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Review Articles

Cahokia Examined

The Cahokia Chiefdom: the Archaeology of a Mississippian Society, by George Milner, 1998. Washington (DC): Smithsonian Press; ISBN 1-56098-814-2 hardback, £31.25, $40.00, xvi+216 pp., 69 figs.

Timothy Earle

Cahokia is a major Mississippian centre covering about 13 km^2 with many mounds, an enclosing palisade, residential areas, and other features. It is among North America's most important prehistoric sites, listed on the World Heritage List by UNESCO. Monks Mound, a particularly large earthen mound, dominated an open central plaza that was defined by additional smaller mounds. The site sits above the extensive alluvial American Bottoms along the Mississippi River just east of St Louis. Mound groups, representing other chiefly centres affiliated with Cahokia, and their associated residential settlements have been described through the Bottoms. The Cahokia regional chiefdom(s), AD 900–1400, is recognized as probably the most complex political organization to have existed in prehistoric North America.

George R. Milner's *The Cahokia Chiefdom* is a substantial and beautifully produced synthesis of a single archaeological region (and prehistoric political system). Typically, archaeologists produce works at quite different scales of analysis: 1) reports of single site excavations with analyses of their artefact assemblages; and 2) broad syntheses of cultural areas like the American Southeast, England or even Europe. Except for reports of settlement/site surveys, regional syntheses are rarely attempted.

Ignoring the region is particularly limiting because this scale is often the vital level of cultural identification, political interaction, and polity integration in stateless societies (Johnson & Earle 1987). Among societies organized as local groups or simply ranked societies, the region is a zone of intense cultural interactions that involve webs of intermarriage and exchange and coordinated cycles of ceremonies. A culture (and its 'tribe') define a region. Among chiefdoms, the region is the significant arena of political action; here polities form, reform, and fragment. Even within states, the region is often the critical political unit of organization, below the overarching state superstructure, for economic, social, and political life. Outside of the household and its immediate community, the cognitive worlds of traditional peoples were largely conceived and built with the region as a frame of reference. Much of what we want to understand is how regional social, political, economic, and religious systems are formed and operate. Milner's synthesis of an archaeological region in which the Cahokia chiefdom emerged and dissolved can become a model for future archaeological publications.

If the region is so important a scale of analysis, why are regional studies so rare (notable exceptions include Crumley & Marquardt 1987; D'Altroy 1992; Knight & Steponaitis 1998; Richards 1990)? The primary reason would appear to be the extraordinary effort (cost) of doing such synthetic regional work. Research goals, as originally articulated by processual archaeologists, set out impossible agendas for research that caused most projects to be unequal to their task. Regional settlement surveys were rarely integrated with subsequent excavations, and most researchers reluctantly settled for reports and cursory regional summaries. Since the 1970s, the proliferation of rescue archaeology has rapidly increased the availability of evidence for many archaeological regions, but, without standardized recovery and recording methods for computerized archives, attempts to capture the overall regional nature of settlement, society and culture through time have become daunting. Milner's accomplishment is thus just that much more impressive. He has pulled together, systematized, and made sense of extraordinarily diverse and rich data sets that included CRM reports, research site reports, historical maps, unpublished excavation records, and unanalyzed museum collections. What immediately impressed me is how close he has been able to keep in his conclusions to the archaeological evidence.

The Cahokia Chiefdom is organized in a routine and easily comprehended fashion. Chapter one, 'A stupendous pile of earth', provides background on the history of regional research and interpretations of Cahokia. Detail is provided on early surveyors

and antiquarians who produced maps of the mound groupings before destruction by farming and city growth; on the government-supported work during the Great Depression by archaeologists of the WPA; and on extensive CRM recovery mostly connected with federal road building. Chapter two, 'A huge silver serpent', describes the environs of Cahokia, emphasizing how dramatically things have changed with regards to river movement and vegetation. Chapter three, 'Great quantities of earthen ware & flints', describes the regional assemblages of pottery and lithics. Chapter four 'No land can surpass its vegetable luxury', describes the prehistoric diet that emphasized locally available crops (especially maize and continuing use of indigenous cultigens) and some wild wetland and upland wild foods such as nuts and deer. An overall richness was tempered by problems of droughts and flooding. Evidence supports immediate availability of food, without extensive, systematic regional (or long-distance) food exchanges except as periodic gifts to chiefs. Chapter five, 'Simtoms [sic.] of ancient ruins', describes evidence at the centre and outlying sites for lithic and ceramic production and exchange, for housing, and for mound construction. There is no credible evidence for the development of systematic systems of specialized production and extensive exchange, and the types of ceramics found within the major centre of Cahokia documents a similar range of activities as at outlying settlements. While Cahokia demonstrates a continuous occupation for the period, other centres are not all contemporaneous, suggesting a less stable political structure.

Chapter six, 'Proofs of an immense population', describes the regional dynamics for Cahokia chiefdom. Estimated population peaked early at Cahokia in the Lohmann phase, and in the next (Stirling) phase for the whole of the American Bottoms. Estimates for Cahokia are quite small, 3000–8000 at its highest and otherwise in the low thousands; estimates for the American Bottoms topped out at 15,000–50,000 and otherwise close to 20,000. These figures fit quite reasonably with a complex chiefdom, as found for example on the various Hawaiian Islands at contact; they correct earlier exaggerated figures that might suggest that Cahokia was an urban state. Chapter seven, 'Extraordinary monuments of their social state', describes evidence for social stratification. Both burials and settlement evidence document a division into two distinct social strata. Little evidence for elaborate craft specialization, with a corresponding potential for control through attached specialization, exists. Bead-making, involving the long-distance import of marine shell, took place in domestic settings. Milner emphasizes, as do others discussing chiefdoms, that the labour involved in mound construction was not large and problems mobilizing and directing it would not require special managers or other formal direction. However, 'many of the American Bottoms mounds [including Monks] were constructed in one or a few bursts of effort, as indicated by great amounts of fill laid down over short periods of time' (p. 108), and I believe that the construction of these mounds and the palisade probably required systematic control and scheduling of labour.

Milner concludes (Chapter eight, 'Gray chronicler of hoary centuries'), with a full and convincing synthesis of the Cahokia chiefdom, flawed only by his decision not to compare the patterns of development explicitly with other Mississippian chiefdoms (such as Moundville: Knight & Steponaitis 1998) and chiefdoms elsewhere (Earle 1997). Although he may be excused since he has surely 'done enough', comparative work would have supported substantially the reasonableness of his conclusions. The settlement (and political hierarchy) was probably modest and changing. 'Only Cahokia . . . stands out from the other mound centers as clearly dominant over an area that exceeded its immediate vicinity' (p. 156). Each local mound group was probably largely economically and to some degree politically separate, supported by their surrounding residential communities whose members farmed the fertile alluvial soils and used other local resources. The size of a mound group appears to reflect the productivity of its land, and I would suggest that this means that local chiefs retained an overarching ownership right to the locality's lands and received staples as rent to support their political and ceremonial activities. The degree of effort involved in the monumental construction was modest and the elaboration of wealth objects was not extreme; there was a clear desire, however, to emphasize the separation between the ruling chiefs and the commoner population through non-local wealth, ostentatious burials, and special housing. Exchange in non-local goods was 'an exceeding thin veneer over the great bulk of locally produced, everyday objects' (p. 163). No evidence of an exchange system organized beyond local tribute and down-the-line élite exchange seems probable. Cahokia's success derived from its natural setting, which I would argue provided an opportunity for élites to control highly productive local agriculture and then extend regional control through an elaborated ceremonial setting and cycle. The Cahokia chiefdom

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was a remarkable example of a staple-financed, complex chiefdom that fits reasonable well with a corporate strategy for power (Blanton *et al.* 1996).

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Culture, Cognition and Conflict

A Cognitive Theory of Cultural Meaning, by Claudia Strauss & Naomi Quinn, 1997. Cambridge: Cambridge University Press; ISBN 0-521-59409-X hardback, £50 & US$64.95; ISBN 0-521-59541-X paperback £16.95 & US$24.95, 323 pp.

How the Mind Works, by Steven Pinker, 1997. London: Penguin; ISBN 0-713-99130-5 hardback, £25, 660 pp.

Chris Knight

Archaeologists study outcomes of past cognitive strategies. We might better reconstruct these if we fathomed how human cognition works, when and how it evolved — and the nature of its relationship with technology, language and culture. If there exists some novel, elegant and parsimonious theory which addresses such issues, then that is good news. So I looked forward to reading these books.

