

THE RISE OF AGRICULTURE IN SOUTH SULAWESI BEFORE 1600

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This paper is concerned with the economic bases of early states in South Sulawesi. It suggests a major change from political power essentially associated with maritime trade to power based primarily on the control of agriculture and those involved with it. This change occurred some two centuries before 1600 A.D., that is before substantial European or other external sources on the area are available. Inevitably the evidence that does exist both in internal sources and a few external comments, as well as archaeological data, is somewhat scrappy and indirect. In such a case, it is imperative to define our questions very closely and to approach the questions with eyes very wide open to general theoretical issues.

It is necessary to begin a brief survey of the prehistory of South Sulawesi. Recent work has produced a qualitative change in our knowledge here, as compared with the situation described in van Heekeren's surveys (1958, 1972). It is now possible to propose, in very rough outline and with many details requiring confirmation, a cultural sequence in the area from initial occupation up to historic times. The earliest evidence comes from the upper terraces of the sites near Cabenge where Bartstra (1977, 1978) has recently proposed an interpretation which differs markedly from that of van Heekeren and Soejono. Bartstra claims that the fossil material is not in primary association with the stone artefacts and cannot, therefore, be used to date them. He puts the fossils well back in the Pleistocene and the artefacts considerably later. More recently Sartono (1979) has refined Bartstra's stratigraphy and suggested a Pliocene date for the fossils, while keeping the artefacts in the (presumably reasonably late) Pleistocene.

These simple stone flakes still mark Man's entry to Sulawesi, and, possibly, Man's earliest venture off the Eurasian landmass. It is greatly to be hoped that further work will provide some direct dating evidence.

Bartstra also claims to have material at the end of his Cabenge sequence which overlaps with the sequence of the Toalean culture known from many rock shelter sites in the peninsula. The recent work of Glover at Ulu Leang 1 and Leang Burung 2 is especially crucial in this linkage. At both these sites, an earlier flake industry, still very imperfectly known but apparently of some antiquity, is succeeded by the Toalean, that is the local expression of the widespread flake and blade technocomplex of the Philippines, eastern Indonesia and possibly even further afield (Glover 1976, 1978; Bellwood 1978: 71-80). The beginning of the Toalean - and, despite some problems, I think the name is worth retaining - can be put sometime before 4000 B.C. Glover's work and the recent report by Chapman (1981) on the excavation at Leang Burung 1 and Batu Ejaya and on the collections from Pangnangreang Tudea have provided a good description of the Toalean, and especially of its local variation.

Pottery first appears about 3000 B.C., but the evidence so far from South Sulawesi is insufficient to tell whether it was associated with plant and animal domestication or other signs of the "Neolithic". The general picture of Southeast Asian prehistory, now so clearly laid out by Bellwood (1978), suggests that it was. Similarly, although the dating of the highly decorated pottery found at several sites is somewhat uncertain, on general grounds it can be assigned to Bellwood's Early Metal Period of c.500 B.C. to c.1000 A.D.

The significance of this information for the study of later periods is twofold: it shows that there was a long continuity of settlement in the peninsula with which theories of change and development must reckon and, secondly, it reminds us that South Sulawesi did not develop in isolation. If there were contacts through the archipelago in, say, the Early Metal Period, and this cannot be

doubted, there is no reason to suggest regional isolation in subsequent centuries.

We can now turn to the nature of the period c.1000 to c.1500 A.D. in South Sulawesi. In an earlier paper (Macknight 1975), I have discussed this question, and the evidence bearing on it, in terms of the 'emergence of civilization'. Further work on written and ethnographic sources, especially by Pelras (1977, 1981) and Mattulada (1978), as well as the ceramic investigations discussed by Hadimuljono and Macknight elsewhere in this volume, has advanced our understanding of some of the evidence, though I still believe my caution in that paper against too simple explanations to be relevant. There is, however, one common feature of almost all this evidence which, in my opinion, allows us to move forward a little, that is, its relation either to external contact, or to trade, or to areas in Sulawesi easily reached by boat. The basic pattern of life was probably much the same as in the period before 1000 A.D., with a relatively small population scattered in settlements throughout the peninsula, but especially in locations where the resources of sea, lake or river could supplement the returns of swidden agriculture. What changes is the slow growth of the society's integration in all its aspects: economic, cultural, social and religious. While much of the detail of this will always, perhaps, remain beyond our understanding, the available evidence does allow us, in my view, to see that external contact and trade were important elements in that integration.¹ Moreover, that contact and trade may have been more substantial than we can now document very clearly.

