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THE WEST AFRICAN ARCHAEOLOGICAL NEWSLETTER

No. 7

December 1967

Editor: Professor Thurstan Shaw

Institute of African Studies, University of Ibadan, Nigeria

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REPORT OF SECOND CONFERENCE OF
WEST AFRICAN ARCHAEOLOGISTS
IBADAN JUNE 8 - 10, 1967

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Editorial

Once more we have to apologise for the delay in the production of the current number; plans had been made to have it out by September, but because of the movements of editorial personnel this proved impossible. This is all the more regrettable as the intention was that copies would be available for perusal well before the Sixth Panafrican Congress at Dakar, since much of the contents are relevant to discussions on terminology which are likely to take place there.

The current number is entirely devoted to the reporting of the Second Conference of West African Archaeologists, which was held from 7th to 10th June, 1967, under the auspices of the University of Ibadan Institute of African Studies, which also provided hospitality. At the meeting of West African archaeologists held in Freetown in June 1966, it was agreed to meet again in about twelve months time in order, especially, to discuss questions of terminology in the light of the Burg-Wartenstein Symposium of August 1965. (West African Archaeological Newsletter No. 5, pp. 53, 58, 64).

Because of the size of the report on the conference's proceedings concerned with terminology and pottery classification, we regret that we are having to hold over the communications on recent work given at the conference, as well as a number of contributions already received. The former will comprise the next number of the Newsletter; it is hoped to get this out almost immediately and that another number will follow it closely containing the outstanding contributions. We apologise to the authors for the delay.

May we remind readers that if they have not already done so, they should fill in the enclosed order form and despatch it with the necessary remittance if they wish to continue receiving the Newsletter. We would also ask the two persons to identify themselves who sent us money orders through the Post Office but whose names cannot be traced!

Finally, a correction. We have received the following letter from Dr. James B. Griffin, Director of the Museum of Anthropology in the University of Michigan. We are grateful to him for 'unbolixing' (or should it be 'debolixing'?) the record!

'Professor Thurstan Shaw
Institute of African Studies
University of Ibadan
NIGERIA

'My dear Professor Shaw:

'I was first amused by the editorial in the West African Archaeological Newsletter No. 6. I then turned to pages 6 and 7 to glance at the brief report by Oliver Myers. In there I saw where the University of Michigan Radiocarbon Laboratory had provided him with a date of A.D. 1380 \pm 100 which then had a footnote. The footnote explained that Professor Frank Willet informs us that when the same laboratory processed this sample a second time, the result came out at A.D. 1730 \pm 100. In line with the complaint of the editorial, I now raise my feeble voice to suggest that the editor of this journal might have gotten in touch with me to find out what happened.

'On October 2nd, 1965, my son, David M. Griffin, sent Mr. Myers a letter telling him that the date of the carbon sample from Igbo Obameri had been run and calculated by the laboratory. The results are: 570 \pm 100 or A.D. 1380 - so far, so good. On December 16th, for our specimen number M-1686 (the lab identification should always be given), I wrote to Oliver Myers as follows:

' "A week ago we had a call from the radiocarbon laboratory to tell us that an error had been made in figuring the approximate age of your specimen. When Prof. Crane figured out the age, he neglected to take into account the fact that the amount of material in the counter did not fill the counter, so that he needed to make an adjustment for that. The corrected age is therefore 220 \pm 100 years ago. At the same time, they also gave us a correction for another sample that had been dated. This one from Missouri. The actual amount of difference in that case was of about the same numerical number but not the same proportional result.

My apologies to you for the earlier incorrect date, and I hope that this will not be too much of a blow"

'You can thus see that Professor Willet, with every good intention, has bolixed the record, for we did not run another sample. It was simply a mechanical error when Professor H.R. Crane, who runs the radiocarbon laboratory, figured out the date.

'I do not know when this short statement by Myers was prepared. But if he "went west" in November 1966, as you indicate, he had had time enough to have corrected this error in this article and the date of 1380 A.D. should not have been used by him or anyone else for our specimen number M-1686. I should like to thank you very much for sending me this copy of the Newsletter.

Sincerely yours,

(sgd.) James B. Griffin
Museum of Anthropology'

Since the above editorial was written, we have received the following letter from Professor Frank Willett, just in time for inclusion in this number.

'Editor, West African Archaeological Newsletter
Institute of African Studies
The University of Ibadan
Ibadan, Nigeria.

'Dear Sir:

'In the sixth issue of the West African Archaeological Newsletter, you commented in the editorial on the embarrassment one suffers when inaccurately quoted in the press. I have now discovered that it can be even more embarrassing to be correctly quoted, as I was on page seven of the same issue of the Newsletter, because the statement I made was wrong. My statement that the charcoal sample from Oliver Myers' excavation at Igbo Obameri was processed twice was based on a misunderstanding of a telephone conversation I had with the laboratory early in 1966. May I explain what happened?