Together with Roy D'Andrade (1981; 1995), Bradd Shore (1996) and other 'cultural models' thinkers, Claudia Strauss and Naomi Quinn have risen to prominence within a movement straddling the divide between anthropology and psychology. In seeking to unify these disciplines, such scholars repudiate what they see as outmoded doctrines about 'the psychic unity of mankind'. Cognition, they assert, is *ethnographic* (Shore 1996). 'Neural network theory' — alternatively known as 'connectionism' (Rumelhart *et al.* 1986) — forces abandonment of naïve ideas about innate cognitive architecture. The brain *self-organizes* during maturation and development, acquiring structure by internalizing local cultural models (Laughlin *et al.* 1992). Imagine, for example, relying only on Roman numerals in attempting complex arithmetical calculations. As strategies were devised, the mind would settle into a pattern quite unlike that based on arabic numeracy. There is clearly a sense in which 'mind' is *internalized culture*.

The 'culture in mind' (Shore 1996) approach stands diametrically opposed to the school of thought known as 'evolutionary psychology' (Tooby 1985; Pinker 1997). As if Alan Turing (1950) had teamed up with William Hamilton (1964) and Robert Trivers (1971), Pinker belongs to a movement seeking to link the artificial intelligence revolution of the 1950s–1960s with the more recent 'selfish gene' (Dawkins 1976) revolution in the life-sciences. Following the success of *The Language Instinct* (1994), Pinker's *How the Mind Works* is an engrossing, enjoyable and openly partisan account of the mind as a product of evolutionary design.

Pinker's point of departure is a thoroughgoing materialism. Philosophers have long debated an apparent conundrum. If 'mind' is irreducible to the materiality of 'brain', how can it nonetheless engage with and influence the physical world? Telecommunications and artificial intelligence metaphors have enabled us to set aside that problem. Mind is not spirit, yet neither is it matter. It is information. A message in morse code remains unaffected by whether the medium is light or sound. Each sequence of dots and dashes, while autonomous with respect to the physical medium, is nonetheless bound up with it and capable of producing physical effects. To grasp this is to understand how 'mind', while not reducible to 'matter', is nonetheless materially active and effective. There is really no mystery any more (Fodor 1968; Dennett 1978; Pinker 1997).

Evolutionary psychology extends the compu-

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ter metaphor to explain why learning is necessary but insufficient in explaining the workings of mind. Imagine a personal computer which initially 'knows' nothing at all — not even what a floppy disc is. The instructions specify that you must first 'teach' the machine by inserting a disc. We can see at once that this is a logical paradox. Only a machine set up with *prior* information about discs — that is, one equipped with specialized adaptations for reading them — could possibly learn anything from such a device. By the same token, no-one disputes that the human brain develops and functions through learning. It achieves this by combining inputs from alternative sources, such as visual perception, intuitive mind-reading and language. But in each case, sense can be made of the input only thanks to equipment previously installed. If a child spontaneously mind-reads from cues provided by the eyes (Baron-Cohen 1995), or computes the basic grammar of a language after hearing only fragmentary utterances (Pinker 1994), it is because there is a sense in which it 'knows' in advance what kinds of inputs to expect.

Both psychological anthropology and evolutionary psychology proclaim the unification of knowledge. In place of ancient and outmoded dualisms — 'mind' versus 'matter', 'culture' versus 'nature' — they promise a coherent, intelligible scientific picture. Unfortunately, by tugging in opposite directions, they tear the canvas apart. Psychological anthropology strives for unity by collapsing 'mind' into 'culture'. Mind, for this school, is internalized *cultural* patterning — ethnographic and hence variable (Shore 1996). Evolutionary psychology seeks unity on precisely the reverse terms — by collapsing 'mind' into 'nature'. Defiantly essentialist, it construes both body and mind as coded in the genes. Where learned structure is acquired, this can only be within limits set by innate cognitive design. Mind, for evolutionary psychology, is those natural, species-specific computations which *Homo sapiens* is designed by evolution to perform (Pinker 1997).

Rather than debate with the enemy, each contestant in this dispute disdains to acknowledge the other's existence. In the case of Strauss and Quinn, the nearest they get is a reference to Chomskyan linguistics, in connection with which they caution against going 'too far in assuming hardwiring' (p. 81). Not one of Noam Chomsky's specific publications is mentioned, and it is clear that his name functions as a surrogate to license an attack on their real target. Connectionist models 'as they stand now' are too soft on the unmentionable proponents of innate cognitive architecture:

> It may be that we are born with propensities to attend to and represent certain features of the world, but these initial propensities are only neural first guesses that can be modified with experience. If that is the case, one problem with connectionist models as they stand now would not be that they are underconstrained but that they are over-constrained because their inputs have fixed representations (Strauss & Quinn 1997, 81–2).

Over in the opposite camp, meanwhile, Pinker engages in mirror-image acrobatics in his bid to avoid acknowledging 'cultural models' theorists. The nearest he gets (pp. 311–12) is to touch on linguist George Lakoff's *Women, Fire and Dangerous Things*. Lakoff (1987) points out, reasonably enough, that the Australian Aboriginal linguistic category from which his title is derived cannot be natural. The lumping together of 'women, fire and dangerous things' is a cultural artifice. Extending his argument, Lakoff goes on to suggest that linguistic categories in general are socially constructed.

For Pinker, any such idea is anathema. 'Many anthropologists and philosophers', he acknowledges (p. 308), 'believe that categories are arbitrary conventions that we learn along with other cultural accidents standardized in our language'. His counter-attack is that this cannot be so since 'categories would be useful only if they meshed with the way the world works'. What might *appear* to be cultural fictions, he insists, are in fact nothing of the sort — they are just abstract outcomes of rule-systems for processing information about the real world:

> Systems of rules are *idealizations* that abstract away from complicating aspects of reality. They are never visible in pure form, but are no less real for all that (p. 312).

For Pinker, then, linguistic categories are a natural consequence of 'the way the world works', explicable therefore in straightforward adaptationist terms.

One might reasonably have expected Pinker to acknowledge that for any socialized human, cultural schemas including social fictions are precisely an aspect of 'the way the world works'. But no. In Pinker's universe, social constructs have no place. The lens of evolutionary psychology simply screens them out. What remain are individuals with their innate competences and their thoughts. Such persons inhabit an external environment made up of other thinking, speaking individuals, together with non-human animate and inanimate entities. And that is all. The distinctively human world of intangibles (such as promises, oaths, curses, totems and gods)

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falls outside the purview of this kind of Darwinism.

Evolutionary psychology and psychological anthropology in this way mirror one another. On each side, the territory across the boundary is declared *not to exist*, a stance which may explain a seeming paradox. While fighting on behalf of nature and culture respectively, each camp vehemently repudiates this very dichotomy. For evolutionary psychologists, the dichotomy is false since cultural models — even supposing such fictions are entertained— are basically irrelevant to cognitive function. For cultural theory, the distinctions and oppositions central to Darwinism are at best superficial, at worst divisive and pernicious. On a deeper level, as eastern mystics have long understood, all is one and one is all.

Where selfish gene Darwinism celebrates conflict, politically correct cultural theorists insist on a vocabulary which precludes all binary opposition. Hence, according to social anthropologist Tim Ingold (1993, 470), culture and biology are not opposites but should be used interchangeably. Cello players, having internalized their distinct skills, are now *biologically* different from sitar players; similarly, English speakers are *biologically* different from Japanese. A broader conception of Darwinism, continues Ingold, would speak not of 'animal' versus 'human', instead treating all creatures alike. The subject of the life-sciences would then be 'the organism-person as an intentional and creative agent' (p. 470). Advanced cultural theorists in a similar way argue for abandonment of essentialist, divisive categories such as 'woman' and 'man' (Butler 1990). Strauss and Quinn (p. 28) endorse such 'de-essentializing' work, yet, as psychologists, differ in wishing to be allowed their own foundational distinction — that between 'inner' and 'outer', or between 'the individual' and 'the surrounding social world' (p. 28). Butler (1990) would deny any such distinction, thereby precluding the possibility of doing psychology at all. At this point, Strauss and Quinn (p. 28) call a halt. 'This denial of the difference between the inner world of subjects and the outer world of objects', they declare, 'is going too far . . .'

