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Archaeological and Ethnographic Studies on Natural Resource Utilization

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It is not possible to discuss how human beings have utilized natural resources without looking at the natural environments in which they have lived. Different natural environments (dry land, island, tropical, sub-tropical, temperate, polar, etc.) offer different resources (animals, plants, minerals, etc.), which is why it is so difficult to characterize natural resource utilization by human populations in different places, at different times.

In order to advance anthropological knowledge of cultural variation and natural resource utilization, a large research group (consisting of eight research units) was organized in 2002 to study the 'Distribution and Sharing of Resources in Symbolic and Ecological Systems: Integrative Model-building in Anthropology'. The research was led by Motomitsu Uchibori and continued for five years, with a funding by Grant-in-Aid for Scientific Research on Priority Areas, from the Japan Society for the Promotion of Science. One of the research units, led by myself, consisted of seven researchers from Minpaku and two from other

universities. Our research title was 'Selective Use of Natural Resources and the Process of Symbolization'.

Defining 'resources' is not a simple matter. Any substance in the natural environment becomes a resource for the person who actually uses it. Recognition of the value of a resource occurs at various points in time and space, in the natural and social environments in which the person lives. As noted by Sahlins, natural environmental conditions play a significant role in cultural dispositions towards how natural resources are used. The environments selected for our research varied from arid to arctic, mountainous, and island. Some of our results are described in the present newsletter.

The island environment was my area of study. The diversity of Pacific islands is great in terms of area, height, geological components, climatic conditions and so on. The natural resources available on each island are more-or-less isolated from those available on other islands. This partly explains why Oceania has been recognized as a 'laboratory' for biological and anthropological model building.

Many small islands were abandoned by prehistoric populations in Oceania. The common features of these islands are small size and a scarcity of natural resources, especially water supply. The ease of contact with other

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islands was also a crucial factor for survival on these islands. Without adequate resources and social connections, it seems to be difficult for people to live on such islands for long periods of time.

On low coral islands, neither clay nor volcanic or sedimentary stones are present. These raw materials are necessary for making pots and stone tools. Fresh water supply is generally poor and the variety of plants that can grow is very limited. Atolls are particularly vulnerable to natural disasters such as droughts, tropical storms, and tsunamis. Despite such conditions, some small coral islands were populated for long periods and developed systems to secure resources and cope with emergency situations.

In Micronesia, two important inter-island exchange systems persisted into the historic era, within the Marshall Islands and between the central Caroline Islands and Yap. Most islands involved in such exchange systems were atolls. The latter exchange system is called *sawei* and operated between many low-lying coral islands and Yap (a high island), despite language differences. Items brought from the coral islands included woven cloth and various handicrafts which were exchanged for natural resources unobtainable on the coral islands: bamboo, red soil pigment, turmeric, yams, and some man-made products, such as canoes and pots. Carolinians invariably received greater economic benefit from the exchange than the Yapese.

Development of the *sawei* system has been mostly debated on the basis of ethnographic data, which emphasizes

the importance of the overseer power of the Yapese class society. My own approach has been to examine the exchange interactions from the viewpoint of the islanders, who may regard exchange as a resource management strategy. The most significant function of *sawei* is to maintain the social relationships needed to secure aid in case of an emergency. It is an insurance system that gives coral islanders protection against potential future disasters.

Although the origin of the *sawei* exchange network is still not clear, the history of contacts between coral islands and Yap seems to be fairly long. My archaeological excavations on Fais island indicate outside contacts back to about 1800 years ago. A number of excavated potsherds show that pots were brought in to Fais, perhaps together with other resources. The imported materials were not necessarily introduced through an established exchange network, but do show that maintaining contact with other islands was an early living strategy for the resource-limited islanders.

Simple inter-island trading between Yap and the outer islands began in the 12th to the 13th century, according to interpretations of legendary and genetic evidence from Puluwat and Satawal. This dating is close to a period in which these islands were affected by strong El Niño events, around approximately 1150-1000 BP. During the El Niño, the western Pacific must have suffered a severe drought. This was also about the time when the Yapese constructed *Cyrtosperma* (giant swamp taro) cultivation plots along the coast. The increase of such gardens may have

supported a larger population on Yap and the emergence of a ranked society. As a result, if outer islanders visited Yap desperate for help, the Yapese could have taken advantage of the situation. In due course, one high-ranked village in Yap came to control the system and monopolized the exchange of goods. Imported goods, such as red *Spondylus* sp. shell necklace and woven cloth, became valuable. Simple interactions initiated by the outer islands were now interwoven into the Yapese political order.

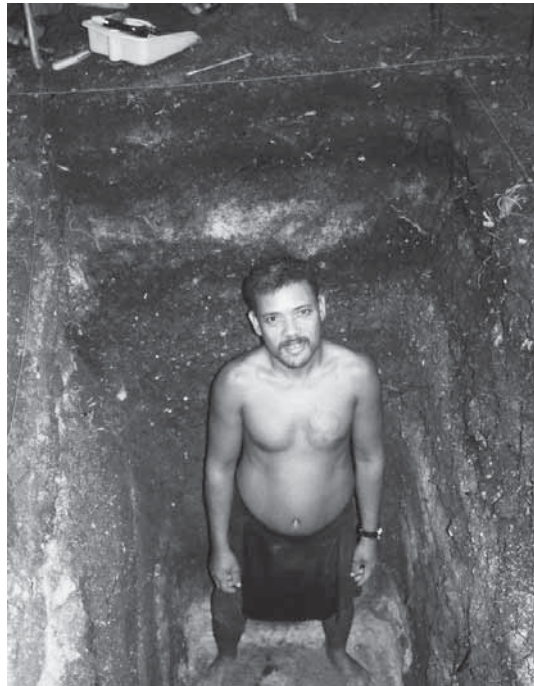
I have argued that interactions between the coral islands and Yap have

An imported Yapese earthen pot which was still kept on Fais (Intoh, 2005)



always been started by the coral islanders. *Sawei* originally began with individual ties amongst families on the Caroline Islands and Yap. The individual ties may have then evolved into a systematic relationship in accordance with changes in Yapese society: population growth, introduction of giant swamp taro, development of coastal gardens, and formation of a ranked society.

