

Facts and values in archaeology

"Those who desert the world and those who sell out to it have something in common. Neither group can adopt an openly critical stance to society" (Gouldner 1973, p. 13)

Introduction

Chapter 2 considered archaeology's pretensions to being science through a critique of positivist doctrines accepted by man since the 1960s. In this chapter we concentrate on archaeology's pretensions to objectivity which may or may not be associated with the advocacy of a scientific archaeology. Is it possible for archaeology to be value-free? Is this a reasonable or a valid aim? Most sceptical empirical archaeologists would probably deny that archaeology can ever be an entirely objective account of the past and yet most archaeologists are undoubtedly, aiming at objectivity even if it isn't thought possible to quite achieve this ideal, it is accepted that the archaeologist should aim at eliminating subjective 'bias'. But what exactly are the implications of this aim? We wish to progress beyond slippery scepticism and examine objectivity in archaeology, focussing on the relation between facts and values. Archaeologists have remained surprisingly reluctant to discuss this issue in spite of claims made over a decade ago for a dawning of critical self-consciousness (Clarke 1973). As several (Kohl 1981, Hall 1984, Miller 1982a, Ucko 1983) have noted, this self-consciousness within archaeology has largely been limited to the search for method to secure objective knowledge of *other* cultures. It has been methodological introspection, a concern to find an objective means of access to the past rather than reflective inquiry into the contemporary roots of knowledge in the past. We wish to examine this search for method, to look further into this discrepancy in the form and meaning of archaeology's self-consciousness of itself as investigation of the past, a discipline and practice largely untroubled by doubts and questionings with regard to social, political and moral issues which have brought about an awareness in other fields of knowledge of the manifest shortcomings of dominant patterns of thought. We argue that the notion of value freedom, of objectivity, imports a whole series of usually unrecognized values into archaeology and contend that the separation of facts and values, an opposition lying at the heart of a complex of related theoretical standpoints, is a disabling ideology which fails to deal adequately with the past and, in however minor a way, helps to sustain and justify the values of a capitalist present.

An objective and scientific archaeology: rational method and therapy

Setting aside its more unsavoury aspects as a struggle for power in the discipline which we discuss in Chapter 2, the 'new' archaeology began as ideology critique. It aimed to

dispel and discredit the fact collection and humanist narrative of traditional archaeology to rationally reassess archaeological work and to call into question the validity of interpretations not open to such assessment and this was conceived primarily in terms of testing and quantification. Much of the introspection in archaeology during the past fifteen years is part of such a process of rationalization.

A premise of this process is that systematic observation and rational method, a term which we employ throughout this chapter as a short-hand term when referring to positivist empiricist discourse, would provide an objective means of access to the past. The process of acquiring knowledge is viewed as being a resolution of contradiction between knowledge, located subjectively, and the objective facts.

Knowledge starts from the tension between knowledge and ignorance. Thus we might say not only, no problems without knowledge, but also, no problems without ignorance. For each problem arises from the discovery that something is not in order with our supposed knowledge, or, viewed logically, from the discovery of an inner contradiction between our supposed knowledge and the facts. (Popper 1976, p. 88)

But the contradiction lies in the subjective side of the relation, it is a deficiency of supposed knowledge on the part of the impartial observer (Adorno 1976a). In the search for rules of method which will guarantee objectivity, reason becomes identified with the correct method, with operational rules rather than with cognitive acts. Thus the process of acquiring knowledge, of doing archaeology, is a therapeutic process. It aims to bring thought and expression, the archaeologist, into accordance with the object of archaeological investigation. It aims to cure pathological thinking, contradiction within the process of knowledge.

According to rational method, reality is reasonable and the observed immediate appearance of the object is taken as being real, something existing independently of us. Investigation of the archaeologically observable past, the object of archaeological investigation, is accorded epistemological and ontological priority. The basis of true explanation becomes an abstract conception of the fact, abstract because it does not matter which fact it is as long as it has been systematically observed, measured and recorded - processed by rational method. Objectivity is in itself, abstracted from its context. Objectivity, which is the quality of an object, is conceived abstractly - quantitatively. Objectivity is uniform and neutral because it exists separately from the observing subject. So it is objective facts which count; knowledge depends on them, they are, after all, considered to be hard physical realm. The neutrality of facts from this perspective means that they cannot be criticized; the precision and consistency with which facts are observed may be criticized, but not the abstract concept of objectivity. The fact's name, its immediate classification, exhausts its concept, describing without passing judgement.

'Value' refers to a relationship, it is a meaning, a significance for another, for someone. It unites, for example, an object and a person or two people. But according to rational method, values are to be separated from facts, they exist not for another but in — themselves. Values are substantial, monetary. What is and what ought to be are

entirely separate. Thus in affirming the primacy of the object, archaeology must positively affirm immediate appearance. Ideology comes to mean violation of objectivity or of value-freedom; it refers to the intrusion of the subjective at the level of method. So misunderstanding of the data, even systematic misrepresentation and distortion in the data must be due to the pathologically thinking analyst. Immediate reality of fact can never, after all, be unreasonable.

This is compounded by scientism - the belief that whatever is defined as scientific rationality should be the basis of archaeology. Scientism is most obviously seen in the neo-positivist law-searching new archaeology but certainly does not depend on a positivist conception of natural science. We would contend that it implicitly lies within a great deal of theoretical archaeology. If archaeology as science of the archaeological object is only contingently related to value judgements and there can be no other objective basis to a study of the archaeological past than through observation of the object, the primacy of the object leads to the identification of what is and what ought to be, the latter is reduced to the former. The way things appear immediately in fact is the way it should be.

Reification and empirical regularity

The exchange principle, the reduction of human labour to the abstract universal concept of average labour time, is fundamentally related to the principle of identification. Exchange is the social model of the principle, and without the principle there would be no exchange, it is through exchange that non-identical individuals and performances become commensurable and identical. The spread of the principle imposes on the whole world an obligation to become identical, to become total. (Adorno 1973a, p. 146-modified translation)

Pre-defined rational method produces its object in advance. The particular structure of the object in the past is neglected in favour of a general method which guarantees objectivity - abstract objectivity. So the object past is not represented in, by and through archaeology but rather its representation is exchanged for universal interchangeability - a principle of identification. Objects have meaning primarily as objectivity. This means that fundamentally unlike phenomena can be equated. In particular social phenomena are reified, conceived as a set of physical processes; social phenomena as objects of rational method are part of the object world, society becomes a second nature.

