

Cultural Materialism:

The Struggle for a Science of Culture

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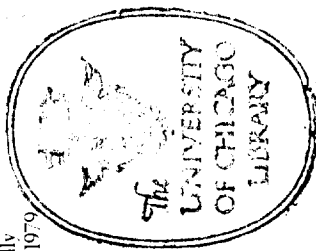
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objectivity. It is Diamond himself and not Anekwe or Anyians who has lately come to tell us that "the issue of truth . . . transcends the presentation of facts . . ." (1972:413). And it is Diamond himself and not his critics who repeats the refrain of this chapter: "any attempt at ethnology, has in short, to be a fiction, a constitution of reality" (*ibid.*).

Now it is possible to reconcile both of these statements with the logico-empirical meaning of scientific objectivity. Truth *does* transcend the presentation of facts in the sense that facts collected under the auspices of some paradigms have greater theory value than facts collected under other auspices. And ethnology must be "a constitution of reality" in the sense that theories are abstract models that emphasize generalities at the expense of particularities. But I have no intention of entering such a defense on behalf of people who refuse to acknowledge that the search for objectively valid knowledge under the auspices of a scientific epistemology is the only possible way to avoid relativistic anarchy on the one hand, or ethnocentrism, nationalism, or something worse on the other (cf. Kaplan, 1974, 1975).

"Business on the Scale of History"

OBSCURANTISM is actually a more common strategic commitment than this chapter seems to suggest. Powerful obscurantist currents flow through many of the alternative strategies discussed in the previous chapters. The attacks on positivism launched by dialectical materialists, structuralists, and structural Marxists converge with those launched by phenomenologists. They contribute as much to a broad-based rejection of the possibility of a science of culture as do the outspoken advocates of epistemological anarchy, total relativism, and unanalyzed praxis.

Of course, I do not mean to say that every rejection of a principle or theory congenial to cultural materialism counts as the advocacy of obscurantism. Rather, it is the general nature of the arguments advanced, especially their overwhelming negativity, that places many new-wave Marxists and structuralists in the obscurantist camp. Let me illustrate this contention with some concluding remarks about the stance adopted by Marshall Sahlins toward cultural materialism.

Sahlins (1978) equates the "overall view" of cultural materialism with the bourgeois ethnocentric notion that "culture is business on the scale of history." He bases this equation on the fact that cultural

materialism finds explanations for sociocultural phenomena in the relative costs and benefits of alternative activities. Sahlins's *idée fixe* is that costs and benefits are the same as "profit" and "loss" and that they therefore are applicable only to cultures that economize in conformity with the formal categories of capitalism. This is consistent with Sahlins's advocacy of the substantivist position in the substantivist-formalist debate, as discussed in Chapter 8. However, as I have already indicated (p. 236), the epistemological position of cultural materialism corresponds to neither side in that debate. The costs and benefits of cultural materialism are the etic behavioral costs and etic behavioral benefits of alternative innovations in reference to the bio-psychological constants proposed on page 63. Although the precise quantitative operationalization of these costs and benefits presents a great challenge, rough approximations can easily be obtained in terms of such measures as rising or declining death rates, caloric and protein intake, incidence of disease, ratio of labor input to output, other energetic balances, amount of infanticide, casualties in war, and many other etic and behavioral indices. These etic costs and benefits clearly constitute categories distinct from price market econometric notions of profit and loss measured in monetary terms. They are relevant to a much broader set of concerns—namely, the more or less efficacious solution of infrastructural problems experienced by all human beings and all cultures. If a mere concern with efficacious solutions to the problems of production and reproduction is sufficient to characterize cultural materialists as bourgeois formalists, then Sahlins must also tar Marx and Engels with the same brush. Indeed, anyone who has a lively concern with the basic material conditions of human welfare emerges from Sahlins's analysis as a proponent of the "western business mentality."* This is a distinction that businessmen east or west scarcely deserve.

