ARCHAEOLOGY AT THE EDGE OF CHAOS: FURTHER TOWARDS REFLEXIVE EXCAVATION METHODOLOGIES.

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ABSTRACT

This paper concerns itself with the relationship between theory and practice in archaeology. In a recent Antiquity article, Ian Hodder proposed that by embracing post-processual ideas of subjectivity, recursive hermeneutics and multivocality, a more reflexive excavation methodology should be possible (1997). This paper broadly concurs with Hodder's thesis but argues that his article did not take into account many of the other workers within the discipline who have also put forward similar ideas. This paper therefore seeks to redress this imbalance by outlining these various perspectives. It also suggests further means by which reflexivity in excavation practice may be explored, principally by the critical re-examination of stratigraphic matrixes and context sheets. Particularly, in a developer-funded excavation context, any move towards more reflexive methodologies will have far-reaching implications for how contemporary archaeology is structured and managed.

"It may be said that we do not in fact proceed to infer the physical world from our perceptions, but that we begin at once with a rough-and-ready knowledge of the physical world, and only at a late stage of sophistication compel ourselves to regard our knowledge of the physical world as an inference. What is valid in this statement is the fact that our knowledge of the physical world is not at first inferential, but that is only because we take our percepts to be the physical world. Sophistication and philosophy come in at the stage at which we realize that the physical world cannot be identified with our percepts."[1]

Introduction
In the September 1997 issue of *Antiquity*, Professor Ian Hodder of Cambridge University published a paper which dealt with issues of excavation methodology raised by post-processual approaches to archaeology, with particular reference to the on-going project at Çatalhöyük in Turkey. Though a welcome addition to the growing body of literature on archaeological methodologies, this paper fails to take into account some recent developments within the discipline, and as a consequence, its intended impact may in fact have been somewhat diminished. Nevertheless, Ian Hodder has repeated many pertinent questions, and so in this article, I would like to try and summarise the directions in which current archaeological thought and practice are moving. These developments will not only influence how we excavate and write archaeology in the future, but may also have important implications for the structure of the discipline itself.

"Let's start at the very beginning, a very good place to start
When you read you begin with ABC,
When you dig you begin with -- stratigraphy!" [2]

This article seeks to explore some of the most recent trends in excavation methodology. Published articles and papers delivered at Theoretical Archaeology Group and Stratigraphy Conferences indicate that there has been a growing change of opinion taking place within the discipline over the past five years. As most of my archaeological career has been spent in Britain, I will be concentrating on developments within British archaeology. There is still great variety in archaeological practice around the world, but as the polyglot collection of papers in *Practices of Archaeological Stratigraphy* (Harris, Brown III and Brown 1993) demonstrates, despite financial and political pressures, British archaeology can still be highly influential on an international level.

It is not my intention to detail the histories of fieldwork in Britain, although these histories [3] and the personalities that contributed to them have undoubtedly shaped much of the archaeological practice that is carried out today. Some of these histories have been summarised succinctly elsewhere (Daniel 1950; Daniel and Chippindale 1989; Harris 1989; Hudson 1981; Schnapp 1993; Trigger 1981). Instead, I will be focusing on how archaeological data are approached and recorded, by investigating two archaeological artefacts that, until recently, have received little critical attention -- the stratigraphic matrix and the context recording sheet.

Until the 1930s, there was little formalised recording on archaeological sites in Britain. Ditches, pits, walls, and other structural features were drawn on scale plans or sections, but individual deposits were rarely distinguished or recorded,
and interfacial lines on section drawings were often lacking (Harris 1989: 25). *Archaeology from the Earth* (Wheeler 1954) and *Beginning in Archaeology* (Kenyon 1961) were amongst the first publications to advocate that individual episodes of deposition or destruction be distinguished from one another, and that finds from these 'strata' be separated and numbered accordingly. Kenyon also proposed that 'stratigraphic excavation' should also take into account the 'interfaces' between these deposits, which should also include the edges of pits, ditches, and other negative or cut features. Written information pertaining to these numbered units was still largely confined to annotations on the drawings themselves and site notebooks. This information was recorded by the director of the site or a few select supervisors.

