

Review Articles

Historical Consciousness and the Ancient Maya

*Chronicle of the Maya Kings and Queens:
Deciphering the Dynasties of the Ancient Maya*
by S. Martin & N. Grube. London: Thames &
Hudson; ISBN 0-500-15103-8 hardback, £19.95 &
US\$34.95, 240 pp., 368 ill. (86 col.)

David Freidel

Since the publication of John L. Stephen's and Frederick Catherwood's travels in southern Mexico and Central America more than a century and a half ago, the ancient Maya have gripped the popular imagination as a people whose undeciphered glyphic texts would, at the very least, confirm the civilized character of the Precolumbian inhabitants of the region. Many hoped they held some great insight as lost and secret knowledge of the human experience. As late as the 1930s, Colonel James Churchward (1926; 1931), prototype to Indiana Jones, could get a warm reception from the *New York Times* review of books with unlikely sagas of a lost continent called Mu, whose enlightened legacy included the wisdom of the Maya sages through their writings. Sylvanus Morley (1946) and Sir Eric Thompson (1954) published lively and authoritative best-sellers on the Maya civilization, in which they despaired of ever really knowing what the texts conveyed, beyond a fascination with calendrical time bordering on religious obsession.

But there were always some devoted adepts who thought this writing system would eventually yield, and in the sixties and seventies it finally did. Michael Coe's *Breaking the Maya Code* (1992) is a lucid take on that remarkable era of achievement. Beginning with Linda Schele and Mary Miller's *The Blood of Kings* (1986) and continuing with Schele and my collaboration on *A Forest of Kings* (1990), Schele and Peter Mathews *The Code of Kings* (1998), and numerous other books and articles in the 1990s, Mayanists have been exploring the prospects of ancient history in a Precolumbian society comparable

to the ancient histories of such Old World civilizations as Egypt and Mesopotamia. To be sure, the textual material from the Maya civilization is in many ways more limited in both quantity and quality than that available from those others, but it is nevertheless yielding intriguing and increasingly detailed information about how the rulers and elite perceived and responded to their times. Simon Martin and Nikolai Grube, in *Chronicle of the Maya Kings and Queens*, deliver an elegant and illuminating exclamation point to this quest for Maya history.

It is a well-organized and beautifully crafted book. The graphics are in a class by themselves pedagogically. High-resolution colour photographs make compelling illustrations, even when reproduced at small scale, and they are distributed throughout the narrative texts. *Chronicle* includes excellent new cut-away and reconstruction pictures of monumental architecture important to the stories. The numerous side bars and boxed discussions draw attention to particular substantive points and methods of analysis without distracting from the main arguments. In the wake of *The Ancient Maya* of Morley, Brainerd, and finally Robert Sharer (1994), Linda Schele sustained a tradition of detailed visuals in her books on Maya history, and *Chronicle* extends this tradition in an original and welcome fashion. Like those books, *Chronicle* is also an original and important work of scholarship as well as a current summary of ancient Maya history as presently known. So the book can be read at several levels, by the interested novice, the well-acquainted enthusiast, and the professional, with rewarding results. The endnotes are brief allusions to scholarly publication; the bibliography is compact and precise. Indeed, the running narrative is in a parsimonious and clear prose that rarely strays from the main points of historical interpretation proposed by these authors.

Following the mandatory introductory orientation to the Maya, their culture history, writing, and elite culture, the authors lay out the essentials of Classic Maya politics as they understand this matter. Martin and Grube, building upon prior work but also making a brilliant leap in interpretation, propose that the Maya practised *overkingship*, a hierar-

chical ordering of rulers that created larger regional political entities out of the many relatively small kingdoms making up the southern Maya lowlands. They have articulated this thesis clearly and persuasively here and in other publications, and it is the favoured working model for students of ancient Maya history. At the core of this idea is the fact that the Maya did not write publicly and monumentally for local audiences alone. Rather, they wrote for a larger and regional posterity. As we come to understand the events that rulers celebrated in their texts, we can discern that some of them actually were of great regional consequence, shaping the destiny of all the kingdoms as they struggled over the course of the Classic period with an increasingly tangled web of obligations and loyalties. *Chronicle* brings these events to life vigorously; but because the book is organized chronologically by dynasty, eleven in all, the reader is required to jump from chapter to chapter periodically in order to follow the links between events in one kingdom and those in another. The priority of dynastic sequence over the inter-kingdom ties is a reasonable one. For one of the major scholarly contributions of this book is a complete revision of the dynastic sequence at Tikal based in new epigraphic analyses by the authors. Moreover, this is the first relatively comprehensive summation of a series of Maya dynasties through their entire lengths.

The focus of *Chronicle* on the institution of dynasty as such raises a number of important issues for further consideration. While such epigraphers as Chris Jones (Jones & Satterthwaite 1982), working at Tikal, long ago argued that the ideal of dynastic succession through descending related males could be broken by interlopers inserted into the line, *Chronicle* underscores this pattern at such key kingdoms as Tikal, Palenque, and Naranjo. It is now clear that Maya dynasties could maintain a count of kings reckoning from dynastic founders that included individuals related only tenuously, if at all, by blood descent. This is not to support assertions by some, such as Joyce Marcus (1992), that Maya writing was not chronicle in the main, but rather political propaganda in which dynastic founders were likely mythical. Recent archaeological discovery of the probable founder of the Copan dynasty (Sharer 1999) suggests the contrary. But the observation begs a question unanswered in this book, which is precisely how such interlopers were legitimated as members of the dynastic succession? It is a question that may be answered eventually through a combination of archaeological and epigraphic evidence. I would suggest on the basis of my own research that the essen-

tial means was implementation of the appropriate rituals transforming the would-be king from an ordinary mortal into a sacred vessel of the rulership (Freidel & Suhler 1999). Such rituals required facilities and instruments that sometimes leave archaeological traces.

At the heart of *Chronicle* are two unfolding historical dramas in Classic Maya civilization. The first is a general consequence of the *overkingship* phenomenon, the struggle between two great hegemonic powers, centred on Calakmul and Tikal, for supreme status among the southern lowland kingdoms. The details of this struggle will be unfolding for a long time to come, but it shows promise of being the crux of Classic politics, and perhaps a key to the notorious ninth-century collapse. The second drama, related to the first, is the establishment of what Martin and Grube call the *New Order*, a hegemonic expansion of Tikal in alliance with outsiders, evidently from the huge highland Mexican city of Teotihuacan, during the late fourth and fifth centuries. Clemency Coggins (1976) first argued that Tikal had Mexican kings in the Early Classic period. Schele and I, in *A Forest of Kings*, saw this Tikal-Teotihuacan connection as an alliance. Recently, David Stuart (1998) has argued that Teotihuacanos conquered Tikal and placed one of their own on the throne there. Martin & Grube side with Stuart in seeing Teotihuacan conquest at Tikal. These epigraphers have resurrected aspects of an important debate concerning the secondary or primary status of the Maya states in the ensuing Late Classic period. William Sanders & Barbara Price (1968), in a bold and influential essay on the evolution of Mesoamerican civilization, proposed that the Maya lowlands were an environment inimical to the pristine inception of states, and they postulated that such states as arose did so under stimulus from states in the Mexican highlands. In light of the impressive Late Preclassic lowland Maya civilization (Hansen 1998) the evolutionary dynamics are more complicated than Sanders & Price could have anticipated, but the notion of secondary state formation in the Classic period is back in the mix. Whatever the outcome of this debate, there can be no doubt that research in southern lowland Maya archaeology of the Classic period is now conditioned by epigraphic data.

Ancient civilization was, in important respects, a self-defining cultural phenomenon. The Classic Maya lived adjacent to non-Maya peoples to their east in Central America who, while prosperous and settled, were not full participants in Mesoamerican civilization as a matter of cultural choice and oppor-

tunity. The same, I think can be said, for the southern lowland Classic Maya civilization. I have joked in the past about working in *text-free* zones in northern Belize and northern Yucatan. The archaeology of those regions shows that their Preclassic and Classic period kings were quite mainstream in their material insignias, ritual paraphernalia, and divine architectural settings. But for the most part they were not writing themselves into the regional history which emerged in the southern Classic lowlands. That self-definition, as participants in an interwoven history unfolding as a cosmic literary drama was unique in the Pre-Columbian Americas. In some important ways, still not yet clear in their collective chronicle, they wrote an end to their history. The ninth-century collapse encompassed that world of public writing and left alive the several Maya societies surrounding it to the north, east, and south. Why remains to be resolved, but it is an inquiry in which Simon Martin and Nikolai Grube will certainly continue to contribute insight.

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Evolution of the Mind

Evolution and the Human Mind: Modularity, Language, and Meta-Cognition, edited by P. Carruthers & A. Chamberlain, 2000. Cambridge: Cambridge University Press; ISBN 0-521-78908-7 paperback, £14.95 & US\$22.95, 346 pp., 37 ill.

Toby M. Pearce

It is increasingly recognized that the study of the evolution of the human mind must be inter-disciplinary. And presumably, when treating the more complicated of the range of human cognitive abilities — language and consciousness, for example — the need to combine the strengths of various disciplines is at its strongest. Since, then, one of the central aims of this collection of essays is to discuss a variety of issues that arise from the evolution of just such complex human abilities, it is just as well that the attempt to create a truly inter-disciplinary work was genuine. The book gathers together archaeologists, philosophers, psychologists, linguists, even psychiatrists, and allows them to share their particular fascination with the evolution of the human mind. It has to be said at the beginning that it lets them do so pretty freely; the editors speak just once, at the beginning, and leave the reader to draw links between the various contributions. (Carruthers does also con-

tribute an essay concerning the evolution of consciousness, but this is more in the capacity of contributor than editor.) As it is unlikely that any reader will be very familiar with all of the topics touched in the essays, the volume might have benefited from a final chapter pulling together various strands of argument, and providing general directions for further work. Nevertheless, the twelve essays that make up the volume do represent a serious attempt to bring together thinking from otherwise disparate disciplines to bear upon questions surrounding the evolution of the mind.

