A PHILOSOPHICAL PROBLEM IN ARCHEOLOGICAL METHOD: HOW IS A DESCRIPTION OF CULTURE TO BE INFERRED FROM A DESCRIPTION OF ARTIFACTS?

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Archeological data consist of artifacts which provide the bridge to the peoples and cultures which produced them. A network of ecological, biological and geological inferences is needed to reconstruct the environmental constraints and interactions under which these people lived. Most archeologists take the constructing of a description of culture and society to be their job: Colin Renfrew, in *The Emergence of Civilization* (1972) says: "The raw material data have first to be reviewed (in Part I) before an attempt is made (in Part II) to construct from them a picture of the cultural processes at work and the changes which resulted" (p. vi); in Watson, Le Blanc and Redman, *Explanation in Archeology* (1971), archeology is defined, following R. Watson, as evolutionary anthropology (p. 163); K. C. Chang in *Rethinking Archeology* (1967) argues that the basic unit of archeology is the settlement not the artifact (p. 17).

Archeologists in general are restrained in their evaluation of archeological inferences. Bruce Trigger "Archeology and Ecology" in *World Archeology* (1970) pp. 321-336 says that archeology is unable to reconstruct whole cultural systems. Colin Renfrew in *Emergence of Civilization* (1972) p. xxvi says: "When many of man's most pressing concerns are now social rather than ecological, and the predominant economic problems are no longer subsistence ones, other explanations are needed, and the notion of 'adaptation' must be modified considerably." Christopher Hawkes, "Archeological Theory and Method" in *American Anthropologist* (1954) pp. 155-168 says that drawing inferences as to social and political life is hard, but he indicates that inferring the nature of religious and social life is much harder.

The theoretical supports for inferences from artifacts to culture have been enumerated by Bruce Trigger in "Archeology and Ecology" as follows:

1. Unilinear evolution.—All cultures and their artifacts can be placed on an assumed linear order of development. Therefore cultural level delimits the inferences that may be made.

2. Diffusionism.—The theory of cultural diffusion pushes the problem back to some known seat of culture: Egypt, China, India, which is then studied by the full battery of social sciences and humanistic studies. The problem remains of explaining the local conditions for assimilation of the diffused bit of technology or culture.

3. Culture as a product of economic and ecological base.—"Cultural materialism" is the term used by Marvin Harris to describe this view in the *Rise of Anthropological Theory* (1968), whereas "Marxism" is the term used for the exclusive concentration on technological and economic factors as necessary causes.

4. American functionalism.—Following Maitland's dictum, "American archeology is anthropology or it is nothing"; it interpolates a functional interrelationship among artifacts, their uses, and the rest of culture. It requires elaborate classificatory schemes and computer analyses for vast amounts of minutely classified data which are interrelations of facts about artifacts, social structure, aesthetic concepts, and religious beliefs. Artifacts are given an integral cultural interpretation; for example, burial artifacts are viewed as fossilized rituals. The analysis assumes semi-autonomous, adaptive, systemic, functional process, that culture is determined by "core features" which are mainly technological and social structures, and that variation in cultural pattern is limited to a few types. This assumption has its roots in older unilineal or multilineal evolutionary theories. Trigger points out that in the cultural sciences as in biology, the large number of uncontrolled factors makes the prediction of adaptive variation impossible. As a result, the explanations of cultural phenomena, being *ad hoc*, are merely plausible. American functionalism may be criticized because it ignores all but the "core features" and plays down diffusion and cross-cultural contact.

5. Open-system ecological archeology.—This is Trigger's own view that many other factors, some of which are cultural, must be taken in account, e.g., warfare, religious beliefs, disease patterns, contacts with neighbors, trade and communication patterns, and political organization. These affect the "core factors" (the ecologically adaptive factors and the systemic interrelationships) so much that some cultural features cannot be deduced. For this reason, Trigger concludes that archeology is unable to re-construct a whole cultural system. The critical accounting of theoretical bridges draws the net of inferences too tightly around cultural variations.

Some cultures or some aspects of culture are so remote, to use Charles Gallenkamp's word to describe the remains of Maya civilization (*Maya, the Riddle and Rediscovery of a Lost Civilization*, 1976) that we have a sense of something unaccountable and beyond our ken. In the case of the Maya, even the common people were unable to reconstruct the religious culture of their elite.