In his treatment of early South Sulawesi history, Pelras tends to play down the extent of this external contact, although it should be noted that his periodization differs slightly from mine. In his first period, up to c.1300 A.D., he points to the orientation of the I La Galigo material toward north Sulawesi, the Moluccas and Sumbawa rather than westwards toward Java and notes that it is difficult to find any evidence of direct contact with Java (Pelras 1981: 177-8; Pelras 1983: 96 n.19). Yet his second period, from c.1300 to c.1550, opens

with the record of the marriage between a prince of Luwu and a princess of Majapahit. It also includes the Nagarakertagama references to Sulawesi, the 'Keraing Semerluki' attack on Malacca, and, if it is not in part the same, the external contacts recorded in the early parts of the Tallo chronicle. There we learn that the third ruler, Tunilabu riSuriwa not only travelled to Malacca and Banda, but also married the daughter of a woman captured in war in Java (Abdurrahim and Ridwan Borahima 1975: par. 24; Matthes 1883, notes p. 22). Furthermore, although the dating is quite vague, there is certainly some antiquity in the scatter of Javanese placenames, such as Garrisi' (=Gresik) near Makassar, various technical terms and other words which are very plausibly derived from Javanese, and general traces of Indic influence. It is not unreasonable to perceive Javanese influence in the design of some of the gold jewellery found in graves, and a bronze bell from Bantaeng (now in the History and Antiquities Service museum in Ujung Pandang) may have been made in Java. (See also Reid in this volume.)

I am particularly impressed by two pieces of evidence. Firstly, there is the very considerable quantity of imported ceramics found in the peninsula. As Hadimuljono and Macknight explain elsewhere in this volume there are certainly some pieces dating from late in the first millennium A.D. There is undoubtedly a good deal of Song material (960-1279) and much more if one extends the range to 1400, that is, into early Ming and to the earliest of the Thai export wares. Particularly since it is the delivery of these pots to South Sulawesi rather than their deposition in graves that is in question, there is no reason to allow much time after their manufacture for their use as dating evidence. However indirect the link and whatever was used to pay for the pots, their presence shows that the peninsula was not isolated. My own opinion is that the most probable channel for most of these pots was through the southern Philippines. About 1225, Zhao Yuku (Chao Ju-kua) wrote in his Zhu-fan-zhi (Chufan-chich) of trade in Mindoro that:

The method of transacting business is for the savage traders to descend on the baskets

and hampers all in a mob, grab them and pick out the merchandise, and then go of The savage traders then take the goods around to the other islands for barter, and generally don't start coming back till September or October [the end of the southern monsoon] to repay the ship's merchants with what they have got. Indeed, there are some who do not come back even then, so ships trading with Ma-i [Mindoro] are the last to reach home. [At least six other unidentified places] are all the same sort of place as Ma-i. (Scott 1968:69-70)

It seems possible that some of the porcelain traded in this way was carried as far as South Sulawesi by the 'savage traders'. Within this contact, I would not wish to exclude the possibility of men from Sulawesi being involved, as well as men from the contact points in the Philippines, but any opinion on this point is straining the evidence. In this context, attention should also be drawn to the Philippine writing systems which may, according to some, be related to those of Sulawesi, and to the Chinese ignorance of Sulawesi until comparatively late which argues against Chinese delivery of the ceramics.

