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Library of Congress Catalog Card Number: 77-74726

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Publication Number Two March 1977

SARAWAK: RESEARCH AND THEORY

Introduction

This issue of *Studies in Third World Societies* and the next are both devoted to research in the east Malaysian state of Sarawak. The state has a population of 1,007,000 and an area of 48,250 square miles. The size of the present state is a result of treaties between the sultans of Brunei and the Brooke rajahs, who held the territory from 1841 until 1946. In the latter year the state was ceded to the British, who administered Sarawak until it joined the Federation of Malaysia in 1963.

For more than two centuries adventurers, traders, and missionaries have written about the people of Sarawak. But only recently have systematic studies been attempted of the scores of groups that inhabit the coasts and interior. Like the rest of Borneo, Sarawak is an area of as yet uncomprehended ethnic diversity.

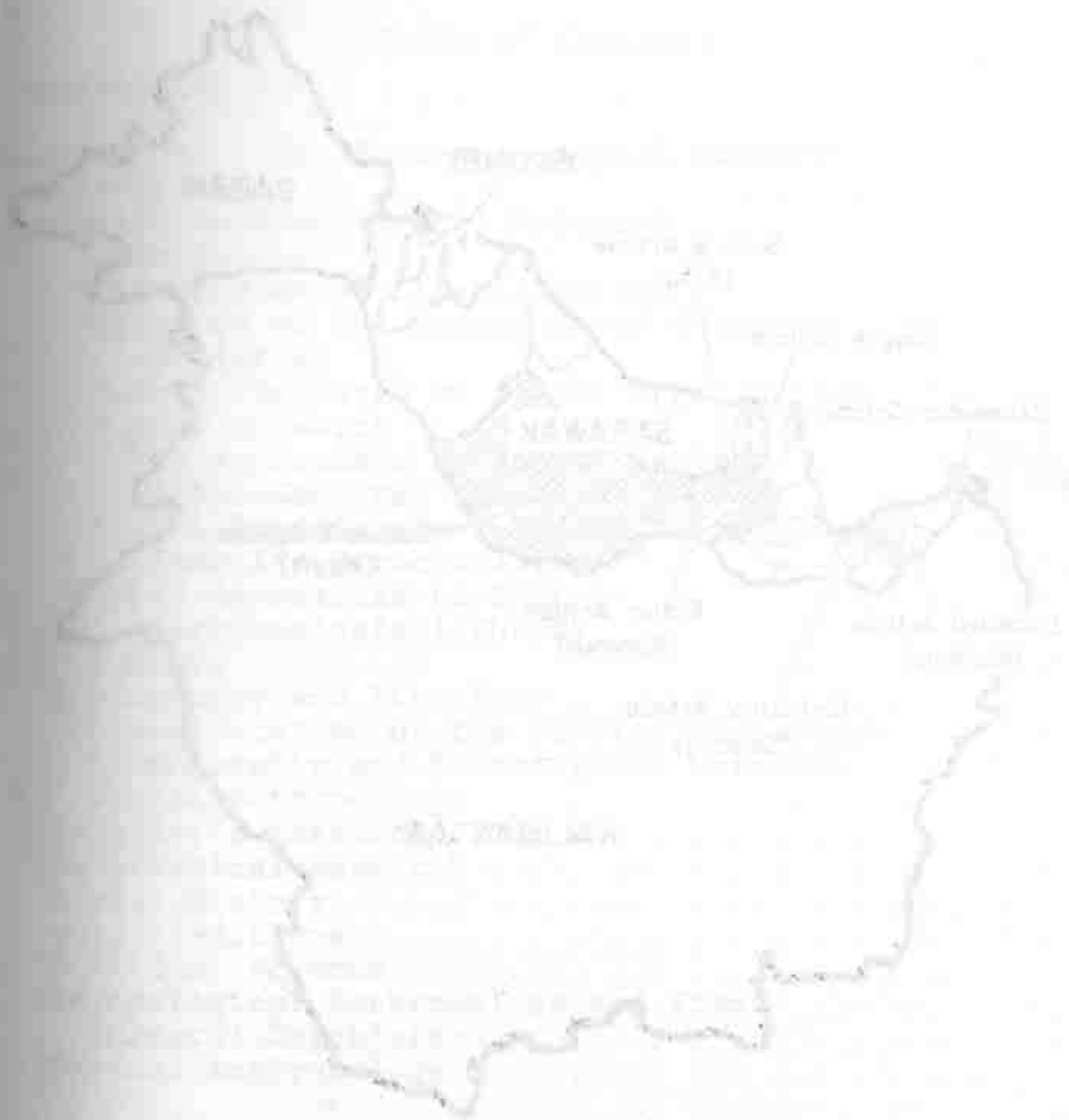
The articles in this issue are by two anthropologists (Appell and Sutlive) and an historian (Lockard). Articles in the third issue include those of three linguists (Asmah, Clayre, and Hudson), one rural sociologist (Grijpstra), an agricultural missionary (Schwenk), and two anthropologists (Fidler and Schneider).

Appell's article is a courageous "attempt to review the results of recent research in the social sciences" and to deal with "a new challenge to social-science research in Sarawak." The first section of this article, originally scheduled for publication in this series, has appeared in Studies in Borneo Societies (Appell, ed., 1976b), and in its revised form is included here by the kind permission of Northern Illinois Center for Southeast Asian Studies. An unusually rich ethnographic literature has been produced through the founding of the Sarawak Gazette in 1870, the establishment of the Sarawak Museum in 1888, and governmental encouragement of social science research. In light of current programs of development, Appell urges continuing research on the "ethnographic heritage" of the people of Sarawak to enable them "to maintain a competent self-identity and therefore the ability to grow with change." He stresses the need for self-examination by administrators, social scientists, and agents for development, who must realize that their activities may lead either to practical and theoretical gains or irretrievable losses.

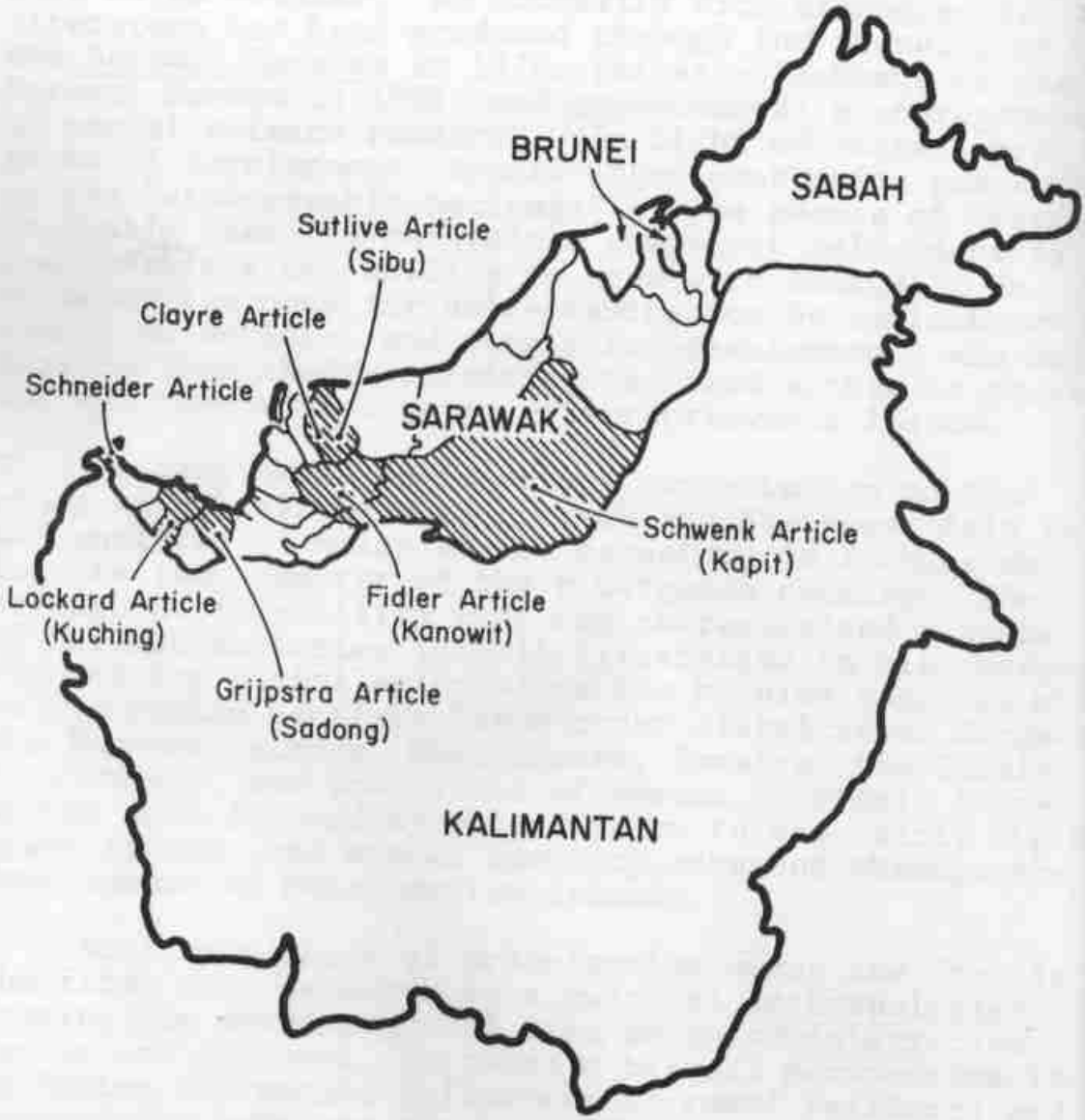
Lockard makes an important contribution to the study of urbanization in Sarawak and Southeast Asia in his analysis of Malay social structure in Kuching during the last quarter of the nineteenth century. The structural flexibility that has characterized a number of Sarawak societies is well illustrated in his description of the assimilation of native peoples together with Malayo-Muslim settlers "from other districts of Sarawak, the Natunas Islands, West Borneo, Sumatra, the Straits Settlements, and the island of Bawean." Ethnic boundaries were defined by subscription to the fairly rigid class system, and ethnic identity enhanced through the development of Malay-medium schools.

Sutlive's study of urbanization among the Iban is the first such research by a cultural anthropologist. Tracing the development of Sibu as an administrative center and entrepot, he takes a bifocal perspective in analyzing the mutual influences of rural residents and townspeople upon one another. The recent growth of Sibu and the current movements of Iban into the town provide ethnographic answers to questions that have been raised about the nature of urbanization in Southeast Asia. Apparently, the Iban "perceive no 'barrier' to their participation in urban life," and "consider Sibu

as another niche, more or less complex than the hills and plains" to which they have adapted, "with a new exploitable resource, cash."



A MAP OF BORNEO LOCATING THE DISTRICTS DESCRIBED IN THE SECOND AND THIRD ISSUES



DRAWN BY SHEARON VAUGHN

THE STATUS OF SOCIAL SCIENCE RESEARCH IN SARAWAK AND ITS RELEVANCE FOR DEVELOPMENT

G.N. Appell
Brandeis University

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The Status of Social Science Research in Sarawak And Its Relevance for Development

G.N. APPELL
Brandeis University

Introduction

I have divided this assessment of research in Sarawak into two parts. In the first part, I shall attempt to review the results of research in the social sciences. For my discipline of social anthropology, I obviously can do this more competently than for others. Thus, I shall not only review the history of social-anthropological research in Sarawak, but I shall also assess its contribution to social-anthropological theory in general and indicate the significant questions still to be asked. Because of the unique history of the Sarawak government encouraging research in the anthropological sciences, coupled with the unusual ethnography of the region, research there has made a major contribution to social-anthropological theory, and, therefore, deserves extended treatment. Social anthropology, furthermore, provides the foundation for research in other social sciences.

For other disciplines, I can only draw attention to some of the current literature. As for archaeology there are competent reviews of its status that appear regularly

in scholarly journals, and therefore I shall not discuss it here (see Bibliographic Appendix).

In the second part of this assessment, I shall deal with what is now a new challenge to social science research in Sarawak. This challenge comes from the impact of economic development and modernization. Development in other countries has too often led to unexpected and unintended deleterious consequences, and, in some instances, imminent disaster. But the fault here, in my view, lies more with the social scientists than the developers. For we have not yet provided the necessary models, the necessary conceptual tools, for understanding the full effect of social change arising from development projects and its impact on human populations. Consequently, in the second section to this appraisal I shall attempt to outline what I believe to be the significant aspects of such a model. To do this I shall have to draw from the results of research undertaken not only in Sarawak, or other parts of Borneo, but in many parts of the Third World as well.

This challenge, however, is not solely to the social sciences. It is also a challenge to Sarawak. For Sarawak has had a unique history of encouragement of social and biological research, which is not duplicated in any of the other regions of Borneo. As a result, more significant research has gone on there than in any other region of Borneo. In a sense Sarawak provides a model for the rest of Borneo to follow. For if I am right in my argument that the social dislocations of development can produce, among other deleterious effects, a loss of self-identity for indigenous populations, and that this in turn can produce unexpected, disruptive effects, then the emphasis put by the Sarawak government on the past and its ethnographic heritage will be well repaid. It is in this acknowledgement of a meaningful past that the people undergoing change can set down the roots that will permit them to maintain a competent self-identity and, therefore, the ability to grow with change.

The tasks of social science research in Sarawak are twofold. First they must continue their urgent research on the nature of past and present social processes in Sarawak. But they must also respond to a new set of questions that are now arising from development. Whether they do so may lie with the attitude in Sarawak

itself toward research. Will Sarawak provide the encouragement and stimulation, as it did in the past, to the social sciences to respond to this challenge? Will it, as a result, play an important part in the development of new social science theory to deal with the problems of social change? How these questions are answered in Sarawak will not only provide a model for the rest of Borneo but for the Third World as well.

Section One: The Status of Social Science Research[1]

> *Finally it is our agreeable duty to acknowledge our obligation to H.H. the Rajah of Sarawak, who welcomed to his country the members of the Cambridge Anthropological Expedition and without whose enlightening encouragement of scientific work on the part of his officers this book would never have been written* (from the Preface of Charles Hose and William McDougall, The Pagan Tribes of Borneo, 1912).

> *Our Museum shall be second to none in the East -- my only fear is that it will be too small....* (Charles Brooke letter, 1889 [quotation taken from Harrisson 1961: 17]).

> *I am always in favour of everything in Sarawak being published as much as possible* (Charles Brooke, 1907 [quoted by Pringle 1970: 369 from a letter of Charles Brooke].

> *He was in the Brooke tradition, one who believed it important to treasure the past and temper the future therewith* (Harrisson, 1962a, Obituary of Gordon Aikman, C.M.G.).

Any assessment of the state of social science research in Sarawak must first deal with the unique set of historical circumstances that prevailed in Sarawak and which stimulated, encouraged, and provided the soil for the social and biological sciences to develop and

flourish. As it is impossible in the limited treatmen here to deal adequately with this, I have instead trie to suggest the ambience of the times by the quotations which opened this section.

The primary *fons et origo* for this climate was in the attitude toward the country and its inhabitants hel by its Rajahs, first articulated by James Brooke. This was then elaborated upon by Charles Brooke as a result of his unusual experiences as an outstation officer and the unexpected opportunity to become the Second Rajah (cf. Pringle 1970 for an insightful study of these events).

As early as 1863, Pringle points out, Charles Brooke sent out an order to his Residents to submit "a regular monthly report of all the domestic and foreign events which occur in your province together with such information as you are able to give of the political and social conditions of the people" (quote in Pringle 1970: 368). In 1870 the Sarawak Gazette was founded, and it served as a vehicle for publishing many of these reports. Charles Brooke also encouraged his administrative officers to write articles on local ethnography and folklore for this semi-official publication and urged them to collect specimens for the Sarawak Museum (Pringle 1970: 147).

As early as 1878 plans were announced for the founding of the Museum. The first Curator was appointed in 1888 (cf. Harrisson 1961), and in 1891 the museum building was erected.

Following World War II, Tom Harrisson became Curator of the Museum and Government Ethnologist, positions that he then held for the next twenty years, longer than any other Curator. By 1961, Harrisson could justifiably write (1961: 21):

> to [Charles Brooke's] ...conception we owe our Museum, which today is still second to none in the East; and still, alas the ONLY...one in all this great island of Borneo.

During Harrisson's curatorship the activities of the Museum were expanded and the Sarawak Museum Journal

enlarged. The impact that this energetic person had on social and biological research in Sarawak can be found in his many publications. But the full history of this period of the Museum's development and its influence on the direction of social science research still has to be written.[2]

Also following World War II social-anthropological research was initiated for the first time in Sarawak.

Social-anthropological Research

Social-anthropological research began in Sarawak with the pioneering survey of Leach in 1947 (Leach 1950). This survey, to assess the possibilities of sociological research in the colony, was undertaken under the auspices of the Colonial Social Science Research Council at the urging of the then Governor-designate. It was a remarkable piece of work, and scholars still benefit from the published results. Leach was the first to recognize that the cognatic social systems of Sarawak and Borneo as a whole presented a challenge to anthropological theory, which had been too long preoccupied with unilineal societies. He thus pointed out that descent in Sarawak was usually "ambi-lateral" and residence after marriage "ambi-local." He furthermore drew attention to the importance of the "personal kindred" as an organizing feature of the societies in Sarawak at a time when the analytical status of the kindred concept was very much in question. He indicated the importance of the village as a landowning social entity. And he reviewed the past classifications of the peoples of Sarawak, proposed a new one based on similarities of social organization, and introduced the category of "Para-Malay." Finally he indicated a number of significant sociological problems that needed to be studied both in his formal listing of possible projects and in his analysis of the state of the anthropological knowledge of Sarawak. And many of the questions he raised have still to be dealt with.

However, before I continue my survey of social-anthropological research, let me first deal with some terminological problems.

Terminology. I want to distinguish at this point the discipline of "social anthropology" on the one hand

from "ethnography" and "ethnology" on the other. Social anthropology is concerned with answering a set of questions on the nature of social systems and how they function. As a result, many of the findings may be rather abstract and sometimes rather restricted in terms of the cultural materials covered. Thus, the goals of social-anthropological inquiry are not necessarily those of a full ethnographic description, but this does not mean that there is a sharp line of demarcation between social anthropology and ethnography. There is, in fact, a constant discourse between these approaches, where social anthropology attempts to improve our analytical concepts, which are then used for ethnographic descriptions; ethnographic research provides the necessary data whereby the flights of theoretical fancy on the part of social anthropologists are checked and their theoretical constructs refined. This problem is no more salient than in the terminology for social systems.

Societies, such as are generally found in Borneo, that are not organized on the basis of unilineal descent groups have in the past been termed "cognatic" (cf. Davenport 1963; Murdock 1960). But this practice has eroded over the years until we now have at a minimum three different terminologies, as illustrated in Figure One. In Figure 1.1 "cognatic" is restricted to social systems having ambilineal descent groups. Membership in these groups is based on establishing a genealogical connection with some ancestor through both male and female links, not through only one sex. However, since such a method with its ramifications of linkages could produce unwieldly groups with overlapping memberships, other restrictive clauses are involved to cut off access to membership. These clauses are frequently based on choice of residence. This fact of choice has led some anthropologists, such as Fortes (1969), to argue that ambilineages cannot be considered "descent groups" since membership is based on criteria other than kinship alone.

In this usage of the term "cognatic" to refer to social systems with ambilineal descent groups, cognatic contrasts at the same level with "bilateral" societies, which are organized without descent groupings.

In Figure 1.2, the reverse usage is illustrated. Here "cognatic" is used in an equivalent sense to

FIGURE ONE: DIFFERING NOMENCLATURES FOR SOCIAL SYSTEMS AND DESCENT GROUPS

Nomenclature For:

Social System:	Unilineal		Cognatic	Bilateral	L.1
Descent Group:	Patrilineage	Matrilineage	Ambilineage or ramage	None	L.2

FIGURE 1.1

Nomenclature For:

Social System:	Unilineal		Ambilineal	Cognatic	L.1
Descent Group:	Patrilineage	Matrilineage	Ambilineage or ramage	None	L.2

FIGURE 1.2

Nomenclature For:

Social System:	Unilineal		Cognatic		L.1
			Ambilineal	Bilateral	L.2
Descent Group:	Patrilineal	Matrilineage	Ambilineage or ramage	None	L.3

FIGURE 1.3

Note: "L." refers to level of contrast

"bilateral" and refers to societies that have no ambilineal descent groups.[3] As such "cognatic" contrasts at the same level with "ambilineal."

The more common usage in the literature is shown in Figure 1.3. "Cognatic" is used here as a cover term for both "ambilineal" and "bilateral" societies (Davenport 1963; Murdock 1967; and Fortes 1969), contrasting with unilineal. And this is how the term will be used here.

Finally it should be noted that "cognatic" has also been used to indicate various kinship terminologies, lacking the features usually found in those associated with unilineal societies, rather than designating the nature of recruitment to social groupings.

The Problem of Classification. I do not believe that there is much to be gained by classifying societies on the basis of descent groupings and kinship terminologies. As I have argued (Appell 1973a, 1976a), social anthropology has put too much emphasis on kinship with the result that there has been a proliferation of terminologies and classifications that insult not only common sense but also the basic premises of anthropology. If we are concerned with the nature of social systems, our classifications should be based on their overall form rather than on one item, descent constructs, a small thread in the total fabric.

The emphasis on descent has also introduced an ideological bias in anthropological research and classification (Appell 1973a, 1976a, and ms.b). For descent constructs involve cultural-specific criteria. Therefore they cannot be moved from one society to another without distortion, even if the proposition of cultural relativism is only accepted in a limited sense. For these reasons it seems rather questionable whether one can productively classify societies on the basis of a descent ideology.

I have found it an insurmountable problem to break out of the present discourse of classification in social anthropology, even though I believe it to be demonstrably inadequate. Even to raise this point on the cultural contamination of descent constructs, one must refer to contrasts provided by societies without these, i.e., "cognatic" ones (more specifically "bilateral"

ones). In any event, I believe research in societies such as these will eventually force social anthropology to redefine its basic concepts. Until this is possible, we must work within the present terminology, realizing its weakness and its limitations.

