EXCAVATION RECORDING: BUCCINO, SOUTH ITALY

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Although the notion of computer-based excavation recording systems is now commonplace, they have yet to be developed to such a fine art that it is not worthwhile to describe and discuss individual ones. And I emphasize individual, for I do not believe it is practical to think of devising one recording system and one general classification system for all materials. I agree with Brew that

> the diagnostics of classificatory groups are too closely associated with the immediate problem in hand to permit a general classification which can be generally applied to a heterogeneous mass of problems.[1] (p. 51)

Many systems of classification and recording include ideas and practices useful to other related systems. And so for my own benefit and perhaps that of others, I would like to present the excavation recording system I have devised for the Proto-Apennine site at Buccino, South Italy, and some of the preliminary results from the statistical analyses to date.

This site holds, we feel, particular importance for the understanding of the Early Bronze Age in South Italy. Proto-Apennine habitation has been revealed previously in layers of three stratigraphic sections, Ariano Irpino, Coppa Nevigata, and Leporano.[2] The site at Buccino, however, represents the first attempt to open up a Proto-Apennine habitation site horizontally. Thus the site holds particular importance, especially as part of the bridge between the Chalcolithic Gaudo sites and the later Middle Bronze Age classic Apennine sites.

With these thoughts in mind, we wished to design a recording system for the excavation at Buccino which would allow us to handle data from the site expeditiously and permit statistical analysis of the material recovered. At the same time, however, realizing the implications for the further understanding of the period, we wanted a system flexible enough to encompass and differentiate among materials from other related sites.

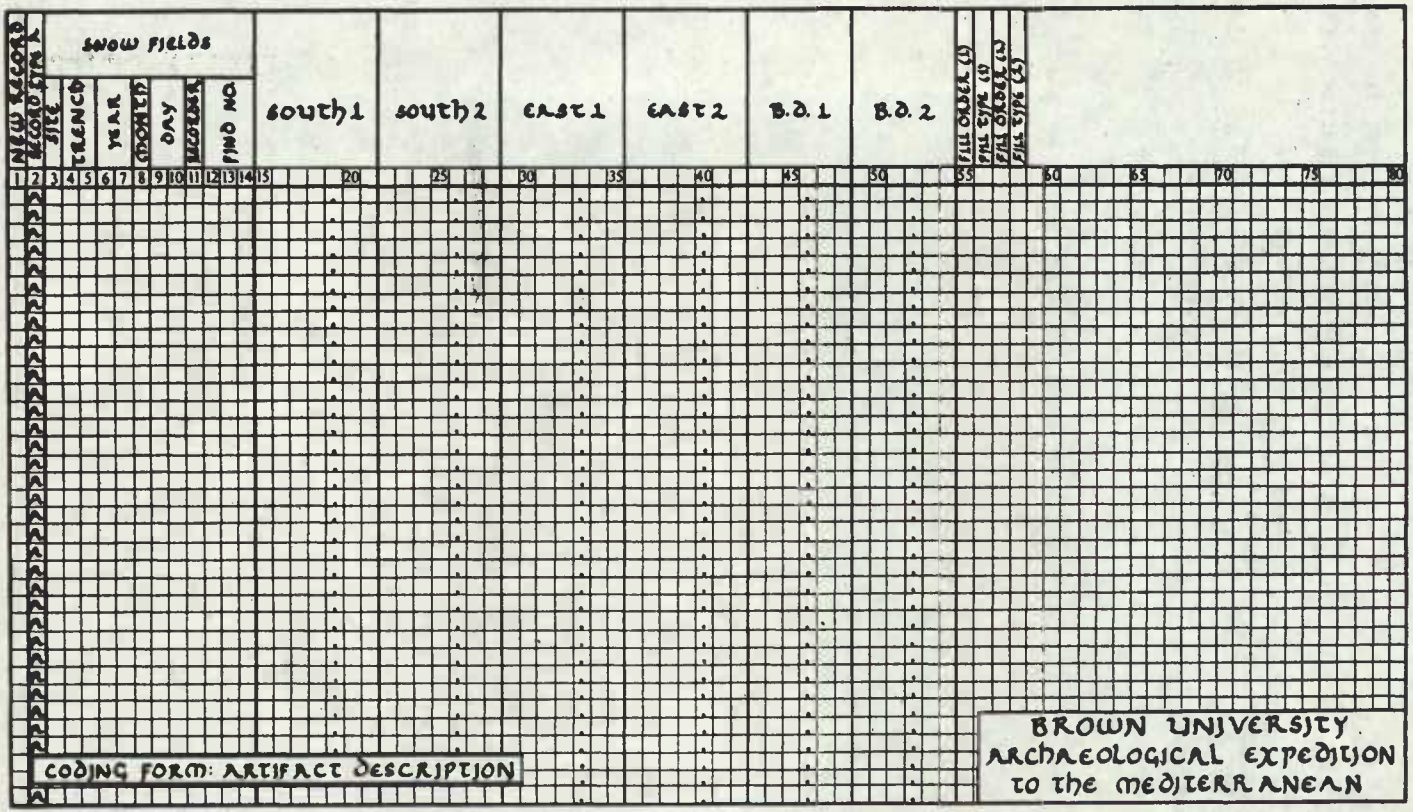
The recording system permits the material recovered to be recorded by location, stratum description, and artifact description as well as with a number of special codes. The recovery location was generally recorded within a grid block rather than a point, although special items can be precisely recorded. The stratum is recorded as a level (1, 2, 3, etc.) and with a coded description of the level itself (fill , destruction deposit, robber trench, and so forth). The level is also recorded precisely by its distance from an