Post-war reconstruction and development in the 1960s and 1970s led to the growth of rescue archaeology, and the emergence of local government archaeological officers and county rescue archaeology units (Jones 1984). Excavations in Winchester, Southampton, London, York, and other large urban centres revealed extensive and complex sequences of activity. As sites and excavation teams grew, it became clear that new recording techniques were necessary to deal with this increase in information.

Experimenting with ways of presenting stratigraphic relationships, Edward Harris and others devised the stratigraphic matrix in Winchester in 1973 (Harris 1975; 1989) and proposed laws of *archaeological* rather than geological stratigraphy (Harris and Reece 1979). There have been criticisms of the Harris matrix, most notably from geo-archaeological viewpoints (q.v. Collcutt 1987; Stein 1987). These have focused on the internal character of archaeological deposits, and have tried to establish universal sedimentological rules which are applicable both to natural processes and those anthropogenic formation episodes which give rise to archaeological sites. For Harris and others, the interfaces *between* stratigraphic units are critical to their understanding, and sedimentological methodologies are inadequate to explain traces of complex human activity in the past (Brown III and Harris 1993; Fedele 1984). Carver (1990) has proposed an alternative system of presenting stratigraphic information, but this has been criticised for assigning differing degrees of importance to different stratigraphic units (Brown III and Harris 1993: 16-19). In its attempt to indicate the duration of deposits, structures, and interfaces, Carver's system is similar to the Dalland Matrix for post-excavation analysis and presentation (Dalland 1984; Lowe 1993). In these particular forms, such ideas are embellishments on the basic theme established by Harris, which still forms the basis of stratigraphic recording and presentation in most British excavation methodology.
"When the going gets weird, the weird turn pro." [4]

In 1975 the then new Department of Urban Archaeology (DUA) of London Museum instituted the first single-context recording system (Spence 1993: 25). This incorporated the then relatively new idea of pro-forma sheets or cards (Figures 1 and 2), which were filled in by the individual excavators for each different stratigraphic unit or context that they identified (Barker 1977; 1993). These soon were widely adopted throughout the discipline, on research as well as rescue projects.

These innovations were ideally suited to the professionalisation of archaeology that occurred in the late 1970s and the 1980s, as the volume of rescue excavation continued to grow (Hudson 1981). Work on site was made more efficient by the individual excavator becoming responsible for her/his own recording (Spence 1993), and on complex urban sites at least, the use of single-context planning negated the need to identify and record phases during excavation. This phasing work was increasingly relegated to the post-excavation stages of a project (Pearson and Williams 1993: 94-95). The number of people employed in rescue excavation continued to grow, partly as a result of Manpower Services Commission funded schemes, and excavation and recording methodologies became ever more systematised.

Preservation by record and the objective collection of data were the central tenets of 1970s and 1980s excavation methodology. To this end, recording sheets usually had two sections. In one, measurable attributes of a stratigraphic unit were recorded in detail, and in the other, these attributes were used to interpret the unit in question. This involved suggesting what human or natural actions formed the unit, what the duration or 'life' of the unit was, and how it was affected by subsequent human or natural processes. This basic dichotomy is still present on virtually all context sheets in use today.

Though subjectivity was acknowledged, the separation of objective recording and subjective interpretation was held to be essential to the archaeological discipline (Barker 1977; 1993: 159). The 'New Archaeology' of the period emphasised empirical enquiry, the goal of which was the identification of quantifiable patterns of human behaviour in the past (Bell 1990; Carver 1989). This was a reaction at the time to what was regarded as traditional archaeology (Shanks 1992) and an attempt to introduce rigorous methodology.
Many rescue archaeologists thought that information was still being lost, with inexperienced excavators recording less objective information. On-site interpretation was decreasing with increasing time pressures (Spence 1993: 34-40). For the DUA (now MoLAS -- Museum of London Archaeology Service), the introduction of specialist recording sheets for burials, coffins, stone and timber structures, in addition to the basic deposit/cut sheet, was an attempt to increase recorded information, and to try and standardise this recording process (ibid.). Keyword prompts were also put onto the new recording sheets, and greater space was made available for interpretative comment (Figure 3). Stratigraphic matrix boxes figured prominently on the front of these sheets.