If all this looks like madness, there is nonetheless method in it. As in any conflict between nation states or rival tribes, each camp reinforces its own solidarity by exaggerating the external threat, preventing reconciliation by periodically confirming the enemy's worst fears. Through their political correctness, cultural theorists provide an endless source of bitter amusement to their Darwinian opponents, licensing the latter to dismiss the entirety of social science as mere propaganda. Evolutionary psychologists, while presenting themselves as cautious scholars on their home ground, respond by parodying politically backward stereotypes when on the rampage outside their specialist domains. This is true not only of the self-professed racists and reactionaries. Not even Darwinism's liberals can resist the knockabout fun and games. Take, for example, Pinker (p. 305) on 'shamanism' — a topic properly considered within social anthropology. Ignoring the vast scholarly literature on this fascinating theme, he explains the phenomenon as follows: 'Tribal shamans are flim-flam artists who supplement their considerable practical knowledge with stage magic, drug-induced trances, and other cheap tricks'.

The belief systems of preliterate peoples — their view, for example, that certain anthropomorphized principles are 'sacred' — are demoted to the status of hoaxes. Where constructs diverge from 'the real world', they must be quackery. On this issue as most others, Pinker is joined by Dawkins (1993), for whom religion of any kind is a computer bug — a cultural virus malevolently introduced to parasitize gullible minds. To social anthropology as a profession — I need hardly stress — such doctrinaire verdicts on the subject *of other peoples' beliefs* are interesting only as an example of western folk-prejudice, not scholarship or science.

When Pinker (pp. 528–38) comes to discuss music, he is for some reason less dismissive. An orchestral symphony may be emotionally hallucinatory, but that does not make it a cheap trick. One might be forgiven for invoking Pinker's own cultural experience in accounting for his change of heart at this point. His social background fosters an appreciation of music, whereas shamanic trance-dance (leaving aside the contemporary rave scene) is surely a world apart. Interestingly, however, Pinker remains convinced that music is adaptively useless. Since he rejects *a priori* any kind of sexual selection or social explanation, he is left to philosophize about its evolution in a vacuum. If it is not an adaptation, what kind of thing might music be? The following are Pinker's concluding suggestions — the best ideas he can come up with so far (p. 538):

> Perhaps a resonance in the brain between neurons firing in synchrony with a soundwave and a natural oscillation in the emotion circuits? An unused counterpart in the right hemisphere of the speech areas in the left? Some kind of spandrel or crawl or short-circuit or coupling that came along as an accident of the way that auditory, emotional, language, and motor circuits are packed together in the brain?

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It is ironic to recall that when opponents of adaptationism invoked oscillations, spandrels and comparable lucky accidents in attempting to explain the evolution of *language*, Pinker (1994) was among the loudest in pouring scorn on all such ideas. Yet when turning to music — by his own admission linked intimately with language and song — he warmly rehabilitates his former intellectual enemies.

The inconsistency indicates the depth of Pinker's problem. Genuine evolutionary scientists, faced with the fact that humans have traditionally invested immense energy in their trance-dance and other mythico-ritual domains, would be expected to seek some kind of adaptive explanation (Knight *et al.* 1999). But for Pinker and his colleagues, *all* cultural schemas and corresponding competences are simply beyond the pale. Unable to explain the evolutionary emergence of symbolic culture as such, the proponents of evolutionary psychology are left with little option but to portray music, rhythm, song, dance, trance, art, mythic narrative and just about everything else distinctive of human consciousness as non-adaptive if not positively harmful! These Darwinians throw out Darwinism precisely when it encounters its most exciting challenge.

It would be inaccurate to say that Strauss and Quinn ignore biology altogether: their need as psychologists to retain the notion of the biological individual prompts a certain caution on this. Adjusting themselves with respect to the paradoxes and inconsistencies of their cultural theory colleagues, they opt for a position mid-way between what they see as various extremes. One of these is the notion that everything and anything is 'culture'. Sensibly, they reject such blanket use of the term, commenting, 'we do not think it is useful to use "culture" to refer to shared experiences of the natural world'; or again, 'we do not want to label as cultural those schemas that are the product of experiences arising from innately programmed behaviors' (p. 7).

But to avoid conflating culture with nature is the least we might expect, given that these authors' stated aim is to rescue the term 'culture' from oblivion. To speak of meaning as 'cultural' specifies nothing unless *non-cultural* — presumably 'natural' — meaning can be envisaged. As a Darwinian, I find no problem in envisaging this. Are not humans designed to see meaning in involuntary facial expressions, in the cries of babies or in symmetry or other indices of fitness in potential mates? Do not apes in a similar way see significance in the world around them (Byrne 1995)? How can one discuss 'meaningfulness' as a characteristic of human experience without taking account of our species' evolved repertoire of drives and emotions? Can distinctively human modes of cognition be truly understood or theorized *without* asking what *non-cultural* cognition might involve?

But while acknowledging that the natural world exists, Strauss and Quinn do not pursue such lines of reasoning. Once the authors have nodded in nature's direction, they immediately move on. Like all cultural theorists, Strauss and Quinn take 'cultural models' for granted. Their book therefore gets nowhere in explaining their existence, distribution or significance. The authors are unconcerned with evolutionary issues, make no attempt to engage with biological models of cognition, ignore the most exciting recent developments in palaeoanthropology, cognitive archaeology, cultural transmission theory, evolutionary linguistics and symbolic (including linguistic) anthropology — and instead hark back to . . . Freud.

The authors describe themselves as 'psychological anthropologists'. I fail to see in what sense that is an accurate self-identification. In the definition with which I am familiar, an anthropologist is someone who studies human face-to-face interactions, relationships, cognitive and social strategies. By contrast, Strauss and Quinn compile interview transcripts conducted in private homes. Here, informants reminisce and otherwise cogitate in isolation. The rationale, as I understand it, is the authors' insistence that 'cultural meanings' are neither institutional nor relational but exist as representations or 'schemas' which for some reason have got inside individuals' skulls. The researchers' task is to make tape-recordings of verbally expressed 'schemas' and then perform what is termed 'discourse analysis' on the transcripts.

The selected informants are questioned about (a) love and marriage and (b) economic individualism. The interviewees, like the authors, are United States Americans. At an early stage, we are introduced to 'Paula', who — while 'entirely a product of our imaginations' — is 'a composite constructed in large part from the lives of women friends, acquaintances and ourselves' (p. 87). Paula was born shortly after World War II, grew up in a white suburban middle-class family, went to college, has a husband, two children and a professional job — and thinks of herself as some kind of feminist. Paula's run-of-the-mill opinions on ethnicity, motherhood, gender and other matters are detailed, but it is not easy to discern the scientific interest or relevance of any of this. Where non-fictional individuals are studied, we might have expected to be on firmer ground. Perhaps the case studies reported do indeed contribute

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genuine (albeit exclusively verbal) data, but a problem here is that the taped transcripts are so mind-numbingly predictable as to be barely readable. This applies also to the analyses which follow.

Question: 'What do you mean by love?' Answer: 'Essentially the — well I think the sharing, the togetherness, the giving. Ah — and emotional attachment, caring, that kind of thing' (p. 200). Or again:

> I just feel like when you're ready to marry somebody then you're ready to give up everybody else as far as ever going out with anybody else — any other men. I mean you're ready to just dedicate your life to loving one man, you know. I mean I can love somebody else as a friend but not romantically, you know, physically, romantically (p. 196).

And so on.

Throughout the volume, all data takes the form of utterances of this kind. Why is it that they appear so superficial — so strikingly *lacking* in meaning? Surely the problem is the authors' methodology. They concede that 'linguistic conventions' cannot be a sure guide to deeper meanings (p. 208), yet it is on the basis of exclusively verbal interview data that the 'analysis' proceeds. Since, even at the best of times, language inevitably abstracts away from the emotions, it is scarcely surprising that an artificially elicited, fragmentary interview declaration will be calamitously inadequate to express what the speaker may really have in mind. In Strauss and Quinn's treatment, the utterances even lack obvious scientific meaning. They are not related to findings or research which might explain how or why such utterances might compare with others culled from elsewhere in the world. There is no discussion of human species-specific mating strategies (Buss 1994) or strategic emotions theory (Frank 1988). In place of an anthropologically- or historically-informed explanation for diversity and change in marital strategies, kinship systems and corresponding meanings, Quinn argues that historical differences in linguistic idiom are mere masks beneath which lies an unchanging, universal core of 'psychodynamic' meaning (p. 207). This leaves us with no way of explaining how or why contemporary western ideas about 'love and marriage' might differ from notions concerning comparable topics among, say, traditionally organized Navaho Indians, whose kinship structures are matrilineal (Witherspoon 1975). In short, there is no *anthropological* treatment of the psychology of marriage or love.