I will return again to these problems of classification in my discussion of the history of research on the societies of Sarawak.

Research on the Structure of Cognatic Societies.[4] The development of social-anthropological theory on the nature of social structure has in the past been too dependent on the results of research into unilineal societies. As a consequence lineal models have permeated anthropological thinking to the extent that ethnographic reality has been distorted, particularly in the description of cognatic societies. Elsewhere I have documented some of the impact that this lineal thinking has had on anthropological research and have tried to show what the contributions from research on the cognatic societies of Borneo might have for the further development of social-anthropological theory (cf. Appell 1973a, 1976a, and ms.b). Borneo with its variety of cognatic societies at every level of sociocultural integration, with differing cultural ecologies, presents a challenge to anthropological theory. For these cognatic societies represent an anomaly to the present organization of theory which demands resolution.

It was in Sarawak that the importance of this rich ethnographic region for social-anthropological theory was first realized. Consequently, I shall attempt to review the history of theoretical developments in the study of cognatic societies there.

First, there is the well-known, pioneering work of Freeman among the Iban. His analysis of their society delineated a new form of cognatic social organization that has had a singular and purging effect on anthropological theory. He described a new form of family organization, the Iban *bilek* family, and his analysis of its developmental cycle now serves as a paradigm of craftsmanship for other Bornean research. His discovery in such a small-scale society of a corporate group not based on descent, i.e., the *bilek* family, was a major one, the implications of which I do not think have yet

been fully realized. And he has contributed to a rethinking of the concept of kindred (cf. Freeman 1961a and Appell 1967, also cf. King 1976a and Appell 1976c). His study of the cultural ecology of the Iban swidden system has also had a singular influence on subsequent work on this type of agricultural system.

Geddes' work (1954a) among the Bidayuh Land Dayak has produced the description of a new type of land tenure system involving ambilineal categories, and it is hoped that Schneider's work on the Selako Dayak will elaborate on this. Morris has described a cognatic society with an elaborate system of social ranking, and as a result he has made a significant contribution to our understanding of the issues in the study of plural societies and social stratification (1953, 1967a, 1967b).

Needham has used his ethnographic materials on the Penan in a number of interesting comparative articles dealing with specific theoretical issues. As a result he has made an important contribution to our understanding of the function of mourning-terms and death-names (1959, 1965). Specifically, in his article on death-names (1965) he used the method of closely controlled comparison and concomitant variations to demonstrate nicely that the range of Penan death-names contracts step by step with the various stages in the breakdown of Penan social solidarity (as measured by degree of acculturation to other sociocultural systems).

Needham also has broken important new ground in his study of the consequences of the contradiction between kinship category and age that arises from demographic factors. This can result in individuals of the same age belonging to different categories and individuals of the same category being of different ages. He concluded that in lineal systems this problem in ordering social relations is resolved primarily by emphasizing categories. In cognatic societies, however, there is a lesser emphasis on categories in favor of social distinctions based most generally on relative age (1966).

Work in other regions of Borneo has also added to our understanding of the nature of cognatic systems. For example, Sather in his study of the Bajau Laut has demonstrated how a cognatic society without any corporate social groupings can maintain social order and

continuity. He has also described a new type of cognatic, extended family structure, and a new form of kindred which ramifies only in ascending generations from the propositus (Sather 1971, 1976a).

My own work among the Rungus has been to develop an abstract, analytical system for the analysis of the property domain of all societies, not just cognatic ones. For I believe that only by developing universally useful concepts can the past contamination from our concerns over substantive questions of kinship be removed (cf. Appell 1972, 1973a, 1974a, 1976c).

Current Research on Social Organization. I will now briefly review current research. This will be presented in terms of the level of sociocultural complexity of the societies involved, as by this method some interesting anthropological problems are revealed that require further study.

At the first level, there are the hunting and gathering groups collectively called Punan, of whom the Penan of Sarawak are one such group (cf. Needham 1954, 1972, for a discussion of the terminology of these groups; also cf. Appell 1976d: 2). Currently, Johannes Nicolaisen, of Copenhagen University, is engaged in a long-term study of their society (also cf. Langub 1974, 1975; and Tuton Kaboy 1974).

At the next level of sociocultural complexity are those societies whose economy is based on the swidden agriculture of rice and who have essentially egalitarian social orders. Societies in this category that have been recently studied are the Iban by Christine Padoch, who is analyzing the differing systems of agriculture found among various Iban groups; the Berawan, with whom Metcalf has been working, and the Selako Dayak recently studied by William Schneider.[5]

The Kantu? Dayak are a people found in West Kalimantan whose economy is basically swidden agriculture. They have recently been studied by Michael Dove. In terms of this review their importance lies in the fact that they are neighbors of Iban peoples and have used aspects of the Iban system of land tenure as a model for developing their own. According to Dove (1976, and personal communication), originally their system of land tenure was similar to the Rungus Dusun (cf. Appell

1976b). Under increasing pressure of population, they devised a new system of land tenure, incorporating various aspects of the Iban system but also developing certain important innovations. When Dove has completed presenting his findings a reevaluation of the nature of land tenure in Borneo and the processes which have contributed to its organization will be required.

At a still higher level of sociocultural complexity are those societies whose economy is based on wet-rice agriculture. In this category are the Kadayan, studied in Brunei by Maxwell and currently being studied in Sarawak by Sather, along with Solhee. This level of complexity might also be expanded to include those societies representing a transitional state between swidden and a cash-crop economy. Research on societies in this category include the Bisaya by Peranio, the Lun Bawang by Deegan, and the Melanau by Morris. Morris (1976) has recently written an important article dealing with the indigenous development of private ownership of land under certain ecological and cultural conditions.

The Lun Bawang, along with the Lun Daye, studied by Crain, represent a large group of peoples that I have termed Southern Murut (Appell 1968b, 1969e). This is an extremely important group of peoples that include the Kelabit and whose social organization contains certain unusual features, particularly in the manner by which bride-price is distributed. These peoples deserve much more study, particularly the Kelabit.

At perhaps the highest level of complexity are the various sectors of what now makes up the plural society of Sarawak that arose as a result of certain historical factors and the onset of colonialism. Fidler and T'ien Ju-K'ang have studied Chinese communities and Harrisson and Zainal Kling have worked among the Sarawak Malay.

I have left to the last to be considered one of the major theoretical problems still to be resolved in the analysis of the societies of Sarawak. This is the problem of the high degree of stratification that is found among the swidden societies such as the Kenyah, studied by Herbert and Patricia Whittier, the Kayan, studied by Rousseau, and the Kajang group of peoples, of which the Punan Bah have been investigated by Ida Nicolaisen and the Sekapan and Kejaman by de Martinoir. Social stratification is also found among such wet-rice

agriculturalists as the Kelabit, and this is why a social-anthropological study of their society is so important. To date there has not been advanced an adequate description of the nature and function of such social stratification, nor has its adaptive significance been explained, a problem of particular importance for the swidden societies. Rousseau is currently working on this critical problem with regard to the Kayan, with a manuscript soon to be ready, but we need comparative data from the Kenyah and Punan Bah.

Once this problem has been adequately attacked, we may find that the highly stratified swidden societies should be classed at a higher level of sociocultural complexity than the egalitarian swidden societies, and maybe even higher than certain of the egalitarian wet-rice societies that are found to the north in Brunei and Sabah. It has always been assumed that the use of irrigation signified a higher level of sociocultural complexity than swidden agriculture, that wet-rice could support a more complex social organization. But work on these people in Sarawak may disprove this assumption, at least for Bornean societies.

The problem of the so-called Kajang peoples has always been an intellectual thorn in Sarawak studies, since this classification at times did not seem to relate to what was happening on the ground (cf. de Martinoir 1974). Ida Nicolaisen has recently nicely resolved this difficulty (1976). But her research on the Punan Bah has other significance. I have always stated that to the best of our knowledge all the societies of Borneo were cognatic. But I have also stated that this method of classification distorted not only social reality but contaminated the intellectual tools that the social anthropologist has brought to his study (cf. Appell 1973a, 1976c, n.d.b.). However, it is the work of Ida Nicolaisen which may provide the critical evidence to support this conclusion and help dispense with this method of social classification that is based on descent constructs. Ida Nicolaisen has told me that the Punan Bah have all the characteristics of a cognatic society, but they nevertheless have limited but corporate unilineal descent groups at the level of the domestic family. Her work is extraordinarily important to resolving these issues, and I will not comment on it further until she has had the opportunity to publish on

it. But if I have understood her correctly, we have here a society, the Punan Bah, which falls between t two categories in the usual method of classificatio cognatic and unilineal. But this also brings to fo the importance of the social-anthropological study those small-scale societies, with limited membershi such as are found in the Kejang complex as well as study of the other groups that have felt the impact the expansion of the Iban, the Kayan, etc.

Future Research. But what of the future? Sara as I have tried to demonstrate, offers a unique oppo tunity for anthropological research to make a major breakthrough in our understanding of the organizatio features of cognatic societies, and through this, ou understanding of the basic organizational features a functioning of all social systems will improve. Thi not only because of the rich and varied ethnographic landscape but also because Sarawak provides exceptio opportunities for the use of controlled comparisons. We have cognatic social systems operating in a varie of ecosystems, exhibiting a range of cultural ecolog from hunting and gathering to advanced wet-rice agri culture. These societies vary from bilateral, that without descent constructs being used as a basis for forming socially important categories or groupings, the Iban; to societies with ambilineal categories, a the Land Dayak and the Selako Dayak; to those with ranked ambilineal categories as among the Bisaya; to those such as the Punan Bah. To my knowledge, howev no corporate ambilineal descent groups have as yet b found in any of these societies. In addition some o these societies, as we have noted, are organized on egalitarian basis while others have a highly develop system of stratification.

Their systems of economic exchange also form an ther important variable. Some of these cognatic soc eties exhibit balanced reciprocity in their systems exchange, as for example the system of labor exchang among the Iban and Land Dayak (cf. Sahlins 1965). Others, such as the Lun Dayeh, have highly complex s tems of redistribution either for organizing agricul tural labor or as part of the bride-price system in which property is redistributed widely among the var ous cognates of the couple (cf. Crain 1970a and 1976 And this raises the important question of what might

the function of such a complex web of articulations between kin and domestic families in a cognatic society, since this is not found in other cognatic societies such as the Rungus or the Iban.

Finally, all these variables can be tested within a single language grouping, that is to say, within one genetically related set of peoples, so that it would be possible to set up provisional developmental sequences. Thus, Sarawak offers a truly unique laboratory for developing our understanding of social processes, for the testing of anthropological hypotheses, and for constructing well-grounded and significant theoretical propositions on the nature of social structure.

Other Approaches to Social Action: Actor-Centered Research. The theoretical focus of Bornean anthropology has primarily been on the nature of social structure and how social systems operate. Actor-centered approaches have seldom been explicitly dealt with. Thus, while the processes of decision-making in cognatic societies have been described for certain domains in some societies, such as residence among the Iban and Rungus (cf. Freeman 1958 and Appell 1966a), the building of decision models and the development of decision-making theory have not yet attracted much interest. The related theoretical concerns of "opportunism" (cf. Appell n.d.b.), that is the nature of opportunity structures and approaches using situational analysis and transactional analysis have also attracted little interest in attempting to make sense out of the ethnographical data of Borneo. The only research to date dealing with these theoretical concerns has been that of H. Whittier who has studied the nature of village political processes and factionalism among the Kenyah.

Mental Organization: Cognitive and Symbolic Structuralism. Cognitive and symbolic anthropology also has not yet received much attention in Bornean research. Maxwell in his research among the Kadayan has investigated their folk taxonomy and other matters of ethnosemantic concern. Judkins (1969) has made a structural analysis of a Land Dayak myth collected and translated by Geddes (1957). And McKinley (1976) has made a penetrating structural analysis of head-hunting.[6] But these fields of research remain largely undeveloped in Borneo, leaving untapped the extremely rich and varied ethnographic materials.

Other Approaches to Social-anthropological Theory. The study of the cultural ecology of Bornean peoples ha been strangely neglected, except for Freeman's pioneering study of the swidden ecology of the Iban and Christine Padoch's study of Iban with a mixed system of dry- and wet-rice agriculture. Yet it is almost impossible to overestimate the importance of such studies. And on wonders what will be the effect of this neglect in the face of the rapid changes that are now going on in Sarawak and the rest of Borneo.

The study of indigenous religious systems in Borne has been a neglected field although there has been recent work on the Iban religion. Freeman has published some of his materials (1961b, 1967), and he plans to publish the rest soon. Jensen has published a number o articles on Iban world view (1966a, 1967, 1968, 1972/73 and his book on Iban religion and the Iban way of life has recently been published (1974; cf. Freeman's review of this book, 1976). Sutlive (1976a) has analyzed the role of the Iban shaman. Bishop Galvin has published a number of articles on Kenyah religion in the Sarawak Museum Journal and the Brunei Museum Journal. It now appears that his recent untimely death has prevented the completion of an extensive monographic treatment of the Kenyah religion. Herbert and Patricia Whittier are also currently concerned with both the problems of social stratification among the Kenyah and their religious systems, Kenyah domains which probably are closely interrelated. And Metcalf (1975, 1976a) has been studying Berawan mortuary ritual.[7]

Nevertheless, the study of the indigenous religiou systems of Bornean peoples is a very neglected field, although it has immense importance for our understanding of Bornean social processes. Furthermore, the lite rature and symbolic thought that is found in the indigenous religious literature has a beauty and an understanding of the world that will leave us all impoverished unless it is recorded before it disappears. Yet change is rapidly eroding this heritage.

Economic anthropology has been almost completely neglected in research not only in Sarawak but in all o Borneo. Michael Dove, who is working on the economy o the Kantu? Dayak in West Kalimantan, is the only anthro pologist I know who has explicitly dealt with this are And there have been no socialization studies done in

Sarawak. Legal anthropology is also just barely beginning as a field of inquiry after the ground work laid by Richards (1961, 1963, 1964), a member of the Sarawak administration. Heppell from the Australian National University has been recently working on Iban *adat* law cases.

The anthropological study of culture change has also largely been ignored in Borneo except for the research now being done in Sarawak. Morris has been working among the Melanau peoples studying the nature of change in their social organization and belief systems as a result of conversion to Islam or Christianity, and this promises to be extremely productive in terms of its impact on anthropological theory (cf. Morris 1976). Jensen (1966b), Beavitt, Sutlive, and Peter Kedit have all made studies of culture change among the Iban (cf. Grijpstra 1973 for other research on social change). Sutlive's work can be viewed not only as a contribution to the study of cultural change but also to the study of the processes of urbanization, the first such social-anthropological study done in Borneo (1976b, n.d.). The interesting conclusion emerging here is that there is little evidence of disorganization among urbanizing Iban, and I think the crucial question arising from Sutlive's study and others on Iban culture change is this: What is it in the nature of Iban social organization that makes it so unusually adaptive that the Iban can move into all sorts of cultural-ecological niches without major cultural distortion and disorientation? Or, to put it in other terms, what is it in Iban socialization which facilitates the movement of individual Iban out of their sociocultural milieu, apparently without psychological costs in terms of personality disorganization, and allows them to take up positions of leadership in other cultures (cf. Black 1969)?[8]

Summary. Before discussing the results of research in other social sciences, I would like to sum up briefly my main points:

(1) There is much urgent research that needs to be done in Sarawak not only to fill in the ethnographic map but also because of its relevance to the development of social-anthropological theory and because the nature of Sarawak ethnography presents such a unique opportunity for using the method of closely controlled comparisons to test problems in social-anthropological theory.

(2) The "cognatic" societies of Sarawak offered and still offer a significant puzzle for social anthropology to solve. If social-anthropological inquiry had focused on the anomaly presented by cognatic societies, I believe by now the theory of social structure would have been significantly revised; it would have become more productive, and it would have opened up new horizons to conquer, rather than leading us, as claimed by some, to an apparent dead-end. But this challenge has not been fully accepted, and social anthropologists concerned with the development of theory are focusing their activities in fields other than social structure, such as symbolic anthropology and social stratagems. However when the growth rate in their findings slows; when they gather more chaff than grain, then I suspect we will have a resurgence of interest in many of the problems presented here. At that time, the work undertaken and being undertaken in Sarawak and the rest of Borneo will receive more attention. The point is that we permitted too long the question-set of kinship to produce solutions that to common sense appeared more and more ridiculous, rather than facing the hard questions posed by cognatic social organization.

Ethnography and Ethnology

I have distinguished social-anthropological research from ethnographic and ethnological research to separate analytical studies on the one hand from those which are either primarily descriptive, or those which focus on problems of material culture or historical relationships between ethnic groupings. But there is no hard and fast line of demarcation here, only a continuum with overlapping boundaries. I have heard the most analytical of social anthropologists refer to themselves as ethnographers and engage in important descriptive studies, and all analytical work in the end must depend on and arise from good ethnography. There is a dialectical relationship between these approaches, for new ethnographic data challenge past analytical concepts, which when revised, are then incorporated into ongoing ethnographic research.

One of the main challenges facing any social science research in Sarawak (for it has significant implications not only for social-anthropological theory but

also for ethnography and ethnology) is the classification of the indigenous peoples.

Classification of the Peoples of Sarawak. The classification of the peoples of Sarawak, and of all Borneo for that matter, has always been one of the knottiest problems in Borneo anthropology. Leach (1950) discusses the history of ethnic classifications employed in the various censuses of Sarawak and spells out the problems that exist in constructing a useful and sound social terminology in Sarawak. So I will not dwell on the details of this here but only outline the most salient problems (also cf. Metcalf n.d.; Babcock 1974; Ida Nicolaisen 1976; and Rousseau 1975).

First, most classifications, particularly those made in the earlier days, were based on the folk classifications of peoples external to those being identified, most frequently those used by coastal peoples. Thus, these classifications used exonyms rather than autonyms, and as a result they overrode the indigenous and locally relevant distinctions often with no logical reasons.[9]

This situation has been complicated by the fact that ethnological, ethnographical, and linguistic inquiry has sometimes uncritically accepted these exonyms as representing "real" ethnic entities and has used these pseudo-units as a basis for scientific research and generalization (see Appell 1968a and 1968b for a discussion of these problems and illustrations of some of the peculiar results thereby produced). Most of the censuses of Sarawak, as well as Brunei and Sabah, for reasons of expedience have accepted many of these exonyms and have thus overridden local distinctions, so that they are a relatively unreliable resource for serious social science research (Appell 1968b).

But the problem does not solely lie with the uncritical use of indigenous classifications and exonyms. All classifications reflect the cognitive interests of the devisers. The failure to fully recognize this has also contributed to the problem.

Western thought tends to be concerned with temporal relations and historical reconstruction. Brown (1976) has recently analyzed the functions of history in the social construction of reality for societies with open class systems and illustrates how a valid sense of

history may vary with social structure. Western and western-educated investigators, because of their cogn tive concerns with history, frequently presume that local ethnic classifications represent genetic relati ships, that a common ethnic label gathers under it populations with a common historical background. Rou seau (1975: 47) makes this point clearly and shows ho this assumption has created confusion in dealing with the indigenous ethnic classifications in Sarawak. Fo example, he writes (personal communication) that the "ethnic" categories under which the peoples in the ce ter of Borneo are classified are not always what they seem to be: "They refer not only to ethnic affinitie but also to socio-political interrelations, and what seems to be an 'ethnic' group may sometimes be a loose political alliance of different ethnic groups."

While ethnic labels in Borneo may indicate a com- mon historical origin, this is not necessarily so. Mo importantly they may designate a category, the members of which share a common interest rather than a common background. Such a category of people, possibly unre- lated, may be isolated under a common label on the bas of geographical commonalities, economic commonalities, or their common political or religious interests. Sin these interests can rapidly shift, the indigenous ethni classifications can be in constant flux (Babcock 1974; Rousseau 1975).

Moreover, Appell (1968a, 1968b) has pointed out that the use of ethnic labels for establishing social identity will vary with the social context and level of contrast. Whether or not labels of broad common inte- rests on the basis of socioeconomic, religious, and political commonalities are used at the lowest level of contrast will have to be established by further researc But I suspect not. Finally Babcock (1974) postulates that bilateral social systems, such as are found in Borneo, without well-defined corporate descent groups may facilitate changes in social identity and therefore may contribute to the lability of any system of ethnic identification and classification.

Thus there is no "true" classification, only more or less useful ones for the purposes at hand. For exam ple, the peoples in Sarawak have been classified earlie according to levels of sociocultural integration as a method of outlining interesting problems on the nature

of social process for social anthropological research. However, a genetic classification has the broadest uses, as long as the pitfalls previously discussed are avoided. Such a classification should be one of the goals of ethnographic and ethnological research in Sarawak. A fruitful method of delineating such historical or genetic relationships is by the use of lexicostatistical techniques (Dyen 1965; Hudson 1967; Blust 1969, 1970). Hudson has been particularly active in this field. But more work on this problem needs to be done in Sarawak and the rest of Borneo.

Hudson (with the help of Patricia Whittier) has collected linguistic materials from all the regions of Borneo and is engaged in the preparation of a catalog of current ethnic names. The publication of this catalog and his lexicostatistical work should make a significant contribution to resolving the problem of the classification of the peoples of Sarawak and should also provide a major resource aid for all anthropological research.

Finally in classifying the indigenous peoples of Sarawak, it is imperative to devise an unambiguous terminology. For dealing with these problems in Sabah, I have developed a binomial terminology (Appell 1968a) which resolves many of the problems discussed above. In this the first term is the autonym used by the people in question, while the second term refers to the linguistic groupings to which the ethnic unit belongs. One example would be *Rungus* Dusun. (The autonym is italicized to identify it.) There are still problems in this procedure to be worked out, yet it does have the advantage of delineating clearly the autonyms while at the same time indicating the larger relationships involved that may not be locally recognized.

