Much difficulty. But, in my innocence, I thought it would be a question of making lists, and that some sort of system would be needed for recording information and balancing acts which would take much time to explain. So I might either make use of a system, which had come into existence to begin with, or make up a system for myself. Dubious about my abilities, I began to make enquiries about systems already in use.

An account of these enquiries could easily be the subject of a paper in itself. Sufficient to say that every Inventory, Survey or Record, which I looked at, differed markedly from every other one: all had their good points and some were outstanding, but none had a very high proportion of the total of desirable features, which I collected in the course of my travels (Benson, 1972; Emery, 1972; Sheppard, 1972). I hope that that remark does not sound ungrateful, because the people concerned with these projects were unfailingly kind and devoted hours to explaining the details of their activities and to answering my letters. Their helpfulness and interest have been most encouraging during the past year (see Acknowledgments).

Faced with the alternatives of making use of the most suitable of the systems already in operation, despite its apparent defects, and setting up yet another new system, I chose the latter, for this reason: it occurred to me that the fulfilment of my original need for a generally applicable system, available for use by any group which might be persuaded to start work on an inventory of their area, might bring benefits which would far outweigh the trouble involved. These benefits would not be limited to the direct contribution which the establishment of such a system would make towards reducing the Ortsels in Archaeology; my train of thought took me a long way on from there. For a generally applicable system might one day become generally applied: a series of local inventories might one day become a national inventory: a national archaeological index was on the cards - if the cards were properly designed. This thought brought me back to earth.

**System design**

The design of the system has proved much more difficult and taken much longer than expected. The result so far is a mass of delicate compromises, balancing acts which would take much time to explain. It is only possible here to outline the basic requirements, as I see them, and then describe briefly the system intended to satisfy them, as it stands at present. I am aware that I have not yet solved all the problems - there may indeed be some of which I am not yet conscious. The system is still very much in the prototype stage and improvements are being actively sought. Suggestions for changes will be gratefully received. For I must also make it clear that much of the system is as yet untried in practice; I will try to indicate this as I proceed with the description of it.

The requirements of the system, then, appear to me to be as follows:

1. **It must be applicable, without restriction as to period or region to all remains, which are known or thought to exist or to have existed, of human activities which are no longer current.**

2. **It must tend to locate the most reliable sources of information about such remains and**
permit the recording of the principal conclusions from these sources.

3. The records must be amenable to constant correction and expansion throughout the foreseeable future. An inventory should not be conceived as a finite project with a possible completion-date.

4. The compilation and maintenance of the inventory must not require more than a minimum of training; the time required for these tasks is of secondary importance, due to the use of the cheapest possible form of labour and the open-ended nature of the project.

5. Access to the records and obtaining information from them must be quick and easy for the following groups of users:
   a. Those working on the compilation and maintenance of the records.
   b. Those concerned with land use: conservationists, planners and developers.
   c. Those involved in archaeological research, both locally and further afield.

To describe the system intended to satisfy these criteria, I shall deal briefly with territories and workers, before turning to the records themselves.

Territories

Territories must be clearly defined, in order to ensure that no areas are inadvertently left uncovered. For this purpose, there is, as a basis at least, no practicable alternative to the administrative areas of national and local government: the County, the District and the Civil Parish and its urban equivalent, the Electoral Ward. In addition to these the scheme calls for another unit, consisting of three to five districts, i.e. between a third and a fifth of an average-sized county, which I shall refer to as an Area.

Workers

The labour force, as I have said several times, is to be recruited mainly from among those who are or may be prepared to work in their spare time for other reasons than financial gain. To obtain and retain their services is more difficult than it would be if the workers were to be paid wages or a salary, but the difficulties are greater only in degree; to obtain the quality of work required by an Inventory, it would be necessary, in any case, to offer a good deal more than just money. Other inducements are needed such as
   a) the pleasure of activities suited to the individual's abilities and inclinations;
   b) the satisfactions provided by concrete results of work involving individual responsibility;
   c) the reassurance derived from participation in a group able to provide the resources which are needed to back up individual efforts;
   d) the sense of fulfilling a duty to the community as a whole.