Secondly, I am impressed by the Sulawesi writing systems. Noorduyne (1965:153) has argued that writing in the area can be taken back to, at least, the early sixteenth century. Some antiquity for the script is suggested by the obvious point that had there been no writing system prior to the dispersal of Malay Muslims after the fall of Malacca in 1511, one would have expected the Arabic script to have become dominant. The fact that the various writing systems - the so-called Old Macassar as well as the standard scripts - are Indic-based is therefore very significant. It does not, of course, solve the questions of their precise derivation or date, but it helps to reinforce the general picture of early external contact available from other sources.

Pelras has begun to set out some of the conclusions that may be derived from a detailed

study of I La Galigo texts, which I too believe refer, at least in a general way, to this period of c.1000 to c.1500. Although we still badly need a rigorous edition of this material on which to base our analyses, there can be no doubt of the importance of trade in the society as it is depicted (Pelras 1981:177). The model of a developed society in the archipelago based on trade, that is, living on the surplus produced on the coast by exchanging the produce of the hinterland (whether gold, slaves or jungle and maritime products) for manufactures brought by sea is well developed (Bronson 1977). It is this sort of society that I (and Pelras 1981: 177 n. 28) think to have existed, and indeed flourished in the peninsula between c.1000 and c.1500.

One point to notice about such a society, which is of importance for the discussion below, is the likely reliance on a wide range of food, including much that is gathered, and more stress on roots and fruits than rice. The point is difficult to prove, but especially given the later concentration on rice to be discussed below, I attribute some significance to the much more varied lists found in the I La Galigo texts. Sago, coconuts, bananas, millet and a variety of roots and vegetables are listed as part of the resources for human existence (Kern 1939: 32; Kern 1947: 187-8).

The central concern of this paper is to point to the contrast between this sort of society, depending for its integration on a trade-generated surplus, and the societies of the historic states of South Sulawesi which depended for their integration on an agricultural surplus. It is necessary to begin by getting the chronology right: we are interested only in the period before c.1600. In the years after 1600, South Sulawesi was increasingly bound into wider linkages, first through Islam, then through the growth of trade in contravention of the Dutch monopoly, then by the opportunities of war both in the peninsula and in Java and Sumatra, and so on up to the present.

The first point to be established is that there was a significant change in the orientation of society between, say, the fourteenth century and the

sixteenth century. On the one side, one can take the evidence of the I La Galigo material. While the action is clearly based in the peninsula, the pattern of politics and the areas of significance are clearly very different from those of the sixteenth century. That point will certainly survive any quibbles over details of identification.

More important evidence, in my view, is to be found in the chronicles of the various traditional states of South Sulawesi. Two features of these chronicles have not been noticed clearly enough. While there are considerable difficulties of detail in calculating the precise dates of the early reigns, it is not possible - except for the significant case of Luwu - to carry the dating back much before 1400. This is particularly so if one disregards the more "mythical" elements, for example, at the beginning of the Gowa chronicle the rulers up to Tanatangka'lopi. Yet, as I have argued, there is sufficient evidence to suggest that developed society in the peninsula goes back several centuries before this. Moreover the chronicles do not attempt to account for creation: the "mythical" elements in the early sections are intended, in my view, only to justify the status of the ruler and nobility. This is most commonly done by association with the supernatural, especially the unexplained appearance of the tomanurang (in Bugis) and by the ruler's assumption after death. More positively and more importantly in this context, the tomanurang appear in a world which is already populated by groups of people living in more or less the same settlements as are found today. The antecedents, at least, of the present world existed before the tomanurang. These points may be illustrated by a very much abbreviated quotation of the early part of the Bone chronicle.

There were kings ... back in (the age of I La) Galigo, but then no longer was there anyone called king. For the people [tauē] did not know how to discuss things with each other ... This, then, is how there began to be kings ... [A figure appears.] ... Then it was agreed by all the people

[tau maēgaē] to call him tomanurung ...
 [He explains that he is not.] ... Following
 that, all the people were shown the way
 to what is [still!] called Matajang
 [All the people met the real tomanurung
 and say], "You we will make our lord..."
 ... The (to)manurung was led back to Bone.

