A SEMIOTIC APPROACH ON INDONESIAN MEGALITHS STUDY

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1. Introduction

Megalithic structures in Indonesia have their own unique characteristics, compared with elsewhere, because of the influences of Indian, Arabic, and European cultures, as well as local developments. They exhibit great variation in shape, size and degree of complexity. Perry (1918), Hoop (1935), Geldern (1945), Heekeren (1958) and Soejono (1984) have identified stone tables (dolmen), slabs, coffins, menhirs, enclosures (*watu kandang/watu temu gelang)*, statues, pits (*batu dakon*), paved paths, upright statues, terraced platforms, jars, seats, elliptical coffins, rectangular coffins, chamber graves, cubic coffins (*waruga*), vat coffins and thrones (*pelinggih*).

Geldern (1945, p. 149) concluded that there were two main waves of megalithic culture in Indonesia. He connected the first wave, during the Neolithic period from 2500 to 1500 BC with Austronesian speakers, who utilized the quadrangular adze. These people constructed megalithic tables, menhir, terraced platforms, pits, and seats. The second wave, during the Bronze-Iron period from 300 to 100 BC, produced slab, elliptical, cubic and rectangular coffins, chamber graves and statues. While accepting Heine-Geldern's basic hypothesis, later researchers suggested that the two main waves of megalithic culture became intermingled and developed local variations (Heekeren 1958, p. 44).

Today, living megalithic traditions are known to exist on the islands of Nias, Central Sulawesi, West Sumba and Flores (Heekeren 1958; Soejono 1984). On the other hand, 'Prehistoric megaliths' lacking ethnographic context, are also found on Sumatera, Java, Bali, Kalimantan and Sulawesi.

2. Indonesian Megalith Problems

Research on Indonesian megaliths started in AD 1900, but has remained sporadic, fragmentary, speculative, superficial, descriptive, and typological in emphasis. As a result, their chronology, the identity of the builders, their origin, and lineage significance, are poorly understood. More specifically, it is not known whether recent megaliths in Indonesia, for example those of Nias, Toraja, Sumba, and Flores, are the direct heirs of older megalithic traditions in Sumatera, Java, and Central Sulawesi. While much information has been recorded on living megalithic traditions, there is little comparative archaeological evidence: megalith sites and their contexts have rarely been excavated.

In this article, I do not intend to pursue all these problems, but will attempt to go beyond the simple 'religious' concepts of megalith function, as put forward by Heine-Geldern (1945, p. 149):

> *The megaliths are connected with special notions concerning life after death; that the majority are erected in the course of rites destined to protect the soul from the dangers believed to threaten it in the underworld or on its way there, and to assure eternal life either to the persons who erect the monuments as their own memorials while alive, or to those to whom they are erected after their death.*

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Or as reiterated by Hoop (1932, p. 95):

> *Even if at present time, there were nothing in the images to suggest that they were suggest that they were used for purposes of worship, this would not exclude the possibility of their formerly having been used for such a purpose. Moreover, a short investigation revealed the fact that several of the images stand in the proximity of graves, and others near dolmen or upright stones. When one stands before one of these great images of the Pasemah, sculptured with so much care and devotion and attempts to imagine how much labor and how much time it must have cost to erect and complete such a colossus, the impression received is that these images were used for purposes of worship.*

Similarly Mulia (1980, p. 616), Sumijati (1980, p. 37), and Sukendar (1984, pp. 10-11) accept megalithic statues and menhir statues as the manifestation of ancestors, with supernatural powers to ward off misfortune, while Soejono (1984, pp. 235-247) associates megalithic coffins in Bali with a religious purpose and concentrates on typological description. Gunadi (1994, pp. 79-80) has argued that the stone enclosures (*watu kandang*) of Karanganyar, Central Java, had a practical astronomical function. They served to mark the rising and the movement of the sun. By tracking the movements of the sun from a fixed point, the megalith builders found it possible to determine the exact number of days in the year. In turn, this calculation of the sun's movement provided a calendar for the dates of particular ritual ceremonies, such as those intended to ensure success in rice harvesting.

