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Author(s): Kalervo Oberg

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# Types of Social Structure among the Lowland Tribes of South and Central America

KALERVO OBERG

*Institute of Inter-American Affairs, Rio de Janeiro*

## I. THE PROBLEM OF CULTURAL TYPOLOGY

STEWARD'S fourfold classification (Marginal, Tropical Forest, Circum-Caribbean, and Andean civilizations) of the Indian cultures of pre-Columbian America south of Mexico stands as a landmark in the ordering of the vast body of descriptive material brought together in the *Handbook of South American Indians*. It appears to me that in the ordering of this material and in his theoretical and interpretative passages Steward had three major objectives in mind: (1) to classify tribes or other culture-carrying units on the basis of certain typical culture traits; (2) to distinguish broad cultural strata or levels and to indicate the developmental interrelationship of these levels; and (3) to determine, in so far as possible, the concrete historical processes by which these developments have taken place (Steward 1949). With this approach, which is at once taxonomic, developmental, and historical, I am in complete agreement. Steward has gathered the material and has indicated basic approaches, and it remains for others to develop these approaches or to create new ones in order to derive more meaning from the material. In this paper I will attempt not only to describe the major types of social structure under which I believe all sociopolitical units in this area can be listed but will attempt also to account for these types in terms of those cultural elements, environmental factors, and the derivatives which appear to be intimately associated with them. Admittedly this approach is narrow, for large segments of culture content will be omitted.

If one is concerned with the typology of culture, one must of necessity consider certain functionally interrelated constellations of variable cultural forms, which, in turn, poses the problem of defining the unit to be used for comparison. Is there an isolable, social, culture-carrying unit which in the locus of the cultural process, which accepts the discoveries and inventions of its members, which absorbs or rejects outside culture traits, and which in the process is itself modified? In short, is there not a social organism which exists in an environment, somewhat comparable to a biological organism which is studied and classified by biologists? It is suggested here that, although varying tremendously in size and complexity, social organisms of this kind do exist and that they can be classified in terms of their structures. Once established, these major structural types can be separated into subtypes and the subtypes can be further separated into types based on their cultural content, the latter types depending on the elements which the classifier wishes to select as criteria. Here only the major structural types and some of the associated cultural elements and environmental factors are outlined.

Considering pre-Columbian America south of Mexico, there appear to be sociopolitical units which fall into six major classes of social structure: (1) Homogeneous Tribes, (2) Segmented Tribes, (3) Politically Organized Chiefdoms, (4) Feudal Type States, (5) City States, and (6) Theocratic Empires. These structural types reveal increasing complexity, each successive type on the scale of complexity being distinguished by the structural feature or features which by addition creates greater complexity. It is assumed: (a) that the development of more complex structure consists in the reorganization of social relationships on the basis of such constant factors as kinship, age, sex, territory, and status, associated with such prime social functions as economic pursuits, warfare, the settlement of internal disputes, ritual, ceremonial, recreation, and artistic activities; (b) that the immediate precondition for the reorganization of social relationships is the increase in population density and the appearance of a food surplus above subsistence needs; (c) that population density and the food surplus, in turn, are directly related to the totality of conditioning factors which influence food production. Only the first three structural types will be analyzed here, for they characterize social organization of the lowland tribes of America south of Mexico. Before going on to describe these structural types it seems necessary to discuss their preconditions and the complex conditioning factors which affect them.

## II. FOOD PRODUCTION, THE FOOD SURPLUS, POPULATION, AND SOCIAL STRUCTURE

The relationship among food production, population density, the size of population aggregates, and the appearance of a food surplus above subsistence needs is evidently a complex one. Among both food gatherers and food producers improvement in the resource base or an improvement in the methods of exploitation usually means an increase in population density and the appearance of larger bands or villages. This process continues until the population in a given area reaches an optimum size, after which the population either expands territorially or limits its growth. As territorial expansion is not always possible internal checks to population growth must be operative, although perhaps not consciously recognized by the people themselves. There is considerable evidence to indicate that the small Indian tribal groups in central Brazil limit population growth. Illegitimate infants, deformed infants, and often twins are destroyed at birth; and more important is the fact that in many tribes women insist on a long nursing period (about three years) during which if they become pregnant they practice abortion and infanticide.

The fact that these same tribes raid each other for women and children, which seems to contradict a desire to check population growth, relates to different population problems. In small population groups the ratio between males and females born does not always balance, and the capture of women and children is one way of correcting this imbalance; the Terena, for instance, practice infanticide so that a male birth follows a female birth, or vice versa, by this means endeavoring to make the sexes numerically equal. Another

factor is the ideal population structure which fits their particular kind of social and economic conditions. Economic processes and defense lay emphasis on the age group between 15 and 40, the younger and the older age groups being considered a burden. A low birth rate associated with the capture of young women and children able to walk and feed themselves appear to correlate with this type of population structure.