So what, finally, is the author's analysis? Quinn's major theoretical point is that her 'love-and-marriage' clichés make sense in Freudian terms. The infant, we are told, wishes its mother to meet its needs; it is in a state of extreme helplessness and dependency. If contemporary Americans share a cultural understanding of marriage in terms of love, it is because they feel similarly dependent (p. 190). The experience of 'falling in love', as Quinn explains, 'can be understood psychodynamically as a reentry into the dependent infant's felt state of extreme helplessness' (p. 191).

By way of scientific explanation, as opposed to mere description, this is all we get. It is as if the facts of human biology could not be entirely expunged, so a static, timeless version of the infantile experience courtesy of the venerable ancestor was offered in place of anything more dynamic and up-to-date. The advantage of citing Freud is that it distracts attention from more recent research into the biology of love and other human emotions (e.g. Buss 1994; Frank 1988), research whose evaluation would entail acknowledging the enemy's existence.

Turning from marital to industrial matters, Strauss interviews employees of a Rhode Island chemical factory owned by the Swiss multinational, Ciba-Geigy. The plant is producing dangerous emissions, risking the health of its employees and the entire neighbourhood. Here, we sense the presence of class solidarity; there is even a whiff of resistance to dominant values. 'Corporations do not care about people', says one worker. 'They — all they care about is satisfying their stockholders, making money . . .' Or again: 'Politicians. They get away with murder. And they, you — everybody could be up in arms about it, but until you can get a group, no one's listening' (p. 216).

But thanks to her interview technique, Strauss ensures that any such countervailing voice is stifled. When proletarian resistance rumbles, the interviewer pays scant attention. Violating what is perhaps the most elementary rule of anthropological fieldwork, Strauss screens out the collective by taking transcripts only from decontextualized, isolated informants expressing opinions *for the sake of the interview* in the privacy of their own homes. She is then able to make her main point: these people are ultimately incoherent. Their 'internalized schemas' contradict one another and so add up to nothing. 'For the most part', as she observes (p. 230), 'we are only as consistent as we need to be to get things done'. Insofar as the imperative is personal survival, then each contestant will pick-and-mix fragmentary 'schemas' according to the task in hand. But as I was reading Strauss' chapter, a question occurred to me. Suppose

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collective resistance became widespread and organized. Would not strands of cognitive and political consistency then begin to emerge? If we had to rely on Strauss' interview techniques, we would never know. Within the privatized context of each interview, Strauss' perceived middle-class status is intrusive and politically inhibitory. Having repeated criticisms of 'the rich' throughout six interviews, one Ciba-Geigy worker — having met with scant sympathy from his interlocutor — is finally moved to apologize. 'You probably got big money, I shouldn't talk like that' (p. 242). One more inconsistency for the record.

Both books under review see anthropology as individualistic psychology. Unfortunately, this ensures in advance that cultural meaning must remain incomprehensible. The passage from nature to culture — from primate sociality to human cultural symbolism — entailed assertion of a distinctively collective level of intentionality. Let me quote philosopher John Searle (1996, 41):

> The central span on the bridge from physics to society is collective intentionality, and the decisive movement on that bridge in the creation of social reality is the collective intentional imposition of function on entities that cannot perform those functions without that imposition.

What does Searle mean? He is reminding us that neither a banknote nor a sentence can serve its function thanks to any intrinsic property or form. It has no use or value except that which is collectively conferred. Faith in public symbols, like magic, creates illusions which Searle terms 'institutional facts'. If everyone believes them, then — for social purposes — they are true.

For Searle, cultural meanings are recalcitrant to a perspective focused upon personal cognition or experience. For Strauss and Quinn, by contrast, meanings are precisely internal — they have a spatial location, which is 'in people's minds'. 'There is', they write (1997, 19–20), 'no other place for meanings to be concretely, and they have to be concrete if they make a difference in the world'. In this context, the authors reserve special scorn for Clifford Geertz's version of cognitive collectivism. Geertz (1973, 10) writes:

> Culture, this acted document, thus is public, like a burlesqued wink or a mock sheep raid. Though ideational, it does not exist in someone's head; though unphysical, it is not an occult entity . . . The thing to ask about a burlesqued wink or a mock sheep raid is not what their ontological status is. It is the same as that of rocks on the one hand and dreams on the other — they are things of this world.

If culture — a pattern of meaning — is 'unphysical', ask Strauss and Quinn (p. 19), 'how can it have the same ontological status as a rock or a mock sheep raid?'

But Geertz's point — although taken to extremes by subsequent postmodernism — is in itself incontrovertible. Insofar as we humans have entered 'the cognitive niche' (Tooby & DeVore 1987), constructed facts are a part of our world no less than rocks or other peoples' actions. As Searle writes, it is not just a fiction but a *fact* that London is the capital of Britain, that he is a United States citizen — and that the paper in his pocket is a ten dollar bill. It may appear paradoxical that each such fact is dependent upon collective belief, counting therefore as a social fiction. But that is the world we humans live in. Treating collective constructs *as if* they were external, solid facts is precisely the peculiarly human — symbolic cultural — stance.

One might think it self-evident that the value of a banknote resides in collective rather than individual intentionality. It is therefore instructive to note how Strauss and Quinn manage to promote their psychological individualism even with respect to monetary value. Dismissing the idea that the 'cultural meanings' of coins or banknotes can be their socially imposed functions, they reason as follows (p. 20):

> Certainly an outside observer . . . can only ascertain those meanings by observing people's uses of money, but for the people whose uses are being observed, each monetary transaction provokes meanings *in* them, and it is on the basis of these meanings that they act. For example, someone deciding to buy a lottery ticket does so because of what a sudden windfall of money would mean to them. These meanings are a combination of ideas (e.g. about the 'good life'), feelings (e.g. of relief at being free from debt), and motivations (e.g. to win admiration through generous charitable donations) in them.

Having conceded that notions of monetary value 'are probably held in common with many other people', Strauss and Quinn hasten to add:

> But the point remains that these meanings are the actors' meanings: They are the actors' thoughts, feelings, and motivations, including out-of-awareness psychological states. As others have insisted before us, meanings can only be evoked in a person.

From a truism — namely, that *any fact* can mean different things to different individuals — these authors conclude that cultural meanings are rooted in

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personal psychology. They have conveniently lost sight of the main point. A ten pound note is just that — a ten pound note — regardless of what individuals may think or feel. It might be earned, kept or spent according to personal whim, just as one might utter a word in different combinatorial or social contexts. But what conclusion is to be drawn? Banknote values — like semantic meanings — are independent of personal psychology. An institutional fact remains a fact — founded in collective intentionality — no matter how this or that individual might experience it. Only in *Alice in Wonderland* do words mean whatever the speaker wishes them to mean. Only in such a world might personal psychology metamorphose a five pound note into ten. Outside such imaginative contexts, cultural meanings rest upon structures transcending the psychology or cognition of individuals.

Both evolutionary psychology and psychological anthropology repudiate the one piece of the jigsaw puzzle which might make sense of the picture and unite their disciplines in the process. Each repudiates what is genuinely unique to our species — the collective dimension of human social and cognitive life. For both schools, 'mind' is not social or relational — it can exist only inside the head. Admittedly, Strauss and Quinn concede that certain schemas may be shared; indeed, the authors follow Sperber (1985) in accepting that the more widely they are shared, the more properly we may describe them as 'cultural' (p. 7). But the notion of 'shared schemas' has little in common with 'collective intentionality', which is defined by Searle as a distinctively human *level* of social and cognitive life. Neither do the authors do justice to Sperber. In an analysis more subtle than that of Strauss and Quinn, Sperber & Wilson (1986) see linguistic communication as *combining* collective code with personal inference, the 'code' dimension being of more recent — distinctively human — evolutionary origin. Wild-living monkeys and apes doubtless internalize shared schemas, but it would be surprising if they exhibited collective intentionality — a stance in which arbitrarily agreed functions are imposed on aspects of the world.