For coral islanders, *sawei* is a form of resource management. It is not an equal exchange. By intentionally keeping the relationship unequal, Carolinians succeeded in cultivating a Yapese sense of superiority as well as of responsibility toward the islanders as guardian. The apparent anomaly in exchange may be explained by extending Kirch's recognition of the wet and the dry as distinct island environments that led to fundamentally different means of economic and political control, among island societies. Such is the variation through which some patterns of prehistory can be explained.



A deep cultural deposit excavated on Fais island in 2005. Many imported potsherds from Yap were found throughout the 1800 year sequence (Intoh, 2005)

Fur Trapping and Selective Usage of Ecological Resources by the Udehe in Far East Russia

Shiro Sasaki

National Museum of Ethnology

Hunting techniques and equipment generally vary according to natural and socio-cultural circumstances. In anthropological and ethnological studies of hunting techniques and equipment, researchers usually give more attention to the natural rather than to the social and cultural circumstances of usage. However, the latter are just as significant as natural ones. When a hunter has a range of tools that can be chosen and used under the same natural conditions, he will choose those that give him the best results in relation to his society. Here, I will try to explain changes in hunting equipment and techniques among Udehe people, one of the indigenous ethnic minorities in Far East Russia, in relation to changes in their socio-cultural circumstances.

The Udehe live in the basins of tributaries of the Amur River, in the Primorye and Khabarovsk regions of Far East Russia. Their population is very small, and only 1657 people were registered in the official census taken in 2002. Their name, *Udehe*, means 'forest people', and their life has typified northern-latitude forest hunting and gathering for anthropologists and ethnologists. Their society and culture has often been described as 'primitive' or 'uncivilized'. At the end of 19th century, and in the early 20th century, researchers often found them using simple temporary huts and wandering through the forest to chase wild animals and find good fisheries.

However, their culture also had another side that could be seen as civilized and sophisticated. Certain

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people of high status wore silk and cotton costumes and used many kinds of foods and utensils imported from China. They accumulated property through political and economic connections with Chinese officers and merchants. They sold many precious furs, such as sable, silver fox, and lynx. They also sold ginseng and other medical plants to the Chinese, and purchased from them silk and cotton clothes, flour, liquor, metal products, ceramic utensils, and even religious items such as icons and amulets. The Udehe were linked to a huge economic system that was established by the Chinese empire.

The economic life of the Udehe was based on hunting and the utilization of forest resources. This did not change after the shift of the national border between China and Russia in 1860, when their territory was separated from China and absorbed into Russia. Nor did it change after the Socialist Revolution in 1917. The Udehe continued selling the animals they hunted, and other forest products, to Russian and Chinese merchants, and they continued to acquire many things from them in return. During the Soviet Regime, they supported the national

economy of the Soviet Union by producing precious furs that could be exported.

The two main categories of Udehe hunting are 'subsistence' and 'commercial'. Subsistence hunting provides the people with fresh meat from large animals such as bear and deer, and supports their basic material culture with pelts, hides and bones. In commercial hunting, the hunters aim at smaller fur-bearing animals such as sable, fox, otter, lynx, ermine, weasel, and squirrel. This hunting supports their trade activities, political actions, and sophisticated culture. In order to capture animals with high quality fur, Udehe hunters choose traps and techniques not only according to natural conditions, but also according to the prevailing economic and political conditions.

Nowadays Udehe people have traditional and modernized traps. The former include various kinds of dead-fall traps, snares, hunting nets, and automatic bows, which have been used ever since the beginning of the Chinese dynasties. The latter include variously sized steel-jaw traps that are widely used across Russia and that were distributed as a policy of the Soviet government.

To make and set the traditional traps, the materials needed can be acquired at places in the forest where the traps are set or elsewhere in the hunter's territory. These kinds of traps are generally made of trunks or branches of trees, pieces of wood, vines, plant fibers, and the tails of animals, none of which require purchase from outside sources. Usually the traditional traps do not damage the quality of the fur. The animal captured in a dead-fall trap is killed by a hit on the body or head. It is killed instantly and the animal is not tortured. Nets and snares can also capture animals without damage. This is one of the advantages of traditional traps. A disadvantage of these traps is that they require a long time to set and do not allow a hunter to set many traps in a limited time. The hunters cannot easily increase their catch or productivity. In short, traditional traps can be described as 'quality-oriented' traps. When Udehe hunters were under the control of the Chinese dynasties, productivity as such was not important. High quality was desired because sable and silver-



Sengmi, an automatic bow trap (Sasaki, 1996)



Dui, a Chinese type dead-fall trap (Sasaki, 1995)

fox fur could be used only by royal families, who were considered sacred.

Modern jaw-traps can be described as 'quantity-oriented'. They are easy to set because they are small and are simply made. Hunters can set a trap at any point on which an animal may put its paw. This type of trap increases productivity, but often damages the fur pelt, because it snaps onto an animal's paw and then allows the animal to wriggle in an attempt to escape. However, this is not considered to be a problem now, because the eventual users of the fur are not sacred — they are rich but ordinary people. Though damage lessens the value of a fur, hunters can make up for the loss with quantity.

The modern traps have another consequence: jaw-trap hunting, like gun hunting, makes hunters dependent on equipment and materials supplied from outside their area. Traps, guns, bullets, motor vehicles (motor boats and snowmobiles) and fuel must all be bought with the money earned by selling hunting products. The Soviet Union and other modernized countries often encouraged quantity-oriented hunting in order to raise the productivity and integrate people with the national economy. This policy succeeded and sometimes enriched the lives of hunters, when the government gave the hunters appropriate protection. However, such hunting has the serious defect of leading to overexploitation and a susceptibility to economic crisis.

The usage of traditional and modernized traps reflects the economic and social conditions at each time in history. Traditional traps were well adapted to the pre-modern, dynastic



Hunter setting a jaw trap (Sasaki, 2003)

society and economy. The shift to the modernized traps followed the change from a pre-modern to modern economy, from quality-oriented production to quantity-oriented, and from hunting that was less dependent on outside materials to that which was more dependent.