The information in the *Handbook* indicates that with the intensification of agriculture there is both an increase in population density and the appearance of a food surplus above subsistence needs. How does this come about? Increased productivity of land can have a number of consequences. If subsistence needs alone provided the incentives, cultivators would utilize smaller plots of land, the population of a given area would increase, and the cultivators would have surplus time to devote to domestic crafts, group rituals, arts, ceremonies, and sports. On the other hand, if cultivators worked full-time on areas as large as they could manage, they would produce a surplus above subsistence needs. But this surplus above subsistence needs would not come about automatically; some incentive or force would be necessary for its production. Craft specialization, occupational groups, and markets would be one condition that could provide this incentive. But if craft or regional specialization had not reached a level to create a market to absorb surplus food supplies, or had done so only to a limited extent, then we would have to look for other social motives and forces capable of bringing into being, concentrating, and utilizing the surplus.

These motive forces and incentives are evidently inherent in any tribal situation. Surplus time, we saw, would lead to a proliferation and elaboration of pre-existing noneconomic activities by group members as a whole. Surplus food supplies, on the other hand, would make possible the appearance of specialized groups to carry on some or all of these activities by the permanent withdrawal of members from agricultural production. Tribal rituals would become the prerogative of special priests, leading eventually to the formation of temples and priesthoods. Marked differences would appear in the nature of warfare, the status of war captives, and intertribal relationships. Instead of incorporating war captives into the tribe as husbands and wives, they could now be used as slaves; weaker tribes could be periodically plundered, or conquered and forced to pay tribute. Warfare, in both its acquisitive and defensive aspects, would tend to become permanent with the appearance of military establishments. But this would mean political organization with corresponding increase in the powers of chiefs, leading ultimately to the appearance of a state organization. These developments in social organization are not directly caused by the capacity of cultivators to produce increasing surpluses. Surplus producing capacity is only the precondition. In fact these structural developments must take place to bring the surplus into being.

Major differences in surplus producing capacity are undoubtedly related to technological developments. Intensive agriculture based on irrigation is certainly a different technological system from digging-stick, slash-and-burn agriculture. But the agricultural tool system does not explain the appearance

of a food surplus and of complex social structures in the Circum-Caribbean lands, for the hunting tribes practicing supplementary agriculture and the tropical forest tribes who did not produce a surplus used basically the same tool—the digging stick—with slash-and-burn as the method of clearing the land. It would thus appear that highly significant increases in agricultural production can be brought about by factors other than improvements in agricultural implements. Soil fertility and its relationship to rainfall is a variable factor of great importance. According to soil scientists, tropical rain forest soils in general are low in fertility and quickly depleted by cultivation. Grasslands are often composed of rich soils but owing to the heavy turf are not easily accessible to digging-stick methods of agriculture. This is true today in Brazil in the case of hoe agriculture. Once land goes into pasture it is removed from cultivation until covered by second growth which, when again cut down and burned, makes the soil available to the hoe cultivator. The Circum-Caribbean lands evidently provided variable climate and soil conditions. Our sources indicate the sporadic use of irrigation and the cultivation of two crops a year, which would indicate reasonably rich soils.

Even though the list of crops cultivated in this area do not differ much from those known to the cultivators in the Amazon rain forest, there is a strong likelihood that there was a more varied and balanced use of these crops. I have observed that although the Indians in the Amazon Basin know a wide variety of plants they tend to confine themselves to a narrow pattern of cultivation, growing those plants that give the best yields and depending on the river and forest for many other food products. The fact that many of the Circum-Caribbean tribes lived away from rivers would indicate that they had a much more balanced diet provided by the cultivation of foods such as manioc, maize, potatoes, beans, peanuts, arrowroot, squashes, and a wide variety of fruits. With this more intensive cultivation there is the probability that some selection was practiced, which in time would lead to greater yields per species than was common in the Amazon forests.

Our sources indicate that there was an improvement in the methods of cultivation. Although the digging stick was still the primary tool, and slash-and-burn the prevailing mode of clearing the land, the use of such fertilizers as urine mixed with ashes and the irrigation of cultivated areas indicate a longer period of use of a given parcel of land. With a wider range of food plants used, some rotation no doubt was practiced, land passing from maize to root crops and on to fruit tree cultivation. Abandoned lands would in time be covered by trees and undergrowth and in due course would again be ready for another cycle of cultivation.