absolute datum point. The artifact description, though workable for all materials, was designed and refined for ceramic materials of this period in particular. Consequently, handle description is alloted two columns (and may in the future be developed to three). Since we were recovering broken sherds, great stress was laid on recording the feature(s) of the pot preserved. A whole pot, which we recorded only once but would be frequent in tomb deposits, could be described by shape alone or with special features of the shape recorded in the columns for preserved features. Decoration of the material we recovered was almost entirely plastic, in this case added cords of clay, but codes for the later Apennine incised and earlier Chalcolithic/Neolithic incised ware are now under consideration. We have been unable so far to properly record size of vessel, since it is generally impossible to determine with the majority of the sherds. Time did not permit all the rim sherds whose diameter could be determined to be measured. Very few of these, in fact, gave any indication of the depth of the pot. Size in our typology relies thus on a range of shapes determined by a representative number of rim sherds correlated with the breakdown by ware type (coarse, medium or fine).

The use of special codes allowed us the most flexibility in this system. Designed to allow a variety of extra data - records of photographed, drawn, and restored material - it was also used to indicate a special note in the day books. Columns were designated to indicate the book and page for this record. A second category of special codes was used specifically to note a variation of type. It is impossible to be sure at the first instance if an artifact warrants a new type or is merely a variation of an already recognized type. These variations of type were drawn, and if it developed later that they should indeed be considered a new type, they could be easily recovered and the coding modified.

Although the system was designed primarily for excavation recording, rather than a detailed system to analyze a specific material, and hence a certain amount of detail was lost for the gain in time, it is hoped to further refine some areas of particular importance to the Apennine culture. Toward this end, a more detailed description of handle types is currently being developed. Codes for close description of the classic Apennine incised decoration are also under consideration, since it is possible that with the variations of this factor geographical and temporal phases may also be isolated.

Further detail in the description of vessel shape (measurements of neck, rim diameter and body diameter, for example) is, of course, desirable but often impossible with the sherds recovered. Although these measurements are available for a few sherds and should be included, a well-developed typology into which many sherds can be placed is also desirable. To encompass both features, it is planned to have separate descriptions of shape and type. When both measurements and "closest" type are available, a refinement to the typology will then be possible. That is, the system


NEW RECORD
RECORD TYPE
SITE
TRENCH
YEAR
MONTH
DAY
SQUARE
FIND NO.
SNOW FIELDS
south 1
south 2
east 1
east 2
B.D. 1
B.D. 2
FILL OBJECT (1)
FILL TYPE (1)
FILL OBJECT (2)
FILL TYPE (2)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 20 25 30 35 40 45 50 55 60 65 70 75 80
CODING FORM: ARTIFACT DESCRIPTION
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TO THE MEDITERRANEAN

Identity List

```
100   13
200  100
100   13   DUPLICATE LAYER IDENTITY
 13  100   DUPLICATE LAYER IDENTITY
300   11
```