This process of reification and identification is related to the capitalist mode of commodity exchange. It is through the commodification of labour and its product, through the reduction of labour to abstract labour time that non-identical individuals and practices become commensurable and identical. All practice, concrete and particular is reduced to behaviour - physical movement. Everything is identical and comparable according to the commodity form. 'Values', our subjective reaction to and appropriation of the object, are reduced to this single value of commensurability, monetary comparability. 'the only value allowed is that of objectivity, facts not judgements about what ought to be, explanations not 'paradigms'

In the commodity exchange of the capitalist market we seem to be and are treated as

empirical regularities governed by a natural necessity. We must adapt ourselves to the quasi autonomous processes of the capitalist market. However, in making objective and universal this particular relationship between the individual and society, positivist" empiricist rational method distorts society through its duplication, through the duplication of a reified consciousness. The conception of meaningful practice as physical behaviour and the symmetry held to exist between prediction and explanation has the effect of making this contemporary relationship between the individual and society seem natural.

Predictability does not lead to truth. Rather it highlights the extent to which social relations are relations of unfreedom. The more society takes the form of and is perceived in the categories of a second nature, the more it is shaped by the outcome of individual actions locked in relations of economic necessity, the more human agency is subjugated to 'laws' of development, the easier it is to predict social outcomes.

(Held 1980, pp. 171-2, quoting Horkheimer 1968)

Thus in archaeology the widespread attempts made to predict data sets (e.g., Hodder (ed. 1978, Hamond 1981, Sabloff (ed.) 1981) and then to think one has explained anything as a result of the outcomes of these predictions can be conceived as the imposition of a reified consciousness of the present attesting to social relations of unfreedom, onto the past. The past is thereby recreated as the present which then becomes, in turn, naturalized by the past. Although prediction-as-explanation is logically connected with a view of explanation as subsumption of the particular beneath generalization (see Chapter 2, pp. 38–40), the former is often held without explicitly connecting it with the latter. Clarke (1972, p. 2) has claimed that explanation in archaeology is viewed merely as a form of redescription which allows predictions to be made. The rationale behind such redescription or model building is that a working model - a model that works - is viewed as a successful explanation. The relationship between theory and reality, becomes one of utility. The theory must work, and the reality it serves to define is a useful reality. Fritz (1973) and Ford (1973) have explicitly emphasized archaeology's utilitarian value, archaeology producing universal principles of human behaviour applicable to the present. Archaeological theory can 'help engineers, applied scientists, government managers to control and even direct' social processes (Fritz 1973, p. 81). Past, present and future are deemed to be equivalent objects of instrumental control.

Manipulating the past as image of the present: economic archaeology

We argue that archaeology is a technology, that it is not a neutral quest for knowledge but that it systematically structures its questioning and the object it questions. It adapts the past to the exigencies of an archaeology in a capitalist present concerned with establishing the rules of a rational method to secure objective knowledge of the past, pinning it down. Such method operates on a pre-defined objectivity, a unified and abstract nature and society. This absolute reality is reduced through reification - separation of subject from object - to a quantified object of manipulation. Such knowledge aims to eliminate contradiction between subject and object, to eliminate disturbances in inter

action with objective nature, to adapt the individual to nature, to produce successful expectations As part of feedback-monitored practice the principles of knowledge become the principles of self preservation Immediate living the principles of self-preservation are the principles of a free market economy Individuals classified as producer consumers act 'rationally, adapting themselves to the quasi autonomous processes of the omni-historical market, satisfying need, minimizing cost and maximizing profit But this universal market is a capitalist market within which

The domination of men over men is realised through the reduction of men to agents and bearers of commodity exchange The concrete form of the total system requires everyone to respect the law of exchange if he does not wish to be destroyed, irrespective of whether profit is his subjective motivation or not
(Adorno 1976b, p 14)

An explicit adherence to the primacy of instrumental reason is to be found in a great deal of economic archaeology The relation between the archaeologically observed society and its natural environment mirrors the epistemological subject-object relation of the present - a technical relation economic archeology asserts the historical primacy of technologically rational behaviour Rationality refers only to behaving in accordance with the technical recommendations of economy and efficiency - those values internal to rationality Other value systems are non rational and so arbitrary History becomes the unfolding of reason, the Enlightenment dream, the curing of irrationality, of mal-adaptive behaviour History becomes a therapeutic process

That archeology is to a large extent a reconciliation between the capitalist present and the prehistoric past can be seen most nakedly in the application of decision theory, game theory, linear and dynamic programming models (Jochim 1976, Keene 1979, 1981, Earle 1980, Christenson 1980) These theories represent, quite clearly, a mathematized logic of self preservation Such work has been hailed by Whallon as good examples of explanation and modelling and as an effective approach to theory-building of universal applicability (Whallon 1982) Underlying all this work is the notion of rationality writ large 'the major assumption underlying all theories of choice is that of the rational decision maker' (Jochim 1976, p 4) This rationality, we are led to understand, involves concepts such as risk and cost whether or not they were recognized by the prehistoric actors Keene notes two assumptions on which his application of linear programming to hunter gatherer economy rests

The primary goal among hunter-gatherers is to provide the basic nutritive and other raw materials necessary for the survival of the population

and

when faced with a choice between two resources of equal utility, the one of lower cost will be chosen economic behaviour is both satisfying and optimising
(Keene 1979, p 370)

Virtually identical remarks are made by baric

Other factors being equal, a community viewed here as functionally equivalent to a diversified firm, should allocate its labour such that the requirements of the community's population are met at the lowest possible cost

(Farle 1980, p 14)

Some remarks of Christenson may be added

There is no universal tendency toward profit maximization in the unrestricted sense. However, maximization when referring to efficiency can be considered a restricted kind of profit maximization where output (consumption) is fixed. This kind of maximization is quite relevant to understanding early human subsistence behaviour. [Christenson 1980, p 33]

These statements rather than being of great relevance for understanding the past appear rather as prime examples of the *value system* of contemporary capitalist economics projected onto the past. Optimization is a key term in all these models: maximum profit for minimum risk and cost. Torrence (1983) has applied the quantified time of the factory clock to hunter-gatherer societies, attempting to relate technology - tool kit composition - to effective use of time, optimization of time - scheduling and budgeting of time. This is claimed to provide increased reproductive fitness. This is the value system of technocratic reason, of the company executive. As optimization has, in such accounts, always been a fundamental feature of social life from the dawn of precision, such a perspective bolsters up the contemporary capitalist system by naturalizing contemporary economic practices as the only possible ones. Mathematized decision making is very much to be related to a capitalist rationalization of the labour process, a rationalization which aims, of course, to benefit capital. It is no coincidence that decision theory plays a significant part in management science.