Strauss and Quinn cite Hannerz (1992, 4) to the effect that 'culture resides in a set of public meaningful forms', whereas on the other hand 'these overt forms are only rendered meaningful because human minds contain the instruments for their interpretation'. Strauss and Quinn (p. 10) say they were 'much heartened' to read Hannerz' evenly balanced formulation, stressing that this is 'exactly what we are saying'. Unfortunately, the authors immediately lose balance by describing their own field of investigation as 'intrapersonal culture', setting this up in opposition to what they characterize as Hannerz' focus on 'extrapersonal forms'. For Strauss and Quinn (pp. 5–6), institutionally stabilized, shared mental states merely affect how cultural meanings may be *interpreted* by individuals. They are not to be confused with such meanings themselves. A meaning as such is always an 'interpretation evoked in a person by an object or event at a given time' (p. 6). In short, whereas for most of us, words have collectively defined semantic meanings which individuals may employ and interpret in different ways, for Strauss and Quinn this relationship is precisely reversed. Word meanings reside in personal experience, although interpretation of this varies with public schemas and standardized cultural forms.

Pinker, as we have seen, conceptualizes music not as an adaptation for emotional bonding or alliance formation, but as non-adaptive oscillations or other events internal to the individual brain. Strauss and Quinn converge with Pinker in that they, too, lose sight of the big picture, reducing what is special about human consciousness to internal personal psychology. It is because each camp insists on such individualism that neither can communicate with the other: as they focus on the individual, each is trapped in a different sector of the psychological split screen. Inside the skull, after all, is brain and its natural (including learned) activity. But also installed is software developed in the public domain. The problem is that no sense can be made of the relation between the two without stepping outside the skull — into the space where circuits are closed and meaningful connections made.

If humans are computers, they are not standalone machines. They are peculiar in that they build and provision one another, programme one another, invent and develop evolving codes — and communicate on the basis of these. If humans are computers, then earliest society was a conspiracy of such machines networking in pursuit of collective goals. For a community of intelligent machines signalling and co-operating with one another, the surrounding physical world may be relevant and directly apprehensible, but no single device is in a position to access the whole picture. The significance of each personalized fragment is accessible only via sensory and data-processing systems involving the network as a whole. Central in this respect are those codes and conventions which the machines have jointly settled upon, the programmes they have installed,

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the complex simulations they are cooperatively running and their current and recent states of play. If there is 'mind' at work here, it is not internal to any one device. Meanings are relational, not spatially confined. *Virtual reality* — distributed across many machines — eclipses and restructures reality as instantiated in any one machine.

Searle's (1996) point is that we humans inhabit such a world. Cognition in the human case must embrace more than physical or biological facts. Of equal significance are *institutional facts* such as that this piece of paper is a ten pound note, that cow is sacred — or the person over there is a cabinet minister. Facts of this kind are fictions — in a sense, 'deceptions' — rendered authoritative by communal resistance to their denial (cf. Knight *et al.* 1995). Of course, there are constraints acting upon such free-floating social construction — not just any fictions will do. Where science is concerned, at least certain of the constraints must stem from engagement with the external world. But as representational forms, the meanings of symbols — whether religious or scientific — transcend personal psychology. Distributed between us, they make up the big picture, integrating our otherwise meaning-starved, fragmentary minds.

Pinker's *How the Mind Works* introduces a wide readership to a new and seemingly promising science. For Pinker, there is no internal crisis — the Darwinian paradigm has established itself as a thriving discipline capable of generating widespread theoretical agreement, its scope now broad enough to embrace language, consciousness and the entire human condition. For Strauss and Quinn, matters are much more problematic. Cultural theory is in crisis, and their volume is a somewhat cheerless response. Whereas Pinker is assured and engaging on every page, Strauss and Quinn's less confident prose lacks sparkle. The authors too often appear mannered and insecure as they jointly announce verdicts on their own and colleagues' internecine disputes. I suspect a reader lacking committment to the detail of cultural theorists' numerous internal differences might quickly lose interest.

'Once upon a time', Strauss and Quinn (p. 1) observe, 'we anthropologists believed in the concept of culture'. Nowadays, they continue, such faith has been abandoned and cultural theory is at an impasse (p. 3). For Strauss and Quinn, the root of the problem is insufficient individualism: people should acknowledge that despite the obvious role played by collective institutions and schemas, 'meanings can only be evoked in a person' (p. 20). For Pinker, collective representations and constructs were never of much interest anyway, and neither is he bothered with the subject of 'cultural meaning'. Pinker extends the methodological individualism of modern Darwinism directly into the study of symbolic cognition, arguing against group-level explanations at any point. Where Pinker converges with Strauss and Quinn is in blaming outmoded collectivist assumptions in mainstream social science for all current theoretical fallacies.

But if Searle (1996) is right, the problem lies elsewhere. To unify anthropology and psychology, it is precisely collective intentionality and its evolutionary emergence that we must acknowledge and understand. The problem with traditional social science was that it took collectivity for granted. The refreshing contribution of the new Darwinism has been to render such complacency untenable. Far from being self-evident or unproblematic, collective intentionality is biologically unprecedented — a human anomaly which cries out to be explained. In this context, to shift focus to the myopic perspective of personal psychology is the worst possible response. To privilege individualism as the source of meaning is to stress precisely what does *not* distinguish human from primate consciousness. It is also to stress precisely what does *not* lend meaning to human lives.

Strauss and Quinn position themselves on the sensible wing of postmodernist cultural relativism. But in attempting to find a middle ground, they ensure continued entrapment in the flawed paradigm. It was entirely predictable that cultural theory should arrive at its current impasse. If everything is cultural, then nothing is. To be set back on its feet as a meaningful category, culture has to be restored to the company of nature — its only conceivable foil and counterpart. Beyond the political factionalism, there are in fact good reasons why the natural and social sciences have so far remained separate. Collective intentionality is not found in nature. Yet however legitimate the disciplinary barrier, it must be possible to communicate across it. Our evolutionary ancestors made the critical transition. Only by discovering why and how can we hope for an adequate understanding of the distinctively human mind.

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Crafting Complexity

Craft and Social Identity, edited by C.L. Costin & R.P. Wright, 1998. (Archeological Papers of the American Anthropological Association 8.) Arlington (VA): American Anthropological Association; ISBN 0-913167-90-8 $15.00 Members; £22.00 Non-members, vii + 182 pp.

Stephen J. Shennan

Craft production has long been a focus of archaeological interest. Craft specialization has played an important role in many accounts of the rise of civilization and the state. Attempts have been made to reconstruct pre-industrial craft processes. As far as the craft products themselves are concerned, they have always formed the basic raw material of archaeological study and in recent years have been accorded a much more active role than before, as things that led their own varied social lives and had a profound impact on the societies in which they were used and circulated. The premise of this book is that it is now more than time for the makers of the objects to have a more three-dimensional existence, and to be granted the capacity for agency demanded

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by recent social theory, as opposed to being regarded as pre-industrial robots churning out products specified by social norms.

If this is to be done, they can no longer be seen as an undifferentiated mass, but must be distinguished from one another in terms of such features as age, gender, power, autonomy and wealth, all of which can vary between craftspeople even within a single society and a single craft. One aspect of this process of differentiation is that simple oppositions, like that between attached and independent specialists, have to be abandoned. Another, perhaps paradoxical aspect, is that in some instances individual craftspeople come to be recognized as 'great artists'. This is particularly clear in Reents-Budet's discussion of the painters of Maya polychrome ceramic vessels. She points out that individual artists and their work can be identified not just by their painting styles, but also because their names are painted on the vessels, together with those of their patrons: 'In other words, here in the Late Classic period, the artist and his patron move from anonymity and join the art historical ranks of "immortal" creators' (Reents-Budet, p. 74). Of course, this sort of argument takes us back to the type of approach developed by Beazley for Classical Greek pottery, with its emphasis on connoisseurship in the investigator, on the one hand, and the genius of the producer, only apparent to the greatest connoisseurs, on the other. In the Classical field this approach is now condemned as naïve and reactionary, ideologically extremely dubious and anthropologically decontextualized. It would be a nice irony if such approaches as that adopted in this book, with its very contemporary emphasis on the active agency of craft producers, rehabilitated more traditional approaches. Of course, it is no accident that the Maya polychrome vessel painters who achieved these individualized identities were themselves members of the ruling élite: aristocrats could be recognized as individuals.