Other archaeological units implemented similar changes, and a 1992 survey suggested that there were only three main recording systems in use in Britain (Hammer 1992). A few units still used the 'Feature' system, whereby stratigraphic units were grouped into features, which were then numbered and recorded separately on site. The two most influential systems however were those of the CEU (English Heritage's Central Excavation Unit -- now Central Archaeological Services), and the revised MoLAS sheets and accompanying manual (Spence 1990). These form the basis of most of the recording systems used by archaeological units today. Political and organisational changes in the 1990s have had a profound effect on archaeological methodology in Britain. The publication of the Department of the Environment's Planning Policy Guidance Note 16 (PPG16, 1990) and the concomitant burgeoning of contract-based competitively tendered archaeology has been of mixed blessing to most units. Whilst the volume of work they carry out has risen, competitive tendering has forced many to undertake this work in the minimum amount of
time and with fewer available resources for excavation, post-excavation analysis, and publication. Most archaeological reports have become terse statements of reductionist objectivity, written for developers, in the same dry style as engineering and other consultants' reports. The withdrawal of county council funding from most regional archaeology units and the gradual decline of central funding from bodies such as English Heritage have also contributed to this situation.

Professional archaeologists now find themselves being employed on very short-term contracts, or even on a weekly basis. Sick pay and leave entitlement are becoming rare, and there has probably been no discernible improvement in pay rates and conditions of service since 1990, whilst wages have fallen further behind inflation and other professions (Aitchison 1996; Howe 1995; Schaaf 1996; Spoerry 1997). Rather than driving pay up and improving conditions, competitive tendering and the introduction of PPG16 has placed archaeologists in a worse position than they were in 1990. The high turnover of personnel and the emphasis on cost efficiency in many contractual units can lead to excavators being regarded as little more than labourers whose opinions on site may be ignored by project managers. Some developers now regard the presence of archaeological deposits in a development area as a contaminant problem which archaeologists can solve by the quick, efficient and (always) cost-effective removal of this stratigraphy (Lucas, forthcoming). One recent study of archaeological assessment procedures has even gone so far as to use a medical metaphor to describe evaluation methodologies:

"A successful project is one in which a correct diagnosis is made. A comparison with the case of a potentially sick person visiting a doctor is apt: the success of the visit depends on the doctor correctly diagnosing the complaint and prescribing appropriate treatment, not on the severity of the condition itself. The metaphor is perhaps even more apposite if the process of diagnosis is considered. Simple common complaints can usually be recognised quickly and easily with a high degree of success, but there are more intractable cases where elaborate tests and analyses are needed before a diagnosis is reached" (Darvill, Burrow and Wildgust 1995: 8).

Does this mean that archaeological deposits should be considered as infected and diseased tissue, ultimately to be 'cured' or excised?

Modern management techniques have been widely adopted (Brooke 1995). English Heritage's Management of Archaeological Projects 2 (MAP2, 1991) was a valuable guide to the rational planning of excavation and post-excavation work, but it has been criticised by some as turning a discipline of research into
a series of flow diagrams and Gantt charts (Adams and Brooke 1995; Pryor 1995). The stratigraphic matrix and the recording sheets which were once so revolutionary have now become the tools of a new archaeological orthodoxy. As existing methodology becomes ever more systematised, standardised, and economised, there are fewer opportunities to experiment with new ideas and techniques. Fortunately, some individuals and organisations within British archaeology have managed (no pun intended) to do just this.