The increased possibilities of food production through agriculture would tend to draw productive effort away from fishing, hunting, and wild food gathering. Our sources state that the fields of the Circum-Caribbean tribes increased in size and that fishing and hunting in fact did become of minor importance in the pattern of subsistence activities, in contrast to the tropical forest tribes.

There are indications that some tribal groups in the Circum-Caribbean

region domesticated the Muscovy duck and the guinea pig, and bred a vegetable-eating dog for human consumption.

### III. SOCIAL STRATIFICATION

Social stratification, as distinct from individual differences in status due to purity of descent and prowess in social activities, appears to be closely associated with the capacity of social units to produce economic surpluses with consequent changes in both internal and external relationships. The Guaicuruan horse-using tribes of the Chaco represent stratification in its simplest form. The introduction of horses, sheep, and cattle into this area created a source of wealth which could be raided through surprise attacks and the driving off of the livestock. The capture of Indian slaves to take care of the livestock and to perform menial tasks for the owners now took on an economic aspect. The economy could now support a class of raiding warriors and the slave class itself. The economic characteristic of this organization was its dependence upon the *surplus producing capacity* of the Spanish settlements and of other Indian tribes which had acquired livestock. The Guaicuruan chiefly class did not concentrate and employ their traditional tribal productive surpluses for social purposes, for the tribe itself was not yet a surplus producing economy. Control by the chiefs over their warrior bands depended upon the individual success of these chiefs in war and on the acquisition of *loot* in which the warriors shared. The chiefs had no judicial control over the tribesmen nor control over their domestic, hunting, and agricultural activities. Although no permanent political structure appeared, a class of wealthy chiefs and a large class of slaves did appear, with the general run of tribesmen forming an intermediate class.

Social stratification on the Northwest Coast of North America was likewise related to the appearance of two kinds of economic processes: a subsistence economy based on fishing and hunting and a potlatch economy based on the surplus producing capacity of the fur trade, the surplus being used for prestige-earning ceremonies which in turn led to the appearance of a wealthy class with high social status. As in the case of the Guaicuru, no political organization appeared, the chiefs remaining ceremonial, economic, or war leaders of kinship groups, their ties to the members of their respective groups being composed of kinship rights and obligations.

This type of social stratification is clearly different from one in which the class position of the chiefs rests on political and economic powers not shared by other members of the tribe. Among the Arawakan Taino the chiefs were territorial chiefs with judicial powers backed by penal sanctions and with rights to requisition surplus wealth for both military and religious purposes. The private wealth of the chiefs was acquired by means of the agricultural labor of female slaves captured in war, while male captives were often reserved for religious sacrifices. Although this type of political structure and the social stratification associated with it was made possible by the surplus producing capacity of the economy, the political bond between tribesmen and chief was

one of clientship rather than of kinship or serfdom. The tribesman provided food supplies and his services to the chief's war party as a matter of duty, in return for a share of the loot and for protection against counterraid. The chiefly class due to its greater wealth and to political prerogatives not shared by other tribal members was now able to express this social difference through distinctive social symbols and social behavior.

With the appearance of feudal-type social structure, social stratification takes on a new form. Tribal bonds as cohesive forces are replaced by an estate-like politically organized central nucleus which may well have originally been a conquering tribe to the head of which conquered peoples are linked by serfdom and the payment of tribute. Tribute payment makes possible a greater concentration of wealth for the display-use of the ruler and of the ruling class, the maintenance of a permanent military establishment, and for a priesthood.

Social stratification is in essence a horizontal segmentation of the sociopolitical unit, in contrast to vertical segmentation along kinship lines. Social stratification can appear among both Homogeneous and Segmented Tribes under conditions which make possible the acquisition of an economic surplus from foreign societies. This surplus is in the nature of a windfall and does not alter the basic economy of the tribe itself. If stratification appears among Homogeneous Tribes without a sib structure, it may well bring about an increase in population density through the addition of slaves, but as the tendency of stratification is to create endogamous horizontal groups this would work against the development of sibs and moieties. In other words, a Homogeneous Tribe may pass directly into a class structured society without passing through a unilinear kinship phase. In a sib-structured tribe social stratification would tend to weaken the social importance of the sib structure.

The argument put forth in this paper is that the increase in the size of population aggregates is sufficient to account for the appearance of sibs and moieties. An alternative development may be the appearance of stratification under the special conditions just described. But a formal political organization and a class structured society can arise only when the economy of the sociopolitical unit itself is able to produce a surplus food supply above subsistence needs.