But the volume is not just about individuating the craft producers. In a rather different vein, Costin makes the point that crafts and their producers have been of central social importance because the crafts themselves often provide key metaphors for the organization of society as a whole, whether it is the association between spinning/weaving and feminine gender in Mesoamerica or the symbolic identification of kings as blacksmiths in parts of Africa.

The substantive papers in the volume explore a range of different aspects of the process of craft production and the identities of the producers.

The contribution by Lass looks at crafts in pre-colonial Hawai'i. We learn that craft specialist roles had a strong hereditary element; that some crafts were male and others female — for example the making of chiefly feathered cloaks — while there was no strict dichotomy between independent and attached specialists. Some, like the feather-cloak-makers, were essentially attached, and probably worked full-time, at least for long periods. Others, like canoe-makers, were occasionally commissioned by chiefs. Others still, like bark-cloth-makers, probably worked part-time and some of their products were simply taken by chiefs as tribute or taxation. Finally, adze-makers were probably independent specialists.

Clark and Houston use early ethnohistoric sources from Yucatan for their examination of artisans and craft activity among the Maya and show how all-pervasive was craft production and its influence. In this context they emphasize that the distinction between craft production and subsistence production is really an unhelpful one: better, they suggest, to see a contrast between female and male work rather than craft and subsistence. Male and female work were complementary: female work involving everything around the house, male work everything away from the house. Spinning and weaving were the complement of male subsistence pursuits such as farming, fishing and bee-keeping. On the other hand, textiles were also the key resource linking subsistence with the political economy, since cloth formed a major part of demand for tribute as well as being a general medium of exchange.

Wattenmaker and Wright discuss craft production in diferent parts of third millennium BC Mesopotamia, emphasizing the wide variety of statuses for craft specialists. Like Lass, Wright indicates that the attached versus independent contrast doesn't work in practice here. Crafts were often hereditary, for example in the case of potters and foresters, but there was no straightforward equation between crafting and social identity because legal statuses were more important for people's identities than occupations.

Childs' contribution focuses on traditional iron-workers in the former East African kingdom of Toro. Some master iron-workers, head smiths of lineages, were able to gain local wealth, power and privilege, and some of these, as specialists attached to the royal court, achieved even more status and wealth. But knowledge was not just technical; much of it was esoteric knowledge associated with rituals, symbols and roles considered as at least as vital as more 'practical' skills.

Costin's substantive paper examines weaving

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in the Inca empire. She argues that the identities of weavers varied considerably in terms of such features as gender, age and ethnicity, and that these different categories of weaver produced different types of cloth. In particular, there was a correlation between the amount of control exercised over the artisans and the symbolic significance of the cloth produced. Thus, relatively unsupervised women wove plain cloth but it was a category of sequestered women, recruited into state service in childhood and bound by tight restrictions on their behaviour, who wove the elaborate tunics of the nobility. By being defined as metaphorical sisters and wives of the ruler they were given the social attributes necessary to produce items of the highest significance.

Brumfiel's chapter on Aztec craft specialists also emphasizes that there was no unitary category of craft specialists but an enormous range of different statuses, albeit without the qualitative distinctions that Costin finds among the Inca. And indeed, she suggests that Aztec craft specialists had greater prestige than they did among the Inca and others, perhaps partly because craft goods were extensively distributed through the market system; furthermore, since the specialists sold their own products, they received personal credit for the goods they produced. Such differentiation without strong state control is also seen in Sinopoli's Vijayanagara example.

Finally, Spielmann's examination of crafting in 'middle-range' societies shows a different picture again, identifying three kinds of craft specialist. Where ritual performance is relatively open, skilled independent specialists are found, with the craft often inherited on family lines. Where ritual knowledge and performance are paramount in achieving status, ritual craft specialists are also likely to be ritual practitioners. In the last case, where ritual is only one means of obtaining position, ritual craft specialists may not be the practitioners but they are quite likely to be incorporated into contexts such as households which ritual practitioners control.

It is clear that the main lesson of the contributions to this book is that the concept of a unitary phenomenon of craft specialization is unhelpful and analytically misleading. In one sense, subsistence farmers are just as much craft specialists as anyone else and in Clark and Houston's Maya study male versus female labour is a better distinction. In complex states the enormous range of specialists and their social identities both within and between societies defies easy categorization. Interesting though they are, however, the studies never get much beyond describing the complexity of their specific situations and as a result the book comes across as a rather disparate collection of papers. What we now need to start doing is theorizing the basis of the newly identified axes of variation in terms of social and economic processes, recognizing the central role of material objects in all human societies.

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Why Greek Art Matters

Pictorial Narrative in Ancient Greek Art, by Mark Stansbury-O'Donnell, 1999. (Cambridge Studies in Classical Art and Iconography.) Cambridge: Cambridge University Press; ISBN 0-521-64000-8 hardback, £45.00 & US$75.00, xviii + 237 pp.

Anthony Snodgrass

If reckoned in terms of quantity and variety of treatment of the human figure, ancient Greek art would seem to be the richest iconographic source in the world for any period before the Renaissance. Yet for many archaeologists and art historians it remains largely a closed book. Most comparative studies of imagery steer well clear of it. The reasons for this are too familiar to need dwelling on here: they boil down to the perception that Classical art historians are talking only to each other, in a language which others have not had the chance to learn.

Mark Stansbury-O'Donnell has been working in this field for long enough to master it thoroughly — more than a decade — but not for *too* long. His book makes an honest effort to break down this barrier, by seeking to generalize and to systematize wherever possible, and by moving away from culture-specific terminology in his important opening chapter, 'An approach to pictorial narrative'. Here he establishes a framework of analysis, consisting of narrative micro-structure, with its four prime 'functions' (following Roland Barthes) of nucleus, catalyst, index and informant; narrative macro-structure (the place of an image in a given period and culture); narrative extension (the working of multiple images in relation to each other); and narrative object (in the sense of 'objective'). In theory at least, these are con-

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cepts applicable to the iconography of any culture, once it has reached a fairly minimal level of sophistication.

This chapter also achieves a purely descriptive aim which may be humbler, but is potentially extremely helpful to Classicists and (I would think) to art historians of any period down to the later nineteenth century: this is a *typology* of pictorial narrative, in which the varied terminology used by different Classicists about different kinds of figure-scene is smoothed down and fitted into a single framework of eight types (tabulated on p. 7). Since the invention of photography, we have become so conditioned to the presentation of just the first of these types of figure-scene — the 'monoscenic', in which there is complete unity of time and space and no figure may appear more than once — that we need reminding of the long pedigree of other forms of narrative art, in which only some, or even none, of these restrictions apply. By far the commonest and most important of these, at least for earlier Greek art, is the 'synoptic/simultaneous': here, unity of time is violated, to show a sequence of phases in the same story; yet the rule against repetition of figures still holds. An important conclusion of this chapter is that there is no simple evolutionary progression from one type of figure-scene to the next: there are overlaps, and there is sometimes apparent chronological regression.

So far, so good: Stansbury-O'Donnell defends his classificatory system very convincingly, and promises a close examination of his four fields — micro-structure, macro-structure, extension and object — in each of Chapters two to five. Further, the exemplification of these fields, by illustration and discussion, is carried out in a very clear way: Chapter two, for example, begins with an excellent demonstration of how nucleus, catalyst, index and informant operate together, first in simple and then in more complex images. Yet somewhere along the way, one has the feeling that the author will be starting to lose his non-Classical readers. Despite his every effort to present examples in early, uncomplicated styles — such as the works dating from the eighth century BC in figures 14–16 — the apparatus of Classical scholarship begins to build up barriers: the names of chronological phases and of pot-shapes, the attributions — all apparently rather superficial things — but also something far from superficial, the mythological subjects. Here again, the author does his best not to take too much for granted; but the non-Classicist will still need to have a dictionary of mythology to hand in order to follow the argument closely. Thus, some will need to be told directly that, in the Europa story (p. 29), the bull *is* Zeus, rather than just having a frontal depiction of the bull's head explained as 'an epiphany of the god Zeus'; or to be told who Memnon was (p. 49); or to know *why* Amphiaraos was angry (p. 68); or, in the obscurer story (pp. 85 & 177), to have it explained that Polyeidos had been buried alive by Minos for initially failing to bring the king's son back to life. These are all things that can be readily looked up; and the truth of the matter may be that it is not these allusions so much as, precisely, the superficial linguistic usages which act as a 'turn-off'. Perhaps this is being too pessimistic: the author does after all provide an approximate numerical date for every one of the works illustrated; and probably no one will object to the designation of a 'black-figure *dinos* from the circle of the Antimenes Painter' when the object is clearly there to see.