Given its title, it is not at all surprising that the volume adopts an evolutionary perspective throughout, but it is certainly pleasing. The idea that the mind is a product of evolution is, within the palaeontological and archaeological disciplines, dealt with on an almost daily basis. Within the study of the *contemporary* mind, however, the fact that the mind has evolved has not always been embraced as fully as one might like. This is especially true when dealing with complex phenomena like language and consciousness, as this volume does. For archaeologists, this point is staggeringly important, because if the mind *per se*, rather than the *evolution* of the mind, is seen as the only area worthy of serious interest, then archaeologists may have nothing to contribute to debates that is unique.

Two of the essays, from Steven Mithen and Thomas Wynn, show the volume's commitment to an engagement with the archaeological record. Mithen's essay centres on the changes that occurred during the transition from the Middle to Upper Palaeolithic. The comprehensive changes — indeed expansions — in the types of artefacts manufactured and employed after the Upper Palaeolithic transition might, he suggests, not merely reflect changes in human cognition, but themselves represent an extension of the human mind into the environment. Humans learned to use both material culture, and the minds of their companions, to boost the limited resources of their own minds. He states, for example, that:

by creating artefacts that represented ideas that could only have a transient existence within the mind, it became possible to regenerate those ideas, communicate those ideas, and allow for cross-fertilisation of ideas between individuals in such a way that completely new constructs could be developed. (p. 216)

Although this idea is not completely original within archaeology — Donald (1991), for example, suggested that some Upper Palaeolithic artefacts may have been used to store information, as an aid to memory — Mithen makes the formulation much more explicit,

presenting it as a thesis in its own right. This perhaps quite profound notion has been receiving recent philosophical support from Andy Clarke, who has gone so far as to suggest that at least some parts of the external environment should be included in the very definition of the human mind (Clarke 1996).

Thomas Wynn's paper attempts to chart the evolution of symmetry by drawing inferences from stone tool manufacture. For those familiar with Wynn's work, the basic approach adopted in this essay will hardly be new. However, his work is as solid as ever, and the basic argument — that it is possible to construct an archaeology of symmetry, and that this can be used to infer the evolution of hominid spatial perception-cognition — is both easy to follow, and difficult to fault. Furthermore, Wynn demonstrates a willingness to engage directly with notions drawn from evolutionary psychology, and coming from an archaeologist, this is exciting. Evolutionary psychologists have often accepted an oversimplified notion of human evolution. They propose that hominids would have lived in an 'environment of evolutionary adaptation (EEA)', where they would have faced a number of adaptive problems, such as predation, obtaining food, and securing mating opportunities. They appear to regard as uninteresting, however, the idea that it might be possible, with the help of the archaeological record, to specify in some detail what this environment might have been like. But as Wynn suggests, 'the current weaknesses of evolutionary psychology lie not so much in its tales, but in its failure to follow them up with testing against the actual evidence of evolution' (p. 135). Wynn's paper shows how an increased dialogue between evolutionary psychologists and archaeologists may be both feasible and productive. Finally, Wynn's paper should be noted for its particularly inspiring and honest introductory defence of the role that archaeology has to play in the study of human cognition.

A number of the essays endorse, or at least discuss the idea often associated with evolutionary psychology, that the mind is largely composed of innate, special-purpose computational modules, each shaped by natural selection to overcome some particular information-processing problem that greeted the human mind during the course of its evolution. That is not to say that they do so in a blithe, uncritical fashion. Hughes and Plomin, for example, discuss modularity using empirical evidence. They present genetic data, derived from a study of monozygotic twins, suggesting that the development of children's theory-of-mind — the understanding that other individuals possess desires, beliefs, and

intentions that may be different to one's own, and that this knowledge can be used to predict or at least explain some aspects of their behaviour — is under tight genetic control. They go on to discuss the implications of this finding for the modularity thesis. Richard Samuels suggests in a more philosophical sense that evolutionary psychologists have often endorsed a rather strong version of the modularity thesis, but have tended not to discuss some of the more problematic implications that arise from their position. He suggests that it would be possible for them to weaken their theoretical construction on the nature of modularity without compromising the force of their argument.

Samuel's chapter attempts to bring the rigours of philosophical discipline to bear upon competing theories within evolutionary psychology, so that they might be usefully compared. This is an enterprise on which the editors are keen. They state in their introductory chapter:

the traditional philosophical skills of distinguishing carefully between different questions, of different variants of a theory, of teasing out the implications of theories proposed in a given area, and of uncovering the implicit assumptions of the theory proposers, are just what interdisciplinary investigation requires (p. 8).

But the volume also demonstrates how philosophers can do more than act as mere referees between various theories. Indeed Carruthers, in the penultimate chapter, employs the same methodology, but does so in reverse. He uses the conception of a mind that has evolved to adjudicate between various philosophical theories of consciousness. He demonstrates how some otherwise quite plausible conceptions of consciousness become untenable if a scenario for the evolution of consciousness is asked of them. The Hopkins paper, too, shows how philosophers willing to engage with the notion of human evolution may find the dialogue rewarding. (One can only think that, were they further willing to engage with all that the archaeological record has to offer, then their rewards might be even greater.)

One other paper, that of Murphy and Stich, is well worthy of mention, because it shows how practically useful the acknowledgement that the mind has evolved can be. The paper is written by two psychiatrists. They claim that the current system used to classify and diagnose mental disorder — the Diagnostic and Statistical Manual (DSM) — is 'radically and alarmingly unsatisfactory', and is unpopular with many of those people who engage in its use. An alternative, evolutionary approach is then

outlined. They suggest that there are two main categories of disorder — some result from the breakdown of specific modules (such as autism, which is thought to arise at least in part from a failure of the theory-of-mind module: e.g. Baron-Cohen 1995), while others stem from the mis-match between the present day environment, and that in which the mind originally evolved:

psychological mechanisms originated in a past environment, and although those mechanisms may have been adaptive in that past environment, it is entirely possible that the environment has changed enough to render aspects of our cognitive architecture undesirable or obsolete in the modern world (p. 72).

Disorders involving depression and anxiety would apparently fall within this category.

The ideas that Murphy and Stich discuss are most interesting. They may well even be true. One suspects, however, that while many clinicians might welcome some form of renovation of the current classification system, there might be resistance to this particular suggestion. Its adoption would require clinicians to make specific theoretical commitments about the evolved mind, whereas the DSM has traditionally, if only ostensibly, been theoretically neutral, and value-free. Nonetheless, Murphy and Stich's paper demonstrates that thinking about the human mind from an evolutionary perspective is not only of great scholarly worth, but that it has the potential to be *useful*.

One might be forgiven for supposing, on the basis of this review, that the volume's main virtue is its adoption of an interdisciplinary theme *per se*, rather than the individual contributions of which it is comprised. But this would be a mistake. It may also have become clear that many of the papers are meritorious in their own right. In fact, it is the combination of its desire to pull together scholars from different disciplines *and* the calibre of the individual papers, often heavily interdisciplinary themselves, which deems the book a success. It represents a real answer to calls for an interdisciplinary understanding of the human mind, particularly in relation to its evolution. The wide range of issues considered shows just how important evolutionary considerations are, and the quality of work shows how seriously they should be taken.

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An Agency of Choice?

Agency in Archaeology, by Marcia-Anne Dobres & John Robb, 2000. London: Routledge; ISBN 0-415-20760-6 hardback, £65 & US\$100; ISBN 0-415-20761-4 paperback, £19.99 & US\$32.99, xiii + 271 pp., ills.

Bruno David

In a world populated by human actors, where the social and cultural life of people is a target of archaeological enquiry, what is the role of the individual as agent in social change and social practice? How are concepts of individual choice and intention meaningful when addressing the archaeology of socially patterned and therefore normative behaviour? If choice is historically and socially circumscribed, what does individual choice mean in relation to agency? Does the archaeology of agency imply the archaeology of individuals, or need it be concerned with institutions, historical contingency, social groups and contexts? These are some of the questions broached by Marcia-Anne Dobres and John Robb's new book, the first dedicated to the concept of agency in archaeology. Its aims are to stimulate the incorporation of agency, in its various guises, into archaeological practice, including notions of personhood, intent and consciousness and, as propounded by many of the authors in this book, action as a product of individuals rather than broader-scale social practice. Because of these various dimensions of agency, the chapters here are equally varied. One common theme, however, is a general reference to Giddens' structuration, although this body of theory is not discussed in any depth.

The idea for this book emerged during a conversation between the editors in New Orleans in 1996, giving rise to a session at the 1997 Society for American Archaeology conference in Nashville. *Agency in Archaeology* is the product of this meeting. It contains 17 chapters divided into five sections:

- 1) Introduction (Dobres & Robb);
- 2) Thinking agency (Hodder, Gero, Wobst, Cowgill, Barrett);
- 3) Using agency (Joyce, Clark, Pauketat, Walker & Lucero), Sassaman, Chapman, Sinclair, Johnson, Shackel);
- 4) Commentary (Brumfiel); and
- 5) Epilogue (Moore).

The book contains valuable discussions of regional archaeological records (particularly in the Americas), often based on theoretical and methodological implications of social life as behavioural technology, and symbolism as the cognitive transformation of the world. Unfortunately, however, such insights are also tempered by a lack of theoretical discussion and unfolding of other key notions that are much relied upon to understand them, in particular the implicit conviction by many authors that human action is intentional choice. Neither intention nor choice are theorized, being rather largely implied to be a product of the conscious awareness of a more or less unlimited range of behavioural possibilities. Yet agency in continental philosophy concerns a subject who chooses between options, such choice leading to action. In this sense, agency involves choice. What is of interest here is the relationship between the agent as engaged in choice, and the social conditions that come to define the world of possibilities. What does this dialectic hold for archaeological practice? What of the experience of choice and agency, from a phenomenological perspective? If the range of behavioural possibilities is constrained by historical conditions — if social practice is always contingent — what do the concepts of individual choice and agency mean?

Tim Dant (1999, 118) has thus noted that 'the symbolic power of the object lies in the way humans are attracted to it'. We are seduced by objects, a seduction whose roots go beyond the material thing to its entanglement in a world of meaning and what the German philosopher Hans-Georg Gadamer has called preunderstanding — the culturally specific ontological frameworks by which we understand the truth of the world, and that guide our understanding of things and future actions. We are all captives of our cultural worlds, but this is not to deny our engagement as active agents. Ours is a world not just of material culture or 'cognitive' behaviour and intentionality (in the sense of action ultimately arising from fully controlled, conscious awareness), but of behaviour both engaged and engaging. Instead of our consciousness reaching out and grasping the material, objects and ideas themselves draw out from us a certain way of engaging with them. If this is the case, can we achieve an archaeology of ontology through an archaeology of

agency, of engagement with objects and constructed landscapes, with how people construct their worlds in place, ritual, symbolism (see David in press for such an attempt)? This is a promise of an archaeology of socially and historically embedded agency, but a first necessary step is unfolding its theoretical and methodological premises. Unfortunately, agency's theoretical and methodological underpinnings have not been unfolded in this book.

