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Slavery, Surplus, and Stratification on the Northwest Coast: The Ethnoenergetics of an Incipient Stratification System[1]

by Eugene E. Ruyle

Not only has the culture been interpreted and reinterpreted, but the data gathered by Boas have been quoted, paraphrased, dismissed, corrected, and occasionally, one suspects, rewritten. Upon closer examination, then, one is tempted to leave the Kwakiutl and find some undiscovered civilization in Antarctica, and with it a wealth of data on a primitive skiing, penguin-totemizing culture with a subsistence base of water. . . . Perhaps this is a good time to pause and re-evaluate our methods, for, in the absence of reliable data and in the confused sea of interpretive materials, what we need most is a steady hand and clear vision.

DANIELA WEINBURG, "Models of Southern Kwakiutl Social Organization"

AS A RESULT of the reinterpretation of Benedict's (1946) configurational view of Kwakiutl culture, a new orthodox interpretation of Northwest Coast socioeconomic formations has been developed. For our purposes, this view may be summarized in three sentences. First, although a rank system existed, social classes, in the proper sense of the term, did not. Second, although slavery existed, this was not true slavery as we have known it in the West: slaves had no economic value and were not part of society. Finally, the prestige system, including the rank structure and an individual drive for prestige, was essentially adaptive in its nature and functioning: it served to facilitate the adjustment of the population as a whole to its environment. Let us consider these aspects of the new orthodoxy more carefully.

Rank versus class. Since the publication of the influential articles of Drucker (1939) and Codere (1957), the generally accepted view of the Northwest Coast has been that it was a rank, not a class, society. The idea that classes existed in Kwakiutl society, according to Codere (1957:473), is a result of "careless definition" and "faulty logic." Taking her own definition from Parsons (and ignoring such matters as differential access to strategic productive resources and economic exploitation), Codere argues that there was no distinct class of commoners in Kwakiutl society. In this respect she follows Drucker (1939:55,56,58):

There were no social classes among the freemen, but rather an unbroken series of graduated statuses. . . . There were individuals reckoned high and there were those considered lowly, true enough. Those of high rank abstained from menial tasks such as fetching wood and water, they wore costly ornaments and finer garb, and strutted in the spotlight on every ritual occasion. But these were not class prerogatives. They were not restricted to a certain group; there was no point in the social scale above which they

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The present paper, submitted in final form 13 III 72, was sent for comment to 50 scholars, of whom the following responded: John W. Adams, Hatim A. S. Al-Ka'bi, Judith K. Brown, Peter Carstens, H. J. M. Claessen, William W. Elmendorf, James C. Faris, Robert Steven Grumet, Thomas Hazard, Harold K. Schneider, Arnold A. Sio, Wayne Suttles, H. David Tuggle, and Herbert W. Vilakazi. Their comments are printed below and are followed by a reply from the author.

[1] This paper is an outgrowth of term papers written for Andrew P. Vayda and Morton H. Fried while I was a graduate student at Columbia University. Subsequent drafts were read and criticized by Theodore Caplow and Frank J. F. Wordick of the University of Virginia. I would like to thank the above-mentioned scholars for their criticisms. I would also like to thank Thomas Hazard, Peter Carstens, and Julia Averkieva, who read and commented on the paper in the process of CA refereeing. While none of the above necessarily agrees with the interpretation presented here, the treatment benefited tremendously from their criticism. They are not, of course, responsible for any errors of fact or interpretation in the final version. Grateful acknowledgement is also made to the University of Virginia for a grant to cover costs of preparing the manuscript for publication.

were permitted and below which prohibited. . . . To insist upon the use of the term "class society" for Northwest Coast society means that we must say that each individual was in a class by himself.

In spite of Drucker's warning, a number of specialists have continued to speak of classes on the Northwest Coast (e.g., Collins 1950, Suttles 1958, Wike 1958*a*, Rohner and Rohner 1970). Ray (1956:165–66) has even gone so far as to write:

There are masses of ethnographic data relating to the distinctions between the upper and lower classes and the cultural disabilities suffered by the latter. The reality of the lower class and the magnitude of the cultural distance separating it from the upper class are firmly established ethnographic facts. . . . Boas was nineteen years ahead of Drucker in stating that "a sharp line between nobility and common people did not exist," but for him this fact did not negate the reality of the classes.

It may be noted that Codere (1957:485) also cites Boas in support of her view. Nevertheless, there has been little published controversy on the empirical or conceptual aspects of rank versus class on the Northwest Coast, so proponents of the rank interpretation have achieved their position of orthodoxy largely by default.

The economic value of slavery. Since Boas's assertion that slaves did not form part of the *numaym* and "may be left out of consideration" (1970[1897]:338), the idea has been widely expressed that slavery was economically unimportant on the Northwest Coast: it has been said that slaves were "no great asset" as concerned their labor (Curtis 1913:74), had "little societal importance" (Drucker 1939:55), were "not a productive part of the economy" (Service 1963:215), were "as much of a liability as an asset" (Barnett 1938:352), and "contributed little to the traditional social system except to give prestige to their owners" (Rohner and Rohner 1970:79). Curiously, in support of her contention that "[the] economic value of the slave captured in war was so slight as to be non-existent," Codere (1950:105) cites an article entitled "Economic Aspects of Indigenous American Slavery" (MacLeod 1928). Consulting this, one finds an abundance of data on the economic importance of the slave in Northwest Coast society, on slave raiding on the Northwest Coast, and on an extensive trade in slaves along the Northwest Coast, as well as the following surprising conclusion (MacLeod 1928: 649–50):

The data available on prices in connection with the data on the percentage of slaves to the total population, distinctly suggest that slavery on the northwest coast among the natives was of nearly as much economic importance to them as was slavery to the plantation regions of the United States before the Civil War. Incredible as this may seem, it seems very definitely indicated by all the facts.

Clearly, the problem of the role of slavery in Northwest Coast economic systems requires further consideration.

The adaptive nature of the prestige system. Following the pioneering work by Suttles (1960) and the extension and elaboration of Suttles's work by Vayda (1961), Piddocke (1965) and Weinburg (1965), the idea has been widely accepted that Northwest Coast prestige systems functioned to facilitate the adjustment of aboriginal populations to their variable habitat (e.g., Harris 1968:313; 1971:247–50).

Suttles's interpretation of Coast Salish potlatching, briefly, is as follows. Living in a habitat characterized by year-to-year as well as local and seasonal fluctuations in productivity, local groups which had surpluses of some food item took them to their affinal relatives and exchanged them for wealth. As local groups accumulated surpluses of wealth by this process, they redistributed these surpluses by potlatching. In this way, differentials of food and wealth were transformed into prestige, and consumption of economic goods was equalized. The potlatch, then, was part of an adaptive cultural system which functioned to equalize food consumption among local groups.

Underlying these exchanges of food and wealth was a drive for individual and group prestige. It may be noted that the system demands that this drive for prestige be independent of, and at times override, considerations of materialist self-interest. Emphasis on the drive for prestige goes back to Boas's statement (quoted by Codere 1956:335) that "[the] leading motive in their lives is the limitless pursuit of gaining social prestige" and was also a key element in Benedict's configurationist interpretation. But, as Harris (1968:313) notes,

whereas this prestige has nothing but a completely inexplicable and unqualified penchant for self-glorification at its base in Benedict's account, we now see that the entire prestige system was probably in definite and controlled articulation with aboriginal techno-environmental and techno-economic conditions vital to the maintenance of individual and collective life. In other words, we see a system, explicable in scientific terms, where previously there was nothing but the unintelligible ravings of megalomaniacs.

To the extent that the Suttles-Vayda hypothesis has redirected research on Northwest Coast sociocultural systems to a cultural materialist, rather than a cultural idealist, research strategy, we can only voice our approval, in the Kwakiutl manner, with shouts of "Wa, Wa." The reinterpretation, however, suffers from severe deficiencies in empirical and theoretical analysis. Let us examine, first, the empirical deficiencies, which center on the reality of the year-to-year fluctuations in productivity, the reality of starvation, and the reality of the drive for prestige.

The existence of year-to-year fluctuations in productivity has been disputed by Drucker and Heizer (1967:139):

Throughout the area there was one important food source, salmon, which though seasonal lent itself to preservation for storage by use of a fairly simple technique. While Suttles stresses the marked year-to-year differences in the size of Frazer River sockeye runs, it may be doubted that primitive pre-commercial demands were so heavy that the smaller runs produced any hardship. In any event, the year-to-year fluctuations in salmon runs were not characteristic of parts of the area other than those occupied by Coast Salish.

Without these year-to-year fluctuations, the system cannot function as hypothesized, a fact which Piddocke (1965:259) recognizes.

Evidence is cited by Vayda and Piddocke that starvation and hunger did occur and that fern and lupine roots were eaten by hungry tribes, and Kwakiutl mythology refers to a "starving people [who] pay for food with dressed elkskins, slaves, canoes, and even their daughters" (Vayda 1961:621; Piddocke 1965:247–49, 258–59). But no evidence is cited in support of Piddocke's assertion that "oftentimes it fell out that a local group would have died of starvation if it had not acquired food from other groups" (1965:249). Indeed, Drucker and Heizer explicitly deny this. They acknowledge that there were times of shortage in the midst of plenty, but judge (1967:149) that "these were short periods of skimpy rations and discomfort, but not of abject starvation. Men's bellies rumbled, small children cried, but no one actually starved to death." In such times, rather than turn to neighboring groups, the distressed group could fall back on a variety of usually despised food resources (1967:149): "codfish heads, spurned by seals and sea lions, and storm-killed herring, and pilchard. . . . tiny mussels of the inner coves and bays, and similar molluscs disdained in normal times. A tough, rankflavored seagull may be nothing to make a gourmet's eyes glisten, but it will sustain life in a pinch." In any event, the data on starvation cited in support of the idea that the hypothesized adaptive mechanism would have been useful may also be cited in support of an argument that it was not very effective.

No evidence is presented in support of the idea that food surpluses were given to disadvantaged groups. Suttles (1960:297) mentions a group of "low-class" people "with no claim to the most productive resources of the area." Presumably the greatest deficits would occur in this group. But, since their affines would also be low-class and, hence, probably also in need, and since, being low-class, they would receive least at potlatches, neither the affinal exchange nor the potlatch mechanism would alleviate their distress.

In short, as Drucker and Heizer (1967:149) observe, "[the] idea of the potlatch as a sort of intertribal AID program to combat starvation does not fit the ecological facts"—or, we may add, the sociological facts.

Concerning the drive for prestige, Drucker and Heizer (1967:134) point out that status was not achieved through potlatching but instead was ascribed by birth and only validated by potlatching. This is not a minor distinction, for it means that it would be impossible, or at least unusual, for an individual to move up in the status system, as is required in the Suttles hypothesis.[2]

The Suttles hypothesis, then, suffers from severe deficiencies in the analysis of empirical material. It has, however, been scientifically productive in that it has stimulated research into the nature of Northwest Coast socioeconomic systems. But the theoretical implications of the new orthodoxy are grave indeed. The Northwest Coast material has been used to support an inherently mystical interpretation of the role of mentalistic phenomena in a population's adjustment to its environment. The entire prestige system, the rank structure, the drive for prestige, and the potlatch are seen as mechanisms "by which incipiently stratified social systems maintained their productivity levels and maximized their social cohesion" (Harris 1968:313). This prestige system does not reflect real differences in food and wealth consumption; indeed, its function and purpose is to prevent the formation of such differences, since by doing so it permits a large and denser population to inhabit a given habitat.

As the Drucker-Heizer critique suggests, this simply is not so. However, this mystical view fits into a larger strategy to destroy materialist interpretations of the origins of social stratification, as is illustrated by the following (Service 1962:150, order altered):

> There has been a tendency in modern thought to see exploitation, wealth expropriation, greed, as causes of the rise of authority, classes, and the state. However, this view is manifestly erroneous if we consider chiefdoms to be a state in social evolution occupying the position intermediate between tribal society and civil society. . . . It is interesting that many well-developed chiefdoms seem to have had a *conceptual* class division. In fact, certain measures were often taken to create or accentuate distinctions which were artificial, in a sense, rather than being based on a true economic dichotomy as in feudal society.

Service's rejection of the idea that exploitation is the central aspect of social stratification is shared by nearly the entire corpus of contemporary social scientific literature on stratification (see, e.g., Bendix and Lipset 1966, Beteille 1969, Heller 1969, Lenski 1966). This literature, however, is immersed in a morass of conceptual entitites whose epistemological and ontological status is far from clear. Stratification can be analyzed in such terms as "position," "norms," "functional importance," "conflict," and "power"; but it need not be so analyzed, nor is analysis in these terms necessarily best.

As we have seen above, the interpretations of the ethnographic material on the Northwest Coast have been contradictory. The resolution of these contradictions does not lie in more ethnography. The significant facts of the case were in *before* Boas did his fieldwork, and the aboriginal populations have, in any case, disappeared. To understand the aboriginal systems, then, we must forsake the clear air of the ethnographic field for the musty odor of old books and stale tobacco, immerse ourselves in theory and history, as well as the ethnographic record, and, in the words of Bancroft (1875:35–36), "picture these nations in their aboriginal condition, as seen by the

[2] Due to depopulation and the opening of potlatch positions, there may have been a shift from ascribed to achieved status during the potlatch period (1850–1920), making the "drive for prestige" correct for the "ethnographic present" but incorrect for an understanding of the aboriginal economic system (see Codere 1950:51,97; Drucker 1963:128–30; Drucker and Heizer 1967:24–25).

first invaders, as described by those who beheld them in their savage grandeur, and before they were startled from their lair by the treacherous voice of civilized friendship."

A THERMODYNAMIC APPROACH TO SOCIAL STRATIFICATION

The study of the flow of energy through ecosystems is a recognized subdiscipline of ecology, energetics. Energy also flows through sociocultural systems, and aspects of this flow have attracted the attention of a number of anthropologists (e.g., White 1959, Parrack 1969, Lee 1969). Such studies, centering on the process of harnessing energy from the environment, have been one-sided; failing to take into full account the thermodynamic peculiarities of the human primate, they have failed to give adequate attention to significant aspects of the thermodynamic structure of sociocultural systems.

There are two interrelated but analytically distinct thermodynamic systems associated with all animal populations. The first, in which food energy is ingested by members of the population, may be termed the *food energy system*, relating the population to the food web of the ecosystem. The second, the patterned energy expenditure of the members of the population interacting with each other and with environmental objects in the satisfaction of their needs, may be termed the *ethnoenergy system*.[3]

Human ethnoenergetic systems exhibit a number of unique features, the most significant of which are those connected with the expenditure of ethnoenergy in the production of use-values and the exchange of use-values by members of the population. By and large, animal populations merely appropriate naturally occurring use-values, but human populations transform nature into culturally acceptable use-values before they are consumed. This transformation requires the expenditure of a particular form of ethnoenergy, labor.[4] We may speak of this ethnoenergy as being embodied in the use-value, and, if the use-values are consumed by someone other than their producer, we may speak of ethnoenergy flowing from the producer to the consumer.

Utilizing the concept of ethnoenergetic flow, we may make two sets of contrasts in ethnoenergetic flow patterns, one between nonhuman and human primate populations and one between egalitarian and stratified human populations.

Nonhuman primate populations. Among the nonhuman primates there is direct and individual appropriation of the energy resources of the environment. Use-values are not produced, but occur naturally and are merely consumed on an individual basis. Although cooperation in the food quest may occur, and although tools may be used in producing food, the scope of such phenomena is comparatively slight. Labor is not involved to any great extent in the production of use-values, and so, although there may be a dominance hierarchy, with the strongest individuals appropriating the choicest environmental resources, there is no exploitation of labor. Figure 1 illustrates this type of ethnoenergetic flow.

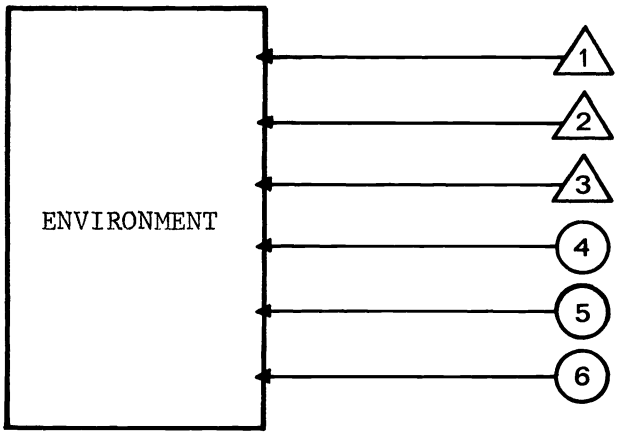

FIG. 1. Ethnoenergetic flow in a nonhuman primate population. 1,2, . . . 6, dominance hierarchy in population; ←, flow of ethnoenergy in interacting with environment.

Human populations. In human populations, although some use-values (such as air, water, and certain kinds of food) may be directly consumed on an individual basis, the scope of production is tremendously increased. Further, in contrast to the food quest of the nonhuman primate, the production and consumption of use-values by human populations is a social undertaking. The totality of use-values produced by a population is the social product, and this social product is distributed according to culturally established principles. The ethnoenergetic flow of a human population is illustrated in figure 2.

This human elaboration of the energy flow opens the way for the appropriation, by one individual or group, of the use-values produced by another individual or group, a possibility not present in nonhuman primate populations. Such appropriation is ubiqui-

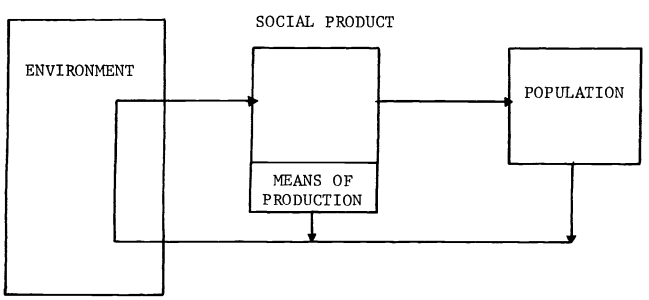

FIG. 2. Ethnoenergetic flow in a human population. →, flow of productive ethnoenergy (labor).