"It's coming from the feel that it ain't exactly real
Or it's real, but it ain't exactly there...." [5]

The development of post-processual theory has also been influential. People began to question the idea that there was one fixed 'true' past waiting to be discovered by the use of the correct methodology. Instead, it was suggested that personal, cultural, and political perspectives in the present influence the way that archaeologists interact with information (q.v. Bell 1990; Hodder 1986, 1992; Patrik 1985; Shanks and Tilley 1987). The metaphor commonly used has changed from that of a fixed archaeological record, to one of an archaeological text, open to differing interpretations by different individuals or groups. Of course, as a text may be written from biased perspectives, so selectivity and bias influences the formation of archaeological sites.

There has been continued debate concerning multivocality and relativism (q.v. Hodder 1989, 1992; Renfrew 1989; Shanks 1992; Shanks and Tilley 1987), but a consensus has perhaps emerged that archaeologists are not objective scientific observers and that archaeology does not comprise passive objectified entities (Adams 1991). Rather, archaeologists have a dialectical relationship with the material they study, and their accounts of the past move within hermeneutic spirals (Hodder 1992: 188-193), or even a fourfold hermeneutic (Shanks and Tilley 1987: 107-108). Archaeology may actively resist interpretation in the present (Tilley 1993: 8), as each successive era produces its own disparate frameworks of interpretation.

"Contexts include both the interpreting archaeologist(s) and the questions asked and entities existing in the archaeological record. These are always sliding and changing, never fixed or given since the context is decided upon by future or prior analytic intentional structures. In inserting artefacts into contexts we find ourselves in a hermeneutic circle which can never be completely described. Context is not just a matter of the artefact and its associations on a site, within a region, etc; it is also a matter of history -- of interpretative context, of a dialectical relationship between the archaeologist and that studied. Archaeological contexts are always changing temporally in accordance with
how they are framed by disciplinary codes for producing knowledge" (ibid. 1993: 9).

Whilst these debates have examined the relationship between archaeologists, the material they study and the ways in which this material is interrogated and presented, the gap between problem-orientated, theoretically informed research projects and development-led, data-gathering rescue excavation has continued to grow (Tilley 1989b). Nevertheless, post-processual ideas have gradually begun to percolate out of the universities and into the wider discipline. Social theory, new ideas of complexity emerging in science, and the rethinking of management approaches are being used critically by archaeologists to re-examine excavation methodologies.

"Entropy's worst enemy is life itself." [6]

Although grounded in processual archaeology, studies of formation processes on archaeological sites (Kristiansen 1985; Schiffer 1987) have demonstrated that these processes may be complex and unpredictable using deterministic laws (Adams and Brooke 1995: 94). Blurred stratigraphic interfaces, perceived differences and similarities between stratigraphic units and the scale at which physical attributes are noted are all issues that challenge existing notions of the formation, recording, and interpretation of archaeological sites (Adams 1992; Clark and Hutcheson 1993; Lucas forthcoming; Matthews 1993). The extent to which archaeologists objectify stratigraphic units and de-temporalise them has been examined (Lucas, forthcoming), whilst the inferential, subjective, and autobiographic nature of on-site recording and interpretation has also been explored (Adams 1991; Barham. n.d.; Barrett 1995; Tilley 1989b, 1993).

With regard to contract archaeology, the use of artefacts for producing dating evidence alone rather than contextual information has been heavily criticised (Blinkhorn 1994; Blinkhorn and Cumberpatch, in press; Brown 1993; Roskams 1992). The recording of artefact distribution within or between stratigraphic units has been investigated (Lucas, forthcoming). The dominant antiquarian-derived approach of categorising artefacts according to material type and perceived intrinsic value has also been questioned (Connolly 1996; Cumberpatch and Dunkley 1996; Tilley 1989a). Our modern notions of what constitutes a 'small' or 'special' find, for example, are of little value when trying to understand the contextual and social meanings that these objects had in the past.

The development of soil micromorphology may have important repercussions. It can detect human and natural processes that contribute to site formation, but
which are unlikely to be recognised by more traditional approaches (Courty, Goldberg and Macphail 1989; Davidson, Carter and Quine 1992), such as manuring and stalling activity, and arable or pastoral land use. The presence of midden spreads and organic material such as wood and grass ash, charcoal, bone, and human faeces may also be ascertained by micromorphology (Dalwood 1992; Matthews et al. 1997), which is capable of much finer resolution than conventional sampling procedures.