Rationality, in these perspectives, is not a relative concept but instead is a term that is confined to social action in so far as it is 'satisfying'. The technically efficient. In effect, rationality becomes a value in itself by means of which all other actions and values are judged and labelled irrational. This is because the technical rationality of efficiency and cost minimization is designated as what rationality *is* and all human beings are deemed to be rational in just this one sense so that other 'non-rational' values not relevant to economic maximization are reduced to dependent rather than independent, and equally important, variables. Hence the non-economic can be reduced to the status of a random or dependent variable (magic). The means-ends relationship from this perspective, becomes considered in a manner which militates against the consideration of ends at all in the last analysis. Such work is no more than a rationalization for, and assertion of the *Homo oeconomicus* of capitalist theory - 'human nature' - against the timeless standards of which all can be measured and explained. We know of little significant criticism of this fiction in archaeology. A recent substantive criticism of optimization (Jochim 1983a) was concerned not with the assumptions of maximizing rational economic behaviour, but with the application of the ideal model to 'reality', fitting *homo oeconomicus* to the real world making her work

Systems theory, the status quo and pathology

Systems theory has become the dominant 'analogue model' within archaeology used to explain social change and social process, providing a theoretical structure, a set of modelling techniques, a source of concepts and testable propositions and a model for explanation according to one reviewer (Plog 1975). We wish to argue that it is fundamentally implicated in the search for rational method we have been outlining, in the process of rationalization within archaeology. The major theoretical exposition of systems theory in the archaeological literature remains that of Clarke (1968) and the most detailed substantive applications those of Renfrew (1972) and Plog (1974) while there are a host of other studies adopting the same general framework (e.g., Flannery 1968, 1972; Flannery and Marcus 1976; Hill (ed.) 1977) and Binford made some early programmatic remarks (1962, 1964, 1965).

Systems theory can be viewed as an updated version of the holism of Durkheimian sociology (Durkheim 1915) in which the whole, society, is greater than the sum of its parts. That is, it is not in principle reducible to the sum of the individuals which make it up. Generally, the definition used of society is of a system which functions as a whole by virtue of the interdependence of its parts. The whole system is usually divided into subsystems, the precise characterization of which varies according to the analyst. Renfrew, for example, chooses subsistence, metallurgy, craft specialization, social, projective, and trade-communication subsystems in his consideration of the emergence of civilization in the Aegean (Renfrew 1972, p. 486). The basic components of society as system are empirically defined and regularly organized behaviours of individuals. Systems analysis is based on the description of empirically given regularities. The system is to affirm, agree with immediate fact, which is pre-defined as having primacy. The concept 'system' is equivalent to pattern; it is a descriptive device. But the concept of 'system' is not part of the object of study; it is proposed in advance and cannot be empirically confirmed or refuted.

Systems theory involves analysis of the object in terms of its functional relation to the reproduction of the whole. This whole is *pre-defined* as an organic unit whose *natural state* is stability or equilibrium. Clarke (1968, pp. 48-52) defines seven different equilibrium states, in essence, different states of systems stability. Stability rather than change is the norm presupposed in systems theory and systems only change, in effect, in order to remain stable. Systems search out and converge upon desirable states. Clarke (1968, p. 52) terms this goal-seeking or homeostasis. The main explanatory concept is function (Hodder 1982a; Tilley 1981a, 1982a, p. 28).

Systems analysis as universal recipe stipulates in advance what is to be discovered. Any component of the system functions to maintain a desired state of affairs - social stability, a condition postulated in advance of any particular society. The system and its components adapt to the objective given - usually the external environment. Conservative values of persistence and stability become the norm. Change is always a contingent state of affairs while harmony is universal. Contradiction within the system is an unfortunate 'pathology' (Flannery 1972), its very abnormality revealed by the term itself. Systems theory, as pre-defined method based on immediate objective appearance, is a theory of conservative politics, conservative in that it will lend support to anything that

is, the immediate 'reality' of any social form. In this sense, systems theory is not only conservative, it is immoral in its acceptance of any empirical state as a slate for the good. For the sake of an abstract value of equilibrium, systems theory implicitly justifies oppression. In identifying what is with what should be, it creates a tidy, ordered and timeless world. The message of systems theory is that 'goodness'¹ is to be found in social stability while social unrest is an unfortunate 'pathology': 'the ideal is for man to act without dislocation because this . . . communicates a set of contradictory values - capable of causing confusion, loss of cohesion and ultimately social anarchy' (Clarke 1968, p. 97). Naturally so-called 'social anarchy' is not in the interests of the ruling classes.

Cultural evolution, the politicization of time

The adoption of a systemic perspective by the 'new' archaeology involved a fresh understanding of cultural change and permitted the development and blending of cultural evolutionary theory with a functionalist equilibrium analysis. The 'new' archaeology has generally been considered to mark a revival of interest in evolutionary theory and, in effect, the evolutionary perspective served to put the static, functionalist, adaptive, systemic perspective into operation.

Binford (1972) followed White (1959) in viewing culture as an extra-somatic means of adaptation but he was unhappy with the association of evolution with progress and instead suggested that evolutionary change was change occurring within maximizing systems which included the adaptation of the system to its environment, the more efficient use of resources and energy flux. Concomitantly, 'evolutionary processes are one form of ecological dynamics' (Binford 1972, p. 106). In addition to this ecological perspective, many archaeologists, following Sahlins and Service (1960) and Service (1975), have adopted a stadial framework according to which societies are arranged in a typological sequence of increasing complexity: bands or egalitarian societies, tribes or stratified societies, chiefdoms and states. Development is seen as the factor to be explained and most interest has focussed on the development of the state and 'civilization'. This typology has had extensive influence on social archaeology. But descriptive typology defined in advance of the object of study and 'adaptation' - the central features of cultural evolution - has a close relationship with the reductive and ultimately ideological conception of society and rational method we have been outlining.

Adaptation to socio-environmental stresses provides for Flannery (1972), as for Binford, the overall meaning and direction for evolutionary change. It provides the *rationale* for processes of 'segregation' and 'centralization'. The result is an increasing degree of efficiency and control over the environmental field. If any particular social system is unable to adapt through segregation it is no longer able to maximize its environmental control and resultant energy yield. In the long run it must be extinguished. The successful state is indeed a predator (Saxe and Gall 1977) in this perspective. Societies, or those that survive, attain new and higher levels of adaptive efficiency and are enabled to compete more successfully with their neighbours. Even if we do not know which socio-environmental pressures operated in any particular case, as Flannery evidently does not in the example he gives of ritual promotion and social stratification in Mexico

(Flannery 1972, pp. 414-16), these stresses 'must have been there . . . their role was to provide the selection pressures, while the actual instrument of change was ritual' (ibid., p. 416). This is not only a fundamental methodological assumption, but a metaphysical presupposition, an act of faith, for without adaptation there can be no reason for the segregation and centralization processes.

Sanders and Webster (1978) broadly align themselves with Steward's (1955) multi-lineal approach to evolution and, unlike Binford and Flannery, see an inherent paradox in trying to explain variability in culture by factors which are of their very nature non-varying. Accordingly, they state that environmental stimuli are 'basic causes of cultural evolution' (Sanders and Webster 1978, p. 251). The model they use outlines various possible evolutionary trajectories from egalitarian societies to states conditioned by the permutation of environmental variables and assumes that population growth occurs, that rates of growth remain constant, and that this is a necessary precondition for evolution: 'all processes of complex cultural evolution are processes of *growth* as well' (ibid., p. 297, emphasis in original). Adaptation accommodates people to their environment and permits the development of societal growth and higher-order social structures.