#### IV. TYPES OF SOCIAL STRUCTURE

##### A. HOMOGENEOUS TRIBES

These are small tribal units in which all relationships are in terms of kinship, the tribe being the only corporate named group. Internal structure reveals only evanescent conjugal families and extended families built around unnamed patri- or matrilineages, depending upon the rule of residence. This group operates within a defined territory which it will defend if threatened. In some cases the use of organized force against other groups is of such minor importance that political cohesion does not appear, tribal unity being maintained by periodic joint rituals, intermarriages, visits, exchanges of presents, and a consciousness of common descent. In other words, a homo-

geneous tribal group is an internally self-perpetuating, corporate, sociopolitical group identified by a name and an origin myth which defines true membership bilaterally through both father and mother back to the mythical ancestors. Most southern hunters and many tribes in the tropical forest and in the Circum-Caribbean area belong to this structural type. Good samples are the Yahgan, the Nambicuara, and the Upper Xingu tribes.

Homogeneous Tribes can be broken down into subtypes on the basis of kinship structure, residence and marriage rules or settlement pattern. If settlement pattern is selected we get: (1) a loosely integrated group made up of dispersed family groups, (2) groups made up of interrelated extended family bands, (3) a large single band, (4) a village tribe, or (5) a multivillage tribe. These differing forms of settlement can, if intensively studied, be accounted for by the differences in the physical environment, the nature of the ecological adjustment, and related subsistence activities.

I differ to some extent with Steward's definition of sociopolitical groupings as his definition pertains to the small tribal units which he calls Marginal. My experience has led me to believe that neither the conjugal family nor the extended family is the effective sociopolitical unit under native conditions. Although it is true that conjugal families and extended families can and do operate permanently as spatially separated economic units, as among the Guató and Mura, or temporarily, as among the Nambicuara and the Upper Xingú Basin tribes, these units are not self-insuring against economic and political risks nor are they self-perpetuating in time. Marginality in the economic sense implies a margin of subsistence with sporadic and uncertain surpluses. Lack of success in hunting and fishing, incapacity due to illness or injury, may drive a conjugal family to the verge of starvation. Economic insurance is secured through dependence upon near relatives. During the eight days the writer spent among one of the Guató groups he observed the presents of food given to an elderly couple who lived some distance from their relatives, and was informed at the same time of the custom among women of looking after each other's children if the mother was not able to do so. An extended family, on the other hand, although economically more secure, is, in a sense, politically marginal. An extended family usually protects its members, property, and sometimes its terrain against encroachments by the other extended families of its own group, but for security against outside attack related extended families band together.

Even more important than economic and political security is the fact that due to the incest bar these units are not self-perpetuating but depend upon one another for their re-creation through intermarriage which in time establishes lines of descent and unnamed lineage groups in accordance with the prevailing kinship system. A conjugal family which is always bilateral cannot come into being without the presence of two independent lineages. This is likewise true of an extended family. A Homogeneous Tribe, therefore, although composed of two or more lineages and their interlinking bilateral conjugal and extended families, contains no named corporate kinship groups, the only cor-

porate kinship group being the tribe itself, the members of which define their totality of relationship in kinship terms.

The Yahgan local group, for instance, represents a very loose form of tribal unit. Although each conjugal family or a group of two or three families made up independent hunting groups, there was, nevertheless, a larger named group.

Each of the five dialectic regions was broken up into local groups, each of which appears to have been composed, mostly at least, of members related by blood or marriage (Koppers, 1926b, p. 5). Each such local group had its own territory—that of Ushuaia, for instance, occupied 20 miles (32 km.) of coast line on Beagle Channel—and its own name derived from its locality. Like the dialectic groups, these local groups had no chiefs. The local group's chief function was that of holding the *čičaus* initiation rite. The leader chosen therefor had authority only so long as the rite lasted. As the *čičaus* rite was an educational device contributing greatly to social conformity and solidarity, the local group's political function was chiefly an indirect pedagogical one. Loyalty to fellow members of a local group existed, but was not as strong as that to one's own kinship group [Cooper 1946:94].

Another characteristic of these small homogeneous kinship societies is that they appear to have a minimal structural size below which they cannot fall without breaking down, and a maximum size beyond which they change structurally into something else. I am also inclined to believe that the social norms, that is, the kinship system, marriage and residence rules, and the ways of acquiring a wife, found among simple homogeneous tribes are designed to protect group survival on the minimal level. With numerical increase these norms persist and at some maximum point of expansion form the bases for a restructuring of the group. This process of growth and ultimate structural transformation is due more to the changes in the dimensions of the factors which affect structure than to necessary formal changes in them. Thus, the same technological system can form the basis of a homogeneous tribelet of minimal size, an expanded multilineal homogeneous tribe, or a complex segmented tribe, the basic variables being the carrying capacity of the resource base, the radius of operation from a given center, the man-tool productivity differential, and the consequent numerical increase and concentration of population.