For the compilation and maintenance of a local inventory, workers would be required in the following categories, which need not, of course, be rigidly applied, although I feel that each volunteer should have a primary responsibility for a particular activity:

1. Field-workers or, as I prefer to call them in the context of this scheme, Surveyors: It is intended that each of these should be responsible for a particular Parish or Ward, preferably that in which he or she lives, but that this responsibility should be shared with an assistant, to ensure continuity in case either should leave the district, lose interest or die. Abnormally large or small Parishes and Wards might be combined or subdivided.

The other categories would probably function best on an Area basis:

2. Readers, working at home, in Libraries or other archives.

3. Museum Visitors, who would also investigate private collections.

4. Clerks, whose functions will become clear when we turn to consideration of the Records.

5. A Secretary.

Ideally the Secretary would not be a volunteer. Someone is needed to do the jobs, which can't be fitted into the spare time available to the normal volunteer, such as those which can only be done in office-hours or which necessitate journeys to London or other centres distant from the locality of the Inventory. These include consulting different archives, seeking advice from experts and dealing with local authorities, land-owners' representatives, developers, contractors and so on. Someone is also needed to co-ordinate the work of the volunteers. For both these purposes, a person with something more than a minimum of training and experience is needed, and also one free to devote most of his or her time to the Inventory. Ideally, then, both functions would be undertaken by one person on a full-time, paid basis. The obvious source of the necessary finance is the local authority; indeed, the job-specification, which is emerging and which will become clearer as I continue, seems close to that which should be laid down for the Archaeological Officers now being appointed by the more enlightened local authorities. Judging by schemes which are already in operation, however, it looks as though a County would be too large an area for one person to look after on this basis, while a full-time salary would probably impose too heavy a burden on the rates, if it were drawn wholly from those of one District. It would seem, therefore, that the right territory for a Secretary to administer is an Area.

Now, although an Area is of a convenient size for many of the needs of this scheme, it is not a generally recognised unit, as the District will become in 1974. And the size of a District also has advantages: for one thing, it is suitable both geographically and in respect of the number of volunteers likely to be needed (two to three dozen) for the arrangement of regular meetings to discuss Inventory business. For these reasons, the District has been chosen as the basic unit of the project;

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The ideal Area would consist of an urban District and the neighbouring rural ones; this would allow some transfer of resources to sparsely populated bits of country, where it might be difficult to recruit sufficient volunteers. Material preserved in Museums and archives is unlikely to be restricted to one District; Readers and Visitors would usually work on an Area basis and in close co-operation with neighbouring Areas. And, as the Secretary would find it easier if all the master records and other paperwork were maintained in one place, so Clerks would normally be Area people too.

Having told you something of the proposed geographical and organizational framework of the scheme, I will now show you the picture which it is meant to support (Figure 1). The form of record, which appears to satisfy best the requirements described earlier, is a card suitable for duplication of some other sort of means of reproduction. As can be seen from Figure 1, the record card refers not to a site in the conventional sense (if this sense is definable), but to yet another unit of area—the hectare or 100m square of the National Grid. The subject of the card is further defined by period. One object of using the Grid Hectare is to provide the Volunteer Surveyor with an instant yet permanent means of referring to a new discovery, without imposing on him or her either the need to decide whether the new discovery forms a new site or merely part of one already known (which would conflict with the requirement for minimum training) or the obligation to refer to higher authority before completing a card and adding it to the inventory. The true beauty of using the Grid Hectare cards, however, lies in their ease of reference. To make this clear, I must explain how the Card Number is read, particularly where the Grid Numbers are concerned. In the case of Figure 1 the full reference is as follows: 0 for the County of Dorset; Bo for the District of Bournemouth; Wi for Winton Ward. Then 73 for the km square and 98 for the hectare. This is followed by Ne for Neolithic, the purpose of defining the period being to increase the space available for records when the remains of several periods are found in one hectare, without introducing the problems of continuation cards. Finally the full reference includes the date of issue of the card, to distinguish it from earlier and later versions. Use of the hectare Reference in this fashion instead of the way now customary (complete eastings followed by complete northings) means that all the cards for the same km square are grouped together when the cards are arranged in Grid Reference order, a convenience in itself, but most valuable in the case of large and ill-located sites, as I shall show. It also means that maps may be dispensed with except as supporting documents. Although suitably annotated maps are far and away the best means of geographical reference, the difficulty and expense of reproducing them and of keeping such reproductions to date makes it impracticable to use them as part of the fundamental records of a system, which calls for distribution of these records (as this one does). The cards may also be referred to simply by the whole Grid Reference, by Feature Index Number, which I shall explain shortly, by Period, by name, or by a combination of these, depending on the preference of the user.