After the collapse of the Soviet Union in the beginning of the 1990s, Udehe hunters became more exposed to the global market economy. This required a fundamental change in their production activities, and caused serious economic and social crises. The previous socialist economic system protected the hunters from sudden fluctuations in the prices of equipment, fuel and products. Inflation in the costs of fuel and other materials, and decline in the price of hunting products made it difficult for the Udehe to continue even subsistence hunting. Despite their best efforts, they have not been able to adapt their hunting methods to the present social circumstances. Now Udehe hunters must urgently develop new methods for using their forest resources other than by hunting, in order to adapt and succeed within the new global economy.

Reconstructing Dietary Patterns in the Pre-Columbian Period of Peru

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It has often been pointed out in anthropology that food has important cultural dimensions. Patterns of food

production and consumption are based not only on adaptation to local ecology but also on political or religious control.

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By analyzing the corn (*Zea mays*) consumed in ancient societies of the Central Andes, South America, I am hoping to clarify the cultural dimensions of dietary patterns in this region. The corn of South America is thought to have diffused from Mesoamerica, where corn was domesticated, in the prehistoric period.

In the Central Andes of South America, corn is generally eaten after boiling or roasting, but the most distinctive use is for brewing a liquor called *chicha*. In this form, corn plays an important part in social, political and religious life to the present day. *Chicha* is served at meetings and at feasts for labor groups concerned with sowing, harvest, and so on. The drink encourages cooperative relationships within social organizations and kinship groups.

Chicha is also offered to the *huacas*, supernatural beings who are usually thought to dwell in the mountain, lake, or underworld. The aim here is to make cooperative relationships between *huacas* and humans. Behind all of this we can see a principle of reciprocity embedded in Andean tradition. The cooperation of labor is recognized and reciprocated at the feast, and the *huaca* that brings a high crop yield and agricultural fertility is treated with respect which is shown through an offering of *chicha*.

These ways of using corn and *chicha* go back to pre-Columbian times. In the Inca period, the ruler gave *chicha* to subordinates at the feasts held for large-scale projects such as the construction of royal roads and provincial administration centers. The liquor was provided to participants who paid tax in form of labor for the projects. However, reciprocity did not

mean equality. Ruler-subordinate and upper-lower relationships existed. Liquor was used as a way of confirming or cementing these relationships. *Chicha* was thus endowed with a political character based on the reciprocity principle.

Recently new scientific methods to evaluate the importance of corn in prehistoric diet have been developed. I will focus on the study of prehistoric diet through stable carbon and nitrogen isotope measurements of human bone collagen.

Because C_4 plants contain relatively large amounts of the carbon isotope ^{13}C and C_3 plants contain relatively little, it is possible to gain a rough idea of plant food intake by measuring the ratio of ^{13}C and ^{12}C in collagen. The principal C_4 cultigen consumed in pre-Hispanic Peru was corn. By measuring the ratio of ^{15}N and ^{14}N isotopes, we can also learn about the consumption of marine foods, which have more ^{15}N .

These methods have been used to analyze bone samples from archaeological sites in the Cajamarca basin, in the northern highlands of Peru. The sites belong to the Formative Period (BC1500-BC500), and the C_4 plant (maize) appears to have become important during the late part of this period. Only a little use of marine products is recognized, through all the phases.

Excavations at the Huacaloma site in Cajamarca basin were carried out by our Japanese team. Here, the Formative Period has four phases: Early Huacaloma (BC1500-BC1000), Late Huacaloma (BC1000-BC500), EL (BC500-BC250) and Layzón (BC250-BC50).

In the first phase, it is thought that small rooms or houses were scattered in the Huacaloma area. Large monumental structures decorated with symbolic designs were built and renovated several times in the Late Huacaloma phase, above the small structures of the previous phase. Presumably, the monuments were surrounded by many houses in which people lived, in order to sustain ceremonial activities. Several other ceremonial centers can be found in the same basin, and also on the ridge of a mountain overlooking the basin. After decline during the EL phase, the Huacaloma was transformed from a ceremonial center into a non-sacred residential area during the Layzón phase. Other large-scale centers flourished on the mountain ridges surrounding the basin during the

Brewing chicha; Piura region, north coast of Peru (Seki, 1989)



Layzón phase. However, the later monumental structures lose the symbolic designs that indicate signs or messages from the leaders to the public. Since corn started being used during the EL phase, the introduction of this plant might be correlated with the social change.

The introduction of corn during the Formative Period can be related to various kinds of archaeological evidence. Analysis of pottery vessel forms indicates that corn was used for liquor. Vessels suitable for brewing *chicha* increased suddenly in the Layzón phase.

Social conflicts or tensions between the society of Cajamarca basin and outside area are also apparent in the Layzón phase, through changes in settlement pattern and the placement of monumental architecture. The earlier monumental architecture had defensive characteristics and strategic location. The central axis of structures on the mountain ridge during the Late Huacaloma phase was oriented toward the bottom of the basin.

In the Layzón phase, monumental structures appear to be set very close to an old road that led to the coast, and may be directed against an outside threat. In addition to the architectural remains, weapons such as stone *bola* were unearthed.

The evidence also suggests that feasts were held to maintain or strengthen relationships among social groups, and to reduce conflict and tension, and *chicha* beer was probably consumed on such occasions.

At Cajamarca, the cause of social



People drinking *chicha*; Piura region, north coast of Peru (Seki, 1989)

change in the late Formative Period is not yet known. However it is certain that the Late Huacaloma society depended considerably on a religion or ideology that began to collapse around the same time as the introduction of a new crop (corn). This new source of the power (corn, and *chicha*) may not have been well controlled or skillfully manipulated by older leaders such as priests, who knew only traditional methods and values for winning the hearts and minds of the people.

New scientific methods in archaeology can provide us with many ideas for understanding historical processes: the use of *chicha* beer served as a pacifying medium among conflicting groups, and the socio-political meanings of food in prehistoric times.

