LAMBDA ALPHA NATIONAL COLLEGIATE HONORS SOCIETY
FOR ANTHROPOLOGY
TWENTIETH ANNIVERSARY NATIONAL CONFERENCE - 1988

We have enjoyed good response to our recent proposal to host a twentieth anniversary national conference in 1988. Many member chapters have already expressed their interest and willingness to participate. We have received valuable suggestions for an overall organizational framework, symposia topics, workshops and seminars for these meetings. This is exactly the kind of feedback we hoped for. Thanks to all of you, and keep sending in your ideas! If you have not responded, please let us know about your interests with the reply form on the following page. The more participation by member chapters, the better this conference can be! Let's work together to make this conference a BIG success.

The following update will keep you informed about developments:

1) Location - We are investigating several possible sites in Wichita - both on and off campus. More on this later.

2) Dates for the Conference - In order to encourage student and faculty participation, we have tentatively scheduled the conference to be held after the end of the Spring semester - May 19-21, 1988. Help us select dates that are good for as many members as possible.

3) Theme of the Conference - The Wichita State Chapter has agreed to tentatively accept the following suggestion:

"The Significance of Anthropology in Today's Multi-Cultural Society."

Again, we encourage your responses, ideas, or comments.

4) Where to Stay - We are trying to organize the cheapest facilities possible. These could include: special rates at a local hotel, on-campus dormitories, and local members' homes.

5) The Conference - (A) We will host a dinner in honor of Lambda Alpha's founding members, featuring a keynote speaker. Send your suggestions for a well-known speaker who is
involved with our society. After the dinner, plan on celebrating twenty years of Lambda Alpha with other members. Live music and refreshments will be available. (B) Symposia, workshops and seminars - to be organized and presented by faculty and students of member chapters. Let us know about the event you want to sponsor and we will work with you. (C) A student paper competition will feature a cash prize and publication in the JOURNAL OF MAN. (D) A poster session will be open to students and faculty. (E) Member Chapter booths with information on their activities and events, or . . . for example, Wichita State's booth will offer for sale, back issues of the JOURNAL OF MAN and provide information about our society to potential members. (F) We will organize a book sale that could include discounts from major academic publishers. (G) In order to attract new membership, we would like to invite non-member colleges and universities. Let us know how you feel about this idea.

Thank you,
Alpha Chapter of Kansas

LAMBDA ALPHA NATIONAL COLLEGIATE HONORS SOCIETY
FOR ANTHROPOLOGY
TWENTIETH ANNIVERSARY NATIONAL CONFERENCE - 1988
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Name: ________________________________________________
Affiliation: ___________________________________________
Address of Affiliation: __________________________________

Do you wish to be on the mailing list?  Yes ___  No ___

Comments: ___________________________________________
TO OUR READERS

As editor of the JOURNAL OF MAN, I would like to encourage readers to send us comments on Volume 18 and the articles published in it.

I feel these comments can provide information useful for improving future volumes and help in the continuing effort to produce a quality journal. I hope to publish as many of your comments as possible in the next issue of the journal.

In addition I welcome any ideas readers may have for future cover designs.

Kathy Nail
The Lambda Alpha JOURNAL is published by the Lambda Alpha Anthropology Honors Society at Wichita State University. The JOURNAL is partially funded by the Wichita State University Student Government Association.

EDITOR-IN-CHIEF
Dr. Lowell D. Holmes

STUDENT EDITORS
Kathy Nail

A WORD ABOUT MANUSCRIPTS
Lambda Alpha will consider manuscripts for publication in any field of Anthropology from faculty or students. Papers submitted for publication should be typed double-spaced on noncorrasable paper following the pattern established in AMERICAN ANTHROPOLOGIST. All references to literature must be correctly documented with the author's name, date of publication, and the page number, e.g. (Smith 1969:340). Manuscripts should be sent to:

The Editor

Department of Anthropology
Wichita, KS 67208
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ABSTRACT

An investigation of the experiences of Indochinese refugees was undertaken, using primarily biographical material from ten Indochinese refugees. The preliminary information presented covers four areas: experience of civil war and communist victory; the actual process of becoming a refugee; life in the refugee camps; and life in the United States. Results indicating that the experiences of the refugees varied in these areas according to the country of origin and ethnic group are discussed.

INTRODUCTION

Inquiries into the experiences of Indochinese refugees have, thus far, been chiefly concerned with: 1) economics; 2) social adjustment; 3) conflicts with established communities in the United States; and 4) health issues. These investigations have been performed primarily by sociologists and social workers. This is natural because many of the most immediate concerns for refugees are social in character.

It was felt, however, that cultural and historical material more suited to anthropological investigation were being lost. This information would be most valuable to researchers and others interested in the Indochinese community. Thus, an attempt was made to collect biographical material on the Indochinese refugee experiences.

This article is a survey of the information derived from such a study carried out in 1982 and 1983 in Wichita, Kansas. It covers four main areas of the Indochinese refugee experiences: 1) the history of the communist takeover in each of the three countries involved; 2) the actual process of becoming a refugee; 3) life in the refugee camps; and 4) life in the United States.

A general thesis is that the specific experiences of Indochinese refugees differed depending upon the country of origin and the ethnic group of the individual refugee. This thesis pertains primarily to the first two areas of the
survey, the communist take-over and the process of becoming a refugee. Its impact on life in the camps and the United States is less clear from the preliminary data.

METHODS

This investigation took place primarily at the Catholic Indochinese Refugee Resettlement Program in Wichita, Kansas from January 1982 to May 1983. Information was obtained using three methods: 1) life history recording; 2) informal interviewing; and 3) participant observation. These methods were selected because they afforded greater control by the subjects rather than by the investigator. This was felt to be essential if anthropological data were to be obtained.

Life histories were recorded in an office at the Catholic Indochinese Refugee Resettlement Program. Informants were selected by the investigator on the following bases: 1) proficiency in English; 2) interest in telling their story; 3) country of origin (so that a variety would be included); and 4) ethnic group (so that as many as possible would be included). A summary of the ten persons whose life histories were recorded is contained in Table 1. A breakdown of this information is given in Table 2.

It should be noted that not all informants are included in the tables—only those for whom life histories have been recorded. Information and data are included here from informants for whom no life histories were recorded. Such information was obtained using the participant observation and informal interviewing methods.

Informal interviewing took place in English as a Second Language classrooms at the Catholic Indochinese Resettlement Program and as a volunteer teacher of ESL for Lutheran Social Service, Wichita, Kansas. It was announced to students in ESL classes at CIRRP that the author was interested in learning about Indochinese experiences.

The main role for participant observation was in an ESL class for Cambodian refugees where the author reversed roles with the students and asked to be taught the Khmer language. This permitted considerable personal interaction and generated much interest in the author's project. Also, some observation took place when the author was invited to spend the weekend with a Vietnamese family.
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<th>Name*</th>
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<td>1975</td>
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*Not real names; these are coded markers.

**e = ethnic group; b = place of birth; r = place of residence

***at time of interview
### TABLE 2

Breakdown of information on Table 1.

**Sex:**
- Men 6
- Women 4

**Ethnic Group:**
- Vietnamese 5
- Lao 2
- Khmer 1
- Chinese 1
- Khmer & Chinese 1

**Residence:**
- Vietnam 4
- Laos 4
- Cambodia 2

**Age:** range from 20 to 47 years
The Life History Method

The life history method was chosen as the primary method for two reasons: It was a simple means of obtaining data; and the situation of the informants and the researcher's own schedule made submersion in the culture unlikely, though opportunities were sought.

L.L. Langness and Gelya Frank talk about life history as a "culture in context" approach that is "person-centered" (Langness and Frank 1981:1). It is an "insider's view" designed to understand the way that cultural patterns come together "and are linked in the life of an individual" (Ibid.). The subjectivity of this process appealed to the author, and seemed suited to the situation of fieldwork, which contained no functioning wholes to study: no community was yet formed. Biographies are also useful for discerning culture change. Clearly, the informants in this study have undergone a culture change.

The method does have some drawbacks, however. It is a merging of informant and anthropologist. The author in this study was a part of the dominant culture with all the associations of dominance and cultural hegemony involved. That is not the usual position of an anthropological researcher.

Ethnic Groups in Indochina

There are six ethnic groups traditionally living in Cambodia, Laos and Vietnam. Two of these groups--Chinese and Vietnamese--are distributed throughout all three countries. In addition to these two groups, there are the Khmers, who are the principal ethnic group in Cambodia, and the Lao, predominating in Laos. Smaller ethnic groups are the Cham, a Muslim group of Malay background living in Cambodia, and the Hmong in Laos.

Interviews in this survey were conducted with members of the Chinese, Khmer, Lao and Vietnamese groups.

HISTORY OF THE COMMUNIST TAKE-OVER

According to the information obtained from informants in this survey, refugees from each of the three countries--Cambodia, Laos and Vietnam--experienced the communist takeover of their respective countries in distinctly different ways. This was due to several factors: 1) the manner in which the communists took control of the governments; 2) the immediate actions each communist government took to consolidate control; 3) the history of resistance (or lack
of resistance) to a communist take-over in each country; and 4) the cultural traditions of the various ethnic groups and their interaction.

Vietnam

After a long and protracted civil war which had involved several foreign powers, the communist north subdued the pro-U.S. south in April 1975 (Duiker 1981:315). The imminent communist victory precipitated a panic and fear in the city of Saigon (Ibid.). This reaction was heavily influenced by the experiences of millions of refugees who had fled to the south in the 1950's when the north became a communist state.

HO, a lawyer in Saigon, described vividly his childhood journey from the north. His father had been arrested, and later released by the communist government in the 1950's. The family's land was confiscated. HO and his family lived in the jungle for a week while they were building a raft, which they used to float down the coast to the south.

HO expressed a great fear of the communists because of this experience in his childhood. In April 1975, he managed to get into the United States Embassy in Saigon and was part of the earliest group of Vietnamese refugees to come to United States. HO acknowledged that many Vietnamese who had not lived in the north did not have the same degree of fear of the communists, but were fearful because information about life in the north was shared with those in the south during the intervening years of civil war.

There is, of course, considerable evidence of the reaction of those living in Saigon in April 1975 to the imminent communist victory from sources such as news reports. This reaction, however, was primarily limited to Saigon, because most of the surrounding areas had been under communist control for some time previous to the fall of Saigon. People outside of Saigon experienced the communist take-over differently because there was no opportunity for immediate escape. Escape and the process of becoming a refugee would only be possible for such people after the communists had consolidated their power. This was the case for VI, who was living on the outskirts of Saigon. His experience also differed because he is ethnically Chinese. His family's business was closed by the communists and VI eventually left Vietnam by boat in 1978.

NGI was a member of the South Vietnamese Navy, and was on patrol on a boat at the time Saigon fell. He and others
The crew sailed to one of the American ships which was receiving refugees from Saigon and came to America in 1975.

Cambodia

The pro-Western government of Cambodia fell shortly after the fall of Saigon in April, 1975. There had been a civil war in Cambodia since 1971, when President Lon-Nol took over the government and declared a republic. As with Vietnam, before the actual communist takeover, much of Cambodia had been under nominal communist control. Foreign powers had some involvement in the civil war.

The communist Khmer Rouge leaders began their reign with a resettlement program. Specifically, they forced everyone out of the major cities into the countryside. There was a general feeling expressed among the Cambodian refugees that the communists were not trustworthy. One woman reported that anyone wearing glasses was killed immediately because they were assumed to be educated, and therefore "impure." THQ and ME both reported cases in which persons were shot just because the local person in charge in the Khmer Rouge was "mad at them." There was definitely a feeling that the communists' actions were unpredictable and dangerous.

Every Cambodian person interviewed, including those from whom no life histories are recorded, reported that a member of their family had been killed by communists. There is every evidence that many people died in Cambodia, both from deliberate shootings and starvation. The woman who reported that those with glasses were shot, also reported that she was forced to eat the leaves off the trees, because no food was provided for her.

A French Catholic priest, Francois Ponchaud, using refugee reports, discusses the harshness of the work the people were put to after the Khmer Rouge took over, and the scarcity of food. Some people were given only three small allotments of rice per week (Ponchaud 1977:59). He also quotes unofficial French estimates of 800,000 dead by the end of 1975 (Ibid.:71).

Laos

The monarchy in Laos invited the communists to take-over the government in September 1975, after Vietnam and Cambodia became communist. Very little panic or fear was reported by informants, though thousands did escape to Thailand.
TI, a Vietnamese living in Laos, said that life there was very easy, and war seemed "far away." She lived in the capital of Laos, Vientiane. TI and SO both report that they had communist friends and co-workers, and went to school and worked with communists daily. They both said emphatically that they were not afraid of the communists. SO said: "We didn't want to fight." Lao informants generally indicated that there was not a strong military tradition in Laos.