The magnitude of the *minimal* structure among such groups depends upon the demands put upon it as an operational unit, in the first place, by the exigencies of the physical and social (foreign tribes) environment and, in the second place, by the kinship system that integrates it and maintains its continuity in time. The evidence in the *Handbook* and the summary statement by Murdock (1951) show that the predominant type of kinship system among the Marginals (tribes having no sib structure) in the south is Hawaiian and that as one proceeds northward Iroquoian terminology appears. These two types of kinship system which appear to predominate among the bilateral descent groups, which are here termed *Homogeneous Tribes*, give rise to two magnitudes of minimal tribal structure: (1) the two-lineage structure, and (2)

the four-lineage structure. A bifurcate-merging system with Iroquoian terminology appears, from available data, to be associated with cross-cousin marriage, which can operate with the presence, originally, of two unrelated lineages that begin and continue exchanging marriageables—young men or women, depending upon the rule of residence. So long as marriageables are available the structure will continue. It can, of course, continue if marriages outside the named tribe can be arranged or if women can be captured from other tribes. These incorporations occur but under native conditions are uncertain. If more than two lineages exist in the tribe (sociopolitical unit) there is naturally no problem. But unless the two lineages which constitute the minimal level can continue exchanging marriageables the structure will break down.

The case of the Iwalapetí in the Upper Xingú Basin shows the breakdown of a tribal unit but also the possibilities for its reformation. The 28 remaining members were reduced to a patrilineage and were forced to marry out. But their children, owing to the cross-cousin marriage rule, can marry and reform the village. Kanato, my Iwalapetí informant, explained that he and his sister could reform a village of two houses if he and his sister both raised sons and daughters. At present he has a daughter and his sister a son. His brother-in-law is a Trumai who has consented to move to the old Iwalapetí village site once their children become of marriageable age. All that will be necessary will be an exchange of daughters between Kanato and his sister's husband. The nucleus of this tribe could be a two-house or two-family system which, with luck, could grow into two extended families and on to several lineage segments forming the basis of a dual division. The 25 Trumai, also, live in a two-house village, each house being occupied by a patrilineage (Oberg 1953).

Hawaiian kinship terminology, on the other hand, presupposes a larger effective social unit on the minimal level than a unit with Iroquoian terminology associated with cross-cousin marriage. Whereas a cross-cousin marriage system can operate with the minimum of two lineages, a Hawaiian system with a defined second-cousin marriage rule appears to demand a minimum of four lineages, presupposing exchange of marriageables between lineages.

As the Hawaiian system of terminology predominates among the nomadic and seminomadic tribal groups of the southern part of the South American continent there must be something in the hunting-collecting mode of nomadic life which favors the prevention of the effective social unit from falling below a certain minimal size (four lineages or four extended families). This larger group need not be associated with collective activities but may appear due to the economic hazards faced by the conjugal family or extended family. Among hunting groups the burden of the hunt rests upon the adult males. Thus only less than half of the population are the effective food gatherers. Surplus producing capacity is low. Sickness or injury to the adult males spells danger. Dependence upon relatives meets these risks. In contrast, the smaller groups with cross-cousin marriage on the margins of the tropical rain forest are associated with agriculture. Even though men may clear and plant the fields, women take

care of the fields and can plant and harvest along with children. The available working force proportionally is larger in these tribes, making it possible for a smaller social unit to survive.

Matrilocal residence among a significant number of Homogeneous Tribes may best be explained by observing the contexts in which it occurs, for what this practice does in a particular context is pretty well the explanation of its existence. Among the Caduveo and Umotina, both tribes being hunters, fishers, and supplementary cultivators, the native belief is that it gives the head of a conjugal family control over a greater number of men for economic purposes. In a society where the most useful producers and protectors are males between the ages of 15 and 40, this desire is understandable. Yet one may well ask what does a father gain by exchanging his sons for sons-in-law? The answer is that he does not really exchange sons for sons-in-law but trades his daughters for the labor power of his sons-in-law. The tie between fathers and sons is strong. The father rears his sons, trains them in economic activities, and assists them in their initiation into the religious life of the tribe. When the sons leave home they remain sons, the father being able to call on them for assistance whenever necessary. The sons-in-law that live with him are under his control and act toward him as sons. It is true that if daughters went out in marriage the father would have sons-in-law, but his hold over them would not be as strong as over his own sons due to the absence of so deep a personal bond. It would appear that sons make a better second line of defense and security than do sons-in-law.