Resource Use and Evolution of Transegalitarian Societies in the Prehistory of Okinawa, Japan

Hiroto Takamiya

Sapporo University

The Okinawa island group, in southern Japan, consists of many 'small' islands. The largest island in the archipelago is mainland Okinawa, with an area of approximately 1200 km². The islands were successfully colonized by humans, for the first time, during the later

Middle Jomon and the Late Jomon, at about 4000 BP. From this time, a hunting and gathering economy persisted until the first millennium AD. In this paper I focus on how these hunter-gatherers utilized animal resources over 3000 years, and attempt

Hirotaki Takamiya received BA from the University of Toronto, and MA and PhD from the University of California at Los Angeles. His research on the prehistory of Okinawa focuses on how people adapted to the island environment. More broadly, he is interested in theories about the beginnings of agriculture and the evolution of human societies. His publications include 'An unusual case? Hunter-gatherer adaptations to an island environment: a case study from Okinawa, Japan' (Journal of Island and Coastal Archaeology 1(1) 2006) and 'The beginnings of agriculture in Okinawa and Hokkaido' (in press).

to analyze prehistoric social organization, in order to understand why conspicuous symbolic resources were not developed in the region. The development of symbolic resources and social complexity are often correlated.

When humans first succeeded in colonizing the islands of Okinawa, what natural resources did they find and utilize? Earlier attempts to colonize the islands (during the Initial/Early Jomon periods) did not succeed, so what the later successful colonizers found on the islands must have been a pristine environment. In such an environment, we can presume that hunter-gatherers targeted the least-costly food items that were simultaneously of high value in nutritional terms. Four recently analyzed Late Jomon sites in Okinawa yielded remains of 1000 to 50,000 animal specimens identified to the Class level. The results of taxonomic analysis were astonishing.

The first ranked Class was Osteichthyes (hard boned fish). Seventy-five to ninety percent of specimens belonged to this Class, and these specimens were almost exclusively from coral reef species such as parrot fish. Specimens in the second ranked Class were more than forty percent less abundant. The results strongly indicate that coral reef fish were the most important source of protein for Late Jomon people in Okinawa. Coral reef fish species were the most easily-obtained, useful source of protein in the archipelago environment. The dominance of fish in the subsistence system was not established during the Initial/Early Jomon periods. Instead, mammals and almost exclusively wild boar were the dominant source of animal protein. In terms of effort, danger and yield, the boar is a much more expensive species to obtain than coral reef fish. The shift to dependence on coral reef fish probably enabled human groups to successfully colonize the island environment.

The fish-based system may be the ideal protein procurement system for the environment, and was expected to be relatively stable. However, comparisons of Final Jomon and Early Yayoi-Heian period remains contradicted this expectation. The system seems to have disintegrated during the Final Jomon, and during the Early Yayoi-Heian, much more costly procurement systems emerged. Some of the hunter-gatherers diversified their protein sources, while others focused more intensively on costly species such as wild boar. In addition to intensification and diversification,

Okinawan people began conducting long distance exchange with the mainland Japanese. I suggest that this period must have been a period of food stress.

The first successful colonizers in the Okinawa archipelago seem to have had a simple band-like social organization. Although more than one hundred Late Jomon sites have been reported, only eight have yielded house structures, and only few (one to eight) house structures were found at each of these sites. This implies that the hunter-gatherers were mobile population. Furthermore, the dimensions of house structures were small and very similar, on average 3.18 × 2.47m. This piece of information suggests that the social organization of this period was egalitarian, and this seems to be supported by other archaeological data.

During the Final Jomon period, the number of sites with house structures increased. These later sites contained several to more than sixty house structures, and a large cemetery with at least sixty burial pits has also been discovered from this period. The Final Jomon people must have been less mobile than their predecessors. The later house structures also varied considerably in their dimensions (unlike those of the Late Jomon) and burial pits were likewise more variable, implying the emergence of transegalitarian societies. The shifting location of settlement, from the cliff bottom of the Late Jomon to the hilltops or flat lands of the Final Jomon, implies that defense became an important factor for changes in social organization.

Although a chiefdom-like society did not emerge during the Early Yayoi-Heian period, the social organization of this period was not the simple band. Long distance exchange with mainland Japan, along what is known as the 'Kai no michi (Shell Road)', appears to support this statement. Recently, settlement patterns for this period were analyzed in detail. Seven 'large' sites were surrounded by many 'small' sites, and the large sites were more-or-less equidistant. The results strongly suggest the presence of a settlement hierarchy. Furthermore, the large sites yielded a greater abundance of foreign artifacts than small sites. Despite the apparent emergence of transegalitarian societies, a chiefdom-like society did not follow. Instead, the social organization appears to have returned to a simple-band structure.

Several messages can be read from the prehistory of the Okinawa archipelago. First, in pristine



environments, human groups targeted the most easily-obtained and valuable resources for survival. However, since no environment can provide unlimited resources, and because populations increased after successful colonization, the initial subsistence system could not be maintained. Subsistence became more costly, in practical or energetic terms. In the prehistory of Okinawa, we can see that the Early Yayoi-Heian was a period of food stress.

Secondly, it is unlikely that social organization could remain unchanged as resource stress increased or changed. In the prehistory of Okinawa, the most stress-free social organization, a band-like society, existed when people first settled the region. However, a more complex social organization (in this case, transegalitarian) emerged during the Final Jomon and Early Yayoi-Heian periods. The reasons for this social evolution are several-folds, but main one was probably an imbalance between the available natural resources and human population size. Resource scarcity appears to have caused or driven the social evolution.

Thirdly, and most interestingly, although a complex form of social organization emerged, it did not become like a chiefdom. The later society is best described as 'not simply simple, but not complex enough'. Why did a chiefdom-

like society not emerge? The main reason was probably a lack of natural resources. The environment of Okinawa was rich enough to sustain hunter-gatherers for 3000 years, but not rich enough for a chiefdom-like society to evolve. For the evolution of complex societies, control over access to key resources is extremely important. In the case of Okinawa, key resources were obtainable from the coral reef environment, which was accessible for everyone. No single person or group could gain exclusive control over the key resources.