The back of the card (shown in the upper half of Figure 1) is also intended to be self-explanatory, though I shall say a little more about the entry 'Feature Cards Punched' later. Another alteration is contemplated here: the transfer of information about sources and collections from the front to the back of the card, since experience has shown that, sources and collections being all too often unpublised, the same entry must be frequently made on both sides of the card. At the same time, the lower part of the back of the card will be arranged in the way at present used on the front, i.e. with a lettered list of headings, including references, collections, availability of photographs etc., and space below for correspondingly lettered entries (see upper half of Figure 6).

Sites, of course, do not always fit neatly into grid hectares; even small ones may lie at the point where four hectares meet. In such cases, a card must be made out for each hectare to provide an answer for the user who needs to know whether anything of archaeological interest has been found in any one of them. However, to save a lot of repetition, the complete information is entered only on the south-western Card, which would be the front one, when the cards are arranged in hectare reference order. This card will show the numbers of other hectares as 'subsidiary cards' under Heading A. The subsidiary cards are completed only as far as the first item of Heading B, which consists simply of the Reference Number of the south-western Card, unless there is some feature of the site peculiar to one of the subsidiary hectares, in which case the details will be entered on that subsidiary card.

This method, if employed for all large sites, would necessitate the production of large numbers of cards bearing little or no information. To avoid such waste, sites impinging on more than four hectares are recorded on what are known as A-cards (Figure 2). These are given reference numbers in the same way as the ordinary cards up to and including grid numbers for the appropriate km square, which are followed by a letter A and a single figure, a letter B being used if more than 10 A-cards are required for one km square and so on. A-cards, as can be seen, bear the numbers of the hectares over which the site lies, but subsidiary cards are not made out for these, unless there is the case with many in this example, information peculiar to a particular hectare is known. The fact that cards are not made out for all subsidiary hectares, complicates slightly the task of the user: to find out whether any particular information is recorded about a particular hectare, it is necessary not only to search all the A-cards for the relevant km square, but to search the number of the hectare. In practice this should not prove very burdensome, as there will seldom be more than two or three A-cards to a km
Field: C. Garner On: 1/1/73 Card No.
Checks: By: On: 7/19/73

Feature Cards punched:
Winton, Neolithic, Flint, Implements, Published, Red House Museum, Bagshot Beds, Development proposed.

Distribution of this card:
Plans and drawings
Photographs (b & w)
Aerial photographs

Bournemouth Central Library (Vertical).

Slides

Availability of unpublished material

District Inventory Address: Bournemouth Central (Reference) Library. Tel. Bournemouth 26603.

Card No: Card No. entries below (those after colon in right-hand col.): Feature
Co: Dist: Ph/Card: Do Bo Wi E. Land use, vegtn.: last check
100m Nat. { / / 9/7 0/0
Site ref. { / / 8/3 5/9
Period: No 2/73
Date of issue: 2/73
Entries below (those after colon in right-hand col.): Feature
A. Type of site, name, location: E. Land use, vegtn.: last check

A. Chance find.
B. Fine rhomboidal flint lance-head, 13.1 cm long, found July 1927
C. On surface, in slight hollow of plateau c 43 m OD.
D. Bagshot Beds.
E. Unstratified road, overgrown.
F. Road may be made up and widened as part of proposed Route 12.
G. Bournemouth Corporation.
H. Public highway.
I. Check progress of road proposals.

Figure 1
Record card for a 'simple' site. The lower half of the figure is the front of the card, the upper half the back.

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Another point to note on Figure 2 is that the site in question actually impinges on four km squares, one of which is the south-western one. The A-cards for the other km squares are treated in the same way as ordinary subsidiary cards. It would, in theory, be possible to extend this method to cope with sites covering many square kilometres, but this does not seem worthwhile.