More recently, Sukendar (1993, pp. 336-340) has stressed the religious function of menhir statues. By comparing the characteristics of menhir statues, their distribution and historical context, he classified the function of menhir statues into those, which were associated with burial ceremonies, and those connected with day-to-day ceremonies. Furthermore, he states that the functions of menhir statues were tied to ancestor worship.

All these explanations for the significance of Indonesian megaliths are very limited in scope. None have seriously dealt with the social and economic contexts of megalith construction – in present-day Indonesian societies or as manifest in the archaeological record. This article aims to rectify this situation.

3. The General Significance of the World Megaliths

Researchers concerned with megaliths outside Indonesia have largely moved away from descriptive, typological studies, in which function is interpreted in terms of superficial roles (e.g. religious purpose, ancestor worship or the associated 'story'). Rather than looking to categorize megaliths as the surviving remains of ancestor cults, they are concerned with the way in which megalith function within cultural system. Furthermore, they explore the relation between use of megaliths, social organization, settlement patterns, ideology, and land ownership – and how this might be manifest in the archaeological record.

Renfrew (1975, pp. 198-220) has suggested that the megalithic monuments of northwest Europe, especially chambered cairns, acted as territorial markers of segmentary societies. As Renfrew argues, there was greater population stress in this area, since the megalith builder's population grew to saturation point. Because the Atlantic coast to the west bordered this region, the excess population could no longer split and expand. In addition, the over-population was aggravated by the existence of hunter-gatherer-fisher populations along the coastal and estuarine regions. These two stress conditions resulted in clearly defined territories. It is in this context that the tombs of the ancestors functioned as territorial markers.

Closely linked to this idea is the notion that megaliths served as a medium to legitimate control of resources by reference to the ancestors. Chapman (1981, pp. 71-81), using an example from the middle Neolithic period in Holland, explained the relationship between the appearance of megalithic tombs and the presence of cultivation. The cultivated cereals at Swifterbant (western

Holland) and Hazendonk were dated to 3300 BC. In eastern Holland cereal cultivation has been practiced since 3500 BC. In 2700 to 2200 BC, evidence exists of rectangular stone chambers and long mounds constructed in the eastern province of Drenthe. What is interesting is that megalithic tombs emerge one hundred years after the earliest evidence of cultivation. Given this fact, Chapman argued that the population was expanding more rapidly than during the period 3300-2700 BC. Since eastern Holland's topography was higher and dry, arable areas were restricted in this region. Thus, high population densities and restricted resources led to the critical state of resources and economic stress. In order to ensure continued supplies, territorially based descent groups needed to be established. By using megaliths or stone chambers, legitimization and permanent claim to definite ancestors who possessed the resources were established.

A perspective which views megaliths as symbols of power has been proposed by Shanks and Tilley (1982, pp. 129-152). The basis of this work is the consideration that Neolithic chamber tomb practices can be used to express social structure. Using skeletal evidence from Neolithic collective chamber tombs in England (Wessex and Cotswolds) and Sweden (Scania), Shanks and Tilley analyzed the patterns occurring in the arrangement of the bones. This examination indicated a number of structuring patterns, such as: articulated and disarticulated skeletons; distinction between immature individuals and adults; between right and left parts of the body; and no clear distinction between male and female. Furthermore, boundaries of burial deposits were intentionally marked. They suggest that structuring principles and clear evidence of bounded division, may have acted as powerful means to emphasize the group rather than the individual, and, at the same time reflect the exclusiveness and solidarity of the local social group using the chamber tomb.