Instead, *Agency in Archaeology* is largely concerned with the role of individuals and intentionality in creating the past (but hardly from a hermeneutic perspective), although other voices are also occasionally heard. By focusing on choice as the *intentional* decisions of individuals, hegemony and ontology (as preunderstanding) are silenced, despite the fact that it is precisely because of these that we cannot restrict talk of agency to intentionality, nor to the isolated individual. This very book is a case in point: while the authors here aim to transcend established archaeological practice by calling upon the agent and agency, and in the process much is made of individual intentionality in explaining change and social practice, *Agency in Archaeology* itself articulates two broad sets of chapters, each situated in a distinct and more or less discrete set of approaches. On the one hand are the chapters from the US (Gero, Wobst, Cowgill, Joyce, Clark, Pauketat, Walker & Lucero, Sassaman, Shackel and Brumfiel); on the other are the UK participants (Barrett, Chapman, Sinclair, Johnson and Moore). Hodder sits somewhere in between. The language and theory employed — explicitly and implicitly — and the notions referenced are distinctive in each case. In this book the US authors appear to engage in research programs that move away from the processualism that still much dominates American archaeology. But in doing so, processualism remains the point of reference. There is a preoccupation with going beyond positivism and adaptationist thinking, but these are the notions that embed and frame the US chapters. The now familiar processualism borne of the New Archaeology sets up the system of references that informs, symbolically presenting archaeological truth, and reproducing it in the process even as the authors struggle to go beyond. The UK authors, on the other hand, are founded less on the functionalism of the New Archaeology and more on the social archaeologies that have come to be the hallmark of British archaeology since the 1980s.

If agency was simply about individuals and unembedded cognitive awareness — 'intentionality' — why can these two sets of approaches be so read-

ily identified in this book? Indeed it seems that each author *intends* to go beyond adaptationist thinking, and wishes to address how change and social action are generated. But as the dual division of the book indicates, behaviour, or agency as action, cannot be understood simply by reference to individuals or to individual intention. Critical are the forces that condition intention, sociality and 'individual' being. What we therefore need in archaeology are theoretical discussions about agency itself, choice, subjectivity, alterity and identity, being, power, institutionalism (in the sense of Foucault), engagement, dwelling. Such discussions are necessary because theory guides how we approach the archaeological record. Unfortunately, despite some attempts and in particular, passing reference to Giddens, in this book there is little to no engagement with such issues, and this is a major disappointment. Agency and archaeological practice are all the poorer for it.

All in all, however, this volume does contain some points of interest. The highlights for me were Chapter 1, Agency in archaeology: paradigm or platitude? (Dobres & Robb); Chapter 12, Tension at funerals: social practices and the subversion of community structure in later Hungarian prehistory (Chapman); Chapter 13, Constellations of knowledge: human agency and material affordance in lithic technology (Sinclair); and particularly Chapter 17, Ethics and ontology: why agents and agency matter (Moore). But there is also disappointment, in particular that agency is undertheorized and much-used. Because of this, the term has become a grab-bag concept that hovers around the notion that people do things. I fear that agency will suffer the same fate as other undertheorized catch-all concepts in archaeology — style, culture, landscape, and recently amongst rock-art researchers, shamanism. In this sense agency seems to have a limited life-span, in its present guise at least.

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Structural Constraints to Art Theory and Meaning

Art in Non-literate Societies: Structural Approaches and Implications for Sociocultural and System Theories, by J.A. Abramson, 2000. Kalamazoo (MI): New Issues Press; ISBN 0-932826-32-6 hardback, US\$50; ISBN 0-932826-33-4 paperback, US\$25, 420 pp., 26 figs.

Paul S.C. Taçon

When I first learned about structuralism, while attending university in the late 1970s, I immediately perceived its limitations, suggesting it perhaps gave us a wiring diagram of how some things operate but shed little meaning on what they were about. Using the analogy of a television set, I described how lots of similarly ordered pictures could be received that had very different meanings, stories and ideas behind them. For me, structuralism was an interesting exercise toward learning more about something but, at best, was only a first step. Since then, we have seen post-structural, post-modern, processual, post-processual and other eras come and go, with greater or lesser enlightenment. As the century drew to a close, structuralism figured less and less in debate, especially in the past decade. Consequently, it was with great surprise that I should learn of Abramson's *Art in Nonliterate Societies*, published in the year 2000. I anticipated a fresh new look at 'art' from a structural point of view, perhaps with some useful insights, but soon discovered the book was mired in the 1960s — hopelessly out of date in terms both of advances in theory and basic information. Indeed, it is as if this book were inextricably caught in a time warp, to be catapulted some 30 years into the future.

Essentially the book is a dusted off old Ph.D thesis, dressed and tarted up to give the appearance of something new. Unfortunately, however, it was not dressed up enough, so that many sections are totally deficient in recent information, leading to inaccurate, distorted and incorrect conclusions. The section on 'Art and Culture in Australian Societies' is a good example. It is both offensive and ignorant, with almost no mention of the excellent work by dozens of world-renowned experts of the past 20–30 years. Most references are by people based outside Australia and dated before 1969. Many are secondary. This problem plagues other sections as well, leading to inaccurate assessments of Australian Aboriginal arts and cultures and erroneous statements

about many other groups. For instance, human beings did not arrive in Australia 'approximately thirty thousand years ago' (p. 60), instead arriving at least 40,000 (Allen 2000) and perhaps as much as 60,000 years ago (Roberts *et al.* 1990; 1993; 1998; Thorne *et al.* 1999). It is not true that there are only slight differences between Aboriginal art styles from one end of the continent to the other (p. 89). It is not true that 'local Aboriginal bands do not exhibit stylistic features' (p. 90). The falseness of this proposition has been demonstrated in rock-art and material culture studies for over 20 years (e.g. see McDonald 1994; 1998; 1999 for the Sydney region; Taçon 1989; 1993 for western Arnhem Land; and Smith 1992 more generally). Indeed, to state that 'It is certainly the case that the art of a local band seldom exhibits features that differentiate it in any general sense from art of other adjacent local bands' (p. 51) and that band art is 'impoverished', lacks style and is 'uniform' highlights absolute ignorance more than good scholarship.

Finally, Aboriginal cultures are not all the same, part of some gigantic 'multiband' structure. They certainly do not subordinate tradition (p. 292); in fact, it is quite the opposite. And to say that their lifestyle prohibited the formation of particular local band groups or that 'it is the case that particular groups in any local sense are still rarities in Aboriginal Australia' (p. 78) is complete nonsense. For instance, consider the so-called Bradshaw rock paintings of the Kimberley (Walsh 1994; 2000) or the Dynamic Figures of Arnhem Land (Chaloupka 1993; Chippindale *et al.* 2000) as examples of arts produced by particular groups.

But why let facts get in the way of a good theory, especially if you intend to use the theory to explain everything in the universe (p. 366 onward)! Essentially, if one's model is broad enough, and the theory general enough, facts are irrelevant. And that is the heart of the problem with any structuralist approach. Facts are unnecessary red herrings that get in the way of order. What matters is the division of the world into pairs of opposites. And of course, the nature of the exercise preordains a result — everywhere one looks, pairs of opposites are found. In Abramson's case 'Most broadly, the model uses generalizations about form and process and their contexts to explain why cultures resemble or differ from one another'. But only two main forms of culture and art are discovered, 'Type-A' and 'Type-B'. Essentially, 'B' is 'not-A'. But there are exceptions. These exceptions are not quite 'A' or 'B', lying somewhere between. They are thus grouped as 'C', a form of 'B'

(because they are not 'A'). It is important to note 'that "Type-A" and "not-A" are, by themselves, designations for structural options; they label particular sorts of broadest-level cultural domain and/or entire-culture design programs and are not equivalent to sociocultural types' (p. 10).

For Abramson, 'A-society', 'A-culture' and 'A-style' 'refers to the societies, cultures and styles of acephalous familial village-dwelling subsistence-agricultural peoples'. Their designs consist of 'finite elements manipulated by finite process-options to create overall-modular arrays' (p. 10). This is better explained through over 350 pages of detail, for those who care to read it. Essentially, however, the designs are those typical of the peoples of the Northwest Coast of North America and parts of Papua New Guinea, where each design of a local repertoire is made of a limited number of elements, many figures form half-designs, and bilateral symmetry is commonplace (e.g. see Holm 1965). Abramson argues that every aspect of these societies is similarly ordered.

It is interesting that this sort of labelling can lead to placing Australian Aboriginal people, Hellenic Greeks, Romans, Gothic groups and Persian Islamics in the same category (see fig. 25, p. 281) but does this really tell us anything important? For Abramson it tells us something crucial: that 'B' societies 'are themselves characteristically dynamic (continually expanding or contracting); their structural regimes are more complex and flexible, and they typically generate/expend more energy (i.e. they increase entropy more) than do societies organized with A-regimes' (p. 342). Although this is highly debatable (e.g. see Brody 2001), Abramson uses this as the foundation for his theory of everything. For it leads to his two broadest typological distinctions: 'periodic and chaotic' ('A' being a periodic type). Eventually, everything is explained away as 'A' or 'not-A', periodic or chaotic. But it gets better, for 'not-A' really does not exist at all! Instead, things move to or from 'A'. 'So, with respect to the universe in which we find ourselves, our model postulates a structural tendency for everything to move toward a "most-simple" state or "basic order" — and a tendency for substance to move toward matter' (p. 381).

As enlightening as that structural exercise may be for some, one's time might be better spent ordering one's own universe rather than reading this 400-page volume. After all, the take-home message is that there is far too much 'B' in the world and that we should all be striving for 'A'. But a universe composed mostly of 'A' would be unexciting, a robot world of perfect symmetry. Certainly, it would

not be a fun place to learn about 'art'. Sign me up for the 'B' team every time!