Fourthly, and as already stated, natural resources were enough to support hunter-gatherers, but there was an upper limit of population size that could be sustained in the island environment. The population at this upper limit might not have needed strong leadership, and therefore might not have needed strong development of status symbols. A lack of symbolic items is evident among the artifacts recovered from early prehistoric sites in Okinawa.

The prehistory of this archipelago is extremely significant for our understanding of resource utilization, the evolution of human societies, and the development or underdevelopment of symbolic items.

The coral reef environment of mainland Okinawa. Coral reef resources may have been critical for successful colonization of the island by hunter-gatherers (Takamiya, 2004)

Rewriting African History: Ecological Resources and Development of Social System

Shoichiro Takezawa

National Museum of Ethnology

Shoichiro Takezawa, a professor at National Museum of Ethnology, specializes in ethnology and West African archaeology. Recent works include 'Mema dans l'histoire de l'Afrique de l'Ouest' in Proceedings of the 11th Congress of Panafrican Archaeology (2006), History of Anthropological Thought (Kyoto: Sekaishisoshu 2007, in Japanese), and French Colonial Empire and Its Representations (Kyoto: Sekaishisoshu 2001, in Japanese).

Is the development of a social system related to the richness of ecological resources? Or is it more related to other factors, such as long-distance trade? Does formation of the state result from the inner conflicts, as thought by Marx and Engels, or from intensification of social controls as suggested by Weber? These are questions that I have tried to answer through field research in West Africa since 1981.

The initial stage of my research, conducted in the society of fishermen of the Niger River, was ethnological. I tried to understand all aspects of the economic, social and religious changes the people had experienced after World War II. The next stage is archaeological and is aimed at finding the economic and social foundations of the 'medieval' West African kingdoms, which flourished from the 7th to the 16th centuries. Learning how these historical states have affected the foundation of present West African societies, I realized that no ethnological study can be complete without analyzing the past.

West Africa has no high mountains, so the ecological conditions of each area are determined mainly by distance from the Guinea Coast. Along the coast lies tropical rain forest. Further inland we find the wet Savannah (annual

rainfall 1000 to 2000mm), the dry Savannah (500 to 1000mm), and finally the Sahel before reaching the Sahara. My field studies have been located in the Sahel and Savannah.

The West African Savannah is very rich in ecological resources. Pastoral, agricultural and fishing activities have intensified over the last two thousand years, as demonstrated by the recent archaeological surveys. Many plants were domesticated in this zone, including Glaberrima rice, Guinea millet, sorghum, sesame, karite, gourd and okra. Within the Savannah, I work in an area called the Inner Niger Delta. This area is especially rich, with flooded water covering the land for several months. This makes rice farming possible. When the water subsides, the cattle enter to eat new grass. They leave a large quantity of excrement that is dispersed in the next inundation to enrich the plankton that fish eat. Thus, the Inner Delta is very favorable for many kinds of human activity. It is not by accident that all the ancient West African kingdoms flourished here.

The social boundaries of Inner Delta peoples are determined by occupation. The fishing people with their own language and customs are called Bozo. The cattle raising people are called Fulbe, the rice cultivators Marka, and the dry field farmers, Dogon and Bambara. The Dogon and Bambara are famous for a religious system that includes secret societies and mask rituals. Though poor in their ritual life, the Bozo are rich in oral traditions. The Fulbe founded Islamic theocratic states during the 18th and 19th centuries. The Marka have invested the capital accumulated through stable rice culture to construct commercial networks across West Africa.

The West African Savannah is therefore rich not only in ecological resources but also in cultural symbolization. The peoples of this area have used the wealth obtained from rich ecological resources to elaborate their cultural symbols. This elaboration

Remains of a building made entirely of stones, Gao city (Takezawa, 2004)



has a long history, judging from old terracotta statues found throughout the Savannah.

The Sahel, in contrast, is generally poor in ecological resources and has little rainfall (less than 500mm). Agriculture is virtually impossible except for millet cultivation in the lowland, and water wells are more than fifty meters deep. Nomadic stock raising is the main activity. The lack of seasonal variation in rainfall has also contributed to the ecological difficulties. The natural scarcity is reflected in the lack of cultural symbolization: no secret societies, no mask rituals, and no terracotta statues have been found in the Sahel.

Curiously though, all the ancient states of West Africa were located in the Sahel. The first Arabic documents (8th century AD) indicate the existence of kingdoms called Ghana, Gao and Zaghari, all located in the Sahel. Later Arab writers continued to regard Ghana as the richest country in the world, for gold. By the 15th century, Gao had become the capital city of the Gao Empire that dominated most of West Africa.

In contrast, early Arabic documents make no reference to large states in the Savannah. Except for the Mali Empire of the 13th and the 14th centuries AD, the first kingdoms in the Savannah appeared in the 17th century, after the Atlantic slave trade upset the economic balance of West Africa in favor of the coastal areas.

Archaeological studies will be important for solving the seeming paradox of ancient kingdoms located in the poor Sahel. Recent studies in the Inner Delta have found a quantity of cultivated rice, cattle bones and iron slags from a layer dated to the 5th century BC. Economic development apparently resulted in a population growth: at the site of Djeno, from the 8th to the 10th century, an estimated population of about 10,000 people was supported. In and around the Inner Delta, there exist more than ten archaeological sites as large as Djeno.

So far, no archaeological survey has found proof of social stratification and early states in the Savannah. Rodely McIntosh, an archaeologist of the Djenne-Djeno for the past twenty-five years, suggests that Savannah societies are egalitarian, due to a leveling mechanism, the investment required for elaborate cultural symbols and activities. Surplus production has not resulted in the development of highly stratified societies.

Our team has conducted several archaeological surveys in the Sahel over



the last eight years. In 2002, we worked at Gao-Sane, a site famous for abundant glass beads that have been extracted by clandestine diggings, near the city of Gao. We found more than 500 beads made of glass and other materials, several spindles, and a few dozen crucibles, presumably used for melting glass. Almost half of the earthenware was comprised of bottles. No other excavation in the region has produced so many bottles. Radiocarbon analysis indicates that this site was occupied between the 8th and the 10th centuries AD.