Shennan (1982, pp. 155-161) examined megaliths as socially active and legitimating social strategies. He proposed that the early Bronze Age in Europe (2500-1500 BC) marked a significant change in the decline of collective monuments. On the other hand, individual burial with exotic, metal, grave goods increased. Evidence from Wessex during the Early Bronze Age indicated that the construction of large-scale ritual centers ceased, but the appearance of a small number of burials with grave goods was significant. In the Agrarian Early Bronze Age, chamber tombs were replaced by single graves, richly provided with metal grave goods. In Brittany, during the Late Neolithic/ Copper Age period, megaliths were replaced by single-grave burials under barrows, which were associated with metalwork. From this evidence it may be suggested that, in the Early Bronze Age the collective labor ideology, which is represented in the installation of megaliths, was in decline. On the other hand, the new ideology of the consumption of prestige items and ritual symbols by powerful individuals, is evidenced by the construction of the single grave accompanied by grave goods.

Hodder (1984, pp. 51-68) has demonstrated that the way in which megaliths were constructed to negotiate social ends can be explained by assessing the historical context in which megaliths are located. Comparing European stone chambers and European long-houses in the period 5000-4000 BC, Hodder found similarity in their form and function. He then suggested that stone chambers referred symbolically to the long-house.

From historical context it is evident that elaboration of domestic space and domestic pottery in the central European long-house increased during the early Neolithic period. At that time, amounts of arable land were easily found, but the number of workers was limited. Since women were associated with the reproducers of labors, they occupied a central position in control of offspring and labor power as well as having their position in domestic space. In order to naturalize and mark out their important role, women elaborated domestic space and domestic pottery.

As land rather than labor, became the critical resource, women were no longer an important source of labor. Their role in the domestic space was devalued and the domestic space was less useful as an arena

for symbolic elaboration. Thus, the elaboration of domestic space and household pottery gradually decreased in the later Neolithic period. Conversely, it has been recognized that there is increased evidence of the appearance and elaboration of the chamber tomb by the late Neolithic period. It has been suggested that the role of women was transformed to the ancestor, 'the source of living'. In this case, the role of women was transferred from the domestic house to outside the domestic realm. At that time, when group association was emphasized, women were also emphasized as the source of lineage. However, only in the context of communal ritual and in the domain of the ancestors (chamber tomb), was the role of women affirmed.

Recently, Dillehay (1990, pp. 223-241) has paid attention to the social and ideological mechanisms which produce megaliths in the agricultural Mapuche society of south central Chile. Today, Mapuche land is spatially restricted, but they still reconstruct ceremonial fields and objects of group identity. The results of these processes are addressed firstly to demographic fragmentation or by sub-lineation of the patrilineal kinship. Secondly, through alliance-building with neighboring groups or fragmented lineages, larger and wealthier descendants also expand public ceremony. Thirdly, as time passes, internal and external conflicts as well as political marriages occur. These events result in the development of new lineage, demographic and geographic life history and forms, which are presented in the new construction of monuments.

The improved ability of European and American archaeologists to make inferences about many facets of megaliths should force Indonesian archaeologists to consider the fact that megaliths encode meaning. It seems reasonable to ask questions which emphasize the way in which Indonesian megaliths operated, and the way in which they encoded information in a wider social context (ideology, economy, demography, institution, and politics).

4. The Role of Indonesian Megaliths in Encoding Information

In all human societies, communication occurs whenever a message is exchanged between the sender and the receiver. In all cases, art, language, landscape, myth, and ritual are used as a medium to transmit information (Wobst 1977, p. 321; Howard 1996, pp. 44-45). It is important to emphasize that language is the main mode of human communication, since it allows human to exchange of detail information through face-to-face contact (Morwood 1998, p. 17).

In addition Wobst (1977, p. 328) argues that non-portable artifacts, which can catch the viewer's attention from a distance, and which can be encountered in various contexts by large number of people, are potentially very useful for broadcasting information.

However, we must also consider the role of artifacts in carrying information. As Wobst (1977, p.322) argues, the sender can encode information in artifact form without the presence of receiver. Furthermore, once information is so encoded, information can be broadcast without the presence of the sender. Thus, it transcends the limits of face-to-face interaction.

Indonesian megaliths clearly serve such a role, as localized accumulations of these occur in certain villages, which are the loci of social and economic activities. They are in prominent positions, catch people's attention, can be seen from considerable distances (up to 1 km), and help define architectural and social space within settlements. They therefore broadcast message at many levels (Fritz 1978, pp. 39-40; Wiessner 1990, p. 110).