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Structure and Agency in Complex Adaptive Systems

Dynamics in Human and Primate Societies: Agent-based Modeling of Social and Spatial Processes, edited by Timothy A. Kohler & George J. Gummerman, 2000. (Santa Fe Institute Studies in the Sciences of Complexity.) Oxford & New York (NY): Oxford University Press; ISBN 0-19-513168-1 paperback, £28.99 & US\$40; ISBN 0-19-513167-3 hardback, £46.99 & US\$65, 412 pp., ill.

Stephen J. Shennan

Archaeologists, anthropologists and their social philosopher predecessors have long been interested in the processes by which such structures as states and civilizations emerge from human action. The frameworks within which they have pursued that interest have varied over time. One of the earlier ones, and certainly one of the most influential, was the Marxist view of history as class struggle, involving the emergence of contradictions between the forces and relations of production. More recently, the neo-evolutionary framework which has been such a dominant influence in Anglo-American archaeology over the last 40 years has emphasized the growth of complexity and social hierarchies as a process of group adaptation. Those groups which developed hierarchical social mechanisms for overcoming subsistence instability, or for competing better with rival groups, would be more successful. The adoption of innovations such as agriculture, which made it possible for societies to harness more energy from their environment, provided the basis for supporting increasingly complex social structures.

In the 1970s there were attempts to make explorations of these adaptive processes, and in particular the process of *morphogenesis*, more rigorous and systematic by building computer simulations in which variables were defined and their relations with other variables specified by systems of equations. By and large, these attempts were unsuccessful. If structure was going to emerge, it had to be programmed into the relations between the variables in the first place.

The agent-based approach to the modelling of social processes, of which this book is an excellent example, attempts to overcome the shortcomings of these earlier frameworks. Consequences of postulated processes are rigorously followed-through by means of computer simulation. Structure is not built in to the model from the beginning but emerges from the interaction between 'agents' through a process of self-organization. 'Agents', as Kohler (p. 2) describes in his introduction, are 'processes, however simple, that collect information about their environment, make decisions about actions based on that information, and act'. The outcome of such local actions, based on local knowledge and decision-making criteria, can often be large-scale patterns unintended by the individual agents. A famous early example showed that individual preferences for spatial neighbours of the same type as oneself rapidly led to the emergence of segregated neighbourhoods.

This insight has profound consequences. The human tendency to anthropomorphize the world tends to lead to the view that complex patterns must be the result of complex intentions and mental operations as well as global knowledge. In fact, nothing could be further from the truth, as te Boekhorst and Hemelrijk illustrate in their description of an example from situated robotics. Their robots are small vehicles that move randomly distributed cubes into a central heap and line up the rest against the wall. Far from requiring complex object recognition software and capacities for co-ordinating movement and action to achieve this, they need only minimal sensors and movement control. The pattern emerges from simple local responses to colliding with the cubes and with other robots.

Indeed, this is one of the major themes of the book: what are the minimal requirements for the emergence of structure from action? Are they purely mechanical, so that structure is simply a function of the degree of interconnection between different elements? Is it necessary to assume evolutionary dynamics of selection and adaptation? What is the role of conscious intentions and knowledge? These are issues of great significance for the understanding of both human history and biological evolution.

In addition to their robotics example, te Boekhorst and Hemelrijk cite a simulation of dominance interactions between individuals in which the effects of winning and losing are self-reinforcing. The study showed that patterns of cooperation could arise without any memory mechanism in the individuals, simply as a result of the fact that fleeing from the attack range of one opponent leads an individual into the range of another. The observed series of immediate reciprocal actions of support corresponded to that of the famous Tit-for-Tat strategy in the Prisoner's Dilemma game but without any of the assumptions about the costs and benefits of cooperation versus defection that Prisoner's Dilemma involves.

In a similar vein, Pepper and Smuts use an agent-based model to examine the evolution of cooperation in a simple ecological context. They show that patchiness of food distribution can itself create sufficient population structure to generate between-group selection, leading to the spread of group-beneficial traits, without any need for the operation of kin-selection. One of the traits they modelled was feeding restraint. In freely-mixing populations the individual paying the cost of feeding restraint was only rarely among those reaping the benefits, in contrast to the situation when resource patches were isolated and small. Too much isolation, however, was also problematical. Continuing cooperation depended on groups being able to export their increased productivity to other patches, otherwise between-group selection did not occur. When within-group selection is the only relevant process then cooperators will die out.

Skyrms' study of the evolution of signalling systems and inference is also a generic one, demonstrating that evolutionary dynamics provides an account of the spontaneous emergence of signalling systems which does not require pre-existing common knowledge or agreement. Where the individuals concerned have a common interest, almost any sort of adaptive dynamics leads to successful coordination of a signalling system, because such systems are powerful attractors in the dynamics. Which system emerges, however, depends on the vagaries of the initial stages of the evolutionary process (Skyrms p. 84). The evolution of a correct rule of inference in the context of a signalling system 'depends on the repeated occurrence of situations where there is a positive payoff for acting on the right conclusion', in the interest of both senders and receivers of signals (p. 87). Skyrms' example is the correct inference of the type of predator currently presenting a threat, from alarm calls which are differentiated by predator.

The remaining studies in the volume are specific rather than generic. They use multi-agent modelling to explore particular situations, based on large quantities of specific information. Lake describes a project in which multi-agent simulation is linked to GIS to explore the processes involved in making foraging decisions. The agents can learn from their own experience and from others and make decisions in the light of their knowledge and goals. In this case the GIS link enables them to have spatially-referenced knowledge in the form of their own cognitive maps. The system is used to explore the likelihood that foraging for hazelnuts was a major determinant of Mesolithic land-use patterns on the Scottish island of Islay, and Lake concludes that it was not. As he explains, however, the major significance of his project is that he has created a powerful generic modelling tool which can be used relatively straightforwardly by others to model the activities of social agents in a landscape.

The papers by Kohler and colleagues and Dean and colleagues model prehistoric settlement change in southwestern Colorado and northeast Arizona respectively, using multi-agent techniques, and go on to compare the results of their models with the settlement histories actually observed. In both cases this is a very illuminating process. Kohler *et al.* conclude that towards the end of their period, either the importance of dry-farming was decreasing, or farmers were now settling in locations which were inefficient with regard to access to their fields, perhaps because social considerations placed a new importance on community members living in face-to-face circumstances. Their model does not reproduce the population growth that actually occurred towards the end of the period they studied, probably because their agents could not intensify, whereas in fact intensification seems to have been exactly what happened, through the increasing use of water and sediment management techniques. The Long House Valley, whose settlement history was modelled by Dean and colleagues, was abandoned after AD 1300, a process generally seen as the result of drought. The simulation results, however, show that the valley environment after 1300 could have supported a reduced population if people had disaggregated into smaller communities and dispersed into favourable habitats. It appears that the environmental factors only partially account for the abandonment of the area. This contrast between the real world and the simulated one is all the more striking in the light of the remarkable success of the simulation in modelling many other aspects of the valley history, and

adds force to Dean *et al.*'s claim that agent-based models can be seen as laboratories for testing competing explanations.

Reynolds' paper is also a settlement study, exploring the role of conflict in chiefdom and state formation in the Oaxaca valley by means of decision trees. These are used to express changes in the factors predicting raiding and warfare targets over time.

Lansing explores patterns of cooperation among Balinese rice farmers and the mechanisms by which synchronized planting patterns emerge over large areas in response to pest and water availability problems. He shows that there is pairwise synchronization of patterns between upstream and downstream farmers but that individuals also imitate those neighbours who obtain the best results, a process which leads to uniformity in planting times, with high yields, and low variance in yields from one farmer to the next; in other words, a highly satisfactory state of affairs produced by traditional methods, and far better than the results produced by centralized development policies.

In a very different sort of way, Lehner's long and detailed paper on ancient Egypt as a complex adaptive system is equally illuminating, although it does not involve any modelling at all. His main concern is to show that it makes no sense to see centralised control as the key feature of archaic complex societies such as Egypt, not least because the state was very limited in its capacity to intervene. The complex adaptive systems perspective directs us towards a bottom-up view of Egyptian society, looking at the connections between people and households. It is here that complexity lies, for example in the inequality among people in various superordinate and subordinate relationships at different scales, both within and between households: hence the view of Egypt in the paper's title as 'the fractal house of Pharaoh'.

Finally, Small's study uses an agent-based model to explore a classic anthropological issue, the impact of marriage rules on the degree of social stratification in Polynesia. Where rules prescribe marrying non-relations, patterns of stratification are extremely unstable. For stratification to emerge, marriage rules restricting kin have to be replaced by rules permitting endogamy; without this, the trajectories of chiefly lines through time converge on one another. Cross-cousin marriage produces a more stable system where chiefly lines tend to keep their high position, but the most stable and rigid system is achieved by permitting brother-sister marriage, such as occurred in Hawai'i.

In his introduction Kohler is very careful not to

over-sell the virtues of multi-agent modelling, very wisely in the light of the history of panaceas which have come and gone in archaeology since the 1960s. Nevertheless, the papers in this book make a strong case for the productiveness of agent-based modelling approaches within a broad complex adaptive systems framework. While predictions are always dangerous, I would venture to suggest that these methods will be one of the main means by which the hierarchically-focused social evolutionary approaches of the last 40 years in archaeology are finally reformulated and superseded.

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Cities and Historical Archaeology

The Historical Archaeology of Buenos Aires: a City at the End of the World, by Daniel Schávelzon, 2000.

(Contributions to Global Historical Archaeology Series.) New York (NY): Kluwer Academic/Plenum Publishers. ISBN 0-306-46064-5 hardback, £49.75 & US\$72, 187 pages, ills.

Peter Carl

This book raises three issues of general concern: the nature of 'historical archaeology', Schávelzon's results regarding Buenos Aires, and the problem of interpreting what I will term, 'urban metabolism'.

Historical archaeology

In this context, the term refers to the school of archaeological inquiry that had its origins in the 1950s in the United States, with Stanley South of the Institute of Archeology and Anthropology, University of South Carolina as its principal exponent. The series *Contributions to Global Historical Archaeology* has been running since 1960, now edited by Charles E. Orser, Jr, of Illinois State University (who has also written for the series *A Historical Archaeology of the Modern World*, 1996). A succinct formulation of the aims of this school as of 1977 is found in the volume edited

by South, *Research Strategies in Historical Archeology* (South 1977a), a full treatment in *Method and Theory in Historical Archaeology* (South 1977b) and an official history in *Pioneers in Historical Archaeology* (South 1994).