"To Get Some Meat"

SAHLINS DOES NOT stop at fantasizing the ideological implications of a science of culture rooted in the analysis of material costs and benefits. He also misrepresents the manner in which cultural material-

*Paul and Rabinow (1976) also contend that an orientation toward practical mundane costs and benefits is "bourgeois rationalism." They prefer to be impractical and irrational.

ism actually applies optimizing principles to the explanation of specific puzzles. From Sahlin's account, one would suppose that cultural materialism treats the costs and benefits of alternative innovations as if they were timeless options open to any society at any moment in its history. But the corpus of cultural materialist theory is evolutionistic. Particular sequences of intensifications and depletions are viewed as long-term involuntary processes, and specific optimizing alternatives are viewed as actionable only in a definite portion of that process.

Neglect of the evolutionary context of cultural materialist theories leads Sahlin to misrepresent the cultural materialist explanation of Aztec cannibalism (first proposed in Harner, 1977). According to Sahlin, the point of my version of this theory (Harris, 1977a) is that in effect the Aztec ate people "to get some meat." What Sahlin omits is that both Harner and I insist that cannibalism was widely practiced in Mesoamerica before the Aztecs arrived in the Valley of Mexico, and that as part of the small-scale ritual sacrifice of prisoners of war it was probably almost universal among chiefdoms in both hemispheres. We contend further that as states developed, they usually reduced or eliminated human sacrifice, substituting animal for human victims, and that they invariably gave up the practice of eating prisoners of war. Our explanation for this trend is that it was part of the general tendency for successful expansionist states to adopt ecumenical religions. As discussed earlier (p. 109), these religions enhanced the ability of the state to incorporate defeated populations into the victor's political economy as peasants, serfs, or slaves. However, in the Aztec case, and as far as we know, only in the Aztec case, the state itself took over the earlier human sacrifice and cannibalism complex and made it the main focus of its ecclesiastical rituals. As the Aztecs became more powerful they did not stop eating their enemies; instead, they ate more and more of them. At least 20,000 captives were immolated in four days at the dedication of the main Aztec temple in 1487, and by the beginning of the sixteenth century at least 15,000 to 20,000 people were being eaten per year in Tenochtitlán, the Aztec capital (Harner, 1977:119). Since the skulls of the victims in Tenochtitlán were placed on display racks after the brains were taken out and eaten, it was possible for the members of Hernando Cortés's expedition to make a precise count of one category of victims. They found that the rack contained 136,000 heads, but they were unable to count another group of victims whose heads were added to two tall towers made entirely of crania and jawbones (*ibid.*:122).

The scale of this complex bears no resemblance to any other cannibal complex before or since. The Aztec are a unique case, and they therefore demand a unique explanation. Sahlin, however, tries to lump the Aztec complex with instances of small-scale pre-state ritual cannibalism in Oceania and elsewhere. He distorts the problem from one of explaining Aztec cannibalism in particular to one of explaining cannibalism in general. What has to be explained is not why the Aztecs became cannibals but why they remained cannibals.

Why, then, were the Aztecs unique? According to Harner, that the Aztec did not give up cannibalism because the faunal resources of the Valley of Mexico had become uniquely depleted. As a result of millennia of intensification and population growth the Central Mexican highlands were stripped of domesticable herbivores, swine and feral birds, fish, and ungulates in numbers sufficient to supply significant amounts of animal protein per capita per year (Sanders, Santley, and Parsons). The few available domesticated species, birds and dogs, could not be raised in sufficient quantities to make up for the absence of cattle, sheep, goats, horses, pigs, guinea pigs, llamas, or alpacas. All other populous ancient states, including the Inca of Peru, possessed a variety of domesticated herbivores that were intensively exploited either for meat or for some other form of animal proteins, such as milk or cheese.