Eric Thomson, who devoted over 40 years of his life to study of Maya archeology and who is perhaps the most famous of Maya scholars, is extremely cautious in his evaluation of the reconstruction of Maya culture. He says in the foreword to Migual Leon Portilla's *Time and Reality in the Thought of the Maya*, 1968, p. viii:

> It is, perhaps, as irrational to expect a satisfactory penetration of the mystic and emotional aura of the Maya philosophy of time by a creature of twentieth-century Western Culture as it is to hope for a balanced, sympathetic and understanding study of the ecstasy of St. Francis from the pen of a militant atheist of our materialistic age. Our outlooks are too far from those of the Maya and, on top of that a terrible handicap, there are so many aspects of the problem which are imperfectly known or completely unknown to us. The atheist student of St. Francis has at his disposal incomparably richer sources than we can ever dream of having.
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> Many years ago, with unjustified arrogance I compared my ambivalent position as a Maya student—in the picture, but not of it—to that of the humble donor whose portrait is allowed to appear in the corner of some great religious painting of the early renaissance he has commissioned. I had meant to convey that, at best, the student, like the donor, is a nonparticipant, but is honored by being allowed an imaginary participation from afar in the proceedings, but I was ranking myself too high; neither you nor I will ever have the insight into Maya mysteries that the kneeling donor had in that age of faith. I fear we shall never attain a corner of the canvas.
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> Perhaps I have been unduly pessimestic in assessing our problem and your ability to meet them. My emotional insight into Maya mysteries will always be from the far side of that deep chasm which divides Maya culture from ours; I can never hope to be a participant as was that kneeling donor who was both outside that particular scene of mystery or miracle, but at the same time an actor in it.

The Maya present a unique problem for archeological inference and a reef on which such inferences may run aground. Maya artifacts are products of a high civilization, one that is completely different from our own. Isolated from Europe and Asia, highly developed but incomparable it seems to defeat the linear evolutionary and diffusionist supports for theoretical inference. Ecological determinists and functionalists here had the most to say about the Maya, with critiques from the open-systems view, but there remains a central unexplicated core. The Maya have living descendents and left writings that have been partially deciphered.

When inferences are drawn with reference to mental states or cultural creations (each of which might be unique and closed to direct experience), familiarily with the circumstances which may have produced them might lead, in some cases, to their identification. One would then be able to compare them with other known mental states or cultural creations. But in other cases familiarity with the related circumstances will make one acutely aware that one cannot identify the mental states, concepts or cultural creations. Familarity with artifacts and surrounding circumstances may breed a growing strangeness and uncertainty rather than understanding. Examples might be Thompson's own experience with the Maya, my own experience in watching Japanese movies, someone's experience living with a psychopath. Acute study may reveal areas of thought and life

forever closed to us. This is not an argument for rock bottom limits to rationality, Wittgensteinian 'forms of life,' or ultimate irrationality and relativism. We can note the general features of some things which are not totally open to us.

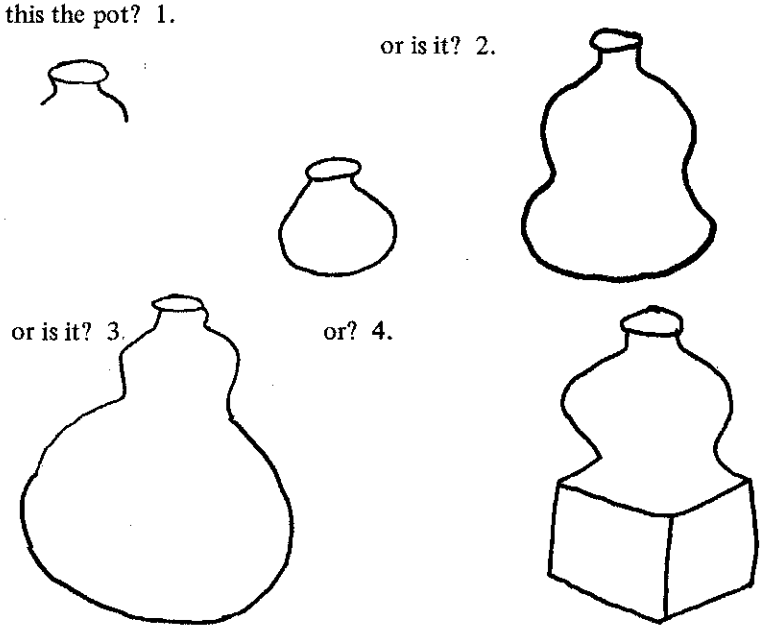
In the case of the Maya, descendents were used as native informants who provided information about history, customs, and folklore. There were also written texts to be deciphered. When inferences from archeological artifacts to culture are thus strengthened, archeology is provided with a key to mental life and culture by using the resources of history and social anthropology. But as Chang has suggested, archeology complemented by history, may treat its texts similarly to anthropology's treatment of native informants, not taking them at face value but integrating and interpreting what they say in the light of other evidence (Chang, 1967, pp. 139-143).