There is no evidence of a great deal of killing or mass starvation in Laos after the communist take-over. NO, whose husband was in the military, reported that her husband was still in hiding in Laos, but was not afraid of being killed.

There is some evidence from news reports that Hmong in Laos were treated more harshly, but for Lao refugees interviewed in this survey, there were no stories of killings or imprisonment.

BECOMING A REFUGEE

In addition to differing experiences in the communist take-over in each of the three countries, the experiences of becoming a refugee and the means of escape also varied according to the country of origin for the informants included in this survey. These differences were primarily due to geography and political conflicts.

Vietnam

For Vietnamese refugees, the combination of geographical and political conditions allowed only one route of escape from the country--by boat. Walking and driving were not possibilities because of communist governments in every contiguous country. Even if a refugee could manage to avoid the governments of the neighboring countries, there was a protracted civil war in Cambodia, and Laos, though not in a severe crisis, was geographically more distant from the southern portion of Vietnam than Cambodia.

VI left by boat, as did NGI and HO. NGI also reported that his mother escaped by walking through Cambodia to a camp in Thailand, and she reported that it was a very dangerous means of escape.

Cambodia

In Cambodia, walking through a civil war was the only means of escape after 1978. Three years after the victory of the Khmer Rouge and the creation of a Democratic

THO reported that it was a very dangerous situation for anyone trying to escape. He escaped several years before the Vietnamese invasion, but reported that unarmed people were often ambushed and killed on the spot "like animals," THO said. ME reported that his mother was killed while trying to escape to Thailand after the Vietnamese invasion.

Laos

For those people living in Laos who wanted to escape, it was uniformly reported by the informants that it was not difficult or dangerous. There was little interference from the government and no violence was reported by the informants in this study.

TI reported that she and her family just got on a ferry and went across the Mekong River to Thailand. NO left by car. SO reported no problems in leaving Laos.

LIFE IN THE REFUGEE CAMPS

Life in the refugee camps is described by all informants as difficult. Ponchaud also describes the "abysmal conditions" of the refugee camps, in Thailand particularly (Ponchaud 1977:180). There was little food available, very crowded living conditions, and little freedom, according to informants. In Thailand, the camps were controlled by the Thai military.

THO reports that a special pass was required to leave a camp, a pass that cost money and was difficult to obtain. If you left without a pass and were caught, you were arrested, and had to pay money to just get back in the camp. THO said it was very hard to get out of the camp.

SO reported less difficulty living in the refugee camp. Though there was little food--he described the amounts as one-hundred pounds of rice per month, three pounds of meat per month, and two pounds of vegetables per month--SO said "life went on, people got married." He lived in a bamboo house, which he built for himself at the camp. SO's situation was perhaps special, because he was part of what is called the "White Lao," as opposed to the "Red Lao." The White Lao were allowed to leave the camps in order to make military incursions into Laos. SO was part of a company of fifty men who made several incursions into Laos after the communist take-over.
As far as distribution of ethnic groups throughout the camps, that was primarily determined by geography. Vietnamese were more likely to be in Malaysia, Hong Kong or the Philippines than in Thailand, which was the only place reported for Lao and Cambodian refugees. Thus, most Vietnamese reported different conditions, though some, especially those in Malaysia, reported great hardship in the camps. VI and NGI, who were in Hong Kong and Subic Bay, Philippines respectively, did not report great food shortages.

LIFE IN THE UNITED STATES

Informants' reflections on life in the United States also varied somewhat according to country of origin. This is most likely due to differences in urbanization in the countries of origin.

THO said that farming in Cambodia required hard work only for half of the year, whereas in the United States, one has to get a "good job and work hard for education."

Vietnamese refugees did not notice this difference, probably because of the greater emphasis on urban life in that country.

All informants claimed to have very good feelings about the United States and Americans. This was true of younger refugees especially. Older refugees were often non-committal in statements about the United States; statements like "America has no war" or "American has lots of money" were common responses. Whether or not younger refugees were more positive because of the age factor, and a fear of offending, while the older refugees were more certain of their opinions, is unclear. No one said that they were treated badly by Americans. SO mentioned that some Americans do not like refugees, and interestingly, said that he "doesn't blame them."

There was an age difference reported in the desire to return to one's homeland, with younger refugees wanting to stay in the United States, and older refugees wanting to return. Most, however, said that they would only return if the communists were driven out of power.

Only one person said he wanted to return (to Vietnam) no matter the consequences. He was very young and not one of the ten life histories included in this study, though he was an informant.
Raising Children in the United States

It was discussed with all informants how they would raise their children in America; whether they wanted them to be Americans or Khmer, Vietnamese, Lao, etc. Also, how American children differed from other children was discussed.

All informants except one, THO, said they wanted their children to be both American and the traditional culture. THO said his children would be Americans.

HO has a daughter who was born during the course of this study. Observations of the daughter were made in HO's home over a weekend stay. The daughter, who was three at the time, did not understand a single word of English and spoke only Vietnamese. HO reported that this was done on purpose, though he had said previously that he wanted to raise his children as both American and Vietnamese. The language situation of the daughter has not been subsequently investigated, but it is assumed that she has begun to speak English as she has entered American schools.

Reasons for Coming to the United States

The question as to why a refugee chose to leave his or her home and then come to the United States has many implications, not the least of which are political, since the United States Immigration Service has specific guidelines. The refugees knew that there was a right answer and a wrong answer to this question. The right answer would have been that they were anti-communists whose lives would be in peril if they returned home. The wrong answer would have been economic reasons. This was U.S. Immigration policy, the informants said, and the answers, it was reported, were widely circulated.

Nonetheless some refugees did report that they wanted to live in the United States for economic reasons. SO stated that his job was taken away from him by the communists in Laos and he was forced to teach agriculture (not his field). That made him unhappy, and also, there was no pay other than food.

VI described how the new communist government in Vietnam closed many shops of the ethnic Chinese, so that they could not make a good living. VI also mentioned discrimination against those of Chinese ancestry by the Vietnamese government as a reason for leaving. NO and GI also reported economic factors as being part of the reason for wanting to live in the United States.
Most informants, however, simply said that they did not like the communists because there was no freedom, or their family was hurt in some way. All did acknowledge, when pressed, that there was a negative economic impact on them resulting from the communist victories.

It should be noted that in the history of the United States, many immigrants came to the U.S. for economic reasons, and that the disruption of economic viability is a factor in many refugee situations.

CONCLUSION

A people's knowledge of their own history and culture is important in their identity and political power. It was felt to be important to obtain the stories of the Indochinese refugees while they were still recent memories. Given the fact that these people's cultures were disrupted, and that they had other significant survival concerns, this work may provide information to the refugees themselves that they were, at the time, unable to assemble themselves.

Anthropology has often been seen as a means of survival for cultures under stress. Lowie and Boas saw it that way, and used life history as a means of obtaining information regarding culture change.

It is hoped that the information presented in this study will be valuable to the Indochinese in choosing their identities in their changing situations in America.

ACKNOWLEDGEMENTS

The author gratefully acknowledges the help of Ann Boswell of the Catholic Indochinese Refugee Resettlement Program, Wichita, Kansas, for her assistance and cooperation (and for putting up with me); Dr. Dorothy K. Billings of Wichita State University for her advice and encouragement; and Hoc T. Vu for his inspiration and friendship.
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Ponchaud, Francois
Many of us consider ourselves "fishermen." Many fishermen consider themselves good fishermen. A select few of the good fishermen are professional sport-fishermen, those who pursue big fish for a living. All of these fishermen undoubtedly use modern day rods and reels, often with expensive lures and other equipment that are "guaranteed" to produce a good catch. Not even the best equipment can ensure a satisfying catch, however. Many times, even the best modern fishermen can dock the boat with nothing to show for his efforts but a cold.

How then does one explain the obvious success of the prehistoric peoples of the Northern Great Plains when it came to catching fish? There is almost always a representative sample of fish scales and bone in most archaeological sites on the Plains, indicating that the people could apparently catch fish at will without the aid of modern equipment, power motors, or even metal fish hooks. The search for a better understanding of how fish were taken is the basic concern of this paper.

Fish are abundant throughout most of the United States, and there have been many studies on their behavior, anatomy, and population patterns which enhance the field of Ichthyology. But the fishing methods themselves have often gone uninvestigated. This paper will focus primarily on the actual practices involved in the taking of fish before the European contact.

The "Northern Great Plains Region" is an area with arbitrary boundaries, and for the purposes of this presentation will include the following subareas of the "Great Plains Region" from Jennings, (1983:203-205):

--- Northwestern Plains
--- Middle Missouri
--- Northeastern Periphery
RESEARCH PROBLEMS

The majority of the existing literature and data that deal with fish seldom discuss methodology. There are several good reasons for this. Fish were not a major form of subsistence for the prehistoric peoples of the Northern Great Plains (Alex 1977:41). Until the time of the European contact, the area was abundant in bigger game including bison, elk, deer and others that made up the bulk of the people's diet. Ethnographic accounts suggest that such an abundance would allow the people to eat their fish fresh, preferring not to dry or store it (Peterson 1980:18). It is believed that this lack of necessity for storing often relegated fishing to a recreative role.

There is an abundance of literature pertaining to the fishing habits of tribes and groups more closely associated with fishing, but on the Plains, the information becomes more and more scarce. This is clearly illustrated in a publication done for the Smithsonian Institution in 1984 entitled "Prehistoric Fishing in Europe and North America," by Charles Rau. An extensive and comprehensive volume for its time, the book goes into great detail about the fishing practices, traditions, and tools of the North American coastal tribes, Alaskan peoples, and indigenous peoples of prehistoric Europe. In a period characterized by archaeological speculation, it was a noteworthy scientific effort, but it gave little or no information on Plains fishing. Such was to be the pattern for many years (Rau 1884).

Since fishing was never a major source of nutrition on the Plains, the evidence is somewhat limited in archaeological sites. This, combined with the fact that many of the artifacts that might have been discovered do not preserve over a long period of time, causes the database to grow very slowly. Many fishing implements and tools were fashioned from or contained parts of, wood, hide, sinew, or woven rope, which would deteriorate very quickly.

The Northern Great Plains Region is not as abundant in fish as other areas of North America (Everman and Cox 1894). The climate of the region varied drastically throughout the year, which restricted the taking of fish to particular times, or "seasons" (Peterson 1980:15-16). The area's main source of water includes the Missouri River and its tributaries; natural lakes of any size are all but nonexistent. This relative lack of water over such a large land area resulted in an obvious devaluation of fish as a source of food. Fish and fishing was often relegated to a recreational means of acquiring a novel meal.
The initial contact by Europeans introduced the horse to the Great Plains tribes. The increase in mobility proportionately increased the people's ability to hunt and follow the great herds of bison and other big game (Rostlund 1952:125). Rostlund believes that the decline in fishing popularity that resulted was reintroduced with the availability of metal fish hooks, and with the annihilation of the bison in later years. With their main source of sustenance gone, the tribes of the Plains turned back to the old ways of fish taking in order to survive.

The information that is available to us is derived from archaeological sites, and from ethnographic and ethnohistoric accounts. The reliability of ethnographic accounts as data, and the difficulties and methods involved in the interpretive studies of fish remains shall be discussed later.

**FISHING METHODS**

The fishing techniques of the prehistoric peoples of the Northern Great Plains Region varied to fit the need and the particular characteristics of the fish. The majority of the available fish in the region were river-dwellers, and these groups often posed some problems for the early fishermen. To begin with, not all river fish could be effectively taken with a hook (Peterson 1980:19). Many bottom-feeders, such as Sturgeon (Acipenseridae), Buffalo-fish (Ictiobus spp), and some species of Sucker (Catostomidae), had to be acquired by other methods.

Hook and Line fishing appears to have been a very popular method on the Plains. Several early expeditions tell of Arikara and Mandan Indians fishing from the banks of the Missouri River (Peterson 1980:19; Burroughs 1961). Hook and Line fishing was, and still is, basically a recreational means of taking fish. Given that only a few species could be taken by hook, combined with the fact that only one fish at a time could be caught on a single hook and line, we can conclude that the need for fish must have been low. One slight variation to this is the practice of set-lining, where several hooks are attached to a single line and left untended over night. Setlines, or "trotlines," were usually anchored to a tree limb, or to a "float" made of intestine (Morse 1983:277).