In 2004 and 2006, we moved to Gao city for a site comparison within the Sahel. There we found the remains of a large building made entirely of stones, seventy-five meters long, and twenty-five meters wide. This building may have been as large as the present mosque of Djenne, which is fifty-five meters long, twenty-five meters wide, and twelve meters high. Large jewelry, stone beads and iron objects were also found during this excavation. Of special significance are fragments of glassware and porcelain that must have been imported from North Africa under the Fatimid dynasty, which had its capital at Kairouan between the 9th and the 10th century. The large building and precious goods at Gao city indicate the presence of a centralized power that attracted people or trade (or both) from North Africa.

Compared with the Gao-Sane site, our Gao city site has fewer bottles, fewer glass beads, and no iron slag, but has more jewelry beads and more iron objects. The Gao city building is made of stones, while dried bricks were used at Gao-Sane. These differences suggest social or ethnic differences: a ruling class at Gao city, and merchants at Gao-Sane, or possibly occupation by immigrants from North Africa and

West African Savannah is a rich area where many cereals including African rice were domesticated, near Diondiori, Inner Delta, Mali (Takezawa, 1986)

African natives at Gao city and Gao-Sane respectively.

Why were the early West African states established, not in the Savannah rich in ecological resources, but in the Sahel poor in these resources? Why did societies in the Sahel lack social leveling mechanisms like those that prevented Savannah societies from elaborating their social systems to form states?

Our findings suggest that long-distance trade may have been critical for how stratified societies developed in the Sahel. In an excavation of just fifteen square meters at Gao-Sane, we discovered more than 500 glass beads and copper articles, whereas McIntosh found few glass beads and copper articles at the Savannah site of Djeno, over a period of twenty-five years. We also found glassware of a sort found in no other excavation in West Africa.

The relationship between long-distance trade and state formation has been discussed by many scholars. Uncertainty persists about whether one should precede the other: state formation first, or long-distance trade? In the Sahel, conflicts must have developed over scarce resources, and must have intensified with the introduction of articles obtained through long-distance trade. In contrast, the resource-rich Savannah had no such conflicts, and presumably invested their wealth in elaborating

cultural symbols.

The economic history of West Africa displays the coexistence of market oriented and socially-embedded economies. Symbolic exchange generally has a leveling effect, which the market economy tends to subvert. For this reason, places for trade with foreigners are often located outside towns in West Africa. Djenne, for example, assigned a hill outside the town for this purpose. This custom seems to have existed all over West Africa to prevent the structure of traditional society from being transformed. Nevertheless, conflicts must have arisen between traditional authority based on exchange, and emergent power based on long-distance trade.

We don't know exactly how these antagonistic influences grew or declined, but it is very plausible that a new social order emerged from the conflicts. Societies in the Sahel would have been easily influenced by new items obtained through the long-distance trade, because they did not have strong cultural symbolic systems. Moreover, these societies were accustomed to conflicts over scarce ecological resources, so the addition of conflicts introduced by long-distance trade must have set these societies more firmly on the road to state formation.

Exhibition

Pilgrimages and Sacred Places: A Voyage of Self Discovery

*Special Exhibition
March 15 – June 5, 2007*

Across the world there are many sacred places to which people have made pilgrimages since the olden days. Why do they want to make pilgrimages? What does pilgrimage mean to them? Walking a pilgrimage route, people search their hearts and may sometimes have powerful revelations. Through ethnographic media this exhibition explores the process of discovering answers, and learning about oneself.

The main part of the exhibition displays documentary film, various images, and items from the 'Pilgrimage to Santiago de Compostela', and the journey of one pilgrim, Michel Lavédrine, a former French army officer

who walked the full distance, 1350km, from Le Puy-en-Velay, France to El Cado de Finisterre located at the west end of Spain, on the coast of the Atlantic Ocean. This was the fourth time for him to walk the route.



Opening of the Special Exhibition

'Pilgrimage to de Compostela' is probably the most famous pilgrimage route in Europe. The most popular starting point of the Santiago Pilgrimage is Le Puy-en-Velay, a town surrounded by the mountains of Auvergne.

In our exhibition, the route starts at Notre-Dame Cathédrale in Le Puy-en-Velay. Visitors are guided through the walking route along Conques, Saint Jean Pied de Port, Pyrénées, Puente la Reina, León, O Cebreiro, La Catedral de Santiago de Compostela, while listening to the voice of an audio guide (a popular Japanese actress tells her pilgrimage story). Hi-vision images allow the visitors to experience walking the real route as if being a travel companion of Lavédrine.

There are also three viewing rooms that introduce other pilgrimages and sacred places. Three further ethnographic films compiled at Minpaku are featured. One is about 'Lourdes' which, since the Apparitions, became one of the world's leading Catholic Marian shrines. The number of visitors grows each year and the place is so important within the Roman Catholic church that Pope John Paul II visited the shrine twice, in 1983 and 2004. The second is about a famous Japanese pilgrimage to eighty-eight temples, 'The Shikoku Pilgrimage', and the third is 'The Shamanic Medium of Tsugaru, Osorezan'. Osorezan is a sacred mountain in northern Japan where pilgrims remember ancestral spirits that appear embodied in the shamanic medium. The landscape is one of the most unusual in Japan and is seen as the entry point to another world.

On the second floor, videos made by Minpaku researchers are shown. Since the founding of Minpaku in 1974, our staffs have been conducting ethnographic research around the world. The early efforts required 16mm films for movie making, with equipment that weighed over 300kg. Today, researchers can take portable hi-vision cameras into the field. More than forty countries have been visited by Minpaku

researchers, resulting in approximately 100 anthropological films, 200 'Videothèque' programs, and numerous documentaries or other records of visual research. In this part of the exhibition, scenes of ethnographic film making and of Minpaku anthropologists at work are shown together with artifacts from the documented areas, and the equipment used for field research at different times.

Also shown is a novel 'Virtual Kyoto'. This project combines pictures and maps, and allows visitors to travel through Kyoto in the past and present, with one click of a mouse. This was made by Ritsumeikan University as part of a 'Kyoto Art Entertainment Innovation' research program. The original Nintendo video game that enjoyed a burst of popularity in the 1980s is also exhibited.