Ethnographic and Ethnological Research. No survey of the state of ethnographic and ethnological research in Sarawak can start without mentioning the work of the Curators of the Sarawak Museum, men such as Banks prior to World War II; then the late Tom Harrisson, and Benedict Sandin, now retired; and the current Curator and long-time staff member, Lucas Chin. Also, no review of the status of ethnographic and ethnological knowledge can fail to consider the contributions made by members of the Museum staff, such as George Jamuh

(deceased), Richard Nyandoh, Tuton Kaboy, and Peter M Kedit. Nor can any survey ignore the contributions made by missionaries such as William Howell in the ea days, and now those of individuals such as Bishop Gal Father P. Aichner, and C. Hudson Southwell. And no r view can fail to consider the contributions of the ea members of the Brooke administration, such as Charles Hose, nor that of later members such as A.J.N. Richar and I.A.N. Urquhart, and now individuals such as Jayl Langub. The work of these peoples and many others ap pears in the various issues of the Sarawak Museum Journal, the Sarawak Gazette, and elsewhere, the sour for which can be found in the Bibliographic Appendix this review. The scholarly activities of representatives of these various sections of Sarawak society is truly a unique occurrence, not yet duplicated elsewhe in Borneo.

In assessing the present overall status of ethnographic and ethnological research, however, it seems t me that the time has now come when the energies of investigators should be directed toward producing full ethnographic descriptions of individual ethnic groups. This would require both field work and the use of avai able published sources. Such an effort would fill wha is now appearing to be a major lacuna in social scienc inquiry in Sarawak: complete, detailed ethnographies for each of the individual peoples.

In addition to preparing detailed ethnographic de scriptions for each of the indigenous peoples and deve loping an ethnic classification, one of the major goal of ethnographic and ethnological research should be to produce a study of the cultural and natural regions of the state such as Kroeber did for North America. As a first step in this direction, an ethnolinguistic map i badly needed.

One final point needs to be made, which applies also to the other social sciences involved in research in Sarawak, as well as the rest of Borneo. The most fruitful kind of research, the most productive, and that which has the greatest use for other social sciences is research that pins down its observations to particular local populations, to those communities in which they were found to occur. All too frequently in other areas of Borneo, as I mentioned in my section dealing with the classification of peoples,

observations are not identified in this manner. Usually they are generalized all too rapidly from the local community in which they were found to include a whole ethnic category, thus failing to honor locally relevant distinctions. As a result, for example, we are unable to learn the degree of variation within a group or to discover the distributional boundaries of the materials. Such observations generalized to the level of the largest ethnic category are of limited use. Observations specified in terms of communities where they were made can have almost unlimited scientific uses. And they can always at a later point be generalized to a larger grouping as more data accumulates. This method allows one to draw the exact cultural contours of an ethnic group and a region. While it is easy to generalize up, it is impossible to take overgeneralized data and make it more meaningful (cf. Appell 1968a and 1968b).

Urgent Anthropology. In one sense all ethnographic and ethnological field work in Sarawak is urgent because of the impact of social change. Yet there are some research projects that are more urgent than others, as when a particular cultural tradition is carried only by a few individuals and therefore is most vulnerable to loss; or when the ethnic group in question is rapidly being assimilated by other cultural traditions. This is the case with those peoples who are converting to Islam and those peoples who were fragmented or absorbed by the expansion of the Iban, Kenyah, and Kayan peoples. I question at this point whether the cultural traditions of those groups that were absorbed into Iban society and who have, as a result, apparently disappeared can be factored out. But this should be tried. Those unabsorbed groups, fragmented by the expansion of Iban, Kayan, and others and now represented only by a few communities, deserve particular research attention as soon as possible. They represent an older cultural stratum in Sarawak, and thus their sociocultural traditions may play a crucial part in understanding the nature of social processes at work in Sarawak and the rest of Borneo.

The urgency of this research has been noted by Heine-Geldern (1958), by Harrisson (1959b), and by Needham (1960). I have attempted to keep an inventory of such projects (cf. Appell 1969c, 1970b) in order to bring attention to the urgency of this research and stimulate it. Yet in spite of all these efforts, little

action has resulted. What is needed is an organized effort, supported by government interest and sufficie funds, involving both the training of local people to conduct this research and the encouragement of resear by anthropologists from universities around the world a cooperative venture.

Linguistic Research

The Sarawak Museum Journal contains many valuabl articles presenting linguistic materials by members o the Sarawak administration, the Museum staff, and by missionaries. Recent field work by linguists include that of Asmah Haji Omar among the Iban (1969, 1972); Blust (1969, 1970, 1972, 1974); I.F.C.S. Clayre among the Melanau (1972) and among the Sa'ban (1970a, 1970b) B.M. Clayre and Cubit (1974) and Rousseau (1974b) amon the Kayan; Court among the Land Dayak (1967a, 1967b, 1967c, 1970); Hudson (1970) among various Dayak people for purposes of developing a classification of Borneo languages; and Topping among the Land Dayak. Richards has also been working for a number of years on an extensive Iban dictionary as has C.H. Southwell on a Kay dictionary. And B.M. Clayre (1970) has been consideri the use of the analytical concept of focus, originally developed in the study of Philippine languages, for th analysis of Bornean languages.

However, with the exception of the work by Asmah Haji Omar with the Iban language and the work of I.F.C. Clayre on the Melanau language, there has been no othe linguistic work the goal of which is a full linguistic description of a Sarawak language. Yet these studies have a crucial contribution to make to both linguistic knowledge and our anthropological understanding of the region.

Geographical Research

The geographical knowledge of Sarawak owes much t the work of the members of the Brooke administration and to the various curators of the Sarawak Museum, such as Tom Harrisson (1949, 1959a, 1959d). Research by professional geographers, however, is relatively recent since the late 1950s. Lee Yong Leng as a result of his research in Sarawak and elsewhere in British Borneo has

published a series of articles (cf. Lee Yong Leng 1970 for a bibliography) and a monograph on population and settlement features of Sarawak. Jackson (1968) has also published a geographical survey of Sarawak as well as a monograph (1970) on the Chinese in the west Borneo gold fields. Dixon (1972, 1973) has investigated rural settlement patterns and cultural landscapes in the First Division of Sarawak and studied aspects of the traditional Dayak system of land tenure (cf. Dixon ms.). He has prepared a brief survey of geographical research in Borneo (cf. Dixon 1973). And finally, Elliston (1967) has published on the marine fishing industry in Sarawak.

Social History

Recent historians who have dealt with Sarawak history, or certain aspects of it, include Irwin, Hahn, Tarling, and Wright (cf. Crisswell 1972 for bibliographic references). Runciman (1960) has produced a sensitive account of the Brooke Raj and the contributions made by the Second Rajah to the foundations of modern Sarawak as a result of his deep-felt concern and understanding for the peoples of Sarawak.

However, there are three major landmarks in the historiography of Sarawak during the past two decades. These represent studies that are outstanding not only because of the subject matter dealt with but also because of the methodological innovations made, so that they have relevance for historiography in all Southeast Asia, not just the Bornean region.

First, Tarling (1963) in his perceptive study of piracy along the Bornean coast bases much of his analysis on indigenous concepts and world views. This is the first time an historian explicitly eschewed European categories of thought to avoid distortion and misrepresentation.

The next major event is the work of Benedict Sandin (1967). For years Sandin collected the oral history, folklore, ritual, and genealogies of his people, the Iban, as well as other groups. Tom Harrisson later recruited him to the staff of the Sarawak Museum, of which he eventually became the Curator. As a member of the Museum staff, he continued his travels all over Sarawak collecting materials that eventually were

brought together in a monograph on the history of the Iban in the pre-Brooke period. In this invaluable contribution to the history of Sarawak and Borneo, Sandi (1967) has clearly demonstrated the uses and validity of oral histories and traditions. His work represents the kind of research that is so badly needed in all t regions of Borneo and which still needs to be done fo the other indigenous peoples of Sarawak.[10]

The third major event in the historiography of Sarawak is Pringle's (1970) study of the nature of th contact that developed between a European government and an indigenous society. In his analysis of the re tions between the Brookes and the Iban, he deals with important but seldom studied aspect of the history of colonial countries, a type of history which, he write unrolls far from the main centers of political and co mercial life (1970: xii). Using both written sources and oral materials, combining library work with extend field trips, he has produced an invaluable study of th period and the social processes at work, demonstratin the value of field work for all historical research.

Oral Traditions

The oral literature of Sarawak represents an asse of inestimable value but one which is rapidly eroding away. In 1955 Tom Harrisson wrote in the editorial pr face to Volume VI (p. xviii) of the Sarawak Museum Journal: "It is the function of this Museum and its associates to record Bornean folklore NOW. For all th is vanishing apace."

Under the aegis of Harrisson, the Museum began a project to collect folklore and oral literature. Bene dict Sandin both as a staff member and as Curator has collected and published a highly significant body of materials in the Sarawak Museum Journal.

In 1957 Geddes published his fine translation of Land Dayak folktale. And during this period the late Bishop Galvin also made an extensive collection of Kenyah oral literature, some of which has been publishe both in the original text and in translation in the Sarawak Museum Journal as well as the Brunei Museum Journal.

Recently Carol Rubenstein, a poet, has collected oral materials from a variety of peoples in Sarawak and translated them so as to catch their original spirit (cf. Rubenstein 1973a, 1973b). And Patricia Whittier is currently engaged in a study of the language used by the Kenyah in ritual and other oral literature.

In conclusion, it should be noted that the unfinished work in collecting and preserving the oral traditions is enormous. The epic poetry and the sagas of the indigenous people of Sarawak are fully comparable in beauty and social and humanistic insight as are the Homeric epics and the old Norse sagas. And where would western civilization be if these had not been committed to writing? Therefore, it is hoped that the Museum staff can continue its efforts and encourage local people to participate in this work in order to accomplish this task before it is too late. Perhaps what is needed at this point is an assessment of what has been collected and the establishment of priorities for future collecting.[11]

Political Science

Little field work has been undertaken in political science. The only project of which I am aware is that of Michael Leigh, who has investigated the development of political parties and leadership in Sarawak (cf. 1970, 1971, 1974).[12]

Psychological Anthropology and Transcultural Psychiatry

To the best of my knowledge, there have been no field projects dealing with the interests of psychological anthropology such as research on the nature of the socialization processes among various ethnic groups; on the degree to which variation in personality organization occurs between ethnic groups and the causes thereof; on the nature of deviance in order to isolate particular sociogenic processes; or on the relationship of human nature to cultural processes and how this is played out in the Bornean scene. Derek Freeman, however, is analyzing his data on the Iban in these terms (cf. 1967, 1968), and his work here promises to provide important and fruitful insights.

Nevertheless, the lack of field research in this field forms a major lacuna in our knowledge of social processes in Sarawak. And there are many interesting problems to be dealt with, such as the causes of variation in aggressiveness among the various ethnic grou or the cause of sociocultural expansion. Pringle poi out in his introduction to Sandin (1967) that the ear lier materials on Iban history do not reflect the exp sive eruption of Iban energies that occurred in the later periods. Thus, we may have here a window back into time to enable us to explore the process by whic a society shifts into an expansive, aggressive stage. Morgan (1968) has given one interesting interpretatio of this, but the problem certainly warrants further interest.[13]

There has been, on the other hand, more research terms of transcultural psychiatry by Schmidt and his workers. He has described the folk psychiatry of the Iban (1964); concepts of mental illness among the Sarawak Murut (1967b; also cf. Nissom and Schmidt 196 and he has explored the nature of *lateh* behavior (Chi et al. n.d.). He also organized a major research project to discover whether true differences exist in th incidence of the major psychoses between the Malay, Chinese, and Iban, the results of which have appeared in various mimeographed reports and publications (cf. bibliography).

However, with the fields of transcultural psychiatry and psychological anthropology so little touched in Sarawak, it is hard to establish any priorities. Any work will make contributions to knowledge at several levels, not just the ethnographic.

Nevertheless, there is one area that urgently demands research. This is the degree to which psychological disorganization and health impairment are occurring in Sarawak from the processes of sociocultural change. There is ample evidence, from work done in other regions of the world, that sociocultural change may induce a number of dysfunctional reactions. These include increased rates of physiological and psychological impairment; rising rates of family instability; sociopathic disorders such as stealing, acts of violence, and related criminal acts; and the possibility of disruptive social movements. I have discussed this aspect of social change in other publications (cf.

Appell 1966b, 1974c, 1975c, 1975d, 1975e, 1976g, ms.a.), and I shall attempt to establish the importance of research on this problem in the second section of this assessment when I deal with the effects of development. Therefore I shall not enlarge on this subject here.

Medical Anthropology

Medical anthropology is not a coherent discipline. It is instead the application of anthropological perspective to the full range of medical concerns. Thus, research in medical anthropology can range from a study of the social organization of a hospital; to the recruitment of nurses and doctors; to the study of the delivery of medical care; to investigations into indigenous medical beliefs and curing practices; to the study of the social and cultural factors in disease causation. This interest on the part of anthropologists, as a subdiscipline of social and cultural anthropology, is relatively new, although it is rapidly expanding.

Jensen (1972/73) has dealt with the curing practices of the Iban shaman. The work of Schmidt and his coworkers, reviewed previously, would fall within the interests of this field, as well as the study of nutrition and health in Iban long-house communities by McKay and Wade (n.d.).

However, there has been no research in Sarawak by medical anthropologists as such. Thus, the future of medical-anthropological research is in a sense uncharted, but it seems to me there are two major priorities. First a series of studies on the medical beliefs and practices of the various peoples of Sarawak are needed. This would not only make a contribution to ethnographic knowledge, but it would help in the delivery of medical care. Just as important, such research would help preserve the indigenous medical practices and pharmacopoeias. The importance of this cannot be underestimated, and I will attempt to justify this in the second part of this review.

Secondly, medical-anthropological research can make a major contribution to our understanding of the processes of social change. Usually there is

considerable health impairment as a society undergoes change and moves away from its traditional beliefs an customs. We need assessments of the degree to which health impairment, both physical as well as psychological, is occurring in Sarawak populations, not only help weigh the total social costs of development but also to help development planners so design their projects as to minimize such stress. This will be one o the major subjects of my next section, and therefore will enlarge no further on this important aspect here

Section Two: The Unintended and Unexpected Social Costs of Development

Introduction

Sarawak was the first Bornean state to encourage ethnographic research and make use of its findings. Sarawak was also the first, and to date the only Borne state, to invite social-anthropological research for t purposes of learning what significance its findings might have for the formation of policy and for the future of the country. And Sarawak has been the only Bornean state to date to make use of applied anthropology. In the preparation of plans for the Miri-Bintul land development and settlement scheme, H.S. Morris an C.A. Sather, as consultants, along with Hatta Solhee, their government counterpart, were engaged in a study what groups and individuals are the most likely candidates for the settlement scheme and participated in th specification of the social conditions under which peo ple should be settled.[14]

But while the Sarawak administration has been interested from its earliest days in the uses and benefi of anthropological knowledge, anthropology as a discipline has not progressed very far in developing adequate theories for the study of sociocultural change and its human impact. We have vast amounts of data, but as yet little theory to guide those attempting to bring about creative change. Some might even argue that we have the theory, but it is lying around in bit and pieces, and no one has brought it together into a formulation that can be used as a guide to development

I will not of course attempt to do this here, but I would like to outline some of the factors that I believe should be incorporated into a more appropriate theory.

I believe it is important to do this here as Sarawak again faces a challenge, and this time it is the unforeseen consequences of development. When in the past Sarawak has had to face a challenge that had relevance for the social sciences, Sarawak has turned to them. And the stimulation of this exchange has produced major developments in social-anthropological theory.

Thus, the questions that I pose here are: Will Sarawak again respond in a foresighted manner to this challenge? Will it turn to the social sciences for help in this challenge, and will the social sciences, on the other hand, rise to this challenge? And will this again result in significant developments in theory?

These questions are not just local ones. Their answer in Sarawak has major implications for all the societies of the Third World. Thus, in attempting to formulate here what I conceive to be some of the major features of a more appropriate model for development, I must rephrase the question of development and then provide supporting data for this particular phrasing. To knit together a new look at the problem I shall however have to depend on findings from all parts of the Third World, not just Sarawak, for only here and there in isolated instances are the right questions being raised.

Partial Social Models and Their Failure to Account for the Pernicious Effects of Development[15]

I use the term development here to refer to all those activities usually incorporated under such terms as economic, educational, and agricultural planning and development. The points I wish to make with regard to development are simply these: First, every act of development of necessity involves an act of destruction, which may in the long run, if not in the short run, entail costs that far outweigh the benefits arising from the act of development.

Secondly, the failure to account fully for such costs arises from the use of only partial social models

by the development planner. He has not been provided with the conceptual tools by which he may discover the total social and ecological costs of a project. Thus, unexpected and pernicious consequences are frequently produced. On the other hand, if the development planner were provided with more adequate conceptual tools so that the costs of these pernicious social and ecological consequences were adequately accounted for, it is my belief that some development schemes would be terminated and most revised to mitigate these unacceptable costs.

Finally, I want to make the point that the fault lies with the social scientist, if anyone. He has neither supplied the development planner with more adequate social models, nor have the social models he has provided been expressed in terms of the language of costs that are congruent with the level of analysis of the planner. In one sense the development planner and the social scientist are dealing with different, unconnected exchange systems, one based on money and the other based on certain limited aspects of social behavior. Therefore, before the planner can be convinced of the pernicious costs of development, the social scientist must develop more adequate models and translate them into the language of costs as used in the programs of the development planners.

The three components that I wish to discuss here that would contribute to a more complete social model for development planning are the ecosystem, the indigenous knowledge of the ecosystem, and the social system as a mechanism of adaptation.

The Ecosystem

The first element ignored in the partial models of the development planners is the total ecosystem in which the development takes place. Every human society resides in a complex ecosystem and is linked with that ecosystem in an intricate network of exchanges. This network may be fragile or flexible. But each development act threatens the existence of this interrelationship, even if it be only the simple act of introducing new ideas in schools that destroy the indigenous perception of this interlinkage.

There exists what has been called the "ecological boomerang" to development (cf. Farvar and Milton 1968). When a development act throws an ecosystem out of balance, a counteraction by forces within the ecosystem frequently cocurs that vitiates the gains of the development project. Such case histories are now being collected by the Conservation Foundation and the Center for the Biology of Natural Systems (Carter 1969). Some of these are reported in the summary of a conference held to consider this "ecological boomerang" (cf. Henkin 1969; Farvar and Milton 1968; and Dasmann et al. 1973). Consequently, I will not comment further on this aspect of development except to point out that nowhere in the summary of these proceedings do the contributors phrase their examples of "ecological boomerangs" in terms of costs. For example, Henry van der Schalie (Farvor and Milton 1968: 62-65) suggests that the construction of the High Dam on the Upper Nile might well prove to be a liability rather than an asset through the increased spread of schistosomiasis. But he provides no data on this in terms of the costs for its control or in terms of the resultant loss in productivity. As a result there is no way to determine what the real cost-benefits of the dam development project are.

The Extinction of Species. There is another crucial aspect of ecological degradation stemming from development that has yet to be fully discussed in the environment of development discourse. This is the extinction of various species of flora and fauna. It would be a formidable task to determine the full costs to humanity produced by the loss of an animal or plant species. To illustrate the costs of such extinctions I shall have to phrase the problem in terms of potentialities and contrasting values.

Each ecosystem contains a unique inventory of wild flora and fauna. Looking at the world as a single ecosystem--it has also been cogently viewed as a space ship with limited resources--the inventory of flora and fauna that has evolved over aeons of time is in serious danger of depletion. Within the past 2,000 years 100 species of mammals alone have ceased to exist, and in the past 200 years 600 species have declined to the point of extinction (Bouillene 1962; cf. Appell [1973b] for a review of the faunal situation in Borneo in general and Chin [1971] for the situation in Sarawak.) At

the present one out of every 10 plants is either extinct or in imminent danger of extinction (National Academy of Sciences 1975: 3).

The position I take on this is that the survival o the human race as a whole is threatened when any development project contributes to the extinction of any one species of plant or animal. This is because the extinction of any species diminishes man's ability to adapt to future conditions in the biosphere. Let me illustrate this by some examples of new uses to which the wild flora and fauna of the world are being put (c Moody 1966 for other examples).

New Uses for Flora and Fauna. Musk ox are being domesticated in Alaska to serve as an economic basis for the development of herding communities on the under populated tundra areas. It has also been recently pointed out that the African game animals are more productive of animal protein than the cattle replacing them and that these wild ungulates could better serve as a valuable source of protein food (Sullivan 1966; Watt 1968). Crawford (1974) concludes that it is possible that Africa could double the present world meat production by the use of such wild species. The domestication of these, he argues, should aim to make use o the wild animals' preferences for different grasses, bushes and boughs, from the tree-top using giraffe to the root-digging warthog (also cf. Jewell 1969). And as a final example, the manatee which is on the list of endangered species of the International Union for the Conservation of Nature (Simon n.d.) has just been discovered to be a more efficient controller of the water hyacinth, which is clogging fresh water, inland waterways, than chemical or mechanical methods. Unfortunately, they have been hunted almost to extinction.

But wild species of animals have another utility that highlights even more starkly their potential contribution toward the adaptation of the human race to the biosphere. This is for medical research. Without monkeys our control over poliomyelitis would not have developed as rapidly. Cancer experimentation in hamsters has produced rewarding results for the understanding and control of human cancer. Thus, there is a continuing search to find animals in which human disease or abnormalities can be induced experimentally.

For example, it has been recently reported that after a 150-year effort by researchers, government scientists at the U.S. Center for Disease Control have successfully infected chimpanzees with gonorrhea. This discovery of an experimental animal for human gonococcal urethritis is considered somewhat of a breakthrough in dealing with this disease, which is now considered to be out of control in the U.S. (cf. Convit and Pinardi 1974 with regard to the use of the armadillo in leprosy; also cf. Southwick et al. 1970).

In addition, there is the need to study models of human disease and abnormalities in animals which do not contract the human disease but which display those impairments that closely duplicate the human illness. (This field of comparative medicine is as yet little developed [Gay 1967], and may never develop is we continue to deplete our resources before they have been adequately studied.)

The conclusion that man's capacity to adapt is lessened by the loss of any of the world's fauna also applies to the extinction of any species of flora. For we do not know to what uses a species may yet be put. One example of the unexpected value of flora for man's survival is the recent discovery that certain gymnosperms have compounds that display anti-cancer activity. And this discovery has led to a world-wide search for other species of gymnosperms that may have similar compounds (Perdue 1968).