[3] A third energy system, unique to man, may be distinguished: the *auxiliary energy system*, involving the nonfood energy—draft animals, wind, water, fossil fuels, etc.—utilized by man. Although the auxiliary energy system is of paramount importance in the contemporary world, its analysis is unimportant for the phenomena we are discussing.

[4] Ethnoenergetics provides a three-way link between ecological energetics (Odum 1959:43–87), actonics (Harris 1964), which provides an operational data language for describing the ethnoenergetic expenditure of individuals, and the labor theory of value (Sweezy 1956:23–71). Since labor is a form of ethnoenergy, value, money, and capital are also forms of ethnoenergy.

tous in human populations. The constant exchange of use-values within human populations carries with it the constant flow of ethnoenergy between the members of the population, a phenomenon which occurs in only the most rudimentary form in nonhuman populations. In cases where the ethnoenergetic flow from one social unit (an individual or group) is balanced by an approximately equal ethnoenergetic flow in the opposite direction, we may speak of mutualistic, or reciprocal, ethnoenergetic relations. In cases where this is not so—where there is differential ethnoenergetic flow, enforced by violence or the threat of violence—we may speak of *exploitation.* Ethnoenergy flowing in one direction in excess of that flowing in the opposite direction is *surplus.*

Egalitarian populations. In egalitarian populations, ethnoenergetic relationships (with the exception of relationships between males and females) are mutualistic when considered over the life cycle of the individual. Indeed, the defining characteristic of a simple, egalitarian population is that no adult male is in a situation where he will be exploited throughout the remainder of his life. The average male can physically dominate the average female, so the exploitation of women requires little in the way of institutionalized support. Complex institutionalized mechanisms are required, however, to exploit males on other than a sporadic, temporary basis.

Stratified populations. The defining characteristic of a complex, stratified population is that some adult males are in situations where they will be exploited throughout the remainder of their lives. The result of this exploitation is a differential ethnoenergetic flow from an exploited to an exploiting class. This energy flow occurs *solely because of the efforts of the exploiting class.* These efforts take the form of definite exploitative techniques, such as simple plunder, slavery, rent, taxation, usury, and so forth. These exploitative techniques, and the differentials of wealth which emerge from them, require definite institutional supports; and in developed stratified populations these are found in the State, which controls the bodies of the exploited by monopolizing legitimate violence, and the Church, which controls the minds of the exploited by monopolizing access to the sacred and supernatural. The State and the Church, then, are instituted and controlled by the exploiting class as part of an exploitative system. Thus, just as the production of use-values requires the expenditure of a particular form of ethnoenergy, labor, so the exploitation of labor requires the expenditure of another form of ethnoenergy in exploitative techniques. The flow of ethnoenergy in a stratified population is illustrated in figure 3.

The flow of surplus to the exploiting segments of the population has two important effects. First, it results in differentials of wealth, which are reflected in differentials of prestige. Differential prestige crystallizes into a rank or status structure which not only reflects but also serves to legitimize differentials of wealth. Second, the exploited segment of the population does not submit passively to exploitation, but resists in various overt and covert ways, ranging from

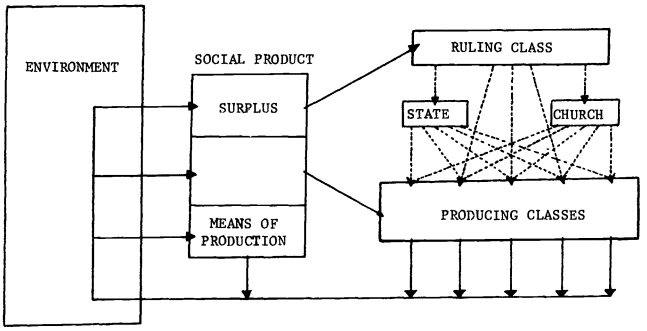

FIG. 3. Ethnoenergetic flow in a stratified population. →, flow of productive ethnoenergy (labor); - - - →, flow of exploitative ethnoenergy.

petty theft and individual flight to organized class struggle and revolution.

From a thermodynamic point of view, an economic class is a group of people who share a common relationship to the ethnoenergetic flow, as producers or exploiters, more or less finely defined depending upon the purposes of one's study. (The concepts here are similar to Weber's [in Heller 1969:24–34; cf. Caplow 1971:322–23] except that Weber defines classes in terms of economic interests in a market situation.) Class in this narrow sense need not involve class consciousness or communal action. If it does, however, it will likely lead to connubium, "the approval of marriage within the group and the disapproval of marriage outside it," and to commensalism, "the willingness of persons in the group . . . to associate on an equal footing" (Caplow 1971:322), and we may speak of a *social class* (Weber's status group). Social classes, in other words, are groups of families which (1) share a common relationship to the ethnoenergetic flow, (2) exhibit a degree of endogamy, and (3) treat each other as equals vis-à-vis the other classes. When class consciousness, connubium, and commensalism are at a peak, we may speak of castes.

Social classes, then, are Mendelian populations, and a stratified population is composed of Mendelian populations interacting in a predator-prey relationship. This relationship is analogous to predator-prey relationships between animal species, except that the stakes are not the food energy locked up in animal flesh but the ethnoenergy the human animal can expend in production. Every stratified population has one particular form of social class, a ruling class. A ruling class is a predator population whose ecological niche involves manipulation of an exploitative system in order to effect a maximum ethnoenergetic inflow. Thus, for the ruling class, the exploitative system is analogous to the productive system in simple, egalitarian populations. As Marx pointed out:

> The essential difference between the various economic forms of society, between, for instance, a society based upon slave labour, and one based on wage labour, lies only in the mode in which this surplus-labour is in each

case extracted from the actual producer, the labourer. [1965:(1887):217]

[The] specific economic form, in which unpaid surplus-labor is pumped out of the direct producers, determines the relation of rulers and ruled, as it grows immediately out of production itself and, in turn, reacts upon it as a determining agent. . . . It is always the direct relation of the owners of the means of production to the direct producers which reveals the innermost secret, the hidden foundation of the entire social structure. [1966(1894):791, as quoted in Baran 1957:44]

The above analysis indicates that we should look to the sphere of exploitation for the primary determinants of sociocultural phenomena in stratified populations. This does not, of course, deny the importance and ultimate logicophysical priority of the sphere of production. From the standpoint of the determination of specific sociocultural formations, however, it is the system of organizational and technological techniques whereby the exploiters extract surplus from the producers that brings the rest of the sociocultural system into line. If it is unable to do so, the exploiters will be expropriated. Such events are not at all uncommon or unusual in the history of stratification systems. Indeed, as Pareto (quoted in Bottomore 1966:48) remarked, "History is a graveyard of aristocracies." When a ruling class loses its ability to rule, it is replaced by a new ruling class.

While I have tried in the above discussion to present a theory sufficiently elaborate to invite and even provoke meaningful criticism, my exposition has been limited largely to the essentials for the analysis of the incipiently stratified populations of the Northwest Coast. My argument is that the social processes underlying the stratification of aboriginal Northwest Coast populations are fundamentally the same as those of stratified populations everywhere, that the chiefs and nobles formed a ruling class which exploited slaves and commoners through definite exploitative techniques supported by an incipient State-Church organization.

HISTORICAL NATURE OF THE PROBLEM

Anthropology is indebted to Codere (1950, 1961) for demonstrating that the potlatch (as it is usually known to anthropologists) was not a purely aboriginal institution, but a product of an acculturative historical development. The period before 1849 Codere (1961) designates as "Pre-Potlatch," meaning that the potlatch, although present, had not yet become *the* dominant institution of Kwakiutl society. After 1849, due to a drastic reduction of population and the domination of the Northwest Coast economy by the vastly more powerful Euro-American economy, the potlatch became the focus of Kwakiutl life.

The post-1849 period, then, is a period of acculturation, and if we are to use Northwest Coast material to examine the origins of social stratification, we must look to the preacculturation, predepopulation period. Such an examination calls for the methodology of the professional historian as well as that of the professional ethnographer. The historical record on the Northwest Coast culture begins with the earliest fur trade; the first professional ethnographer, Boas, did not visit the Northwest Coast until after a full century of Euro-American contact had completely transformed the material conditions of aboriginal life.

Codere's (1961) scheme (Pre-Potlatch, to 1849; Potlatch, to 1921; Post-Potlatch, after 1921) is insufficient for our purposes, as she was primarily concerned with the acculturative period (Potlatch and Post-Potlatch). For our purposes, the significant events on the Northwest Coast were (1) Euro-American contact and the beginning of the fur trade and (2) depopulation and the beginning of Euro-American settlement. The former may have furthered the development of social classes; the latter surely destroyed any stratification system by removing its population base and altering its economy. The dates of these events vary considerably from area to area. The first date is fairly well fixed at about 1785; the influence of the fur trade rapidly spread to tribes not directly contacted by the fur traders because of the oreexisting network of trade relations. The second date should be set at about 1860, plus or minus about 20 years. According to Codere (1950:125), "Kwakiutl population declined rapidly and continuously from at least 1837 to the year 1924." The Haida had been reduced to about one-tenth of their original population by 1880 (Krause 1956 [1885]:206). Krause (1956 [1885]:63) sees little change in the Tlinkit population at the time of her visit in the 1880s, but the figures she cites seem to indicate a reduction to 60–70% of the aboriginal population. Sproat (1868:275) states that the population of Nootka Sound was reduced from 3–4,000 in the early 19th century to about 600 in the 1860s. By 1875, Bancroft (1875:36) could write, "Now they are gone,—those dusky denizens of a thousand forests,—melted like hoar-frost before the rising sun of a superior intelligence; and it is only from the earliest records, from the narratives of eye witnesses, many of them rude unlettered men, trappers, sailors, and soldiers, that we are able to know them as they were."

I shall distinguish, then, (1) a precontact period (up to about 1785), characterized by intensive intergroup trade, slave raiding, and social classes; (2) a fur trade period (1785 to about 1860), characterized by continuation of aboriginal social structure with a possible intensification of trade and stratification; and (3) an acculturation period (after about 1860), characterized by depopulation, beginning of white settlement, domination by Euro-American economy, and the disappearance of classes while rank remained. I have relied primarily on primary historical sources (especially Meares 1790, Jewitt 1898[1815], Dunn 1845, Sproat 1868) supplemented by secondary historical sources (e.g., Bancroft 1875, Nieboer 1971[1910], MacLeod 1928) and more recent ethnographies (Boas 1921, 1970[1897]; Drucker 1951; Ray 1938; Garfield 1939; Curtis 1913, 1915).

The data comes from various areas on the Northwest Coast, the aboriginal populations of which

"shared a fundamental cultural pattern that . . . comprised Northwest Coast civilization" (Drucker 1963:11, cf. 108; Bancroft 1875:95; Boas 1966:7). There is no reason to suppose that the superficial cultural diversity between linguistic groups had any significant bearing on the stratification system. Important variation did exist in the size of the local group, from 40 or 50 persons to several hundred (Drucker 1963:112). Stratification, as discussed above, involves demographic considerations, and smaller groups were quite likely too small to be internally stratified, although they may have been plundered for wealth and slaves by the larger, more powerful groups. Such groups may have adopted a rank system in imitation of the larger ones, but, on a microethnological canvas, this was a secondary, not pristine, development (for a discussion of pristine and secondary development, see Fried 1967:231–35).

CLASS DISTINCTIONS

Throughout the Northwest Coast region, hereditary class distinctions bulked large in the social consciousnesss (Drucker 1951:243). Birth into the noble, commoner, or slave class was the most important determinant of behavior (Drucker 1951:243): "The accident of being born of aristocratic or common parents outlined the normal course of one's life: it restricted his choice of occupations and mates, defined the role he would take in ceremonies, and limited the honors he might gain among his fellows." Children growing up in each class were consciously trained in the behavior appropriate to that class (Drucker 1951:131–32):

> The children of chiefs were told to be kindly and helpful to others, and never to be arrogant; they were told that they must "take care of" their people (commoners), providing them with food, giving them feasts, winning the good will and affection of the commoners, for "if your people don't like you, you're nothing" (phrasing pretty exactly the relationship between chiefs and commoners). They were told not to quarrel; "If someone, whether chief or commoner, says something 'mean' to you, don't answer him, just walk away. A real chief doesn't squabble." A child of low rank would be told to play with a chief's children carefully, to help them, and never to quarrel with or strike them. . . . What with their explicit phrasing and infinite repetition the ideals of behavior became an influential factor in regulating one's acts in later life.

These class distinctions were clearly visible in dress and personal ornaments (Moziño 1970:13–14; Jewitt 1898[1815]:105,115,119,140–41,192; Drucker 1951: 95,99–101,244) and extended to nearly every aspect of daily behavior. Class differences in diet are indicated by George Hunt's (Boas 1921:1337) statement that "chiefs eat only the long cinquefoil roots, and the common men eat the short cinquefoil roots," and by Drucker's (1951:253) observation:

> Commoners and women (except in the case of a woman who inherited a high-high-rank position), seldom tasted seal meat, except during the Shamans' Dance, when the rights were not observed and seals were hacked into little pieces so that everyone without exception got a share. Sometimes a choice morsel—a piece of the breast, or a flipper—would fall to an old woman at one of the Shamans' Dance seal feasts. She would display it gleefully, saying, "Oho, I'm a big chief!"

Jewitt (1898[1815]:109–10) describes the eating behavior of the Nootka as follows:

> The king and chiefs alone have separate trays, from which no one is permitted to eat with them except the queen, or principal wife of the chief; and whenever the king or one of the chiefs wishes to distinguish any of his people with a special mark of favour on these occasions, he calls him and gives him some of the choice bits from his tray. The slaves eat at the same time, and of the same provisions, faring in this respect as well as their masters, being seated with the family, and only feeding from separate trays.

The size of houses varied with the rank of the chief occupying them (Jewitt 1898[1815]:99). While commoners, slaves, and chiefs all occupied the same house, each family "had a separate private compartment" (Codere 1961:444; cf. Jewitt 1898[1815]:203). Meares (1790:139; cf. Drucker 1951:221) describes one great house, with several fires, inhabited by "at least eight hundred persons":

> These were divided into groups, according to their respective offices, which had their distinct places assigned to them. The whole of the building was surrounded by a bench, about two feet from the ground, on which the various inhabitants sat, ate and slept. The chief appeared at the upper end of the room, surrounded by natives of rank, on a small raised platform, round which were placed several large chests, over which hung bladders of oil, large slices of whale's flesh and proportionable gobbets of blubber. Festoons of human skulls, arranged with some attention to uniformity, were disposed in almost every part where they could be placed, and were considered as a very splendid decoration of the royal apartment.

Bancroft (1875:160) writes that in the temporary dwellings occupied during the summer, those occupied by the poor were covered with cedar mats, while those of the rich had skin coverings.

It was, however, in ceremonial life that class distinctions were most marked. Not only the giving of potlatches and feasts, but also the receiving of gifts, seating arrangements, and guest lists reflected social rank (Meares 1790:111, Sproat 1868:59–62; Jewitt 1898[1815]:215; Mayne 1969[1862]:265; Drucker 1951:257–65). Life-cycle observances varied in size and complexity. Moziño (1970:28–29; cf. Sproat 1868:258–63; Mayne 1969[1862]:293; Garfield 1939:235; Drucker 1951:147–49) notes the class differences in funeral observances:

> The difference existing between commoners and princes influences the distinction observed in their burial rites. The bodies of the *taises* and other princes are wrapped

in exquisite otter skins, placed in a wooden chest, and suspended from some pine tree branch in the mountains. Every day four or six domestic servants (of the deceased) go to inspect it and are obliged to sing various funeral hymns around the tree; these are still heard by the soul, which does not abandon the locality of the body it once animated until the body is entirely destroyed. The *meschimes* [commoners] are buried in the earth in order to be nearer the location of *Pin-pu-la* [the "Hell" for the commoners]. There they do not have to worry about suffering, except that they consider it as suffering to be separated forever from their old masters, and to be incapable of ever elevating themselves to the high state in which these masters live.

Although class distinctions were most marked in ceremonial life, they were not limited to the "prestige" sphere, but extended to matters of subsistence and productive labor as well. There are, however, statements in the literature which could be interpreted to mean that chiefs were no better off than the rest of the population. Sproat (1868:114), for example, writes that "the chief has no officers, except his slaves, who could enforce obedience in his own tribe. . . . he never joins an assembly, nor leads an expedition in war. Though frequently receiving presents from his tribesmen, the chief is not often wealthy, as he has to entertain visitors and make large distributions to his own people." Similarly, Jewitt (1898[1815]:130) writes that slaves "reside in the same house, forming as it were a part of the family, are usually kindly treated, eat of the same food, and live as well as their masters." These statements, taken alone, could be used to bolster an argument that there were no real differences between the nobles, commoners, and slaves. No such conclusion may be made, however, if they are taken in their proper context.

Jewitt (1898[1815]:130) continues his description of the slaves as follows:

They are compelled, however, at times to labor severely, as not only all the menial offices are performed by them, such as bringing water, cutting wood, and a variety of others, but they are obliged to make the canoes, to assist in building and repairing the houses, to supply their masters with fish, and to attend them in war and to fight for them. None but the king and chiefs have slaves, the common people being prevented from holding them, either from their inability to purchase them, or, as I am rather inclined to think, from its being considered the privilege of the former alone to have them, especially as all those made prisoners in war belong either to the king or the chiefs who have captured them, each one holding such as have been taken by himself or his slaves. There is probably, however, some little distinction in favor of the king, who is always the commander of the expedition, as Maquina had nearly fifty male and female in his house, a number constituting about one half of its inhabitants, comprehending those obtained by war and purchase; whereas none of the other chiefs had more than twelve.

