

Ideology in archaeology

Warwick Bray

Religion and Empire: The Dynamics of Aztec and Inca Expansionism.

By Geoffrey W. Conrad and Arthur A. Demarest.

Camb-ridge University Press: 1984. Pp.266. £25, \$49.50.

MOST archaeologists, once you come to know them, are quite normal people. They read newspapers, discuss politics, fall in and out of love, and are as irrational and prejudiced as anybody else. In their everyday lives they recognize that the world is a complex and ever-changing place, where human conduct is governed by emotion as well as reason. And yet, these same people, when they write professionally about extinct societies, depict an ordered world in which human behaviour (that is, the raw material of history) develops according to deterministic laws which owe more to Leslie White, Julian Steward or Karl Marx than to evolutionary biology. Ask an anthropologist what caused the industrial revolution, and you will probably get a complicated answer. Ask the same person what caused the urban revolution and the growth of political states, and all too often the reply will be "population pressure", "environmental stress" or some other neat and simple explanation.

At this point a historian (who has read his Machiavelli, and who studies the actions and words of real people, not theoretical abstractions) begins to shake his head and to say that archaeologists have very naive ideas about causality. The archaeologist replies that the historian is unscientific, subjective, and that he corrupts the innocent by passing off creative fiction as historical truth. And there the dialogue usually ends, though each party, in quieter moments, may admit that the other is at least partly right.

Because of the way the subject has developed across the Atlantic, most archaeologists in the United States have little training in history, philosophy or logic. As Conrad and Demarest remark,

During the past two decades cultural materialism, in one form or another, has been the dominant theoretical approach in New World archaeology. Accordingly, environmental factors involved in state formation and expansion have been much discussed and explored . . . some of the ecological explanations of Precolumbian imperialism have been rather simple-minded deterministic themes which assume environmental pressures to be the *only* major causal forces involved in cultural evolution.

With this complaint I entirely agree, and I applaud the authors' intention to reintroduce ideology (or rather the manipulation of ideology by the governing class) as one of the agencies of social and political change.

The terms of reference are set out in the first half of the book, which describes the



Burden of labour taxation — Incas carrying the produce of state-owned fields to imperial storehouses. An imperial official (centre) directs the work.

rise of the Aztec and Inca empires and their equally dramatic breakup in the face of European invasion. These chapters provide a balanced and well-written survey, though very similar accounts of the Aztec story have been in print for some years, and Conrad's views on "split inheritance" (whereby the Inca ruler's power and title descended to his heir, while his wealth remained the property of the dead man's kin group) have already been the subject of a great deal of discussion in the professional literature.

New or not, these sections are a

necessary prelude to the theoretical discussion which follows. The authors conclude that the success of the Aztecs and Incas was due in large part, though not exclusively, to ideological innovation. In particular, they single out the intensification of human sacrifice and the cult of the warrior sun by the Aztecs, and the combination of divine rulership and split inheritance in Inca Peru. I accept Conrad and Demarest's evaluation of these specific phenomena, but, even in societies where there is no clear separation between the religious and the secular, this takes an unduly narrow view of ideology. My dictionary defines the word as "the manner of thinking characteristic of a class or individual". To be effective, a national ideology has first to be made acceptable by

a process of enculturation or indoctrination, as any politician well knows (was not Waterloo won on the playing fields of Eton?). A walk around the streets of Belfast will quickly show how difficult it can be to separate religious from political ideology, but I doubt whether any successful empire was built on religion alone. Conrad and Demarest are careful to explain that they are against all monocausal explanations, and that ideology was just one factor in the growth of the Aztec and Inca empires, but they sometimes write as if ideology was the single main stimulus of success. This is arguable, to say the least.

In their later chapters the authors move from the specific to the more general, in the search for a theoretical framework to explain the emergence of states and the rise of empires. This is one of the bread-and-butter problems of cultural anthropology, so it is fair to ask how — if at all — Conrad and Demarest have improved on previous studies.

In their discussion of socio-political evolution, the biological analogy is never far away. Culture is seen as an adaptive mechanism, responding to particular pressures from the environment (which includes the "climate of opinion" — that is ideology — as well as the physical universe). Thus, "the

Mexica and Inca ideological reforms of the early fifteenth century were highly successful adaptive responses to the natural and cultural environments". These responses, successful at first, became maladaptive in the long run, and were instrumental in bringing down the very societies they had helped to create. This is fine, up to a point. But why, given much the same environmental pressures, did the rivals of the Aztecs and Incas not come up with equally effective adaptations? If the answer is simply that the Aztecs and Incas had better leaders (or better theologians),

Drawing by Guaman Poma, reproduced from *Religion and Empire*.

we are back to the Great Man view of history, which is anathema to all processual archaeologists. And why, if the Aztecs and Incas had adapted once, did they not readapt when their reforms had outlived their usefulness? Also, how do the invaders fit into the scheme? Cannot the Spanish conquest be seen as a trial of strength between European and native ideologies, rather than between Spanish and Indian armies?