The obviously awkward term 'historical' — is not all archaeology historical? — designates 'archeological research on sites of the historic time period in which the broader base provided by ethnographic and historical data is used' (South 1977a, 1). Again, what archaeologist does not use available and relevant contextual material to inform judgements? The practice of historical archaeology is formulated as follows by Mark P. Leone, of the College Park Department of Anthropology, University of Maryland (who also helped to edit a work within the *Contributions to Global Historical Archaeology, Historical Archaeologies of Capitalism*, 1999):

Historical archaeology is considered an exploration

of European expansion and settlement through material remains. It can be thought of as an exploration of the spread of Europeans around the world, primarily through the process of establishing colonies . . . since the fifteenth century.

The expansion of Europe was led . . . by white men of status and stature . . . [However] historical archaeology has access to the material remains . . . of the daily lives in the past of women, children, foot soldiers and sailors, slaves, freed slaves, Native Americans from the moment of contact, the insane, the gaoler, as well as anybody else who has ever used a dish, chamberpot, room, privy, or medicine bottle . . . [Although] such people have gone unrecorded historically . . . there is a distinctive archaeological record for them. And studying it is worthwhile. (Leone *et al.* 1995, 110)

A professed interest in marginalized peoples has good European Enlightenment credentials, inherited from Christianity's concern for the meek of the earth, and therefore might itself be seen to represent colonialism, and its guilt. Leaving aside the redemptive possibilities of a slave's inclusion in the archaeological record, the production of this record by attunement to all of the artefacts which present themselves for scrutiny is, by now, standard archeological practice. What of the finds will be emphasized in the reports or exhibited in the museums is another matter, as is the cultural importance of history. In any event, the specific discipline of historical archaeology seems to be distinguished more by its sphere of interest culturally, geographically and chronologically than by its archeological practice or procedures. The interest in 'European expansion and settlement',

however, has the curious consequence of leaving out of 'Global Historical Archaeology' Europe itself, as the void centre of the phenomenon.

These sorts of ambiguities could be multiplied. I am not exhaustively versed in the work of this school; but what I have managed to find is often interesting and relevant. To me, a non-archaeologist, however, the designation of an excavation by place and/or topic of interest would seem to me to be sufficient, and would avoid what I see in the literature of the group as tendentious claims for importance or political correctness or methodological innovation. The required localism and particularism of the sites does not need to be suspended beneath a grand agenda for greater visibility, as if from a colourful hot-air balloon — for example (taken from recent titles): the historical archaeology of manners, of domesticity and power, of capitalism, of impact on landscape. This problem arises from the presumed division between 'material' and 'culture' (is any archeological material not cultural?), as well as from the need or desire to establish an academic patch — which declares what is cultivated within the patch as well as what is deemed weeds, or beyond concern.

The most interesting aspect of the discipline of historical archaeology is its pretension to situate interpretation within cultural processes, termed by Schávelzon 'a sound approach to life-style' (p. 98). Thus, for example, he treats social ceremonies such as the drinking of *mate* (Schávelzon uses 'ritual' here, incorrectly in my view) not only from the point of view of its remains but also with respect to the implications for gender, slavery, ethnicity, domestic architecture, urban divisions between colonials and others, illicit trade and so on. All of this is quite interesting and worthwhile, although it seems to require demoting the importance of such major institutions as the Jesuits and even the *cabildo* (town council). As this also conforms to Leone's priorities, it appears to arise from a methodological preference for 'daily lives' and an anti-colonialist bias.

Such a bias is not necessarily required by South's theories, which are otherwise treated with discreet silence by Schávelzon — a practice which, I suspect, is fairly widespread among historical archaeologists (the relation may be mutual: South cites himself with greatest frequency). What of South's theories are not common sense are confused collages of a variety of other theories or, in the case of his 'Nomothetic Iceberg' (diagram in South 1977a, 3), simply silly. The metaphor of cultural depth which provoked this diagram will always elicit a groan among archaeologists, even before it is larded up with superficial

references to Chomsky or to what is not the exposed tip of an iceberg. The general idea is to provide a basis for moving back and forth between the complex particulars, discovered on site or in records, to the rich universals of the host culture or that of present readers — which are, of course, the descendants of colonial culture and those assimilated into its modes of self-understanding. For South, the medium of exchange between life and archaeological interpretation is pattern; but, because he seems less interested in life than in methodology, his ‘law-giving’ (nomothetic) patterns are prone to being mis-filed in theoretical categories. Of the works of historical archaeology I have been able to consult, interpretation seems predominantly guided by the artefacts and their contexts and quite plausible conclusions set within the familiar protocols of statistical analysis, taxonomies, typologies, chronologies, line drawings and photographs of details and so on. It is best at this point to consult Schávelzon’s work as representative of the genre.

‘The Historical Archaeology of Buenos Aires’
by Daniel Schávelzon

The book is structured in six chapters, which make four sections. The first two chapters provide a brief history of Buenos Aires from the still-obscure origins to the mid-nineteenth century. The critical moment in the early history is the 1580 Garay Plan, which appears in a version published in 1796 (fig. 6, p. 22). A rectilinear matrix of blocks is set on the exposed west bank of the River Plate, with the large Paza Mayor (still there) fronted by a fort (now replaced by Government House). Schávelzon traces this plan to ‘an urban typology derived from the West Indies’ (p. 151), but these configurations embody much more archaic civic ideals that should have been important to his story. He emphasizes the minority position of Buenos Aires with respect to other colonial cities deeper inland and on the Pacific Coast, and makes it seem something of a miracle that Buenos Aires survived at all. Chapter 3, ‘The Archeology of the Downtown’ is the longest section of the book, being largely the results of Schávelzon’s own work. Most of this is architectural, and manages to traverse the social and political spectrum, although houses predominate. He calls attention to a curious habit of neglect, whereby buildings were used to the point of destruction and then rebuilt either in whole or part (pp. 104 & 161). This includes the Cabildo, the building for the town council, for which there were no funds until 1608; and, by 1624

‘it was already on the verge of collapsing’ (p. 101), not to be rebuilt for a century. This section is rich in interesting detail; but it is not until the end of the book that we discover that the characteristic settlement pattern was houses (which cost less than a fancy dress or a slave: pp. 120 & 132) set back from the street on narrow lots, leaving the interior of the block free for cattle, vegetable gardens and children. He also asserts that circulation through the city was through the interior of the blocks rather than in the streets, reserved for wagons and carts. Two chapters then follow, on ‘Ethnicity and Gender’ (Indians, Africans, Children, Women) and on ‘The Nonarchitectural Evidence’ (food, ceramics — as ever a significant standard for dating — material culture, botanics and chemicals). Chapter 6 provides an overview; and it is a succinct review as well as a lament for the replacement of the ‘variety and originality’ of the early city by the homogeneous, industrial one.

The production of the book is not greatly affected by some loose editing. Several of the images, however, are annoyingly ill-co-ordinated with the text (e.g. figs. 25 & 29a; similarly the references to fig. 2 in Chapter 3 should be to fig. 3) and could have been profitably doubled in number (a basic set of maps showing growth and change is sorely lacking). More Schávelzon’s responsibility is a shortage of sources for several assertions and statistics.

At 187 pages with all notes, bibliography, index and a helpful glossary, this is a short book, and should not have been presented by South in his Forward as a ‘program designed to examine and integrate the historical and archaeological record of a major city’ (p. v). In fact it is the provisional conclusions derived from Schávelzon’s thirteen years (since 1985) of excavations in the central area of Buenos Aires, on seventeen sites. One learns only a few pages from the end (p. 159) that Schávelzon never intended to look at anything other than the history prior to about 1830. It is around this time, after the wars of liberation, that Buenos Aires radically transforms from a provincial episode to one of the world’s major cities (the ‘Paris of the Americas’) and the curve of population growth suddenly sweeps vertically (fig. 7, p. 37). This change also marks, for Schávelzon, a loss of character or quality in Buenos Aires. Ethnically, its ten-fold increase in population in fifty years produces the complete suppression by white European immigrants of the previous generous mix of peoples. Urbanistically, the city ceases to be a complex aggregate of houses and institutions distributed loosely within a 300-year old matrix of blocks and attains what Schávelzon deems an unfortunate En-

lightenment clarity in asserting and extending the grid plan (p. 154). The author's preference arises not from nostalgia but from the cultural agenda of historical archaeology. On his model, the diversity would be visible as such, taking the form of a semi-suburban accumulation of evident polycultural particulars, ranging from language to dress to town, somewhat after the fashion of a *comedia del'arte*.

This said, the city he presents is largely unknown outside archaeology, and it is a real credit to his efforts to have recovered this early history. At the same time, I wish the book had been straightforward from the beginning that this was its intention, and had better set the story within the wider context of such settlements (although I learned much in the first third of the book). Instead, the Paris of the Americas constantly looms on the horizon and the reader is braced for a storm which never arrives. The subtitle — 'a city at the end of the world' — refers to Buenos Aires' location at the southern limits of the Spanish Empire, whose role is demoted to an exporter of Spaniards, products, fashions (Buenos Aires was apparently surprisingly *au courant* throughout its history) and the occasional warship or directive. It may be the case that the principal agents in the history of Buenos Aires have been well-studied elsewhere, and can be taken for granted. When Schávelzon declares that 'Europe mattered most' (p. 151), however, one is surprised that its institutions and culture are here largely silent. The impression is created of a city rendered culturally blind through the agency of methodological deafness.

One might say this is merely a problem of balance, and recommend to historical archaeology the possibility that nobles and priests are as necessary to a town as merchants and barrow-makers, tragedy as well as comedy. Since 'the archaeology of' begins all chapter titles but two, one might say also that Schávelzon limited his discourse to what could be directly related to his excavations; and, as these were never large-scale and systematic but rather discrete incisions often made available by chance when remains were exposed, his conclusions could always only be provisional. Indeed, Schávelzon deserves praise for not only being able to draw as much as he did from the remains but also for making archaeology a matter of concern to the civic authorities, accustomed to vigorous destruction and rebuilding. However, even if one assumes archaeology to be like forensics, concerned more with 'the what and the how' rather than with 'the why', the scope of interpretation opened by appending 'history' remains elusive.