The end of a fishing line need not only contain a hook. Another efficient line fishing implement was the gorge (Alex 1977). Apparently a fish has difficulty in "spitting out" that which it swallows. Realizing this, prehistoric fishermen fashioned smooth, oblong stones with center
grooves for attachment that were rubbed in animal fat or meat, and threw them out as a sort of "lure." Several such gorges were found at the Kimball Site, a Mill Creek site in Western Iowa (Fugle, 1962). Some gorges were spindle-shaped pieces of bone of stone that would stick "cross-ways" in the fish once it was swallowed (Rau 1884). A fish need not always be forced to swallow such unfamiliar objects, however. Some ethnographic accounts speak of using chunks of gristle or meat that would effectively lodge inside the fish (Standing Bear 1931).

In the discussion of fishing with a line, a rather obvious question is often overlooked: "What was used for line?" Although nothing that may have been used would remain preserved, ethnographic accounts tell of the use of horse hair, sinew, and the stringy roots of plants or tree bark (Standing Bear 1931:65-67).

Probably the most efficient practice of making the large catch on the plains was the use of the fish pen, or weir. The Arikara were renowned for their expert use of a "fish trap" along the middle Missouri River Basin (Gilmore 1924; Rostlund 1952). The following is a description from "Arikara Indians of South Dakota" (1941:31), that relates the structure and ritual surrounding the Arikara Fish Trap:

"The fish trap was made in the form of a circular pen, attached to four central posts. Around the posts were four panels of sandbar willows and a detached gate made from twelve sandbar willows. Each panel contained one hundred of these willows, which were sharpened and thrust into the sand of the river bed. . . . outside the circle of the fish-pen four other strong stakes were set to support the panels. The fish trap was set in an eddy beside the main current. For bait, pieces of maggoty meat were used; one tied to the [center support] sapling, and one to each of the four supporting posts. The gate was placed on the downstream side. After the owner of the trap thought he had caught a sufficient number of fish, he would quietly close the gate."

A similar method of catching larger amounts of fish was the employment of a movable net, or seine. An account of early "Dakota" (Yantonnai) use of a seine is provided by Howard (19512:1-3). The seine was manufactured of willow stems, fastened together with buckskin until they roughly resembled a length of modern-day snowfence. The seines were weighted at the bottom with stones so they would drag the
river bottom, and keep the apparatus vertical. The trap was pulled toward the shore, where the ends were quickly closed, entrapping the fish in the center.

The last Wisconsin ice retreat of the late Pleistocene left the Plains with a relatively small amount of water. The area contains a few pot hole lakes in the Northeast Periphery, and the Missouri River and its tributaries. This water shortage left the people with mainly river and streams for fishing.

That is not to say that lake-fishing was non-existent. In an account from the middle of the nineteenth century, Shields gives an account of an intriguing lake-fishing practice by the "savages" of the area. The people would grind up a certain local root that Shields could not identify, and sprinkle the powder on the surface of the small area lakes. After only a few moments, the fish would bob belly-up to the surface, where they were easily collected by the women. The account tells of catches of up to 500 fish in one effort (Shields 1883:340-343).

This practice was (and still is) referred to as stunning, or "poisoning" (although the fish were not killed by the drugs), and was practiced by many tribes throughout North America. (Rau 1884; Perdue 1980). Although Shields' account is somewhat validated by similar testimonies from other areas (Perdue 1980:56), his catch numbers may rank him as one of the great original fish-story tellers.

The use of the spear and the bow and arrow are frequently mentioned in ethnographic and ethnohistoric accounts. Neither of these have been as frequently represented in the archaeological record as other fishing methods, however (Peterson 1980). Early spear points were certainly much too large to use in the taking of fish, and the appearance of the bow and arrow on the Plains did not occur until fairly recently. The use of sharpened sticks or leisters of wood is noted in ethnographic accounts, but such implements would not preserve.

With this succession in mind, the problems associated with linking spears, leisters, bows and arrows, or harpoons can be better understood. To begin with, only a projectile weapon with a stone or bone point would preserve well enough to be recovered by archaeologists. Sharpened sticks or leisters would not be represented in sites, allowing only speculation as to their use. Adding to this dilemma, there have been few points found with the distinctive barb that characterizes fishing points of the coastal tribes (Rau 1884). The subject of whether an arrow may have been used for fishing then falls under the realm of speculation and ethnographic accounts.
There are, however, an abundance of ethnographic accounts concerning the use of the bow and arrow, harpoon, and spear (Rostlund 1969; Landis 1968; Howard 1951; Rau 1884). Howard (1951:3), relates some methods of bow and arrow fishing practiced by an old Yankonnai friend of his:

"Another type of fishing . . . involved the use of a bow and arrow with a cord attached to it. Oscar Howe, the Dakota Indian artist, who is a good friend of Saul's, stated that . . . he would very often fish with the bow and arrow. The customary time for Saul to fish in this manner, according to Howe, was just before daybreak. Saul would . . . shoot at the fish which had come to the surface to feed. This was quite a difficult feat, [for] the refraction of light in the denser medium of water makes the fish often appear to be several inches from their actual position. Saul is one of the last, if not the only living Dakota Indian to fish in this manner. The Woodland tribes of the east and central United States very often fished in this manner."

Ice fishing was popular on the Plains long before the European contact. Landis (1968:192) gives an account of ice fishing in "The Mystic Lake Sioux":

"The fisherman broke a hole in the ice and crouched over it with a blanket to exclude light... A spear was used, and occasionally a bow and arrow, with a string attached to withdraw the arrow. Cold weather fishing was tedious and wearing."

The fishing methods mentioned above are not comprehensive by any means. These are merely the practices that we have physical evidence and/or ethnographic testimony to support. Other methods are assumed to have been used. The "taking of fish by hand," for example, was surely employed, especially at times of flood, or in natural backwater traps along the rivers of the area. (Alex 1977:43). Because no tools are involved, no artifacts may be found to support the assumption that the technique was used prehistorically. To avoid excessive speculation, these methods of fishing are usually passed over or ignored until further justifiable evidence can be produced to validate them.
INTERPRETATIONS FROM ARCHAEOLOGICAL EVIDENCE

Ichthyologists, archaeologists, and physical anthropologists have developed some ingenious methods for deriving answers from the remains of fish. The holistic approach taken by these investigators can serve to enlighten on several key issues about the consumption of fish during prehistoric times. Some of these issues include:

- species of fish represented
- approximate age, size and weight of individual fish
- total number and weight of all fish represented in site
- particular season in which each fish was caught
- annual consumption of fish per prehistoric household

Determining species types from remains is relatively easy. Although there is a total of six different scale types among the fish of the world (3 of which are extinct), there are only two types of fish scales represented on the Great Plains; the cycloid, and ctenoid. Teleosts (bony fishes), have either of these two scale types (Peterson 1980:22). The only other scale types found among modern forms today belongs to the shark, ray and chimaera families; obviously not recently represented on the Northern Great Plains!

Fish that possess the cycloid scale have soft rays and abdominal fins. Some examples of these families include: Esocidae (pike), Hiodontidae (mooneye), and Castomidae (sucker). Ctenoid scales are found on fish that possess spiny rays and thoracic pelvic fins. Some families in this category include: Percichthyidae (bass), Percidae (perch), and Sciaenidae (drum) (Peterson 1980). The actual differentiating characteristic between the two scale types lies in the presence or absence of ctenii, or tooth-like structures on the posterior portion of the ctenoid scale.

Fish scales grow from the inside (focus), outward in "rings," or circuli. Patterns of circuli form fields, which are used to determine growth patterns. Circuli that mark a year's growth are called annuli, and reveal the age of the fish at the time of death. Fish in temperate regions are poikilothermal, showing periods of rapid and slow growth, depending on the surrounding climate. In temperate regions such as the Plains, the variations in growth caused by the extreme seasons show up clearly on fish scales, allowing researchers to infer the approximate season of the year when the fish was caught. (Casteel 1974:576; Peterson 1980).

Fish bones also provide a wealth of information. Sound formulas have been developed that can help determine the
weight, length, and width of a particular fish from a small number of specific bones. Casteel (1974:76) writes that, once the weight of the fish is determined, through comparative osteological analysis, the relationship between width and length assume the mathematical formula of:

\[ W = L^3 \] and \[ L = \frac{3}{W} \]

\( W = \text{Width} \)
\( L = \text{Length} \)

The approximate amount of total fish at a particular site can be found by counting the occurrence of certain bone elements. For example, if thirty complete mandibles are discovered, then approximately thirty fish are represented in the site.

There are several problems involved when making these calculations. First of all, not all families of fish share the same general shape. A long-nosed gar and a channel catfish of the same length will obviously not share the same width, or weight. It is doubtful that the bones examined in the archaeological lab will absolutely accurately predict the number of fish represented in the site. Fish scales are fairly delicate, especially those of great age. They tend to break easily, rendering them useless for analysis.

Why then, spend so much time and work on a data source that was not even a major food staple for these peoples? Casteel (1974:76) makes the following point in summary:

"Even with the potential problems outlined above, fish scales [and bones] may still provide the archaeologist with a valuable source of information. . . . It seems far better to exploit these potentials, keeping in mind the limitations involved than to simply ignore this type of material when it is present in an assemblage."

RELIABILITY OF ETHNOGRAPHIC AND ETHNOHISTORIC ACCOUNTS

Another intent of this paper is to recognize and address the problems associated with the use of ethnographic and ethnohistoric account data for research. Archaeological research on prehistoric fishing methods relies heavily on such accounts.

The oldest accounts are frequently seen as the most valuable. Most, however, were often written or edited with
a flair for the dramatic and the sensational. Often the information itself was distorted in an attempt to sell copies, or to conform the findings to the speculative dogma of the era. An understanding of this situation is necessary in order to fairly judge the validity of such accounts.

The Speculative Period produced many barriers to the development of New World Archaeology (Willey and Sabloff 1980). Literature dealing with Moundbuilder Myths and questions concerning the origins of the Native Americans abounded. These works were characterized by wild stories with much speculation and sensationalism meant to sell copies and make the writer rich and famous. This type of thinking and lack of scientific approach was the intellectual and formative backbone of the first phase of New World Archaeology. It can therefore be understood that, although the oldest ethnographic accounts are undoubtedly the most desired, that account may very well have been altered to make a better story.

So, are all of our accounts of early fishing nothing but "fish stories"? Not totally. When using such accounts as data in research such as this, the accounts must be thought of as exactly that - data, and treated accordingly.

Any interpretations made from the analysis of archaeological data does, inescapably involve some amount of speculation. An archaeologist validates his interpretations by examining his data empirically, or, looking for patterns. Frequency of occurrence is the key. An archaeologist cannot pick up a chipped stone tool and proclaim "This is a blade tool," unless he has seen many such stone tools before. A single fishing practice may be handled in the same manner. And still there is the room for error. The very best that can be done is to carefully handle the data itself, with prompt publication and presentation of findings, that others may benefit from the work. This might possibly help some patterns develop for them.

SUMMARY

Prehistoric Fishing Methods of the Northern Great Plains Region is a difficult topic of research due to the general lack of published information. It is understandable that researchers choose to devote their attention to the more scientific aspects of the contributions of fish on the Great Plains. Studies that deal with nutritional content of fish, abundance and species of fish available, or morphology of fish remains are dealing with hard data that helps draw correlations with the present-day research in the field of Ichthyology. The research data is also more easily acquired
than that of fishing practices per se. But it has been the intent of this project to examine the more humanistic aspects of the prehistoric fishing process. If we can get a better understanding of how the prehistoric fisherman operated, maybe we can reach some conclusions about modern fishing practices.

Fishing was not, nor was it ever, the most popular means of sustenance on the Plains. It did, however, have an important recreational, and therefore cultural value. The lone fisherman with a hook and line had some form of motivation behind his efforts. The group of people that participated in the trapping of fish with a seine on the James River had some particular motives in mind. What were they? Why did they bother? Perhaps some of the answers can be found in our own world. We have both individual and community fishing happening all around us. If we have a better understanding of the methods employed by the fishermen of the past, and they are consistent with modern methods, then we can draw correlations and make firmer inferences about those who have fished before us.

Ethnographic and ethnohistoric accounts must be used to supplement the archaeological record to form the data base for the research of fishing. Patterns in both sources must be sought in order to add validated theories.

Above all, and most importantly, the study of such practices of ancient Plains cultures must be pursued mainly because it must not be ignored. Just as it would be a tragedy to lose the information and knowledge of prehistoric flint knapping, so too would it be unfortunate to disregard and eventually lose sight of fishing practices of the past. Prehistoric fishing on the Northern Great Plains was not a haphazard, uneducated attempt to catch fish. It was, instead, a meticulous and precise process that carried with it a great amount of traditional cultural significance. To devalue such information is to do a disservice to those people of ages past that worked very hard, and were very worthwhile fishermen.
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WORD BORROWING AND WORD PLAY AMONG NGAWBERE (Panama)

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ABSTRACT

The present paper is concerned with the phenomenon of word borrowing among Ngawbere (speakers of ngawbere). More specifically, the paper emphasizes the phoneticization as well as the semanticization of loan words into ngawbere from Spanish and English. Whereas the process of phoneticization is constrained by phonological transformations (nasalization, voicing, de-voicing), the process of semanticization that occurs in word borrowing is abetted by sociocultural processes. Three examples of word borrowing and two examples of word play are presented.