Figure 3 shows a subsidiary card bearing information peculiar to its hectare and, in entry B (general information about the site), the number of the A-card to which it is subsidiary. This is the number of the hectare card in which the hectare lies, which would bear no information about the site under consideration. Large sites which transgress Parish or Ward boundaries are treated, as far as this method is concerned, as two (or more) separate sites.

Another sort of 'awkward site' is one which cannot be accurately located (Figure 4). The method of dealing with this type of site is similar to that used for large sites, except that letters from Q onwards are used in the reference number instead of the letters from the beginning of the alphabet.

The way in which cards are prepared for typing is illustrated on Figure 5. A draft card in pencil is prepared by a Clerk from information received from the Parish or Ward Surveyors for checking in the field and against their fund of local knowledge. Sometimes information about a new site will be received from the Surveyors themselves, already entered on a card, which will be given to a Reader or Visitor for checking of references or collections. The card is returned to the Area Clerks and the entries for the Area Index are then made (Figure 1). The Area Index is kept on Feature Cards on which are printed, 10,000 spaces, each of which is reserved to a hectare. If the Hectare Reference Number were to be used for indexing, a set of Feature Cards would only suffice for a 10km square of the National Grid. This would make the Index unduly cumbersome; hence the need for a Feature Index Number on the front of the card. This is simply the 'next unused number' and is applied by the Clerk, when first indexing a new card which bears information. All such cards have separate numbers, including cards for different periods on the same hectare and subsidiary cards, but subsidiary cards which bear information to that on the south-western card are not indexed. It can be seen for the entry for 'Feature Cards Punched' (Figure 1) which is completed as the indexing is done, which Feature Cards have been punched in respect of this Hectare Card. This entry not only enables checks on indexing to be made, but allows other users to maintain their own indexes - and to point out where features have been omitted.

There is another problem in indexing the cards, which I have not been able to overcome as easily as the problem of numbering. This occurs when a user wishes to count the number of times a particular feature occurs in a District or other area. The index will tell the user quickly enough how many hectares there are in which barrows, for instance, are found. But there may be three or four barrows in one hectare and this the Feature Cards will not reveal, unless separate Feature Cards are kept for hectares with two barrows, hectares with three barrows and so on, which seems a bit cumbersome, especially if flint implements are to be counted instead of barrows. At present it is hoped that no such requests will be required or that users will be prepared to go through the cards for such details. Counts of this nature are bound to be unrealistic anyway.

Once the entries for distribution have been made, the cards are typed out on a sheet on which both front and back of the card are printed, as in Figure 1. The information on the lined parts of the card is actually typed on a separate sheet of plain paper, cut out and glued under the lines, which would make the text difficult to type neatly and harder still to read. From the master thus produced stencils are cut; copies of the cards are then duplicated. It is intended that they should be issued ten times a year in batches of 50 or so for each Area, together with lists of new abbreviations and index numbers and a covering newsletter. Some of these packages may be sold, many will be given away to volunteers, local libraries, museums, and other bodies listed under distribution, while a few will be smuggled into the offices of recalcitrant local authorities.

And, one day, a set may be coded for computer input.

One set of Feature Cards can, as we have seen, provide an index for up to 10,000 items, in this case, Hectare Cards. If one wishes to index up to 20,000 items it must have two sets of Feature Cards, and so on. Furthermore, the more items one is dealing with, the greater the detail required: if one is looking for coins of a particular Roman Emperor, it is not too difficult to look through the cards indicated for Roman coins in a particular district; it is a very different matter if one wants the answer for the country as a whole. In fact, there is a level at which the combination of numbers of sites and the salary levels of researchers makes it cheaper to put the information into a computer than on to feature cards. From the findings of my 'survey of Surveyors', it seems that this critical point will occur somewhere about County level, with a number of sites of the order of 50,000. To put that another way, one set of Feature Cards should suffice for an Area administered by a Secretary and it would be feasible to use the Feature Cards for all such areas in a County as a County Index.

Supply of record cards

Record cards, on either card or paper, both of size A5 and 8vo, punched for standard loose-leaf binding if required, and Source sheets, both of size A4 and 4to, are available for anyone who wishes to make use of them. A handbook is also in course of preparation. Further information and prices may be obtained from:

PAST, 8a, Queen's Park West Drive, Bournemouth BH6 9BY (Tel. 36540).