For example, one can see that the effort to re-

construct 'from a hundred fragments' the label of an imported Bitter des Basques bottle can be deployed to shed light on the daily lives of Basque immigrants, trade and, when coupled to the amusing image of a portal fabricated from these bottles (fig. 22, p. 63), advertising, commercial life and so forth. What, however, is to prevent deploying other published material, from newspapers to novels? What is to prevent shifting the interpretative centre of gravity from archaeology to history? Why not, in this example, query the iconography of the label and of the portal, or attempt to register the culture of its drinking (domestic, at bars, drinking songs, etc.) with the settings and situations of Buenos Aires? The answer is either a bit embarrassing — the only relevant material comes out of the ground — or it depends upon the sorts of questions one asks. If one wishes only to account for the label, then Schávelzon's contribution is sufficient. If, however, one wishes to understand the life of Basque immigrants, does historical archaeology offer its results to anthropology, history or literature? If, finally, one wishes to understand a city, at what point does the 'material' (archaeology) leave off and the 'culture' (history) begin?

Urban metabolism

As a student of architecture and urban order, the most attractive aspect of Schávelzon's work is his interest in the innards of the urban block, as this is a theme little understood in my own discipline. Accordingly, his city differs considerably from that of guidebooks or standard courses in architectural history, which gravitate about an aesthetic sublime of monuments, lovely urban squares and the like. Schávelzon is deeply interested in the sorts of processes that produce the infinite diversity of local decisions, refuse-dumps, infrastructure, etc., and in being able to understand the coherence of the movement from the kitchen-garden to the patio to the salon (pp. 72–80 offer a representative excavation of this kind). The line of a street remains remarkably constant over centuries, whereas the interior of the block can undergo radical transformations at various intervals — every 200 years, every 50 years, every 5 years, daily — and at a commensurate range of scales. Schávelzon seems not to have realized, however, that the semi-autonomy of the block is what creates the opportunity for the development of its interior diversity.

His conclusion advocates a species of urban diversity inspired by the inside of the block — or by suburbia — but without the, to him, pretentious or repetitive or oppressive block perimeter. He marks

the loss of his preferred city allegorically. In 1784, the *cabildo* issued a *Real Ordenanza* whereby the inhabitants were required to build a perimeter wall (effectively a street façade) to the pavement line, even though many of the buildings were set well back from, and not even oriented to, the street (p. 157). For fifty or so years, the town must have presented a remarkable spectacle — a ‘hollow’ version of a European capital city, a Vitruvian Tragic Stage-set masking a Comic one where people actually lived.

Inverting the intended lesson of this allegory, we may allow the hiatus between two orders of civic life to stand for the several difficulties that accompany the promise of historical archaeology. The fascination for the processes of daily lives of supposedly marginalized peoples creates a strange gap between them and a mooted colonialist enemy — first noble, Catholic and distant and then Enlightenment, rational and industrial. The overall urban order is less another duality of this kind than a topography of mediated differences. Something similar could be said about the dialectics of ‘material’ and ‘culture’: architecture is not language, rather each needs the other within a continuum of representations. To the extent that pattern is involved, it arises from the typicalities of praxis — action and reflection — from ‘life’ rather than from methodological considerations.

If historical archaeology is to fulfil its declared ambition of being able to take advantage of the wealth of cultural material available to interpretation of what might be termed ‘recent antiquity’, it would seem obliged to rise above the limitations of method and ideology (not to say the objectivity of the former deployed as tacit support for the latter). Schávelzon’s work is excellent as far as it goes, but it also appears to represent a missed opportunity. There would seem every reason to drop the mantra ‘the archaeology of’ and straightforwardly to pursue the questions of interest, drawing upon the relevant material as claimed by the questions. Such a procedure transposed to New England whaling might look more like the renderings of equipment in *Moby Dick* than a customary archaeological report, but the mode of interpretation ought to be governed by the topic.

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Epistemology of Rituals

Ritual and Religion in the Making of Humanity, by Roy A. Rappaport, 1999. Cambridge: Cambridge University Press; ISBN 0-521-29690-0 paperback, £16.95 & US\$19.95, 535 pp.

Dilip Chakrabarti

At the beginning of this book, the late Professor Rappaport argues that religion was as essential as language for the evolution of modern humans. The following fourteen chapters offer a detailed theoretical discussion of one of its principal components, i.e. ritual. In the absence of religion, humanity could not have emerged from its proto-human condition. This is something which the protagonists of some religions would readily understand: Hindu *Dharma*, the nearest Sanskrit term for religion, means something which upholds the social universe, something which enriches and enhances the possibilities of one’s own and others’ lives.

Language and proto-language are considered absolutely central to human evolutionary success. The world of concepts that lies behind symbols could come about only through the emergence of language. On the other hand, not all these concepts were meant to contribute to the success of the human species; the concepts of ‘God’, ‘Fatherland’, etc., for which countless millions have sacrificed their lives, are convenient examples of such ‘inversion’. The concept of alternative possibilities is also important, especially when human beings face the breakdown of ancient certainties.

In the second chapter, Rappaport discusses the form of rituals, defining them as a set of invariant

acts and utterances, the meaning of which is not completely encoded by their performers. Not all ritual is religious and this definition ties it to the formal displays observed among the birds, beasts and even insects; but it is the ground from which all religions spring. The very performance of rituals also entails the construction of an integrated convention regarding the concepts of the holy, the occult, the divine and perhaps a lot more. The author takes care to say that his definition of ritual is neither substantive nor functional. In the form and substance of a given ritual he believes that it is the conjunction of features, and not any single feature, which constitutes the specific character. The arrangements of features may be re-drawn and lead to the formation of a new ritual.

The following chapter is concerned with the self-referential messages of rituals and their transmission. The author first establishes a hierarchy of meanings, which he calls not only one of subjectivity but also of integration. He then discusses the elements of variation in the Maring ritual cycle (the Maring being a group of slash-and-burn horticulturalists of New Guinea), examining what he calls 'natural indices' and 'ordinary' and 'cardinal messages' with examples from this ritual cycle.

Chapter 4 deals with 'enactments of meaning'; and Chapter 5 ('word and act, form and substance') considers why humans have recourse to rituals involving physical display as a mode of communication instead of communicating through language.

Chapter 6 is about time and liturgical order, the author maintaining that the latter is just as coherent as the 'natural' or 'economic' orders. He emphasizes the sequential dimension of liturgical order, which involves the notion of time. Its implications are worked out with reference to St Augustine, St Emille and the concept of time and categories. An interesting example is the Gadjari ritual cycle of the central Australian desert, which turns the physiographic and biotic features of a vast area of the desert into a landscape identified not merely with landmarks but also with the different stages of the history of the Mamandabari people.

The theme of time is taken further in the next chapter, where it is argued that ritual time — 'times out of time' — really lies outside mundane time. This leads to a consideration of eternity and to a discussion of the relationship of tempo to the state of mind and society and to certain nuances of ritual representation. To participate in a canon is to step out of time's flow into eternity which is endless and irreversible.

The aim of Chapter 8 ('simultaneity and hierarchy') is to illuminate how the array of significant features of a ritual can be concurrently represented and simultaneously grasped. The discussion is based primarily on the *yu min rumbim* ritual of the Maring and centres around language and liturgy, analysis versus performance, ritual representations and hyperreality, and the hierarchical dimension of liturgical orders.

Chapter 9 defines the term 'sanctity' as 'the quality of unquestionableness imputed by congregations to postulates in their nature objectively unverifiable and absolutely infalsifiable' (p. 281). This is amplified and argued in a number of sections which consider sacred postulates, basic dogma, unquestionableness and the truth of things.

The different dimensions of 'sanctification' are discussed in the following chapters; varieties of sanctification; sanctity, community, and communication.

Chapter 11 moves on to 'truth and order', focusing mainly around the concepts of 'logos' and 'logoi'. The ancient Greek notion of 'logos' brought together a whole range of apparently irreconcilable concepts (such as the temporal and the timeless, mortal and divine, sacred and sanctified, discursive and non-discursive reason) into a wholeness and unity. If 'logos' refers to the cosmic orders represented by the liturgical orders as wholes, 'logoi' addresses the family resemblance of concepts shared between these liturgical orders.

The notions of 'the numinous, the holy, and the divine' are scrutinized in Chapter 12, first with reference to the concepts of religious experience of William James, Rudolph Otto and Emile Durkheim, and then around order, disorder, and transcendence; grace and art; ritual learning; meaning and meaningfulness; the notion of the divine, the illusion of truth, and the foundations of humanity which are realized in ritual.

Chapter 14 ('the breaking of the Holy and its salvation') discusses the falsification of the sacred and the delusion of the numinous, rounding up the themes with a section on postmodern science and natural religion. The volume concludes with the assertion that humanity is not merely a species among species but 'that part of the world through which the world as a whole can think about itself' (p. 461).

This is a massive volume, full of great philosophical complexity and possibly the most detailed epistemological analysis of the phenomenon of rituals. It would have benefited, however, from a section on the history of the study of rituals in anthropology, and the extent to which the present

volume is related to this, or marks a new departure. Further, it has been recently argued (Brück 1999) that the conception of ritual employed both in archaeology and anthropology is a product of post-Enlightenment rationalism. These are evidently not the kinds of issues in which the author was interested.

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Tales from the River Bank

Rekem: a Federmesser Camp on the Meuse River Bank by Marc De Bie & Jean-Paul Caspar, 2000. (2 vols.) (Instituut voor het Archeologisch Patrimonium.) Leuven: Leuven University Press; ISBN 90-7523-013-4 hardback & ISBN 90-5867-011-2 paperback, BEF 4950/122.71 Euro, 325 pp., 123 fig., 179 tables + 265 pp., 115 pls, 154 maps (41 colour) & 3 annexes

Christopher Tolan-Smith

The Late Upper Palaeolithic site at Rekem in the Meuse Valley, Belgium is well known to European prehistorians both through a series of interim publications and from one particularly distinctive find out of the 25,000 recovered from the site. This item, a curved backed 'Tjonger' point, has a residue of resin adhering to it which has provided a virtually unique opportunity to directly date a stone artefact. The AMS radiocarbon date obtained (11,350±150 BP: OxA-942) remains the most reliable for the site and for 'Tjongerian' or *Federmesser* (the preferred nomenclature) occupation in Belgium. That so much should rest on a single artefact seems apt in that this site, the investigation of which will set the standard for decades to come, is exclusively comprised of a deposit

of stone artefacts recovered from a sandy ridge. There are no self-evident remains of structures, no animal bones, virtually no charcoal and not a single hazelnut. Yet the evidence we are presented with in these two magnificent volumes offers a highly detailed picture of the daily life of a group of hunter-gatherers on the North European Plain during the Allerød Interstadial. This has been achieved through the very high standards of recording on site and the meticulous subsequent analysis of the technological and spatial data.