(Macknight and Mukhlis, in prep.)

If I am correct in interpreting the early sections of the chronicles as marking a change of direction in the history of South Sulawesi, they also provide us with data on the nature of the society that developed after that change. Scattered among information on many other issues, there are a surprising number of indications of the importance of agriculture to a state. Before setting out some of the detailed evidence, it may help to give a general description of the process I envisage as typical.

Very approximately about 1400, there was a perceptible growth in the population of areas away from the coast, such as the central plain of the peninsula and the back parts of the most extensive coastal plans. Increasing numbers of small agricultural communities established themselves on a permanent basis. This does not, of course, represent the first agriculture in the area: that lay back some thousands of years. Rather, it is an intensification of agriculture, especially perhaps a move from swidden to more or less continuous cultivation. In particular, it is tempting to see this in terms of some concentration on rice at the expense of other crops and the extension of wet rice agriculture. As we shall see, there are hints of both rain-fed sawah and of irrigation.² There were, no doubt, well-developed ideas of status in the society, along the lines of other Austronesian-speaking groups, and those with high status (or acquiring high status) were able to control and encourage surplus food production. Control was not just a matter of obtaining a portion of the crop; it also involved some direction over the whole process of production not only in practical matters, but perhaps even more

significantly, in seeing to it that the necessary ritual was observed. A corollary of this control and encouragement was power over the men concerned for military purposes. It is important to note the interaction of the several factors: population, geography, the technology of food-production, social status, religious function, and military power.³

Once such a system has been set up, there is advantage in expansion. A wider area under control means more food, and perhaps more efficient production because of economies of scale and the elimination of disputes, thus more men, more power and more status. The location of nodal points around which such growth occurs may be influenced to some degree by accidents of personality and fate, but it is hard to escape too far from the inexorable constraints of geography. It is just this process of the foundation and expansion of agricultural states that is revealed by the chronicles. The chronicles also express, of course, the status of the rulers around whose reigns most of them are structured. If the foundation of these states is to be dated around 1400, it is only by about a century later that the strongest of them have achieved the local dominance that brings them into contact and conflict during the sixteenth century.

Naturally this rather schematic account does not apply equally well to all states, and it is by no means comprehensive in its description of the situation. Thus, for example, it does not preclude continuing swidden agriculture and hunting around the fringes of the developing states and in hilly areas; nor would it deny the link between rule, ritual and metal (Zerner 1981). Most significantly perhaps, there is the continuing importance of the sea, both as a source of food and other resources and as an avenue of trade. The famous passage in Tomé Pires describing, admittedly with some confusion, Bajaus from Sulawesi points to one important element in the situation (Cortesão 1944: 226-7), but he is also, in my view, reporting extensive non-Bajau trade between 'Macacar' (presumably this means somewhere on the west coast of the peninsula) and Malacca (pp. 223, 283, see also p. 156 for produce of Palembang going to 'Marcacar, probably via Malacca)

and west Java (p. 172). However, it is interesting to note Pires' emphasis on the agricultural resources of the people from 'Macacar': 'They have many food-stuffs' (p. 226); 'They bring many foodstuffs: very white rice ... These islands have many inhabitants and a great deal of meat, and it is a rich country' (p. 227). This information is confirmed by numerous sources over the next two centuries. Pires, however, like virtually all European sources and, it might be argued, Malay and Javanese sources, reports only those aspects of Sulawesi of relevance to the world beyond the peninsula and thus inflates the significance of trade (and migration) in the society. For a juster view, we must turn to internal sources.

There is no space here to analyse all the mass of potentially relevant data, or even that available in some form of translation. However, it is my impression that the material presented below is typical of much similar material. Moreover a complete exposition would also need to cover the question of agricultural ritual and related beliefs, as seen, for example, in the Segeri plough ritual and in numerous texts.