In the cultural evolutionary' perspective adopted by the new archaeology the term progress is no longer used, as in earlier work; given the emphasis on scientism it is no longer acceptable. However, it has not been completely exorcized but has become conceptually shifted in relation to earlier accounts of evolutionism. It is now the more muted matter of adaptive efficiency and the ability to integrate and accommodate increasing numbers of people within the system by means of social differentiation, increasing stratification, and the emergence of higher order social regulators. The assumed need of societies to adapt to externally induced socio-environmental stresses or internally developing 'pathologies' is a differential measure of success. Societal adaptation may be efficient or inefficient, effective or ineffective, and some societies develop to become civilizations while others fall by the wayside: they never develop to the status of civilizations. Societies are like football teams with numbers on their backs and compete in the adaptive stakes - ground rules for the game which are laid out a priori before any analyses start. Some reach the top of the league and become civilizations while others are relegated to the lower divisions of bands and chiefdoms. Adaptation is the teleological cause, consequence, and measure of social development. Social change itself becomes rationalized. But societies exist in history, they are not interchangeable. However, all forms of cultural evolutionary theory treat the time of the past as homogeneous and abstract which allows the comparison of different societies, attaching labels to societies according to a pre-defined typological sequence. This is not a neutral process. It is the politicization of time. In measuring (evaluating), comparing and ordering sequences of societies according to definite criteria, we pass judgement on the past (see the discussion of time in Chapter 1).

Evolution: biology and behaviour

The only evolutionary position which does not seem to necessarily embody an explicit or implicit concept of progress is the modern theory of biological evolution combining

Darwin's theory of natural selection with Mendel's work on the nature of inheritance. The evolution of all forms of life is thought to be the result of at least five processes including inheritance, mutation, drift, gene flow and natural selection and of these natural selection is the most important. The essence of Darwinian evolutionary theory is non-directional variability on which natural selection operates in a particular environmental milieu on individuals rather than groups. The theory provides a general and abstract conception of the mechanisms by means of which changes occur in individual organisms and remains valid whatever the concrete succession of forms actually is. Quite crucially the theory specifies no necessary direction stipulating the manner in which processes of variation and selection take place. It is an explanatory theory and is not a descriptive set of generalizations, unlike most cultural evolutionary theories. The ultimate origin of variability on which natural selection acts is mutation. This variability is transmitted genetically through either sexual or asexual reproduction. Evolutionary change is a selectional rather than a transformational process, a consequence of differential reproductive success in relation to a determinate natural environment at a specific time and place. A considerable stochastic element may be involved as regards the initial source of the variability, and the types of genetic recombinations taking place through reproduction. Organisms that survive changes in an environmental milieu are not the most aggressive, fastest or largest members of a species, but forms which are biologically variant. The survival of the fittest' only makes any sense in relation to a specific environment. Different forms have definite relations of descent and these are always contingent as no arbitrary principles of a predetermined hierarchy of species are involved and may be explained in terms of selective processes. Sociobiologists (e.g., Wilson 1975, 1978 contributions in Chagnon and Irons (eds.) 1979) have attempted to apply this evolutionary perspective to human social behaviour while Dunnell (1978a, 1980) and Wenke (1981, pp. 111-19) have indicated it may be of value in archaeology as an alternative and more satisfactory position to cultural evolutionism.

It is by the very means of the concepts of the theory of modern evolutionary biology that we know that it simply cannot be applied to the development of human social organization except in such a problematic fashion as to completely undermine any value the attempt might have. Social relationships are not in any primary sense biological relationships and may not be explained except in the most reductionist scenario by the physical attributes of human beings in relation to different adaptive situations. Sociobiologists, and for that matter a large number of archaeologists (for example Plog 1974, pp. 49-53, 1977 pp. 16-17 Price 1982, p. 719, Schiffer 1976) write of human social *behavior*. As argued above and in Chapter 2, 'behaviour' is the reduction of meaningful practice to physical movement, immediate and commensurable. The reduction of practice to behaviour is a central feature of capitalist social relations, of the alienation experienced on the factory floor. But we would argue that people do not behave in the sense that animals behave (see Chapter 6), they *act* and the difference between behaviour and practice or action is of fundamental significance. Humans must be conceived as sentient social beings living in a symbolically structured reality which is, essentially, of their own creation. Behaviour is to action as the immanent to the actual, as the precondition for what actually is. To reduce action to behaviour rather than leading to valid explanations

in fact directly eschews anything which might be properly termed explanatory. We are left with the imagery of a plastic, malleable cultural dope incapable of altering the conditions of his or her existence and always subject to the vagaries of external non-social forces beyond mediation or any realistic form of active intervention. Sahlins (1976) has discussed at length the political and theoretical implications of sociobiology and subjected it to a lengthy critique and these arguments will not be repeated here. The 'threat' from sociobiology, especially as evinced in the work of Wilson (1975, 1978), the most widely read but least satisfactory discussions, comes from the line of argument that human social behaviour is determined by a combination of genes and environment; concomitantly the only political action which could alter social life as it is today would be eugenic. Rather than stress this aspect of the debate we will suggest that a biological evolutionary perspective, when transferred to the activities of human beings, collapses with the redundancy argument, i.e. that what people spend most of their time doing is completely redundant in terms of conferring any possible selective benefit. The sheer complexities of human social activities go substantially beyond the basic necessities of survival. Palaeolithic cave art is in no way explained by reference to cultural adaptation to climatic change (Jochim 1983b). Human social action is the product of the symbolic praxis of people in and on the world, it is inherently meaningful and 99% of this action has no direct survival value in terms of conveying any definite selective advantage. The archaeological record is, primarily, a record of *style*, i.e. ways of acting or accomplishing ends according to varying orientations to the world and with reference to individual and group social strategies and power relationships, which may not be assimilated or reduced to functional or adaptive necessity. The biological evolutionary thesis cannot even begin to accommodate or explain why people should produce elaborately decorated ceramics, create ceremonial structures, make thousands of different types of tool forms; the list can be almost infinitely extended. The perspective leaves us with such statements as 'In a cultural frame, many specific trait forms may lack adaptive value, but a reservoir of variability, some of which may ultimately acquire adaptive value with changing conditions, has a clear selective value.' (Dunnell 1978, p. 199). What is supposed to be adaptive is left on one side. In what circumstances, for instance, would a pottery vessel decorated with curvilinear lines have a selective value over one with scalene triangles? This question is not trivial or extreme or even 'suitably chosen' since similar questions can be raised in relation to the entire gamut of human culture, material or non-material. In order to work at all, the sociobiological evolutionary perspective must reduce the almost limitless variety of human action and material production to self-sameness and, in doing so, destroys that which it purports to explain. In this restrictive sense the theory *is* dehumanizing.