And Sproat's remark about the chief being "not often wealthy" refers to the fact that a head chief wasn't wealthy merely by virtue of that office. He further states (1868:114,115) that "unless accompanied by wealth, inherited rank is a poor possession. . . . the hereditary chief is an important person, whose official dignity is maintained by strict etiquette. But his actual influence in the tribe is frequently exceeded by that of some vigorous underchief." The existence of a titular ruler whose wealth and power is exceeded by others is not uncommon in stratified societies. The existence of one poor chief does not mean that the chiefs as a group were not more wealthy than the commoners. Elsewhere, Sproat (1868:52) describes the nobles as "mere gentlemen at large" and (1868:117,118) states that the commoners, although they "live much in the same way," are "less rich as a body than the men of rank."

The privileged access of the nobility to the social product was not restricted to nonfood items. In normal times everyone had enough to eat, but nobles fared better in times of famine. Jewitt (1898[1815]:189–90) seems to have been very hungry during one famine, but reports:

We were, nevertheless, treated at times with much kindness by Maquina, who would give us plenty of the best that he had to eat, and occasionally, some small present of cloth for a garment, promising me that, if any ship should arrive within a hundred miles of Nootka, he would send a canoe with a letter from me to the captain, so that he might come to our release. These flattering promises and marks of attention were, however, at those times when he thought himself in personal danger from a mutinous spirit, which the scarcity of provisions had excited among the natives, who, like true savages, imputed all their public calamities, of whatever kind, to the misconduct of their chief, or when he was apprehensive of an attack from some of the other tribes. . . . At such times, he made us keep guard over him both night and day, armed with cutlasses and pistols, being apparently afraid to trust any of his own men.

We may infer from this that Maquina had the necessary foodstuffs at all times, but only parted with them in order to ensure the loyalty of those who could protect him and his wealth from the masses when "a general revolt of the people" was feared (Jewitt 1898[1815]:190). One of Ray's (1938:56) Chinook informants declared that "famine was unknown to the [upper class] since the food of the [lower class] was appropriated in such circumstances." In a situation like that cited earlier from Kwakiutl myth, in which "starving people pay for food with dressed elkskins, slaves, canoes, and even their daughters" (Vayda 1961:621), it is reasonable to suppose that the wealthier nobles would fare better than commoners. Clearly, then, the nobles possessed preferential access to the entire social product, subsistence as well as wealth and prestige items.

It is also clear that chiefs and nobles did not engage in drudge labor, but only in more prestigious productive activity, such as whaling. The following quote from Curtis (1913:74), for example, which indicates that the slave status did not differ unduly from that of free commoners, implies that chiefs and nobles did not work as hard as slaves and commoners: "[Slaves] wielded paddles in their masters's canoes, fished, gathered wood, cooked and made baskets and other utensils, but they labored no more strenuously than the free members of the lower class, and in

return they were well treated as members of the household." Elsewhere, there is evidence of occupational differentiation between chiefs and nobles on the one hand and slaves and commoners on the other. Meares (1790:145,258) writes: "Fishing was an occupation which was followed only by the inferior class of people. . . . the common business of fishing for ordinary sustenance is carried on by slaves, or the lower class of people:—while the more noble occupation of killing the whale and hunting the sea otter, is followed by none but the chiefs and warriors." Moziño (1970:9) felt that class differences in occupation caused physical differences in stature: "The height of the common person is below average; but of the chiefs is medium; this difference may be due to the different occupations to which the former apply themselves from childhood." Nieboer (1971[1910]: 209) quotes a statement of Gibbs in 1877 on the division of labor: "A portion of them only attain the dignity of whalers, a second class devote themselves to halibut, and a third to salmon and inferior fish, the occupations being kept distinct, at least, in a great measure."

In a similar vein, Jewitt (1898[1815]:130) writes that "all the menial offices" are performed by slaves. It may be inferred that since only nobles had slaves, commoners were obliged to perform these menial offices for themselves. Jewitt (1898[1815]:152) does speak of Maquina, his master, going out on fishing parties, but he nowhere indicates that Maquina participated directly in the labor of catching, cleaning, and preserving the fish. It is not unreasonable to assume that if Maquina and other nobles had indeed worked along with the commoners and slaves in drudge labor, either Jewitt, Meares, or someone else would have been sufficiently impressed to make note of this. The only explicit statements that nobles engaged at all in productive labor are the following:

> [There] was no leisure class entirely dependent upon another class for support. . . . All the members of a household shared in the necessary labor involved in providing for themselves and for the household head and tribal chief. In this labor the slaves and even the chiefs took part. Slaves were often assigned to the more monotonous and menial tasks, but as often they and their masters worked side by side. . . . Even chiefs helped with the fishing and hunting which furnished the raw material for the various food products and also the horn for spoons, the mountain goat wool for weaving and furs and skins for clothing and trade. [Garfield 1939:271,329/

> [Slaves] gathered firewood, dug clams, and fished, but so did their masters. [Drucker 1965:52, quoted in Fried 1967:220; cf. Olson 1936:97,114]

Garfield's statement, however, says neither that chiefs worked as much as slaves and commoners nor that they engaged in drudge labor, such as carrying firewood or water, at all. Drucker's statement must be weighed against masses of ethnographic evidence to the contrary, including his own (1951:244):

> Still more noteworthy [than ornate dress] as indicative of his social role is the oft-repeated statement that "a chief did not work." He would not often deign to perform the menial tasks of fetching wood and water, nor, on many occasions, even paddle his own canoe. To be sure, he took a leading part in certain more spectacular activities such as whaling and sea otter hunting. His real duties were of an executive nature, however. The activities of his people were in his charge: he decided on the time of the seasonal movements, directed group enterprises, such as construction of large traps and weirs, planned and managed ceremonials and had the final voice in matters of group policy.

Similar kind of statements abound. Sproat (1868:52, cf. 39) further describes the fate of slaves as follows: "A slave never sat at meat with his owner; he waited upon the family and their guests, and took his own meal afterwards. His duty was to split salmon, pluck berries, carry wood and water, and to do all that he was told to do, without remonstration or remuneration." Similarly, Hill-Tout (1907:163, quoted in MacLeod 1928:640) writes: "Every family of distinction had its own body of slaves, male and female. These did all the rough, dirty work, such as keeping the house clean, fetching water, and carrying firewood." Dunn (1845:190) writes of "slaves, who do the principle drudgery." Bancroft (1875:108–9) quotes Kotzebue, who wrote about 1825, as follows:

> [A rich man] purchases male and female slaves, who must labor and fish for him, and strengthen his force when he is engaged in warfare. The slaves are prisoners of war, and their descendants; the masters' power over them is unlimited, and he even puts them to death without scruple. When the master dies, two slaves are murdered on his grave that he may not want attendance in the other world, these are chosen long before the event occurs, but meet the destiny that awaits them very philosophically.

Dunn (1845:191) describes a smallpox epidemic which in 1835 made "dreadful ravages" among the natives, "more amongst the families of the chiefs, than among the inferior classes; perhaps because these did not lead so sedentary a life, and were not so highly fed." Dunn (1845:193) describes his conversation with a Kegarnie chief (who, it should be noted, was the son of Captain Bennett of Boston and an Indian woman, and spoke English very well, but who, nevertheless, must have depended upon Indian methods of surplus extraction):

> I asked him if he would not like to go to America or England? He answered "no!" as he considered we were slaves—even our chiefs—who were always doing something from necessity, and as we were always at work for a living. "I have slaves," said he, "who hunt for me—paddle me in my canoes,—and my wives to attend upon me. Why should I wish to leave?"

There was a strong endogamous tendency within the noble class. As Drucker (1951:244; cf. Curtis 1913:68–69, 76–77; Ford 1946:36; Olson 1936:106; Ray 1938:48,72; Garfield 1939:232; Suttles 1960:297) puts it, "Society was given a castelike tinge by the

effect of the class system on the arrangement of marriages. Chiefs were expected to marry women of corresponding rank, for the honor of a noble line would be tarnished by a union with someone low in the social scale." There was more than honor at stake, however, since the alliances formed by marriage were important in politics and war. The following quotes make this clear:

> The chiefs of this country have a custom which . . . appears principally to be derived from the wars of the different states with each other. . . . This custom consists in yielding up their wives to, or interchanging them with each other. A beautiful woman will sometimes occasion a war in the desarts of Nootka, as it did formerly in the fields of Troy: a woman is sometimes found necessary to sooth a conqueror, or to purchase a favorable article in a treaty. Indeed, the privileges which the chiefs possess of having as many wives as they please, may, perhaps, have arisen from an experience of the political purposes to which female charms may be applied in peace or in war. [Meares 1790:267–68]

> Intermarriage with other tribes is sought by the higher classes to strengthen the foreign connections of their own tribe, and, I think also, with some idea of preventing degeneracy of race. . . . The poorer orders are unable to do otherwise than marry among their own people. . . . The marriage of a patrician is an important affair. He loses caste unless he marries a woman of corresponding rank, in his own or another tribe. Affection or attachment has little to do with the marriage; the idea is to preserve the family from a mixture of common blood. The marriage of a head chief must be with the descendent in the first line of another chief of similar rank, and no head chief is permitted to take a first wife for himself, or to agree to a marriage for his children by such first wife, without the consent of his tribe. Few of the head chiefs have more wives than one, it is not necessary that he take other than his first wife from women of his own rank; but the children of his extra wives have not the father's rank. The purchase of wives is made in public and great ceremony is observed when a chief's wife is purchased. Grave tribal discussions as to the purchase money, the suitableness of rank, and all the benefits likely to follow, accompany any such proposal of marriage. Most of the tribes have heralds, who announce important events, and their office, like the harpooners, is obtained by inheritance. [Sproat 1868:99]

The result of this class endogamy was what Wike (1958*a*:225–26) called "the emergence of wealthy family lines" and a "relatively stable differentiation between rich and poor family lines."

The practice of polygamy was largely restricted to the upper class, since only they could afford the ceremonies and bride wealth involved (Moziño 1970:32–33; cf. Garfield 1939:234; Drucker 1951: 301; but see also Ray 1938:73, where it is said that "polygamy was practiced by both upper and lower classes"):

> Polygamy is established among the *taises* and princes, or *catlati* (brothers of the *tais*), who consider it a sign of greatness to buy and maintain various wives. I always noticed that one among them was constantly more privileged, and that even the other wives treated her with so much consideration that next to her they appeared as mere concubines. Their acquisition is very costly to the *taises*, who can obtain them from the hands of their fathers only at the cost of many sheets of copper, otter skins, shells, cloth of cedar bark, canoes, fish, and so forth, so that the person who has four or six daughters of normal appearance can count them as so many jewels whose price will make him extremely rich. The *meschimes* [commoners] almost always find themselves incapable of incurring these expenses, because not being the owners of the fruits of their labor, except in a very small part, they can never collect the dowry. Thus, many of them die without being married, and the few that have better luck must content themselves with just one wife, which they receive at the hands of their prince as a reward for their services.

There was not, of course, a sharp break between the nobility and commoners, as Drucker (1951:245; cf. Ray 1938:48; Moziño 1970:32) points out:

> The descendants of younger sons formed a sort of middle class. They were usually addressed as "chief," and owned various of lesser prerogatives, including the offices of speaker and war-chief. In real life, there was no sharp break separating the two strata, noble and common. Not only were the relatives of the royal lines graduated in rank in proportion to their distance from the eldest families, but certain families of commoners might be raised slightly above the common level by grants of minor rights. It is this group of "low-rank chiefs" that gives informants their greatest difficulty in assigning individuals in accounts to their proper station. They do not have to hesitate a moment in saying, "Oh, he was a real chief," or "He was just a commoner." But of the middle class they usually say, "He was chief, but not very high," and "He wasn't quite a chief, but better than ordinary commoners." When one considers this unbroken gradation from high to low, the castelike appearance of the society dims perceptibly. Within the middle class shifts in rank constantly occurred. A man could not change his own rank, but he could better—or lower—that of his descendants by his marriage. Members of the higher middle class could marry into the eldest families or slightly beneath their own level without arousing disapproval. This held true for persons of any station. It was only marriages of persons widely separated in rank which carried stigma.

Social mobility was also possible, but its scope was relatively limited, as the following quote from Drucker (1951:181; cf. Ray 1938:48; Fried 1967:223) makes clear: "The shaman's career was one of the few means by which a person of humble origin could acquire prestige, and even a measure of wealth and privileges."

On the basis of the historical and ethnographic evidence it is clear that the nobility formed a social class, a population in the biological sense, which enjoyed preferential access to the social product while participating in its production only marginally or indirectly. Neither the existence of gradations between nobility and commoners nor the existence of class mobility negates this fact.[5]

[5] In fact, social mobility forms an essential part of ruling class theory. As Marx (1966[1894]:601) noted, "The more a ruling class is able to assimilate the foremost minds of a ruled class, the more stable and dangerous its rule."

As I noted in the introduction, the view that what has been called slavery on the Northwest Coast bears no important resemblance to slavery in more advanced societies has been widely accepted (see also White 1959:200–3 and Fried 1967:219–23, where slavery is viewed as part of a social "game"). It is freely admitted that a slave could be killed at the whim of his master, but it is argued that there was no real difference in life-style between master and slave and that economic exploitation was lacking. Material already discussed calls both of these ideas into question and supports Drucker's (1951:272) observation:

> The treatment accorded slaves varied according to the temper of their masters. A slave was a chattel in a very real sense; he could be bought and sold, maltreated or slain at his owner's whim. Actually, the lot of most of them was little different than that of commoners. Both classes labored for their overlords, and both were allowed to attend or even participate in festivities.

The material conditions underlying slavery on the Northwest Coast include (1) a sedentary life, based on fishing, (2) a high development of trade and commodity production,[6] and (3) the existence of warfare, providing the means of capturing slaves, and the slave trade, which removes the slaves from their place of capture and thereby prevents their escape. As Nieboer (1971[1910]:201,206,225) observes:

> Fishers are not necessarily so nomadic as hunters; and where a sedentary life prevails, there is more domestic work to be done, and the slaves cannot so easily escape. . . . A settled life makes escape of slaves more difficult. Living in larger groups brings about a higher organization of freemen, and therefore a greater coercive power of the tribe over its slaves. . . . the preserving of food, a settled life, and the high development of trade, industry and wealth, are the main causes which have made slavery so largely prevalent here.

Building and repairing houses, making canoes, fishing, carrying water, cutting firewood, and other forms of drudgery were the primary uses to which slave labor was put. The demand for such labor was increased by the development of trade and commodity production, since, as Nieboer (1971[1910]:210) points out, "The more the freemen devote themselves to trade and industry the more need there is for slaves to do the ruder work (fishing, rowing, cooking, etc.). The trade itself may also require menial work: carrying goods or rowing boats on commercial journeys, etc." In addition to laboring for their masters, slaves also assisted their masters in warfare and assisted the chief in maintaining order within the group (Nieboer 1971[1910]:215). A slave, being cut off from any prospect of escape and completely dependent on his master for his welfare and his life, would find it to his advantage to support his master loyally in warfare and in disputes with commoners. Thus, although it is undeniable that slaves gave prestige to their masters, the prestige functions of slavery were not independent of economic and political considerations.

The demand for slaves was met through slave raiding and the slave trade. Although debtor slavery occurred south of Puget Sound (MacLeod 1925*a*) and the seizing of orphans by chiefs for sale as slaves is reported for the Chinook (Ray 1938:52–53), the primary source of slaves was warfare. An analysis of Nootka mythology has shown that wars were fought for slaves, plunder, land, and fishing rights (Swadesh 1948). According to Curtis (1913:75; cf. MacLeod 1928:645; Garfield 1939:267), "it was principally for the purpose of taking slaves and plunder that war was prosecuted." The following quote from Meares (1790:267) indicates the prevalence of warfare in the 18th century and its results:

> The Nootka nations are not only in frequent hostilities with the more distant tribes, but even among themselves; . . . their villages, &c., therefore, are generally built in situations not easily to be attacked without danger. . . . Indeed, this continual vigilance is a most essential part of their government; as among these savage people an opportunity of gaining advantage is oftentimes the signal for war; and therefore, they can never be said to be in a state of peace: They must live in constant expectation of an enemy, and never relax from that continual preparation against those hostilities and incursions which doom the captives to slavery or death.

And Sproat (1868:92) observes: "Some of the smaller tribes at the north of the island are practically regarded as slave-breeding tribes and are attacked periodically by stronger tribes, who make prisoners and sell them as slaves."

The slave trade functioned to remove slaves from their place of capture, thus effectively eliminating any likelihood of escape (Nieboer 1971[1910]:209–10; Drucker 1951:111,272; Ray 1938:51–54). The extent of this slave trade can be seen from the reports of the earliest Russian fur traders that the majority of slaves among the Tlinkit were Flatheads from the Oregon region (Bancroft 1875:108; Krause 1956[1885]:105,128; but cf. Olson 1936:97).