Perhaps rather ironically for a potentially positivist scientific technique, micromorphology's major impact on archaeological excavations may be to undermine present definitions of stratigraphic units and their boundaries (Hodder 1997: 695; Lucas, forthcoming). Archaeology has long used the small scale to re-examine larger wholes, and this is fundamental to complexity theories which are emerging in physics and chemistry, as well as biological and social sciences (Lewin 1993). Some of these ideas are closely linked to deterministic systems theory and thus inappropriate for any archaeology which seeks to understand ambiguity, subjectivity, the particular, and the unfamiliar. However, the emphasis of much complexity theory on chaotic, non-linear dynamics may have important bearing on archaeological formation processes and excavation methodology. Human activity in the past and archaeological actions in the present could be seen as linked dynamic processes which interact with one another in many varying recursive combinations.

The dry, positivist, and compartmentalised archaeological reports currently being produced might be greatly enhanced by much fuller integration of artefactual, contextual, and visual information within the text, and by the return of some form of personalised, humanised narrative (Downes and Richards 1995; Hamilton 1996; Hodder 1992; Shanks 1992; Tilley 1989b, 1993), one which acknowledges complexity and multivocality. The use of new multimedia technologies such as CD-ROM and hypertext (Hodder 1997: 698; Tringham 1996) may allow for more non-linear, interactive texts to be produced, though the potential of these technologies is only just becoming apparent. There have also been proposals to rethink radically the way that excavation projects are structured and managed (Adams and Brooke 1995; Johnston 1994; Owen and Steane 1993), to empower individuals and project teams more by harnessing their subjective approaches and to encourage self-reflexive strategies.

Towards a (more) reflexive excavation methodology?

It is curious that Hodder does not deal with some of these recent developments within the discipline, for it would have placed his paper firmly within the arena of recent debate. As in earlier work (1992), he explores the basic contradiction
at the heart of excavation methodology -- the conflict between objective recording and subjective interpretation (Hodder 1997: 691-693). It is to be regretted, however, that he chose Joukowsky's *A Complete Manual of Field Archaeology* (1980) with which to make his point. This publication is at best wildly idiosyncratic, and Joukowsky's excavation techniques (e.g., 1980: 172-183) and understanding of stratigraphy (e.g., ibid.: 150-156) are extremely dated, but this book is very much a product of her background and times. Similarly, using Barker's 1977 book as a basis for discussion may also be seen as setting up a straw person to criticise. It would have been much more productive if he had critically engaged with the contemporary, theoretically informed perspectives outlined above. His calls for multivocality and the foregrounding of interpretation are indeed interesting, but other workers have advanced such ideas too (Adams 1991; Adams and Brooke 1995; Shanks 1992; Tilley 1993). By omitting some of the major changes that have affected archaeological practice in Britain in recent years, such as the introduction of PPG16, MAP2, and competitive tendering, he is in danger of being regarded by some within the discipline as out of touch with contemporary archaeological realities. To be fair, he is concerned primarily with illustrating how experiments at Çatalhöyük in Turkey are progressing. Nevertheless, few people within modern archaeology are fortunate enough to be working on a large, relatively well funded multidisciplinary research project such as Çatalhöyük, where ideas can be tested and developed after discussion and debate in a comparatively open forum. Without linking his concepts to archaeological practice as a whole, Hodder's paper may be seen by some as strangely remote.