The report consists of two volumes, the second being comprised of illustrations of finds, plots of their spatial distributions and a series of data bases while the text is presented in Volume 1. Both volumes are handsomely produced and virtually free from proof-reading and typographical errors. Volume 1 is divided into six main chapters, the first two of which deal with the *Research context* and *Site description and environmental setting*, while the third summarizes the evidence from *Non-flint rocks and minerals*, chiefly quartzites, sandstones and quartz. The next three chapters, which focus on the flint lithic assemblage, comprise the bulk of the volume, 232 pages out of the 291 devoted to the main text.

The approach followed is both explicitly and implicitly that of the *chaîne opératoire* and was very much facilitated by the refitting of 2311 pieces into some 521 refit groups and by the use-wear analysis of 2500 pieces, approximating to 10 per cent of the assemblage. The study begins with a consideration of the flint-knapping techniques and reduction methods that led to the production of blanks (Chapter 4). From this study the Federmesser flint workers at Rekem, while striving to produce broadly laminar blanks in the classic Late Upper Palaeolithic mode, are shown to have had a very *ad hoc* and expedient approach to the task, lacking the rigid preparation procedures characteristic of the 'classic' Magdalenian industries of Northern Europe from which the Federmesser knapping traditions were ultimately derived. This development, which has been noted in the past, has been attributed to the difficulty of locating sources of good quality flint in the increasingly dense vegetative cover of the Allerød Interstadial. De Bie and Caspar advocate an interesting, less environmentally deterministic, explanation. They point out that the simplification of reduction methods in the Federmesser industries and their increasing flexibility would have released the 'artisans from the more exacting demands of the Magdalenian, . . . and allowed them to exploit a more diversified range of lithic raw materials' (p. 112). This positivist stance is to be welcomed.

In Chapter 5 attention is focused on the 'consumption' of the blanks which are the end products of the reduction sequence. This sequence proceeds from tool manufacture through use and maintenance, and ultimately to discard. The assemblage is dominated by a restricted range of implement types of which Laterally Modified Laminar Pieces (LMPs) burins and scrapers are the most numerous. Studies of use-wear traces and impact damage suggest that the more slender LMPs were mainly selected for the manufacture of arrowheads while broader versions appear to have been used in various cutting tasks. Scrapers with use-wear traces were mainly used for working fresh and dry hide and, as expected, burins were mostly used for bone- and antler-working though numerous examples were also noted for their use on dry hide while some were used in cutting various materials. It is also the case that the burin facet was not always the part of the implement utilised. The picture obtained is one of expediency, with individual tools being adapted on an *ad hoc* basis to meet the immediate requirements of a task under way. This is emphasized by a number of cases in which different 'types' of tools discarded at the same location conjoin in single refit-sequences; for example refit set 05c05 which consists of six burins, one scraper, a truncation and a retouched piece. There are also examples of individual tools being transformed during their use-life, such as discarded scrapers being recycled as burins. Indeed, De Bie and Caspar argue that while LMPs are essentially 'intentionally shaped tools', the 'domestic tools' in the assemblage, including burins, scrapers, *becks* and various composite implements, are 'primarily end-products of a use-rejuvenation process' (p. 211). This is an important observation and one in accordance with the flexible and expedient approach already noted in the Federmesser artisans' attitude to raw material selection.

The study of the assemblage is given a third dimension in Chapter 6 which focuses on spatial analyses. The primary stages of flint-knapping seem to have taken place at loci 13, 15 and 16 whereas loci 7 and 11 appear to have been the scenes of more specialized tool-production. Locus 1 is interpreted mainly as a dump, while large communal working areas, mainly for the processing of hides, are identified at loci 5 and 6. The data from locus 5 provide a particularly clear picture in that raw material types can be divided into two, almost mutually exclusive, zones with the working of fresh hide being confined to one zone. Locus 10 is interpreted as a dwelling, probably a circular tent about 5 m across, partly on

the basis of the finds but also using an application of the 'Ring and Sector' method (Stapert 1992). Over 60 per cent of the artefacts recovered at locus 10 had suffered mechanical damage, possibly attributable to trampling, a much higher proportion than noted elsewhere on the site.

Chapter 6 concludes with an assertion that Rekem should be regarded as a residential settlement, a view somewhat at odds with that adopted by Houtsma *et al.* (1996) who argued that all fully excavated Federmesser sites should be regarded as seasonally occupied hunting stands. This reviewer finds the evidence from Rekem compelling, but in the absence of seasonality data from any of these sites the question must remain open. De Bie and Caspar also make a brave attempt to offer what they call 'glimpses' of social structure, gender patterns and ritual behaviour, but on the basis of a lithic assemblage alone there is little that can be claimed that carries real conviction. For example, while the presence of a dwelling may imply a household and, by implication, the presence of children, do the cases of rather inexpert selection of raw materials and 'instances of clumsy handicraft' necessarily document their presence? Wisely, the authors conclude that 'grasping these dimensions with a study of material culture alone remains an intricate endeavour, . . . beyond the scope of the rigid data analysis' (p. 283) that forms the substance of the Rekem report.

One aspect that could, perhaps, have received fuller attention is what may be called the fourth dimension, the active life histories or 'biographies' of finds as their movements across the site from manufacture through use to discard are traced through the refitting sequences. These data are embedded within the other parts of the report and it would have been a fascinating addition to have a few of these 'biographies' specifically extracted from the rest of the data. De Bie and Caspar assure us (p. 280), however, that this topic is a matter of continuing research. At present this fourth, temporal, dimension of Federmesser behaviour is dealt with by the summary assertion that the robusticity of the spatial pattern implies that the site was the scene of a single occupation or repeated short-term visits by the same group of artisans.

The excavations at Rekem are of considerable interest in several respects. First, they provide a detailed insight into the life of a group of hunter-gatherers on the North European Plain during the Allerød Interstadial. They show how the Federmesser populations had developed a technology that stressed flexibility and expediency and one that stands in

contrast to the rigidly structured Magdalenian technologies of an earlier stage of the Late Glacial. This comparison and contrast is of considerable interest to students of the Late Glacial resettlement of the formerly glaciated and periglacial areas of northern Europe. Secondly, the results of the Rekem excavations show what can be achieved from a study of high-quality / high-resolution spatial data. The excavators specifically eschewed the use of sophisticated statistical analyses and theoretical models. This is an empirical study and one that shows what can be accomplished by a combination of meticulous recording on site and post-excavation analysis. The authors are to be congratulated on the success of their achievement.

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Monumental Problems: Who Built Late Egyptian Temples and Why?

Temples of the Last Pharaohs by Dieter Arnold, 1999. New York (NY) & Oxford: Oxford University Press; ISBN 0-19-512633-5 hardback, £36.00 & US\$49.95, viii+382 pages, 101 col. ills., 169 b&w ills.

Kate Spence

Our limited knowledge of ancient Egyptian history is, for most periods, inextricably linked with temple architecture. Texts and reliefs from the walls often provide our only evidence for military activity, jubilees and other major royal events and, when this information is lacking, the building activity itself forms a basis for discussion. As one moves through time and Egypt's interaction with foreign states in-

creases, tantalizing glimpses emerge of a political complexity obscured in the artistic, textual and architectural output of the pharaohs. This peaks in the Hellenistic period, for which we have accounts written by Classical historians and visitors to Egypt contemporary with the huge temples constructed by the Ptolemies.

Egyptian temples were built in the name of the king and traditionally only the king and gods were represented in them. Constructing new temples or embellishing existing shrines was an important part of the king's role. Through building he honoured the gods and instituted order in the world in addition to marking his own reign with a display of conspicuous consumption. The history of temple construction therefore fits well with the traditional division of Egypt into periods of strong centralization and 'intermediate periods' for obvious reasons: only in periods of strong central government were surplus resources available to divert into projects of this type. When centralization weakened, any resources available for construction were generally channelled at a local level into the construction of impressive tombs for the provincial élite. The tendency of architectural history to concentrate on periods for which we have a lot of interesting and varied architecture is understandable, but it can result in continuities between periods being underplayed and an over-emphasis on apparent architectural changes which follow periods of political upheaval.

Arnold's *Temples of the Last Pharaohs* manages successfully to combine architectural history with a much broader archaeological interest in the changing role of architecture over time. It covers the period from the breakdown of centralized control at the end of the New Kingdom (c. 1070) to the construction of the last Egyptian temples under the Romans (c. AD 200). With the exception of the Ptolemaic temples, Egyptian architecture of this period is not well known. Although some dynasties are poorly represented architecturally, either because they did not build much or because their constructions have been usurped or destroyed, the lack of more general interest in late temples seems incomprehensible in the light of this study.

The core of the book is a list of architectural projects carried out under each king grouped into chapters by dynasty; each project is described, and illustrated and discussed where appropriate. Short introductory sections outline the historical background of each period and the most important developments in building form and construction technique. The final part of the book outlines the

most characteristic building forms and stylistic developments, and the relationship between late Egyptian and Western architecture. The emphasis is on succinct and accessible presentation of a large amount of material and as a result interpretation of the monuments and individual architectural programmes is necessarily limited. The illustrations are numerous and exceptionally varied, comprising photographs (archive and recent), plans, elevations, reconstructions and line-drawn details as well as early etchings and a few computer-generated reconstructions.

What follows is a series of more general considerations which were provoked while reading Arnold's useful and most informative book. The juxtaposition of political and architectural history over such a long period is particularly stimulating as it allows comparison between periods as well as examination of patterning between the building programmes undertaken by each king (see for example Baines 1997, 228–9). As is often the case, more evidence and more variety in the source material does not actually make interpretation easier, it simply raises awareness of the underlying complexity.