Like other writers in the field of Greek pictorial narrative (the present reviewer included), Stansbury-O'Donnell shows a strong inclination to concentrate on the earlier phases of Greek art: the Geometric, the Archaic and the Early Classical. There is just one work shown or discussed here (figs. 48 & 88) which belongs to a later date, and that not by a wide margin.

The reason is presumably that, in these earlier stages, we can see artists struggling to set up a 'narrative macrostructure' for the first time; and that this makes their work far more transparent to analyze than the more sophisticated later products, where allusion took the place of naïve explication and such aids as labelling inscriptions were gradually dropped. There are a few casualties that arise from this concentration, such as the later Greek experimentation with true perspective (p. 83). But this approach has nevertheless enabled the author to convey his message with admirable economy: in the whole book, only just over fifty art-works, out of the tens of thousands available from the Classical epoch in its broadest sense, are illustrated. The majority of them are painted pots, but a whole range of other media are also represented, sometimes in reconstruction, reminding us of the Greek love of decorative work in stone, bronze and wood, as well as of the lost world of major wall painting.

That touchstone of post-processual approaches, the *meaning* of the works, is not neglected here. But, as with other aspects, non-Classicists will have to adjust to a foreign linguistic tradition: it is no good looking for discussions of phenotypes and spatial adaptation, and even 'perception' secures only one reference in the index. Yet, as in so many aspects of

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Classical archaeology, the reader who persists will find that they do *not* actually do things differently in this particular foreign country; their aims and concerns are very similar and their data base is exceptional only in its richness. It is just that they are seeking to satisfy different standards of excellence, and this is a book which unquestionably succeeds in doing that.

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Waiting for the Great Leap Forwards

Early Human Behaviour in Global Context: the Rise and Diversity of the Lower Palaeolithic Record, by D. Petraglia & R. Korisettar, 1998. (One World Archaeology.) London: Routledge; ISBN 0-415-11763-1 hardback, £95.00, US$160.00. 512 pp., ills.

Mark White

Rise and diversity are not words that many archaeologists normally associate with the Lower Palaeolithic. Other than the appearance of hand-axes (*c.* 1.6 myr), and the earliest Levallois technology (nominally marking the end of the Lower Palaeolithic about 250 kyr), very little appears to happen in the archaeological record for over two million years — even though the period did witness anatomical and cognitive evolution and several major Old World hominid dispersals. Indeed, the Lower Palaeolithic has more than once been summed-up as several million years of depressing monotony. Large volumes of up-to-date regional syntheses such as this are valuable in diluting this image and help to identify variability in technology, subsistence, settlement and social organization and provide a firmer basis for interpretation. By drawing together papers from different research traditions they also present a less Euro-American viewpoint.

The papers contained in this volume mostly derive from the session *The Neogene and Quaternary* presented at WAC-3 in New Delhi, India, December 1994. While there is no over-riding theme, the papers do concentrate on several key sub-themes — environment, dating, colonization, settlement and lithic technology — but sadly leave some hot topics, such as cognition and subsistence, largely unaddressed. Still, there is enough in here to keep most people satisfied and information relevant to other issues can certainly be drawn out, should one be inclined to look.

The book's fifteen chapters include eleven regional syntheses encompassing almost all of the Old World, plus four global overviews. The first two chapters provide an overview by the editors and a synopsis of relevant dating techniques by Singhvi, Wagner & Korrisettar. In the penultimate chapter, Clark compares the record from the eastern and western regions of the Old World, while in the final chapter Gamble hits upon the key themes running through the book, which he draws together into a characteristic global view of hominid behaviour and social life (and in doing so practically pre-empts any would-be reviewer). The middle is a time-transgressive travelogue through the Lower Palaeolithic Old World, following a west-to-east arc from Africa — via Europe, western Asia and the Indian Subcontinent — into China. The first six of these chapters, dealing with Africa, Europe and Western Asia, should be familiar to most western workers, but those on the Indian subcontinent and Eastern Asia might be less so. The various chapters can be usefully grouped into three themes: 1) African origins and development 2) world colonization, and 3) the Palaeolithic of Asia.

Chapters two to six deal with Africa — the continent with the oldest and longest Lower Palaeolithic record, the richest fossil record, and the clearest evidence for long-term cultural evolution. Ludwig and Harris summarize the East African evidence from the 'pre-Oldowan' to the early Acheulean, concluding that, other than a rapidly increasing selectivity in raw material use, the first 0.8 million years is a period of relative stasis with no obvious geographical or temporal patterning. With the emergence of *Homo erectus/ergaster* and the Acheulean, however, dramatic behavioural and cognitive shifts are indicated. These issues are picked up by Stiles, who argues that the transfer of chert between different Olduvai localities shows clear evidence of blank selection, forward planning and the provisioning of places *c.* 1.7 myr; and by Cachel and Harris who concentrate more generally on 'hominid lifeways'. They suggest that *Homo erectus* shows several significant changes over earlier hominids, including greater cognitive capacity, wider-ranging behaviour, niche expansion, dietary change and improved carcass acquisition skills,

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all of which they suggest would have impacted on social organization and equipped *Homo erectus* with the skills to colonize the rest of the Old World. Kuman provides a valuable synthesis of the South African cave sites, with the evidence from Sterkfontein (where raw materials are constant) providing clear evidence for technological and behavioural shifts through time. The intelligent selection and use of raw materials is again an important theme, but in contrast to East Africa, the South African hominids seem to have selected for raw material quality (preferring easily flaked quartz), but not for blank dimensions.

Chapter seven onwards deals with life outside Africa. Rolland provides a model of global colonization, revised in light of the currently fashionable 'short' chronology for Europe (Roebroeks & Van Kolfschoten 1995) and the new dates for key Asian sites (Swisher *et al.* 1994; Huang *et al.* 1995). What once was portrayed as a synchronous global march is here revealed as a complex, piecemeal process dependent on regional conditions and hominid coping strategies, with East Asia colonized very early, but northwest Europe probably empty until 500 kyr. In Bar-Yosef's summary of the West Asian evidence, this region's role as a corridor from Africa during multiple dispersals is more fully considered. Dennell discusses the problems associated with the archaeological record of southern Asia, suggesting that the reticence shown in accepting early dates for Pakistan and Southeast Asia stems from dogma and a poor grasp of these regions' archaeological record. His contention, that hominids dispersed across the tropical and temperate grasslands which extended all the way from Africa to China from at least the Late Pliocene, is reminiscent of Gamble's suggestion that the late westward expansion of the Mammoth Steppe is one of the reasons why northern Europe was not colonized until the Middle Pleistocene.

In the last four chapters of the travelogue, Korrisetta and Rajaguru present a history of Quaternary research in India, followed by an excellent summary of the Indian archaeological evidence by Petraglia, which addresses the globally important topics of industrial variability (Soan versus Acheulean), land-use, and the differential use of raw materials. Many of the patterns highlighted mirror those seen elsewhere. Corvinus provides a descriptive, but informative outline of the Lower Palaeolithic of Nepal, which contains evidence for early exploitation of upland environments, while Leng discusses the use of quartz as a raw material in China and how this has contributed to the nature of the archaeological record in that region.

Apart from providing digestible and easily accessible summaries, this volume also helps develop an up-to-date global impression of the Lower Palaeolithic, and identifies, or at least draws renewed notice to, questions requiring further attention on a global scale. Several such questions are highlighted by this book, but for me, as a lithic specialist, three are of critical importance. Despite the book's subtitle and plentiful minor regional variations, there are still overwhelming similarities in the Old World Lower Palaeolithic record and long periods of apparent technological stasis. While some of this undoubtedly stems from the lithic bias inherent in the record (and this book), combined with the limitations of direct percussion stone technology, there may also be strong cognitive, conceptual or behavioural limitations at work here. In his closing summary, Gamble uses this homogeneity as the foundation for a generic skills model, suggesting that the congruences evident in the record stem from a suite of common skills that were selectively applied to particular circumstances — such as the differential use of raw materials seen across the whole Old World — rather than a specific skills model, whereby novel solutions to particular problems were developed. Whether or not this is a useful distinction, and setting aside the question of preservation bias, Gamble goes on to suggest that the true diversity existed in social relationships and the skills of the individual.