Hodder's paper does, however, advance cogent ideas regarding new technologies and their potential for transforming the ways archaeologists operate on and off site. The interactive possibilities offered by the multivocal perspectives and the computer database at Çatalhöyük are exciting, although it will be some time before this technology is available to many projects. He is also concerned with breaking down the traditional barriers between field and laboratory staff, non-specialist and specialist (Hodder 1997: 699). This is indeed a laudable aim, but one which requires radical changes to the management and hierarchy structures within contemporary archaeology (Adams and Brooke 1995: 102-103; Johnston 1994). Merely having more 'field' staff who are 'specialists' and 'specialists' who work on site is not enough, for this has important ramifications for pay and conditions of work. His article does not explore the full implications of this.
Although the input of film crews, anthropologists and specialists to on-site excavation at Çatalhöyük has made an important contribution to the recent excavations, these are all essentially 'top down' approaches, practicable for the time being only on larger projects. Similarly, whilst Çatalhöyük project members can contribute to electronic diaries (Hodder 1997: 696) and group discussions, these are still not applicable to most sites in Britain. What are needed are more structured means by which the individual excavator can advance her/his personalised, subjective experiences. Academic and contract archaeologists alike have shied away from examining the on-site dialectic between excavator and stratigraphy, between present and past (Tilley 1993: 8) - - the so called 'trowel's edge' (Hodder 1997: 693).

The aim of a truly reflexive excavation methodology must surely be to put the individual archaeologist at the forefront of a recursive, interactive web of interpretation and discussion. Only such 'ground up' approaches will be effective and have the most chance of being experimented with, for the real challenge will be to pursue these suggestions within the context of developer-funded archaeology, or on smaller-scale evaluation or research projects. One way to do this may be to rethink those two canons of contemporary excavation -- the stratigraphic matrix and the context sheet.

**Beyond two dimensions: fuzzy thinking [7] and the stratigraphic matrix.**

The Harris matrix was originally intended to be an interpretative tool, and extensions of the basic idea were welcomed (Harris 1989: 148-149). Although some development work has taken place (q.v. Dalland 1984; Harris, Brown III and Brown 1993), there has been little critical analysis of the matrix, and its use has now become so universal that some archaeologists appear to have forgotten its original purpose. The stratigraphic matrix now is the archaeological site; it has ceased to be an aid to interpretation altogether, and has become a rather
arcane representation of the entire process of excavation. Some archaeologists talk about the large size of their matrix as if this information alone is enough to suggest the richness and the complexity of the archaeology they have been encountering. Interestingly enough, such meanings are often tacitly understood, which again suggests that matrices have become iconified.

Many contractual units have dispensed altogether with the recording of physical relationships between stratigraphic units, and stratigraphic relationships are often the only contextual information noted on recording sheets. In its present guise, therefore, the Harris matrix is a highly systematised, codified, and topological display (Adams 1992: 13), one which objectifies stratigraphic units and deprives them of their own individual temporality (Lucas, forthcoming). The often bewildering and enigmatic variety of human and natural relationships which give rise to the formation of archaeological deposits are thus reduced to an essentially static format.

A matrix gives little sense of human activity, both in the past and in the present. Surely though, it is this activity that we as archaeologists are seeking to investigate and (perhaps) understand. The Harris matrix is effectively a two-dimensional representation of a much more complicated four- or five-dimensional hermeneutic into which three-dimensional archaeological deposits, time (both linear diachronic time and non-linear time), past actors and the excavators in the present are inextricably woven. Whilst the basic problem of matrix two-dimensionality may always remain, any reflexive methodology must try and overcome the existing limitations of the format and restore the matrix as a valuable heuristic device.

Dalland's aim (Dalland 1984; Lowe 1993) of adding a temporal dimension to the matrix as a whole was clearly laudable, as was Carver's (1990) somewhat confusing attempt to do this for individual stratigraphic units. Others are working along similar lines to express continuity and change at both the individual unit and site level (Lucas, forthcoming). The land use diagrams which are frequently employed during post-excavation are also a means of expressing some of these concerns. However, if we accept that stratigraphic units are archaeologically visible products of human activity in the past, then it may be that archaeologically invisible actions also need to be recorded on matrices in some manner. Most archaeologically recovered floors were cleaned during their use, for example, yet this activity rarely is explicitly recorded.

At Çatalhöyük during the 1997 season, we excavated a burial which had totally recut and removed an earlier primary burial; disarticulated elements from the original skeleton were redeposited with the second skeleton in the recut burial
pit. The partially articulated remains of the original skeleton were also redepsoited on top of the second skeleton. We wanted to show this sequence of activity on the matrix, and we therefore thought it was necessary to create 'ghost' contexts representing the original burial pit, though little trace of this survived.