Shrubs of the arid lands, many considered as weeds, are instead a potential source of food, fodder, and raw materials (McKell 1975). For example, jojoba is a hardy shrub of the North American desert. It secretes a liquid wax in its seeds that has a potential use as an industrial lubricant. The only other natural source at present is the endangered sperm whale. Jong et al. (1973) argue that the tropical forests of Malaysia contain an unexploited genetic reservoir of edible-fruit tree species, and they give as an example the recent discovery of a new species of *Citrus*. They maintain that is is necessary "in view of the continued erosion of Malaysian forest resources, first that known useful or potentially useful rarer species be brought into cultivation to ensure their preservation; and second that considerable tracts of virgin forest must be retained.." (1973: 113).

In a study by the National Academy of Sciences of neglected plants that show promise for improving the quality of life in tropical areas, an ad hoc panel reports that throughout history man has used some 3,000 plant species for food. One hundred and fifty of these have been commercially cultivated to some extent, but today most of the people in the world are fed by about 20 crops, which is a very small bastian between mankind and starvation. "To help feed, clothe, and house a rapidly increasing world population, it is timely to consider neglected or little known plant resources..." (1975: 1).

The Genetic Erosion of Cultivars. A more immediate threat to man's ability to adapt arises through the loss of indigenous cultivars. Indigenous cultivars have provided and can continue to provide a genetic pool from which new cross-bred and hybrid varieties of crops can be designed that are resistant to new plant disease and have greater productivity. But few of these are being collected and studied to determine what contributions they might make to the development of higher yielding, more disease resistant varieties. Few indeed are being preserved in genetic banks against the day when a new challenge appears from new disease agents (cf. Bennett 1968). Yet these indigenous cultivars are being displaced and permanently lost in all parts of the world by agricultural experts who introduce the more developed, genetically refined varieties of cultivars from the more advanced countries (cf. Appell 1970a; Bennett 1968; Miller 1973).

For example, researchers at Purdue University have recently found two Ethiopian strains of sorghum which carry high lysine genes. They are now trying to cross-breed these with other strains to produce a high protein sorghum that may help alleviate protein deficiency diseases such as kwashiorkor in the Third World (cf. Shapley 1973).

And it has recently been discovered that the winged bean, found in Southeast Asia and New Guinea, is unknown elsewhere but is possibly the tropical counterpart of the soybean (National Academy of Sciences 1975: 5). The pods, seeds, and roots can be eaten, and all are high in protein content. The roots furthermore house bacteria that can turn atmospheric nitrogen into fertilizer; and so the plant can thrive on poor soil

and can be planted between rows of other crops, providing nourishment for them (cf. National Academy of Sciences 1975: 59-61; Brody 1975).

Sauer writes (1963: 147) with regard to the problem of plant destruction, "In the space of a century and a half--only two full life times--more damage has been done to the productive capacity of the world than in all of human history preceding." Sauer (1963: 150) gives an interesting case of the potentialities here:

> Primitive forms [of cultivars] hold by far the greater range of plant-breeding possibilities for future, as yet unrecognized needs. Some years ago we secured from southern Mexico seeds of a type of cotton, called acala, that made possible the current development of cotton growing in the San Joaquin Valley. Had the plant explorer missed this particular spot in the state of Chiapas or come a few years later, we might not have a successful cotton industry in California. No one knows how many domestic varieties of cotton survived or had been lost.

To summarize, I want to emphasize the point that the flora and fauna of the less developed regions of the world are being destroyed by development projects before they have been analyzed for the contributions that they can make to man's welfare. Yet they are the mechanisms on which man may have to depend at some future point in order to adapt to a changing world environment. And I believe that one of the reasons that this problem has not been sufficiently realized is that the ecologists, plant breeders, and medical personnel have not phrased this problem in terms of costs and potential benefits. Consequently, those who ultimately decide the fate of development projects do not have the necessary tools with which to make decisions. For example, and I wish it were possible to be more precise, I believe that the benefits of a full use of the genetic resources of the indigenous cultivars of Southeast Asia might conservatively be put in terms of billions of dollars per year in increased agricultural production. With regard to rice alone, recent crossbreeding experiments with indigenous varieties has raised the

yield per hectare from 1 or 1.5 tons to 6 or 8 tons (Streeter 1969). Yet other indigenous varieties are being rapidly lost as peoples from the interior regions move to development projects and give up their indigenous agricultural systems.

In this regard, the situation in Borneo is one for particular concern. Without doubt Borneo is one of the few remaining untouched reservoirs of germ plasm from indigenous cultivars. Yet many of these indigenous varieties are rapidly being replaced in agricultural development projects without any effort to conserve their unique genetic resources. Many other ecotypes are being lost as a result of growing urbanization. But for all of Borneo, I know of only two attempts to assess these genetic resources and these were limited ones, focusing on a narrow range of rice varieties (cf. Dunsmore 1970; Hewitt 1972; Hewitt and Muhammade bin Yasin 1971).

Cultural-specific Knowledge of the Ecosystem

The next component missing from the partial social models of the development planner is the inventory of knowledge on the ecosystem owned by the society being developed. And I use the term "owned" specifically to indicate that it is a valuable asset. But before we discuss the part that the culture-specific knowledge of an ecosystem has to play in a more complete social model for development, let us expand our definition of the development act, for in doing so we can portray with greater definition the pernicious effects of development.

Any act by an individual who is not a member of a local society that devalues or displaces the perception by the members of that society of their relationship with their natural and social world is a development act. By this definition we can include in the act of development the local school teacher, the local doctor as well as the economic, agricultural, and education experts who work in the major centers of the developing country and who are ultimately responsible for the lower level acts.

Such acts in addition to destroying local knowledge have the consequence of undermining the self-

esteem held by the members of the society, which may produce pernicious stresses within that society (cf. Appell 1969b, 1975c, 1976g). This aspect of development we will discuss shortly. The focus here is on the destruction of knowledge, the destruction of accumulated human experience, won over thousands of years of experimentation with the biosphere.

Disarticulation of Human Populations from Their Ecosystems by Acts of Development. The act of education assumes that the teacher has knowledge or skills to impart to a pupil population that does not have, at least within the educational environment, anything of equivalence to offer in exchange. However, the knowledge and skills imparted by the teacher are derived from the more sophisticated centers of the country and have little or no relevance to the local ecosystem in which the education act occurs. But they may encourage the pupil population to accept an exploitive view of the natural world that is derived from the value system of the western nations and which has produced their environmental crisis.

On the other hand, as local knowledge is not included in the educational process, its relative status is implicitly devalued, if not explicitly in certain cases, which lowers the capacity of the local population to maintain their level of adaptation to their ecosystem.

For example, during the field session of one anthropologist working in a small Bornean village, a new school was built within walking distance of his house. The pupils were told by the new teacher and the Chinese shop owners in the area where the school was located that they could not wear their native dress of carry their belongings to school in their native baskets. Instead they were told to buy shirts, shorts, and school bags from the local stores. Thus began the slow process of disarticulation of these people from their ecosystem. Their native dress, tailored both from cloth purchased at the shops and from cloth they weave themselves from their own cotton, will give way to manufactured clothing, which requires a greater cash outlay. And to obtain this cash, these people must become more closely articulated to the national cash economy through taking up wage labor rather than maintaining their tradition of being small, independent farmers.

As a result, the agricultural products they use in cl
ing manufacture will no longer be raised, and the for
products formerly used to make a variety of basketry
materials will be forgotten as well as the skills and
knowledge needed to produce these.

Furthermore, other important skills linked with the ecosystem in which they live will also be replace with nonfunctional, but "modern" skills. For example the school teachers for the local district fair taugh the school children to do calisthenics rather than encouraging them to put on a demonstration of athletic skills that they themselves must learn either to survive in their environment or which they engage in for pleasure, such as climbing bee trees, spear throwing, felling trees, leg wrestling, and so forth. Charles Brooke with great foresight wrote in 1907:

> We stuff natives with a lot of subjects that they don't require to know, and try to teach them to become like ourselves, treating them as if they had not an original idea in their possession (quoted in Pringle 1970: 139).

Another example of the destruction of valuable indigenous knowledge and its replacement with inferior knowledge is provided by the actions of the head of a missionary-run agricultural school. The head of the school told one anthropologist that he was going to teach the local people to plant fruit trees, as these would provide a valuable supplement to their diet. The anthropologist, however, had to point out to him that the local people, as most people in Borneo, cultivated a variety of fruit trees, and he indicated the valuable groves of fruit trees scattered over the landscape, some of which had a history of ownership going back seven generations. Anyone who knows how to "read" the jungle can pick out from a distance these groves of fruit trees standing in the midst of the forest along the hillsides.

The anthropologist then asked the head of the agricultural school to help identify certain grains cultivated by the local people. But he was unable to. However, because of his high status as head of the agricultural school and teacher, his vastly inferior agricultural knowledge will be transmitted to the school children to replace that which arose from thousands of

years of accumulated agricultural experience in their own ecosystem. In this manner these people will become disarticulated from their ecosystem to the detriment of themselves and mankind as a whole. For with their accumulated experience displaced by an inferior knowledge, they are less able to adapt to the challenge of their ecosystem. And with the loss of their knowledge of their ecosystem, with the replacement of their crops and fruit trees by those from outside, mankind loses another part of his inventory of knowledge and tools that was won by trial and error over many generations.

A further striking example of the way in which local peoples become disarticulated from the ecosystem in which they must live by acts of development is provided by the same missionaries who operated the agricultural school. The peoples living in the vicinity of the school believed that groves of trees along river banks, in ravines, and around springs have indwelling spirits who will become angered if this forest is cut in the preparation of swiddens. Thus these spirits will vent their anger on those involved in such forest destruction and cause them to become ill. The missionaries told the local people that if they became Christians, however, they would be protected from such spirits. Furthermore, they argued that then they could not only cultivate these virgin areas with impunity but also, by taking advantage of the rich soil, make a "lot of money" from the higher agricultural yields that would be produced.

However, the local people believe that in addition to angering these indwelling spirits, if they cut these groves, their land will become hot and dry up. Thus they demonstrate that they have a greater knowledge of cause and effect in their agricultural system, congruent, it should be added, with modern concepts of agriculture, than do the missionaries who staff the agricultural school.

The point here is that a society inhabiting a specific ecosystem must deal with that system and, in destroying the indigenous knowledge of the ecosystem, the developers are lessening the ability of the local society to adapt to it. This is illustrated nicely by Prentice's observation of the Timugon Murut of Sabah who have now taken up rubber planting. He writes (1969: 9-10):

> The change to a cash-economy has, as usual, proved a mixed blessing. While it enables people to survive a bad rice-harvest without too much difficulty, and while it has brought such commodities as penicillin and zinc-roofing within their reach, it has also caused the disappearance of such arts as weaving of hats, mats, and baskets, since all these articles are readily obtainable in the shops.... Moreover, the availability of cheap tinned foods from the same source has led to the large-scale abandonment, not only of the traditional hunting and fishing activities, but also of the traditional methods of preserving emergency stocks of food (i.e., by fermenting meat or fish with rice, or by roasting and smoking pork, venison, game, etc.). The resulting unbalanced diet has produced a greater incidence of diet-deficiency diseases than formerly. More importantly, those households which are now dependent on shop-foods are often placed in considerable distress when the cash-income fails through (e.g.) illness or a fall in the price of rubber.

In this regard Gokulanathan and Verghese (1968) provide experimental data to establish that the loss traditional knowledge and techniques for dealing with child rearing and diet frequently provide nutritional deprivation and growth retardation in children. Jelliffe (1972) also provides evidence to the effect that nutritional deprivation results from the replacement of indigenous diets with commercial foods in underdeveloped countries and from the cultural export of inappropriate nutritional information from the western world by untrained, unacculturated, and culture-bound home economists, nutritionists, and pediatricians.

Destruction of Indigenous Knowledge

The Social Construction of Inferiority: Modernization and the Western Mind. These examples and others which I shall shortly give tend to suggest that the inferior status that is conferred on the members of the simpler societies of developing countries, on the more "primitive" peoples, is in fact an artifact of the western-educated mind. First of all, the western-educated mind perceives these peoples as being inferior. As a result he then in fact makes them inferior. Teachers from the more "sophisticated" sectors of a national society, or from foreign, more developed countries, trained in a western model of education, drive out the local knowledge and skills. They substitute for this indigenous knowledge their incomplete, western-based knowledge and skills, which are inappropriate for dealing with the local conditions that the indigenous people must face. As a result, the local people are left in possession of inferior knowledge and skills. They do in fact become less able to cope, and so they do in fact become inferior to those individuals from the sophisticated or westernized sections of the society. This conclusion can be supported by another example from the activities of certain missionaries who provide local peoples with clothing discarded from the urban centers of the western world. These garments displace the native dress and become tangible and visible symbols of the inferiority of the local peoples. This product of a distorted Christian ethic creates, out of its own lack of tolerance for the customs of other peoples, the very inferiority that the western mind wishes to find in order to justify his own, but nevertheless inappropriate, world view.

Thus, in a very real sense the western-educated individual needs the "savage" to support his own self-image, to demonstrate psychologically that he carries a superior culture, for only by devaluing the members of local societies can he support his questionable claims for superiority. But, as I have pointed out, this world view has economic ramifications. And I am reluctantly forced to conclude that perhaps the "radical anthropologists" are right when they take the position that development is just another form of imperialism by western nations. For development does make the indigenous peoples bound to and irreversibly dependent on the

western economic system by destroying their indigenous knowledge and abilities to adapt to their ecosystem.[16]

Learning from Indigenous Peoples: Our Eroding Heritage. When any society loses its skills and knowledge in adapting to an ecosystem, it is not the only loser; the whole human race is. Can we be certain that the methods of adaptation discovered and invented over thousands of years of experimentation will be rediscovered, re-invented at some future point when they may have critical importance for man's adaptation to his biosphere?

The point is that westernized man never seems to have learned his lesson. He is therefore doomed to constantly repeat his mistakes, while at the same time his teachers are rapidly becoming extinct. We frequently resist the knowledge of less advanced peoples, incorporating such knowledge informally into our own culture only centuries after it was first presented; in other instances we reject the knowledge outright only to rediscover it later by our "scientific" techniques. For example, the Indians of Montana thought that Rocky Mountain fever was caused by tick bites, but the early settlers tended to believe it was from drinking water from melted snow until 1906, when the Indian assumption was finally confirmed (cf. Nelson 1971). Recent experimentation with biofeedback has demonstrated that the mind can indeed control what were normally considered involuntary bodily functions, yet this was claimed by yogis centuries ago but dismissed by the western materialist mind as ridiculous.

Unfortunately, in the majority of instances westernized man and his new industrial society destroy the indigenous books of knowledge, casting aside the potential contributions to the knowledge of all mankind as being superstitions and evidence of "primitive" mentality. We do not systematically attempt to collect this knowledge before it is lost, before the indigenous peoples lose their culture and become articulated to the modern world.

But I do not mean to imply here that the westernized mind is restricted to its classic cultural area. We are now finding a new form of colonialism, a decentralized colonialism, sometimes practiced by the

western-educated elites of Third World countries who view their less economically developed countrymen as illiterate savages with nothing to offer their country's growth and evolution.

The Destruction of Indigenous Chemotherapeutic Knowledge. This point is vividly illustrated in the destruction of indigenous pharmacopoeias and chemotherapeutic knowledge (Appell 1975b). As indigenous pharmacopoeias are based on native belief systems, missionaries and educators destroy knowledge of these inventories of drugs in their attempts to supplant the indigenous belief systems with Christian beliefs or "modern" beliefs, not realizing in their arrogance that the germ theory of disease causation to which they subscribe is really only a folk belief of their own native society and is now under considerable revision.

The introduction of western medicine is also one of the major destroyers of the indigenous chemotherapeutic knowledge. The success of cures by antibiotics, but particularly the attitude of physicians to the indigenous medical belief systems, puts the native pharmacopoeia into disrepute, and it slowly erodes away. Yet before the development of synthetic products to duplicate the properties of natural drugs there were more than 200 drugs in the "United States Pharmacopoeia" that were derived from the American Indians (Vogel 1967). Levi-Strauss concluded for South America (1950: 484):

> With the exception of perhaps the cinchona bark...there is no [plant] species used in modern pharmacopoeia which was not familiar to the natives in pre-Columbian days. Furthermore, it is probable that only a fraction of the herbs used by modern Indians are presently known and exploited.

In India there is now emerging an effort to evaluate the medicines used in various indigenous medical systems (Appell 1975b).

The value of knowledge from indigenous people about their ecosystem and its uses in medical treatment is also illustrated by the fact that psychiatric medicine has within the past two decades benefitted from

psychopharmacological agents originally derived from nonwestern medicine systems, and I would estimate that native neuroleptics still offer one of the most important but largely untapped psychopharmacological resources (Crane 1973).

To conclude with two striking examples of the value of this knowledge, Tabrah, Kashiwagi, and Norton (1970) report that on the suggestion of "an elderly woman of Hawaiian race who had experienced many of the native Hawaiian medical practices," a tropical sea worm was tested for antitumor activity and found to inhibit tumor growth in treated mice. According to their informant, indigenous "cancer patients had shown clinical improvement after drinking an infusion of cooked sea worm tentacles daily for several weeks." Another native Hawaiian anticancer method involved sucking the body fluid of live sea worms through a fine bamboo tube (also cf. Von Reis Altschul 1967, 1968, 1970). And Schultes (1962: 260) writes that had we carefully evaluated the writings of the Egyptian papyri we might not have had to wait until the 1940s for a knowledge of the antibacterial activities of certain fungi.

The Social System as an Adaptive Mechanism

We have discussed how the partial social models of the development planner do not normally include the ecosystem, yet each society is closely tied in with its ecosystem in a complex series of exchanges. Unconsidered modification of this exchange system produces not only pernicious consequences but also hidden costs to economic development. We have also pointed out that the partial models of the development planner do not include the indigenous knowledge of the local ecosystem with the result that this valuable asset is destroyed on the grounds that the society being changed will as a result become more developed, more modern, more productive. Yet if this asset of local knowledge could be weighed against the expected economic benefits from development, the question arises as to whether mankind is not in fact becoming poorer rather than richer. Certainly, we are depleting our inventory of adaptive techniques at a time when the present mode of adaptation by modern society to the world ecosystem is facing its greatest challenge.

The social system that a society has constructed over thousands of years of trial and error is also a mechanism of adaptation, not only to the physical environment but also to the social environment in which the society is embedded. This system provides a mechanism by which the members can satisfy their social, psychological and biological needs. But, as this mechanism is tinkered with, as it is changed by development, or changed in response to outside pressures, it loses its former integration. As a result it loses its ability to provide a satisfactory method of adaptation for its members. It begins to malfunction, and its members become less able to cope at all levels, the social, the psychological, and the biological, until a new level of adaptation and integration is reached, which for many societies may never occur.

I have called the pressure that a malfunctioning social system puts on its members, stress. And this is the one final component that developers leave out of their planning models. For with development, with introduced change, stress arises in the population as it loses its past ways of coping, as its social mechanism for coping disintegrates and is no longer able to perform its function at the very time when the adaptation load has been increased. Scudder gives a striking example of what can happen. He reports (1965) that in the relocation of peoples for the Kariba Dam project there was a mortality rate in one group of 10 percent within eighteen months of relocation. And mortality rates represent only part of the costs of social malfunctioning that result from such induced stresses.

However, in attempting to ascertain these costs of development, the difficulty is that the social scientists have yet to produce a social model that can be used to monitor such stress reactions. Instead, the social scientists have given the planners conceptual tools such as culture, social organization, and so forth, and these were developed for other purposes than determining the reactions of a social system to change and assaying the total social costs. Consequently, I would like to sketch out here a more appropriate model.

First of all, if we conceive of a social system as a mechanism by which its members adapt to their social and physical environment, stress can be more precisely defined as dysfunctional reactions to change or the

threat of it. By dysfunctional adaptation, I refer specifically to stressor-produced activities that are not directed toward the resolution of the threat but which require energy and resources of the society to be redirected into support and maintenance activities for the social system. This results in a reduction in the resources of the social system to adapt further.

Health Consequences of Social Change. An example of this is health impairment in the members of the social system as the culture changes. There has been a certain amount of research into the health consequences of culture change (cf. Polgar 1962; Scotch 1963a), with the general conclusion that an increase in health impairment can be related to sociocultural change. However, the findings of these types of investigations are not entirely consistent (cf. Murphy 1961). One of the difficulties in most of these investigations is the use of a faulty research design (cf. Appell 1969b), and I will only briefly outline some of these factors here as they pertain to our problem.

First of all, many investigations do not distinguish between observer-defined stress and perceived stress, and the latter, Hinkle and Wolff (1957, 1958) have pointed out, is the critical factor. Furthermore, it is not perceived stress alone that may cause health impairment, but whether or not the population at risk can deal effectively with the perceived stress. For example, Scotch (1963b) has concluded that hypertension occurs primarily in those urbanized Zulu who have difficulty in adapting to the new environment, not those who have made a successful adaptation. And finally, the research designs that have been used to date do not establish the relationship between sociocultural change and health impairment clearly because they do not include controls for all significant variables. Thus, on the one hand, certain types of stressors in sociocultural change may not directly produce health impairment but instead produce other types of behavioral reactions that only at a later date, and then indirectly, lead to psychological and physiological damage. Family instability produced by the stresses of sociocultural change may well be one such example.

However, the one major contribution these studies make to building a model of a social system as a mechanism of adaptation is that they clearly demonstrate

that health impairment may be one form of dysfunctional adaptation.

Other types of dysfunctional, as well as functional, adaptations to change have yet to be adequately delineated. To do this, I believe it would be useful to view changes in all types of behavior in a social system as possible responses to the perceived threat of social change. Thus the goal of this new, social systems research design proposed here is not to determine the objective level of stress in any social system, even if this were possible, but to monitor changes in the social system as it reacts to new stressors (see Appell 1966b: 316-317), using the concept of concomitant change to identify possible causal sequences.