INTRODUCTION

This essay considers the sociocultural aspects of the process of word borrowing from one language to another. The emphasis herein is on the way an indigenous population of western Panama adopts foreign words into their language by phoneticizing them in a manner which semanticizes them, whether or not the introduced meaning is faithful to the original usage in the foreign language. The ideas that are presented are a response to the claim by some that the incorporation of foreign words into an indigenous language results in an alteration in sounds, but little more. The language (ngawbere) spoken by the indigenous population that self-identifies as Ngawbere is ideal for examining word borrowing and word play since ngawbere is an "isolating" language that builds on morphemes with distinctive meanings as the basis for word construction (see Sherzer 1982, 1985).

BACKGROUND

The population among whom linguistic and ethnographic data was collected live in western Panama. They self-identify as Ngawbere and speak an indigenous language of the same name (ngawbere). Ngawbere represent the western and most populous portion of the population designated as Guaymi both in Spanish chronicles and the ethnographic literature, and a much smaller population as Buglere that live to the east. Today there are many more Ngawbere than Buglere. Ngawbere are the most numerous of the five indigenous populations in the Republic of Panama.
At the time of the Spanish conquest, there were several different indigenous populations on the isthmus of Panama. The consensus among archaeologists is that these populations inhabited the valleys of the major rivers which formed a kind of ecological boundary between the various populations (De La Guardia 1982; Cooke 1981; Helms 1979). More than likely, Ngawbere were a small group living near the middle range of Cricamola River in a small area inland from the coast of what today is central Bocas del Toro Province.

The history of Spanish settlement on the isthmus is one of westward expansion along the Pacific coast following the initial efforts to establish settlements near what today is the San Blas Islands. Settlements on the Atlantic side of western Panama seldom lasted more than a few years; all were doomed to failure. By the 17th century, the Spanish in Panama had established a few settlements and missions that were provisioned by cattle haciendas, but all of these were located along the southern or Pacific side of the continental divide (Carles 1959; Perez 1962[1862]; De Peralta 1883). While the Pacific settlements continued to develop and prosper, the Atlantic coast of western Panama remained unsettled and relatively unexplored. Whereas nearly all of the other indigenous populations were decimated through warfare, diseases and mestizización, the Ngawbere population grew in size and expanded south over the continental divide. The largest concentration of Ngawbere remained on the northern slopes below the continental divide and received very little contact from the Spanish in western Panama (France 1792).

The Atlantic coast was not without foreign contact, however, which occurred in the form of Miskito incursions and the raids of English and French privateers (Roberts 1927; Cooke 1981). For a brief time, French missionaries (Jesuits) had contacts with Ngawbere along Cricamola River. It was not until the 19th century that the first permanent settlement occurred along the Atlantic coast of western Panama. This occurred on Isla Colón and nearby islands, where English fishermen with slaves settled in what today is the provincial capital (Aizpurus 1960; Roberts 1827). By the 20th century, other nationalities had moved into Bocas del Toro Province where they settled along the western and central coast. Today the eastern half of the province remains primarily indigenous.

In sum, from the time of the Spanish Conquest to the 20th century, Ngawbere had sporadic contact with the Spanish (especially on the Pacific side of the continental divide), and French and English (primarily on the Atlantic side). The historic situation, therefore, provided a fertile ground for minor changes in the ngawbere language. Except in areas
bordering Spanish settlements, no major language shifts of
the magnitude described by Dorian (1982) or Pfaff (1979)
have occurred.

The emphasis in the material that follows is on the
occasional borrowing of English and Spanish into ngawbere.
Implicit in the argument is the notion that word borrowing
shows evidence of an attitude of self-determination that
permeates Ngawbere identity and culture. The three examples
represent the areas of domestic life and health care.

THE DATA

For present purposes, word borrowing is postulated to
occur at two interrelated levels:

Level one: The phoneticization of foreign words
into ngawbere is to be expected, particularly
words which refer to objects (or concepts) being
introduced into Ngawbere society. Since most
words in ngawbere end in one of twelve vowel
sounds, borrowed words can expect to end in a
final vowel, and moreover, show evidence of
nasalization, voicing or de-voicing in order to
conform to ngawbere phonology. The principal
phonological transformations which occur in
ngawbere are:

nasalization:  |b| ---
voicing      |p| ---
de-voicing  |g| ---

Most words in ngawbere end in one of the twelve
vowel sounds: |a|, |e| and |A| (short vowels),
|i|, |o| and |u| (long vowels), along with the
nasalization of each of these six (for a total of
twelve) (Kopesec and Kopesec 1974; Arosemena and
Javilla 1979). The unasalized vowels appear most
frequently as final sounds in ngawbere.

Level Two: The phoneticized words can expect to
have meaning within the ngawbere language
(semanticization) that extends beyond or
embellishes the original meaning in the foreign
language. This particularly is true when the
introduced objects (or concepts) are associated
with similar objects (or concepts) or strategic
importance (Bybee 1985) to Ngawbere culture, that
Many of the words that have been borrowed from Spanish and English occur in the domain of domestic life. Two words from this domain are given as examples. The third example is drawn from the area of health care.

Domestic Life. The ngawbere term, bleto is derived from the English word 'plate,' and the term besini is derived from 'basin.' Bleto refers to any plate of foreign manufacture; the most common ones acquired by Ngawbere are metal plates. Besini refers to any kind of bowl which is used to serve soupy foods; the most common ones acquired by Ngawbere are made of metal or plastic and come in varying sizes.

For bleto, the initial sound in the stem [plet] is voiced, becoming [blet]. A final [o] sound is added to the stem, forming the suffix [to], even though four of the other five vowel sounds commonly occur with the [t], as in the words nurata ['has returned'], nete ['here'], titi ['infant' as a term of endearment; also a species of fish], brutu ['chest'] and tu ['thought'].

For besini, the second vowel is made long, becoming [besin]. A final [i] sound is added, even though any of the unasalized vowels could have become the final sound, since all occur with the, as in the words kûbûna ['in-law'], henene ['non-kin'], no [location referrent], nu ['armadillo'] and nê ['leech'].

At this point, the question arises whether these two examples reflect only a process of phonetic compatibility or whether there is more involved. The argument here is that there is more involved.

Eating implements in historic times were minimal and included primarily the bowls fashioned from the gourd fruits of the calabazo tree, the leaves of the bijao plant and one's hands. The gourd bowls served to hold soupy mixtures, and were especially useful for holding the fruit puree known as michila. The leaves were used to wrap, cook and serve solid food such as manioc and yams.

The indigenous term for bowl was sio, which contains the morphemes si (meaning 'support') and o (meaning 'caution'). The term sio alludes to the bowl's use to contain (or 'support') liquid mixtures and its inability to stand by itself owing to the curvature of its base. Ngawbere use several terms for the bijao leaves, depending on the
plant species from which the leaves are obtained, the stem for each is kriko, as in the word for the most preferred leaf nako krikoi.

From historic times to the present, Ngawbere have held a reputation for consuming the purée mixture michila more than any other food item except possibly the cacao drink (Von Ufeldre 1965[1682]; Roberts 1827). Asking another ?mo michila nain carries the surface meaning 'Do you consume purée?' as well as referring implicitly to the question of ethnic identity: 'Are you Ngawbere?'

The term besini acknowledges the adaptation of a foreign material (a metal bowl) as an eating implement, while stressing a continuity in that which is central to Ngawbere culture. The morpheme be refers generically to any gourd, si means 'support', and the suffix ni serves to indicate a "continuity in discourse." In Ngawbere narratives, the first spoken word carries the suffix ni and any other words or concepts which are central to the discourse likewise carry the same suffix (Arosemena 1980). The term besini alludes that the substitution of metal bowls at some time in the historic past was viewed by Ngawbere as not changing what they considered essential to their way of life. The fruit purée and other foods could still be served and consumed during the practice of visiting, during festive labor projects and ritual occasions in which special foods are distributed. The suffix ni in the word for 'bowl' is not used as a continuity marker in a spoken narrative. Instead, it has become permanently affixed to a borrowed word as an indication that the introduction of metal bowls has not lessened the practice of consuming michila, which conveys to Ngawbere their membership in the same ethnic population.

The term for 'plate', however, does not carry the same semantic load that occurs with the term besini. The root form ble refers to errors in the repair of clothing, wherein the manufacture of the repairing stitches is enlarged and becomes cumbersome to the wearer, and the suffix to refers to any kind of 'imprint' (such as a footprint).

Plates are used to serve food items which provide the bulk of Ngawbere diet (such as yams and manioc); the root tubers serve as dietary staples, but they do not form a part of the ritual system, as do the purée michila and the cacao drink. Hence, the argument for what is alluded to in the word bieto is more tenuous. Since plates are not (and cannot) be disposed in the same manner as the traditional cooking leaves, they become "cumbersome" to Ngawbere by virtue of their quality of permanency. They require washing after each meal (which the leaves do not), and families must pack them up for transporting or storing when they rebuild their houses or move to a new area.
Thus, although the two terms besini and bieto each have introduced meanings in the ngawbere language, the meaning of the former carries a greater semantic load in terms of Ngawbere values.

Health Care. The collection of lexical data in the area of health care was more extensive than any other area, yet there were fewer examples of English or Spanish terms that had been incorporated into ngawbere. This does not preclude the possibility that the development of a system of indigenous medicine incorporated loan words for ritual concepts or medicinal plants from other indigenous languages at an earlier date.

Since 1973, the government has been establishing health posts along the Atlantic coast, and with them have come modern medicines and a program of vaccination. No special word is used to identify the foreign medicines, although Ngawbere differentiate folk medicine [kroko konsen], which relies heavily on ritual and botanical remedies, from cosmopolitan medicine [chiwi krokoi] by affixing an adjective to the term kroko ('medicine').

Regarding vaccinations and innoculations, the Spanish term aguja [for 'needle'] has been phoneticized in ngawbere and shortened to become agu. Each phoneme of aguja has a counterpart in ngawbere: a occurs in several contexts (sometimes referring to time), gu occurs less frequently, and ha is a reflexive referent. Both a and gu can occur as affixes at the beginning, middle or end of words, but ha only occurs as a pre-positional affix. When occurring as a post-positional affix, ha becomes hai, in which case it emphasizes the action performed by or done to someone [as in the phrase mru den hai, meaning 'seeking food for oneself']. Although phonetically it would be permissible to transform the term aguja to /aguhai| or /gjai|, it would not be plausible semantically in ngawbere.

The free translation of the morphemes a plus gu is 'from the time referred to' and 'hole,' respectively. Conjoined together, the term agu implicates one moment in a temporal sequence of events which occurs when one receives an injection. Since Ngawbere recognize that an injection or vaccination cannot be performed by oneself, it makes sense to drop the reflexive ha, which leaves only the compound agu to refer to innoculations. Hence, the transformation to agu is compatible with linguistic processes that can occur in ngawbere, and the converted meaning of the original term conveys some sense of how Ngawbere view one of the primary modes of treatment utilized by cosmopolitan medicine.
DISCUSSION

The question can be asked whether in fact Ngawbere have some sense of these secondary meanings in mind when they use the three terms given as examples. Although a detailed response cannot be made by going into the historic past when these terms were incorporated into the language, an answer can be suggested by the way of an ethnographic analogy. The two examples that follow will show that some Ngawbere have an inkling of secondary meanings; these are the people who engage most creatively in word play.

The use of speech for communication among Ngawbere occurs primarily during the practice of visiting between households (basare), discussion during group work projects and mealtime conversations between family members. At such times, Ngawbere sometimes engage in "word play" on the events of the recent past. "Word play" here refers to the practice of accentuating certain syllables or altering sounds to give a new twist in meaning to either foreign or ngawbere words.