One of the most striking features of this presentation of all the late temples is the strong sense of continuity which becomes apparent between the Ptolemaic and earlier structures. Study of Ptolemaic temples has largely become a specialized area: the sheer volume of architecture preserved in Egypt makes specialization inevitable and there are certainly differences in the social, political and economic context of these temples in comparison with earlier periods. There are also differences in the quantity and complexity of temple decoration. While there are occasional examples of Hellenistic elements in decoration such as the signs of the zodiac depicted alongside traditional Egyptian constellations on the Dendarah astronomical ceiling, these are rare. An examination of Ptolemaic architecture actually produces little, if anything, which lies outside what might be expected of architectural development over such a substantial period of intensive building activity: most of the architectural features which 'characterize' Ptolemaic temples can be traced back to the poorly-preserved projects of the 26th or 30th Dynasties, if not earlier. Instead Ptolemaic architecture stands out as a period of experimentation and exploitation of traditional Egyptian features and themes within a markedly Egyptian style.

The question of the 'Egyptian-ness' of these temples becomes of particular importance when considering their overall purpose and the role of the king in their creation. It is also significant in considering

whether information from the temples of the Ptolemaic period can be used to shed light on the role and meaning of temples of earlier periods. This is an area of great interest not only because the temple texts and reliefs are considerably more descriptive and explicit than Pharaonic examples, but also because related documents allow much more detailed (although still severely limited) evaluation of the social and economic role of the temples than is possible for earlier periods. Obviously both architecture and context changed over time, but the high level of continuity existing within the architecture may provide useful pointers in interpreting evidence from earlier periods.

The presence of several dynasties of decidedly un-Egyptian rulers highlights interesting questions of agency in temple construction and exposes areas of conflict between the interpretation of post-New Kingdom architecture and that of earlier periods. The subject of agency in construction initiative has now been examined in detail for the 30th Dynasty by Spencer (2001) with some discussion of its relevance for other periods. The main focus here lies in the Ptolemaic period on account of the preservation of the architecture and the number of relevant background texts, but the problem could as readily be applied to any period with foreign kings.

The problem lies in the emphasis placed on the role of the king in Egyptian monumental building projects of the New Kingdom and earlier. As has already been observed, the king is traditionally the only person represented on the temple walls in the company of the gods. Similarly he is usually the only person mentioned in association with construction projects. There is a tendency to avoid discussion of 'architects' in pharaonic Egypt for laudable reasons: the term has no exact ancient parallel and we have little textual evidence for the individuals involved in this type of work. Where we do have evidence for individuals it is usually ambiguous, leaving us uncertain whether they were the designers or the administrators of projects. Discussion of the involvement of priests in design and construction projects is also often avoided, again through lack of evidence.

To avoid making assumptions we therefore stick with the ancient fiction of associating only the king himself with temple construction. Obviously we know that others must actually have been involved, but the danger is that we conflate different aspects of the building project (inception, funding/benefaction, design and execution) and implicitly attribute far too much to the king (cf. Spencer 2001, 174, 186–7). Presenting the king as the constructor itself involves

assumptions, but ones with which we feel comfortable: the interpretation is based on texts and appears to be supported by numerous New Kingdom inscriptions which stress the proactive role of the king in decision-making in many areas, including architecture. There is little to conflict with this interpretation in the New Kingdom, but clear problems emerge when we get to the Ptolemaic period.

Although the evidence for architectural design is nearly as limited as for earlier periods, it has to be doubtful that Ptolemaic kings were actually involved in temple construction to any significant extent beyond that of benefactors, and even this role may have been limited (see below). These kings were Greek-oriented, living in Alexandria in Hellenistic luxury and primarily concerned with power struggles in the eastern Mediterranean and within their own family. According to ancient texts Cleopatra VII, the last ruler of the dynasty, was also the first to learn to speak the Egyptian language. Discussion of design and construction of these temples therefore shifts onto the priests and the centres of learning within temples, despite the fact that it is still the king who is represented in the scenes on the temple walls.

It is quite clear from the architecture itself that those who were actually involved in designing and building temples, be they priests, 'overseers of works' or others, belonged to a highly specialized body of people with detailed knowledge of architectural precedent and religious practice, trained and functioning within a living tradition of Egyptian cult architecture. These people maintained architectural continuity and tradition over generations of kings both Egyptian and foreign (Spencer 2001, 209–11). Similar groups of people or individuals must also have functioned as advisors to kings on issues such as where to bestow their benefactions and at which festivals a royal presence was essential.

Such a situation must also have existed at earlier periods, however scanty our textual evidence. New Kingdom texts dealing with the dedication of architecture focus on costly materials, size and surpassing or embellishing the constructions of one's predecessors; this is the language of benefaction, not of design. Some kings (such as Akhenaten) may have taken more interest than others in architectural design and decoration but this should be viewed as the exception rather than the rule; in any case, the design and realization of architectural projects would still have been undertaken predominantly by others. It is essential that the important role of this group of 'designers' is recognized and acknowledged for earlier periods despite their virtual absence from the

textual record. The existence and importance of such groups goes a long way toward explaining the continuity and gradual changes within architecture after the New Kingdom while the architecture itself was central to creating cultural continuity (Spencer 2001, 210–11).

The question of why foreign kings should have invested so heavily in Egyptian temple architecture is interesting. Some Ptolemaic temples are very large and represent sustained investment over generations. Many smaller structures were also built. This activity took place while resources were presumably already stretched by the extent of Hellenistic building activity in Alexandria and the Delta, on top of military activity around the Mediterranean. As might be expected, the answer is elusive and almost certainly involves complex political, economic and religious factors. A key issue here is the role of the temple in local administration, as during the Pharaonic period temples came to play an increasingly important role as foci of local life. Temples were large land-owners, they had workshops and education seems to have been increasingly temple-based; in addition, law courts were associated with them and markets lay nearby. Traditionally, high-ranking members of the priesthood had also held civil offices. The Ptolemies seem to have left this system largely intact and investment in temple construction in the Nile Valley may have encouraged the support of high-ranking Egyptian local officials. It may therefore be no coincidence that the major building works undertaken by Ptolemies VIII and XII in times of reduced revenues correspond to periods of civil unrest in Upper Egypt (Baines 1997, 229).

Other sources point to the issue of legitimation which must have been orchestrated by the priesthood on behalf of the king. In Egypt, the king's status derived from his relationship with the gods, which was enshrined in cult activity on his behalf. To be accepted as the legitimate ruler of the country it was traditional for the king to build or embellish temples to show his devotion to the gods in return for which the gods would grant blessings to him and through him to Egypt. His representation as sole cult participant on temple walls emphasized his acceptance by the god. The Canopus decree (238 BC) accords Ptolemy III and Berenike the status of 'benefactor gods', with their own priesthood throughout the country, on account of their benefactions to temples and restoration of sacred statues removed by the Persians (Bowman 1990, 169–70). This is recorded as a privilege to the rulers in language which is far from subservient and seems to point to a complex

power-balance between priests and rulers.

This use of temples for legitimation is illustrated most clearly by the building programme undertaken at Thebes for Alexander the Great and his immediate successor, Philip Arrhideus. Having conquered Egypt, Alexander went for the jugular in a religious sense by undertaking very limited work in the most sacred locations in the most sacred temples of the most sacred city of Egypt. The decoration of the sanctuary of the *Akh Menu* at Karnak was recarved with images of Alexander before Amun, and new shrines for the sacred boats of Amun were built and decorated at Karnak and Luxor temples, following closely the design of the New Kingdom originals; the Karnak boat shrine was actually decorated by Philip Arrhideus. These interventions are interesting in several ways. First, the programme must have been orchestrated by an individual or team who understood and was exploiting the significance of these locations on behalf of the king. Secondly, this building work would have been visible only to a handful of priests and the gods: it was not an act of legitimation directed toward the general population. Thirdly, the scale of these projects is tiny in comparison with the building activity of the Ptolemies.

Despite the potential of legitimation as a carrot for extracting building funds from the ruling dynasty, the funding of projects was certainly more complex than one-off benefactions from the king. There is considerable evidence for private initiative (Spencer 2001, 144). In addition, major temples were formidable economic forces with sizeable land holdings, a possible monopoly on papyrus production and the ability to charge large fees for mummification and burial rites (Quaegebeur 1979). It therefore seems possible that some construction costs could have been met by the temples themselves, particularly in larger institutions. The extent to which this could have been a factor in funding construction is difficult to assess given the paucity of evidence. The suggestion is highly speculative, but the fact that construction declined rapidly in the Roman period following major economic reforms including the confiscation of temple properties under Augustus (p. 225) could be interpreted as lending support to this view although it could also simply reflect lack of royal investment. An apparent lack of definition between royal and temple coffers in the New Kingdom (Janssen 1979) makes it difficult to assess whether funding for building projects might not also have been partly internally-generated in earlier periods. It is interesting to note, however, that the Deir el-Medina workers who built the New Kingdom royal

tombs in the Valley of the Kings seem to have been paid in part through existing temples (Janssen 1975, 456–58; Valbelle 1985, 148–52).

While an examination of the architectural evidence suggests little direct foreign influence in late Egyptian architecture, and recent architectural histories are certainly justified in emphasizing continuity, it is important not to overlook the new interests and emphases which appear in wall decoration at this time. Some of these are given a historical pedigree within remotest Egyptian history which is almost certainly fictitious (Kemp 1989, 100–101): they reflect new ideas developing within the contemporary cultural context drawing on traditional aspects of Egyptian religion (Spencer 2001, esp. 111–18). These temples also provide the fullest and most explicit expositions of many Egyptian myths and rituals and this explicitness may to some extent be the result of indirect influence. Traditionally, temple texts and reliefs referred to a world view and a religious system understood to a greater or lesser degree by all Egyptians; perhaps continual explanation of rituals and beliefs to those who did not share that world view encouraged the development of a more explicit and narrative presentation of ideas.

Despite continuity in architectural form and detail throughout the period under study, the architecture of Ptolemaic and Roman Egypt is more than the sum total of its recognizable parts. As is the case with the wall reliefs, the temples of this period reflect contemporary religious practice in a way which draws on tradition within a creative context and produces distinctive architecture. Thankfully, the importance of the art and architecture of the Late and Graeco-Roman Periods is now widely acknowledged within Egyptology and negative value judgements are rare (Baines 1997; Finnestad 1998) but both art and architecture are still poorly understood. There is enormous scope here for further investigation: Arnold's volume provides a useful starting point and hopefully researchers will not be put off by the scale of the challenge.

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