Statistics, mathematics and objectivity

The enormous increase in the utilization of statistical and mathematical analysis is a characteristic feature of much of archaeology since the 1960s. It is often justified as merely being a formalization of what archaeologists have always done. Naturally, according to epistemological and ontological primacy to the 'facts', the objects of archaeological knowledge, provides a powerful rationale for the use of mathematics and

statistics which have become part of the rationalization of archaeological practice aimed at expelling the subjective. Statistical practice is conceived as a technical and therefore neutral practice including the collection, processing, assessment and presentation of facts. It meets the need for generalization based on objective data, controlling for subjective bias, and meets the requirement for practical rules for deciding when generalization is justified or when data are inadequate. These needs accompany the conception of reality as the observable, of theory being brought into agreement with and affirming reality, of the facts being theory-neutral and intersubjectively acceptable. Above all else the use of statistics is related to the requirement for theory to be value-free.

Statistical practice is rooted in quantification, providing value-free methods of drawing conclusions from quantified data. But quantification also results in the disqualification of the object and its redefinition in terms of the primary qualities of number, extension and motion, which are readily treated mathematically. This relates to objectivity being abstractly conceived, as universal and ruled by equivalence. Quantification thus presents data - that which is 'given' - in standardized and comparable form. Adorno and Horkheimer comment that 'mathematical formalism, whose medium is number, the most abstract form of the immediate . . . holds thinking firmly to mere immediacy. Factuality wins the day; cognition is restricted to its repetition; and thought becomes mere tautology' (Adorno and Horkheimer 1979, p. 27).

Standardized and comparable data facilitate calculation. Disqualification, precision, calculability, prediction ultimately mean control. In this way quantification is dissolution of mythology - 'anthropomorphism, the projection onto nature of the subjective' (Adorno and Horkheimer 1979, p. 6). Nature is realized as universal objectivity, stuff of control; and society is second nature.

In quantified archaeology categories of analysis are necessarily designed to enable certain calculations to be made; they are methodological. In the very process of production facts are pre-censored according to the norm of the understanding which later governs their apprehension. Again the structure of the object is neglected in favour of a general methodology.

Of course statistics have long been recognized as requiring careful interpretation and being open to misuse. But the problem is seen as one of social responsibility, misuse arising from technical ineptitude or deliberate mis-manipulation. Statistical theory remains neutral, tied to objectivity. The solution is seen as being more knowledge of statistics and social responsibility in their utilization (Huff 1973; see Griffiths, Irvine and Miles 1979, pp. 347ff).

Mathematical archaeology

Quantification, motivated by a belief in the objectivity of exactness and calculability, leads eventually to mathematization - the conception of the archaeological record in terms of neutral patterns and relations capable of precise definition and expression in terms of formulae.

The classic expression of mathematization is the volume *Transformations* (Renfrew and Cooke (eds.) 1979). Explanation is represented as the subsumption of the particular beneath generalities:

Most of the contributors to this book would agree that the appropriate path to understanding is generalisation, that is, the formulation of general relationships between events and between processes, of which specific individual occurrences and phenomena can be seen as concrete expressions or manifestations. (Renfrew 1979a, p. 5)

Mathematics provides the generalities, abstract and precise definitions of relationships. Abstract in that it is purely formal, mathematics unifies scientific fields of studies and overcomes the problem of scale. History becomes the unfolding of universal relations:

We may therefore, if we wish, think of different societies, at different periods and localities, as being transformations of one another, with the individuals of society S transferred into those of society S'. (ibid., p. 38)

Renfrew stresses that this is not to deny the importance of the individual, of the human. But the human element is strangely regarded as idiosyncrasy (ibid., p. 37) and circumstantial detail (ibid., p. 5). 'No threat is offered to the *magic* of human experience, to the authentic force and *irrationality* of the passions' (ibid., p. 4, our emphasis). In the end we are left with the impression that idiosyncratic and irrational human subjectivity opposes regular, precise and predictable objectivity. It is only in so far as humans can be transformed into regular and predictable objects that they are important. Neanderthal man appears in modern dress (ibid., p. 38) and you wouldn't recognize him in the street. We are all mathematically human and have been so for as long as matters. The rest is magic and in Renfrew's light-hearted finale from Osbert Lancaster's *Draynflote Revealed* the present becomes magically unveiled as the past, its transformation. We rediscover our essentially mathematical selves, and in our obsession with immediacy and factuality discover the inevitability of the present being as it is; it becomes objectively necessary.

Transformations marks the end of the programme of the new archaeology, its logical conclusion. Mathematical calculability has become substituted for archaeological knowledge. This is seen most vividly in Renfrew's application of catastrophe theory (Renfrew 1979b). It depends on the use of a purely mathematical theory, formal symbolic logic, which is true in itself. The theory can only be applied to archaeological data. It cannot be tested in any way. The archaeological data are fitted to the theorem. This forces Renfrew into a position with which we would agree, that knowledge of the archaeological record cannot be reduced to the outcomes of testing processes. However, within the framework of the new archaeology this is heresy. On the other hand, the new archaeology has always looked to the construction of formal symbolic logic as an ultimate goal (e.g., Clarke 1968, p. 62). This goal, when reached, destroys archaeology because it is not ultimately the data that matter any more but the internal coherence of the statistics to which they are fitted. It is the development of the statistics that provides the key to future work, not the conceptualization of the data. At least, the latter is placed in very much a subsidiary and peripheral role. Mathematical coherence replaces archaeological knowledge. Mathematization results in the dissolving of the physicality of the objects of archaeological knowledge in terms of the logical or mathematical relations. The very notion of objective substance opposed to subjectivity disappears.

In the quest for a unified and objective past a mathematical past becomes an ideational, subjective past Reality is approached in an instrumentalist framework Orton views mathematics as a cognitive instrument and a universal tool It is not confined merely to being a technique to be used in data analysis (Orton 1980, p 216) but 'mathematics can be used as a tool for organising one's thoughts and data, and as such is of value to any archaeologist, whatever his philosophy, and whether he works in the field laboratory study or armchair' (ibid p 13) Here reason is explicitly reduced to instrumentalism It is an organ of calculation, of coordination, of planning Reason becomes detached from decision as mathematical reason itself decides the means of approach to the past The purpose, the aims of a study of the past are attributed to the calculating subject Reason is detached from the decision to apply reason, the electronic calculator or computer from the creative impulse behind model building, from justifications The latter can only be circumstantial detail, subjective and arbitrary As mathematics is purely formal, it can only become meaningful when meaning itself has been discarded Objective substance, the past, is 'the mere stuff of control instrumentality which lends itself to all purposes and ends - instrumentality per se, "in-itself" (Marcuse 1964 p 156) In effect this results in a suspension of judgement on what reality, is, us meaning For mathematization meaning is a meaning-less question This is the inevitable conclusion to a belief in the objectivity of precision and calculability