We can begin with the relatively simple information in the Bugis chronicle of Tanete. This includes an account of the founding family moving about because of squabbles between brothers. Laying out the sawah is mentioned repeatedly in each new location. Finally they settle in the coastal plain on the western side of the peninsula which is apparently virgin land. The father establishes a named sawah and his sons lay out others around it. 'They made the sawah extend out in all directions, upstream and downstream, and this all came together at La Mangade [the father's sawah].'⁴ The reference to an unnamed river suggests irrigation.

The important point to notice is such accounts is the sense of a new departure. This is very widespread, though precise dating of each occurrence is not possible. For example, in the coastal area south of Tanete there are various traditions of the introduction of sawah and related agriculture techniques by local village rulers. These have been not unreasonably estimated to relate to the

period around 1400 (Takaya 1982: 154; Maeda 1982: 180).

More specific comments are found in the Makassar chronicle of Tallo: here, if anywhere, the role of agriculture might be of lesser importance. Certainly, as noted above, there are references to external contacts, but the same third ruler also 'dammed up fishpounds of Buloa. He also first made sawah of Talaka Pandang [the Pandanus buffalo-wallow]' (Abdurrahim and Ridwan Borahima 1975: par. 32; see also Matthes 1859, under talaka). In the middle of the 16th century, Tumenanga riMakoayang 'was clever at agriculture' (par. 74) while his son Karaeng Matoaya 'first made ... dammed water' (par. 117) most plausibly for irrigation. Even the last ruler mentioned, Tumammalianga riTimoro' (1623-41), is praised as being 'clever at working sawah' (par. 202, see also Matthes 1883, notes 13). In the context of this brief and rather jejune chronicle, such an array of comments is significant. Even a state like Tallo depended on efficient agriculture production, and the use of fishponds may be usefully included in this.

This point is even more clearly apparent when one turns to the states on the eastern side of the peninsula. Noorduy'n's Bugis chronicle of Wajo is a convenient mine of information. The early pages reveal a situation where there appears to be ample opportunity to establish new agricultural settlements in virgin territory. Thus La Matatikka' came to found Cinnotta'bi after running off with someone else's wife, who conveniently happened to be the daughter of a tomanurung. He 'took his wife, moved his household to the hill Cinnong and lived there working gardens (darē') and sawah (galung)' (Noorduy'n 1955:154, 11.6-8). Later, dissatisfied elements from Cinnotta'bi move off and 'live on their farmland (ria'diumanna)' (p. 156, 1.19) elsewhere, while even the legitimate line moves 'to clear a [new] settlement (ttipang wanua)' (p. 156, 1.26). As in Tanete, galung can be seen as a place with its own name (p. 164, 11.34-6, see also p. 168, 1.32).