Thus, for example, while deviant behavior is recognized as having its function in defining the boundaries of social systems and in bringing into focus dominant values by contrast (cf. Erikson 1966), changes in amounts and types of deviant behavior are viewed in this type of research design as providing a measure of the degree of added stress that the social system is undergoing as a result of induced change. By deviant behavior we include not only crimes and other antisocial acts, but also mental illness (cf. Scheff 1966), accidents and other parapsychiatric disorders (cf. Mazer 1965), loss of productive efficiency and effectiveness, separations from the social systems (cf. Likert 1961), and so forth. Other modes of response include anti-administrative behavior and revolution (cf. Appell 1966b). Whether they are dysfunctional or not depends both on the outcome and the side from which one views them. They, nevertheless, do involve a cost to the social system.

In this view we extend the position taken by Menninger et al. (1963) on psychological and physiological coping mechanisms to include the social systems in which the individuals participate. Deviant behavior will thus increase in a social system undergoing change as the other coping mechanisms become inappropriate or as the structure of social relations that provides a means for stress reduction in the individual changes or deteriorates.

However, one of the major problems in accounting for the costs of development-induced stress reactions

is that there is no satisfactory inventory of these eve at the present state of our understanding of this problem. The best inventory to my knowledge is that provided by Menninger et al. (1963), but he ignores, as I have pointed out above, certain social reactions to stressors that mitigate the psychological and physiological effects, or organize resistance to the source of threat, such as religious innovation or the forming of associations to deal with agents of stress. In any event, these social reactions also produce costs to the social system as they include the rechanneling of energy from productive to protective and maintenance activities.

Leading Indicators of Increasing Stress. At this juncture it would be useful to mention briefly three behavioral domains in a social system that appear to be particularly sensitive to change and which therefore may in fact provide leading indicators of the increase of stress in a social system. Stress reactions in these domains may also precipitate reactions in other behavioral domains, requiring maintenance and support activities and thereby increasing the costs of change. I refer here to the culture-specific evaluation of self-esteem; role conflict and ambiguity; and the perceived aspiration-achievement gap.

In situations of culture contact and change such as occur in development projects, one of the potent factors leading to nativistic movements has been the loss of self-esteem by the members of the indigenous population. In the case presented earlier of children going to the new school, they were told that if they used their native clothes and carrying basket they would be laughed at by the teacher. Aberle (1962) in his discussion of the precipitating factors in such movements has referred to this as the relative deprivation of personal worth. And Kasl and French (1962) have used the concept of loss of self-esteem to explain why men who move to low status positions increased the frequency of their visits to the dispensary while men who moved to higher status jobs showed a decrease in frequency of visits.

The exact processes involved in the loss of self-esteem and the behavioral ramifications is urgently in need of further research. But we do know, however, that individuals who have high self-esteem are less likely to display distress and anxiety and are better able to cope with threats when they do arise than are

those with a lower self-esteem (Coopersmith 1967: 247). Thus the loss of self-esteem may begin a chain reaction of dysfunctional adaptations. For example, Wallace discusses the relationship of aggression to flawed self-esteem and threatened social identity. He writes

> ...the occurrence of destructive aggression within and between non-human primate groups is a temporary reactive product of fear except under the circumstance of widespread damage to identity processes in which chronic internalized fear (of a kind experienced in man as a threat to self-esteem) becomes endemic. In view of the apparently nondestructive inclinations of most other primates, one must ask whether man's notorious propensity for hostility may not also be a consequence of his extreme vulnerability to fear induced by disorders of identity processes (1968: 44).

The second cultural domain, particularly susceptible to stress, is that of role organization in which change may produce role conflict and ambiguity. Kahn and his associates (Kahn et al. 1964) found role conflict and ambiguity to be significantly important in the development of psychological stress. And in economic development and modernization role conflict and ambiguity are particularly prevalent as new roles are introduced and old roles redefined.

Finally, the third leading reactor to stressors is the perceived aspiration-achievement gap. We know that a high aspiration-achievement gap may lead to significant psychiatric disorder (cf. Parker et al. 1960) as well as many other types of behavioral responses including social movements (cf. Aberle 1962). And the development act by its very definition does increase aspirations in the target population. But the degree to which it increases such aspirations and the means which are provided in the development act for the achievement of such aspirations is in each case an empirical question. The difficulty is that too little research has been done on this question so that the parameters and costs are not fully known.

In any event, these three behavioral domains bear close scrutiny in any project that involves change or any research investigation into the dynamics of change as these appear to be leading indications of stress arising in the social system as it attempts to adapt to change.

Loss and Change. Any act of development, as I have said, entails an act of destruction. The psychological equivalence of this is loss. Economic development and modernization always involve personal loss. This produces a psychological reaction that has been equated with the grief experienced in the loss of a significant other. Only here it is over the loss of social fields and meanings attached to life. I call this "social bereavement." And this is an added load on the adaptive capacity of a society experiencing change, in addition to role conflict and ambiguity, threats to self-esteem and social identity, and a growing aspiration-achivement gap. However, its dimensions have only recently been realized (cf. Marris 1974, Parkes 1971, 1972, and Fried 1962), and as yet we have no indices by which to measure the extent of social bereavement that may be occurring.

Nevertheless, both social and personal bereavement seem to follow a developmental sequence. First there is a period of denial or numbness accompanied by anxiety, fear and feelings of threat to one's identity. This is succeeded by a phase of frustrated searching for the lost one, hoping for a reversal, and then bitter pining and an unrelieved sense of pain. Following this there is a period of depression and apathy, interspersed with periods of anger against the deceased for having left the bereaved. This is the period when the bereaved gives up the hope of recovering the lost person or social world. Finally there is the phase of reorganization, when the bereaved begins to build new plans and assumptions about the world. This period is also frequently accompanied with guilt feelings associated with the process of removing the deceased from one's social field. This transition out of the grieving state can be accomplished more successfully when the bereaved links up with his new life the past meanings of life and the past purposes that were part of the common social field of the deceased and the living.

The developmental sequence can be aborted and the grieving process interrupted. However, the processes

producing this are complex and still not entirely clear. But if the process of grieving is not completely worked through, certain pathological manifestations can occur, which may include unrelieved depression and apathy, health impairment of various kinds (cf. Parkes 1972), and/or unexpected outbursts of aggression.

When through social change a population undergoes major changes in its social space, its socioeconomic structure, or its assumptions about the world, it experiences the same grieving process. If the trauma of such losses is not successfully worked out and healed, reintegration and growth in the population will cease. Under these conditions populations can lose their capacities to cope, becoming apathetic, depressed, or, alternatively, angry. As with individual grief, so with major social changes, normal growth and the completion of the developmental cycle of social bereavement require that the past be conceived of as a meaningful and an important experience on which to build the future. If the past is destroyed without proper valuation, the normal development of the social bereavement process is aborted.

Thus the work of museums such as the Sarawak Museum is so important to the development of productive social change. Such effort will bear and continue to bear fruit for the resolution of many tensions that arise in social change, for it provides the link with the past for many local populations. It is also in these terms that the collection of the indigenous oral literature and oral histories, and their introduction into the school curricula, is so vital.

Summary

In this last section we have introduced the idea that development adds a load to the adaptive capacity of a society undergoing change. This can produce costs in health impairment, loss of productive efficiency, and in the diverting of productive energy to operate protective and support mechanisms. But these costs are seldom accounted for in any development plan. And my argument here again is that if we really knew the extent of these costs we might readily conclude that the plans should be aborted or radically redesigned to mitigate the pernicious effects and thus lower the

costs. The difficulty here is that social scientists themselves have not yet built an adequate model of a social system as a mechanism of adaptation nor developed methods to estimate the social costs of stress induced by change. A great deal of basic research needs to be done. And development planners themselves can contribute by keeping case histories of change, detailing the mechanisms by which populations adapt to change, and the costs that are produced by dysfunctional adaptations. Certainly, although the full parameters of this model of a social system as an adaptive mechanism are not known at present, the development planners can incorporate what we do know into their social planning, thereby increasing their effectiveness and appropriateness.

Other areas that I have discussed in which the pernicious effects of development may be realized include the native flora and fauna of the ecosystem in which development takes place; the indigenous cultivars of the societies in these less developed regions of the world, which contain unique genetic resources for plant breeding; the interlinkage between human societies undergoing development and their ecosystem; and the indigenous knowledge of the local ecosystem. However, with the exception of the indigenous cultivars and the accumulated knowledge and experience of the local ecosystem, my remarks should not be considered to apply only to the societies of the Third World, for the pernicious consequences of development that I have discussed occur in the other societies of the world as well.

I have also pointed out that the social scientists and the ecologists are talking at different levels than those used by the development planners. They are dealing with different exchange systems: in the one, the values are expressed in terms of money, and in the other, they are expressed in various forms including aesthetic values, cultural values, normative values, social values, anomie, and so forth. Only by translating these values into costs so that the exchange system of the social scientist and ecologist are compatible with that of the development planner can the point finally be made as to the pernicious consequences of development and the need for a consideration of these problems in sound development planning.

In sum, development involves destruction, change brings loss. Development is not a simple creative act as implied by its name, but it is intertwined with the destruction of ecosystems and sociocultural systems. Since development means the loss of techniques, mechanisms, and knowledge whereby man can adapt to the ever-changing world ecosystem, I have raised the question as to whether mankind is not in fact becoming poorer rather than richer as the result of development. Certainly, it would be well worthwhile to require that a complete scientific survey be made of any ecosystem and sociocultural system before it is destroyed or modified by development to determine what should be preserved.

BIBLIOGRAPHIC APPENDIX

The major bibliographic source for social science research in Sarawak is Cotter (1965). For social anthropology and ethnography, LeBar, editor (1972), provides an up-to-date summary. For linguistic research, Cense and Uhlenbeck (1958) should be consulted, although it is somewhat out-of-date. The Borneo Research Bulletin carries a listing of current bibliographic references as well as brief summaries of ongoing research and the preliminary results. Other important sources include the Sarawak Gazette, for which Cotter (1966) has provided a useful index. Also, the various issues of the Sarawak Museum Journal are invaluable.

For summaries of the current status of research in the prehistory of Sarawak, not covered here, consult Chêng Tê-K'an (1969) as well as the various issues of Asian Perspectives and COWA Surveys and Bibliographies. Tom and Barbara Harrisson review prehistoric research in Sarawak in various issues of the Journal of the Malaysian Branch Royal Asiatic Society.

Finally, the Association for Asian Studies publishes a yearly Bibliography of Asian Studies which covers all disciplines.

Footnotes

1. The first section of this article is an updated and expanded version of materials that originally appeared in Appell (1976e). Since writing this revision, Peter Kedit (1975) has published a most useful review of current anthropological research in Sarawak. He has also kindly responded in that article to some of the points that I raised in the second section of this paper on the basis of an early draft that I sent him. I would like to thank him here for his courtesy and thoughtfulness in this; and I would like to recommend that the readers of the second section of my article consult Kedit (1975) in this regard.

2. However, please consult Volume 8, No. 2 of the Borneo Research Bulletin for a series of obituaries on Tom Harrisson.

3. Needham (1966) has used the term "cognatic" apparently in this sense to refer to societies without ambilineal descent groups. Firth (1963) uses the terms "bilateral" and "cognatic" interchangeably with "ambilineal" to refer to those nonunilineal descent groups.

4. I will not include here a complete bibliography of social anthropological publications on Sarawak. For this please refer to the references listed in the Bibliographic Appendix. I also will not attempt to cover secondary materials based on reanalyses of the basic data derived from field work, such as Fortes' (1969) reanalysis of the Iban cognatic system on the basis of Freeman's data; Buchler and Selby's (1968) reanalysis of Freeman's data on the domestic family cycle; Vayda's analysis of the functions of Iban head-hunting (1961, 1968, 1969b); and Wagner's (1972) analysis of the impact of Brooke administration on Iban head-hunting. However, please see footnote 13.

5. King has recently studied the social organization of the Emboloh Maloh in West Kalimantan. These people are closely related to peoples in Sarawak and representatives of these people used to travel throughout Sarawak as skilled silver and coppersmiths.

6. Needham (1976) in an important article reviewing the literature on head-hunting in Southeast Asia presents his data on head-hunting among the Kenyah. He raises critical questions as to the contamination by investigators of the ethnographic data by imputing a more complex causal nexus to explanations of head-hunting than were advanced by informants. He attributes this to the intrusion of models from the physical sciences into social science inquiry for explanatory frames of reference that are inappropriate to the thought patterns characteristic of the members of the society being investigated.

7. Motomitsu Uchibori, a student of Derek Freeman at the Australian National University, is currently doing field work on conceptions of death and ritual behavior among the Iban of Sarawak.

8. Peter Kedik (personal communication) suggests that the Iban's ability to adapt is related to two features: the social identity and obligations that center on the *bilek* family and the wide-ranging idea of "Ibanness" among societal members.

9. I have introduced the term "exonym" to contrast with "autonym": "Terms used for ethnic identification that are derived from the folk classification of peoples foreign to those being identified might, for convenience, be referred to as 'exonym'" (Appell 1968a: 2). This terminology was adopted by LeBar (1972).

10. In addition to Benedict Sandin, various other members of the Sarawak Museum staff have been very active in ethnohistorical research, the results of which appear regularly in the Sarawak Museum Journal. Anyone dealing with the social structure of any of the peoples of Sarawak or anyone attempting to understand the nature of social processes at work in Sarawak cannot afford to neglect this critical source of data. However, it is impossible to review here all the important results of this research. It can only be hoped that this important work can be expanded.

11. It should be noted that very little research in ethnomusicology has been done on the rich musical traditions of Sarawak (cf. P. Court 1973).

12. Michael Leigh has just completed a listing of the indigenous populations of Sarawak by locality, headman, size of settlement, ethnic group and constituency boundary. The data are to be published in the Sarawak Gazette.

13. King (1976) reviews the literature of Iban warfare and attempts to show the inadequacies of ecological explanations advanced by Vayda and Wagner for the functions of warfare in the competition for the scarce resources of cultivatable land. Vayda (personal communication) says that the position King has attacked has been superceded by a new interpretation and explanation for warfare among swidden agricultralists that appears in Vayda (1976).

14. H.S. Morris and C.A. Sather, as Consulting Sociologists to the Miri-Bintulu Regional Planning Study, have written a "Support Volume--Sociology" on the basis of their research for this project. Hatta Solhee, a rural sociologist, and Sather carried out twelve field studies, which were written up in a series of working papers (please see Bibliography).

15. Parts of the argument presented here were originally outlined in a paper entitled, "Partial Social Models and Their Failure to Account for the Pernicious Effects of Development," which I presented at the Symposium, The Role of Education and the Problems of Development, Annual Meeting of the Society for Applied Anthropology, April 1-5, 1970, Boulder, Colorado, and which has now been published as "The Pernicious Effects of Development."

16. A recent example of this has been brought to my attention in which development consultants themselves should have known better. An underdeveloped country asked two individuals from a United States university to advise the government on model contracts for dealing with foreign concessionaires in the extractive industries. In giving this advice at no time did these consultants raise questions as to the pernicious effects that might result to the ecosystem or the local peoples. They neither suggested the government consult with ecological and anthropological experts nor did

they write into the contracts corrective clauses to mitigate these pernicious effects. What is even more surprising is that there exists a large literature on the indigenous systems of land tenure and the methods used by the local peoples to conserve their ecosystems from degradation as a result of cutting the tropical forest for agricultural practices. These jurally sanctioned conservation practices were not included in the model contract. Consequently, at the present time vast areas of tropical forest are being cut with an unnecessary degradation of the ecosystem, with the loss of primate and other animal populations, and with an unnecessary disruption of the local societies and cultures. It is too early to quantify the full costs of these, but they will eventually have to be dealt with. It would seem to me that at this stage in our own understanding of the costs of industrial development in our own country, the consultants from the U.S. might at least have raised the question as to the ecological and social consequences of resource development even if this fell outside the realm of their own areas of competence.

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Abbreviations:

AAA = American Anthropological Association

BICUAER = Bulletin of the International Committee on Urgent Anthropological and Ethnological Research

Bidj. = Bijdragen tot de Taal-, Land- en Volkenkunde

BMJ = Brunei Museum Journal

BRB = Borneo Research Bulletin

CRS = Colonial Research Studies

HMSO = Her Majesty's Stationery Office

I. = International

J. = Journal

JMBRAS = Journal of the Malaysian Branch Royal Asiatic Society

NY = New York

SMJ = Sarawak Museum Journal

U. = University

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Malay Social Structure in a Sarawak Town During the Late Nineteenth Century

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Although modern urban settlements in both East and West Malaysia have usually been thought of as predominantly Chinese in composition, some towns and cities in the region have had substantial Malay populations since their establishment. Yet little attention has been paid in the historical literature to the structure and development of urban Malay communities.[1] This paper attempts to begin to fill the gap by examining the social structure of the Malay community in Kuching, the capital of the East Malaysian state of Sarawak, during the late nineteenth century. Kuching is a riverine trading port founded in the early nineteenth century as a Malayo-Muslim political and economic center. Later it came under European political control and developed as an ethnically heterogeneous town in which Malayo-Muslims and Chinese were the most important numerical elements.

Kuching began as a Malay village in the late 1820s and was almost entirely Malay when James Brooke settled there in 1841 and established the Brooke raj. It was still a predominantly Malay town before the turn of the century; a rough census in 1876 found that Malays composed about 70 percent of the total town population of

7,684, while Chinese accounted for only 29 percent.[2] In the early twentieth century the growth of the rubber industry encouraged large-scale Chinese immigration, which contributed to a substantial population increase and the transformation of Kuching from a largely Malay town into a primarily Chinese one. Nevertheless, by 1939 the Malays still accounted for almost 40 percent of the total town population of 34,478, while Chinese composed 55 percent.[3] Clearly the Kuching Malays merit attention as an urban group.

The Malays of Kuching constituted a cohesive ethnic group in the late nineteenth century, and lived in their own neighborhoods, known as *kampongs*, on both banks of the Sarawak River. The Chinese and Indian bazaar (commerical district) on the south bank constituted the heart of the town of Kuching. Most of the government offices were located in the bazaar, although the rajah lived on the north bank, directly across from the bazaar. (In the late nineteenth century this rajah was James Brooke's nephew, Charles Brooke, who served from 1868 until his death in 1917.) Concentrations of *kampongs* lay to the west of the bazaar, in the area known as the Datu's Peninsula, along the north bank, both upriver and downriver from the Brooke *astana* (palace), and also a few to the east of the bazaar.

The *kampong* pattern was an important structural component of the Malay community, for the various *kampongs* and *kampong* clusters often reflected different class and occupational criteria. Most of the aristocrats lived in the *kampongs* of the Datu's Peninsula, and these *kampongs* also had a high percentage of residents who were employed in the government bureaucracy and police. Under the Brookes, Malays received preference for government employment. Although no statistics are available, a significant number of aristocrats held posts in the growing civil service, and the Kuching police force was largely composed of Malays, mostly commoners. Few aristocrats lived on the north bank or in the eastern *kampongs*, and these consequently had a more agricultural or laboring orientation. Some of them were also inhabited primarily by Malays who had migrated from elsewhere in Sarawak or the archipelago.

The *kampongs* played an important social role for the Malays, since they had a part-urban, part-rural character that contributed immeasurably to the

adjustment of formerly rural Malays to town dwelling. Many of the Malays, in some *kampongs* a strong majority, worked in the bazaar, primarily for the government; but they returned home to a wholly Malay milieu. Chinese and non-Muslim Indians were generally prohibited from owning land, living, or operating shops in the *kampongs*. Most Kuching *kampongs* occurred in clusters, often with few visible boundaries, but the individual *kampong* was usually a self-contained neighborhood with its own identity and social structure. The identity was based on administrative jurisdiction, family ties and, sometimes, different ancestral origins. Each *kampong* had a *tua kampong* (village chief) and its own *surau* (prayer house); later, in the twentieth century, it often had its own social and recreational clubs restricted to residents of that *kampong*. There was a definite sense of belonging to a particular *kampong* and many Malay families had been associated with a particular *kampongs* since settling in the town. There were slight variations in spoken Malay among different groups of *kampongs*, so that the *kampong* of a Kuching Malay could be easily identified by his accent.

In the late nineteenth century the categorization of an individual as a Malay depended in part on residence in one of the *kampongs*, as opposed to the bazaar or the suburban fringe. Furthermore, a Malay identity usually applied to anyone who habitually spoke the Malay language, was a Sunni Muslim of the Shafia school, wore Malay-style dress, generally followed Malay customs, and considered himself a Malay. Yet the Kuching Malays were not a homogeneous ethnic group at this period for they derived from highly mixed Malayo-Muslim and Dayak origins. The Malays of the Sarawak River basin developed over many centuries through the amalgamation of Islamic immigrants (Malayo-Muslim and Arab) from elsewhere in Borneo or the archipelago and of Dayaks who had embraced Islam and settled in Malayo-Muslim settlements along the coast. Through time these peoples had come to have a coherent ethnic and cultural identity.[4]

The "making of the Malay" through the assimilation of Malayo-Muslim immigrants continued in the late nineteenth century, even as the pace of Malayo-Muslim immigration increased considerably. As many as several thousand Malayo-Muslim immigrants may have settled in Kuching between 1850 and 1900, and these groups by and

large merged rather imperceptibly into the Malay group within a few decades, certainly within a generation. They came, like their predecessors, from various parts of the archipelago, but particularly from other districts of Sarawak, the Natunas Islands, West Borneo, Sumatra, the Straits Settlements, and the island of Bawean.