This is not the place for a lengthy discussion of the biochemical and physiological advantages associated with animal versus plant sources of protein. It is sufficient to note that animal sources of protein in the form of milk or meat are universally valued over plant sources of protein and are everywhere given a central place in ecclesiastical redistributions, honorific feasts, and upper-class commissaries. (Hindu India, the world center of vegetarian ideologies, is one of the world's largest consumers of milk and milk products.) The reason for this is that proteins are essential not only for normal body function but for recuperation from infections and wounds. To make proteins, the human body needs twenty different kinds of amino acids. It can synthesize all but eight or nine of them, the so-called essential amino acids. To obtain these essential components from plants, one must eat large amounts of carefully balanced combinations of plant foods at the same meal. Meat, eggs, and other animal proteins however, provide the essential amino acids in balance even when eaten in small quantities. The world-wide preference for animal protein therefore reflects an adaptive cultural and nutritional strategy. Any population that did not seek to maximize

its animal protein intake relative to that of neighboring populations would soon find itself physically smaller, less healthy, and less capable of recuperating from the trauma of disease and the wounds of combat (cf. Scrimshaw, 1977).

The theory advanced by Michael Harner and me is that the uniquely severe depletion of animal protein resources made it uniquely difficult for the Aztec ruling class to prohibit the consumption of human flesh and to refrain from using it as a reward for loyalty and bravery on the battlefield. It was of greater advantage to the ruling class to sacrifice, redistribute, and eat prisoners of war than to use them as serfs or slaves.* Cannibalism therefore remained for the Aztecs an irresistible sacrament, and their state-sponsored ecclesiastical system tipped over to favor an increase rather than a decrease in the ritual butchering of captives and the redistribution of human flesh. The Aztec ruling class, unlike any government before or since, found itself waging war more and more not to expand territory but to increase the flow of edible captives. All of this bears little resemblance to the economic fable concocted by Sahlin in which the Aztecs go to war to "get some meat" because it is cheaper for them to cook people than to eat beans. The critical optimized costs and benefits are those associated not only with the choice between two sources of protein but also with the choice between alternate modes of justifying ruling-class hegemony in a severely depleted habitat at a definite moment in an evolutionary process.

Sahlin's Aztec Arcadia

THE ABOVE theory is based on the contention that the Valley of Mexico was a uniquely depleted habitat. Sahlin, however, not only rejects this contention, but makes the claim that the Valley of Mexico was a veritable protein paradise. He claims that "of all the peoples in the hemisphere who practiced intensive agriculture, the Aztecs probably had the greatest natural protein resources." Hidden in this state-

*It is true, as Sahlin points out, that the Aztec sometimes fattened up their prisoners before eating them, but that scarcely means that they were engaging in some final mismanagement of resources—they had to provide food only for the fattening, not for the rearing, of their victims. It is also true that the "trunks" of the victims were fed to animals in the zoo. But no one knows if the flesh was still on the bones; nor is the feeding of carnivores at the zoo at odds with the other amusements of the Aztec ruling class.

ment about greatest *natural* resources is the indisputable fact that the Aztecs had the least *domesticated* protein resources among the ancient states of either hemisphere. That is the crucial point, for it is an established archaeological, ecological, and plain common-sense fact that hunting and nonmaritime fishing cannot be sustained at high levels in the immediate vicinity of densely urbanized populations. Even village-level societies with densities below two or three persons per square mile require large reserve areas in order to sustain per capita animal protein intake at modest levels (say, 30 grams, or less than half of the current U.S. ration). In this perspective, Sahlin's contention that the 1,500,000 people who lived in the Valley of Mexico could have gotten an ample supply of meat from hunting is worth about as much as the suggestion that New York City could get its meat from deer captured in the Catskills.

W. Sanders, R. Santley, and J. Parsons have studied the archaeological evidence for overkill and depletion in the Valley of Mexico for the period 1500 B.C. to 1500 A.D. They estimate that at the beginning of this period deer meat contributed 13.5 percent of the calories in the diet. In Aztec times, "overkill had become so acute" that only 0.1 percent of calories could come from deer meat. They estimate that "total meat from all wild sources could not have exceeded 0.3 percent of the annual requirement [of calories]." This works out to 0.6 grams of protein per capita per day.*

The idea that the lakes in the Valley of Mexico could have supplied significant amounts of fish protein per capita per year is no less incorrect. These lakes in precontact times were in large part swamps averaging less than three feet deep; at the lower elevations in the chain the water was too salty to drink, and during the dry season the surface area shrank considerably due to evaporation. The lakes bloomed with algae out of which the Aztecs made their famous "scum cakes." These algae blooms themselves contradict the possibility that fish were abundant in the same water. According to Charles Gibson (1964:340), in the early seventeenth century, the two most productive lakes were yielding over a million fish, none larger than nine inches and most smaller. Tripling this number for the early sixteenth century, one arrives at a total of the equivalent of two herrings per capita per year or about 0.12 grams of protein per day per capita.