If there are only written texts and there is no Rosetta Stone which translates them into a known language then only those parts of the texts which have a clear referent can be translated. In order to bring a language back to life the possible range of referents must be known. It is a radically different process from cracking a code and it cannot be done mechanically (by computer). The range of referents in cracking code, for example, the German Code in WWII, is the number of words in the German language, restricted by the possible grammatical structures in which they occur. If any sensible message were as likely as any other, the cracking of code would be very unlikely; but since the number of situations to be coded in wartime is very limited, the chances of success are thereby increased. Success in the translating of an unknown language depends on the range of referents to which the language can refer. The formal structure of any language can be discovered by formal analysis, which together with a fund of known words can be the beginning of that success. But with few or no known words, texts with obvious referents make for the most likely break-throughs. At least those texts referring to arithmetic, astronomy, business, and agricultural transactions seem to be cross-culturally invariant. But as texts move from practical and mathematical concerns to culturally unique social, artistic, philosophical, and religious creations the referents, save for the artifacts employed closely with these factors, have vanished with the minds which contained them; vanished also is the uniqueness of their history, laws, and social institutions. The texts cannot be translated. The remains cannot be interpreted. Archeology remains mute. The informative, the mind-expanding, the different escapes us *in principle* in archeology. It is no wonder that early people look mundane, dull, and brutalized to us. We would not know them if they were not. Not only is it no wonder, it is even a night-club joke: "Don't think I'm Neolithic, I'm

secondary Neolithic, you know. And what's more, I own two polished axheads and a bone implement of undetermined use." (From Flanders and Swann's act quoted in Hawkins *Beyond Stonehenge*, p. 27.

The problem of archeology from the functionalist point of view, is to piece together fragments of a culture and to get an over-all picture of it. This is painstaking work. The process is very much like putting together the fragments of a piece of pottery of unknown shape where many pieces are missing or are of indeterminate shape. If there are pieces enough to reconstruct this:

Is this the pot? 1.



The argument against 4 is structural—difficult or impossible to construct. The argument against 3 is that with so much construction material, it is unlikely that none would remain in the surroundings. The arguments against 2, 3, and 4 is of no practical purpose. A strong additional argument for any of 1-4 is finding others like it, or representations of it, or means to produce it. But none of these constraining arguments or hypotheses apply directly to culture. Weaker constraints like them could be applied, e.g., (1) structural difficulties to be overcome in conceiving, executing, and retaining an aspect of culture life; (2) lack of any remnant indicating the existence of that aspect of cultural life (idea, rule, institution); (3) no practical reason for having it; and finally, (4) lack of occurrence of any-

thing similar to it. But it must be remembered that while analogs of these arguments can be applied with a heavy hand to pots, they cannot to culture where constraints are not, for the most part, physical but are predominately due to lack of imagination and dullness in conception.

The philosophical problem which I have been considering is how does one get a correct picture of a culture, not merely a scientifically safe one (which appears to be somewhat as follows: "if they could not use it to get food or sleep on, then it must be for decoration"). The obvious approach is to use the hypothetico-deductive method. Any coherent picture of the culture which does not conflict with the data is a viable hypothesis. No great emphasis is to be placed on coherence or conflicts with the data. Imagination is the most important ingredient in *correct* archeology precisely because cultures are products of the creative abilities of human beings. If we do not use ours there is no hope of retracing theirs.

But there are three problems involved in archeological imagination:

1. Out of several hypotheses only one will be right. Are we too optimistic? The answer to this is that no one has over-estimated the lack of imagination of people. But this would go for the students of archeology as well. Therefore, the only thing to assume here is imaginative parity.

2. The bounds of biological, ecological, physiological (both genetic and anatomical), geological and environmental constraints may be overstepped by the hypothesis. But as Trigger has pointed out, in arguing for his open-system ecological archeology, cultural factors may interact with the environment and radically alter these bounds. Where constraints can be established they do limit hypotheses, but variation in assessing them is considerable. They usually are broad enough to be irrelevant to cultural theory. It is, in any case, a matter of probabilities, adjustments, and guesswork. To focus one's attention on these limitations will result in self-inflicted blindness of one's insight and imagination.

3. The data is so poor that almost any hypothesis will not be rejected by it. Is this not a license to unbridled imagination? We are indeed in bad times when one needs a license to unbridle his imagination, but if you can get a license it is well worth any price.

If my answers to the three problems seem to encourage unbridled speculation and proliferation of hypothesis, must we fall back on platitudes about human nature, economic necessity, physical impossibility in order to close the door again and to weed out bizarre hypotheses? I think not. The limits of human nature and economic and physical necessity will take care of themselves. These imagined limits have been trangressed throughout human history and have often become no longer limits and transgressions. In the meantime, until the possibility or viability of hypotheses have been assessed, they linger, enriching life and doing no

harm. Safety in speculation and dullness in creativity had never been virtues of biological organisms or of thought until scientific and academic institutions imposed a bureaucratic morality on imagination and awarded success only to plodding. The realm of thought is and ought to be many magnitudes freer and safer than the realm of cultural or physical experiment. So it is here that we can leave open hypothetical imagination in order to obtain not plausibility but the ideal of correctness of interpretation in archeology. In spite of Popper and Feyerabend there is a growing dullness in science itself.

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