Most of all, the evolutionary analogy raises questions of "causality" of the kind familiar to historians as well as to anthropologists and archaeologists. Conrad and Demarest give a lot of space to this question, without carrying conviction or offering much hope for the future. In biological evolution the question "What causes elephants?" is meaningless. Perhaps it is just as pointless to ask what "causes" states or empires. Conrad and Demarest do a lengthy demolition job on the ecological determinists, the cultural materialists of the Marvin Harris school, and even on the orthodox Marxist theoreticians (though they show more sympathy for the "structural Marxism" of Godelier and his reviv-

ionist colleagues). These criticisms were well worth making, but where do we go from here? To revert to the authors' own biological analogy, we need a theoretical model in which the same phenomenon can simultaneously be an adaptive response (to the previous adaptive responses?) and also a "cause" of change. This, of course, denies the existence of prime movers. Some biologists and anthropologists would argue that, for all its imperfections, some form of systems model comes nearest to satisfying the requirements, but this possibility is never seriously discussed.

Overall, *Religion and Empire* looks backward, to yesterday's problems, rather than forward towards the future. It is a thought-provoking book, but as a contribution to the debate on causality in human history it offers few solutions. Nor does it suggest how the archaeologist, with no documentary information to help him, can even begin to reconstruct the nature of past ideologies, let alone build ideology into his explanatory model. □

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Work with nucleic acids

Jeffrey Williams

Techniques in Nucleic Acid Biochemistry. Techniques in the Life Sciences, Vol. B5.
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For those who do not already know the series, it should first be pointed out that *Techniques in the Life Sciences* takes a somewhat unusual form. Each volume consists of a number of pamphlets, loosely held within a plastic box. The rationale is that such a format will allow the publication of supplements and replacements to keep each volume up to date; indeed, with no secure method of retaining individual pamphlets within the box, and with the high loss rate observed for methods sheets in most laboratories, a steady supply of replacements seems likely to prove a necessity.

This is the final volume in the Biochemistry Section of *TLS* (the other, which still continues, deals with physiology, while a Cell Biology Section will be launched next year) and it illustrates the usual advantages and disadvantages of a multi-author technical manual. Because almost all of the authors are recognized experts in their particular techniques, the methods presented are thoroughly tried and tested. The main fault is the enormous variation in the depth of technical detail. Thus the "shotgun" method of DNA sequence analysis is described down to the last salt concentration in a contribution

which should find a place above the bench of all aspiring long-distance sequencers. In contrast, the section on RNA sequence analysis is purely a review which, while well written, contains no technical descriptions of any one sequencing method.

These two contributions represent the extremes and most of the articles succeed in the difficult task of combining a literature review with a more-or-less comprehensive methods section. Thus the articles on RPC-5 chromatography of DNA, restriction enzyme purification, restriction enzyme mapping, cosmid cloning, mRNA-DNA hybridization and calcium-phosphate-mediated DNA transformation constitute very useful descriptions of important techniques. There are contributions on genomic cloning in bacteriophage and in yeast which, although predominantly designed to be review articles, give a certain amount of technical information. Finally there are two sections — on bacterial expression vectors and on the analysis of eukaryotic enhancer sequences — which are primarily reviews of work from within the authors' laboratories.

The style of the volume is somewhat akin to the manuals emanating from Cold Spring Harbor Laboratories, but it is a multi-author work and this places it firmly in the mould of a series such as *Methods in Enzymology*. Where the latter is much more successful is in enforcing consistency upon the individual authors and the overall impression is of a valuable concept which in practice still has not quite found its feet. □

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That strange fellow, Mr Newton

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In the Presence of the Creator: Isaac Newton and His Times.

By Gale E. Christianson.
Free Press, New York: 1984. Pp. 623. \$27.50.

ONE OF Isaac Newton's French contemporaries and author of the first textbook on calculus, the Marquis de L'Hôpital, is said to have asked of him: "does he eat & drink & sleep, is he like other men?". Newton's close friend, the philosopher Locke, wrote of him: "Mr Newton is really a valuable man, not only for his wonderful skill in mathematics, but in divinity too . . .". The historian-bishop, Gilbert Burnet, called Newton "the whitest soul I ever knew".

Adulation of Newton's character was far from universal in his own lifetime, however: the diaries of Robert Hooke and John Flamsteed, and the letters of Leibniz, contain some of the harshest language a seventeenth-century gentleman (other than Swift) could bear to pen. Newton's successor in the Lucasian Chair, William Whiston, recorded his as "the most fearful, cautious and suspicious temper" he had ever known. Recent writers on Newton the man have, on the whole, taken the side of Newton's enemies rather than that of his friends. At the best they have (following Keynes) emphasized his character as magus, mystic and seer, deducing even the concept of universal physical forces from the mystery of alchemy; at the worst they have found him dictatorial, deceitful, violent, neurotic, a fit subject for the psychohistorian's couch if not the straitjacket.

Gale Christianson is not of the psychoanalytical school, but he discerns another powerful force in Newton's nature: social and personal ambition; "Newton had kept his private pledge to attain the recognition usually denied a lowborn yeoman's son" (p. 383). He makes much of Newton's lack of arms, his family illiteracy, his status as a sizar at Trinity, in a way that shows a certain insensitivity to the habits of Newton's society. A sizar was not so very different from a gentle page in a noble household and many gentry could barely sign their names. If one underestimates the likelihood of upward mobility in a society, one is likely also to exaggerate the psychological effects upon those who, like Samuel Pepys and Isaac Newton, rise far in status.

Comparison is inevitable between this new biography and the even ampler one by R.S. Westfall (*Never at Rest*; Cambridge University Press, 1980). Westfall's book is a magisterial study of Newton the scientist based on a quarter-century of steady