*At 2,000 calories per capita; at 2 calories per gram of lean meat; and at 20 percent protein per gram of lean meat.

Next come the waterfowl. Sahlins says there were "millions of ducks." Gibson (ibid.:343) estimates that about 1 million ducks were taken annually in the eighteenth century. Since these were hunted with guns when the population of the Valley of Mexico was much smaller than in Aztec times, there is no reason to adjust Gibson's total upwards. That gives every Aztec something less than three-quarters of a duck per year. If we allow a generous two kilos undressed weight per duck, this yields about 1.0 grams of protein per capita per day.

But the real worth of the Aztec arcadia we are told lay in its invertebrates. The place was "teeming" with small "wildlife," writes Sahlins—with "bugs, grubs, and small red worms." And Sahlins again accuses me of bourgeois ethnocentrism for my failure to realize that such *animallitos* taste good to non-Westerners. Taste, however, is not in dispute; rather, it is the ability to recurrently harvest small, patchy, and trophically subordinate invertebrates on a scale sufficient to provide a dense urbanized population with significant amounts of animal protein. It is one thing to relish piquant morsels of witchety grubs and snails as a supplement to meat and fish; it is quite another to make such fare one's primary source of animal flesh. Ordinarily people let the fish and the birds eat the worms, and then they eat the birds and the fish. The only sensible conclusion to be drawn from the fact that Aztecs ate more worms than anything else is that they had eaten up most of the birds and the fish, and having eaten up most of the birds and fish, they ate people as well. Sahlins thinks this shows that the Aztecs were an affluent society. This conclusion honors his concept of culture, but it dishonors the relentless efforts people have always had to make to satisfy nutritional needs.

To further establish the point that the Aztec actually inhabited an environment rich in natural sources of protein, Sahlins declares "there was no shortage of meat in the markets described by the Spanish," neglecting to add that Cortés was convinced that much of it was human meat. (If they can't eat scum cakes, let them eat people.) In places like Calcutta one also finds that for those who can afford it there is no shortage of anything. If one adds up all possible sources, exclusive of human flesh it is difficult to see how the Aztecs could have gotten more than two or three grams of animal flesh per capita per year, or about half of the current animal protein ration in India (Nair and Vaidyanathan, 1978).*

*If we assume that they got as much protein from the bugs and worms as they did from the ducks, then the total is as follows:

Against Sahlins's ducks, bugs, and scum cakes there is hard evidence from the chroniclers concerning devastating crop failures and famines. Between 1500 and 1519, the year of the arrival of Cortés, there were either famines or near famines in 1501, 1505, 1507, and 1515. The worst recorded famine occurred in the fifteenth century. It lasted from 1451 to 1456 and was followed by an intense period of warfare and prisoner sacrifice. Harner estimates that famines occurred on the average every three or four years. No scholar has ever questioned the reports of Aztec famines. Their occurrence discredits Sahlins's notions about the abundance of wildlife.

Positivist Cant

FROM THE ARDOR with which Sahlins argues for abundance on the bases of the evidence for scarcity, one might suppose that he wishes to promote his own explanation of the Aztec puzzle. But Sahlins has no alternative explanation. The sole purpose of his unremittingly negative critique is to prove that Aztec "culture is meaningful in its own right," a proposition to which one cannot object but which has no bearing on the question of whether or not Aztec cannibalism can be explained by cultural materialist theories.