The Special Exhibition surveys thirty years of ethnographic documentation at the National Museum of Ethnology, and commemorates the 30th Anniversary of the museum. We hope that our visitors will discover something about other cultures, about us, and about themselves as well.

Yasuhiro Omori
Chief Organizer
National Museum of Ethnology

Conferences

Socialist Modernization in Mongolia: A Reappraisal of A.D. Simukov and His Works

*International Symposium
February 25, 2007*

Contributions by Japanese scholars for Mongolian studies have had wide significance. One of the pioneers was Tadao Umesao, the first Director-General of Minpaku. However, after Mongolia became socialist, it was not possible for Japanese scholars to enter for the purpose of field work until 1990. The restrictions were

also related to earlier acts of aggression by Japan, such as the Battle of Khalkhin Gol during World War II.

During the absence of Japanese field research in Mongolia, the main contributors were Russian. For original data concerning Mongolia, it is vital to refer to Russian achievements during the 20th century. Andrei Dmitriyevich Simukov was one of the most long active researchers in Mongolia during the early 20th century. Simukov first visited Mongolia in 1923 as part of an archaeological team led by P.K. Kozlov and spent most of his time in Mongolia until 1938. He made many research trips throughout Mongolia and wrote many articles.

Unfortunately, Simukov became a victim of Stalin's repression in the 1940s, and



(above) A.D. Simukov, 1926
(below) Natalia Simukova giving a presentation. She is Simukov's only remaining child and has been the main keeper of his works and letters.

his works became scattered despite their well known significance. Some were kept at the library of the Geographical Department of the Mongolian Academy of Sciences, or by his family.

In order to improve this situation, Yuki Konagaya of Minpaku, published the collected works of Simukov, and held a symposium to celebrate this publication on February 25, 2007. Simukov's achievements were reappraised and participants discussed how to apply his works to the study of socialist modernization in Mongolia. Our presenters were all people who had inherited Simukov's practices in their respective fields, and they each emphasized the historical and contemporary relevance of Simukov's works.

Thanks to the publication, the collected works of Simukov have become common intellectual resources for Mongolists all over the world. Two volumes have been published by Minpaku so far, and the final two volumes will be published in Autumn 2007. If you are interested in these collected works, please contact Konagaya (yuki@idc.minpaku.ac.jp).

Ai Maekawa
Chairperson
National Museum of Ethnology

Local Communities and the State: Changing with Immigrants

*International Symposium
March 26 – 28, 2007*

Globalization has reinforced the massive and fierce transnational movement of people, things and capitals, thus bringing about vacillation in the concepts of borders that have been essential for the existence of present nation states. As the borders of state, nation, and nationality have changed, socio-political and legal systems which operate within these borders, have been reorganized.

From the late 1980s onward, Japan too has experienced



Local Communities and the State: Changing with Immigrants, International Symposium, 26-28 March 2007

significant changes due to the sudden and massive influx of foreigners in various roles. Although immigrants were expected to adapt themselves to the host society, the host society is also changing. In such circumstances, host societies face new conflicts and problems. The trans-border anthropology project, which was launched in 2004 as a core research project, has organized a series of study sessions, seminars and forums with immigration experts from the fields of cultural anthropology, sociology, jurisprudence, and NGO management.

On March 26-28, the trans-border anthropology project concluded with an international symposium under the title 'Local Communities and the State: Changing with Immigrants'.

Following the keynote speech by Hiroshi Shoji, twenty-one papers were presented in seven sessions on the following themes:

- (i) Immigrant workers,
- (ii) From diaspora to transnational strategies,
- (iii) Immigrants' networks and religious activities,
- (iv) Immigration policies and foreigner's status,
- (v) The returnees' question,
- (vi) Immigrant language teaching,
- (vii) Immigration policies at local levels.

We focused on case studies from Japan, Korea, and Germany — all states that have adopted immigration policies often characterized as *jus sanguinis*. Case studies from Finland and the Netherlands

were also presented. In this symposium, special attention was given to positive policies and activities — of state and local governments, and NGOs — that support integration of immigrants with their host societies.

The symposium proceedings will be published during the present academic year.

Hiroshi Shoji
Convener
National Museum of Ethnology

Information

Awards

Two Minpaku researchers have recently been given prestigious awards for their exceptional academic and social contributions:

Yuki Konagaya (Center for Research Development) was awarded the Nairamdal (Friendship) Medal, one of the highest honors bestowed upon a foreign citizen by the Mongolian Government. This award is in recognition of her special contribution to Mongolia (February 27, 2007).

Kazunobu Ikeya (Department of Social Research) received AJG Outstanding Research Award by the Association of Japanese Geographers for two of his recent publications: *Sansai-Tori no Shakaiishi (Social History of Edible Wild Plants Hunters)* (2003, in Japanese) and *Pastoralists Today: Human*

Life in the Dry Zones (2006, in Japanese) (March 20, 2007).

New Staff

Nanami Suzuki

Professor, Department of Advanced Studies in Anthropology



After graduating from Tohoku University in 1981, Suzuki conducted research at the Sagami Chemical Research Center. In

1989, her interest turned to the anthropology of 'self-fashioning', or people's search for their way of life, and she studied at Yale University for one year. At Ochanomizu University, she received her MA and PhD, and the latter was published as *Historical Anthropology of Childbirth: From the Deconstruction of Midwifery to the Natural Birth Movement* (1997, in Japanese). In 1998, this book received the 13th Aoyama Nao Award (History of Women). Another book, *Historical Anthropology of Healing: The Symbolism of Herbs and Water* (2002, in Japanese), explored the practices and meanings of various alternative medicines. Suzuki is currently working on a range of topical issues, including the problems of an aging society. Before joining Minpaku, she worked as a professor of medical anthropology and North American Studies at Kyoto Bunkyo University.