It follows, however, that sons away from home are helpful only if they are within a reasonable distance. If environmental circumstances favored a dispersal of extended families into widely ranging hunting groups, this advantage would be lost, the male members of the extended family depending upon brother and son relationships within either their own extended family or related male lineages for economic and political security. Although each case should be examined in terms of its special context, evidence points to the fact that the more nomadic Fuegian, Pampean, and Chaco hunting bands with strong lineages as predominant economic groups, practice patrilocal residence. Among the larger, more stable tribes further to the north, matrilocal residence appears to be more common. It goes without saying that control over manpower is just one factor related to the practice of matrilocal residence. Among sedentary groups where property is significant or where women are the prime cultivators the factors favoring matrilocal residence are quite different. The importance of patrilocal and matrilocal residence is that among Homogeneous Tribes it establishes unnamed patri- or matrilineages which appear to be the precursors of patrilineal and matrilineal sibs.

The numerical expansion of these minimal sociopolitical tribelets can lead to (a) budding through the permanent spatial separation of lineage segments, or (b) larger spatial concentrations which change their inner structure. When the resource base is narrow, that is, restricted to sea and shore line, to plains, or to dense tropical forests, the carrying capacity is limited by the availability of resources exploited by a given technology. As the group increases, the dis-

tance to be traveled from a campsite limits the size of the group; a point is reached when some will have to move to more distant areas. In these circumstances a segment of a lineage will separate and establish itself in a new region. But for reasons of economic and political security and marriage it will maintain its connections with the tribal core, periodically meeting with the rest of the tribe for ceremonies or trade. This type of organization prevailed among the southern hunters and is ably described in the *Handbook*. However, completely new sociopolitical units may appear when several lineage segments begin to meet to form an intramarrying group, due to the increasing distance that separates these lineage segments from their original home center. Specific carrying capacities and travel distances appear to be important factors in determining the size of population units and their interrelationships.

In more favorable environments, which usually means an exploitation at one and the same time of river, swamp, savanna, and gallery forest for agriculture a much wider range of resources becomes available, as is true in eastern Brazil. Agriculture alone is a narrow adaptation and provides a large yield per cultivator only under favorable soil conditions, but when combined with fishing, hunting, and gathering, a heavier concentration of people in one settlement is possible. Here, again, each resource base has to be judged in its own right. Shallow, slightly muddy streams are more favorable for shooting fish with a bow and arrow than deep clear streams. Timbó fishing requires still, shallow pools of warm water for maximum success.

An area which is composed of several kinds of resource bases in close proximity permits a concentration of population. As a consequence the number of conjugal and extended families increases. As individual kinship relationships are determined by lineage ties, the problem of interlineage relationship arises. In a group of 50 to 100 individuals, kinship relationships can be determined on the basis of direct personal knowledge. So-and-so is my brother because he is the son of my father's brother. But in a group of 500 to 1,000 individuals separated into numerous lineage segments, exact relationship requires tracing descent genealogically back to some common ancestor. To overcome this, individuals are categorized on the basis of lineage interrelationships. So-and-so is my brother because he is a Turtle like myself. This same principle of creating named divisions in the original unity of the named sociopolitical unit, after it reaches a certain size, gives rise to named associations for games, rituals, and ceremonials. Individuals know their places, their functions, and obligations to other individuals in tribal life in terms of these new groupings. Individuals who have gone through the puberty rites together or who have similar supernatural experience give recognition to the common bond by thinking of themselves as a group, and express this group identity by a name. The principle underlying this process may well be related to the "span of attention" and "span of control" which are important in the organization of large administrative groups. The capacity of a single individual to know intimately the interrelationships of a number of other individuals is limited by his "span of attention." In a situation where control is necessary this diffi-

culty is overcome by a delegation of authority to a leader of a named section or team. When control is not essential this difficulty is overcome by classing individuals into named groups.

#### B. SEGMENTED TRIBES

These are tribal units which are composed of named unilinear kinship groups, such as sibs and moieties, often with the addition of named associations and age grades. The precondition of increasing size of population aggregates related to an increase in the food supply is sufficient to account for the appearance of segmented tribes. As this type of structure is familiar to all students of social organization no detailed description is necessary. As unilinear kinship structures vary, a number of subtypes can be easily distinguished.

Segmented Tribes appear when it becomes necessary to identify and classify groups rather than individuals. A simple, bilateral system identifies and classifies only living named individuals, but it now becomes essential to identify and classify lineage segments. As a lineage is unilateral, all that appears to be necessary is to identify the relationships of lineage segments through unilateral descent and to give this grouping of lineage segments a name by which it can be identified in time generation after generation. In a Homogeneous Band or Tribelet with a name, an individual is a member of but a single named corporate group. Now, however, he is, in addition, a member of a corporate unilinear kinship group.