The numbers of slaves varied from area to area. For the Nootka, Sproat (1868:117) writes that "in an Aht tribe of two hundred men, perhaps fifty

[6] While trade certainly increased with white contact (Moziño 1970:65; Wike 1958*b*), it is clear that there was an active trade before the coming of the earliest fur traders (Krause 1956[1885]:126: Nieboer 1971[1910]:207–9; Bancroft 1875). The reasons for this assertion include: (1) articles traded were not limited to white trade goods; various groups specialized in producing articles for sale to other groups (MacLeod 1927; Jewitt 1898[1815]:137–38; Sproat 1868:19,85); (2) the institutional means of trade, such as shell money and the potlatch, were of aboriginal, not white, origin (Jewitt 1898[1815]:81,138; Meares 1790:120–23; Krause 1956[1885]:128–30; Mayne 1969[1862]: 293; MacLeod 1925*b*); and (3) the mercantile mentality of the Indians was described with much respect by the earliest travelers, such as Vancouver and Menzies (Codere 1961:437), LaPerouse (Krause 1956[1885]:130), Cook (Wike 1951:26), Meares (1790:148–49), and Lewis and Clark (Ray 1938:99).

possess various degrees of acquired or inherited rank; there may be about as many slaves; the remainder are independent members, less rich as a body than the men of rank, but who live in much the same way." Other reported percentages of slaves are one-tenth among the Coast Salish (Curtis 1913:74), one-seventh among the southern Kwakiutl, one-twentieth among the Oregon coast tribes (MacLeod 1928:639), and one-third among the Tlinkit, probably exaggerated (Krause 1956[1885]:111). Among the Chinook (Ray 1938:51), "the average upperclassman owned two or three slaves, with chiefs possessing perhaps double that number. Concomly owned ten or twelve slaves; this may represent a customary maximum." For the Quinault Indians of Washington, Olson (1936:98–99) writes: "It is doubtful if they ever constituted more than a very small portion of the population. Johnson Wakinas' father is said to have owned 'about thirty' slaves, but this number is certainly exceptional. Probably few persons owned more than one-tenth this number." According to Jewitt (1898[1815]:130), Maquina had nearly 50 slaves. And Meares (1790:137–42) visited another village near Nootka Sound which was almost three times as large as Maquina's, and whose chief was much more powerful and presumably had even more slaves. The amount of surplus which could be extracted from this number of slaves would permit a quite respectable degree of stratification.

OTHER EXPLOITATIVE TECHNIQUES

Aboriginal exploitative techniques may be grouped under two rubrics, intergroup and intragroup. Slavery on the Northwest Coast may be put into the former category, since slaves were obtained from outside the group and were not considered a part of society by the natives. Simple plunder appears to have been a favorite form of intergroup exploitation for the aboriginal ruling class and, as indicated above, was a common motive for warfare (Curtis 1913:75; 1915:22; Boas 1921:1345–48; 1935:60,66–67; Ray 1938:52,59; Garfield 1939:267–69; MacLeod 1928:645; Swadesh 1948; Drucker 1951:333,359; Taylor and Duff 1956;Piddocke 1965:247; but cf. Codere 1950:105, where economic motives for warfare among the Kwakiutl are denied). Further, tribute was demanded of passing traders (Sproat 1868:79,92; Meares 1790:149, Taylor and Duff 1956:64), and Jewitt (1898[1815]:132,136,138; cf. Wike 1958*a*) speaks of various tribes as being in a state of vassalage and as paying tribute. Such intergroup exploitation, established through warfare and piracy, has the advantage that it tends to unify the local group rather than disrupt it (cf. Drucker 1951:332).

Exploitation also occurred within the local group, taking the forms, primarily, of rent and taxation. Nearly all of the productive resources were "owned" by persons with rank.[7] Niblack (1970[1890]:298; cf. Swanton 1905:71; Curtis 1915:23,137–38; Drucker 1951:248–57; Davidson 1928:22–24; Suttles 1960:300; Service 1963:216) writes:

> The whole of the territory on the northwest coast adjacent to the Indian villages is portioned out amongst the different families or households as hunting, fishing, and berrying grounds, and handed down from generation to generation and recognized as personal property. Privilege for an Indian, other than the owner, to hunt, fish, or gather berries can only be secured by payment.

This ownership (or "stewardship") of all productive resources provided the ideological justification for the collection of rent and taxation. Since the chiefs supplied all the productive resources, they were justified in collecting a portion of all fish and game captured on their property. George Hunt describes how this was done among the Kwakiutl (Boas 1921:1333–34; cf. Ray 1938:56; Drucker 1951:251–53):

> This was also asked by you about the early Indians. Indeed, they work for the head chiefs of the numaym. When the hunter goes out hunting, and he gets many seals, the hunter takes one of the seals and gives the seals as a present to the head chief of his numayn; for he can not give one-half of them (to the chief),—even if the hunter has obtained many seals—and give a feast with the other half left from what he had given to the chief. Therefore, the hunter takes one seal for food for his children and his wife. The hunter, who does so, is treated well by the chief. If a stingy hunter gives half of his seals to the chief because he prefers the price offered by another chief of another numaym, then the chief of the hunter's numaym tries to kill the hunter, and often the chief strikes the hunter so that he dies, if the chief is a bad man; and, therefore, the chiefs of the various numayms own hunters. The seals are all given to the chiefs by the hunters, for the meat of the seal is not dried. Mountain goat hunters, when they get ten goats by hunting, give five goats to the chief of the numaym, and the goat hunter keeps the other five goats and dries the meat. Sometimes the chief cuts up the goat meat for his numaym, when he wishes to do so. If he wishes to dry it, he does that way. When the chief is a good man, he does not take the goat away from the hunter by force, and the good chief never thinks that one-half given to him by the hunter is not enough. If

[7] Wittfogel would no doubt be pleased to read the following note from the journal of Alexander MacKenzie (1801:374–75), dated July 26, 1793: "From the very little I could discover of their government, it is altogether different from any political regulation which had been remarked by me among the savage tribes. It is on this river alone that one man appears to have an exclusive and hereditary right to what was necessary to the existence of those who are associated with him. I allude to the salmon weir, or fishing place, the sole right to which confers on the chief an arbitrary power. Those embankments could not have been formed without a very great and associated labour; and, as might be supposed, on the condition that those who assisted in constructing it should enjoy a participating right in the advantages to be derived from it. Nevertheless, it evidently appeared to me, that the chief's power over it, and the people, was unlimited, and without control. No one could fish without his permission, or carry home a larger portion of what he had caught, than was set apart for him. No one could build a house without his consent; and all his commands appeared to be followed with implicit obedience. The people at large seemed to be on a perfect equality, while the strangers among them were obliged to obey the commands of the natives in general or quit the village. They appear to be of a friendly disposition, but they are subject to sudden gusts of passion, which are as quickly composed; and the transition is instantaneous, from violent irritation to the most tranquil demeanor. Of the many tribes of savage people whom I have seen, these appear to be the most susceptible of civilization."

a chief is bad, he wishes more than half to be given to him by the goat hunter, and if the goat hunter does not wish to give more than half of the goats, then the bad chief will take them away by force. Then the bad chief may kill the goat hunter, but generally the goat hunter kills the bad chief, if he overdoes what he says to the hunter.

On the basis of this and of Hunt's continuing description (Boas 1921:1334–40), the chief would receive somewhere between one-fifth and one-half, or more, of the entire food production of the commoner class, depending on the power and personality of the chief (cf. Wike 1951:60; Sproat 1868:114; Curtis 1913:68). Artisans worked outside this tribute system and were supported directly by the chiefs (Boas 1921:1338–40).

The food appropriated by the chiefs in this manner did not simply accumulate in the hands of the chiefs, but instead was redistributed in feasts and potlatches. Jewitt (1898[1815]:216; cf. Sproat 1868:112,114), for example, writes: "The king is, however, obliged to support his dignity by making frequent entertainments, and whenever he receives a large supply of provision, he must invite all the men of his tribe to his house to eat it up, otherwise, as Maquina told me, he would not be considered as conducting himself like a *Tyee*, and would be no more thought of than a common man." The fact, however, that a portion of the goods obtained through exploitation was redistributed to the producers no more negates the reality of the exploitation than the payment of wages to laborers negates the exploitation inherent in capitalist production (Marx 1965[1887]:*passim,* but esp. 193–97). Several points about this redistribution should be made. First, less was redistributed than was obtained (a logical concomitant of the already demonstrated fact that chiefs were wealthier and worked less than commoners). Second, this redistribution was economically necessary. It is doubtful if the biological functioning of the group could have been maintained if the chief simply held one-fifth to one-half of the caloric production of the group. But the passing of the necessary product through the hands of a redistributor would tend to increase the power of the redistributor and foster feelings of dependency on the part of the commoners. As Drucker (1951:257, cf. 271–72; cf. Curtis 1913:68) notes: "From the native standpoint, it was through the chief's bounty that the people of lower rank had shelter and sustenance." Finally, this redistribution was an important method of attracting and holding a free labor force. As Thomas Hazard (discussed in Harris 1968:306–13; 1971:250,324) suggested, there was considerable residential mobility among the Kwakiutl and other Northwest Coast populations, with individuals and families moving about in response to changing economic and social conditions. Drucker's (1951:278–80, order altered; cf. Olson 1936:115) description and remarks on this deserve to be quoted at length.

> Actually there was no fixed rule. Chiefs tended to stay most of the time with the group in which they owned property (a corner of the house, seats, fishing places, etc.), whether this came from the paternal or maternal line. But even they moved about, and might spend a fishing season, a year, or even 2 years, with another group to whom they were related. Lower-rank people can be divided into two classes on the basis of residence. The first class lived in the corner places with some chief (to whom they were often, though not always, fairly closely related). Such people were referred to as "under the arm to" (mamutswinilim) such-and-such a chief. . . . Often they were given minor privileges in an effort to bind them more surely to their chiefs. . . . The second class stayed in the part of the house between the corners. They were called "tenants". . . . The "tenants" proper were for the most part perpetual transients. A man might spend a year or two in his mother's house, the next in his wife's father's, then live with his father's mother's group, and later go to live awhile with his son-in-law. One receives the impression that there was a continual stream of people, mostly of low rank, pouring in and out of the houses. As one informant put it, when trying to name the people living in his father's house during his own boyhood, "The people who lived in the houses used to move in and out all the time. After a man had stayed with one chief awhile, fishing and working for him, he would decide he had helped that chief enough, and would move to the house of another chief to whom he was related. If a man stayed too long in one house, his other relatives became jealous. They would think he didn't care for them any more." . . .
>
> From a chief's point of view, this migratory residence-habit was far from advantageous. All his cherished rights would be of little use to him if he could not muster enough manpower to exploit them. The fish traps from which he derived not only food for feast but his very sustenance required many hands to erect and tend. Little good the sole ownership of a stranded whale would do him were it not for many strong arms to cut the blubber and strong backs to carry it. Most of his ceremonial prerogatives required many singers and dancers to be properly used. So he was in every way dependent on his tenants. Every chief recognized this; it was taught him from childhood. His problem was, therefore, to attract lower-rank people to his house, and to bind them to him as much as possible. This he did by good treatment, generosity (giving many feasts and potlatches), naming their children, etc. A family noted as good workers, lucky and skillful hunters, or clever craftsmen would be courted to the extent of giving them economic and ceremonial rights, to entice them to associate themselves more permanently to his house. Even lazy no-accounts were not discouraged from residence; their close kindred might feel hurt and move out too. Should a whole family definitely sever their connections with one group, others would welcome them, no matter what their reputation had been.

These remarks illuminate two institutions that are frequently misunderstood, the potlatch and slavery. Feasts and potlatches, in addition to validating a chief's claim to titles and associated economic privileges, served to attract and hold a free labor force to enable the chief to exploit the productive resources he owned. Slaves formed an important captive labor force, since, unlike commoners, "the slave cannot leave the master's service" (Sproat 1868:95).

In addition to the above, the potlatch served a variety of other functions. It was, apparently, one of the means through which intergroup trade

was carried out (Meares 1790:120–23; Jewitt 1898[1815]:81,138; Mayne 1969[1862]:293; Krause 1956[1885]:128–30; MacLeod 1925*b*). Further, it functioned as an exploitative device in its own right, since the entire group contributed to the potlatch but the distribution of wealth was according to rank. Mayne (1969[1862]:264–65; cf. Boas 1921:1344) describes a potlatch in which a chief gave away 480 blankets, 180 of them his own and 300 of his followers', and sums up the results as follows: "Thus do the chiefs and their people go on reducing themselves to poverty. In the case of the chiefs, however, this poverty lasts but a short time: they are soon replenished from the next giving away, but the people only grow rich again according to their industry. One cannot help but pity them, while one laments their folly." The potlatch, then, may be thought of as a thermodynamic pump, effecting an ethnoenergetic flow upward and outward, with the reciprocal inward flow benefiting primarily the nobles according to rank.

THE STATE-CHURCH

Although there does not appear to have been a monopoly of violence, it seems clear that the balance of power did indeed lie with the aboriginal ruling class. The power of the nobility over its slaves was, of course, complete: no one has questioned the fact that a slave could be maltreated or killed at the whim of his master. The chief also had ways to enforce his will on the commoner class. Sproat's (1868:114) oft-quoted remark that the chief had "no officers, except his slaves, who could enforce obedience" implies that slaves were used to enforce chiefly will, an interpretation supported by Olson (1936:96; cf. Nieboer 1971[1910]:215): "If a man were a murderer or a persistent troublemaker the chief might advise the people that he could be killed with impunity; or he might order his slaves to kill the offender." A chief's relatives might perform a similar function. Ray (1938:56) describes one chief's actions: "He was constantly sending one or another of his ten sons (agents were always used in property appropriations) to seize goods from some commoner, the penalty of resistance being death." Jewitt (1898[1815]:189) notes that as a slave he was treated better in times of unrest to ensure his loyalty and (pp. 140–41) that only the nobles were permitted to carry war clubs. The chief, with his relatives and slaves, then, may be considered the nucleus of an incipient state organization.

Chiefly political control was reinforced by a unity between the ruler and the supernatural beings that controlled natural phenomena. The economic ownership of productive resources was legitimized by the fact that the chief, as "high priest," was responsible for the rites and prayers which maintained the productivity of the resources. Moziño (1970:24–25; cf. Drucker 1951:164, 265; Drucker and Heizer 1967: 11–12; Service 1963:222–23) observes in this regard:

> The government of these people can strictly be called patriarchal, because the chief of the nation carries out the duties of father of the families, of king, and high priest at the same time. These three offices are so closely intertwined that they mutually sustain each other, and all together support the sovereign authority of the *taises*. The vassals receive their sustenance from the hands of the monarch, or from the governor who represents him in the distant villages under his rule. The vassals believe that they owe this sustenance to the intercession of the sovereign with God. Thus the fusion of political rights with religious rights forms the basis of a system which at first glance appears more despotic than that of the caliphs and is so in certain respects, but which shows moderation in others. . . .
>
> The moderation of this system consists in the fact that the monarch, in spite of being convinced of the value of his orations, does not fail to recognize that these would be unfruitful for the sustenance of himself and his subjects if they did not also employ their working efforts in fishing, hunting, lumbering, and so forth. This obliges him to arm them like sons to defend themselves from their enemies at all risk, and to alleviate as much as possible the hardships of life. It would be very boring to express in detail the deeds that substantiate what I have referred to; suffice it so say that in Maquinna I have always observed inexpressible feeling over the loss of one of his subjects by death or flight; that his subjects treat him with familiarity but maintain at the same time an inviolable respect.

This privileged access of the ruling class to the supernatural continued in the afterlife (Moziño 1970:28–30, order altered):

> They believe that the soul is incorporeal, and that after death it has to pass to an eternal life, but with this difference: the souls of the *taises* and their closest relatives go to join those of their ancestors in glory where Qua-utz resides. The commoners, or *meschimes*, have a different destiny; for them there awaits a Hell, called *Pin-pu-la*, whose prince is Iz-mi-tz. . . . The *taises* do not believe this retribution unjust, which appears to be more the predestined compensation for the sheer accident of birth than for the personal merit of those individuals. They are convinced that since the commoners are able to enjoy the pleasures of sensuality at all times, not being subject to the painful observance of the fast, nor to the hard work of prayers (in all of which the chiefs are heavily obligated), they are not worthy of a reward which would liken them in a certain manner to the Deity. . . . [The souls of the *taises*] are the authors of the lightning and the rain; the lightning is testimony of their indignation and the rain of their feelings. Whenever any *tais* overcomes some calamity by his own efforts, the rains are the tears which his sympathetic ancestors spill from heaven; the lightning strikes when they discharge their arms to punish evil-doers. Those *taises* who abandon themselves to lust, the gluttons, the negligent in offering sacrifices, and the ones lazy in praying, suffer the miserable fate of a commoner at the end of their lives.
>
> The belief that the monarch who presently governs them will in time become one of the fortunate ones, capable of overthrowing all the harmony of the elements at his pleasure, obliges the subjects to show him as much veneration as they consider appropriate to a sacred person. Not even by accident is one permitted to lay his hands on the sovereign.

The privileged access of the nobility to the sacred and supernatural took a variety of forms. Among the Kwakiutl, during the time of the winter ceremonial the clan organization was replaced by a religious one based on the "secret societies." "The whole tribe is divided into two groups: the uninitiated, secular, who do not take any active part in the ceremonial, and the initiates" (Boas 1966:174). Since the latter were recruited entirely from the nobility (Boas 1970[1897]:418,338; 1966:173; cf. Ray 1938:89; Garfield 1939:303,313), this sacred/profane division reflected the fundamental class division in Kwakiutl society. Of the numerous kinds of secret society, one of the most significant was the *hā'mats'a,* or cannibals, "possessed of the violent desire of eating men" (Boas 1970[1897]:437), who not only devoured corpses and bit "pieces of flesh out of the arms and chest of the people," but in at least two cases are reported to have killed slaves for cannibalistic purposes (Boas 1970[1897]:439–40). The cannibal song boasts of the fearsome "magic power" manifested in this behavior (Boas 1970[1897]:461):

> I have the winter dance song, I have magic powers.
> I have the hā'mats'a song, I have magic powers.
> I have BaxbakualanuXsi'wae's song, I have magic powers.
> Your magic power killed the people, and therefore they all hide from you, fearing your great power.

Another important secret society (Boas 1970 [1897]:468–69) was "the nōō'nLEmaLa or 'fool dancers,' . . . messengers and helpers of the hā'mats'a, who help enforce the laws referring to the ceremonial. Their method of attack is by throwing stones at people, hitting them with sticks, or in serious cases stabbing and killing them with lances and war axes. . . . The nōō'nLEmaLa wear lances and war clubs during the ceremonials, with which they kill the offenders of the hā'mats'a." To be sure, not all of the secret societies engaged in activities as gruesome or fearsome as these. But the monopolization of access to the "supernatural power in and around the village which sanctifies all activities" (Boas 1966:172) by the ruling class could not but have functioned to produce feelings of fear, awe, and acquiescence on the part of the uninitiated populace, thus supporting the exploitative system.