Wobst (1977, pp. 323-328) suggests that only simple and highly standardized messages, relating to ownership, authorship, identification of individual or group affiliation, or information concerning religious and political institutions, are broadcast by highly standardized portable and non-portable artifacts. Since Indonesian megalith sites are localized accumulations of highly standardized, non-portable artifacts, then the nature of information broadcast should be reflected in their distribution within the megalith sites layout (Root 1983, pp. 208-209).

In their placement in relation to other cultural and natural features, Indonesian megaliths also have specific contexts. They

enable people to create space, manipulate and modify the relationship between nature and culture, or legitimate culture by making it part of the landscape (Kus 1983, p. 287; Layton 1985, pp. 434-453; Morphy 1991). As Fletcher (1977, p. 48) argues:

> *The human use of space is not only directed by immediate and material, functional or environmental controls, but it also patterned by the human brain's need for signal specifying the similarities or differences between various parts of its context and by the use of classifications of space as an adaptive mechanism for coping with the environment.*

The ritual function of megaliths requires substantial wealth, labor and appropriate social ties to maintain them. They are therefore an effective medium for broadcasting information on social status and power (Clarke 1985, p. 38). In this they are effective, but hardly efficient, given their high cost (Wiessner 1990, p. 106, 110).

As many researchers have called Indonesian megaliths 'monuments of the living to the dead', longer lasting example epitomize the message of continuity with the past, and also legitimize societies concerns with this. Megaliths symbolize the permanent relationship of people to their settlement and to the land of the ancestors (Bloch 1975, p. 208; Fleming 1973, p. 189).

Potentially then, there is a huge amount of information encoded and transmitted by Indonesian megaliths. This includes information on technology and the natural environments, as well as on ideology, economy, institution, and politics. From this point of views, studies on Indonesian megaliths will move beyond such superficial interpretation of 'meaning' to consider the role that megaliths played in establishing and maintaining the corporate identity of groups, establishing rights to use of resources, in integrating different cultural aspects of society, and as material assets in the processes of negotiation and political dispute.

For instance, Indonesian megaliths first appear in the Neolithic period, exactly when the introduction of agriculture led to more long-term, intensive and frequent repetition of land use. This must have been associated with potential for a major population increase as well as very different notions of land use, social organization, and land ownership. It is in this context that descent lines and their permanent relationship with tracts of land would have become a major social concern (Meillassoux 1973, p. 198; Clarke 1985, p. 17).

Land use involving longer and more continuous production, greater labor investment, clearly bounded territories and land inheritance, would have created the need for formal symbols to establish fixed relationships between resources, social groups and descents. Erection of megaliths by corporate landowning groups in fixed places, would have established a link between subsistence, social groupings, territoriality and ancestor cults. Megaliths would therefore have functioned as important symbols for validating indigenous descent, as territorial marker and for legitimating access and claim to the land (Chapman 1981, p. 73; Clarke 1985, pp. 16-18).

5. The Rationale for Semiotics Approach to the Study of Indonesian Megaliths

The work of Shanks and Tilley (1982), Shennan (1982), (Hodder1984), and Dillehay (1990) on European and American megalith, has clearly shown that megalith cannot be understood solely by its symbolic representation, but rather as a functional part of cultural system. That is, the meaning of megalith is inherent in its interrelationships with ideology, social organization, territoriality, resource use, etc. As Elkin (1961, p. 56) argues:

> *Meaning is not obtained by asking the artist or bystander what a certain pattern indicates, nor merely by getting the myth it represents. Meaning comes after much travail out of the functional relationships of philosophy, belief, ritual, social structure and the general heritage of culture.*

This point of view is semiological in the sense employed by de Saussure (1959, pp. 36-37), and involves the study of the means by which sign encode meaning as used in linguistics. The primary interest here is to

investigate the relationship of sign, especially to produce meaning.