According to Sahlins, the fascinated contemplation of the richness of human sacrifice as the Aztec priests and their victims understood it alone defines the anthropologist's proper task. Indeed, Sahlins warns that if we persist in trying to learn something about the etic and behavioral conditions that create butcher priests skilled at yanking the hearts out of living people, "we shall have to give up all anthropology." Why this should be so eludes me. I rather think it more likely that we shall have to give up anthropology once the idea gets around that Sahlins's constriction of anthropology to the emic and mental aspects of Aztec sacrifice exemplifies the true anthropological calling. No one can doubt that "culture is meaningful in its own right," but many will doubt Sahlins's authorization for telling us what it meant to be dragged up the pyramid by the hair—even if it was "magical hair," as he

$$\frac{\text{meat}}{0.6} + \frac{\text{fish}}{0.12} + \frac{\text{ducks}}{1.0} + \frac{\text{"animallitos"}}{1.0} = 2.7 \text{ grams.}$$

Of course, this does not take into account the seasonality of many of these creatures, nor does it take into account the sharp differences in consumption privileges among the Aztec's social classes.

proposes in a footnote—to be bent back spread-eagled and cut open. Sahlin claims it mattered to the victims whose screams ended five hundred years ago that they were part of a sacrament and not just part of a meal. “It is positivist cant,” writes Sahlin, to impose Western categories such as cannibalism on these high holy rites. It wasn’t cannibalism, he continues, it was the “highest form of communion”—as if communion is not also a Western concept and as if labeling human sacrifice “communion” transubstantiates obsidian knives and human meat into things we can’t recognize as being sharp and nutritious respectively. We should certainly try to understand why people think they behave the way they do, but we cannot stop at that understanding. It is imperative that we reserve the right not to believe their explanations. Most of all we must reserve the right not to believe ruling-class explanations. A ruling class that says it is eating some people out of concern for the welfare of all is not telling the whole story. An anthropology that can do no more than make that viewpoint seem plausible serves neither science nor morality. Aztec cannibalism was the highest form of communion for the eaters but not for the eaten. For the eaten, it was not only cannibalism but the highest form of exploitation. (Even the bourgeoisie refrains from dining on its workers.) If it be positivist to describe human relationships in such terms, long live positivism. If it be anthropology to struggle against the mystification of the causes of inequality and exploitation, long live anthropology.

The Name of the Game

ONE TEMPTING answer to Pontius Pilate’s “What is truth?” has always been that truth is whatever people can be persuaded to believe. If we stop to ponder the further question “What persuades people to believe?” sooner or later some impatient soul will answer “Power.” The ability to make people believe is rooted in the ability to make people conform. Do we not hold that truth is constantly being created and re-created out of struggle? A recurrent resolution of obscurantism therefore does not lie in the power of argument but in guns, prisons, and torture. If the truth cannot be found, it is often imposed.

According to the “Marxist” socialists Barry Hindiss and Paul Q. Hirst (1975:179), who believe that “nothing which has happened or has existed in Asia or elsewhere” can ever establish the legitimacy of concepts such as the Asiatic mode of production, historical truth is useless for praxis.

Marxism, as a theoretical and a political practice, gains nothing from its association with historical writing and historical research. The study of history is not only scientifically but also politically valueless (Ibid.:312)

What matters is the present, not as an objective product of history but as “current situation,” the object of political struggle:

History renders unrecognizable that which is the primary object of Marxist theoretical and political practice. It dislocates that necessary connection between theoretical analysis and politics which is the very core of Marxism. (ibid.:313)

These are ominous words. If we capitulate to obscurantism in the name of political clarity, we capitulate to the brutalized visions of truth that exist in the minds of those sadistic few who know best how to persuade people to believe that fact is fiction and fiction is fact. Until such time as anthropologists reacquire some respect for scientific objectivity, and demonstrate that respect by distinguishing between behavior and thought, between emics and etics, between empirical and nonempirical statements, between subjective and objective points of view, between fact and fiction, and between theory and practice—until they stop indulging in rhetoric designed to inflame all parochial prejudices, justify any political whim, and mystify every material relationship, the name of *their* game will be the name of a new age of ignorance and oppression.

To assert as Alvin Gouldner (1970:103) does, that “objectivity is the compensation men offer themselves when their capacity to love has been crippled,” is to deny that truth can be both the object and means of expressing love. To erect a barrier between truth and love is to wantonly degrade and limit human nature. There are many, but not enough, for whom objectivity is the path that leads to both.