The prestige system, with its graded ranks and associated potlatch behavior, not only reflected class differences in access to wealth and subsistence items and to the sacred and supernatural world, but also provided an ideology which justified and legitimized these differences.

Ruling class control, then, was economic, political, and ideological. It was, however, far from complete and not always effective. There are numerous references in the literature to the murder or desertion of "bad chiefs" (e.g., Sproat 1868:196; Boas 1966:45; Drucker 1951:318). This is scarcely surprising—the eco-niche of the ruling class is by its very nature a precarious one, especially before an effective State-Church has developed—and the possibility of overthrowing a chief in no way negates the reality of stratification.

CONCLUSION: RANK AND CLASS ON THE NORTHWEST COAST

The evidence discussed above permits only one conclusion: the aboriginal populations on the Northwest Coast in the late 18th and early 19th centuries were stratified, with an indigenous ruling class obtaining its wealth and privileges through definite exploitative techniques and supporting its rule through an incipient State-Church organization. The prestige system reflected and legitimized the underlying system of exploitation. It is essential to realize, however, that the stratification system disappeared at least a generation before professional ethnologists began to study Northwest Coast culture. With depopulation and the reorientation of the aboriginal economic system, the remaining Indians became attached to the white Euro-American economic system as a disadvantaged minority group. As the number of Indians dropped below the number of rank positions, the ranks lost their aboriginal economic significance, but retained their prestige value and acquired a new significance: every Indian could become a chief through potlatching. The resulting burlesque, described by ethnographers and enshrined in anthropology textbooks, has little to do with aboriginal economic behavior but instead reflects, as Harris (1968:312) notes, "a society celebrating its own funeral." The situation of rank without class, then, like the potlatch (Codere 1950) and the tribal divisions (Fried 1966:538, citing Colson 1953:79), belongs to the realm of acculturation studies, not aboriginal economics.

Abstract

According to the prevalent interpretation of aboriginal cultures of the Northwest Coast, nobles may think they are nobles, but they are not, and slaves may think they are slaves, but they are not. Topsy-turvy as this may seem, it can be explained in ecological and evolutionary terms. The natives, it is argued, are quite literally thinking their way into a better adjustment with their environment; and, on a larger canvas, it was through similar mental feats that other cultures thought their way onto the path leading to social stratification and the state. This paper attempts to correct this interpretation by viewing social stratification in thermodynamic terms, as a process in which economic surplus is pumped out of the direct producers and into a ruling class. Evidence is presented in support of the view that there was an aboriginal ruling class on the Northwest Coast which obtained its wealth and privileges through definite exploitative techniques—slavery, rent or taxation, and the potlatch—and supported its rule through an incipient State-Church organization. Accordingly, the rank system and the potlatch are to be understood not in terms of the population as a whole adapting to its environment, but in terms of the sociocultural design of an exploitative, class society.

Comments

by JOHN W. ADAMS
Ottawa, Canada. 4 III 73

My wife, Alice Kasakoff, and I have carried out fieldwork recently among the Gitksan (an inland group of Tsimshian) which fully substantiates the principal ethnographic interpretations of Ruyle: slaves were held aboriginally for their economic value; a system of classes existed based upon differing rights to resources; and the religious system was utilised by the chiefs as a means of social control (Adams 1973).

The evidence from the Gitksan, however, does not support Ruyle's contention that there existed two separate Mendelian populations, for there was, and is, considerable upward and downward mobility. Only those who can name a grandfather who was a chief are considered members of the chiefly stratum. Collateral branches of expanding chiefly lineages tend to become commoners in time; while chiefly lineages which die out, as many quickly do, are often replaced by commoners "promoted" by the other chiefs in order to fill the vacant statuses (for resources are never redistributed when the owners die out). Genetically, then, if not ideologically, the two principal social strata are the same.

When a chief dies, outsiders may "pay for his funeral and take the name" if his own lineage is unable or unwilling to do so. Food and money are usually contributed and received in standard amounts according to rank, so the obligation to reciprocate means, in effect, that participants (really the perpetual statuses of the resource-owning Houses, not their occupants) "break even" over the long run, despite temporary imbalances and "leaks." So people, not food and wealth, are actually redistributed in the potlatch system, as expanding groups disperse to fill the statuses left vacant by groups which have died out.

Thus I agree with Ruyle's criticism of the Suttles-Vayda-Piddocke interpretations of the potlatch, and I agree with him also that there was economic exploitation of the lower stratum by the upper. Now that all the natives have access to the cash economy, however, a different kind of exploitation, undoubtedly aboriginal, can be seen—the compulsion to participate in the distribution system of the potlatch. This is largely because it is a "total social phenomenon" so pervasive that there was and is virtually no escaping it. Ruyle's conceptualisation of exploitation solely in terms of upper/lower class relations to the means of production, together with his assertion of a biologically inevitable dominance of women by men and his postulation of perfectly egalitarian societies, has the effect of reducing an important topic to the level of stereotypes. This not only obscures the real relations in the data, but invites dismissal of the whole topic because the clichés used as the tools of analysis are so easily dismissed.

by HATIM A. S. AL-KA'BI
Baghdad, Iraq. 25 II 73

Ruyle's paper is a very interesting and illuminating attempt. The presentation is very appropriately directed to the theme that "there was an aboriginal ruling class on the Northwest Coast which obtained its wealth and privileges through definite exploitative techniques—slavery, rent or taxation, and the potlatch—and supported its rule through an incipient State-Church organization." I am afraid, however, that the writer, like almost all Marxists, may have been somewhat eclectic in his evidential and supporting citations.

It is true that slavery, the potlatch, and many other phenomena of such an incipient stratification system cannot be the result of mere adaptation to environment. But to suppose that a Kwakiutl heaps up all of his property and sets fire to it, as they sometimes do, just because of the principle of pumping out to effect ethnoenergetic flow in society is, it seems to me, mere speculation.

The writer begins by challenging the validity and clarity of certain (inexplicable) functional conceptualizations and interpretations of some of the phenomena he discusses. When he tries to explain the working of the stratification system in the Northwest Coast societies, however, he inserts new esoteric concepts such as ethnoenergetics, thermodynamics, and the like. Hence, his presentation does not prove that such an interpretation is valid or right. Further, such a scheme indicates a relapse to the mechanistic or organismic types of explanation that characterized earlier efforts in the social sciences.

It is well known that the potlatch confers prestige. Accordingly, it has its roots in individual or group interest. Thus Ruyle rightly treats it in terms of exploitation. When he talks about the society as a whole in terms of ethnoenergetics and the like, however, he tends to overlook this picture of intergroup and intragroup interaction in terms of (exploitative) interests and to emphasize holistic explanation as do the adaptationists and functionalists he criticizes.

by JUDITH K. BROWN
Rochester, Mich., U.S.A. 5 III 73

Ruyle states that the presentation of his thermodynamic approach to social stratification is "limited to the essentials." Perhaps its reductive quality can be attributed to the brevity of its exposition. But the model fails to intimate, let alone explain, why in the course of human history societies characterized by "mutualistic ethnoenergetic relationships" have been almost entirely replaced by societies in which the ethnoenergy flow is "differential." Was it perhaps because the wily serpent suggested that the exploitation of women (which for Ruyle appears not to disqualify a society as "egalitarian") can be extended, through the application of "complex institutionalized mechanisms," to the exploitation of men? In other words, the model fails to explain why some members of a society would embark on a course of exploitation, a course which appears to demand much effort, contrivance, and nastiness.

As Ruyle himself suggests, verification for his hypothesis concerning stratification on the Northwest Coast must depend upon sources which antedate the descriptions of ethnographers. Particularly crucial are the accounts from the 18th and early 19th centuries. Reports of travelers and traders of the period vary tremendously in trustworthiness. How long did the writer stay with the "natives"? How much does the writer project characteristics of his own society onto the observations? (See, for example, Ruyle's quotations from Moziño, which attribute a "monarch," a "governor," and "vassals" to the Nootka.) For the nonspecialist reader, it is unfortunate that Ruyle failed to comment on the selection of his earliest sources. Choices have been made, since we are told in n. 6 that other early accounts were used by Ruyle only as they are cited in secondary sources. Furthermore, the earliest primary sources most extensively quoted deal only with the Nootka. Were the similarities among the societies of the Northwest Coast, affirmed by ethnographers, merely the result of prolonged contact with the Euro-American economic system? How representative of the entire area were the Nootka in the 18th century?

Ruyle proposes definite stages in the development and decline of incipient stratification, yet his citations are not ordered for these time periods. Quotations from the 18th century are mingled with Hunt's statement to Boas concerning "the early Indians" and Drucker's ethnography. Furthermore, a number of the quotations are ambig-

uous. Although Ruyle's hypothesis is provocative, the data offered in its support are not convincing.

by PETER CARSTENS
Toronto, Canada. 6 III 73

Dahrendorf, when I met him in 1962, was mainly interested in stratification in industrial societies, while I was largely concerned with class and status on Indian reserves. One of our mutual concerns, though we were relatively uninformed, was a feeling of bewilderment over the "theories" of Northwest Coast stratification. If I recall correctly, he once dismissed Suttles's various reformulations of the problem as being totally lacking in understanding of the basic principles of stratification. He was in particular objecting to what might be called the eufunctional theory of potlatching among the Coast Salish, a theory that conveniently evades the concept of stratification with exploitation as a basic ingredient. I introduce Dahrendorf's ideas into this discussion not because I believe that he has written the last word on stratification systems, but rather because his work (e.g., Dahrendorf 1969) would have been enriched had Ruyle's paper been published earlier. It is also worthwhile noting that a distinguished sociologist who has always been concerned with the relevance of comparative social science should also be aware of the contemporary value of precontact ethnography.

The two major topics that now need clarification and further analysis by Ruyle are the nature of Northwest Coast slavery and the structure of Northwest Coast stratification systems. Regarding slavery, Ruyle should make up his mind whose accounts he is going to accept and how he intends to interpret them. For example, quoting Jewitt (1898 [1815]:130), he leads one to believe that slaves were often skilled workers and craftsmen and sometimes petty officials. Later, however, quoting Nieboer (1971 [1910]:210), he seems to downgrade these same skills to "forms of drudgery," presumably because he does not want slave work to sound too elegant. Perhaps these Northwest Coast slaves were in fact more like those of ancient Greece and Rome than Ruyle appreciates; and few historians would deny that Greek and Roman slaves *were* subject to exploitation by coercion.

I think it would help all of us if the author could attempt to produce some sort of diagram or model indicating how the various strata of preconquest Northwest Coast peoples were arranged. We have been presented with excellent diagrams to explain the ethnoenergy system; could we not have an elaboration of the stratification system as it appears (in another context) in Ruyle's figure 3? Some enlightened demographic estimates of the relative sizes of classes and status groups would also be appreciated.

by H. J. M. CLAESSEN
Leiden, The Netherlands. 26 II 73

Ruyle tries to demonstrate that the Northwest Coast Indians (*a*) possessed not only rank, but also class, (*b*) kept real slaves, and (*c*) had a prestige system not based on adaptation. He presents some rather convincing arguments to support his theory, but I would raise the following questions:

When is the word "class" used "in the proper sense"?

The arguments against the influence of fluctuations in food supply on the origin of stratification are sound. However, there have been fluctuations, so why deny even the possibility that people sometimes created or reinforced prestige by "presenting" food to less fortunate groups? Some remarks in the 1778 journals of Cook, Clerke, and King (Beaglehole 1967:299, 302, 1326, 1396, 1398) create the impression that these Indians tried to monopolize the goods of the Europeans to have the opportunity to barter these with other groups and thus gain prestige.

What is the meaning of "mystical" as characteristic of the "new orthodoxy"? Is it simply a synonym for "nonmaterialistic"?

Though exploitation is a useful concept for characterizing stratification, I fail to see how it can explain its origin. Exploitation becomes possible only when some people already have some kind of dominance (economic, social, religious) over others (cf. Fried 1967, Goldman 1970, Kottak 1972). Nieboer (1971 [1910]) pointed in this direction when he stressed the importance of large groups, fixed habitation, etc. Baks, Breman, and Nooij (1966) see stratification as a necessary condition for slavery (cf. Köbben 1970).

With the help of the sources Ruyle cites and others, it might be possible to describe the evolution of stratification in this culture in some detail; compare, for instance, the information of Cook, Clerke, and King in 1778 (Beaglehole 1967) on chieftains, slavery, and commerce with the data of Lewis and Clark from 1806 (De Voto 1966) and Von Kotzebue (1830) on these subjects.

The fact that these Indians had nonunilineal descent (cf. Harris 1968: 304, 306) makes possible a comparison with Polynesia. Goldman (1970) gives an interesting explanation of the evolution of Polynesian society with the help of the same type of descent and the status rivalry it provoked. Though this is a nonmaterialistic viewpoint, it might be of use in the study of the Northwest Coast Indians.

by WILLIAM W. ELMENDORF
Madison, Wis., U.S.A. 9 III 73

Ruyle's treatment is interesting and stimulating. He has aired a complex and debatable topic and tried to reduce some of the confusion surrounding previous treatments of it. His model of precontact native society is carefully worked out, and it should permit derivation of testable hypotheses applicable to a variety of other comparable stratification systems.

However, I have some specific reservations concerning intraregional diversity, the "orthodox view," the concepts of rank and class, and the precontact social model.

Ruyle tends to ignore, or to dismiss as "superficial," cultural differences between Northwest Coast peoples. His data range from Tlingit south to Coast Salish and Chinook and are heavily concentrated on the Wakashan Kwakiutl and Nootka. Within this range, there are striking social-system differences. Ruyle is not to blame for disproportions in the available ethnographic data, but it seems too bad that he tends to perpetuate an old stereotype of "Northwest Coast equals Kwakiutl." Whether or not the cited statement that "a chief did not work" is really true for Kwakiutl or Nootka, it is directly contradicted by a Coast Salish emphasis on industry in high-status families, for both men and women (cf. Elmendorf 1960:327–36, esp. 333). To anyone who has done fieldwork in different parts of the Northwest Coast, such dismissal of intraregional variation fails to carry conviction.

The supposed "orthodox view" of Northwest Coast socioeconomic features may be in fact a poorly sewed-together straw man. It seems to involve three distinct views: (*a*) the Drucker-Codere rank-without-class view; (*b*) a Curtis-Drucker-Barnett-Rohner view that slaves were economically unimportant; and (*c*) the Suttles-Vayda-Piddocke-Weinburg view that native prestige systems were habitat-adjustive. It is perfectly possible to reject or qualify one of these positions without dismissing the others; they are not

linked as parts of a logically coherent model.

With regard to view (*c*), Ruyle's argument about absence of "abject starvation" seems beside the point. Relative differences in accessibility of different resources seem to be all that is needed to underpin the Suttles-Vayda argument. Further, the writer here seems to overlook the fact that food exchange and potlatch gifts are two different things.

Much previous discussion of the rank/class problem rests on different tacit or expressed meanings of the term "class" and on generalizations from different bodies of ethnographic data (cf. Elmendorf 1971:361–62). Ruyle has introduced an explicit model of class structure and function, which does accord with native formulations from different parts of the area implying both ranking of free individuals and separation of free groups as ascribed upper and lower strata. But his insistence on exploitative functions of a class system raises doubts. I keep thinking of the consistent *mutually supportive* function of lower/upper status relations in Coast Salish situations (cf. Suttles 1958).

A major thrust of Ruyle's paper is that, following contact with Western civilization, Northwest Coast socioeconomic arrangements underwent drastic changes during the 19th century. Consequently, ethnographic data from the 1890s or later reflect social systems in many respects unlike those of the untouched 18th-century culture. It is the system of precontact times, roughly, before 1785, to which Ruyle's model pertains. If we assume his model of precontact social classes, then we must derive from it, in accord with ethnohistorical and ethnographic data, a processual model successfully accounting for a series of subsequent changes. Further, these changes, all starting from the base-line precontact model, must be shown to have operated at different rates and with different end results in different parts of the region. Such a treatment would not seem to necessitate exactly Ruyle's model as a starting point. Whatever these precontact (and unreported) social conditions may have been, it is possible that they did not operate in entire accord with a resolutely Marxian model.

by JAMES C. FARIS
Storrs, Conn., U.S.A. 26 II 73

Ruyle has attempted a historical-materialist reinterpretation of Northwest Coast society. Not only does this help clear away the deadly functionalism cultural ecology has dumped on the region, but it also marks the beginning of real understanding. We would of course want to know much more about the roles of the nonslave producers, the nature of the rent requirements, and the organization of the ruling classes over time in order to understand the potentialities of the systems and to specify the nature of their contradictions. But the immense explanatory advantage of this approach is well indicated by Ruyle.

The promise and essential adequacy of Ruyle's reinterpretation makes his use of "ethnoenergetics" puzzling. It is difficult to see that specification of energy flow or thermodynamic coefficients of events, even if it were possible to document, adds anything nontrivial to the analysis. The paper would in fact have fared better if the ethnoenergetics had been left out altogether, for it is in the attempt to tack ethnoenergetics to the analysis that unfortunate mistakes appear. Ethnoenergetics is an empirical measure requiring rigid specification and as such cannot be considered a statement of the underlying process. It cannot penetrate beneath the surface; it remains descriptive. The ultimate job of science is explanation—a statement of process which explains the data of our sensory perceptions, not simply the description or documentation of those perceptions. As Marx (1967:817) reminds us, if the appearance of things coincided with their essence there would be no need for science at all.

The principal error rests in Ruyle's attempt to specify class in ethnoenergetic terms. Specified ethnoenergetically, classes appear to be for Ruyle, as they were for Weber, a form of stratification—an empirically specifiable entity rather than an explanatory construct. Class was, for Marx, a theoretical construct to generate the data about which he spoke, to show how it came to be (Newcomer 1972). Ethnoenergetics can at most describe the consequences of social process; it can never reveal the dynamics and motive forces of this process. Ethnoenergetics aside, however, Ruyle's paper gives us an important glimpse of the dynamics and social history of the Northwest Coast and in this constitutes a breath of welcome fresh air.

by ROBERT STEVEN GRUMET
New Brunswick, N.J., U.S.A. 12 IV 73

While agreeing with Ruyle's conclusions on questions regarding rank and slavery on the Northwest Coast, I must take exception to his treatment of Suttles and Vayda's work concerning the potlatch. Let's examine some of their "severe deficiencies in empirical and theoretical analysis."