Some may not agree with this approach, for this means adding explicitly interpretative information to what many regard as an objective record. As other workers have done with different context types (e.g., Harris, Brown III and Brown 1993), this extra interpretative information could be coded onto the matrix in a different manner to the main stratigraphic elements, or it could be recorded on a different set of matrixes altogether, which would perhaps be similar to the trait or attribute matrixes advocated by Adams (1991; 1992). These could allow all the archaeologists on site to have an important role in the generation of interpretational ideas which are normally reserved for post-excavation work carried out by the site's supervisors and director.

Archaeologists must embrace the idea that sites do not always obey the stratigraphic rules established by Harris, and we have all come across such stratigraphic conundrums from time to time: fills that build up in much earlier capped drains for instance, or pits that are dug through deposits whilst the latter are still forming (Matthews 1993). Rather than being regarded in a negative manner as problematic, these instances of 'fuzzy' stratigraphy should be seen as illustrating the dynamic nature of archaeological sites. Matrixes should be adapted and transformed to meet such challenges, and it may be necessary to supplement the stratigraphic matrix with other forms of graphic display (Adams 1992; Lucas, forthcoming). The new technology is also likely to play a significant role in the formulation and presentation of such interpretative tools.


The basic layout of these has altered little in the last ten years. For larger contract units, the sheer volume of work and the requirements of their substantial computer-based archives often mean that habitual overhauls of their context recording sheets are impractical. With smaller units, it is often easier to discuss and implement such changes on a more routine basis. It is singularly important that those who use the recording sheets should have influence over their design.

Figure 6 shows one mock-up sheet from a recording system that I am currently devising with members of the Archaeological Research and Consultancy at the University of Sheffield (ARCUS). This is not a final version and will be subject
to further changes before it is used. Indeed, I hope that there will be no 'finished' sheets at all, but rather an electronic version that can be altered to meet the requirements of different excavations and the changing needs of the unit itself. I make no claim to any real originality, but nonetheless, it is an attempt to incorporate some of the recent thinking about on-site recording, albeit within a traditional format which repeats the contradictory objective/subjective dichotomy.

The layout is based partly on the 1990 MoLAS sheets and those used since 1991 by the now disbanded South Yorkshire Archaeology Unit (Cumberpatch and Dunkley 1996: 6), sheets which themselves went through further group-discussed changes before this organisation was shut down. Separate sheets for deposits/fills and cuts/truncations are also not a new idea, but with the increased contextual information required of excavators a combined deposit/cut sheet is becoming inadequate. Other specialised sheets will be added in a similar manner to the MoLAS system.

The return of recording physical relationships in addition to stratigraphic ones is a response to discussions with finds specialists, who sometimes have to consult many single context plans to retrieve information about the physical contact between deposits, vital to understanding patterns of discard on site (Cumberpatch, pers. comm.). On the back of the sheet, free text, and numbered characteristics allow an excavator to record some of the subjective elements of their work on that stratigraphic unit, including its perceived inference potential (cf. Adams 1991). It is intended that this knowledge be used to build up 'excavation biographies' for the stratigraphic units and the archaeologists working on them. Together with additional finds information, the results from this would then be used to provide a thicker description (Geertz 1973: 9-10) of the excavation, and to inform further work on that site and future projects.

A more radical departure from recording convention is represented by the context sheet of the Archaeological Service of the University of Durham (Figure 7). By using a variety of icons and numerical codes, it also tries to incorporate some of the
subjective elements of excavation and recording. Space precludes an explanation of the meanings of all these icons, but they are concerned with observations on the characteristics of interfaces, material in deposits, and formation processes, in addition to assessments of on-site inferences and quality of information (Adams and Brooke 1995: 102). Both the icons and their associated numerical values are designed to produce a unique combination of characteristics for each stratigraphic unit. Different types of units, different sites, and different excavators may all produce clustering of traits.