A dual division is implicit in a minimal two-lineage or two-extended-family tribelet perpetuated on the basis of cross-cousin marriage. Similarly, sibs are implicit in the segmentation of the two lineages into additional units. The numerically small tribes of the Upper Xingú Basin, who have the cross-cousin marriage rule, have the potentialities of moiety formation. Among the numerically larger Carajá villages with cross-cousin marriage the division into moieties has already taken place. Natural increases or incorporation of outsiders may also give rise to sibs through the same principle of lineage grouping and naming.

It would appear that with an increase in numbers a minimal four-lineage system with Hawaiian kinship terminology could separate into four named marriage classes, as among the Apinayé, or into four exogamous sibs. But it seems that a dual division is also implicit in this system, assuming a defined second-cousin marriage rule and an exchange of marriageables between the lineages. Lineage A would exchange marriageables with lineage B, but as the offspring of these unions would be siblings they would be prohibited from marrying. Lineage A then exchanges with lineage C and similarly lineage B with D, to maintain a balance. In the following generation lineage A can again exchange with lineage B and lineage C with D. With a defined second-cousin marriage rule the four lineages would divide into two halves, consisting of A and D on one side and lineages B and C on the other, the lineages belonging to each side never exchanging with one another.

Although it will be difficult to trace the transformation of a simple four-lineage system into a structure with moieties, sibs, and associations, the writer agrees with Steward that such possibilities are implicit in the simpler structures.

Such developments cannot be attributed to diffusion from more advanced Tropical Forest neighbors, for they lacked them. The associations must be interpreted as crystallizations of the sex and age cleavages implicit in the Marginal cultures [Steward 1947:94].

To me, numerical increase and concentration appear to be the principal factors affecting this change. If a greater body of information can be gathered to substantiate this thesis, it will help to explain the apparently anomalous fact that tribes with the same type of technology can have social structures which differ as widely in complexity as do Homogeneous and Segmented Tribes.

### C. POLITICALLY ORGANIZED CHIEFDOMS

Tribal units belonging to this type are multivillage territorial chiefdoms governed by a paramount chief under whose control are districts and villages governed by a hierarchy of subordinate chiefs. The distinguishing feature of this type of political organization is that the chiefs have judicial powers to settle disputes and to punish offenders even by death and, under the leadership of the paramount chief, to requisition men and supplies for war purposes. Unity is achieved by federation, the acceptance of political authority resting on common interests and ultimately on the recognition of common tribal descent. There are no standing armies, permanent administrative bodies, subject tribes, or payments of tribute. Wealth in the form of property and slaves acquired through war, along with war honors, set the chiefs apart as a class with the highest status. The relatives of chiefs and outstanding warriors constitute a class with high rank, often described as a nobility, followed by the great body of common tribesmen. Slaves, as always, constitute the lower class. Chiefs have large numbers of wives, are carried in litters, live in large houses, are addressed by a string of titles, and often speak to the commoners through an intermediary. The Calamari, Quimbaya, Tolú, Cenú, and Mompox of the northern lowlands of Colombia appear to have had this type of social organization, and a good example of this type of structure is provided by the Arawakan Taino of the Antilles as described by Rouse (1948:528-29) in the *Handbook*:

On Hispaniola the Spaniards observed five provinces, or chieftainships, not counting that of *Ciguayo*, which will be discussed below in connection with those people. These provinces are shown on map 10. Magua, in the northeastern part of the island, was the most populous. The wealthiest and most aristocratic was Xaragua to the southwest; it was the model of refinement in customs and manners. As shown on map 10, each province had its own chief, called a "cacique." In addition, there are said to have been some 30 subchiefs in control of local districts within each province and 70 to 80 headmen in charge of the villages of the province.

Each chief, subchief, or village headman seems to have governed the village in which he resided. He organized the daily routine or work, arranging for hunting, fishing,

and tilling the soil. He was also responsible for the storage of extra provisions and for their ultimate distribution among the villagers. His was the largest canoe in the village and he probably directed transportation. He acted as host to visitors and conducted relations with other villages, through their chiefs, subchiefs, or headmen. He was the leader at feasts and dances, and, having learned the songs by heart, he also directed the singing. His were the most powerful zemis in the village, and he organized their worship by the villagers. His authority is said to have been despotic; he could order the death of his subjects, and they had to obey his commands to the letter.