First, contrary to Piddocke's view, a cyclical, year-to-year fluctuation of salmon runs is not essential to the functioning of the Suttles-Vayda potlatch model. Fluctuation and relative deprivation are the important things. Admittedly, salmon is a foodstuff of cardinal importance in the area. But is that all the people eat? Suttles (1962, in Cohen 1968:103) notes that "as compared with the Coast Salish, the more northern tribes rely on fewer kinds of plants and animals and get them at fewer places and for shorter times during the year, but in greater concentration, and with consequent greater chance for failure." This certainly makes for fluctuation in resource availability.

It's difficult to operationalize starvation. It seems Drucker and Heizer can only recognize starvation when emaciated skeletons are dropping like flies around them. Do situations have to be maximized before they can be acted upon? Hollings and Goldberg (1971) state that systems with a stable equilibrium, operating at an efficient, "normal" level, have a broad domain of stability and can respond to many stresses over a wide spectrum of intensities. When stresses become too great, this domain of stability shrinks, and lower-order stresses exact much more of a toll than they otherwise would. The authors suggest that when the domain of stability shrinks, the system attempts to maximize opportunities to reestablish stability. Prior to the coming of the Europeans, it can be said that conditions vis-à-vis the potlatch were rather stable. Northwest Coast societies, despite having marked disparities in resources, probably remained at equilibrium for long periods of time. If the Suttles-Vayda model works, as they suggest, to regulate pressures on the domain of stability, no Northwest Coast groups would experience Warsaw-Ghetto-like starvation. Of course many kinds of stresses can account for starvation, however it be defined, among them breakdown in trade systems, natural catastrophes, war, and disease.

Ruyle states that low-class people would have low-class affines and that "neither affinal exchange nor the potlatch mechanism would alleviate their distress." Low-class people have wealthy relatives. Poorer relations become the retainers of the more powerful members of their lineages.

Finally, Suttles (1968*b*) cites two instances of changes in status brought about by potlatching. In the "rivalry potlatch," many contenders compete for a single rank slot and only one

wins, with a commensurate raising of status when he takes the position (which the potlatch validates, of course). With diseases and out-migration substantially lowering the number of persons available to fill the rank positions, it seems plausible that the coming of Europeans would result in increased mobility. Suttles also describes the rise and fall of a certain Kwakiutl individual in the potlatch.

Contrary to Ruyle's doleful account of its shortcomings, the Suttles-Vayda model holds up rather well. A less slavish dependence on Drucker and Heizer might have been in order; the acceptance of Suttles and Vayda's position in no way threatens Ruyle's central thesis, which in other respects has much to recommend it.

by THOMAS HAZARD
Rockville, Md., U.S.A. 22 II 73

Ruyle has made a valiant attempt to reconcile a number of seemingly irreconcilable or at least partially contradictory points of view concerning some aspects of aboriginal economics and social organization on the Northwest Coast. I applaud his conscientious industry; yet, in the end, I find myself dissatisfied. Some of the reasons for my dissatisfaction have to do with the substance of his argument, others with his interpretation of the conclusions of previous students and observers. The most important difficulties, however, have to do with approach and method.

In my view, Ruyle has not tested his hypotheses, but rather has tenaciously clung to them despite countervailing evidence, some of which he cites. This fallacy, that of superimposed abstraction, is related to both the fallacy of misplaced concreteness (Whitehead 1955:11) and the fallacy of precarious margins (Collingwood 1967:22), but is coincident with neither. Ruyle is of course by no means the only worker subject to these fallacies; my own work has displayed them on more than one occasion. Moreover, we all have to contend with our unacknowledged premisses and assumptions, unconscious and conscious, ethnocentric and idiosyncratic. Furthermore, those of us who have managed to survive that peculiar and insufficiently examined exploitative system known as the American Ph.D. "track" have to face up to the tyranny of preprogrammed proselytization. In this also I am in sympathy with Ruyle's predicament.

Returning to the specifics of his work, I believe it serves little purpose to speak of "proper context" unless we are willing to immerse ourselves in ethnography. It serves even less purpose to speak of anyone's "méthodology," for the word "methodology" carries no substantive meaning whatever and never will have meaning until there are genuine methods to be studied and compared.

Concurring with Hymes (1968:42), I believe we must return to making a sharp distinction between the role of the ethnologist and that of the ethnographer, whether these roles are carried out by the same person or not. I realize, of course, that in a day when press, public, and practitioner alike almost habitually say "anthropology" or "anthropologist" where "ethnography" or "ethnographer" is wanted, this distinction will be extremely difficult to put into consistent practice.

by HAROLD K. SCHNEIDER
Bloomington, Ind., U.S.A. 7 III 73

Having been raised in the "objective" tradition of scholarship, I feel rather edgy in the presence of the "conspiracy" school. I therefore approach Ruyle's paper with extreme caution, because at the same time that it designates a Kwakiutl propertied class as exploiters it brands any other interpretation as conspiratorial-exploitative. I'm damned if I disagree and damned if I don't. However, never daunted, I plunge into the paradox.

Marx, as Meillassoux (1972:93) has argued, never extended his theory to the inner workings of primitive societies, focusing rather on the historical succession of modes of production. While speculating about how Marxist theory would look in this context (for example, suggesting that a main characteristic of such systems is control of the means of reproduction, rather than of production), Meillassoux thinks that the extension of Marxist analysis to primitive societies is only beginning and should be fostered. Ruyle's paper meets Meillassoux's urging, but the result, I feel, is not as I would hope.

My general feeling is that Ruyle imprints class, exploitation, and the labor theory of value on the Kwakiutl. He needs classes rather than ranks, so he insists that they existed and attributes the emergence of the idea of rank to a "new orthodoxy." He needs an exploited lower class, so he attacks the Suttles-Vayda ecological-functionalist position (very successfully, I feel) and attributes its emergence to a "strategy" designed to destroy materialist interpretations of the origin of social stratification. And he needs to apply a labor theory of value, so he introduces the concept of "use-value," defined as the transformation of natural things to valued goods by the application of labor; here conspiracy is introduced in the form of an exploiting class which deprives the laborer of some of his value through violence and the threat of violence. Throughout the analysis, those who have property and those who interpret that evidence in another way than Ruyle's emerge as conspirators and exploiters.

Marxist thinking has a good deal to contribute to emergent formal economic anthropology, particularly in relating social interaction to the material sphere. Economists have generally avoided doing this. Even today, when the failure of development schemes over the last decade has led them to reevaluate their thinking and to cast coy glances at the social system, they tend to treat the interaction sphere as an exogenous variable which will magically solve the problems of their materialist models if they plug it as a constant into their equations. Social interaction will have to be taken more seriously than this, but Ruyle's is unlikely to be the best approach to the merging of materialist and social economics.

I have to stick to my bourgeois, objective approach and argue that Ruyle's analysis short-circuits what could be a useful debate over such counterclaims as that an exploiter is simply an entrepreneur, whose presence is inevitable in any economic system; that the value of labor, like any other value in an economy, is a function of the demand for it; and that classes arise as epiphenomena of the imbalance of material exchanges, which is essentially the message of the analyses of Belshaw (1965:20–29), Epstein (1968), and Bennett (1968).

by ARNOLD A. SIO
Hamilton, N.Y., U.S.A. 2 III 73

As a description of the social structure of Northwest Coast society, Ruyle's paper clearly demonstrates the value of his historical method in questioning the assumptions underlying ethnographic accounts and dealing with some of the problems these have created. Looking at it as an interpretation, however, I fail to see how the thermodynamic approach informs the analysis; that is, the pivotal concept of exploitation doesn't seem to require the elaborate theoretical underpinnings advanced for it, especially in view of the definition of class in terms of which the analysis proceeds.

Moreover, although Ruyle asserts that "exploitation is the central aspect of social stratification" and that the "primary determinants of sociocultural phenomena in stratified populations" are to be found in the "sphere of exploitation," he acknowledges that stratification can be approached in other terms, such as "position" or "norms." While his analysis of stratification in terms of exploitation seems to me to demonstrate the value of that approach for Northwest Coast society, this is hardly to be taken as evidence for the centrality of exploitation in all systems of social stratification.

It is curious, indeed, that the conception of slavery as of no economic importance on the Northwest Coast should have remained unchanged through the 75 years since Boas's early work. Ruyle did well to turn to the work of Sproat, Hill-Tout, and especially MacLeod for his revision of the conception of slavery as exclusively of prestige value. However, he might have emphasized the very active and voluminous nature of the slave trade. Even the tribes on the plateaus of Oregon and Washington and in northern California, who did not keep slaves, raided other groups to obtain victims to sell to the Chinook in the great intertribal market at the Dalles on the Columbia River; and Fort Simpson, in Tsimshian territory, ranked with the Dalles as a trade center. Also, Ruyle concedes too much to Drucker in accepting the latter's observation that "the lot of most [slaves] was little different than that of commoners." Slavery on the Northwest Coast was hereditary. Slaves could not own property and could not regain their freedom unless they were ransomed by relatives or manumitted by their masters during a potlatch. Moreover, there is evidence that among some groups slaves were physically differentiated from free men as a result of head deformation. Among groups that practiced deformation, a deformed head was the mark of a free man, a round head the mark of a slave. On the other hand, the tribes with round heads preferred that their slaves have flat heads. The slave trade made the exchange possible. Commoners were not slaves.

by WAYNE SUTTLES
Portland, Ore., U.S.A. 1 III 73

The label "new orthodoxy" implies a uniformity of belief that does not exist. On rank vs. class, Ruyle himself provides evidence for disagreement, to which we might add Drucker and Heizer's (1967) description of a Kwakiutl "council of chiefs" and their use of the term "commoner," implying that Drucker too has modified his earlier position. Arguments for the economic value of slavery have been offered (since MacLeod) by Garfield (1945: 620; 1951:30) and myself (1968*a*:65–66). On the "adaptive value of the prestige system," wide acceptance seems controverted by Drucker and Heizer (1967), Adams (1969), and Rosman and Rubel (1972), nor is there full agreement among those of us who have argued for it.

The judgment that "the Suttles hypothesis . . . suffers from severe deficiencies in the analysis of empirical material" may be premature, since Ruyle seems not to have read my later papers (1962, 1968*a*); instead he relies on Drucker and Heizer's criticism, which is based in part on the mistaken notion that I have suggested that the potlatch was consciously devised to solve subsistence problems (see my review 1968*b*). But I must reject this judgment. Year-to-year fluctuation in the availability of resources did exist. The notion that on the Northwest Coast salmon was everywhere the staple, everywhere abundant beyond human needs, easily caught, and easily preserved from year to year is a gross oversimplification. If this had been true there would have been no hunger, which there clearly was. To say that people were hungry "but no one actually starved to death" is to suppose that nutrition and mortality are unrelated. Anyway, there are native assertions that people starved to death. During the winter of 1793–94, after an unusually severe storm, the people of Nootka Sound sought help from the Spanish, and Maquinna told the Spanish commander that more than 80 people had starved to death on the outer coast (Gormly 1968). But that there was hunger and starvation is hardly an embarrassment to my hypothesis. The argument, based on Coast Salish data, is that the system in which the potlatch played an important role compensated in some degree for the variability of the environment, equalizing resources to some degree among participating groups, and so allowed them greater biological success than they could have had each living as a self-sufficient community. I would not argue that the system worked perfectly so that all were well fed at all times. Nor would I argue that there were no inequalities within groups; in times of scarcity poor families no doubt suffered more than rich families. The separate lower-class settlements probably suffered most precisely because they had fewer extra-village affines who had shared with them and enabled them to build up their supplies. They were in fact only marginal participants in the system, useful for their labor but expendable in time of danger (Suttles 1958:498–99, cf. Eggan 1966:125 on Hopi marginal clans). Nor have I suggested that invitations to potlatches were deliberatedly extended to the needy; the equalization of food that occurred resulted from the exchanges among affines long before the potlatch. The point is that the potlatch was a kind of safety valve in the system rather than the expression of some inexplicable ethos.

Ideas and values are a necessary part of the system when they are causes of behavior that has system-maintaining consequences, but I do not suppose that people invent such ideas and values for such ends. Nor can I imagine that ideas and values are merely a reflection of the material conditions of our existence. Clearly they are largely a cultural inheritance, the product of our particular culture history. I suppose that their frequency in a population can vary through differential transmission resulting from variation in the success of the behavior they contribute to, somewhat as genes are selected by variation in the success of whatever they contribute to, except that in biological evolution success consists of being rewarded with descendants while in cultural evolution it consists of being rewarded with emulators. The Coast Salish potlatcher potlatched to validate his claims to property and to gain prestige and the tangible benefits that came from it, among them good marriages for his family and continued good relations with his affines. (I regret the reference to "high status" in my 1960 paper, since it suggests that the Salish had ranked statuses in the Wakashan manner, which they did not. But whether the potlatcher potlatched to raise status, maintain status, or gain prestige is here irrelevant; the important thing is simply that he be motivated to potlatch.) I suppose that more often than not the generous potlatcher got these tangible benefits and that other people appreciated this, accepted his definitions of "right" and "good," and emulated his actions. Is this mystical?

I see a danger of mysticism in Ruyle's thermodynamic approach to stratified societies. In the flow of "ethnoenergy" downward from the ruling to the producing class, are there not often functions (e.g., organization for greater productivity, control of variables in water, food, and other necessities) that are "beneficial" to the producing classes in the sense of making possible an increase in their numbers? If there are and numbers have increased, there is no turning back; the producing

classes may not need the ruling class as families A, B, and C, but they need the "beneficial" functions that ruling class performs, so that the best they can hope for is to replace more tyrannical rulers with less tyrannical ones. The hypothesis that the development of social stratification is accompanied by population growth offers an explanation for the persistence and spread of stratified societies that is consistent with a Darwinian theory of social/cultural evolution. A denial of "beneficial" functions in the downward flow of "ethnoenergy" and of demographic concomitants of stratification would seem to leave us with some kind of orthogenetic theory, e.g., that stratified societies get bigger and more stratified simply because that is the way the course of social evolution runs.

Let us not confuse analysis with approval; to suggest that a ruling class does things that enable a producing class to raise more children is not to deny the reality and cruelty of exploitation. I doubt that Northwest Coast upper classes and lower classes can be neatly separated into "rulers" and "producers." Nevertheless, cruel exploitation did exist. If there were those who doubted it, Ruyle's paper may change their minds.

True, the 18th-century records ought to be mined for all they hold, but, as Gunther (1972:203) shows, there is much evidence there for the stability of culture traits in spite of the disastrous consequences of that early contact. The material conditions of aboriginal life were certainly changed by Boas's time, but hardly "completely transformed." Bancroft's "Now they are gone . . ." is the same combination of romanticism and wishful thinking we find even in prefaces to ethnographies of the 1930s—"no point coming to check up on my work, I just talked with the last one." It is now nearly 200 years since the first Spanish explorers met the Tlingit and Haida, yet all along the coast natives still hold ceremonies with potlatch-like features. That's a long time to celebrate a funeral. (But no point coming to check up on my work, I just talked with the last one who will talk with an anthropologist.)

by H. David Tuggle
Honolulu, Hi., U.S.A. 20 III 73

A necessary question which Ruyle has failed to ask is to what extent social stratification is adaptive, i.e., "serves to facilitate the adjustment of the population as a whole to its environment." I would suggest that much of modern anthropological theory argues that social stratification is adaptive in this sense and as such is a mechanism for regulating and integrating large populations. Its origin is tied into a complex set of variables involving population increase, control and distribution of resources, resource intensification, and occupational differentiation. If this is the case, then support of the elite system is part of the overall cultural adaptation. At this point a second question is required: whether "surplus" demanded by the elite for conspicuous consumption is part of the adaptive system. I would argue that symbols and expressions of power and control are necessary for the maintenance of the *separation* of an elite group from the non-elite to allow effective sociopolitical control. Conspicuous consumption is an expression of differentiation and thus has adaptive value.

In other words, Ruyle's materialistic psycho-functional explanation for Northwest Coast stratification is not the only alternative to the ecologically based redistribution hypothesis; and even assuming an exploitative mentality as characteristic of the elite, its role in a cause-effect analysis of the development of social stratification would be untestable.

Ruyle also muddies the distinction between "status" and "prestige" for the purpose of his argument, and in referring to Drucker and Heizer to the effect that "status was not achieved through potlatching" he does not go on to mention that Drucker and Heizer discuss the role of the potlatch in the prestige system (pp. 134–36), which is ultimately related to change within the status organization if viewed dynamically.

In sum, there are several angles in Ruyle's remarks which are seriously neglected or distorted.

by Herbert W. Vilakazi
Newark, N.J., U.S.A. 28 II 73

In the light of comparative sociology, ethnology, and history, I cannot find anything new in Ruyle's paper, except perhaps his view that the potlatch was a method devised by the rulers to exploit the ruled. Regarding his commendable effort to convince us of the existence of class stratification among the Northwest Coast Indians, let me just say that it is to me dismaying that anthropologists, after noticing the existence of slavery in a society, still debate whether or not that society is characterized by class stratification.

Do we need new terms for phenomena that have well-established ones? Ruyle's use of "ethnoenergetics," "ethnoenergetic flow," "ethnoenergetic relations" seems to me a waste on language, and may lead readers to mistake something old for something new. Since Ruyle is familiar with Marx's *Capital*, why not just use "surplus labour," "surplus value," etc., to get to the notion of "exploitation"?