One such occasion during fieldwork occurred on Mother's Day, an introduced holiday among Ngawbere which is known as el día de la madre in Spanish and celebrated near the close of the school year on December 8th throughout Panama. On this particular occasion, several Ngawbere families were preparing special meals to honor mothers and grandmothers. At one gathering where the food was being cooked by the women's husbands and sons, the men were discussing the foreign "holiday" and the place of women in Ngawbere society. The gist of their conversation was how women were necessary although troublesome at times. One of the men repeated the Spanish word for 'mother' a couple of times |ma dré, ma dré| in order to summarize in an emphatic fashion what the basic theme was. It seems that the phonemes |ma| and |dré| each have meaning in ngawbere and can be rendered as 'nuisance' and 'obligation,' respectively. The conjoined sounds |ma dré| have two implicit meanings. First, they refer indirectly to the bothersome qualities one perceives in one's mother (or grandmother) while stressing the obligatory nature of the relationship between mother and offspring, and, second, they refer to the nuisance and responsibility thrust upon a (Ngawbere) woman when she becomes a mother.

The second example occurred as word play on a personal name. Names are bestowed at a transitional phase in a person's social life (such as birth and marriage) and are drawn from both sentient and non-sentient phenomena from the world in which Ngawbere live. By making use of the
language's isolating morphemes, names can be used in word play to improvise new meanings. One example of word play on a personal name is given here.

During a festive occasion held to honor the visit of a Panamanian general [Manuel Antonio Noriega] to the Indigenous Reserve, people from several communities gathered to prepare the food to feed the visiting indigenous population coming from nearby areas. Ngawbere clearly recognized that the general's visit was to be brief and unlikely to repeat itself in the near future. Several people used this theme of a quick arrival and short stay to discuss a concurrent case of illness in the community. A neighbor and his wife who initially began staying with an ill man shortly thereafter had stopped their visits, even though people felt the illness episode was not over. Someone created a play on words and altered the man's name from [Mecha] [meaning 'mother-in-law's surface'] to [Machako]. In so doing, the coined name Machako [meaning 'nuisance-one who flees'] could equally refer to the general's visit as well as the neighbor who stopped visiting the ill man. To compound the word play, someone nodded toward the fieldworker and asked: "This one?" [?ni ne], to which the originator of the coined name now stated the intended reference to the man named Mecha. By this time, the additional reference to the fieldworker became clear, as several people smiled or chuckled openly, since the nature of fieldwork, as Ngawbere view it, entails nothing more than a quick arrival and short stay, relatively speaking, against the permanency of spending one's entire life within the Indigenous Reserve. What began as word play with a double meaning was extended to include a third referent.

SUMMARY

Many more examples could be given of the interest that Ngawbere take in word play using both foreign and indigenous terms. Altering sounds to create new meanings in word play appears similar to the process of word borrowing, wherein the phonology of an introduced word may be altered slightly such the term is given a meaning that fits the cultural values that Ngawbere hold as most salient. While the process of phoneticization is operative in word borrowing, to be sure, the sociocultural context of word borrowing appears to operate more decisively in bringing foreign words into the ngawbere language. Things or concepts which represent primary concerns to Ngawbere are those which most likely assure the process of word borrowing. The study of word borrowing among Ngawbere should emphasize not only linguistic processes but also sociocultural ones.
POSTSCRIPT

Ngawbere have survived more than four centuries of European Conquest and, in a self-deterministic fashion, they have incorporated but a small portion of what is foreign and made it meaningful to their way of life. The much bigger question we should be asking ourselves is whether their participation in self-determination will continue over the next four centuries of human existence.

ACKNOWLEDGMENTS

An earlier version of this paper was read at the Annual Meeting of the Michigan Linguistics Society, October 3, 1986. Fieldwork was conducted along the northern Valiente Peninsula from March 1982 to April 1984, and from November 1984 to April 1985.

NOTES

1. The term Guaymi apparently derives from the Buglere word ngwamigda which refers to indigena or Amerindian (Robert Gunn, personal communication, October 1984).

2. Suggested by Ngawbere (ethno)historical narratives; also postulated by Richard Cooke (personal communication, April 1985).

3. Santa María la Antigua was the first settlement attempted by the Spanish on the isthmus of Panama. No settlement of any kind exists today on this site, which is jungle, or the surrounding area.

4. The evidence includes reports of the French priests who worked in Cricamola River (cited by Atencio 1891[1787]:311-316; Palazuelas 1891[1757]:350-352; Fernandez 1886: Vol 5, pp. 165-215, 235-245, 250-261; Ximinez Donosso 1957[1784]:251-258) and a French settlement listed as Taurreau on European maps from the 1700s. The term tura is given by Alphonse (1972) who claims the "old ones" in the Valiente Peninsula told him that these were the people who used to inhabit the area. Today peninsular Ngawbere use the term tura to identify several kinds of airplant, some of which are used as botanical medicine.

5. These were some of the findings of Melquiades Arosemena (personal communication, June 1984) who spent two years conducting linguistic research among Ngawbere on both sides of the continental divide, along with serving as director of SIL during its last years in Panama. (See also Kopesec and Kopesec 1974; Kopesec 1975)
6. According to a lexical list presented in Alphonse (1980:127-128), some 22 of the 43 Spanish-derived and some 19 of the 39 English-derived words are used in relation to domestic life, respectively. Several others not given by Alphonse were collected during fieldwork; most of these, too, are used in domestic life.

7. The calabazo tree is: **Crescentia cujete**.

8. The *bijao* leaves are: **Calathea sp.**

9. *Mesi* is the name of a mythic figure for Ngawbere who live along the coast. "She" is associated with three others, all of whom "saw" the powerful force Sibrai leaving the Valiente Peninsula (that is, what is shown as Punta Valiente on local maps) according to the narrative account.

10. One other term (namely *bani*) listed by Alphonse (1956:31-35, 63-118, 1980:127-128) carries the suffix *ni*. During fieldwork this term was not found to be in use and the related term (for "roof") was given as *baninkwata*. No other terms collected during fieldwork carry the suffix *ni*. The use of *ni* was observed to occur in relation to narrative discourse not only as described by Arosemena (1980) for formal discourse on a past event, but also informal narratives describing an event (such as a *fiesta*) as it unfolded.

11. The term *ble* may have been altered upon incorporation from another indigenous language. Lehmann (1920: Vol. I, pp. 166, 170) gives *ble* as the word for 'sea' in both *murire* and *sabanero*, and as 'salt' in *sabanero* (*murire* and *sabanero* are now extinct indigenous languages of groups once bordering Ngawbere). On the adaptation of indigenous words into Spanish, Zamora (1982).

12. Mother's Day is not an indigenous event and has a history within the Indigenous Reserve more recent than the introduction of government schools in rural Panama in the 1950s.

13. In other contexts, *ma* stands alone as the word for 'sandfly' and serves as the root form of the cry of exasperation *mai*! There is the additional possibility that the man was emphasizing the notion of "nuisance," since neither the morpheme *me* [referring to mother-in-law, when used as a single syllable word], nor its derivative *meya* [meaning 'mother'], was included in his word play.

14. One of the more humorous examples (to Ngawbere) collected during fieldwork was the incident in which the name *Iachi* ['corn penis'] was changed to *Ikuaw* ['corn
balls'] for purposes of a festive labor junta. It should be made clear that the emphasis herein is on "word play" (which alters both form and content) and not on "play language" (which alters form but not content); compare Sherzer (1970) and Laycock (1972).

### APPENDIX: ADDITIONAL EXAMPLES

<table>
<thead>
<tr>
<th>ngawbere</th>
<th>Derivative</th>
</tr>
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<tbody>
<tr>
<td>bresisi</td>
<td>'angle beam'</td>
</tr>
<tr>
<td></td>
<td>brace (Engl)</td>
</tr>
<tr>
<td></td>
<td>[used to brace endposts in fences, houses]</td>
</tr>
<tr>
<td>bre-</td>
<td>si-</td>
</tr>
<tr>
<td>PUSH OUT</td>
<td>SUPPORT SUPPORT</td>
</tr>
</tbody>
</table>

| bobre    | 'poor' |
|          | pobre (Span) |
|          | [in an economic sense and in sense of 'a sad sack] |
| bo-      | bre |
| IMAGE    | PUSH OUT |

| brete    | 'bun' |
|          | bread (Engl) |
|          | [generically any bread through an allusion to the rising of the dough] |
| bre-     | te |
| PUSH OUT | INSIDE referent |

| hato     | 'pasture' or 'clearing' |
|          | hato (Span archaic) |
|          | [allusion to extending the immediate clearing around house] |
| ha-      | to |
| REFLEXIVE | IMPRINT referent |

| kruso    | 'cross' |
|          | cruz (Span) |
|          | [primarily religious usage] |
| kru-     | so |
| TERMINATE | BAD HABIT |
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Once upon a time, there were two brothers. One made himself a hide-out at the top of an Azywaywa tree, the flowers of which the macaws used to come and eat. He had already killed a great many birds, when two jaguars appeared on the scene carrying gourds which they filled with nectar pressed from the blossoms on the tree. For several days running, the hunter watched the animals without daring to kill them, but in spite of his advice, his brother was less prudent. He shot at the jaguars without suspecting that they were invulnerable. The animals raised a storm, which shook the tree, bringing down both the hide-out and its occupant, who was killed instantly. They carried off the corpse to the underworld, the entrance of which was as small as an anthole, and they placed it on a wooden cross standing in bright sunshine.

The hero, after being changed into an ant, came to the jaguar's hut, where vessels full of honey were hanging. He learned the ritual songs, and every evening he resumed his human form and danced with the jaguars; in the day time he became an ant again.

When he returned to his village, he told his companions of all he had seen (Levi-Straus, 1973:34).

The above myth as told by the Tembe Indians of South America is typical of myths explaining the origin of a natural substance; in this case it is honey. However, as we look deeper into the myth, we not only discover that honey was given to the Indians by jaguars, but we also understand that these jaguars are to be feared, are capable of supernatural powers, and are invulnerable. These revelations are very valuable as we try to unfold the ancient stories and current mysteries of the role of the jaguar in South American iconography and religion.

Before proceeding, it must be noted that it is not only the jaguar which is central to South American myths and mysteries. Many other animals are represented with one of the most important being the alligator-like cayman. The cayman is as feared and revered as the jaguar by some Indians, and it is also believed to be the donor of such necessities as cultivated plants (Reed, 1977:742). Both the cayman and the jaguar have been widely represented in the
iconography and religion of South American Indians. Almost all aspects of the Indians' existence and well-being is believed to be affected by one of these two animals in some way. The task at hand is to determine which animal, if either, plays the more important role symbolically and otherwise. If this were to be judged quantitatively, we might suggest that it is the jaguar purely because there is more documentation on this animal. However, through a systematic approach it will be seen that the jaguar, in concordance with the amount of written work which represents it, seems to be afforded more importance in South American art, religion, cosmology, and modern life. This paper will compare and contrast the cayman and the jaguar with attention being focused on the nature of the Lanzon and the Obelisk Tello located at Chavin de Huantar, Peru.

First, it is necessary to define the cayman and the jaguar in terms of their respective environments and characteristics. The jaguar is a carnivore and can be found in the Amazonian jungle. Likewise, the cayman is also a meat-eater and its habitat includes the Amazon tributaries. The two animals often share the same living space, and are much more in contact with one another than one might think. Although the cayman rarely becomes terrestrial, the jaguar's favorite site for hunting in the area near particularly well-watered forests (Ewewe, 1973:211). In fact, even though the cayman and the jaguar are at the tops of their respective food chains, while the jaguar is hunted only by man, the cayman is a regular meal for a full-grown jaguar (Minton, 1973:50). In the survival of the fittest, the jaguar triumphs over the cayman in a direct manner.

Although the jaguar here obtains a point in its favor, the cayman plays a role in its environment of which no parallel exists in terms of the jaguar. The cayman has always eaten dangerous liver fluke which are known to infect sheep, cattle, and sometimes man (Ibid.:43). Also, many Indians once believed that by killing the caymans, they could increase the fish population by adding those fish upon which the cayman normally fed. This however, has been disproved. In fact, "...a decline in the fish population has paralleled the disappearance of the caymans" (Ibid.:43) This follows because in addition to controlling liver fluke, the body of the cayman destroys certain bacteria and sediment in the water which is harmful to the fish.

As the myth at the beginning of this essay suggests, the jaguar was the animal responsible for giving honey to the Indian. There are many other myths from various tribes which explain the origins of other resources gained from both jaguars and caymans. For example, although the frog is believed to be the giver of shamanistic abilities, the Tupi of the Amazon Valley relate that this frog can be
transmuted into a jaguar (Levi-Strauss, 1973:215). Also, according to Levi-Strauss, a fifth deviation of this myth is the transformation of the female frog into the male jaguar (Ibid.:250). Related to the aquisition of shamanistic powers is the giving of tobacco to the Indians by the jaguar. Here, tobacco can loosely be translated as hallucinogenic snuff. Again, according to Levi-Strauss, "tobacco comes into existence through the jaguar . . . [and] the jaguar comes into existence . . . through the invention of the bark tunics. The wearing of the bark tunics and the absorption of tobacco are two ways of entering into communication with the supernatural world" (Ibid.:368). Simply put, the jaguar was believed to have given tobacco to the people, and his image was carried on by humans through the wearing of painted bark tunics. These bark tunics combined with the use of tobacco helped produce the jaguar state of the shaman which was necessary to enter into the world of the supernatural (Reichel-Dolmatoff, 1975:47, 120).