One of the most important groups from outside of Sarawak were the Sumatrans, most of whom came from Minangkabau and Koranchi. The Minangkabaus took a particularly active part in Malay education and government service. They also tended to segregate themselves in their own *kampong*, Gersik, established just downriver from the Brooke *astana* and fort on the north bank. Although the Minangkabaus were eventually largely assimilated into the predominant Malay group, in the late nineteenth century they often wore distinctive Sumatran-style clothing.[5]

Boyanese and Jawi Peranakan settlers also arrived at this period. The Boyanese, from the island of Bawean north of Java, were considered extremely strict Muslims; they often retained their Boyanese-Javanese surnames, such as Som, for generations. They established their own *kampong* on the north bank and also lived as squatters on the urban fringe just southwest of the bazaar. The Boyanese, famous as grooms for the ponies owned by Europeans and generally as handlers of animals, were also market gardeners and carpenters. There also seems to have been a gang of Boyanese laborers in the 1880s under the leadership of a Boyanese contractor.[6] The Jawi Peranakans (Jawi Pekans), of mixed Muslim Indian and Malay descent, had been recruited by the rajah from Singapore and Penang as teachers and civil servants. They did not come in large numbers and tended either to return to the Straits or to merge with the Kuching Malay community on completion of their service.[7]

The Malay ethnic definition was sufficiently liberal to allow the development of *kampongs* based on area of origin and the retention of different patterns of dress and naming. Yet these groups never constituted communities or sub-groups wholly separate from the Malays, for they recognized the authority of the Malay chiefs, replaced their own languages with the local dialect of the Malays, intermarried freely with the Malays and merged into the Malay social structure at

appropriate levels. Even the Sumatrans, perhaps the most individualistic of immigrants in this period, did not constitute a separate community with separate schools, voluntary associations, or leadership structure. They were generally regarded as Malays, albeit Malays of a rather special kind since the Minangkabaus were widely admired throughout the archipelago for their learning and piety. The relationship between the Minangkabaus and the Malay elite is discussed below.

The relative ease with which Malayo-Muslim immigrants were assimilated was due in large part to a local Malay social system made flexible by a long history of incorporating Muslim elements of diverse background, including Dayak. But there were also other factors. Most of the immigrants came as individuals or in small groups, often to join kinsmen who had preceded them. They were not therefore a large and cohesive immigrant group. Communication with their home areas was usually difficult and infrequent; Kuching-based schooners and junks sailed far more regularly to China or Singapore than to Sumatra or Pontianak. No doubt a Brooke tendency to govern through ethnic blocs and to discourage ethnic ambiguity also contributed to the assimilation of immigrants into the major ethnic categories.[8]

The general cohesiveness of the Malay community despite mixed origins helps explain why no Malay voluntary associations of any kind developed in the late nineteenth century. Unlike the Chinese, who established an extensive associational structure, most of the Malays were not immigrants and therefore did not demand social organizations to serve in place of family, clan, or village ties. The sex ratio in the Malay community was balanced, again unlike the immigrant Chinese, and a stable family life was therefore possible. Furthermore, the *kampong* provided a focus for social relations very similar to that of a small rural village, allowing even Malayo-Muslim immigrants to join and become a part of a neighborhood group. The same was not true for a Chinese community fragmented by dialect and occupational differences and concentrated in the bustling but more anonymous bazaar. The informal social linkages of kinship, neighborhood, patronage, and reciprocity bound localborn and immigrant Malays together and made formal social organization unnecessary.

The integration of immigrants was also greatly facilitated by the presence in Kuching of a strong, prestigious, and well-defined Malay elite able to hold the allegiance of the entire Malay community. Unlike many urban Malay communities in Malaya, here there existed no ambiguities about local leadership and no divided loyalties, for Charles Brooke governed the Kuching Malays through the traditional chiefs of the community, men who held the rank and title of *datu*.[9] The *datus* were clearly recognized by all as the major personalities in the Malay community. During the Charles Brooke period there were four titled datuships. Although the authority of the *datus* over the Malay community extended throughout the state, all of the titled *datus* who served during the late nineteenth century were Kuching Malays, and thus a discussion of the *datus* is also essentially a discussion of the Kuching Malay elite. There were other persons who held *datu* rank outside of Kuching, but these were not titled *datus* and had no statewide authority.

The highest position was that of *Datu Bandar*. The term means "chief of the port" or "chief of the town," and essentially the *bandar* was the premier chief of Kuching as well as the entire state; he was also president of the Datu's Court (Malay Court), which had authority in matters of Malay custom (*adat*). The *Datu Imam* (high priest) was the second most important official and the religious head of the Malay community. The *Datu Temonggong* (commander-in-chief) was originally second only to the *bandar*, but this office declined in importance over the years. The original functions of a military leader receded with the ever increasing security and stability of the raj; by the late nineteenth century the office of *temonggong* had become largely symbolic, a deputy ot the *bandar*. The fourth office was that of *Datu Hakim* (judge), established only in 1886 and the chief authority on Malay custom and Islamic law.[10] Why the position was established is not clear, but it may have reflected the growing complexity of the Malay community and a gradual formalization in the Brooke legal system. There was also another position--that of *Datu Muda* (Young Datu)--sometimes awarded to the eldest son and heir apparent of the *Datu Bandar*.[11]

The *datus* received a regular salary from the government. Their most important local duty was to sit on

the Datu's Court, which met regularly in Kuching. The *Datu Bandar* was chief justice of the court, with the other *datus* serving as associate justices. The Kuching Datu's Court had jurisdiction over the town and some nearby *kampongs* such as Matang and Quop. In other districts there was usually a government-appointed magistrate or sub-magistrate who forwarded only the most serious cases to the Datu's Court in Kuching. The *datus* also sat in rotation on the Police Court for petty crimes, and on various other local bodies. As Charles Brooke expressed the official feeling, the *datus* had the experience without which the raj "could not satisfactorily enforce obedience and administer justice."[12] In most cases the *datus* occupied their positions until death. In case ill health forced them into premature retirement, the term *tua* (elder) was added to their title, which they retained. None of the offices was legally hereditary, although in practice the *bandar* was always succeeded by a son or brother. Most of the *datus* lived in the south bank *kampong* west of the bazaar, and this became the favored residential area for most aristocrats.

The *datus* set the political tone for the Malay community, and this tone favored strong loyalty to the Brookes. The *datus* also set the moral and social standards for the Malay community, and life in the late nineteenth century was very much influenced by the demeanor of the *datus*, and particularly of the *bandar*, Abang Haji Bua Hassan (Bolhassan). Bua Hassan was the premier Malay of the period, serving as *bandar* from 1865 until his death in 1906 at the age of ninety-six, a span of over forty years.[13]

As *bandar*, Bua Hassan was regarded by the Brookes as an intelligent, broad-minded, and very able leader. Although a conservative in many respects, he did create an atmosphere in which some social change was welcome. For example, bonded dependency was gradually eliminated and the first formal Malay schools were begun with his approval. On the other hand, the *bandar*'s only wife, Datin Isa, was the acknowledged leader of Malay female society and a bulwark of social conservatism. She avidly opposed a plan by the rajah's wife, the Ranee Margaret, to teach Malay reading and writing to some of the wives and daughters of the *datus*. The *datin* told the ranee that:

> Writing amongst the women is a bad habit, a pernicious custom. Malay girls would be writing love letters to clandestine lovers, and undesirable men might come into contact with the daughters of our house... I hope it will never come to pass.[14]

In the end the *datin* relented and allowed her own daughters to attend the classes. According to the Ranee Margaret, Datin Isa's "ideas on ceremonial dress and deportment were as rigid as the aristocratic old ladies of the early Victorian days,"[15] but her "blameless life set the standards of conduct for Malay women"[16] in Kuching. The *datu* and *datin* left nine children including the next *bandar*, Mohammed Kassim. At their death they also left seventy-two grandchildren. Although accepting some change, the *datu* and *datin* represented and encouraged stability, and this may have promoted the acceptance of tradual change as well as the integration of Malayo-Muslim immigrants into the Malay community.[17]

The *datus* occupied the top level of the political and social structure, but it should be noted that below them were two separate categories of leadership which played important social roles, the *tua kampongs* (*kampong* chiefs) and religious officials. Every *kampong* had a chief, whose major duties were to settle minor disputes, keep order, collect taxes, and serve as spokesman for his *kampong* to higher authorities. They were the local administrators of *adat* law, with the power to inflict fines on offenders. The *tua kampongs* were therefore an intermediary institution between the *datus* and the *kampong* Malays. The institution of the *tua kampong* (equivalent to the Malayan *penghulu*) was not traditional in the Sarawak River basin for the institution was first established by James Brooke in 1854.[18] Initially the *tuas* received a small percentage of the taxes collected but later they were paid regular salaries by the government.[19] The *tua kampong* was not necessarily an aristocrat. In the more aristocratic *kampongs*, such as Jawa and Bintungor on the south bank, he was always an aristocrat and often a *datu*. In other *kampongs*, he could be a respected commoner; very often he was a *haji*.[20] It was not uncommon for the office to be passed on from father to son. The position seems to have provided one

of the few vehicles for upward mobility within the Malay social system.

Religious offices also provided some opportunity for upwardly mobile commoners or lower aristocrats with Islamic learning to attain an elite status. These officials supervised the Masjid Besar in Kuching and were also the leading Islamic religious officials in the state. Their elite status was prefixed by the term *tuan* (master), and the *imam*, *khatib*, and *bilal* of the Masjid Besar in Kuching were the only men allowed to use this honorific. The *Tuan Imam* was the director of the mosque and the leader of Friday prayers, the *Tuan Khatib* the chief lecturer at Friday services, the the *Tuan Bilal* the *muezzin* or caller to prayer. All received government salaries. The three religious officers were sometimes aristocrats or had ties with aristocratic families through marriage, and usually had spent some years in the Middle East. The jurisdiction of the *khatib* and the other officers was largely restricted to religious affairs.

In addition to the *datus*, *tua kampongs* and religious officials, another group seems to have exercised considerable informal influence and power. This was the Minangkabau intelligentsia, most of whom settled in Kuching in the middle of the nineteenth century. The appointment by Brooke of the *tua kampong* of Gersik, a largely Minangkabau settlement, to the Supreme Council and Council Negri signified the political significance of the group. The Minangkabaus represented the premier example of the absorption of an immigrant group into the Malay community, in this case into the Malay elite. The ability of the Minangkabaus to become aristocrats came despite the fact that few if any of them held aristocratic status on arrival. Their status had to be earned, and the manner in which it was accomplished can be illustrated by a discussion of the two best known Minangkabaus of the late nineteenth century, Inche Sawal and Inche Abu Bakar.[21]

Inche Sawal first settled in Kuching to work as a Malay writer under James Brooke. Later he taught Malay to European government officers and became headmaster of the first Malay-operated school in the town. He was a butcher and confectioner by training but because of his wide knowledge of Arabic and Malay literature, he was generally called *guru* (teacher) and was considered

the chief authority on Malay learning in Kuching. According to the Ranee Margaret, Sawal was widely admired by the Kuching *datus* because of his image as a "cultivated man" and he taught Jawi (Malay written in Arabic script) to the ranee and wives and daughters of some of the *datus*. Sawal's educational background and reputation as a scholar, rather than any political or economic power, seems to have been the reason for his influence. Sawal died around 1910.[22]

Perhaps the best known Minangkabau was Inche Abu Bakar, usually known as 'Che Bakar, who was born about 1853. Bakar's father was Inche Boyong, an immigrant from Kayong in Sumatra who settled in Kuching as court interpreter and later became head of the Customs Department. Bakar succeeded his father in his government positions and was also the headmaster of the second Malay school in Kuching, *tua kampong* of Kampong Gersik, and a member of the Supreme Council and Council Negri. He was also the owner of two schooners, which traded with Sumatra and Java. After the death of Sawal, 'Che Bakar was the leading Malay intellectual in Kuching and was considered particularly broad-minded by Ranee Margaret. Bakar maintained very close relations with some of the Chinese merchants, who often joined him in entertaining and in the presentation of Chinese opera. He also married into the aristocracy, as his wife was a close relative of Datin Isa. He died in 1928.[23] In contrast to Sawal, 'Che Bakar had some political and economic success in addition to his stature as a learned intellectual. He was of a younger generation, and locally born, and this may have assisted him in reaching the top of the social ladder.

In addition to the personal achievements of Sawal and Bakar, there would appear to be several other reasons which may help explain the social position achieved by an immigrant group in a highly structured and generally rigid society. The Minangkabaus were renowned throughout the Malay world as a distinctly religious people and most of the immigrants were usually far better educated in both Arabic and Malay than most Kuching Malays. Learned and pious men were always highly regarded in the Malay value system. Furthermore, many Kuching Malay families (including that of the *bandar*) believed that their ancestors came from Minangkabau, and this must have been to the advantage of the new

arrivals. Once a position as a scholar and public servant was achieved, marriage into aristocratic families and absorption into the aristocracy followed.

The stratification system of the Malays in this period included three distinct levels: aristocracy, commoners, and dependents.[24] The elite of the system were the aristocrats, known as *perabangan*, with the *datus* at the head. The male members of this group were always addressed as *abang* and females as *dayang*. All were descendants of *datus*. Marriages in this group were largely endogamous, and definitely so for females. Some of the *perabangan* were merchants (mostly itinerant traders in the nearby rural districts), but most served in the civil service. All male members of this group were allowed to give their opinions in any local court regardless of whether they were involved in the case--a privilege extended to no other group.[25] Slightly below the *perabangan*, most of whom were of local origin, were those whose aristocratic blood traced to Brunei. This group, the *bangsa pengeran*, was considerably smaller and probably declined in status over the decades with the fading of Brunei influence. Male children of this group were called *awang* and female children *dayang*. On attaining age, a male could assume the title of *pengeran* although it was common to decline the privilege.

The final group in the aristocratic "upper class" was composed of those who boasted of Arab ancestry and claimed direct descent from the Prophet Mohammed. Their claims to such exalted ancestry were usually considered doubtful by Europeans, who feared the "Arabs" as potential political rivals. Furthermore, many acknowledged having some degree of Malay, Bugis, Sumatran, or other Malayo-Muslim ancestry, and few had any recognizably Arab physical traits. Arab adventurers had been settling in northwestern Borneo and other parts of the Malay world for centuries, and many of those in Sarawak may have come from the "Arab"-ruled city of Pontianak. Many of the Sarawak "Arabs" may have had at least partial Middle Eastern origins, and most Sarawak Malays seemed inclined to accept such claims at face value, even if Europeans did not. The "Arabs" were a prestigious group because of their claimed relationship to the homeland of Islam, and they occupied a high position in Kuching, dominating some of the religious offices and taking active roles in both politics and

trade. It was also reported that they were given an honored position on festive and state days in the early years of Brooke rule, and may have enjoyed a more eminent position than the *perabangan*,[26] but this may not have been as true in Kuching as elsewhere in Sarawak. The men in this group were known as *syed* in Malaya and as *sharif* or *tuanku* (your highness) in Sarawak but were addressed as *wan* before their marriage. The females were always known as *sharifa*. Although the group was very small, and culturally indistinct from other Malays, the women were not supposed to marry a non-*sharif*.

There were apparently two major groups of commoners in the late nineteenth century, the *nakodas* and the *orang pereman*. The *nakodas* (ship captains) were a mercantile class who originated in Brunei and monopolized the coastal shipping trade in the early years of Brooke rule; they also dominated other forms of Malay commerce which were not already the preserve of the aristocracy. The title of *nakoda* seems to have been one of respect, and they were the most prestigious commoner group. Indeed, some observers considered them almost equal in real status to the *datus* and *abangs*.[27] They were also a highly mobile group who were popularly believed to have wives in their different ports of call.[28]

The *nakodas* as a group were the Malays most affected by the growing Chinese settlement, for they were unable to compete effectively with the Chinese and Indians as shippers, exporters, and traders in the interior; they began to decline in the early 1860s. By the 1880s most of the *nakodas* had gone out of business, and by the turn of the century the *nakoda* class had almost disappeared.[29] The gradual disappearance of this group eliminated the one group that might have threatened the position of the aristocracy, had the *nakodas*' affluence increasingly surpassed that of the *datus*. Furthermore, their disappearance widened the gap between aristocrat and commoner. Although some former *nakodas* and returned *hajis* of commoner status continued to occupy positions just below that of the lower aristocrats, it would seem that the class structure within the Malay community was becoming more rigid.

The *orang pereman* (free citizens) probably constituted a majority of the Malay population. This diverse group included peasants, fishermen, laborers, and retainers to aristocratic families. The best definition

of this group would be lower class. Some of these people, particularly those who were retainers, were actually dependents of various members of the elite, although they were apparently free to detach themselves from this arrangement whenever they chose to do so. There was considerable security in a patron-client relationship with an influential family, however, and for many commoners the only economically viable alternative to such a relationship was trade, by which one might eventually reach *nakoda* status. There was evidently no formalized mechanism for upward mobility into the aristocracy except to marry a daughter to an *abang*. In that case the children of the couple would be eligible for elite status as descendants of a *datu* on the paternal side. There is no evidence as to how often this occurred.

During the first half-century of Brooke rule there was also a group of people who were generally termed a slave class by European observers. They were evidently known as *alun alun* in Kuching.[30] The definition for "slave" as used by the Brookes is unclear and in any case the "slavery" of the archipelago world differed substantially from that practiced in the Western Hemisphere. "Dependent" may be a better term for these people, although in many cases the dependency could not be terminated except by the action of the patron. The dependency relationship was therefore stronger than that pertaining to the *orang pereman* retainers, who were not bound as tightly.

It would appear that there were two types of strongly-bound dependents in Kuching: debt bondsmen and captives. The former either were seized for nonpayment of debts or temporarily sold themselves into dependency to gain a more secure livelihood. They could theoretically regain their freedom by paying off their debts, although this was difficult because the creditors, usually aristocrats, often imposed high interest rates on debts. Debt bondsmen could not be sold or transferred without their permission.[31] Captives were generally descendants of Dayaks who had been captured in pre-Brooke Malay-Dayak conflicts or had been seized in pre-Brooke times for alleged transgressions against Malay rule. These people could be bought and sold freely and their descendants generally inherited their status. To some extent this form of dependency can be interpreted as a mechanism for recruitment into the

Malay group, as captive Dayaks were required to embrace Islam and gradually lost their Dayak culture and language.

The great majority of bound dependents were attached to *datus* and merchants, and most European sources were in agreement that they were generally well treated.[32] Most females were assigned to household work as domestics while men were employed in the household, on trading ships, or on farms owned by aristocrats. Some were evidently free to hire themselves out and keep their earnings when they were not needed by their patrons. Hugh Low noted that female domestics had the hardest existence because aristocratic women were more demanding of their servants than were the men. This was particularly true if the servant was considered physically attractive, thereby potentially inviting the attentions of the males in the family.[33] What proportion of the population was considered "slaves" is not clear, but it was probably not large.

A major change affecting social stratification came in 1886, when bound dependency was abolished. The status of aristocratic and commoner families alike was often determined by the number of dependents they controlled, so the abolition removed a major component of status. The institution of "slavery" had gradually declined throughout the early Brooke period, and by the 1870s there was a tendency for wealthy Malays to reduce the number of their bound dependents.[34] By the early 1880s many of the Malay leaders favored abolition. Brooke's official newspaper, the Sarawak Gazette, noted the reasons for the growing opposition in 1883:

> Whatever may have been the case in past years, at present the relations between master and bondsman are much as follows, that the master has to feed and clothe a slave (unless the latter is working on his own account) and is singularly lucky if he succeeds in getting any work in return. Slaves are so protected by law from any ill-usage or even neglect that the owner has no means whatever of enforcing his orders; masters always say in conversation that their followers are an expensive nuisance.[35]

The main obstacle to abolition was the opposition of the Malay wives, who feared that their domestic help would be removed. The *datus* explained the problem in a meeting of the Supreme Council:

> Those slaves [are] in many cases descendants of generations [of slaves and] would in all probability prefer remaining with them and under their protection, even if they were liberated. Yet their mistresses [wives] are strongly averse to their powers over them being infringed upon.[36]

The Gazette suggested a correlation between the opposition of the wives and a reluctance among the *datus* to sponsor an abolition measure, since "many of the old native ladies still love to exercise an undisputed authority over their domestics, and these same ladies will have a very commanding influence over their husbands."[37]

The rajah first introduced the idea of abolition in 1881 but it was not approved by the Supreme Council until five years later. The continued delays in approval were requested by the *datus*, who wanted more time to make the "necessary preparations" for the change within their community.[38] Some of the *datus* had already publicly liberated their dependents. The first to do so was the *Datu Temonggong*, who appeared in the courthouse in 1883 and publicly and voluntarily manumitted all of them.[39] Many of the dependents preferred to remain with their former masters as domestic servants and thus abolition had little immediate overt impact on Kuching. Furthermore, the former dependents still occupied the bottom rung of the social ladder, although as commoners rather than bondsmen.

But the liberation of the bound dependents, however incomplete initially, was a profound change; it challenged the very foundation of traditional Malay social stratification as well as the maintenance of a way of life among the aristocracy based on control of dependents. Aristocratic women were deprived of their power over their domestics, and this marked a first step toward their eventual emergence from a highly sheltered and protected existence. Throughout the nineteenth century aristocratic women had been kept

secluded as much as possible; in public they wore the Sarawak version of the veil, the sarong extended to cover their whole head. Those women who were part of an aristocratic harem had their own apartments, staffed by their own female attendants.[40] The sheltered status of the aristocratic Malay women concerned some of the European wives. One of them noted in 1852 that:

> The Malays have not as yet learnt to give women their right place in society. They are still in measure their slaves, or at best their dolls, whom they like to see handsomely dressed, and employed in embroidery and cooking.... The higher their rank, the less they were allowed to appear in public, and consequently, they were as silly and ignorant as children, and did not consider themselves capable of learning anything.[41]

Yet, this same source also noted that many of the women could read and write Malay, and that they were accomplished weavers, embroiderers, and confectioners. It was evidently less common for nonaristocratic women to be secluded or to cover their faces, for they were expected to work in the gardens or to help bring in an income if not already attached as a dependent to an aristocratic family. The aristocratic way of life, and the position of women, was further challenged by an 1893 law that stipulated that any Malay seeking to have more than one wife must prove himself able to support the new wife and her family financially.[42]

Changes in social stratification and social life were paralleled by developments in religious life, for the late nineteenth century was a time of Islamic revival in Kuching. From the very beginning of the Brooke raj, Islam was accorded special treatment and protection. Islamic law was used in conjunction with traditional Malay *adat* in solving legal disputes within the Malay community. Proseleytization among Muslims by the Christian missions was strictly forbidden, and non-Muslims who married Muslims were required by law to adopt the Islamic religion. Nonetheless the establishment of a local Anglican mission in 1848 and a Roman Catholic mission in 1881 seems to have prompted Malay leaders to promote the strengthening of Islamic

institutions and practices. The Kuching Masjid Besar was renovated in 1880, with funds raised by the *datus* from within the Malay community, reinforcing its position as the leading Muslim religious institution in Sarawak. A growing number of Kuching Malays began making the pilgrimage to Mecca, and it became more common for aristocrats to send their sons to study for a few years in the Middle East. At least three future *datus* are known to have sojourned as students at Mecca and others may have done so. The returned *hajis* and students not only occupied respected positions in society but also brought with them reformist religious and social ideas current in the Middle East since the Wahabi reformation.