Ruyle tells us that "the average male can physically dominate the average female, so the exploitation of women requires little in the way of institutionalized support." Can the average anthropologist anywhere in the world honestly vouch for this assertion from his personal experience as lover or husband? Have not propertylessness, moneylessness, illiteracy, insecurity, etc., of women been the decisive institutionalized support for their domination by men over the ages? Next we read, "The defining characteristic of a complex, stratified population is that some adult males are in a situation where they will be exploited throughout the remainder of their lives." Where and when have we witnessed domination and exploitation limited to males and not their spouses and children? Further on, Ruyle tells us that "complex" stratification needs institutional support, "found in the State . . . and the Church, which controls the minds of the exploited by monopolizing access to the sacred and supernatural." Which "developed stratified populations" does he have in mind? The United States, for instance, is one, and yet today the Church and "access to the sacred and supernatural" are hardly relevant as institutionalized support of its stratification system.

The confusion that has characterized approaches to the potlatch by many anthropologists is the price they have had to pay for trying to explain it out of historical context. I have in mind here not just the history of the society with the potlatch, but the history of man. It is now pretty well established that at the lowest level of development of what Marx calls the productive forces—the level associated with the tribal structure—labor is collective, and what is produced is distributed more or less equally among members of the society. At this stage, the interests of the individual still coincide with those of the group (Harris 1971:370–72):

> Among low-energy societies, the division of labor between the sexes and between young and old, and the sharing of food resulting from cooperative forms of productive forces, cannot be jeopardized without endangering the survival of every individual. . . . Cooperation, mutualism, respect for the person and possessions of one's

fellows arise most readily from ecological situations where each individual's well-being is enhanced by a common abstinence from competitive and aggressive behavior.

On this basis arises the ideology characteristic of all peoples at this stage: sharing, generosity, hospitality, brotherhood, empathy, humaneness (or *ubuntu,* as the Zulus put it), and equality. This perspective, and the stress put upon it, has a material basis. At this stage, however, the idea and reality still coincide. Equalizing the basis and chances of survival and well-being for all individuals is a prerequisite to the survival of the group. A person who suddenly acquires wealth is considered a danger to the community. The Zulus, for instance, considered such a person a sorceror (Vilakazi 1962). Such societies "foundered on the development of wealth . . . Therefore, ancient philosophers who were aware of this bluntly denounced wealth as destructive of community" (Marx 1971:120).

It is, therefore, not surprising that even after the development of wealth had destroyed such communities of equals, and created societies with classes and slaves, there was still the notion of *noblesse oblige,* of charity, and the belief that the rich must *spend* their wealth through feasts, parties, etc. Such spending became an important source of prestige. This expectation and practice were part of an effort to make amends for the violation of what may be considered the "first historical rule," equalizing the chances of survival for all. "Redistribution of wealth" assumes different forms under different historical conditions and exists wherever the "first historical rule" is violated. In preindustrial, preurban society, it is generally left up to households; in societies with emerging, still small cities, it is through both households and the state; as the urban population and the poor increase in numbers and proportion, it is partly through the state, partly through private community agencies, and partly through individuals. Other factors determining the form and extent of redistribution are (*a*) the visibility of the poor and (*b*) the political consciousness of the poor. Where there is a notable physical separation of the poor and the rich, the wealthy may spend their wealth oblivious of the poor. The group consciousness of the poor, translated into politics (riots, danger of revolution, etc.), has ominous implications for the rich and thus also affects redistribution: hence, the rise, for instance, of the "welfare state."

This is the context within which we can better understand the potlatch, rather than seeing it as mainly a method of pumping wealth to the wealthy as Ruyle suggests.

Most of what appear to be unique and serious theoretical problems in social or cultural anthropology cease to be so, once we forget about "primitive societies," and think only of "societies" in the light of the accumulated scholarly knowledge about human behavior and social structures throughout man's history. What anthropology needs desperately is a combined historical and comparative approach—historical not in re-creating or understanding the history of a particular society, but in seeing that society in the light of the history of man. This approach is sometimes found in general textbooks, but almost never in ethnographies or discussion of particular problems or aspects of culture. It will of course put an end to "anthropological theory" (a theory of "primitive societies") in favor of "social theory" (a theory of "human societies"). It will also eliminate the false distinctions in the social sciences, especially those between anthropology, history, and sociology. The scope of our vision should be that of, for instance, Marx, Weber, Durkheim, Simmel, and Toynbee.

Reply

by EUGENE E. RUYLE
Charlottesville, Va., U.S.A. 8 IV 73

I would like to thank the commentators for their careful and critical reading of my paper and for raising a number of important empirical and theoretical issues which were perhaps inadequately dealt with. I find it very gratifying that along with the criticisms there was general acceptance of my major point, that "there was an aboriginal ruling class on the Northwest Coast which obtained its wealth and privileges through definite exploitative techniques—slavery, rent or taxation, and the potlatch—and supported its rule through an incipient State-Church organization." Dare I hope that this will become the new "new orthodoxy?"

I will first respond to the criticisms arising from the empirical analysis and then turn to the theoretical issues.

Since it has been suggested that I imprinted my concepts on the data, it may be well to discuss how the paper reached its final form. My interest in the subject was kindled by an uneasiness I felt in reading Suttles (1960) and trying to figure out what kinds of causal mechanisms would underlie such a system if, indeed, it really existed. This led me through the major ethnographies and into the historical material. The ethnoenergetic model emerged after the main lines of my argument had been formulated (about the third or fourth draft), but it was only after the model had been elaborated that I was able to complete the empirical analysis—for example, the full interpretation of Kwakiutl secret societies as part of the exploitative system appears only in the final draft.

I tried to locate as many of the earliest accounts as possible, but only cited those that had some material, pro or con, on the problem under investigation. Thus Cook's journals are not cited, since they contain little or nothing on social stratification—although there are some passages which I could have interpreted rather tenuously as support (see Beaglehole 1967:229, 306, 322, 1099, 1329, 1350, 1395, but see also 1397). I also tried to go through a reasonable amount of the tremendous ethnographic literature, but found nothing that would contravene my thesis; indeed, material recently published substantiates it (e.g., De Laguna 1972:461–75). To be sure, the opinion is widely expressed that there were no classes on the Northwest Coast. Examination of such assertions, however, invariably reveals that the disagreement lies in the author's conception of class, not the underlying evidence. But perhaps I've missed some important facts; if so, I hope someone will bring them to our attention.

I believe the sources I did cite are all accepted as generally reliable by Northwest Coast specialists (cf. Drucker 1963:209–10). Moziño (1970), who was trained in the scientific methods of medicine and botany as well as theology and ethics, spent six months at Nootka Sound (April to September, 1792), and his observations are highly regarded by Wilson (1970). Meares's (1790) visit was shorter. Jewitt (1898 [1815]) spent three years as a slave of King Maquina of Nootka Sound after his ship was destroyed in 1803. Dunn (1845) spent several years in the fur trade, traveling widely through British Columbia and frequently acting as an interpreter. Sproat (1868) was a colonial magistrate on Vancouver Island from 1860 to 1865. Bancroft (1875), my chief secondary source, based his work on his own collection of books and unpublished manuscripts. In spite of its picturesque language, this work provides an

important picture of the various cultures of the Northwest Coast and to my knowledge has been insufficiently appreciated or utilized. The use of historical material of course has many disadvantages compared to ethnographic fieldwork, but it does have this advantage: books will talk to anyone who will listen ("go ahead and check on my work, the libraries are open to all"). Morgan's (1876) famous critique properly belongs to the realm of intellectual history. A study of the reliability, biases, and preconceptions of these early observers would indeed be most welcome, as would a similar study of those of the later ethnographic fieldworkers (cf. White 1963), but I doubt that such studies would lead to a substantial modification of my conclusions.

Data from different time periods and different regions are mixed because I felt it was better to produce as complete a general model as possible than to produce a number of incomplete ones. It is a simple enough matter, however, for the reader interested in a particular region to separate out the relevant material.

It is true, as Suttles notes, that there were continuities in culture traits during the historic period, but there were discontinuities as well (Codere 1961:509). I think it is important, however, to make a distinction between cultural traits (such as recipes, myths, ceremonies, art styles, and material culture) and cultural processes, the real-life encounters of people with their environments and with each other. Just as no one has denied a considerable degree of continuity in the former, no one can seriously deny that the cultural process of stratification—the plunder of the direct producers by the exploiting class—was indeed completely transformed in the course of the 19th century (warfare, slavery, and killing were all legally abolished, for example).

Of great interest in this regard is the potlatch problem. To what extent was the potlatch aboriginal and to what extent a product of acculturation? As Codere (1961:445) notes, in the pre-1849 period "the Kwakiutl 'potlatch' does not seem to be so developed or striking an institution that there is need for a distinctive term for it." I suggest that this statement applies to the entire Northwest Coast. There were of course numerous potlatch-like affairs serving a variety of functions in aboriginal society, but were these all placed in the same native category before the spread of the Chinook-derived term "potlatch" during the contact period? Most of the features associated with the "classic" potlatch are of postcontact origin: before 1849 there were only "relatively small distributions" of property, between 75 and 287 blankets, not the tens of thousands of the potlatch period (Codere 1961:446); the pantribal ranking of villages and *numaym* was not characteristic of the pre-1849 period (Codere 1961:445, 466; Drucker and Heizer 1967:45–46); there were no coppers until the metal was introduced by Europeans (Drucker and Heizer 1967:14–15; Keithahn 1964). All of this leads to the conclusion that "the potlatch" properly belongs to the realm of acculturation studies, not primitive economics.

When Al-Ka'bi says that "a Kwakiutl [sometimes] heaps up all his property and sets fire to it," he is giving voice to a widespread misunderstanding about Northwest Coast economic systems. As Drucker and Heizer (1967:53–97; cf. Suttles 1968*b*) note, the potlatch, even in the acculturation period, was not a system running wild but one under the control of a council of chiefs. Like the idea that there was a "double return" on potlatch gifts, the idea that property was wantonly destroyed requires further examination. Benedict (1946:179) gave the following account of the infamous "grease feast":

> Oil was fed lavishly to the guests, and it was also poured upon the fire. Since the guests sat near the fire, the heat of the burning oil caused them intense discomfort, and this also was reckoned as a part of the contest. In order to save themselves from shame, they had to lie unmoved in their places, though the fire blazed up and caught the rafters of the house. The host must also exhibit the most complete indifference to the threatened destruction of his house.

Yet Boas (1970 [1897]:355) merely says that "the host alone has the right to send a man up to the roof to put out the fire," and, as I recall his eyewitness account of a grease feast (I've been unable to locate the citation), the host did so immediately. Indians tell tales, and anthropologists duly record and embellish them, but how often did the Indians really destroy valuable property? I know of no one who has suggested that the destruction of property was a feature of precontact systems, nor do I know of authenticated eyewitness accounts of the destruction of property; but again, perhaps I've missed something.

Al-Ka'bi and Vilakazi complain that I view the potlatch "mainly as a method of pumping wealth to the wealthy." A rereading of the relevant passages will show that, although I do indeed argue that "the potlatch" did this, I do not see this as its sole or even its main function. Rather, I argue that the primary functions of the potlatch, as it existed in aboriginal times, were to attract and hold a free labor force and to create and foster feelings of dependency on the part of this labor force. I agree with Vilakazi's analysis, but see it as complementary to my own, not contradictory.

I don't believe that I anywhere said that there were completely "separate" Mendelian populations on the Northwest Coast; rather, I said that the nobility formed a distinct Mendelian population. If we accept a standard definition of Mendelian population (e.g., Buettner-Janusch 1973:340–41) and a tendency for nobles to marry into noble families, I fail to see how we can say otherwise. The existence of some intermarriage and of upward and downward mobility does not negate this interpretation, since gradations, mobility, and gene flow are all incorporated into the concept of Mendelian population.

I regret using the term "superficial" in referring to regional differences. It wasn't my intention to imply that these did not exist or were not important, merely that they would not be considered in the general model. Elmendorf's remark concerning the "Coast Salish emphasis on industry in high-status families" does not really contravene this general model, since his discussion (1960:327–36) does not indicate that this industriousness included drudge labor. As Nieboer (1971 [1910]:210) notes, "The more the freemen devote themselves to trade and industry the more need there is for slaves to do the ruder work (fishing, rowing, cooking, etc.)." Ruling classes, as groups, can never be truly "leisure classes," since they must always be industrious in maintaining the system and their position in it.

On Claessen's remark about the gaining of prestige through giving of food and monopolizing trade with Europeans, my point is not that prestige was not involved, but that prestige considerations operated in concert with materialist ones, not contrary to or independently of them.

An ethnoenergetic model of Northwest Coast stratification systems is presented in figure 4. The two stratified groups are diagrammed differently: for Group I the flow of productive ethnoenergy (labor and its products) is outside the group, for Group II inside; conversely, for Group II the flow of exploitative ethnoenergy (war, plunder, religion) is outside the group, for Group I inside. Group III is a

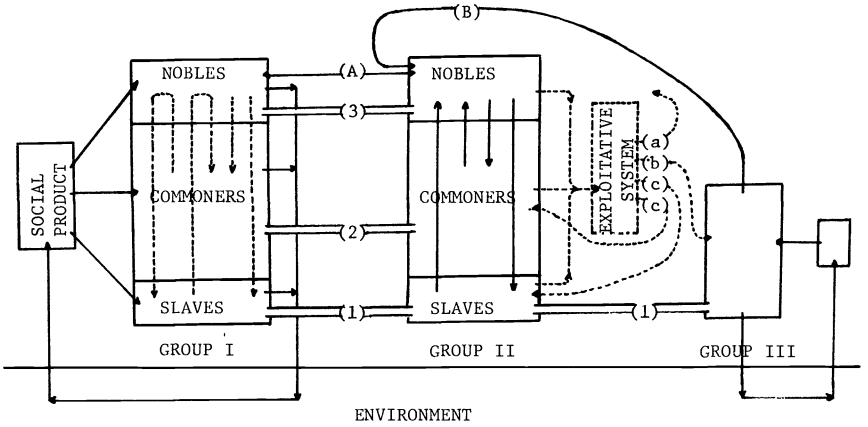

FIG. 4. Ethnoenergetic flow in Northwest Coast populations. →, flow of labor energy: *A*, intergroup trade, affinal exchange, and potlatch; *B*, intergroup plunder; --↛, flow of exploitative energy: *a*, in secret societies and religious ceremonies; *b*, in warfare and raiding; *c*, in oppressing commoners and slaves; =, population flow: 1, slave raiding and slave trading; 2, commoner mobility; 3, noble intermarriage.

smaller group, perhaps internally stratified, but more likely having a purely ideological rank system, in imitation of the larger and more powerful groups, without an exploitative system. Such groups are raided for plunder and slaves. In the larger groups, all classes contribute to production, but they do so unequally. The nobility works less hard and only at certain more prestigious forms of labor. The slaves work harder and perform most of the drudge labor, although, as Carstens points out, they are also used in skilled labor. All classes withdraw from the social product, although the nobility receives the most in daily distribution and in feasts and potlatches. Similarly, all classes contribute to the exploitative system, although here it is likely that the quantitative and qualitative contribution of the nobility is greatest. Commoners contribute by participating in warfare and by helping keep the slaves in their place, and slaves contribute by supporting the nobility against the commoners and by participating in warfare. The nobility, of course, contributes by leading all of these activities and by performing the religious and ceremonial activities which provide ideological support for the system. This sort of three-class system, where commoners and slaves are played off against each other and all classes contribute to the exploitative system, requires considerable political skill and cunning on the part of the rulers for its maintenance, but these are needed by any ruling class.

Regrettably, it is impossible to quantify these flows in any precise way. Abundant documentation has been provided, however, for both the reality of the flows and the fact that, in general, more productive ethnoenergy flows into the ruling class than out of it.

Similarly, it is difficult to make demographic estimates of village size and class composition. I would guess that village size ranged from a low of 50 or 100 to a high of 2,000 (say around Nootka Sound); 500–1,000 was probably typical. Class composition no doubt varied from village to village and from area to area; my general estimate would be 20% nobility, 70% commoners, and 10% slaves (see the citations on percentages of slaves in my article).

To those who expressed a favorable opinion of the empirical analysis but nevertheless felt that the theoretical model on which the analysis was based was superfluous, I can only say that the thermodynamic model helps me make sense of the data, see interrelationships that I did not see before, and pose problems which are hidden by other modes of analysis. If it were to be demonstrated that ethnoenergetics leads to "unfortunate mistakes" or that it is merely a matter of "new terms for phenomena that have well-established ones," I would of course be most willing to abandon it. None of the comments, however, have persuaded me of its folly.

Faris notes two interrelated errors in ethnoenergetics: first, that it leads to regarding classes in a Weberian manner, as "empirically verifiable" entities, rather than as explanatory constructs, and second, that it simply measures results and so cannot be a statement of underlying process.

In saying that classes are not empirical, Faris seems to be saying that they do not exist; but neither he nor Newcomer (1972), whom he cites, gives any indication that such a view was in fact held by Marx, Engels, Lenin, or any major contemporary Marxist thinker. Nor would this be possible, since it is quite clear that Marx and Engels (e.g., 1964 [1848]:2–24) shared Lenin's (quoted in Cornforth 1968:241) view that "classes are groups of people," as do the major Marxists whom I admire most (e.g., Cornforth 1968; Sweezy 1953). Faris is quite right in saying that class is an explanatory construct. It derives its power, however, not from its reference to a hidden level of reality, but from its isolation of an essential aspect of empirically verifiable reality for intensive analysis. As Sweezy (1956:18) puts it, "The legitimate purpose of abstraction in social science is never to get away from the real world but rather to isolate certain aspects of the real world for intensive investigation."

Sweezy's clarification also responds to Faris's second criticism. It is precisely because ethnoenergetics isolates an essential aspect of human life that it is also a statement of underlying process. I failed to emphasize this in my brief statement of ethnoenergetics, but have elaborated on it elsewhere (Ruyle 1973*b*). In his analysis of commodity production, Marx (1965 [1887]) noted that commodities, although differing in size, shape, color, and use-value, share one essential feature: they are all products of human labor. Hence, the exchange of commodities, which appears to actors themselves in fetish form as an exchange of use-values, is also a social relationship involving the exchange of labor. By concentrating on this essential feature, Marx was able to penetrate and understand the underlying dialectic of bourgeois society. Ethnoenergetics follows the same procedure.