In another myth the jaguar gives the Barasana Indians the spice, pepper. The jaguar is believed to have received this pepper directly from the creatress, Romi Kumu (S. Hugh-Jones, 1979:95). Locating the cayman in the origin of basic needs, Donald Lathrap notes that this animal is believed to have given the Indians one of their most important resources: cultivatable plants (Lathrap, 1977:346). He related that the "Great Cayman" gave humans manioc, the basic staple of many South American Indians, and also pepper. Here we see how both the cayman and the jaguar can be believed to have brought the same gifts to humans.

Other than that stated above, the cayman is relatively absent in most origin myths. Jaguars seem to play a much more universal role in these myths, although I was able to pinpoint the cayman in two others. In the first, the cayman is punished for having sex with a human woman and he is destined always to be eaten (Levi-Strauss, 1973:244). In the second, a red hot stone is plunged into the mouth of a cayman found eating his sons-in-law. This results in the burning and subsequent loss of his tongue (Ibid.:228). These two stories represent explanatory myths rather than those of origin, and in both the cayman is punished by man. In the myths I've encountered, there has been no evidence of jaguars being punished by man; in fact, in northwest Amazonia, jaguars are seen as being the closest counterpart of man in many ways (C Hugh-Jones, 1979:84). At any rate, the jaguar must share its limelight with the cayman as the latter's importance in origin myths cannot be overlooked.

Turning our attention to iconography, we find the feline motif in many and varied works of art -- particularly at the ceremonial center of Chavin de Huantar. Throughout
the Andes even today, sculpture, pottery, and other forms of art carry the mark of the jaguar. These pieces are not art for the sake of art, they are often connected in some way with the cult of the feline. For example, in Tiahuanacu the sculpted jaguar head is dominant, and a ceramic jar (Zahumador), feline in shape, is thought to be of ritual purpose (Osborne, 1952:135). Osborne cements the concept of the jaguar with that of the cult in the following statement: " . . . it is certain that a pre-Inca universal cult was associated with the worship of a feline deity . . . Today, all the tribes of the Amazonian jungle agree in according special worship to the jaguar" (Ibid.:134).

This is perhaps the most important concept in the religious/iconographic sphere of South America: that of tremendous emphasis being placed upon a feline deity. But why is the feline considered to be of such great importance to the Chavin art style? Michael Kan answers this question in the The Cult of the Feline by stating, "primarily because feline elements are the most omnipresent figurative devices, and, as Rowe (1967) suggests, are the elements that generally distinguish natural from supernatural or mythological representations" (Benson ed., 1970:76). The felines are often depicted in a highly stylized fashion, but with common features of actual jaguars. These include crossed canines, flaring lips, short noses, heavy jowls, and usually a general snarl.

One of the most general questions that comes to mind is that of the origin of such a cult that worshipped felines. Why did it exist? In answering such a complex question, we must not forget about the cayman. Although there is no know "cult of the crocidillian," this reptile has tremendous importance within the realm of religion/iconography and it is also depicted as a deity.

As was previously mentioned, both the cayman and the jaguar are the kings of their respective spheres of influence: the cayman in the water and the jaguar on the land. According to myths, they are also "kings" (deities) in the world of the supernatural. For example, the cayman is seen as the master of terrestrial water while the frog (the mother of the jaguar) is seen as the mistress of celestial water (Levi-Straus, 1973:249). In the meantime, to effect a polarity, the jaguar is also seen as the master of fire (Ibid.:250). In a similar situation the cayman plays the role of the master of rain in Chaco myths while the Black Jaguar is believed to be a personification of thunder (Ibid.:229).

Above, the cayman and the jaguar have been loosely identified as deities. The most important modern discovery to support this hypothesis is the temple at Chavin de
Huantar. In the temple are two very important columnesque statues: the Lanzon and the Obelisk Tello. The latter without question depicts two caymans as the main icons with jaguars and other beasts among them. Donald Lathrap has done extensive work on this piece and is the main promoter of cayman as deity. His arguments, however, are not as strong when attempting to downplay the role of the jaguar in favor of the cayman.

The Obelisk Tello, according to Lathrap, is a complete and detailed model of the cosmos (Donnan, ed., 1985:249). There are two fairly obvious caymans depicted on it; one of which is the Great Cayman of the Sky, and the other the Great Cayman of the Water and Underground. The two are divided by a thin strip which represents normal, everyday life. Between these three areas are jaguars giving forth the images of plants. The jaguar is portrayed as a mediator between the natural and the supernatural. This is also demonstrated in The Palm and the Pleiades where the Barasana Indians believe that "jaguars are conceived of as mediators between the human world and spirit world of the ancestors" (S. Hugh-Jones, 1979:125).

Lathrap's hypothesis is believable even though the obelisk's namesake, Julio Tello, describes the piece as representing only jaguars. The major jaguar deity depicted at Chavin is not Tello's obelisk, however, but the Lanzon.

The Lanzon is believed by Lathrap to post-date the Obelisk Tello. According to Michael Kan, this image has many of the feline elements common to other jaguar-oriented works including the upturned mouth with long upper canines, the large rounded nostrils, and the eccentric rounded eye (Benson, ed., 1970:77). Many of these and other feline characteristics are also present on the Obelisk Tello demonstrating how easy it is to confuse the cayman and the jaguar in iconography. In fact, the artist often intended the viewer to become confused. He wanted the observer to see simultaneous images of the same mythical being or to associate two animals whose attributes are joined (Benson, ed., 1970:79). However, according to leading archaeologists, the Obelisk Tello is mainly a representation of joined caymans while the Lanzon is a representation of the Feline.

As has been established, the jaguar was conceived of as "Master of Fire" and the cayman as "Master of Terrestrial Water." It seems only logical to pursue these deities in terms of myths about the cosmologies of the ancient South American peoples. This subject is too broad for the purposes of this essay, but a brief overview will be presented here.
In the Kogi cosmology, the universe consists of nine disks piled on top of one another. Each of these disks or layers represents a different world of beings. Humans are believed to inhabit the disk at the center, while the second disk appears to be the birthplace of the first mythical jaguar in creation (Reichel-Dolmatoff, 1975:55). This must be where the divine jaguars live. Underneath the human world is the evil side of the universe (demonstrating a duality) where the Tundebo believe that the devil lives. The devil is also a jaguar (Ibid.:46).

The Barasana have a different view of the cosmos which includes a trinity-like entity. It consists of one large and dominant predator made up of three parts: the eagle in the sky, the jaguar on land, and the anaconda in the water (many times the anaconda is substituted for the cayman) (S. Hugh-Jones, 1979:124). This is similar to Lathrap's view of the Obelisk Tello in one important way. He states, "... the Obelisk Tello represents a standard sort of trinity, with the whole standing for 'the Great Cayman' as Creator and Master of the Fish; and with the two discrete depictions standing for a sky deity and a deity of the water and underworld respectively" (Lathrap, 1977:341). Many other South American myths depict a trinity-like entity with the jaguar on land, the cayman in the water, and the happy eagle in the sky.

Although the jaguar and the cayman have thus far been attributed equal status in religion and iconography, the shaman and shamanism in general are ultimately and universally connected to the jaguar. For the most part, the cayman is excluded from all references to shamanism. What follows are the findings of several studies which illustrate the extensive importance of the jaguar over the reptile.

Very broadly, Joannes Wilbert states, "The shaman is the jaguar, and vice versa" (Wilbert, 1974:69). What this means is that often shamans and jaguars are thought to be almost identical, at least equivalent, in their powers, but each has his own sphere of action (Reichel-Dolmatoff, 1975:44). Why is this? In many parts of South America, the shaman as Jaguar acts as helper, protector, aggressor, or healer depending on the task at hand. This does not mean that the man literally changes himself into a jaguar, but rather dons a jaguar pelt, paints his face, and takes various hallucinogenic drugs, usually snuff or Hihi (Ibid.:33), which are believed to help him see as the jaguar sees. The shaman wishes to become like the jaguar because of the extended beliefs about the animal's prowess and deity-like qualities.

The shaman is also like the jaguar in terms of his role as mediator. A shaman using hallucinogenic drugs is said to
be able to communicate between the cosmic levels previously outlined (S. Hugh-Jones, 1979:125). Stephen Hugh-Jones says of the shaman/jaguar, "very powerful shamans... are able to change into jaguars at will, to keep jaguars like other men keep dogs, and to become jaguars on death" (Ibid.:124).

The main discrepancy concerning shaman/jaguars and other South American Jaguar ideals (the cult of the feline) is in the way the two are practiced. In other words, a shaman taking drugs and entering the world of the jaguar is experiencing something very personal. On the other hand, the very definition of a cult (such as in the cult of the feline) is a community of people all united in the pursuit of one common goal. In essence, what is being played upon is the group and their idea of "jaguarness" versus the individual and his ideas. This conflict was not solved in my research and may just remain as two sides of the same coin, each separate. However, Adolf E. Jensen does say, "a wide gap separates shamanistic practices from religious cult by the very fact that an individual takes the place of the community--the community which would recall its essential humanity in joint activity" (Jensen, 1963:231).

As I've stated, I found no direct evidence connecting the cayman to the shaman. However, one very odd bit of information about the cayman does correspond to the shaman in the state of the jaguar. South American caymans differ from American and Chinese alligators in that they possess bony armor underneath their belly skin rather than on their backs like most crocodilians (Minton, 1973:33). Curiously, when Colombian Indians were asked how a shaman turns into a jaguar, they replied, "To become a jaguar they turn their bellies upside-down. What is below, is up, and what is up, is below. The heart is on the back, and the backbone is where the belly was" (Reichel-Dolmatoff, 1975:120). In sum, the shaman-turned-jaguar's body structure is much like that of the cayman with the back being soft and the stomach being bony.

At the conclusion of this essay, the original thesis statement needs to be modified. Whether or not the jaguar is more important than the cayman is largely an opinion question to be left up to the reader to decide. The evidence presented here may lead one to conclude that the jaguar was indeed more important -- at least more visible. Perhaps much more data on caymans is yet to be published judging from the activities of Donald Lathrap. In any event, the cayman and jaguar both occupy an important place in world literature in both ancient and present South American cosmology, iconography, and religion. It may be that the theory of the mythical animal which is a combination of cayman and jaguar may need expansion. A
single figure carrying iconographic symbols of other animals is fairly common (Gary Urton, personal communication). For example, in the River Trombetas region, Frikel noted something representing a "water-jaguar" according to the Kochuyana (Levi-Strauss, 1968:121). Also, northern Manab, and in Esmeraldas, the god Cocijo is represented as a merging of feline and serpenting characteristics (Wilbert, 1974:69). This may be the next step in the evolution of comparison and contrast of these two animals. In any event, as Geoffrey H.S. Bushnell states in his concluding remarks of The Cult of the Feline, "In South America, felines are widespread but are not universally important . . . " (italics mine), leaving room for the mysterious cayman.
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AGRICULTURE AS A SACRAMENT: A NEW APPROACH TO THE CYCLE OF RICE IN SOUTH INDIA

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ABSTRACT

This article explores the nature of Indian agriculture and the role of the farmer beyond the obvious and immediate economic concerns. Drawing homologies between human bodies and the Earth as a divine body, the article suggests that agriculture in India has the characteristics of bodily sacraments (samskāra) and that the farmer operates as a priest and custodian of the Earth's potential for reproduction.

Attempts to understand Indian agriculture in purely economic or environmental terms, or in terms of any other single category of analysis, are not likely to be successful. The reason for it is that agriculture in India is the kind of phenomenon Mauss used to call "total social fact" (Mauss, 1954), that special domain of life where all social and cultural concerns coalesce together. How do these concerns coalesce together in Indian agriculture? Perhaps an examination of the understanding the Indian farmer has of the agricultural cycle may provide some answers.