The authority of the headman apparently extended no farther than his own village, but the subchief also had a certain control over the other villages in his district, while the chief's authority extended over the entire province. The chiefs and subchiefs exacted no tribute from their subordinate villages, but they had the power to requisition agricultural or military services. This power may have been quite nominal and dependent largely on the personalities of the chiefs and subchiefs for there is some evidence that it shifted considerably from time to time.

The precondition for this type of social structure is the appearance of a food surplus and its association with the new feature of political organization and marked class stratification.

Although not specifically the task of this paper, I would like to add short notes on the remaining three of my six major types of social structure in order to show that the same basic forces were operative in their formation as in the three simpler types.

#### D. FEUDAL TYPE STATES

When tribal cohesion, as the basis for territorial political organization, is replaced by the institution of serfdom maintained by military power, we may speak of the existence of a Feudal Type State. This type of organization appears to be associated with the presence of a strong ruler, a hereditary nobility, and a specialized priesthood. To the landscape dotted with villages and homesteads are added two new features, the palace and the temple. These developments are made possible not so much by a greater surplus producing capacity of the cultivators but by a greater concentration of wealth at the disposal of the ruler, nobility, and priesthood through tribute payments and other exactions collected from a large conquered population. A slash-and-burn, digging-stick economy can maintain this type of structure provided that the ruler can control a great number of digging sticks. The Chibcha of Colombia seem definitely to have reached this stage of development. The information concerning the Nicaraos of Nicaragua appear to indicate that they too had a Feudal Type social structure.

#### E. CITY STATES

With the appearance of City States in the coastal valleys of Peru, like Chan Chan for example, there is a radical change in social structure as well as in the underlying economy which supported them. Intensive agriculture based on irrigation made possible large permanently settled population aggregates. The capacity of cultivators to produce a surplus increased to a point

where craft industries could develop far enough to lead to the appearance of occupational groups, which, in turn, gave rise to markets in which both domestic and foreign commodities could be exchanged. To the palace and the temple are added the market place and the workshops of the artisans, living quarters of those who serve the rulers, nobles, priests, and the headquarters of specialized officials who constitute a government. Urban society develops an overlay of cultural features not shared by the people of the countryside, who maintain the older folk ways of the village and homestead. Urbanization creates a separation between country life and city life, a division which is considered the basis of civilization.

#### F. THE THEOCRATIC EMPIRE

By linking the political and tribal units of varying complexity of the highlands and the coastal plain into an empire, the Inca were able to organize the economy of an enormous area. The productivity of irrigation agriculture was sufficient not only to support a dense rural population but to maintain a political and religious superstructure. Land was divided into three parts, the produce of one part going to the upkeep of the state, the produce of another for the maintenance of the religious organization, while the third part sustained the rural workers. Although these parts were not necessarily equal, the system does indicate a surplus producing capacity far superior to any in pre-Columbian America south of Mexico. This surplus was concentrated through the agricultural tax, and was used for the support of the ruler, the upper class, the priesthood, the army, the officials, and the craftsmen. Labor service built and maintained the temples, roads, and other public works. These sociopolitical tendencies were inherent in the antecedent sociopolitical structures and developed due to the availability of a surplus food supply and the consequent possibility to withdraw large segments of the population from agricultural production.

#### SUMMARY

Progressive increases in food supply are considered the preconditions for the appearance of levels of increasing social complexity. The tendencies toward greater complexity, however, are inherent in the preceding configuration of social relationships. The first step in this process is the segmentation of a homogeneous kinship society into unilateral kinship groups due to the increase in population density. A second level is reached when a surplus above subsistence needs appears, permitting the withdrawal of individuals for the development of nonsubsistence activities. As the surplus increases this process continues, eventually leading to urbanization, pronounced social stratification, and the territorial state.

Although the development of nonsubsistence activities is the force which extracts the surplus from the food producing process, it is not the cause of surplus producing capacity. The capacity to produce is related, on the one hand, to a knowledge of resources and technological devices and methods, and,

on the other, to the highly variable conditions of the resource base. It is for this reason that particular subsistence techniques have not been emphasized. The correlation between social structure and such subsistence techniques as food gathering and agriculture is not a close one on the simpler levels of society. It is not the subsistence technique itself but the consequences it has on food supply that counts. Under favorable ecological conditions hunting, fishing, and the collection of wild food plants permits a greater density of population than rudimentary agriculture under unfavorable conditions. Moreover, slash-and-burn, digging-stick agriculture varies so much by specific environments that each situation should be evaluated separately in order to weigh its influence upon social structure. This statement in no way denies the effect of major developments in subsistence practices, like irrigation agriculture, and their correlation with social complexity. In this paper the relationship between social organization and subsistence and other economic activities has not been discussed, for the correlation here is of a different order.

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