Man, like his primate cousins, must eat; he is dependent upon use-values. Man is unique, however, in that he does not merely appropriate naturally occurring use-values, but transforms nature through the expenditure of his own energy. This thermodynamic peculiarity transforms human life from a struggle for free bioenergy into a struggle for the ethnoenergy used in the production of the use-values necessary for human existence. Thus, by charting the flow of energy through a human population, we are shedding light on the basic processes of human life, the struggle for survival, security, and satisfaction.

From the richness of the human drama, with its diverse passions, status rivalries, and conflicts over women, wealth, and power, we may abstract an individual drive to maximize control over ethnoenergy. I'm not saying that nothing of interest is lost in this

process, rather that something of considerable scientific importance is gained. We have, in Sweezy's terms, isolated an essential aspect of reality for intensive analysis. This individual drive is the motive force behind the emergence and spread of systems of social stratification. In certain ecological and demographic situations, characterized by small, highly mobile populations, this drive leads to egalitarian societies, since exploitation would jeopardize the unity of the band and hence endanger the survival of every individual (as Vilakazi perceptively notes). In other ecological and demographic situations, with relatively large, immobile populations (cf. Carneiro 1970; Ruyle 1973*a*, *b*), a new ecological niche opens—that of maximization of control over ethnoenergy through exploitation—and ruling classes emerge. This process may be seen as "adaptive" for the ruling classes, but not for the exploited classes.

Many feel that although exploitation may exist in class society, it is a result and not a cause. Major supports for this assertion are the ideas of "rank society" (Fried 1967) and "conceptual social classes" (Service 1962). Since a primary ethnographic example of such nonexploitative, hierarchical societies is the Northwest Coast, I'm puzzled by Sio's assertion that the demonstration of exploitation on the Northwest Coast "is hardly to be taken as evidence for the centrality of exploitation in all systems of social stratification." The reason that I expended all this effort on the Northwest Coast is that people have been saying that exploitation may exist elsewhere, but not on the Northwest Coast. I suggest that the ethnoenergetic model be applied elsewhere, especially to Polynesia, not that the Polynesian status-rivalry model be applied to the Northwest Coast.

Concerning Claessen's assertion that stratification is a precondition for slavery, the data of Baks, Breman, and Nooij (1966) show that stratification and slavery are related, not that the former causes the latter. Since Nieboer (1971 [1910]:217) has already pointed out that the formation of social classes is furthered by slavery, this is to be expected. Nieboer (p. 206) does note that living in larger groups gives the tribe a greater coercive power over its slaves, but does not say that stratification is a precondition for slavery.

A number of important issues in cultural evolution are raised by the comments of Suttles and Tuggle. Tuggle is right in saying that "much of modern anthropological theory argues that social stratification is adaptive in [that it] serves to facilitate the adjustment of the population as a whole to its environment," but this is precisely what's wrong with contemporary anthropological theory. Unfortunately, the current popularity of the terminology of biological evolution has not been accompanied by much interest in specifying precisely the conceptual framework underlying evolutionary explanations (elsewhere, I've tried to specify a model for biocultural evolution [Ruyle 1973*a*]). Adaptation, for example, is being used quite differently than it is in the synthetic theory, where adaptation is seen as involving the differential reproduction of individuals within a population. The adjustment of the population as a whole to the environment may be facilitated by this process, but this is only incidental. Although it may be true that social stratification and the state permit a larger population to exist in a given area, this does not explain their existence; the explanation lies in the advantages that accrue to the individuals who control the power structure. This view is not "orthogenetic." It sees the origin, growth, and spread of stratification systems as resulting from the benefits to ruling classes of larger, more powerful, and more efficient exploitative systems and state structures.

Underlying the functional/adaptive view is the idea that some sort of group selection is involved in cultural evolution. Although this concept has been the subject of lively debate in biology, with the advocates of group selection losing ground (Williams 1966, 1971), there has been virtually no discussion of its merits and demerits in anthropology. About the only one who has bothered to specify the mechanisms that might be involved is Harris (1971:152):

> . . . the most successful innovations are those that tend to increase population size, population density, and per capita energy production. The reason for this is that, in the long run, larger and more powerful sociocultural systems tend to replace or absorb smaller and less powerful sociocultural systems. The mechanism of innovation does not always require actual testing of one trait against another to determine which contributes most in the long run to sociocultural survival. Given a choice of bow and arrow versus a high-powered rifle, the Eskimo adopts the rifle long before there is any change in the rate of population growth. In the short run, the rifle spreads among more and more people not because one group expands and engulfs the rest, but because individuals regularly accept innovations that seem to offer them more security, greater reproductive efficiency, and higher energy yields for lower energy inputs. Yet it cannot be denied that the ultimate test of any innovation is in the crunch of competing systems and differential survival and reproduction. But that crunch may sometimes be delayed for hundreds of years.

The idea that a mechanism whose operation may be delayed hundreds of years can be effective in sociocultural causation seems very mystical to me (cf. Ruyle 1973*a*).

Vilakazi questions my interpretation of the Church, presumably feeling that the Church does not serve as a support for the exploitative system. The Catholic Church has no such illusion; according to Pope Benedict XV (quoted by White 1959:325),

> Only too well does experience show that when religion is banished, human authority totters to its fall . . . when the rulers of the people disdain the authority of God, the people in turn despise the authority of men. There remains, it is true, the usual expedient of suppressing rebellion by force; but to what effect? Force subdues the bodies of men, not their souls.

White (1959:303–28) provides abundant documentation of the role of the Church in subduing the souls of men and in serving the ruling class by (1) supporting the State in offensive-defensive actions against adjacent polities and (2) "keeping the subordinate class at home obedient and docile."

My analysis of the Church's role in class society was a highly abstract one. Of course, neither the Church nor class society ever appears in the abstract, but only as manifest in and modified by particular historical circumstances. In the United States, these historical circumstances include a tradition of State-Church separation arising from the fact that many of America's early settlers were refugees from Church oppression in Europe. Further, many of the thought-control functions of the Church have been taken over in the United States by other institutions, notably the schools and the media (cf. Harris 1971:407–9). Nevertheless, even in America, all of our military units have chaplains, priests, and rabbis attached to them, as do our prisons. Again, the content of religious teaching is essentially conservative ("work and pray, live on hay; you'll get pie in the sky when you die"). The relevance of the Church as an institutionalized support of the American stratification system is also recognized by our philanthropists, as witness the remarks made by James Hill, a Protestant (quoted by Josephson 1962:321), after donating a million dollars for the

establishment of a Roman Catholic theological seminary in St. Paul:

> Look at the millions of foreigners pouring into this country to whom the Roman Catholic Church represents the only authority that they either fear or respect. What will be their social view, their political action, their moral status if that single controlling force should be removed?

Religion, in short, is manipulated by the American ruling class, no less than by the Nootka or Kwakiutl ruling classes, for purposes of social control.

It has been said that I neglect or deny the "beneficial" functions of the ruling class. The point, however, is not that the ruling class does not perform any social function, but rather that its members turn this social function to their own private advantage. If we merely talk of benefits, the system appears harmonious and beneficial for all concerned. If, on the other hand, we measure contributions, we find that the members of the ruling class expend less energy than they receive. After performing an ethnoenergetic analysis, it is still possible to argue for a functional/adaptive explanation of the phenomena, but, since this explanation was not plugged into the analysis at the beginning, it does not emerge as the only conclusion. The functional/adaptive explanation must be weighed against alternative explanations, and it does not explain why, if the system is so beneficial to the producing classes, violence and thought control are necessary to maintain it. (Or is this because working people are generally too stupid to know what's good for them?)

Regarding Schneider's comments, I nowhere called other interpretations "conspiratorial-exploitative," nor was it my intention to contribute to the merging of materialism and "social economics"—I would prefer to remain in the materialist camp. I don't think that debates over the sorts of questions that Schneider raises would be very useful. Indeed, a major objective in the formulation of ethnoenergetics was precisely to get beyond these sorts of questions. Consider the following example: A man buys a gun and holds up a shoe repair shop. A thermodynamic analysis shows he has expended a certain amount of his energy to gain control over the labor energy embodied in the shoemaker's money. Since this differential energy flow is accompanied by the threat of violence, we have no trouble calling this exploitation. What is added by calling the holdup artist an entrepreneur who has invested his capital, taken a risk, provided a service (what could be more beneficial than not being shot?), and made a profit?

I disagree strongly with Suttles's assertion that producing classes "need the 'beneficial' functions that [the] ruling class performs, so that the best they can hope for is to replace more tyrannical rulers with less tyrannical ones." Perhaps working classes do need whatever beneficial functions the rulers may perform, but these could be performed by the workers themselves, if the ruling class would allow this. It may well be that in the early and middle stages of the development of class society the best the working classes could hope for was to substitute new rulers for old, but this is not true today, in the terminal epoch of class society. Ruling classes must be viewed in dialectical as well as materialistic terms. Inequality has been a source of much evil, it is true, but is has also been a source of much that is good. It is precisely because the ruling class has beneficial functions and contributes to the development of the productive and intellectual abilities of mankind that it increases man's control over nature and over his own destiny, and hence creates the conditions under which it can no longer rule. As the father of American anthropology (Morgan 1964 [1877]:467; cf. Marx 1965 [1887]:761–64) put it:

> The time which has passed away since civilization began is but a fragment of the past duration of man's existence; and but a fragment of the ages yet to come. The dissolution of society bids fair to become the termination of a career of which property is the end and aim; because such a career contains the elements of self-destruction. Democracy in government, brotherhood in society, equality in rights and privileges, and universal education, foreshadow the next higher plane of society to which experience, intelligence and knowledge are steadily tending. It will be a revival, in a higher form, of the liberty, equality and fraternity of the ancient gentes.

I regret that my definition of egalitarian society caused so much confusion. In a later treatment (Ruyle 1973*b*), I defined egalitarian society as follows: "Classless egalitarian societies [are those] in which all individuals actively participate, for much if not all of their normal lives, in the system of production through the expenditure of labor energy." To this we may add: "and where the consumption of use-values by individuals is approximately equal." This definition, however, ignores the problem of differential energy flows between men and women and between age-groups. Energy flows from adults to nonproducing children are not enforced by threats of violence from the children, and this is therefore not exploitation according to the definition I have proposed. There is exploitation, however, in the case in which males hunt for four or five hours a day while females spend eight or ten hours gathering and preparing food, caring for children, and so on, consumption of food and other use-values is approximately equal, and there are periodic wife-beatings. I'm not suggesting that such a situation is good, that it is "biologically inevitable," that it occurs universally in hunting and gathering societies, or even that it occurs at all (although the data of Malinowski [1963:282–89, 67–84] and Kaberry [1939:23–26, 35–36, and *passim*] strongly suggest that this is the situation among some Australian Aborigines). I merely want to emphasize that if and when this occurs, it should not be confused with class exploitation, in which entire families (both men and women) are exploited and oppressed throughout their lives. Differential energy flows within the family do not necessarily generate the same kinds of antagonisms as the exploitation of men by men. They are likely to be overridden by ties of mutual affection, and, indeed, it has been argued that the greater participation of women in production in some societies gives them a respected status (Reed 1971:43; Leacock 1972:34). Further, the motive force behind these differential energy flows is not necessarily the thirst for surplus labor that generates and maintains class societies. It may well be that it is simply an adjustment to particular ecological circumstances, since what is true of the Australian Aborigines is not necessarily true of the Bushmen or the Eskimo.

Perhaps it is the case, as Brown suggests, that "the wily serpent suggested that the exploitation of women . . . can be extended, through the application of 'complex institutionalized mechanisms,' to the exploitation of men," but I am uncomfortable with schemes which suggest too close a relationship between class exploitation and the subjugation of women. Nieboer (1971 [1910]:219–21), for example, argues that the position of women in the Northwest Coast was somewhere between "a rather high position" and "not a bad one." But of course, this would have varied with the class position of the woman's family, as it does in American society (cf. Reed 1971). I think it is more likely that female subjugation (and sexual repression in general) is not directly related to the emergence of social stratification and the state.

I don't pretend to have exhausted debate on the issues raised by the commentators. If I've seemed argumentative in places, I hope this will

encourage others to plunge into the fray. If my paper contributes to further research and meaningful debate on these issues, it will have served its purpose.

Postscript. Grumet's defense of the Suttles-Vayda hypothesis, which arrived late, is largely tangential to my major argument, but it does raise a number of interesting questions. (1) Concerning the nature of human ecological systems, there is a major theoretical difference between the views of Suttles and Vayda and my own. The Suttles-Vayda hypothesis seems to regard "systems" as entities in their own right, with their own needs and means of satisfying these needs (cf. Grumet: "the system attempts to maximize opportunities to reestablish stability"). While agreeing that it may be useful at times to regard them in this manner (and, as I noted, the Suttles-Vayda hypothesis has been scientifically productive), I feel that it is essential to keep in mind that the "system" grows out of the activity of individuals in pursuit of their own ends within particular environments and, ultimately, must be explicable in terms of individual self-interest. (2) The Suttles-Vayda model, as I understand it, involves a number of more or less equivalent local groups exchanging temporary surpluses of food for wealth and wealth for prestige in such a way as to equalize wealth and food consumption between and within groups. In short, its effects are opposite to those of developed systems of social stratification. For the model to operate as described, however, it is necessary that differentials in productivity be temporary, for groups with sustained surpluses of food would acquire sustained surpluses of wealth and prestige which they could use to attract a larger population and field a larger military force to plunder and otherwise dominate the smaller groups in less productive areas. Thus, sustained regional differentials in productivity, which are mentioned by Suttles (1962, in Cohen 1968:99) and which we know existed since local groups varied in size, would automatically transform the egalitarian Suttles-Vayda model into a stratified, exploitative system that would tend to further increase social tensions and differentials in wealth and food consumption. (3) The cases of changes in status mentioned by Grumet seem to come from the potlatch period and are therefore in accord with my suggestion (n. 2) that there was probably a shift from ascribed to achieved status in the potlatch period due to depopulation.

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Documentation and Data Retrieval

Handling Ethnological Literature with Peek-a-boo Cards[1]

by HELMUT KRUMBACH
Düsseldorf, Germany. 10 x 69

When I speak of "handling ethnological literature" I do not mean the usual classification and registration that is done by libraries, but rather coding in terms of main points, or keywords, and storage for later scientific use. Since almost nothing has been published on the problems of managing ethnological literature, I wish, in this paper, to share my experience of this subject. I hope not only to stimulate greater involvement with this topic, but—if possible—to achieve, in cooperation with diverse institutions in this and other countries, a wider view of the existing ethnological literature.

[1]This paper was originally published in a volume commemorating the centennial of the Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte (Berlin Society for Anthropology, Ethnology, and Prehistory) in Germany in November 1970. For linguistic reasons and because the edition was small, dissemination of this volume has been quite limited. Consequently, this treatise has been translated from German into English for discussion by the readers of CURRENT ANTHROPOLOGY. Publication of an English version offers us at the Düsseldorf Institute of American Ethnology an opportunity to express our desire for cooperation and exchange of experiences with institutions in the English-speaking countries.

I would like to thank the archivist of our Institute, Horst Matthey, for his many stimulating opinions. He has been particularly occupied for years with the basic tool for handling ethnological literature: the keyword list.

DOCUMENTATION AND THE INFORMATION CRISIS

The ever-increasing flood of professional literature (books, journals, separate papers, etc.) has become a problem with which all the scientific disciplines have to contend. No library in the world—not even the biggest, the Library of Congress at Washington, which has 14,000,000 books and, altogether, 55,000,000 collected items—is able to confront the huge expansion in literature without a system of selection. A complete collection of all publications or of all scientific journals does not exist anywhere. Specialists speak of the "problem with the literature" or the "information crisis." Today nobody is able to familiarize himself with all the literature published, even in a special field. Helmut Arntz, a specialist in the area of documentation, thinks it is likely that the specialist must ignore as much as 95% of the literature in his field if he is to have time to write a single line. The result is that many works are overlooked and their results are not considered. In the field of ethnology, therefore, as in other fields, an effort must be made to store as much as possible of the published material according to some system.

The U.S.S.R. and the U.S.A. have established large-scale documentation centers, where experts in special areas read all the imaginable literature and follow certain publications regularly. The extracts that result from these endeavors are at the disposal of interested parties, who otherwise would be unable to acquaint themselves even superficially with most of the available literature. One such documentation center in the Soviet Union, for instance, employs 20,000 foreign and 2,000 internal collaborators. Using rationalized methods of reading based on modern psychology, which are also being practised in American universities, they seek to increase the reading capacity of the individual and thus enable the student to cope with the flood of literature which rushes in upon him. Schadewalt (1959), a medical historian in Düsseldorf, says, "Perhaps the time is not too far away when students preparing their doctoral dissertations may apply to such a documentation center for whatever information they need from the literature. This would not detract from the value of their thesis in any way." Arntz (1968) speculates: "Why are libraries still being built, if nobody is able to read the literature they offer? The literature should be stored at once in computers, so that it need only be asked for with keywords."

This idea, however, is applicable to only part of the published literature, specifically those areas in which such expenditure is self-amortizing, like chemistry. All the other scientific disciplines, including ethnology, must therefore seek other methods to keep up with the new material. They must find a way to store it, as rationally as possible. Only in this way can it be guaranteed that the material can be used when needed without great expense in time and personnel. Our experience suggests that an adequate coding system must be based on fixed main points or keywords, which can be expanded to accommodate special needs, and that storage and retrieval can be handled through the use of punched cards, particularly the peek-a-boo card (see Bauer 1960; Krumbach 1969, 1970*a, b*: Matthey 1969; Treide 1966).