When an Indian farmer, a Tamil in this case, is asked what is an agricultural cycle, the most common reply is that it is a period of time required to bring a seed to its completion or fulness, so that it is suitable to be used as food. In the farmer's ideas, as well as in his actions, an agricultural cycle entails a process of transformation through various stages of growth toward maturation and wholesomeness. The most common Tamil term for "agricultural cycle" is pōkam (from Skt. bhoga), which variously means "enjoyment," "happiness," "satisfaction," "experience of karma or past actions," and the "produce of the season" or "crop" (Madras Tamil Diccionary). All these meanings seem to apply when the word is used in agricultural contexts, as the following, more popular gloss of pōkam indicates: "Pōkam is going through a process that brings enjoyment." Here a thoughtful farmer informant derived the term from the Tamil verb pō/pōka, "to go."
It is important to emphasize the processual aspects of the agricultural cycle, as south Indian farmers do, highlighting its likeness with reproductive processes in human life. As it is well known, Indian farmers often draw comparisons between agricultural and human reproductive processes, as when they compare a fertile soil with a womb, the seed with semen, sowing with copulation, harvesting with the severance of birth and the happiness it brings, and the fallow lands with the post-partum period or, at times, with female widowhood. According to this reproductive metaphor, an agricultural cycle is viewed as a period of gestation, the growing of a seed in the Earth's womb to its full term.

While this reproductive view of agriculture is not unique to India, but is found elsewhere in human societies, an agricultural cycle in India could perhaps be more genuinely conceived as a ritualized process, a sacramental rite of passage or samskara effected on the divine body of the Earth. Like human samskara (Pandey 1969) performed in human bodies in the life cycle of persons, an agricultural cycle could be also viewed as a progressive series of actions intended to remove hindrances, or negative substances and conditions from the soil (such as hardness, dryness, useless seeds, insects, and the like), and other actions directed to add generative or re-generative energy to the soil (such as seeds, water, fertilizers, and work in general), all in an effort to bring forward the Earth's potential for general "prosperity" (sri, palan) and "enjoyment" (cantosam). It is perhaps in this sacramental perspective where all social and cultural concerns coalesce together in Indian agriculture.

To be sure, such sacramental view is seldom verbalized by farmers, nor should one expect them to do so. It is too evident, too "matter-of-fact" to be rendered by them in brahminical jargon. One should think, however, that the actions the farmer undertakes during the agricultural cycle reveal this likeness with human samskaras or bodily sacraments, the actions being in this case more explicitly eloquent than oral statements. This sacramental view of agriculture is congruent and compatible with that which many Indologists have adopted regarding the nature of Hindu society in India (Biardeau 1976; Gonda 1966; Heesterman 1985; Inden 1978; Renou 1959, among others), basically a society of worshippers. This view is also specifically perceptible in Tamil understandings of "culture" as the conquest or control of "nature" in its wild state (Hart 1975); (Pfaffenberger 1982). In this cultural endeavor, the cultivation of lands stands on a par in Tamil traditional thought with the building of temples as the two most outstanding achievements. In all of this, the farmer emerges not only as the conqueror of wilderness by clearing lands and subduing their dangerous creatures, but first and
formemost as a "custodian" of the Earth's fertility. No wonder then that the major socio-political achievements of Medieval South India were the result on an alliance of Priest and Farmer (Stein 1980).

Priestly and farming activities have many features in common, the most salient being that of articulating—-that is, putting together what should be together and separating what should be separated, so that both "cosmic order" (ṛṭa) and "social order" (oruṅku) may prevail. The farmer, as the only one who naturally knows how to articulate seeds, soils and seasons, operates like a priest of the Earth's reproductive capacity. In the Tamil-speaking areas of South India, this specialized knowledge is known as sāstiram (Good 1982), and in connection with seeds, soils and seasons, this knowledge resides by birth-right in the Vellalar caste, as one of the foremost constituents of its being. I shall then turn to Vellalar informants to detail the salient stages of the agricultural cycle in the Palani taluk of the Madurai district in Tamilnadu, where I conducted research for two years (1979-81). Since this locale is a rice growing area, the focus will be on the cycle of rice cultivation.

The nature of Palani soil (mostly of the red variety) and a poor annual rainfall (24 in.) make this locality hardly suited to rice cultivation. Nevertheless rice seems to be the preferred staple (48% of the total meals) and its cultivation uses a large percentage (55%) of the total arable lands. With such constraints, Palani farmers are able to raise only one crop of rice a year, traditionally known as Palani Campa (Nelson 1868). Occasionally, a second crop may be raised in the more fertile blacksoil lands if water is available. Despite this, local farmers always speak of a double rice cycle within a solar year, highlighting in this manner the penetration of astrology in the agricultural domain. The first cycle, the Campa pōkam, corresponds very closely to the astrological division known as dakṣiṇayāna, the dark and cold semester from summer solstice to winter solstice, when the Sun is said to travel south and the Moon is said to release the "saps" (ṛasam) of the Earth in the form of rain (Zimmerman 1980). This cycle extends from the middle of Ati month (July/August) until the month of Tai (January/February). This is the period when fields benefit from seasonal rains, reservoirs are filled, water-table levels go up, and electrical supplies are abundant. Hence, this is the only crop most farmers in this area are able to raise.

The second only potential crop, is known as Navarai or Kuravai pōkam. It also closely corresponds to the complementary division of the solar year, the uttārayāna, the bright and hot semester from winter solstice to summer.
solstice when the Sun is said to travel north and to capture with its rays the "saps" of the Earth. Due to the general desiccation of the Earth, only few farmers can raise a crop then through the modern technology of deep tubewells. It is important then to realize that, despite the contingencies of experience, agriculture is integrated in the cosmic cycle.

The agricultural procedures followed in these two cycles, when both are present, have many similarities, but naturally the first cycle, Campa pōkam, is the most important both economically and ritually. I shall then focus on this cycle. In doing so, it is again important to emphasize the processual nature of the cycle, which unravels its holistic and sacramental dimensions. As a process, it integrates a series of procedures, the most salient being (1) the preparation of nursery beds and main fields by watering, fertilizing, and plowing; (2) the transplantation of saplings; (3) weeding; (4) harvesting and associated activities such as threshing, winnowing, measuring, storing and/or selling. A rice cycle would be considered incomplete without the inclusion of other features, such as (5) the distribution of human shares due to servicemen and specialists traditionally attached to the landowner; and (6) the giving of divine shares due to the powerful beings of the local pantheon. It is only then that the seed has reached its wholesomeness and has the assured potential of bringing enjoyment and prosperity, indeed, life, as food. It is in the articulation of these procedures that the sacramental dimension of the agricultural cycle is revealed as the farmer fulfills his functions of being custodian of the Earth's reproductive capacity.

As understood by Hindō life sciences (ayurveda), in human bodily growth, either in the process of metabolism or in the marked stages of life (birth, puberty, marriage, death), every transformation brings forward a more refined state of being, but at the same time leaves behind residuals. These residuals must be properly disposed of due to the negative and harmful character. The term saṃskāra indicates this double action, "carving out" or "polishing away" harmful residuals of growth and infusing life-giving energy, generative substances. As in human growth, without proper disposal of these negative residuals, a crop is not considered fit for human consumption. Under the farmer's supervision, these residues that accumulate at every stage of the cycle are put away in appropriate receptacles, which usually are his servicemen and his gods.

The procedures followed in the Campa pōkam are very complex and the following attempts only to summarize them. The flooding festival in the month of Ati (Ati perukku) marks the start of this cycle with the coming of the first rains. The preparation of the main fields and nursery beds
is carried out simultaneously, and techniques vary depending on whether the crop is to be raised under the "dry" or the "puddle" system. The dry system is followed when the summer monsoon has been extremely bad, and the required amount of water to inundate the fields is not available. To carry out these operations (described in detail in Ponnuramalingam 1976), farmers in this area would prefer the use of a rural cooperative tractor rather than the country plow with bullock power. The economic advantage of a tractor is well known to all farmers. In 1980 prices, the cost of puddling an acre of land by tractor was found to be about Rs 20/ as against Rs 45/ when done by traditional plow. The most cumbersome operation at this preparatory stage is the control of wetness. A farmer's expertise (sāstirām) is said to be proven by his ability to successfully give the proper amounts of wetness and heat to the saplings.

These preparatory operations are conducted entirely by men, preferably of the Pallar caste, who, despite their Untouchable status, are considered to be experts in wet land work. These operations are, however, always directed by the landlord himself, the cultivator proper who knows all the complexities of the process. Women's contributions at this stage are of a ritual nature, as pacifiers of the Seven Virgins (Kanippimār), said to rule over the wilderness. Women make an image of these Virgins with mud from the nursery, and worship them with offerings of coconuts and plantain. These offerings, once transvalued by the Virgins' contact, are consumed by women, imbibing in themselves the negative residuals at this stage of the cycle.

The transplantation of saplings takes place around the month of Purattaci (October), and is typically women's work. The complexity of this stage lies on spacing the saplings adequately, and in following the proper spatial orientation of the grovers, from north to south. To ensure the establishment of saplings in the main field, another offering is given to the Seven Virgins also by women, this time including sweetened rice. Again, the transvalued offerings are consumed by these women laborers. Twenty days after transplantation weeding is done, always by women. It is repeated at intervals of 15 days until the flowers come out of the stalks. The grains mature in about 30-35 days after flowering, but with present high yield varieties the leaves may still look greenish. This is one of the main problems of improved seeds which puzzles the farmer who has to learn not to trust in color, as he traditionally has done, but in the careful examination of the stalks. Very often, however, the farmer sticks to the traditional calendar of harvesting some 10 days prior to Tai ponkal—the traditional Tamil winter solstice festival.
Prior to harvesting, an offering is given to the goddess, Bhumi, the divinized Earth, or to one of the many "forest goddesses" (vanna turkai), whose open shrines are situated in the proximity of the cultivated fields, marking the boundary with forest lands. These goddesses are also propitiated when a tract of "wild land" (kātu) is brought into cultivation either for the first time or after many years of fallow. The central offering is the blood of a male goat, whose head is severed and the blood let run freely on the ground. The sacrifice is conducted by a priest of the Pallar caste, a serviceman of the landlord, and the transvalued carcass, which contains the negative residuals, is later eaten by the priest and his family. Farmers say that this sacrifice is directed to remove the hindrances of harvesting, to repair the damage inflicted upon the Earth by cutting her fruits. They also say that the sacrifice is done so that the fields may yield larger crops in the future.

Most villages have a communal threshing floor to the west of the main settlement. These places are always endowed of a sacral character, like the domestic kitchen or the temple, and are always approached with the utmost reverence. Every threshing floor has a Guardian God (Melantar), embodied in a stone or a heap of cowdung, usually placed on the north side of the area. Before threshing operations start, a worship is performed to this Guardian God by his human counterpart, the paruvakāran, the most trusted laborer of the landowner, a sort of general manager of the threshing operations and night watchman. Similarly, the transvalued offerings, containing the negative residues of the process, are imbibed by this serviceman.

Threshing, twining the straw and winnowing are always done by men; women only briefly step on the threshing ground to receive their day's share for harvesting. When the winnowing has ended with the day's work, the heaps of cleaned rice are marked with the landowner's household "seal" (mūttirai), thus conferring identity to them, the mark of belonging.

Prior to sealing the cleaned grain, the daily shares are distributed to laborers, every day during the harvest season. Payments on the threshing floor are given on two accounts, (1) to reward "work" (velai) and (2) to reward "expertise" (sāstiram) of a traditional occupation, even when this has not crystallized in actual work during the season. The reward for work is always in kind during the harvest season, and is locally called cooli or sampalam ("wages" or "salary for work"). This is always higher than the reward for expertise, which is known as maniyam ("honor," "respect") (for important implications of this
distinction, (see Good 1982). Laborers and specialists (blacksmith, barber, washerman, and priest) receive at this time one of the two payments or both. The similarities of these payments with the "fees" (dakṣina) offered to the performers of life cycle rituals or samskāras is too great to escape attention. Both are "inducements" to engage in actions of a dangerous nature, that is, to becoming receptacles of negative residuals, the left-overs of growth.

At harvest time the landowner is obliged by a code of "generosity" (sattvika perumāi). This generosity is part of his sāstirām, his code of conduct as lord of the land. This generosity is expressed by the extra amount the landlord throws to the measured quantities given as payment. This action is directed to create mutual "satisfaction" (cantōsam) between the landlord and his servicemen, the token of good will to ensure that the pōkam, the produce of the season, will really be a source of enjoyment to all.

When the shares have been duly distributed, the grain is weighed and packeted in sacks. A part of the crop is sold to the Government, at procurement price, and the remainder may be sold in the open market unhusked or taken to the rice mill to be husked and parboiled and then sold at a higher price.

Grain from the fresh crop is never husked and cooked at home before the festival of Tai poṅkal, the three-day celebration of the Tamil winter solstice. This festival has usually been described as an occasion for popular rejoicing more than a purely "religious" observance. It has, however, a very important ritual purpose whose intent is a final purification of any remaining negative residuals in the new crop. This celebration includes three major observances--offering of new rice to the Sun, about to begin its northerly course; the cleansing of cattle and agricultural tools; and the eating of the new rice by the farmer's household with great rejoicing. These observances are usually surrounded by divinatory practices, in which the general well-being of the family in the coming year is ascertained.