Context Pairs

```
  7    8
  9   10
 14   15
  2    5
  4    9
  3    7
 16    9
  1    4
  7    8   DUPLICATE LINK
 13   11
  6    6   SAME CONTEXT
  6    7
  5    8   ILLOGICAL LINK (8-1-2-5-8)
 10    9   ILLOGICAL ONE-STEP LINK
  1    2   ILLOGICAL LINK (2-6-1-2)
 12   11
  2    1   ILLOGICAL ONE-STEP LINK
  7    1   ILLOGICAL LINK (1-3-7-1)
 10    1   ILLOGICAL LINK (1-4-9-10-1,
  8    1   ILLOGICAL LINK (1-3-7-8-1,
  6    1
  8   10
 14   15   DUPLICATE LINK
  1    3
  5    5   SAME CONTEXT
  2    6
  9    4   ILLOGICAL ONE-STEP LINK
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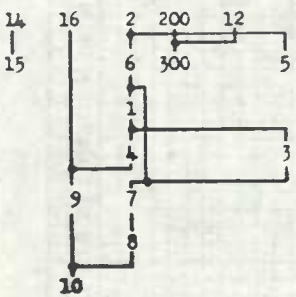


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DUPLICATE LAYER IDENTITY   100   13
DUPLICATE LAYER IDENTITY    13   100
   13 BECOMES              100
  100 BECOMES              200
   11 BECOMES              300
   11 BECOMES              300
DUPLICATE LINK               7     8
SAME CONTEXT                 6
SAME CONTEXT                 5
ILLOGICAL ONE-STEP LINK     10     9
DUPLICATE LINK              14    15
ILLOGICAL ONE-STEP LINK      2     4
ILLOGICAL ONE-STEP LINK      2     1
LOOP MEMBERS
     1
     2
     5
ILLOGICAL LINK               5     1
LOOP MEMBERS
     4
     9
    10
ILLOGICAL LINK              10     1
LOOP MEMBERS
     3
     7
ILLOGICAL LINK               7     1
LOOP MEMBERS
     3
     7
     8
ILLOGICAL LINK               8     1
LOOP MEMBERS
     4
     1
ILLOGICAL LINK               1     4
```

Figure 3 Typical computer results, and the corresponding phase diagram.

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TO THE MEDITERRANEAN

CODING FORM: ARTIFACT DESCRIPTION

1	RECORD TYPE 8	
2	SITE	SNOW FIELDS
3	TRENCH	
4	YEAR	
5	MONTH	
6	DAY	
7	RECORDER	
8	FIND NO.	
9	WEIGHT	
10	QUANTITY	
11	MATERIAL	
12	HANDLE TYPE	
13	PRES. FEATURE	
14	PRES. FEATURE	
15	PRES. FEATURE	
16	PRES. FEATURE	
17	PRES. FEATURE	
18	DECORATION	
19	DECORATION	
20	DECORATION	
21	DECORATION	
22	SIZE	
23	FUNCTION	
24	DISCARD STATE	
25	DATING	
26	SPECIAL CODE I	
27	SPEC. CODE II	
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31		
32		
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73		
74		
75		
76		
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79		
80	Book No.	
	PAGE NO.	

Although it could be argued that the handle types chosen nowhere reflect cultural development, present knowledge of the ceramic material of the period indicates the reasonableness of this and further evidence from the site at Buccino supports the hypothesis of change in use of the site. The presence of twelve hearths and a thick ash layer in the third level with no evidence of other buildings argues for this change in use, perhaps to some industrialized activity. Since we are given no reason to assume other than the presence of a single phase of the Proto-Apennine culture and are given evidence supportive of functional change, this explanation, we feel, must account best for most of the differences between vessel frequencies of the third and fourth levels. This has been reflected in the choice of names assigned to the levels, Industrial and Village Foundation. While an attempt to cluster trenches with a Robinson Index of Agreement showed no significant trend in the Village Foundation level, the trenches of the Industrial level showed a tendency to cluster into two main groups. It is hoped that further analyses may indicate the factors responsible for this clustering and these in turn may suggest interpretations for the activity of the Industrial level, in particular the function of the hearths.

Lastly and perhaps most significant so far for the interpretation of vessel functions, two types of pots, not intuitively associated together, show marked association statistically, the milk-boiler and the septal bowl, a vessel with an internal division. The correlation of these vessels is strong (Pearson correlation coefficient of .9999) and, though not conclusive, is certainly suggestive of a common use. An initial examination of the distribution of milk-boilers and septal bowls in the Industrial level indicates the major areas of recovery of both to be near the hearths.

Although to date we have completed only the first stage of possible statistical analysis, preliminary tests are revealing and suggest that further work may bring us closer to an understanding of the processes at work at Buccino.

1. Brew, J.O. 1946 — The Use and Abuse of Taxonomy. In ARCHAEOLOGY OF ALKALI RIDGE, SOUTHWESTERN UTAH. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, No. 21, 44-66. Cambridge, Mass.: Harvard University Press.

2. For further discussion of the relationship of the site at Buccino to other related sites see my discussion of the ceramic tradition in Holloway, R.R., et al., "The Proto-Apennine Site at Buccino, South Italy", JOURNAL OF FIELD ARCHAEOLOGY (forthcoming).

3. Trump, D. 1963 — Excavation at La Starza, Ariano Irpino. PAPERS OF THE BRITISH SCHOOL AT ROME, Vol. XXXI, 1-32.