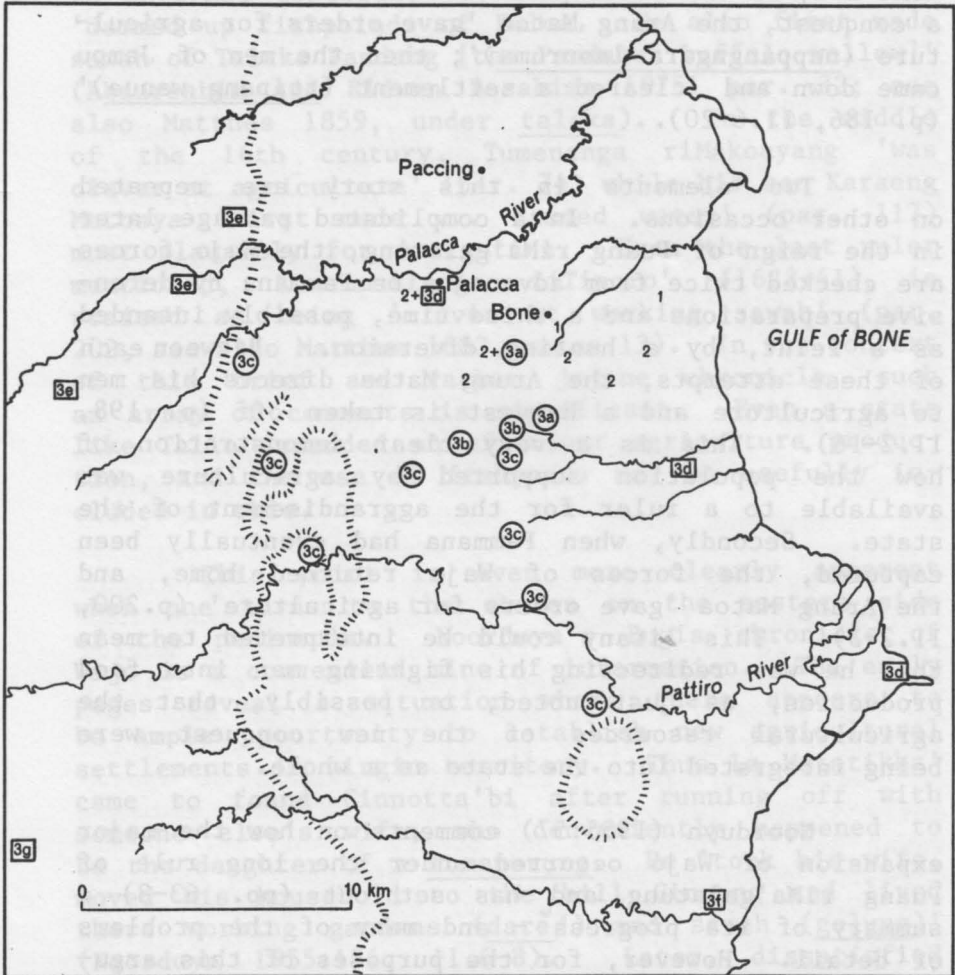
Later, as the state develops, the relationship between agriculture and war is made explicit. The

sixteenth-century war against Jampu, a place in the hills south of Singkang, is a particularly revealing example: the chronicle begins by noting that this minor conquest in the reign of Puang riMa'galatung took place after the harvest; when Jampu had been defeated, its ruler (arung) was ordered to come down and live on the plain; the men of Wajo returned home and, in the usual phrase after the completion of a conquest, the Arung Matoa 'gave orders for agriculture (nappangngara laonruma)'; then the men of Jampu came down and 'cleared a settlement (ttipang wanua)' (p. 186, 11.6-20).

Two elements in this story are repeated on other occasions. In a complicated passage later in the reign of Puang riMa'galatung, the Wajo forces are checked twice from advancing on Pammana by defensive preparations and a third time, possibly intended as a feint, by a hunting diversion. Between each of these attempts, the Arung Matoa directs his men to agriculture and a harvest is taken off (p. 198, 11.2-16). This is a very clear demonstration of how the population supported by agriculture was available to a ruler for the aggrandisement of the state. Secondly, when Pammana had eventually been captured, the forces of Wajo returned home, and the Arung Matoa 'gave orders for agriculture' (p. 200, 11.2-3). This litany could be interpreted to mean that he was redirecting his fighting men into food production, as just noted, or possibly, that the agricultural resources of the new conquest were being integrated into the state as a whole.

Noorduyn (1955:57) comments on how the major expansion of Wajo occurred under the long rule of Puang riMa'galatung and has set out (pp. 63-8) a summary of its progress - and many of the problems of detail. However, for the purposes of this argument, the details are not important: what emerges clearly is a picture of the state gradually establishing its dominance in the low-lying land north of the Cenrana River, and then expanding from there. It is not co-incidental, in my view, that that heartland is suitable for wet-rice agriculture.