Two other offerings of the new rice in the months to come will complete the cycle--to the local goddess Mariyamman during her festival in the month of Macī (February/March), and to the god Murugan in the first day of the month of Cittiral (April/May), the Tamil New Year. These final procedures are obviously "thanksgiving" actions, but are also intended to free completely the crop from its residual negatives, liberating its karma, and making its produce wholesome for enjoyment and prosperity.
In conclusion, there is no doubt that the major function of the Indian farmer is that of "provider," an economic agent in the production of food. But he becomes a provider by virtue of being a "custodian" of the Earth's fertility. To properly discharge this function, he must articulate the Earth's growth, thus becoming its Priest. An understanding of Indian agriculture as a "total social fact" cannot fail to recognize this sacramental dimension.

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My objectives for this paper are twofold: to present an overview of Early Archaic manifestations in the American midwest, and to relate this overview to the Early Archaic components encountered by Mohow and Diaz (1986) in their survey of Maumee River Drainage in Northeastern Indiana. Most researchers agree that the period defined as the Early Archaic began about 8,000 B.C. with the climatic shift at the close of the Pleistocene (Collins, 1979a; 20: C. Chapman, 1975; 126). As most of the Pleistocene megafauna became extinct, aboriginal populations became increasingly dependent on hunting and gathering to draw upon a broader subsistence base. New adaptive strategies demanded new tools, and Early Archaic peoples developed a wide array of specialized tools for hunting and gathering activities (Collins, 1979a; 20). The general midwestern environment became one of deciduous forests and faunal patterns changed accordingly. The temporal boundary between the Early and Middle Archaic is not clearly defined. James Fitting (1975; 65-66) suggests that the Early Archaic terminates about 6,000 B.C. Others, including Carl Chapman (1975; 30) maintain that the period extended to around 5,000 B.C. Due to the persistence of certain diagnostic lithic technology traits, this paper will accept the 8,000 to 5,000 B.C. dates for the Early Archaic Period in the midwest.

On the whole, there is a great deal we do not know about the Early Archaic. While a good number of point types are recognized as being diagnostic of the period, some of these lack clearly defined usage periods. Moreover, we know relatively little about Early Archaic adaptive mechanisms beyond the general characteristics already mentioned. Collins (1979a; 20) states that "The Early Archaic tradition can be well documented from stratigraphically defined components in only a few archaeological sites in the eastern United States. While Early Archaic materials are often found in surface deposits or mixed with later deposits, few sites have revealed discrete intact components uncontaminated by other materials." Mason (1981; 128-129), says of the Early Archaic in the Great Lakes region "All that has been found within the region is a very thin and discontinuous scatter of typologically suggestive artifacts with only limited and infrequent associations."

It is generally agreed that the most readily recognized Early Archaic traits are the points. Midwestern point types
diagnostic of the Early Archaic can be generally divided into two categories. First, there are those types that represent influences that arose in the Southeastern United States. This category includes Kirk Corner-Notch (Broyles, 1971; 63, 65: Payne, 1982; 38-40), Kirk Stemmed (Broyles, 1971; 67: Payne, 1982; 41-42), Palmer Points (Coe, 1964; Cambron and Hulse, 1975; 101), Charleston Corner-Notched (Broyles, 1971; 56-57), Amos Corner-Notched (Broyles, 1971; 55), MacCorkle Birfurcates (Broyles, 1971; 71: J. Chapman, 1975; 245: Payne, 1982; 43-44), St. Albans Bifurcates (Broyles, 1971; 73, 75: J. Chapman, 1975; 245-246: Payne, 1982; 45), Wabash Diagonal-Notched Points (Cochran, 1982), LeCroy Bifurcates (Broyles, 1971; 69: J. Chapman, 1975; 246), Kanawha Bifurcates (Broyles, 1971; 59: J. Chapman, 1975; 69: J. Chapman, 1975; 246), Kessel Side-Notched (Broyles, 1971; 60-61), and Big Sandy Broad-Base Points (Cambron and Hulse, 1975; 16). The second category of Early Archaic Point types represent influences that arose west of the Mississippi River, possibly on the western plains. This group of types includes St. Charles (C. Chapman, 1975; 254-255: Luchterhand, 1970; 31-32), Thebes (Luchterhand, 1970; 31-32; Payne, 1982; 50-52), Lost Lake Points (Cambron and Hulse, 1975; 83), Hardin Barbed (Logan, 1952; Luchterhand, 1970; 27-28: C. Chapman, 1975; 249), Graham Cave Side-Notched (C. Chapman, 1975; 248), Hidden Valley Stemmed Points (C. Chapman, 1975; 249-250), and Rice Lobed (C. Chapman, 1975; 254). The precise affiliation of the Rice Lobed type is in dispute, as the type exhibits characteristics of both southeastern and western influence. The recognition of all of these temporally diagnostic point types has been crucial to identifying most midwestern Early Archaic sites. In the midwest, alternate-edge leveling of the blade and bifurcation of the base are generally characteristic of Early Archaic lithic technologies.

The midwest, as a region, may be delineated by many different criteria, paleoenvironmental, geomorphological, etc. For the sake of simplicity, however, this paper focuses on a more limited concept of the midwest, that defined by the state borders of Kentucky, West Virginia, Ohio, Indiana, Michigan, Illinois, and Missouri. Early Archaic sites have been recorded in all of these states and some of these sites have made important contributions to our knowledge of the period. The following, organized by state, relates some of the more significant Early Archaic sites and data in the midwest.

Missouri: Perhaps the best known Early Archaic site in Missouri is Graham Cave, in the Northeast Prairie Region of the state. The Early Archaic horizon in the site yielded Graham Cave Notched, Hardin Barbed, Hidden Valley Stemmed, and St. Charles Notched points (Logan, 1952; C. Chapman, 1952; Klippel, 1971). Other noteworthy Early Archaic sites
in the state include the Rice Site (type site for Rice Lobed Points) in the Southwest Drainage Region (Bray, 1956), Rodgers Shelter in the Southwest Ozark Highland Region (Wood and McMillan, 1967, 1969; McMillan, 1971; Ahler, 1971), Tick Creek Cave in the Ozark Highlands Region (McMillan, 1965; Roberts, 1965), Arnold Research Case in the Northeast Prairie Region (Shipps, 1966), and the Hidden Valley Shelter in the Southeast Riverine Region (Adams, 1941, 1949; C. Chapman, 1948).


Kentucky: Excavations at Deep Shelter in Rowan County revealed Bifurcate Tradition points with associated dates of 6570 ± 470 B.C. and 5290 ± 550 B.C. (Dorwin and Warholic, 1970). At the Longworth-Gick Site in the Falls of the Ohio region discrete Early Archaic deposits contained small Kirk Corner-Notch points with associated radiocarbon dates of 7816 ± 237 B.C. and 6735 ± 391 B.C. Larger Kirk Corner-Notch points were recovered from an overlying deposit with an associated date of 6732 ± 128 B.C. and overlying this deposit was a horizon containing bifurcate point types in association with a date of 6715 ± 113 B.C. (Collins, 1979; 1024). The Paintsville Reservoir Survey in Johnson and Morgan counties recovered Thebes, Kirk Corner-Notched, Kirk Serrated, LeCroy, St. Albans Bifurcate, Kanawha Stemmed, St. Charles, Amos Corner Notch-like, and Big Sandy Broad-Base points (Adovasio, 1982).

West Virginia: The St. Albans Site in Kanawha County has yielded some of the finest stratified Early Archaic data in the midwest. Broyles (1971; 49) recorded a broad sequence of Early Archaic point types with a series of associated radiocarbon dates. The point types, with their associated dates are: Kessel Side-Notched and Charleston Corner Notched points (7900 ± 500 B.C.), small Kirk Corner-Notch (6980 ± 160 B.C.), large Kirk Corner-Notch and Kirk Stemmed (6900 ± 320 B.C., 6850 ± 320 B.C.), MacCorkle Bifurcates (between 6900 ± 320 B.C. and 6880 ± 700 B.C.), St. Albans Points (6880 ± 700 B.C., 6870 ± 500 B.C.), LeCroy Bifurcates (6300 ± 100 B.C.), and Kanawha Stemmed Points
(6210 ± 100 B.C.). Broyles (1971; 55) also reported Amos Corner-Notch Points from the Early Archaic zones at the Amos Power Plant site in Putnam County, West Virginia.


Michigan: Fitting (1964, 1975) reports bifurcate points from numerous southwestern Michigan sites, including the Holcombe Beach Site. Moreover an illustration of "Possible Early and Middle Archaic Projectile Points from Michigan Surface Collections" (Fitting, 1975, 70, fig. 22) includes Kirk Stemmed, Kirk Corner-Notched, Big Sandy Broad-Base, LeCroy, Thebes, and Charleston Corner-Notch Points.

Indiana: An inspection of the Ball State University point type collection reveals a wide range of Early Archaic types from central and northern Indiana sites. The types represented include all southeastern influence types, as well as Thebes, Lost Lake, and St. Charles Points. A catalogue of types (Mohow, 1984) in the type collection of Indiana University/Purdue University at Fort Wayne includes ten Early Archaic types from northeast Indiana sites. The types noted, are Kirk Corner-Notch, Kirk Stemmed, Kanawha, LeCroy Bifurcates, Lost Lake, MacCorkle, St. Albans, St. Charles, Thebes, and Big Sandy Broad-Base Points.

Having presented an overview of midwestern Early Archaic manifestations, I would now turn attention to the Maumee River Drainage in northeastern Indiana. A preliminary archaeological survey of a six mile stretch of the river's floodplain and adjacent terraces was conducted by Mohow and Diaz between 1981-1984. The survey identified a total of 70 prehistoric sites and recovered approximately 6,000 artifacts. Of the sites recorded, 17 were found to contain Early Archaic Components (Mohow and Diaz, 1986). Four of the sites (12-AI-894, 12-AI-390, 12-AI-899, 12-AI-414) displayed both southeastern influence point types and western influence types. Three other sites (12-AI-900, 12-AI-901, 12-AI-913) exhibited only western influence point types (Thebes, Lost Lake, and St. Charles Points). The remaining 10 sites (12-AI-896, 12-AI-902, 12-AI-908, 12-AI,911, 12-AI-912, 12-AI-914, 12-AI-505, 12-AI-924, 12-AI-931, 12-AI-936) exhibited only southeastern influence types (Amos Corner-Notch, Palmer, Kirk Corner-Notch, Wabash, Diagonal-Notch, MacCorkle Bifurcate, Kanawha, and Big Sandy Broad-Base Points).
In regards to settlement patterns, only three of the 17 sites with Early Archaic components are located in the floodplain, all the rest are situated on the river terraces. This preference for higher ground is noted by Collins (1979b; 1024) on Early Archaic sites in Kentucky, but contrasts with the Paintsville Reservoir Survey (Adovasio, 1982) where a preference for lowland locations was noted. While some glacial and local cherts (particularly Liston Creek Chert) were used in the recovered Early Archaic points a preference for Attica Chert was noted in western influence diagnostics, and a preference for Upper Mercer Chert was apparent in Bifurcate Tradition materials. Attica Chert outcrops along the Wabash River and its tributaries in West-central Indiana (Christenson, et al, 1979; 81). How these raw material preferences might reflect seasonal movement patterns will only be determined by further research.

The Early Archaic Point types recovered by the Maumee River Survey (Mohow and Diaz, 1986) indicate an "overlapping" of southeastern and western influences during the Early Archaic. Approximate occupational periods for Southeastern influence components might be drawn from the radiocarbon dates established at such sites as St. Albans (Broyles, 1971; 49) and Longworth-Gick in Kentucky (Collins, 1979; 1024). From this evidence, the Eastern Bifurcate Tradition seems to be firmly established between 7,000 B.C. and 6,000 B.C. The chronology for western influence point types, however, is not clearly defined. It is therefore not possible to define the temporal difference, if any exists, between the two influences. There is a great need for more excavational data, particularly regarding dates, on western influence Early Archaic associated with Thebes, Lost Lake, and St. Charles Points. We can say, however, that southeastern influence is more apparent in the Maumee River data (14 components) than the western influence (7 components). Whether this difference reflects population differences, settlement pattern preferences, or some other variable, will only be determined by further research. While a great deal is not yet understood about the Early Archaic Period, the Maumee river Survey data may serve to better define the spatial boundaries of midwestern Early Archaic manifestations.
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