Yet the self contained formalism of mathematical explanation is related to its opposite totally and equally meaningless empiricism, the attempt to merely record all the facts without any subjective content or bias Both arise as part of a seemingly, unbridgeable gap between the theoretical and the empirical, between knowledge arising from within and from without symptoms of reification 'the abstract categorising and, as it were administrative thinking of the former corresponds in the latter to the fetishism of an object blind to its genesis' (Adorno 1967 p 33) In analysis subject is split from object What in actuality must arise from the dialectical relationship of subject to object (subject object), is instead regarded as subjectiveless objectivity (Marcuse 1978, P 475)

Reason as method: a logistical archaeology

Reason is identified with method and as such does not decide aims or purpose but refers instead to the implementation of techniques and strategies It excludes choice of value systems which determine ends Thought thus becomes a form of logistics in which ends are separate from means, values from method Reason regulates the relationship between method and pre given aims, ends, purposes, behind the study, of the past Logistical archeology is a radical contradiction between technique and method, and understanding, viewpoint and aim

If reason is accepted as rational method, how are we to decide between different aims, different attitudes towards the past, different models, within the framework of rational method Three positions can be taken on such a decision

(1) The decision to adopt a particular approach may be attributed to irrational intuition, subjective decision Reason as method has no way of judging between differing con-

ceptions of humanity and society. Palaeoeconomy is thus just as valid as a structural-Marxist approach, providing it adheres to rational method (adherence to immediate fact, etc.)- It just assumes a different model of humanity and whether or not this model of humanity is correct is a matter not open to rational argument (Jarman, Bailey and Jarman (eds.) 1982, p. 3); such argumentation is beyond science.

The result is a passive, disabling and repressive pluralism. The question of different approaches is not just a question of differently tinted spectacles through which are seen the same facts, the same past. Some have valued such a pluralism as a strength of archaeology, stressing the final consensus (Clarke 1968, p. 21). But the colour of the spectacles matters as does who made them and who is wearing them. Pluralism cannot be indiscriminate, similarly tolerant of any approach, abstracted from society and history, passive, tolerating damaging attitudes and ideas. As such, it neutralizes any opposition to the tyranny of the majority, dismissing it as just another pair of glasses.

In Chapter 1 we argued instead for a radical, active pluralism, a pluralism which recognizes that object and interpretation are never identical and that all interpretation is time-bound, determinately related to the moment of its event, historically, socially. Such a pluralism takes sides and doesn't protect that falsity which would contradict and counteract the possibility of a liberated humanity; it is a pluralism directed towards a definite end. We argue for true discussion of alternative approaches, realizing the root of 'discussion' in the Latin *discutio* - to cut apart, smash to pieces; not consensus then, but distinguishing and cutting away false approaches, breaking neutral consensus, asserting disagreement.

(2) A different form of rationality may form the basis of the subjective decision to adopt a particular approach. One approach may be judged superior to another through an ethical argument seen as objective and perhaps given transcendental justification. This would seem to be the basis of the sort of criticism of the 'new' archaeology given by, among others, Hawkes (1968), that it is fundamentally dehumanizing. Also Winter (1984) has acknowledged that value systems apply to the practice of investigating the past. But such values, 'human frailty', are separate from the scientific, rational study of the past; 'most of our research decisions are based at least in part on value statements. It is only after these decisions have been made *on ethical grounds* that a scientific approach can be used to understand human behaviour' (Winter 1984, p. 47, our emphasis). So ethical ends are separate from scientific method, and the objectivity of the latter can be protected from consciousness-raising: 'once we have recognised the presence of value-statements in archaeology it should be possible to separate them from the scientific approach' (*ibid.*, p. 42).

(3) The choice between different approaches may be made according to technicist recommendations of utility, efficiency, economy and comprehensiveness (technique) and objectivity (agreement with immediate empirical reality). These *values*, which are internal to technical reason, are permitted in that they are not recognized as values. So different approaches are evaluated through reference to the degree of accordance with rational method. According to Binford and Sabloff (Binford 1982; Binford and Sabloff

1983), scientific explanation is separate from 'paradigmatic understanding' - *beliefs* about the way the world is, 'everyday cultural bias' (Binford 1982, p. 126). They argue for a *rational* choice of paradigm, putting points of view to the test; paradigms can be rationally assessed according to their utility.

Any explanation produced by rational scientific method operating on neutral objectivity supposedly stands on its own; it is self-grounded. Conclusions must follow from initial assumptions and require no additional contradictory assumptions. Contradiction within this process of knowledge, as we have argued, refers to pathological thinking, defective subjectivity requiring therapy. So explanation can be divorced from the social context of its production and associated value systems. The validity of any approach can be determined independently of personal commitment, without reference to moral or political position. As Gouldner puts it, such rationalism

entails silence about the speaker, about his interests and his desires, and how these are socially situated and structurally maintained. Such a rationality does not understand itself as an historically produced discourse but as suprahistorical and supracultural, as the sacred, disembodied word: *Logos*.

(1976, p. 50)

The objectivity of scientific method is stressed as opposed to the 'psychological' objectivity of the ideal observer who eliminates bias through conscious will (Binford and Sabloff 1983, p. 395).

The accuracy of our knowledge of the past can be measured . . . The yardstick of measurement is the degree to which propositions about the past can be confirmed or refuted through hypothesis testing - not by passing judgement on the personal qualifications of the person putting forth the propositions.

(Binford 1972, p. 90)

Quantification then, and not qualification. Objectivity - a measure of value of any approach rests 'with the design characteristics of a methodology and the procedures of its implementation rather than with the characteristics of a particular observer' (Binford 1982, pp. 126-8). Rational method, empiricist science, will cure the pathology of all thought which might retain 'subjective' links with the context of its event.

But crucially, these *moral* decisions behind archaeology as science, which define the process and object of knowledge, subvert the apparent subjective freedom in choosing different approaches.

Any prior guidelines relieve us of moral decisions; following one means surrendering both reason and freedom, for 'binding moral directives do not exist'. On the one hand, the currently dominant form of reason serves as such a guideline which suspends the freedom of autonomous judgement; on the other, its particular form makes value decisions a private matter - which lets its use appear as the voluntary choice of individuals whose decision-making ability it has just suspended.

(Gebhardt 1978, p. 392)

Justifications and the meaning of archaeology

Habermas has written of an end to epistemology:

Positivism marks the end of the theory of knowledge. In its place emerges the philosophy of science. Transcendental-logical inquiry into the conditions of possible knowledge aimed as well at explicating the meaning of knowledge as such. Positivism cuts off this enquiry, which it conceives as having become meaningless in virtue of the fact of the modern sciences. Hence transcendental inquiry into the conditions of possible knowledge can be meaningfully pursued only in the form of methodological inquiry into the rules for the construction and corroboration of scientific theories. (1972, p. 671)

In concentrating on rules of procedure, those who apply the rules are irrelevant. Rational method is independent of the archaeologist; formal logic, mathematics and statistics have universal validity. There is no questioning of the subjective constitution of objectivity; 'the meaning of knowledge itself becomes irrational - in the name of rigorous knowledge' (ibid., p. 69). In this framework, the only acceptable justification for archaeology is that archaeology is part of the 'human' quest for knowledge and truth. There is no attempt to question the meaning or function of the object of archaeology because there is no source of knowledge outside the object. Archaeology is consequently not reflexive; it is not conscious of itself as practice in a capitalist civilization. Instead it becomes a tool, an instrument, probing the past in the service of the present.