Computer work

 Provision has been made in a small way on the record cards for computerisation - the 80 numbered spaces on the two lines at the foot of the front side of the cards (Figures 1-6). I must confess that the purpose of these is principally to show that I have thought about computers - it is certainly not possible to make use of them at present except as useful additional space for drafting purposes. However, I will explain, for what it is worth, that there are indeed needed to allow the encoding of informa-
Figure 2

Archaeological Card (A5/Svo: 1972): PATZ, 8a Queen's Park West Drive, Bournemouth BH8 3NH. (Tel. 0202 35840).

Figure 3

Archaeological Card (A5/Svo: 1972): PATZ, 8a Queen's Park West Drive, Bournemouth BH8 3NH. (Tel. 0202 35840).

Record card for a 'large' site (A-card)
Card No: 100m Nat. {8} Grid sq./ 023689 Site ref: 1/ Entries below (those after colon in right-hand col.):
A. Type of site, name, location: Chance find Nuni Road
B. Subsidiary cards (large site): A. Sources: b. Collections.
C. Feature Index No.: Plateau c 35 m OD.
D. Plateau Gravel.
E. Land use, vegtn.: Residential on C19 heathland.
F. Protection: Check B.a.ii and b.
G. H. Occupier: date.
H. Owner: date.
I. Action required: Reader/Surveyor, date of report.

Entries below (those after colon in right-hand col.):
A. Type of site, name, location: 7. Buildings
C. Feature Index No.: Plateau Village
D. Plateau Gravel.
E. Land use, vegtn.: Residential
F. Protection: H. Multiple
G. H. Occupier: date.
H. Owner: date.

Figure 4
Record card for an ill-located site (Q-card)

Figure 5
Draft record card, with field worker's comments
Figure 6
Revised version of record card.
The lower half of the figure is the front of the card, the upper half the back.
Information on the Districts of

Source (author's name and title of book or article/description of collection/name of informant):

Publisher/Journal/Museum/Address:

Publication or other general date: Date recorded:

<table>
<thead>
<tr>
<th>Page/Accession/Item No.</th>
<th>Information (Where appropriate, 'entry-letters' from the Record Cards are used, District Hectare or National Grid Reference and Period being quoted under entry 'A', insofar as they are known).</th>
<th>Further refs. &amp; material (see over)</th>
</tr>
</thead>
</table>

......continued to bottom of A4 sheet and overleaf to middle of back

Figure 7
Front of standard form for recording information from sources (source sheet)

Further references and other material

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Author's name and title of book or article/description of collection/name of informant.</th>
<th>Publisher/Journal/Museum/Address</th>
<th>Date</th>
<th>Page No. etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contributor's name and address:

Figure 8
Back of source sheet
tion by the local volunteers. Once the labour of
coding has been thus economically completed, the
card - bearing both the code and the information
needed for checking it - would be despatched to a
regional or national centre for transfer of the
code to punched cards or tape.

I understand that coded input is going out of
favour at present for this sort of purpose.
However, it seems to me that it would offer impor-
tant advantages for this particular scheme: first,
it would offer economies on the computer side - in
operators' time, programming and memory-space; more
fundamentally, the national code, which would be
needed, would impose a valuable discipline on those
compiling and maintaining the Inventories - and it
might effect a much-needed tidying-up of archaeo-
logical terminology. The institution of such a
national code would, of course, be an immense task
and one requiring the authority and resources of an
organisation of national standing - which the
Project for Archaeonomic Study and Training cannot
yet claim.

Conclusion

The backing, at least, of a national organi-
sation is really needed for the whole of the scheme,
which I have described. I would end therefore with
a plea.

British Archaeology may be likened to a wood,
in which many different lines of research stand as
magnificent, well-tended trees. But the wood also
includes large areas of tangled, rotting vegetation.
Those who use this wood for their instruction and
entertainment could perform many of the simpler
tasks required to improve its general condition - but
they must be told what to do and how to do it.
I have been trying to work out one way of doing
this. It may well have fatal flaws, of which I am
not yet aware, but if it proves to be a step on the
way to the institution by a national body of a
better method of using the same resources to fulfil
the same needs, I would regard it as a most success-
ful enterprise.

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