The Islamic revival therefore brought new ideas and influences into the Kuching Malay community and also increased the proportion of *hajis* in the population. Furthermore, returned students of Islamic subjects began playing an important social role. Although the great majority of those people able to travel to the Middle East for study or pilgrimage were undoubtedly aristocrats, it may be that some commoners, particularly *nakodas* or their families, were able to take advantage of this travel to increase their social position at home, since *hajis* were highly respected. The Islamic revival does not seem to have had any negative effect on communal relations or the positions of the Brookes. Despite increased attendance at Friday prayers and more attention to Islamic rules,[43] most European observers stressed that the practice of Islam in Kuching was still fairly relaxed and that relations between Muslims and other religious groups were generally cordial.[44]

It is possible that there was a correlation between Islamic revival and the establishment of Malay-medium schools, for such institutions began appearing in the late nineteenth century. The gradual expansion of the Brooke bureaucracy, with favoritism toward the hiring of Malays at certain levels, may also have contributed to an increased interest in education among the Malays. Whatever the reasons the interest in Malay-medium schools contrasted rather strongly with the notable lack of interest in Chinese-medium education demonstrated by the Kuching Chinese before 1900. The first Malay schools did not have any long-term success; between 1848 and 1883 a few short-lived Malay-medium schools were established under mission, government, or private

auspices but none lasted for more than a few years. There were, however, informal Koranic schools, usually taught by *hajis*, in some of the *kampongs*. Formal education was at first dominated by the English-medium schools established by the Christian missions.[45]

The fortunes of Malay-medium education changed in 1883, when the first of several successful Malay-operated schools was founded. This was the Kampong Jawa School, situated in one of the most aristocratic *kampongs* of the Datu's Peninsula. The impetus for this school came through the combined efforts of the Ranee Margaret and Abang Mohammed Kassim, the eldest son of Bandar Bua Hassan and a future *bandar* himself. The early classes met in his house. The first headmaster, however, was the Minangkabau Inche Sawal, and he was largely responsible for the curriculum and subsequent development. Another teacher was also brought in from Singapore. Salaries for the teachers were provided by the government. The first class consisted of seventy boys, mostly drawn from the immediate neighborhood. By 1888 the school included six classes and also began offering English. Before that year students who wished to learn English studied the language part-time at the mission schools. Religion was a very important part of the curriculum, with much of the morning being devoted to reading and study of the Koran. Although this and later Malay schools were government-subsidized, they were not secular schools and religion was generally an important subject of study. The students also studied Malay reading and writing, arithmetic, and geography.[46]

The response of the Malay community to the Kampong Jawa School led to the formation about 1892 of the Kampong Gersik School across the river by that Minangkabau, 'Che Bakar. Bakar's school put more emphasis on English, although by 1894 the majority of boys in both schools were learning that language.[47] Both schools seem to have been intended to train prospective clerks and teachers, and undoubtedly many of their graduates entered those professions; but they were constantly reminded by the government that most of their students would have to seek careers in agriculture and other traditional occupations.[48]

It is noteworthy that neither school placed any emphasis on skills useful for commerce and were therefore not a challenge to the increasing commercial

hegemony of the Chinese. Furthermore, like the mission schools of that period, the *kampong* schools offered only a rudimentary elementary-level education. They were not secondary schools. Neither school was particularly large although they were apparently the only formal Malay schools in Kuching in the 1880s and 1890s. The Kampong Jawa School remained somewhat larger than the Kampong Gersik School before 1900, as is illustrated in the following table:

Year	Kampong Jawa	Kampong Gersik	Total
1883	70	--	70
1889	117	--	117
1894	112	56	168
1897	89	41	130

Sources: Sarawak Gazette, May 1, 1883; August 1, 1889; August 1, 1894; July 1, 1897.

All of the students in the Malay schools were boys. Although Abang Mohammed Kassim, then the *Datu Muda*, suggested the founding of a girls' school in 1894,[49] no action was taken and the Malay-medium schools remained restricted to boys until 1930. The two *kampong* schools, particularly the Gersik School, which was located in a predominantly Sumatran *kampong*, must have played some role in the integration of the children of immigrants into the local Malay culture. The development of Malay schools also served to insulate the Malays from the westernizing influences and heterogeneous atmosphere of the mission schools, although a few Malay students were enrolled in the latter schools. The *kampong* schools provided a Malay cultural milieu and reinforced the Malay value system. As such they were an important social institution which served to keep the Malays apart from other ethnic groups and contributed to the segmentation of the developing urban society.

The structure of Kuching Malay society in the late nineteenth century was characterized by a strong and well-defined political elite represented by the *datus* and by a fairly rigid class system in which the distinctions between aristocrats, commoners, and dependents was clear cut. An increasing institutional differentiation was beginning to be apparent with the formation of Malay-medium schools operated by and for the

Malay community. In other ways as well, the society was undergoing fairly rapid change as two of the major groups in the stratification system were in the process of disappearing, to be submerged into other social classes. Furthermore the Malays were a growing community, strengthened by the continual addition of Malayo-Muslim immigrants from diverse backgrounds. Despite these relatively major changes, however, the Kuching Malay urban community which was in the process of developing seemed as stable as that of any of the ethnic groups in the town. The *kampong* system, the strong leadership structure, and the flexibility of Malay identity appear to be the elements that facilitated a successful Malay adaptation to Kuching life.

Footnotes

*The research on which this paper is based was carried out in Kuching from October 1970 until September 1971, under a grant from the Comparative World History Program of the University of Wisconsin-Madison.

1. The most complete account of the historical development of an urban Malay society in Borneo can be found in Donald Brown, Brunei: The Structure and History of a Bornean Malay Sultanate (Brunei: Brunei Museum, 1970). The development of the Malay community in Kuching is also discussed in great detail in my "The Southeast Asian Town in Historical Perspective: A Social History of Kuching, Malaysia, 1820-1970" (Ph.D. dissertation, University of Wisconsin-Madison, 1973).

2. Sarawak Gazette, October 10, 1876. Indians accounted for 1.6 percent of Kuching's population and there were also a few Europeans and Dayaks.

3. L.W. Jones, Sarawak: Report on the Census of Population Taken on 15th June, 1960 (Kuching: Government Printing Office, 1962), p. 32.

4. For a discussion of the "making of the Malay" in northwestern Borneo during the premodern period, see Lockard, "Southeast Asian Town," chapter 1.

5. On this point see John Goatly, "The Malays," in Tom Harrisson, ed., The Peoples of Sarawak (Kuching: Sarawak Museum, 1959), p. 105.

6. See Margaret Brooke, My Life in Sarawak (London: Methuan, 1913), p. 64; Sarawak Gazette, August 1, 1902; "Rajah's Agreement Book, 1872-1893" (document in Sarawak Archives, Sarawak Museum, Kuching), p. 188.

7. "Chinese and Native Employees Roll Book, 1880-1927" (document in Sarawak Archives). On the Jawi Peranakans in the Straits Settlements see William Roff, The Origins of Malay Nationalism (New Haven: Yale University Press, 1967), pp. 48-49.

8. On the administration of Kuching and Brooke encouragement of social and cultural pluralism in the town, see Lockard, "Southeast Asian Town."

9. Charles Brooke used a modified form of indirect rule in administering the ethnically heterogeneous society in Kuching and governed the Malays through the *datus*.

10. On the duties of the *Datu Hakim* see Sarawak Tribune, December 6, 1954.

11. The *datus* were always selected by the rajah from among the leading aristocratic families and were generally the most prestigious personalities in the Malay community. The appointments were also submitted to the other *datus* for approval, which was always granted. The process of selecting a *datu* was described in a report on the meeting of the Supreme Council, the highest advisory body in the state, in 1890. The Council included four Malays (three of them *datus*) as well as four high-ranking European officers in addition to the rajah. At the meeting the rajah nominated a candidate to succeed the late *Datu Hakim*:

> High Highness [Brooke] informed the members that he proposed to appoint Hadji Mahomat [Haji Mohammed Ali]... who he had reason to believe was well acquainted with the tenets of the Mahomedan religion and was a just and

> upright man; His Highness said he had enquiries made throughout the Kampongs to sound the inhabitants, respecting their feelings towards Haji Mahomat and they all seemed favorably disposed towards his being made *Hakim*.... His Highness now asked the opinion of the members, who unanimously approved the appointment (Sarawak Gazette, August 1, 1890).

12. Sarawak Gazette, May 3, 1873.

13. Bua Hassan was the son of Datu Patinggi Ali, the preeminent Malay in the early years of James Brooke's regime. In his younger days Bua Hassan took part in many of the Brooke campaigns against Malay and Iban rebels. In 1854 he was appointed *imam* of the Masjid Besar (paramount mosque) in Kuching, a position later upgraded to that of *Datu Imam*. On the death of his eldest brother, Mohammed Lana, he became *bandar*. No doubt his appointment was in part a reward for his faithful assistance to the Brooke cause. (On Bua Hassan see M. Brooke, My Life, pp. xx-xxi; Sabine Baring-Gould and Charles A. Bampfylde, A History of Sarawak Under Its Two White Rajahs [London: Henry Sothern, 1909], pp. 77-78, 420-22; W.J. Chater, Sarawak Long Ago [Kuching: Borneo Literature Bureau, 1969], pp. 54-55; Sarawak Gazette, November 2, 1906).

14. Quoted in M. Brooke, My Life, pp. 158-59.

15. Ibid., p. 29.

16. Ibid., p. xxi.

17. The other *datus* were strongly influenced by the *bandar*, for throughout the period most of them were related to him, indicating the supreme importance of the descendants of Datu Patinggi Ali in the Malay power structure. After Bua Hassan was elevated from *Datu Imam* to *Datu Bandar*, the next *imam* was a relative, Haji Abdul Karim, who held the post from 1865 to 1877. On his death a younger brother of the *bandar*, Tuan Haji Metaim (Mohammed Taim), was appointed. Metaim had been a

merchant among the Dayaks before joining the government service so he represented the trading element among the aristocracy. He served as *imam* from 1877 until 1898. (On Metaim see Sarawak Gazette, November 1, 1877, and December 1, 1898; Baring-Gould and Bampfylde, White Rajahs, p. 421; Chater, Sarawak, pp. 55-56). Metaim's son, Haji Mohammed Amin, succeeded him as *imam* in 1898 and served until his death in 1907 (Sarawak Gazette, October 3, 1906). The office of *hakim* also came to be held by a member of Bua Hassan's immediate family. The first *Datu Hakim* appears to have been Haji Abdulrahman, who was appointed to that post when it was created in 1886. Born in 1839, he lived many years in Mecca and was considered an Arabic scholar (Sarawak Gazette, May 1, 1890). Islamic learning would seem to have been an important prerequisite for the position. Upon his death in 1890 he was replaced by Abang Haji Mohammed Ali, the fifth son of the *bandar*. The new *hakim* had been born in 1850 and was considered a specialist on Malay *adat*. (On Abang Haji Mohammed Ali see Sarawak Gazette, April 1, 1925; Baring-Gould and Bampfylde, White Rajahs, pp. 78, 422-23.)

In the 1890s two of the four *datus*--the *bandar* and the *imam*--were brothers, and a third--the *hakim*--was a son of the *bandar*. This certainly suggests the unparalleled influence of the *bandar* and his family on the Malay community. The only post apparently not held by a close relative of Bua Hassan was that of *temonggong*. The original *temonggong* of the James Brooke period, Abang Mersal, served in that office until his death in 1863, when he was replaced by his second son, Abang Mohammed Hassan (Matasan). Mohammed Hassan appears to have been the most westernized of the *datus* in this period. He had particularly close relations with Kuching's European population and was a frequent guest at the British Sarawak Club, which barred Asians from membership. He was also regarded by Europeans as extremely open-minded by the standards of the day, and earned a progressive reputation by being the first *datu* to liberate his "slaves." His influence within the Malay elite is unclear. He generally had a seat on the Supreme Council but not on the Council Negri, another statewide advisory body which had a larger membership but less influence. It may be that his progressive views were unpopular with other Malay leaders, for they suggested a path of social development at variance with

the more traditional approaches of the other *datus*. He died while on a pilgrimage to Mecca in 1883. (On Matasan see Sarawak Gazette, December 1, 1883; Baring-Gould and Bampfylde, White Rajahs, pp. 78, 422-23.) For reasons that are unclear, the office of *temonggong* remained unfilled until 1909. It may be that the duties of the *temonggong* were less well defined than for the other *datus*, who handled general leadership, religious affairs, and law respectively.

18. On the establishment of this office, and the reaction to that establishment by the *datus*, see Lockard, "Southeast Asian Town," pp. 62-66.

19. See Otto C. Doering III, "Government in Sarawak Under Charles Brooke," Journal of Malaysian Branch Royal Asiatic Society, 39/2 (December 1966), pp. 104-5.

20. In 1893, the only year for which information is available, three of the twelve *kampongs* in Kuching were headed by *datus* or future *datus*, five by *hajis* whose aristocratic status is unknown, and the other four by what appear to be commoners. Sarawak Gazette, April 1, 1893.

21. "Inche" is a common Malay word roughly equivalent to "Mister" but it was not used by Kuching Malays until recent decades. In the late nineteenth century it was applied locally to those of immigrant Malayo-Muslim origins. See Baring-Gould and Bampfylde, White Rajahs, p. xxii.

22. M. Brooke, My Life, pp. 160-63.

23. This marriage indicated his status, for women of the *perabangan* class were not supposed to marry below their rank. Some of Bakar's daughters married important aristocrats, including a future *bandar*, Abang Abdillah. On Bakar see ibid., pp. 164-65; Sarawak Gazette, January 2, 1929; Goatly, "Malays," pp. 105-6. Bakar never adopted Malay dress and always wore the Sumatran *batik* cloth and a headcloth rather than a Malay cap (*songkok*).

24. For an interesting discussion of stratification in the modern period, see Abang Yusuf Puteh, Some

Aspects of the Marriage Customs Among the Sarawak Malays (Kuala Lumpur: Dewan Bahasa dan Pustaka, 1966), pp. 12-16.

25. See Hugh Low, Sarawak: Its Inhabitants and Productions (London: Bentley, 1848), p. 132.

26. Ibid., p. 126.

27. Charles Brooke, Ten Years in Sarawak, (London: Tinsley, 1865), pp. 11, 318.

28. Low, Sarawak, p. 136.

29. On the decline of the *nakodas*, and the rise of Chinese commercial hegemony, see Lockard, "Southeast Asian Town," pp. 129-43.

30. Low, Sarawak, p. 118.

31. Ibid., p. 122.

32. See Ibid., p. 118; Brown, Brunei, p. 18; Henry Keppel, The Expedition to Borneo of H.M.S. Dido for the Suppression of Piracy (New York: Harper, 1846), p. 51.

33. Low, Sarawak, pp. 120-21.

34. Sarawak Gazette, November 2, 1872.

35. Ibid., February 1, 1883.

36. Ibid., August 1, 1881.

37. Ibid.

38. Ibid., February 1, 1882.

39. Ibid., February 1, 1883.

40. Low, Sarawak, pp. 44, 144.

41. Harriette McDougall, Letters from Sarawak Addressed to a Child (London: Grant & Griffin, 1854), p. 77.

42. Sarawak Gazette, February 1, 1893.

43. See, e.g., ibid., January 9, 1871.

44. See ibid., September 1, 1875; Baring-Gould and Bampfylde, White Rajahs, pp. 144-45.

45. On the Malay, Chinese, and mission schools in nineteenth-century Kuching, see Lockard, "Southeast Asian Town," chapters 2-4.

46. On the Kampong Jawa School, see Sarawak Gazette, May 1, 1883; July 2, 1883; November 1, 1888; August 1, 1889; February 1, 1928; M. Brooke, My Life, pp. 162-63.

47. Sarawak Gazette, August 1, 1894.

48. See, e.g., ibid., July 1, 1915.

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Research Among the Iban of Sibu And Implications for Social-Anthropological Theory on Urbanization

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I.

The recent growth of the town of Sibu in the East Malaysian state of Sarawak and the current movement of hundreds of Iban into Sibu permit social scientists to deal with a number of questions that have been raised with regard to urbanization in Southeast Asia, and its effects on indigenous populations. From the selection of Sibu as the site for Fort Brooke in 1862, the administrative and trading center has developed into a town with a population of about 70,000, including more than 3,500 Iban. And over the past century increasingly strong ties have bound the Iban of the Sibu District to the town.

The Sibu Urban District includes an area of twenty square miles and is the center of the Sibu District, an area of 1,305 square miles. Strategically located, the town is the most important center of the vast Rejang Valley, which includes an area of 22,000 square miles with a population of approximately 350,000 comprising more than a dozen ethnic groups.

II.

The movement of Iban into the Sibu District has occurred within the past 125 years. Movements into the district were in part related to the Iban practice of shifting cultivation of hill rice, and in part a response to the attempts of the Brooke raj to impose its administration on them. When James Brooke arrived in Sarawak in 1841, the Iban were just beginning to move into the southern tributary valleys of the Rejang River. By the last quarter of the nineteenth century, the Iban had crossed the Rejang and were spreading northward.

Determined to suppress headhunting and to control the migrations of the Iban into the Rejang Valley, the Brookes built and staffed Fort Brooke at the confluence of the Rejang and Igan rivers. Under the protection of the fort, trade flourished between Chinese, Malays, Ibans, Melanaus, and others. From the beginning, Iban have served and have been served by the trade of the center that has developed into the town of Sibu.

Coincident with the Iban movement into the Rejang Valley, the Brookes encouraged immigration of Chinese. The Brookes held high hopes for Sarawak, and wanted to turn it into a second Java through agricultural development begun in the Lower Rejang Valley. To realize this end, the Second Rajah granted generous terms to Chinese immigrants, several thousand of whom arrived in Sarawak during the first decade of this century. After three unsuccessful years of rice cultivation, the Chinese eagerly abandoned rice for rubber (*Hevea brasiliensis*) after it was introduced from Malaya and they discovered that "rubber made money" (Ling 1966: 28). Whereas trade in Sibu previously had depended on jungle produce and natural rubbers, the introduction of rubber cultivation provided a dependable supply of a marketable product and an impetus for the economic take-off of the community.

Equally important in terms of change was the settlement of thousands of Chinese among the Iban and other indigenes. The Brookes and their officers conceived of themselves as protectors of an Iban ethos which they had stereotyped. Their encouragement of Chinese immigration was an attempt to avoid destruction of Iban culture, as Brooke administrators thought of it,

by developing the state's economy with alien labor and not involving the Iban in a value-changing market trade. Ironically, the Brookes helped to produce the changes they wanted to avoid.

The Iban, and other indigenes to a lesser extent, were quick to note the affluence of the Chinese. Many Iban followed the Chinese in planting rubber and pepper gardens, occasionally to the neglect of rice farming. The spread of Chinese up and down the Rejang and its tributaries resulted in an embryonic network along which a variety of goods moved in and out of Sibu. Recently, an almost universal replacement of Chinese traders by Iban at the village level has occurred, indicating how widespread has been the infection of the mercantile mentality.

Today, the Iban of the Sibu District and beyond are tied to the town through trade, taxes, and the administration that has been imposed on them by the Brookes, the British, and now Malaysia. Few Iban in the district live more than two hours travel from the town, which is accessible by private outboard-powered longboats, Chinese launches and ferries, bicycles, cars, taxis and buses. Accessibility to the town carries with it the acculturation of the Iban to values mediated by residents and visitors.

Although there has been a long association of Iban with the town and its residents, large numbers of Iban have moved into the town only within the past decade or so. The factors involved in this in-migration are numerous and complex. On the one hand they are related to the problems of making a living according to the level of new expectations in rural areas. On the other, they include the amenities and attractions of the town, such as education, wage-earning, social services, and escape from the farm.

III.

The study of the Iban of the Sibu District, and especially their movements in and out of the town, against the background of the urban area resulted in a bifocal perspective. It is one of the author's contentions that urbanization cannot be defined by residence

patterns alone nor by the arbitrary delineation of boundaries between urban and rural areas. Urbanization is a complex process that affects rural residents as well as townspeople. In the process of urbanization and in the movements of people in and out of centers, new values disseminate, new orientations to power structures develop, and concepts of time and space change. These observations are not original to the author, nor is his conclusion that the rural-urban dichotomy is unreal, existing for analytic purposes in the minds of some field workers but scarcely important to local people.

As a consequence of the bifocal perspective, this study of the Iban of Sibu took a regional approach; i.e., the author tried to trace the continuing interplay between inhabitants of Sibu and the rural hinterland, which has resulted in the growth of the town and changes in the lives of Iban in town and country. The rationale for the regional approach is that the Iban population can be understood only in light of the growth of the town, and the development of Sibu must be seen in the context of the area from which its people and resources have come, as a complex feature of the ecology of the region.

IV.

McGee (1967) and others have raised a number of questions about urbanization in Southeast Asia. We now shall consider some of these for light that research among the Sibu Iban may provide.

A. What are the effects of urbanization on indigenous societies and cultures? Does the in-migration of indigenes result from and cause structural and cultural changes, and if so, what is the nature of these changes? Specifically, what are the effects of urbanization on traditional technologies and economies, and on such institutions as marriage and residence, the family, kin-groups and longhouse communities?

1. Ecology. Traditionally the Iban have practiced cultivation of hill rice. Climatic and edaphic factors together with population pressure contributed to the movements of the Iban. The Iban's critical evaluation of soil fertility and yields is evident in their predilection for virgin forest and is related to

such institutions as the scouting-initiate trip (*pejalai*) and head hunting. It is highly significant that in Iban myth the gift of rice by Sengalang Burong, the Brahminy Kite, occurs in tandem with instruction about head hunting.