Yukihiro Kawaguchi

Research Fellow, Center for Research Development

Kawaguchi, a cultural anthropologist, received his PhD from the Tohoku University for Arts and Letters. In 2001 and 2002, he visited a village of the Pearl River Delta to collect ethnographic data on popular religion and kinship, funeral



rites, seasonal rituals, and lineage activities. His PhD thesis examined the dynamics of culture and power in a Chinese

village, and resulted in articles on 'Ancestor worship at *qingming jie* in contemporary China: a case from Pearl River Delta', and 'Changes and continuities in funeral rituals under the Communist regime: a case from a Cantonese village in the Pearl River Delta'. He is currently working on modernity in Chinese village society during the Republican period.

Maki Mita

Research Fellow, Department of Advanced Studies in Anthropology



Mita was educated at Kyoto University, and earned her PhD through an anthropological study of the traditional

knowledge of fishermen and fishmongers in Itoman, Okinawa. In recent years, she has worked at Belau National Museum in Palau (Belau), recording the oral histories of elderly Palauans who experienced the Japanese administration. Both Okinawa and Palau were colonized by Japan, after their own long and independent development — and Okinawa is still under Japanese control. Today, both are popular sightseeing spots for Japanese, but their histories and cultures, and how they have been influenced by Japan are far from well understood by the Japanese people. She wants to bridge this gap in understanding through anthropology.

Visiting Scholars

Han Bok-Jin

Professor, Jeonju University, Korea



After studying food science at Ewha Womans University and receiving her MA in food engineering at Korea

University, Han moved to Hanyang University and completed her PhD in the science of food and nutrition. And she is an inheritor of the Joseon Dynasty royal cuisine, a Korean intangible cultural asset (No.38) from her mother Hwang, Hae-sung. Her publications include *Traditional Korean Cuisine* (1989), *Native Local Food of Korea* (1989), *Cuisine for Prenatal Care* (1996), *Dietary Life Culture at Royal Court* (1997), *What We Should Know about Korean Food* (1998), *Korean Desserts* (2000), *Royal Cuisine of Joseon Dynasty* (2002), and *Royal Dietary Culture of Joseon Dynasty* (2005). Her academic career includes professor at Institute of Korean Royal Cuisine (1976-1983), Tsuji Cooking Academy (1983-1988), Hallym Sungsim College (1988-2000) and Jeonju University (2000-2007). At Minpaku she will study practices that can be used in a museum for food culture experience: the *Epicurium* (tentative name). Jeonju University is leading the development of this museum.

(March 6, 2007 – February 28, 2008)

Nasan Bayar

Professor, Inner Mongolia University, China

Nasan Bayar, professor of cultural anthropology at Inner Mongolia University (IMU), China, studied social anthropology at the University of Cambridge (2000-2001),



after obtaining his PhD in Mongolian literature at IMU in 1999. His present research areas are social change,

ethnic identity, historical memory, kinship, and education in Mongolian communities. He has published *Narrative Patterns of Mongolian Literature and their Cultural Meanings* (2002, in Mongolian), *A Study of Social Changes in Pastoral Communities of Inner Mongolia* (in Chinese, forthcoming), and papers on Mongolian culture and literature. At Minpaku he will explore how the Chinese state remakes the ethnic identity and citizenship of Mongolians through educational institutions.

(April 10, 2007 – April 9, 2008)

Publications

The following were published by the museum during the period from January to June 2007:

◇ *Bulletin of the National Museum of Ethnology* 31(2). Contents: T. Nishio, 'Characteristics of Jibāli Arabic or the Bedouin Arabic dialect of the Jibāli tribe of the southern part of the Sinai Peninsula, Egypt'; and T. Iida, 'Overseas scientific expeditions from 1955 through 1965: Japanese anthropology and the mass media after the War'.

◇ *Bulletin of the National Museum of Ethnology* 31(3). Contents: Y. Sugimoto, 'A genealogical study of St. Thomas in south India'; and T-s. Chen, 'Minorities "in between" China and Japan: complexity of legal status and identity'.

◇ *Bulletin of the National Museum of Ethnology* 31(4). Contents: A. Saito, 'Creation of Indian republics in Spanish South America'; T. Nobuta,

'Islamization policy toward the Orang Asli in Malaysia'; and R. Ono, "'Tradition" and "modernity" in fishing among the Sama, eastern coast of Borneo, Malaysia'.

◇ Terada, Y. (ed.) *Authenticity and Cultural Identity: Performing Arts in Southeast Asia*. Senri Ethnological Reports, No.65, 187pp., January 2007.

◇ Konagaya, Y., S. Bayaraa and I. Lkhagvasuren (eds.) *A.D. Simukov Works about Mongolia and for Mongolia, Vol. 1*. Senri Ethnological Reports, No.66, 976pp., February 2007.

◇ Konagaya, Y., S. Bayaraa and I. Lkhagvasuren (eds.) *A.D. Simukov Works about Mongolia and for Mongolia, Vol. 2*. Senri Ethnological Reports, No.67, 635pp., February 2007.

◇ Yokogawa, K. and R. Sasahara (eds.) *Life Culture through Daily-use Articles: Omura Shige's Collection at the National Museum of Ethnology*. Senri Ethnological Reports, No.68, 311pp., March 2007.

◇ Asakura, T. and H. Okada (eds.) *Korea in Globalization: Dynamic Intertwining of the Domestic and the Overseas*. Senri Ethnological Reports, No.69, 254pp., March 2007.

◇ Kashinaga, M. and T. Cam (eds.) *Genealogies of the Chiefly Families of Tai Dam in Vietnam*. Senri Ethnological Reports, No.70, 198pp., May 2007.

From the Editor

Next issue commemorates Minpaku 30th Anniversary. Minpaku opened to the public as a center of anthropological research in 1977.

The Great Ocean Voyage

Vaka Moana & Island Life Today

The untold story of the world's greatest exploration

30th Anniversary Special Exhibition. National Museum of Ethnology, Osaka, 13th Sept. – 11th Dec., 2007. Produced by Minpaku and Auckland Museum

MINPAKU Anthropology Newsletter

The Newsletter is published in June and December. 'Minpaku' is a Japanese abbreviation for the National Museum of Ethnology. The Newsletter promotes a continuing exchange of information with former visiting scholars and others who have been associated with the museum. The Newsletter also provides a forum for communication with a wider academic audience.

The Newsletter is available online at: www.minpaku.ac.jp/publication/newsletter/

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