In Archaeological study there are various ways of tackling this. For instance, in his analysis of European Paleolithic cave art, Leroi-Gourhan (1965, pp. 55-56) showed that the artists intentionally chose figures placed in deliberate locales within the cave, and in particular association with each other. Based on this evidence, he argued that there was an underlying structure or set of structural principles to the art, which reflected its ideological context.

It is worth noting, that Morphy's study of Yolngu bark paintings in Northeast Arnhem Land, Australia was explicitly semiological in approach. Morphy (1977) examined the way in which Yolngu art objects are used in a variety of cultural context. He remarks that Yolngu art is not only an important institution, but also a central component of Yolngu's social structure. It provides a way of socializing people into a particular world view, in which certain themes become meaningful, in which certain values are created and by which certain thins can be done. In addition the art provides a framework for ordering the connection between people, ancestors and land. Morphy's approach is readily applicable to archaeological interpretation of rock art sites in other parts of Australia.

In the central Queensland Highlands, Morwood (1984) demonstrated how the cultural and natural context of rock art sites can reflect the function of the art. He used models drawn from available ethnographic and ethnohistorical information on recent Australian Aboriginal groups to show how art can serve either a binding or a bounding function. On this basis he argued that the transition from Panaramitee-style engraving sites, which were part of a widespread rock art tradition, to rock art sites containing regionally-specific motifs about 4300 years BP, was due to the development of symbolic bounding mechanisms associated with greater territoriality and more intensive economic strategies, such as use of cycad nuts and grass seeds.

Smith (1992) investigated the relationship between style in visual art media (e.g. barks boards, canvases, walls, hollow trees), and social context, in the art system of the Barunga Aboriginal community in the Victoria River District of the Northern Territory. Assuming that style may encode information relating to the social context of production, she showed that the form of the style will reflect the specific constellation of relationship between social structure, social action and natural context.

Current studies in symbolic meaning, especially archaeological rock art, have shown the usefulness of semiotic approach. For instance, in an archaeological study of Aboriginal in Southeast Cape York Peninsula, Australia, Morwood (1992, pp. 417-426) examined chronological changes in the content as well as the natural and cultural context of rock art sites. These were then considered in the light of other evidence for changes in the nature of Aboriginal occupation and the palaeo-environmental record. The rock art sequence was then interpreted in terms of changes in social or territorial organization, ideology, demography and economy.

These studies of European and Australian Aboriginal rock art are important because some of the theoretical perspectives and strategies of inquiry are directly transferable to the investigation of other types of symbolic systems elsewhere in the world – including use of Indonesian megaliths.

From this perspective, it is clear that to understand the meaning of Indonesian megaliths, one must analyze the relationships between all aspects of Indonesian culture-including ideology, settlement patterns, social organization, resource use, systems of landscape utilization, and so on.

In short, the rationale for semiotic approach to the study of Indonesian megaliths is that Indonesian megaliths, like language, broadcast their information through their stylistic characteristics and structural patterning. Thus, the megaliths can be regarded as elements in a semiotic system in which the social and material context encode information to the observer about the cultural systems.

6. Concluding Remark

Indonesian megaliths vary greatly in kind, date and spread, over most parts of

Indonesia. They are still associated with myths and ancestor-cults, and some of these ideas are deeply embedded in aspects of Indonesian culture. Unfortunately, previous studies of Indonesian megaliths have been narrowly and superficially 'religious' in focus.

Thus, the problem which has to be faced in Indonesian megalith research is how to reformulate classical theory, which addresses superficial identification of megalithic remains, as exemplified by the work of Perry, Hoop, Heekeren, Soejono and other studies.

Rather than looking to categorize megaliths as the surviving remains of ancestor cults, semiotic approach is concerned with the way in which megaliths function within a cultural system. It explores the relation between use of megaliths, social organization, settlement patterns, ideology and politic. By doing this, the future megalith research in Indonesia should deal with the question of how megaliths, which convey information, actually operate within a social system which encompasses both cultural and environmental aspects.

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