The identification of rational method with truth together with ideas of value-freedom and objectivity justify the archaeological project but as we have argued, these ideas have no meaning in a scientific sense. They are value judgements, prior guidelines. The methodological or syntactical criterion of meaning is spiritual. The origin of this spiritual meaning, the impulse to the acceptance of a commitment to rational method, was and is the success of scientific capitalism. So any justification for archaeology, any definition of the meaning of archaeological practice is, within this framework, irrational - separate from the practice it claims to justify. There is an unbridgeable chasm between the social practice of archaeology and any reason given for engaging in this practice. (See also Chapter 1, pp. 25-6.)

Facts and values, ideology and criticism

Our claim is that a great deal of archaeology is ideological practice, practice which sustains and justifies a capitalist present. Objectivity, rational scientific method, facts as opposed to subjective values and attitudes - this is an historically specific rational discourse which tends towards an argument for capitalism through appeal to the facts. There has been some criticism already of the ideology, its supportive relation to contemporary society, work which we discuss in Chapters 1 and 4. Here we emphasize the need to avoid reducing the critique of ideology to an assertion of relativism: the contention that every social group has its own equally valid way of looking at and explaining the past. It is also important to avoid making ideology critique simply a form of consciousness-raising: pointing out the inclusion of values derived from contemporary society into research that they might be the more easily isolated and excluded.

Value-freedom, as the attempt to eradicate values, precludes the very possibility of taking a critical stance on society and is consequently supportive of the status quo. The notion of value-freedom is, of course, itself a value which is by no means normatively neutral. Value-freedom commits those who wish to retain it to a rejection of a critique of the existing social order and therefore forces them to political conservatism, and so, the abandonment in and through practice of the claims for neutrality made. Consider the following statements made by those who advocate archaeology in a very explicit manner as a 'hard' positivist law-seeking science.

A lesson which can be drawn from the study of prehistory is that wars, starvation, exploitation and conservation are not simply moral, ethical or political issues. There is an important, indeed a primary biological component to these phenomena, *without recognition of which no really effective consideration of them can be made* . . . The possible demonstration that there are laws which govern human behaviour in the long term ought to have an effect on the way in which we view our behaviour today.

(Jarman, Bailey and Jarman (eds.) 1982, p. 12, emphasis in original)

Now, this 'lesson', even in terms of the rationalist discourse in which it is situated, is hardly unequivocally established from the 'facts'. In reality the lesson is *given* to palaeo-economists in 'knowledge' since prehistory is, al the outset, viewed from a biological perspective, so that what is 'discovered' is already there in theory prior to any investigation having taken place. We can scarcely believe that those responsible for this statement would want to support it, for it has definite social and political implications which are very far from being value-free. It can be used to defend any indefensible action and results in an abrogation of moral responsibility for anything that happens. To return to the present, if the world is plunged into nuclear war this can be justified as inevitable. If a primary biological factor is claimed to be involved then the entire political process is pre-empted.

The lament of High Culture

Clark (1979, 1983) has made a claim for a radical criticism of the present from an archaeological standpoint. Archaeologists, according to Clark, are able to objectively pronounce on the past, its message to the present, its relevance, its value. The objective message, established by archaeologist Grahame Clark, is that the index of our humanity is cultural complexity and diversity which is invariably associated with social hierarchy and inequality. Egalitarian societies dominated by the illiterate peasant lower classes are dull and boring, lacking in cultural achievement. The present, increasingly subject to the 'complacent doctrines of liberal humanism' (1979, p. 5) and with an economic system based on science and technology is reverting to cultural homogeneity. What is needed is a reassertion of hierarchy and inequality.

There is nothing new in this right-wing nostalgic longing for a pre-industrial order of cultured elite and contented commons and it has nothing to do with critical reflection. It is a variation of the familiar lament for the decline of high culture in mass society.

Avoiding disputes over empirical detail, we make the following comments of Swingewood 1977)

(1) Clark presents a simple empirical correlation between ranking and objects judged to represent cultural diversity and achievement. This is a static and reified concept of culture, a reaction of culture as praxis, as concrete production, it is an elimination of the historical roots of cultural production in that a universal aesthetic value judgement is applied uniformly across history. Cultural practice is reduced to 'cultural' artifacts. This notion of cultural value is not related to any concept of the social, the only social variable is ranking. We argue that all cultural production must be understood in relation to specific conditions of production.

(2) Clark's archaeological past is a romanticized and dehistoricized past a myth of culturally rich and inegalitarian societies benefiting from the creative inspiration of elites. But what about poverty and the oppression of the majority? Justifiable for the sake of a high culture as defined by the Clarks of this and other societies who would attempt to shore up their crumbling political edifices with ideological props?

(3) Clark's conception of modern 'mass' society is unsophisticated in the extreme, an abhorrent affirmation of superior minorities and coarse sub human majorities.

Clark's is an argument for the acceptance of inequality through the *assertion* of the necessity of high culture, an *assertion* that this is represented by the immediate appearance of 'cultural diversity', an empirical observation that this is correlated with inequality and social hierarchy, and an application of this to modern society claimed to be reverting to the 'intraspecies homogeneity of a prehuman situation' (1979, p. 13). In his final years Clark has produced a statement of anti-democratic ideological commitment unparalleled in recent archaeology. But the concept of objective cultural value is not at all uncommon. Many, particularly those writing for a non-archaeological audience, would apply a universal standard of cultural value to the past, whether this is seen as cultural diversity, aesthetic quality or whatever, they would appreciate the cultural achievements of an abstract, unhistorical 'humanity'. Such value is attached to artifacts creating a cultural capital, discovered, understood, conceptually owned by an enlightened expert minority, archaeologists and others who teach us of the value of the past, who know about and therefore should make the decisions about the past its study, its preservation and its presentation (see Chapter 1, pp. 24–6 and Chapter 4, pp. 91–3).

The valuable past

Cultural Resource Management and Rescue are openly concerned with a valuable past. The central feature of each is a 'conservation ethic' (Lipe 1977), the dominant moral issue facing archaeology is that it 'employs a non-renewable phenomenon' (Dunnell 1984, p. 64) which requires management and conservation. So an overriding concern of those planning and executing the destruction of the past is with the *value* of the 'resource base', the significance of particular features of the past. It is the question of how much money and effort should be spent on particular features. A primary conflict is between different types of value attached to the traces of the past for example, 'scientific' importance and value to particular research programmes, as opposed to 'symbolic' value to a community.