The movements of Iban into the Rejang Valley in the nineteenth century--whether as forced settlement of war leaders or as voluntary settlement of others who sought refuge from their predator peers--have been of immense importance in light of ecological and structural changes that have occurred. Adaptation to the flatter lands and higher water table resulted in a shift from dry-rice to wet-rice among those who settled on the banks of the major rivers and other low-lying areas. New techniques for cultivation of wet-rice fields were learned and were accompanied by the development of new liturgies suitable for wet-rice cultivation.

More recently, sedentariness and proximity to the town have provided opportunities for participation in government-sponsored rice schemes, and for the development of new techniques of cultivation. Sixty percent of the Iban in the Sibu District cultivate wet-rice exclusively, and the majority of the other Iban cultivate some wet-rice. The introduction of pack-sprayers, drum-rollers, and selective herbicides together with other aid provided by the Agriculture Department has helped not only to evoke adaptive responses from the Iban to new soil and water conditions, but also to strengthen their dependence upon the town.

The planting of rubber and pepper by Iban has been a major factor in the change from shifting cultivation to permanent field farming. As one Iban observed, "Our feet were stuck in the rubber." Further, the planting led to a diversification of incomes from resources more dependable than collection of jungle products. Conservative Iban saw the acceptance of rubber in terms of the destruction of traditional values, symbolized in the widespread story of Aing who witnessed the leaves of the rubber tree devouring his rice, and their belief is supposed to have led to the felling of rubber gardens by an undetermined number of Iban in the 1920s.

2. Economy. Production of rubber and pepper involved an increasing number of Iban in the trade

network that grew in Sarawak in the first half of this century. For centuries the Iban had exchanged jungle products with Chinese and Malay traders. Rubber and pepper, however, were more easily obtained and more reliable; the establishment of permanent settlements and more regular incomes from cash crops contributed to an increased involvement of Iban in trade.

Until the last decade or so, the trading network was controlled at almost every point by Malays and Chinese, who had the external contacts in Singapore, Malaya, and Hong Kong. Within the past decade, however, Iban have supplanted Chinese traders at the village level and a few have assumed positions in overseas trade. The exposure to trade has led to an increasing participation in marketing by both Iban men and women, who realize that they can obtain more goods and prestige through the sale of natural and manufactured products, such as fruits, ferns, boar, deer, and beads, baskets, hats, and mats.

a. Values. Economic change has been related to a re-evaluation of rewards for labor, with a significant appreciation of cash and a diversification of activities. One Iban, who was farming but not earning wages, was described by several of his friends as "not working" (*enda bekereja*). When it was pointed out to them that he was farming, their reply was that only wage-earning is "real" work. As a result of this evaluation, 58 men and women from Rumah Nyala, Sungai Aup, have jobs and are wage-earners, at least one from each of the 33 *bilik*-families in the house.

b. Diversification. A random sample of 200 Iban residents of Sibu showed that 171 were employed. Government is the largest employer with 61 who are working as cooperative officers (2), doctors (2), lab technicians (2), Medical Department employees (11), administrators (5), teachers (4), agriculture (4), telecommunications (1), customs (1), police (29), overseas survey (1), and civil defense (1). Banks and various companies employ 52, as office boys (2), construction laborers (20), waitresses and bar-girls (11), clerks (3), piling operators (3), theater ushers (3), custodians (3), and utilities (7). Three Iban are employed by the district councils, four by political parties, fourteen by church groups, and twenty men and women are "self-employed" or working as domestic workers.

The exact number of young women who are employed as waitresses and bar-girls is uncertain and fluctuates from day to day. The presence of these women is significant for several reasons. First, it is an expression of their rejection of traditional sex values in which a double standard existed for men and women. Second, the "self-employed" description that the women apply to themselves indicates an absence of other forms of employment for them.

3. Settlement Patterns. At the beginning of this century, recognizing that they were "here to stay," Iban of the district began construction of the first permanent longhouses in memory. Previously house construction had been predicated on the frequent movements dictated by natural conditions, techniques of cultivation, and population pressures, and was of an impermanent nature. Sedentary settlements of Iban have been marked by the erection of substantial longhouses, frequently constructed by Chinese and Malay carpenters employed by individual Iban families. The relative degree of permanence of settlements in the district is indicated in the average age of fifteen years for thirty-seven longhouses surveyed.

Longhouse domicile has been culturally and socially normative, and individuals or families who built separate houses were considered evil spirited (*Antu Uging*). The longhouse existed as a jural unit to define rights to land. It was a defensive organization during times when raiding was in vogue. It was important ecologically for the ritual regulations that ensured simultaneity in farming activities, helping thereby to achieve a more equal distribution of birds over farms. Members of different *bilik* exchanged labor at critical times of the agricultural year.

Exposure to the house models of other ethnic groups, an ambiguous land policy, and an increase in affluence have contributed to the physical fragmentation of about fifteen of the longhouses in the district and the construction of separate houses by the former longhouse residents. More conservative Iban look on longhouse fragmentation as "the beginning of the end of Iban culture," noting the departure from the archetypal longhouse in the mythical home of the gods, *Panggau Libau*, and the importance of the common verandah (*ruai*) as the seat of socialization.

4. Longhouse composition. Consonant with the high mobility of the Iban, the longhouse community has been a flexible organization. Individuals and families may attach their units or, upon payment of a token fine of U.S. $10, remove them. Congeniality and friendship are important in the composition of the community, and it is not uncommon for people to take up residence on the basis of friendships they have formed. The relatively easy attachment to the community is one of the most important features of Iban social organization, and has permitted the assimilation of Chinese, Memaloh, Kenyah, Melanaus, and others. Equally significant is the rationalization of the presence of nonkinsmen and non-Iban as members of the kin-group (*kaban*).

A longhouse community develops around a core of cognatic kinsmen and their affines. Iban kin-groups include the *bilik*-family, the bilateral kindred (*suku juru, kaban belayan*), and two broader alliance groups: members of nearby longhouses (*sapemakai*, "of one food") and of more distant communities (*ngabas ungkup*, "share holders"). The alliance groups persist as survivals of raiding times and function today as ceremonial groups. The extensiveness of Iban alliances and the depths of genealogies are important for the definition of present relations, and in numerous instances strangers can find common ancestors as they trace their forebears (*nyambong jala*, "tie the fish-net").

The extension of fictive kin-ties to Iban and non-Iban has ensured that in the urban context the Iban will find friend or "relative." In my survey of 200 Iban residents in Sibu, 187 indicated that they had been helped on coming to town by a kinsman, friend, Malay "brother," or Chinese "father."

5. The family. The *bilik*-family is the fundamental unit of Iban society and the single corporate group. The independence of the *bilik*-family can hardly be exaggerated, and in the words of one leader, "A *bilik* is like an independent country" (*Bilik siti baka menoa siti*). The *bilik*-family, like the longhouse, is flexible and open, allowing members to move in and out according to mutual advantages. *Bilik* partition has been a means of minimizing conflict, permitting the serving of self-interest in parallel structural units, and of spreading personnel and resources widely as a safeguard against times of need.

The flexibility of the *bilik*-family has been pre-adaptive to the process of urbanization. In the past, an individual or husband, wife, and children might move out to establish a new residence or pioneer in a new area. Members who moved out generally were assured of the possibility of returning. They were also subject to requests for labor and goods in times of scarcity and on the occasion of ceremonies. The movement of individuals and families to Sibu is seen by Iban as an extension of their people into a new niche, where they are pioneering for a new resource, cash. Those who establish themselves in Sibu expect to play host to relative and friends, and to extend aid and advice to other Iban who may move to town.

6. Marriage. Iban marriage rules are clearly defined, and the preferred and proscribed forms of marriage are commonly recognized. In this section, we shall consider the cultural norms and changes that may be traced to urbanization and interethnic contacts.

a. Monogamous. Marriage should be monogamous, and generally the form of marriage among the Iban is monogamy. However, within the Sibu District, six cases of sororal polygamy and eight cases of nonsororal polygamy were discovered. In the former instances, all of the women who became second wives had been widowed before taking up residence with a sister and her husband. Unlike sororal polygamy, where the wives live together with their husband, in nonsororal polygamy the wives live in separate residences, the husband dividing his time between the two wives. Commenting on polygamous marriages, one Iban attributed the cases to "copying the Chinese and Malays, a new situation since Malaysia."

b. Within kin-groups. Marriage preferably should be with a person who stands between the degrees of first and fifth cousin. The economic principle underlying the desire for marriage of close kinsmen is expressed succinctly in the phrase *saum buah, suam tanah* ("sharing fruit, sharing land"). Of interest is the relation of this principle to the incest taboo by those Iban who argue that sibling marriage is prohibited for it would result in a couple receiving rights to resources only within their *bilik*'s holdings. A further reason given for preference within the kin-group is that it permits maintenance of kin-ties and prevents marriage with a person who has the "evil eye" (*tau*

tepang) or in some other way is a bearer of misfortune. It also ensures that a relative does not marry a member of a lower class. In practice, however, 76 percent of those surveyed in four longhouses married outside their kin-group.

c. Parental arrangement. Marriage preferably, from the parents' point of view, should be arranged by the parents of the young people involved. However, in the four longhouse communities on which concentrated studies were done, three-fourths of the marriages were not arranged by parents. Of 143 secondary school students who responded to a questionnaire, 137 indicated that they favored selection of their own spouses, and less than one-half favored any consultation with their parents about their choice.

d. Effects of education. There is little evidence of the influence of education on marriage patterns among Iban who do not reach form three (ninth grade). Among those who study in form three or the higher forms, however, education appears to have a delaying effect on marriage. A majority of uneducated or less-educated Iban marry between the ages of 15 and 17 years. By contrast, 102 of those in the sample of 143 who had studied in form three and above were unmarried, and 72 of the young people had been out of school for three or more years.

The economic potential represented by a highly educated young person abrogates and takes precedence over a low-class status or history of family failure. The highly educated youth is often quite acceptable as a candidate for marriage.

e. Postmarital residence. A significant development in recent years has been the tendency to reinterpret one of the cardinal rules of Iban social organization, viz., the presence of at least one child in the natal *bilik* to look after the parents in their old age As Freeman describes the rule, "...at least one of the children of a family, when he or she reaches maturity and marries, always remains in the parents' *bilek*" (1970: 13).

While this rule remains culturally normative, in fact a number of instances indicate that it is not always followed. The orientation to a cash economy has

affected this residence rule, so that monthly remittance by wage-earning children or their spouses is as acceptable as physical presence and labor. Even if the movement of children to Sibu or elsewhere for employment leaves no child in the *bilik*, this often is preferred or even sought, if the children contribute toward the support of the parents.

B. What are the factors involved in the movements of Iban into Sibu? What is the nature of these movements?

1. History of mobility. The rapid growth of the Iban population of Sibu may be attributed to a number of factors. The Iban historically have been a very mobile population. Iban mobility may be traced to a complex of natural and cultural features, including the generally poor soil conditions (Scott 1964), erratic rainfall, myth of the inexhaustibility of virgin forests, swidden cultivation, high expectations in soil yields, and an ethic that is thoroughly opportunistic.

2. Preadaptive values. The Iban grammar of values emphasizes individual achievement, self-sufficiency, pioneering and bravery, and opportunism. These values have been preadaptive to and have facilitated the movements of Iban into different ecological niches--from hills to delta plains, from delta plains to hills, from hills and plains to town.

Iban are as flexible in their ideology as in their practical social organization. The response of more than 20,000 Iban to the Christian faith during the past two decades has been marked by an acceptance of Christ and a persistence of belief in the Iban gods and spirits. The majority of Iban Christians tend to be highly syncretistic, manipulating their beliefs and practices according to perceived advantages. The "double-offerings," to Sengalang Burong and Christ, in agricultural rites, and the cross on the door and *duan pinggan* ("protective leaf") over the sleeping place, illustrate the syncretism that marks Iban Christianity. It will be interesting to observe the incidence of Iban conversions to Islam, among both Christians and non-Christians.

Although perjorative connotations cannot be avoided, it must be stated that Iban organization and

culture appear to this observer thoroughly opportunistic as indicated above. I would suggest that opportunism--by which I mean the readiness with which Iban seize any opportunity of personal benefit, whether in wage-earning, education, Christianity, or politics--provides a key to an understanding of the apparent ease with which Iban become Christians (*masok Keristin*), Muslims (*masok Melayu*), or move in and out of Sibu and other towns.

3. Urbanizing units. Individual Iban and families have moved into Sibu. The former characteristically are young people from the district and beyond who have come for secondary education. Other individuals, both men and women, have moved to Sibu seeking employment. In some cases, a husband may find work and after he has established a residence will move his wife and children. The transfer of government employees to Sibu accounts for a considerable number of the families.

Consistent with traditional Iban social organization, there is no unit in Sibu larger than the stem family. It is important to note also that though there have been attempts to form voluntary associations, such as the Dayak Youth, these efforts have met with only limited success. Traditional values are still implemented in small family units and individual performances.

4. Commuters. Several hundred Iban who live nearby commute to Sibu daily. The extension of roads and paths to longhouses and the availability of means of transportation have made commuting practical. Commuters include both men and women. Men predominate in various types of work offering regular employment, such as gardening, construction, brickmaking, clerking, and custodial service. With few exceptions men who commute are employed in jobs with relatively low wages. Most women who commute are best categorized as self-employed, selling vegetables in the Iban market or working as bar-girls. Of the fifty-five wage-earning members of Rumah Nyala, one of the four longhouses receiving a major focus of the study, seventeen commute daily to Sibu. Fifteen of the commuters are men, two are women.

Commuters and their families have developed a pattern in which women do the farm work and men supplement the family's income with wages. Unlike permanent residents in Sibu, among whom both husband and wife live in

town and depend on the husband's income, the commuters have realized the strategic advantage of their proximity to town so that wives may provide the staple rice, and the cash their husbands earn may be used for other necessities and valuables.

In three of the houses in the study, the main shophouses are maintained by commuters or, in their absence, other members of their families. The men who work in Sibu use the occasion of their daily trips to purchase goods for their shops as well as to dispose of produce they have purchased from members of their communities. The success of the shops in these communities may be attributed to the diversification of activities--farming, wage-earning, and shopkeeping--so that the families have other resources on which they can call if one fails them. Success also may be attributed to the acumen of the men who manage to maintain amicable relations with other members of the community yet at the same time are not bankrupted by overextension of credit.

5. Residents. A survey was conducted of 200 Iban residing in Sibu. A majority of the Iban, 168, were from the Third Division. Of this number 81 came from the Sibu Rural District and 87 from other districts of the Division. Twenty-nine Iban came from the First and Second Divisions, two from the Fourth, and one from the Fifth Division.

The predominance of Iban from the Sibu Rural area may be attributed in large measure to the much longer and closer contacts they have had with the town. Living close to Sibu they have become job wise employment seekers with greater access to information about openings. Further, the positions they have obtained give them a chance to help secure placement for their kinsmen and friends. A recent vacancy in a council office attracted sixty-one applications from young men. The man finally selected for the position did not have ostensibly higher credentials than other candidates, but by his own admission had a friend on the selection committee who helped him get the job.

Of the 200 Iban surveyed, 119 have had some formal education, ranging from a minimum of one year to a maximum of Doctor of Medicine from Ottawa University. Fifty-four have studied in primary school, 28 of whom completed primary six and stopped after failing the Common

Entrance Examination. Sixty-two attended secondary school, 23 studying through form three and failing the Sarawak Junior Examination. Three of the residents have been to universities abroad.

It is significant that two men, with seven and nine years of education, respectively, but unable to find other work, were employed as construction laborers. They represent an urban resident category that, small in number at present, will increase in the future: secondary school drop-outs who are alienated from their longhouse communities. Of the 143 secondary-school students responding to a separate survey, none has returned to take up residence in the longhouse. Others (who did not respond) have had to return to their longhouses but find life in the longhouse difficult if not impossible, keeping their eyes open to any opportunity for employment outside. Many, finding themselves wholly at odds with the interests and goals of their elders and peers, conclude that they have no future in the longhouse. They drift back into Sibu where they form small gangs, hanging around the streets and living by their wits.

Responsibility for parents continues to be a concern for a large majority of the urban Iban residents surveyed, even those who indicated that they would not return to live in the longhouse. In only ten cases had the couples not discussed their marriages with their parents and settled the matter of who would marry out. The incidence of these ten couples who had not discussed the matter of their residence and responsibility with their parents is important in that it represents an abdication of responsibility for aid to the older generation. As more couples arrange their own marriages in the town, an increase in neolocality should occur, with obvious implications for the traditional provisions for parents.

At present, however, more than three-fourths (168) of the persons surveyed indicated that they help their parents with money, food, clothing, or work. While the truth of such statements is difficult to verify, from observations in several families it would appear to be generally true.

Slightly more than three-fourths (155) of the total sample indicated that they preferred to live in town, and would not return to the longhouse community except

for visits. The primary reasons given were ecological/economical: life in the rural area is too precarious; a rice crop may fail and the price of rubber is always fluctuating; food may or may not be available; in town, there is no shortage of food and there is always some means to get it. Secondary reasons given for preference of life in town included superior medical facilities and educational opportunities.

Interestingly, many of the long-time residents of Sibu indicated their preference for life in the longhouse. In several examples of persons saying one thing and doing another, men who had lived in Sibu for more than twenty years maintained that the only place where young people can become "true Ibans" is in the longhouse. Forty-three who stated preference for country life were in the Sarawak Rangers, and they indicated that they would return to the longhouse upon their retirement.

C. What is the nature of interaction between members of different ethnic groups?

The Iban are very conscious of ethnic boundaries (cf. Barth 1969). They distinguish themselves from non-Iban on the basis of differences in language, technology, longhouse style, rituals, and mytho-history. Although some uncertainty still surrounds the etymology of the name "Iban" (Pringle 1970: 19-20), in the Sibu District "Iban" is used as an equivalent for "human" by the Iban themselves. Illustrative of the categorization of members of other groups as nonhumans (cf. Levi-Strauss 1966: 166), the Iban have animal terms for all of the major groups whose relations to the Iban are captured in the epithets. Historically, the Iban have been aggressive, pioneering invaders who have driven out other groups, some of whose members have been assimilated by the Iban. The mythical accounts of Keling include tales of numerous conflicts with non-Iban.

Although the Iban clearly recognize ethnic boundaries, it is essential to stress that they are aware of numerous intra-ethnic boundaries as well. These include the autonomous *bilik*-family, the ritual section, cognatic core, longhouse, bilateral kindred, and "food-sharers" and "share-holding" alliance groups. Further, Iban society has been and continues to be highly factionalized, with incipient aristocrats (*raja berani* "brave rich") building up their personal followings.

Boundaries among the Iban, therefore, are fully as important as boundaries between them and non-Iban. For Iban interact often more frequently and comfortably with non-Iban than with some of their fellows. The Brookes capitalized on the factionalized nature of Iban society by making alliances with friendly *raja berani* and their followers, using them to control hostile factions. As Freeman has written (1970: 148), Iban can be quite tight-fisted with one another, and consequently expect aid from members of other ethnic groups that they would not think of asking from their own.

The Iban have been described as egalitarian and classless, and in the sense that none is in a position of authority to command another, this is correct. However, the Iban long have recognized three principal divisions in their society: the *raja berani*, or upper class; *mensia mayoh*, "most people;" and *ulun*, slaves, both captured (*ulun berani*) and debt (*ulun leka rian*). In their dealings with members of other groups, as well as in the arrangement of marriages and other events, class distinctions have been an important basis for interaction, the notion being commonly held that "like belong together," irrespective of ethnic group.

It is evident from oral and written accounts that the Iban and non-Iban peoples of Sarawak have had a long history of contacts. For as long as memory serves and records are available, Iban, Chinese, and Malays have maintained trading relations with one another. Iban have exchanged rice and fruit for Malay salt and fish, and trading relations have frequently become fixed between individuals and families in the form of dyadic partnerships (*udong*, "brother"). Iban have supplied Chinese with jungle produce, hardwoods, rubber, and pepper, and the relations have tended to become permanent between the Iban client and his Chinese patron (*towkay*).

Ties between members of different ethnic groups have been strengthened by intermarriage and by the development of fictive kin-ties. Such unions are possible between a man of any group and a woman of any other group. Children of interethnic marriages are readily accepted in the pluralistic society of Sibu. Marriages with Chinese, Malays, and Caucasians are considered hypergamous by Iban, and children tend to identify with the group offering maximum opportunity for acceptance, security, and exploitation.

In summary, the relations between Iban and non-Iban have been marked by a high frequency of contacts and strong ties in both rural and urban settings. Malays, Iban, Chinese, and other groups have lived in close proximity, and the networks of members of each community have included ties with members of others. Unlike the situations described for some other parts of Southeast Asia (cf. Bruner 1961: 513; Cooley 1970; Hauser 1957: 87-8), where cities consist of separate ethnic communities, the relations of the Iban and non-Iban of Sibu have tended to be relatively open-ended with respect to one another.

Conclusions

The movements of Iban into Sibu appear to be highly consistent with their history of mobility and opportunism. The Iban appear to perceive no "barrier" to their participation in urban life, whether as commuters or full-time residents. It is instructive to consider Sibu as another niche, more or less complex than the hills and plains to which Iban have adapted, with a new exploitable resource, cash.

If we accept Bruner's perspective that "urbanization...is a process by which migrant peoples in cities come to terms with urban heterogeneity" (1973: 374), then urbanization is of some historical depth among the Sibu Iban. A century-old trading relation with Malays and Chinese, together with other forms of exchange, have served to facilitate the integration of Iban and non-Iban in rural and now in urban areas.

Urbanization among the Iban is a result of as well as a cause of structural and cultural changes, but the minimal disorientation and disorganization that marks the urbanizing Iban is due at least in part to the culture's strong emphasis upon individuation, and in part to the autonomy of the *bilik*-family. The flexibility of Iban society that permits the removal and return of members, and the acceptance of kin, friend, and non-Iban has built up ties and networks that run into the towns. Hence, there is no rural-urban dichotomy for the Iban, and we may anticipate movements of Iban into Sibu and beyond to continue as new values and advantages are perceived.

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