This touches tangentially upon another key theme, the relationship between Mode I and Mode II technologies after 1.6 myr. Although we no longer conceive of Lower Palaeolithic industries in terms of Childean cultures or separately evolving parallel phyla, there is a definite tendency to deny any socially driven variability in lithic assemblages. The current default assumption, well expressed by Rolland and others in this volume, is that raw materials and activity facies must provide the whole answer, because separate non-handaxe-making populations, in which handaxes were never present or fell out of use, could not be supported by palaeosocietal dynamics. These palaeosocieties are often assumed to consist of small, exclusive and probably geographically isolated populations. Under these conditions we know that Chimpanzees develop regionally patterned differences in material culture, i.e. local/regional social traditions — so why not archaic humans? The truth is that we know very little of Palaeolithic social dynamics, but we do know that raw materials and activity facies satisfactorily explain Mode I technologies after 1.6 myr only some

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of the time.

My third issue, identified by Gamble as archaeology's fifth big question, is that of colonization. As this volume shows, we now have, subject to revisions, a basic timetable for movement along the Old World track, an idea of the pre-requisite anatomical, behavioural and ecological conditions needed for successful colonization, and a grasp of what may have driven hominid dispersal. Yet we currently have very little idea of how hominids moved, the precise processes of dispersal. This might seem imponderable, but attempts at modelling various processes and their implications may prove important in understanding whether and how colonization affected social organization, how it might be visible in the archaeological record, and whether 'character release' in non-competitive environments, as hypothesized by Cachel and Harris, can really explain behavioural and anatomical variation. In this regard it is interesting to note that in a number of areas the earliest occupation, irrespective of date, appears to have commenced with a non-handaxe signature. Whether this is related to the dispersal process and what it might be telling us of hominid sociality and cognitive abilities, or whether it is purely an artefact of sampling, are surely important questions.

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Thinking Things Over

Metaphor and Material Culture by Christopher Tilley, 1999. Oxford: Blackwell; ISBN 0-631-19202-6 hardback, £55.00/$59.95; ISBN 0-631-19203-4 paperback, £16.99/$29.95, xv + 298 pp., 63 ills.

Richard Bradley

I could describe this book as a landmark in material culture studies, or as a milestone in the integration of archaeology and anthropology. Both statements would be true, but they would also be metaphorical, for, as Tilley points out, human social life and the language that people use are permeated by metaphor to an extent that is rarely acknowledged. More than that, he insists that the use of metaphor extends well beyond the literary and linguistic studies in which it is so well established, to constitute one of the essential features of material culture. In his words, 'cognition is essentially a process of seeing something *as* something and this is the core of metaphorical understanding'. The point applies just as much to the intentional cross-reference between different forms of artefacts as it does to the use of purely verbal comparisons.

This is an important point. For nearly twenty years material culture studies have been at the heart of theoretical archaeology and yet their role has not always been quite clear. It is one thing to talk about the 'active' use of material culture or the 'cultural biography of things', but quite another to show how those things came to possess such power in human lives. All too often, complex observations have been forced into a system of binary oppositions that originates in the structuralism of Lévi-Strauss. Yet there is a moral here, for the major inspiration behind that work came from linguistics. As Tilley demonstrates, there are other lessons to be gained from studies of language and how it is used. 'To characterise the human mind as a mind that makes sense of the world through the creation of metaphorical analogies avoids the reductionist determinism . . . underlying Lévi-Strauss's appropriation of structural linguistics to study culture.' It provides the theoretical underpinning for a more imaginative interpretation of the past.

In Tilley's view, language and material culture are used in similar ways. They operate by analogy and cross-reference, and gain their power through the fact that both of them convey the information that allows people to live in society, enabling them

to interpret their worlds and sometimes to change them. The basic argument is set out in Part 1, 'Metaphor and the constitution of the world'. This compares the overlapping roles of linguistic metaphors and what the author calls 'solid metaphors'. The latter relate to the human body, to architecture, and to animals, technology and memory. Taken together, these chapters set the agenda for the study as a whole, but there is an important difference between them. The account of linguistic metaphor is less lucid than the discussion of material culture, and depends too heavily on direct quotations from authors who write less fluently than Tilley himself. I sense a certain impatience with these sources that is not there in Chapter two. The second chapter is a remarkably persuasive synthesis of a considerable body of ethnographic sources, drawn together with the verve that characterizes Tilley's earlier book, *A Phenomenology of Landscape*.

The second part of *Metaphor and Material Culture* is concerned with texts, artefacts and art and presents three very different case studies. The first considers the curious manner in which the word 'megalith' has taken on a life of its own, until it constrains the very ways in which this phenomenon can be discussed. The second is concerned with the social significance of canoes in northeast Melanesia and the distinctive meanings encoded in their design. This account is based on Tilley's own fieldwork. So is the third study which is a complex interpretation of a group of Bronze Age rock carvings in the west of Sweden. Two of these chapters have been published before. The study of megaliths in archaeological texts is pointed and amusing, but it lacks the sheer weight of the other two contributions and should probably have been rewritten before it was incorporated in this book. The other examples in this section work extremely well, not least because they provide such an elegant pairing of ethnographic and archaeological field projects undertaken according to the same basic ideas. There are direct archaeological lessons in the study of the carved rocks at Högsbyn, not least Tilley's decision to investigate the changing character of the images along a path leading between the different groups of petroglyphs. This brings many insights. In particular, it allows him to recognize important changes in the ways in which human bodies are portrayed. This is revealing in itself, and it might have been useful to have taken this study one stage further by discussing the relationship between this succession of images and the burial cairns which seem to have been located on a continuation of the same route through the landscape.

In fact, it is the landscape that provides the connecting link with the third part of the book, which is concerned with the metaphorical significance of place. Again this pairs archaeology and anthropology in a most rewarding manner. One chapter returns to Melanesia and discusses the changes brought about by mass tourism. It documents the subtle relationships that are emerging between the traditional use of material culture and the impact of foreign visitors, and relates these to the wider political process. The title of this chapter is particularly apt: 'Performing culture in the global village'. The archaeological chapter is a complete contrast and is over twice as long. This is a detailed interpretation of the metaphorical significance of the Dorset Ridegway barrow cemetery in southern England, and is very much the successor of the influential studies of prehistoric landscapes already undertaken by Tilley in Wales, Cornwall and Cranborne Chase. In this case the metaphorical significance of the cemetery is that its form echoes that of a remarkable feature in the local topography, Chesil Beach, which links the southern margin of Wessex to the Isle of Portland. That is why Tilley calls this chapter 'The beach in the sky'.

This study typifies the strengths of *Metaphor and Material Culture* as a book and of Tilley's approach as a method of analysis. He develops the comparison through careful observation and provides a level of documentation that should satisfy the most orthodox field archaeologist. It is hard to resist the power of his argument, not least because it so often highlights features that other people have seen, but never noticed. It is a virtuoso piece of analysis. I cannot be alone in being swept along by its rhetorical power, even as I feel frustration that I had recognised so few of those connections myself. Its success does come at a price, however, for it overbalances the third part of the book whose other chapters are comparatively brief. It also contains a few archaeological mistakes, although these are not enough to weaken the argument as a whole. One example will suffice. Tilley makes much of the way in which the Neolithic bank barrows echo the position of Chesil Beach, and he says that such extraordinary monuments are unique to this area. That is not correct. Bank barrows were first identified in Dorset and occur there in unusual numbers, but their distribution actually extends as far as northern Scotland.

There are three reasons why this is an important book. First, there is the power of the overall argument. It really does make a coherent case for a

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more imaginative and wide-ranging approach to material culture studies, freed of the empty rhetoric of recent years and also free of the over-schematic approach associated with Lévi-Strauss. One of the weaknesses of radical archaeology has been its reliance on short articles. *Metaphor and Material Culture* is among a number of books that argue their case in detail and at length. They are the stronger for doing so. Secondly, Tilley's study breaks largely new ground in treating archaeology and anthropology on equal terms and presenting case studies based on original work in both these fields. It should win many converts, for it is his best book so far.

Lastly, it confounds the conventional caricature of archaeological theory by being well written and, for the most part, effectively illustrated. No one need feel inhibited from reading this study. In fact it has important lessons for all of us.

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