The past is defined as valuable and must be protected from unscrupulous dealers in antiques, from detector wielding treasure hunters and from incompetent work by inexperienced amateurs. What are needed, it is claimed, are

- (1) general educative measures, inculcation of the conservation ethic-people must value the past (Lipe 1977, 1984, Cleere 1984, Fagan 1984),
- (2) international agreements (UNESCO Convention),
- (3) protective legislation (1906 Federal Antiquities Act and the 1979 Archaeological Resources Protection Act in the USA, and the Ancient Monuments and Archaeological Areas Act 1979 in the UK, see McGimsey and Davis 1984 and Cleere 1984),
- (4) professional accreditation and professional codes of ethics - it must be clear who the real archaeologists are, who truly value the past (the Society of Professional Archaeologists (1984a and 1984b) in the USA, the Museums Association and the Institute of Field Archaeologists in the UK)

At the heart of these codes of ethics and values and protective measures are traditional academic values of scholarship, objectivity, responsibility to and respect for colleagues and public, supplemented by business values of efficient management of the 'resource base'

So value (objectified value) is attached to the objects of the past and accepted values protect the professional expert status of those who apply rational method to the past, who exert control over the past. The message conveyed by the past and revealed by the expert and the system of values associated with rational method are further legitimated in this recognition of value. The sins of archeology (dependence on values) are confessed to salve the guilty conscience of the origins of its values in contemporary capitalism.

Conclusions: notes towards a critical archaeology

The question whether objective truth can be attributed to human thinking is not a question of theory but is a *practical question*. Man must prove the truth, i.e. the reality and power, the this-sidedness of his thinking in practice. The dispute over the reality or non-reality of thinking that is isolated from practice is a purely *scholastic* question.

(Second thesis on Feuerbach, Marx 1970, p. 121)

We cannot cut ourselves off from questions of value, retreating into a supposedly untainted realm of objectivity, nor can we disconnect 'value' and shunt it off into a separate field of aesthetics, political or social relevance, or whatever. By attempting to ignore values we are cutting ourselves off from our work and are unwittingly denying our essential integrity as social persons living in social worlds. The distinction between fact and value arises from a fundamental error. It is a denial of the essentially active role of the subject in research. A value-free approach sets up a view of the subject as renegade or treacherous. The subject/observer must deny self in order to adequately deal with the facticity of the object. This radical scepticism of the self is both impossible to achieve

and, if carried through, would prevent any research at all: no values amounts to no meanings and without meanings no investigation. Because prehistoric people are dead and gone it is only too easy to treat them as mere objects to be shoved around at will, subject to the whims of technocratic reason. But in betraying their humanity we betray our own. In the instrumental attempt to create an objective past we are cutting ourselves off from sources of meaning and so ultimately destroying that which we seek to understand. Prehistoric settlement sites, for example, when transformed into spatial nodes responding to the dictates of an abstract rationality are deformed. The intentional structures of the people who lived in them and imbued them with meanings and significance are considered unimportant. Social meaning has been taken away and pure calculus substituted. We destroy the richness we want to investigate and create a world purged and divested of meaning, an unreal alienated world. This is the world of physicalism, of extension, of geometric form, of number, which has been declared as real, while everything else has been condemned as fictional magic. This is the world in which people do not matter. It is the world of capitalism.

Archaeology embraces a programme which makes of artifacts, people and their relationships objects and objective process. Subject is split from object, archaeologists from their data, past from present. Formal methods stipulate in advance what is to be discovered; the structure of the past is neglected in favour of general objective method. The abandonment of a pretence of value-freedom is vital to overcoming these problems.

To abandon objectivity based on value-freedom is to accept that meaning is not contained within the facts but arises from interaction between archaeologist and data. We have already argued in Chapter 2 that observation is dependent on theory. We emphasize here that theory is value-laden and values form an integral part of the object of study. To define or describe an artifact according to immediately given attributes is not enough because an object always has a surplus of meaning over and above any definition or description. A definition or description can never be identical with or sufficiently summarize the complexity of the overlapping relational aspects of an object. Any single definition or description applies only to a particular frame of reference which is necessarily value-laden. The particular perspective from which an object or event is viewed is an integral part of the object of study. Concepts and categories of analysis are internal to, they constitute the object of study; they are not separate from what they are categories of. So there can be no formal and general method separate from the structure of the object of study; 'methods do not rest upon methodological ideals but rather upon reality'(Adorno 1976a, p. 109).

Archaeology must become reflexive: archaeology needs to consider itself as much as the past. To recognize that meaning does not just reside in the objects of the past but in the *study of the past* is to recognize that archaeology is a *practice* today. Knowledge is not produced by passively receiving individuals acting somehow as mirrors to the world but by interacting social groups evaluating what is to count as knowledge communally. The generation of knowledge does not just arise from individual psychology but from definite social conditions. The maintenance of knowledge is not just to be explained in the manner in which it measures up to 'objective' reality. So, as we argued in Chapter 1, archaeology is a rhetorical practice, historically situated, part of contemporary society

and inherently political. The social function and meaning of a theory or explanation forms part of its validity. As rhetoric, archaeology cannot be separated from its audience: there is a practical dimension to validity which is not to be correlated with the objective' elimination of temporal and spatial variables. It is not only what we term 'data' which constitutes evidence: practical questions must also enter into archaeological explanations. We should concern ourselves not so much with the 'truth' or falsity of various statements. Rather we should ask: who are these statements relevant to and why? what kind of archaeology do they serve to produce? truth is a practical matter, not an absolute. So we may legitimately distinguish those archaeologies which give support to the existing social order, reifying people and their relationships, treating them instrumentally. These are not matters external to theory.

Values cannot be eradicated from archaeology. They are built into the very terminology and language we use and into the act of using them. We should attempt to make the values we bring to research explicit and subject the values to critical scrutiny. This will not only produce a more realistic view of the past, as history irrevocably linked with and mediated by the present, it will also be a more honest view of what we are doing. The ideology of contemporary archaeology cannot be 'cured' by detaching an ideological dimension, by correcting cognitive failure or by making increased attempts to purge ourselves of our values. Accepting archaeology as practice: truth as constituted in practice, is to accept truth as precarious, written into political relations. It is to accept the necessity of a radical and anarchic undercutting of all those theories in search of a timeless and objective truth which would justify the present, the necessity of ideology critique. The kind of reflexive and critical archaeology we propose is not just another approach. To argue that a critical archaeology merely asks different questions and supplements already established approaches is to treat critical archaeology as another formal body of principles, a method outside history, it is to slot it on the shelf in the academic supermarket, neatly packaged next to behavioural archaeology, for anyone to take down and consume at will. A critical archaeology is not merely a way of working, it is a way of living.