Another Bugis chronicle for analysis is that of Bone (Macknight and Mukhlis in prep.) Whereas



Bone in the Fourteenth and Fifteenth Centuries

Bone plays a major role in the later history of the peninsula, it is notably absent from the sources for the earlier period.⁵ It will be clear from my argument so far that I believe this contrast to be determined largely by geographical factors. Before 1400, the area had little to commend it: tucked away half-way up the western coast of the Gulf of Bone, it lacked both harbour and any easy passage to and from the interior. There are no relevant mineral deposits and the products of the central valley could find much easier routes to the sea than through Bone. After 1400, however, the agricultural potential of the area came to be realized.

The site of Bone lies about 6 km. from the coast on a slight rise between the heads of a small creek. It is tempting to associate the name, which probably means 'sand', with the suitability of the site for habitation, but as it occurs frequently elsewhere, this may be no more than chance. The coastal plain is here about 15 km. wide and is backed by low hills of uplifted coral limestone. Several minor rivers flow out of the hills and across the plain to marshy outlets into the Gulf. The two most important for our purposes are the Palakka River just north of Bone, and the Pattiro River about 12 km. south. While the limestone hills to the west are poor country in the main, except for a few pockets in valleys, the plain would seem to have the benefit of detritus from basic volcanics in the headwaters of the rivers and to the south. Today it supports extensive rice fields, watered in part by irrigation works built earlier this century. A map showing land use in the mid-nineteenth century confirms the picture of a (relatively) closely settled plain with extensive sawah associated to some extent with the rivers (Perelaer 1872: vol. 2 map 1). The major difference over the century, here as else-where in Indonesia, is the vast expansion of sawah and the grievous diminution of the forest.

At first glance, the Bone chronicle does not appear to have as many references to agriculture as that of Wajo. The tomanurung figure seems more concerned with establishing a legal basis for trade than agriculture (though perhaps this is significant)

and I hesitate to read much into the name of his daughter who married the king of Palakka. She was called La Pattanra Wanua, which may be translated as 'Marker out of territory'. The second ruler was called the Ironsmith, but there is nothing specifically about agriculture in the account of his reign. It is only the third ruler, Kěrrampēlua', who among many other virtues, was 'praised as diligent in agriculture (mapato laonruma)'. The fourth ruler, the queen Wē Bēnrigau', actually buys land and orders people to lay out gardens (palla'i). After two years this had been done and the people had worked up the fields (nauma galungngē) when there was a dispute about them.

However a very different picture emerges when one plots the abundant reports of conquests and alliances in these early reigns on to a map. The tomanurung was brought to Bone from a distance of about a kilometre and married another tomanurung who had appeared about 4 km. away, between Bone and the coast. These places are marked with a 1 on Map 1.

The tomanurung was succeeded by his son, La Umasa'. This reign saw the conquest of 5 places, all in an arc some 3 to 4 km. south of Bone. These are marked with a 2 on Map 1. There was also close contact with Palakka, a similar distance to the northwest.

The most interesting reign, however, is the third, that of Kěrrampēlua', whom we have already seen was the first to be specifically associated with agriculture. This long reign of 72 years (c.1420 to c.1490) saw a spectacular enlargement of the state, and the chronicle is most informative on the processes involved. Kěrrampēlua' inherited Palakka and married the heir of Pacing to the north. He settled with his slaves two villages on the lower reaches of the small creek on which Bone is located and received fish and boat crew from them. More significantly, he continued the process of conquest. The chronicle distinguishes three groups of conquests, indicated here by 3a, 3b and 3c. In the first group, one of the three names cannot be located exactly, but it is certainly close to the other two, and

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one of the others seems to be a reconquest from the previous reign. The two names in the next group are a little further out. The third group of 12 names, of which 8 can be confidently identified, extends the range of control some 15 km. up to the edge of the barren hills. This reign also shows the beginning of another form of growth, that of association either by merger and adoption, or merger and acceptance of vassalage. No doubt these rather coy phrases reflect the outlook of Bone. Again the chronicle allows us to make some subdivision of the names in this category. A first, rather miscellaneous group, marked 3d, contains Palakka, a collection of 5 territories probably north of Bone, an unidentified name, and two places to the southeast. The next group, marked 3e, comprises three places in the hills. Next Kaju, marked 3f, on a major river to the south, is linked both by vassalage and by a marriage tie. Finally, Ponre, marked 3g, far in the hills to the south-west, is merged, and two collections of territories, probably to the northwest, were adopted. As the chronicle concludes, 'when Kërrampēlua' ruled in Bone, he conquered the area surrounding Bone.'

