwood would not have known about, as it had not yet been published at the time of his writing. I do not give the original references for these corrections as they are all covered in my recent publication. The earliest Neolithic pottery in

Island Southeast Asia is the plain and also bound-paddle, but the latter is often not mentioned. This is often called basket-marked, but in many cases is probably vine-wrapped instead. I had not recognized this until my research at the Sarawak Museum in 2004 on the earthenware pottery of Gua Sireh. Recalling Ha Van Tan's reporting that the earliest pottery in Viet Nam was neither cord-marked nor basket-marked but vine-wrapped I began to recognize the difference and the vine-wrapped and basket-marked pottery at Gua Sireh in Sarawak is much earlier than any pottery dated by Bellwood with a ^{14}C uncorrected date of 4,480±150 B.P. from the lab at the University of Arizona. Corrected, this would be well over 5,000 B.P. In any case from a sherd reported by Bellwood himself (Ipoi and Bellwood 1991) "Accordingly there seems no doubt that at this early date of about 2,300 B.C. rice was indeed present as a cultivated crop in the northern part of Borneo" (Beavitt *et al.* 1996). Thus Bellwood himself had reported both pottery and rice agriculture at a date presumably earlier than 2,000 B.C.

Red-slipped surfaces on early Southeast Asian pottery is found in many more areas than mentioned by Bellwood, as I noted earlier in this review. The transformation to more fancily decorated pottery started well before the Early Metal Age and the early Pre-Sa Huynh-Kalanay pottery had much more decoration associated with the plain and red-slipped pottery going back before 2,000 B.C.

The origins of the red-slipped pottery were certainly not in Taiwan, but long before along the coast of central and southern Viet Nam. I have referred to this several times before in articles of mine that I guess Bellwood considers in disagreement with him and thus not necessary to note or, I guess, even read.

Bellwood reported that Taiwan jade was exported to the Philippines and for this statement referenced Lien (2002). I reread her paper and nowhere in that paper did she say anything about Taiwan jade being exported to the Philippines. The closest she got to such a statement was, "These artefacts are similar to jades from the Tabon Caves, Palawan, Philippines...." Incidentally Lien made a mistake on referring to Fox's (1970) Fig. 39 b–c for the similar jade artifacts. Fig. 39 has only bronze artifacts so she must have meant Fig. 37 b–c. While Lien in her article referred to by Bellwood did not state that Taiwan jade was exported to the Philippines more recent excavations and chemical analysis of the jade has established just this. It was the unworked jade that was exported and it was worked at now known workshops in the Batanes Islands to the north of Luzon and others in typical Philippine styles.

The end of Bellwood's quote above has footnote 7. In that he has said, "The Batanes Islands have produced a 3,500 year sequence with very close ties to Taiwan maintained for at least the first 2,000 years of this time span." Unless there has been a total change in weather patterns and currents between northern

Philippines and Taiwan this would be an impossibility. Botel Tobago, the most southern island of Taiwan was settled from Itbayat, the most northerly of the Batanes Islands in the Philippines. Both islands recognize this relationship. Yet there has been no contact between these two related people since the first settlement well over a thousand years ago. The straits to be covered has heavy currents all year long running north and east through this area from the Philippines and the weather is very bad there most of the year. While it is possible to move from south to north with the currents it is very difficult to move the other direction. Thus *close* ties would be impossible. Occasional contact was likely.

Page 136: Figure 7.2 on sites with Neolithic red-slipped pottery leaves out Gua Sireh in West-central Sarawak, Borneo. Bellwood mentions that his and Ipoi Datan's excavation there came up with a few red-slipped sherds, but he does not consider that enough. This excavation involved only four very small squares. My research done there last year on my excavation done in 1959 indicates considerable red-slipped pottery right from the beginning of the early pottery at the site.

Page 197: "It is likely that the early spread of Austronesian languages into Melanesia was lubricated because Proto-Oceanic (the reconstructed proto-language of the period of Austronesian colonization, beyond the Bismarck Archipelago) represented a useful degree of uniformity, perhaps in a lingua franca, through a network of highly diversified coastal languages." This is just about what I suggested for the Pre-Austronesian development as a lingua franca among the Nusantao maritime network sailors between the Bismarks and Viet Nam and throughout eastern Island Southeast Asia.

I have many more pages of similar remarks. Enough is enough so I end with my last remark. Page 275:

> The longitudinal spread through southern China into Southeast Asia was much slower than into southern Africa, at least until Austronesian maritime technology lifted the lid and allowed the rapid sea-borne colonization of Island Southeast Asia and Oceania.

Southern China was culturally, linguistically and probably genetically Southeast Asian at the original time of this spread back around 5,000 B.C. and before. Bellwood totally disregards the higher sea levels of around 5,000 to 3,000 B.C. that covered the sites showing expansion during this period.

Other than these problems with Southeast Asia this could well be an important book on the beginnings and spread of agriculture, certainly an important subject.

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