I was initially suspicious of Adams's numerical analyses, if only because there could be a danger of seeking to quantify the essentially unquantifiable. However, these traits should in themselves be chaotic phenomena, as, though clustering may emerge, this cannot be predetermined or predicted (Adams, pers. comm.). Whether one agrees with this or not, this sheet's emphasis on the subjective dynamics of stratigraphy and excavation make this an interesting alternative to standard on-site recording. It is this sort of experimentation which should be encouraged within British archaeology.

"I simply forgot that the edge of chaos was an interesting place to be." [11]

Hodder is one of many now proposing the development of reflexive, recursive excavation methodologies. Whilst research excavations can function as ongoing interpretative experiments for the development of ideas (Tilley 1989b: 277), there must come a time when these techniques should be tested by many different people in the wider discipline, otherwise the rescue/research schism will persist. If our aim as archaeologists is the construction of history (Barrett 1995), or even histories, then research should influence how and where we excavate to a much greater extent than at present (Biddle 1994). How this could be achieved in an environment of developer funding and competitive tendering is more problematic, but perhaps some of the money currently being brought into archaeology by developer funding could be invested at a national level in such research programmes (Carver 1989; Graves-Brown 1997).

More reflexive excavation methodologies will not be possible, however, until there are substantial changes in the way that projects and units are managed, and individual archaeologists encouraged and empowered. For better or for worse, archaeology is now a heavily professionalised discipline. Any empowerment will therefore only become possible once archaeological unit managers, developers, and bodies such as the Institute of Field Archaeologists recognise that archaeologists are already a highly skilled, highly motivated workforce. Most archaeological excavators now have degrees or other formal training, and routinely employ a wide variety of technical skills,
many, like surveying, being highly valued in other professions. They thus
deserve to be treated like other skilled professionals, such as engineers and
surveyors. This will not happen while pay and conditions are still poor
(Aitchison 1996; Schaaf 1996; Spoerry 1997), and there is a continuous exodus
of experienced people from the discipline.

The theoretical and methodological ideas needed for a more reflexive
archaeology in Britain will not be enough in themselves unless those within the
discipline feel that they are valued team members (Adams and Brooke 1995:
Archaeology should be intellectually challenging, personally rewarding, and
fun. Recognition of the dynamic, complex nature of stratigraphy, human action
in the past and archaeological excavations in the present could be a means of
restoring these three characteristics to a unique discipline.

"We must remember that at bottom the generalisations of science or, in
common parlance, the laws of nature are merely hypotheses devised to explain
that ever-shifting phantasmagoria of thought which we dignify with the high-
sounding names of the world and the universe." [12]

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used in evidence against them!

NOTES

BIBLIOGRAPHY

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Notes.
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2. Popular excavation song (anon.).
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3. I use the plural deliberately, for what is normally related are the lives and careers of a few great men (q.v. Daniel and Chippindale 1989). Apart from Jacquetta Hawkes, Kathleen Kenyon, and a few other well known figures, the majority of women from archaeology's 'Golden Age' are largely invisible in the literature, despite the fact that the great men themselves often depended on the work of wives or female assistants on their projects. (For one recent exception to this, though, see Allesbrook and Allesbrook. 1992. *Born To Rebel. The Life Of Harriet Boyd Hawes*. Oxford: Oxbow Books.). The biographies and histories of the numerous workers who laboured on these projects are similarly obscured.
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8. Usually male archaeologists, and I have been guilty of this myself. Far be it from me to lapse into cheap Freudianism however!
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9. At least this will always be the case for the written record anyway. Computer graphics may be a means to explore further representational possibilities (see Alvey 1993; Forte and Siliotti 1997; Hodder 1997).
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Bibliography.


**About the author**

Adrian Chadwick graduated from the University of Sheffield with a degree in archaeology and spent six years working as a contract archaeologist on urban and rural projects in Britain and abroad. He worked at Çatalhöyük during the 1997 season and is currently attempting to finish a master's degree in Landscape Archaeology at Sheffield.