It is also possible to see something of the integration of this expanding state. Kërrampēlua' was responsible, so the chronicle tells us, for creating three war standards, between which 'the people of Bone' divided themselves. Each standard also 'shaded' the people of about 6 places under the command of a single individual, with the ruler of Bone maintaining overall control. About half the place names can be identified and all of these are on the plain within the range of conquered land. Unfortunately it is not clear whether the phrase 'the people of Bone (toBonē)' refers here, or elsewhere, just to a central group, or whether it includes all the people involved. What is not in doubt, however, is the link between expansion of territory and greater military power. The other striking feature of this analysis is the distinction between the adjacent plain to the south, with its agricultural resources, which is conquered and incorporated, and the more distant territories, especially those in the hills, where different methods are employed.

In later reigns, the stage on which the affairs of Bone are played out expands very quickly to encompass the whole peninsula. It is not necessary here to follow that development, because it is clear that, by c.1500, the state had already established the central heart-land, and the means of exploiting it, which was to sustain all later rule. A much later ruler in the seventeenth century, wanting to invoke dreadful consequences of breaking an oath, declares 'may my padi sheaves not thresh properly, may my harvest total not be complete, may mice not be kept clear from my storage pile' if certain things happen.⁶

It is inevitable when looking at a topic such as the history of South Sulawesi in the centuries before 1600 that our sources will be incomplete and often unsatisfactory. That is a familiar situation in protohistory. However, this paper demonstrates some of the general principles to be followed in such cases: the need to extract general principles from specific examples and to relate theories to some evidence, however equivocal; the attempt to integrate diverse kinds of data; and the requirement that each scrap of evidence be criticised as carefully and thoroughly as possible. The excitement of Sulawesi history is that we are so rapidly turning up useful new evidence.

NOTES

1. I do not enter here on the question of explanation. Cf. Hutterer 1977.
2. It is important not to over-emphasize the role of irrigation. Even today, there is a great variety across the province in methods of rice cultivation (Mattulada and Maeda 1982), and this is unlikely to have been less in the past. As an example of relatively intense, but non-irrigated cultivation, Tideman (1935: 73) describes a method of planting what amounts to dry sawah and taking advantage of rain as it falls.
3. John Guy has pointed out to me that many petty trading states in the archipelago collapse, on archaeological evidence, in the 13th and 14th centuries with the changes in Chinese trade at the end of the Song dynasty. New sites are developed from the 15th century. Given the indirect contact of the Chinese with South Sulawesi at this period and the difficulty of matching the chronology precisely, I hesitate to include these external developments as a factor in the South Sulawesi situation.
4. Translated from Matthes 1864: 576 = Niemann 1883: 6. There is a Dutch version by Kern 1929: 305-6 and Noorduyt 1965: 138-9 gives an English summary of the story.
5. I do not accept the identification of Bone with P'o-ni recently proposed by Suleiman (1980: 17-18 note 16). See, for a statement of the conventional and acceptable identification with Brunei, Mills 1974.

6. Compare the appeal of the people of Soppeng to their tomanurung to protect the rice crop against birds (Matthes 1864: 522; Kern 1929: 299-300).

Translated from Matthes 1864: 526 = Niekemann 1883: 6. There is a Dutch version by Kern 1929: 302-6 and Noordman 1965: 138-9 gives an English summary of the story.

I do not accept the identification of Bone with P'o-ai recently proposed by Sufism (1980: 17-18 note 16). See, for a statement of the conventional and acceptable identification with Brunel, Mills 1974.

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