'The sample, number M-1686, consisted of 5.2 grams of material coated with clay, and 4 grams were burnt in the test. This however was not sufficient to fill the container, but through an oversight, this fact was ignored in the calculation, producing a radiocarbon age of 570 ± 100 B.P., i.e. A.D. 1380, the date which Myers quoted in his report in the sixth Newsletter. When this error was discovered, a recalculation was made, allowing for the smaller size of the sample, and this produced a younger radiocarbon age of 220 ± 100 B.P., i.e. A.D. 1730.

'I am very grateful to Professor J. B. Griffin of the University of Michigan for the trouble he took to clarify the position for me, in the course of which he had these calculations checked and confirmed. There can therefore no longer be any doubt that the radiocarbon date of this sample is A.D. 1730.

'Yours truly,

(sgd.) Frank Willett'

Resumé

Editorial

Nous regrettons que ce fascicule est en retard; nous l'avons projeté pour Septembre, parce qu'il concerne beaucoup la terminologie - sujet de discussion au VIe Congrès Pan-africain à Dakar.

Ce bulletin est consacré entièrement à un compte rendu de la deuxième réunion des archéologues de l'Ouest africain qui a eu lieu à Ibadan du 8 - 10 Juin, 1967.

Avis aux lecteurs! Si vous ne l'avez pas déjà fait, remplissez la formule ci-inclue et expédiez la avec l'abonnement si vous voulez recevoir encore le Newsletter.

La date de Igbo Obameri, obtenue par la méthode de radiocarbone, qui était citée sur la page 7 de Newsletter N^o. 6 par le feu Oliver Myers comme 1380 ± 100 ap.J.-C. est maintenant solidement corrigée à 1730 ± 100 ap.J.-C., et les raisons sont données.

SECOND CONFERENCE OF WEST AFRICAN ARCHAEOLOGISTS

8th - 10th June 1967

Institute of African Studies, University of Ibadan

PARTICIPANTS

Canada

Mr. Geoffrey Gaherty, Department of Physical Anthropology,
University of Toronto.

Ghana

Mr. David Calvocoressi, Department of Archaeology,
University of Ghana.
Mr. Colin Flight, Department of Archaeology, University
of Ghana.
Mr. Duncan Mathewson, Volta Basin Research Project,
University of Ghana.
Mr. James Myles, National Museum, Accra.

Niger

M. Guy de Beauchêne, Centre de Recherches, Niamey.
El Hadj Maiga Mossi, Centre de Recherches, Niamey.

Nigeria

Mr. Graham Connah, Institute of African Studies, University
of Ibadan.
Mr. S. G. H. Daniels, Institute of African Studies,
University of Ibadan.
Mr. Ekpo Eyo, Department of Antiquities, Lagos.
Dr. Horst Folster, Department of Agriculture, University
of Ife.
Mr. Kunle Oyenuga, Institute of African Studies, University
of Ife.
Mr. Paul Ozanne, Institute of African Studies, University
of Ife.
Mr. Joel Vanderburg, Institute of African Studies,
University of Ibadan.

U.S.A.

Professor Frank Willett, Northwestern University, Illinois.

Chairman

Professor Thurstan Shaw, Institute of African Studies,
University of Ibadan.

Absentees The following expressed the intention of attending, but were prevented at the last minute from doing so: Professor D. Hartle, University of Nsukka, Nigeria; Dr. Henri Hugot, Institut Fondamental d'Afrique Noire, Dakar, Senegal; Mr. A.J. Priddy, Department of Antiquities, Jos, Nigeria; and Mr. R. N. York, Volta Basin Research Project, University of Ghana.

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Part I

TERMINOLOGY

As the time available for meeting together was limited, participants were asked to send in their comments on the subject of the Burg-Wartenstein recommendations beforehand. These comments were then duplicated, circulated and taken as read; thus more of the available time was freed for discussion; these contributions are printed below. Any detailed account of the discussions is omitted, but the points of agreement reached are given at the end.

COMMENTS ON RECOMMENDATIONS AND DISCUSSIONS ON TERMINOLOGY IN
AFRICAN ARCHAEOLOGY AT FOURAH BAY JUNE 1966

by

David Calvocoressi

I. One of the most striking features of the recommendations on terminology in African archaeology is the reliance on the Stone Age, especially the old Stone Age, for examples. Only two of the recommendations are aimed specifically at the Iron Age (Nos. 7 paragraph 1 and 8). In recommendations 1 and 4, sixty examples are cited of which two are taken from the Iron Age: Rec.1, Archaeological Horizon eg. 5 (which incidentally is poorly expressed, since Dawu for example is an "accumulation of food and occupation debris", all 25 feet of it), and in Rec. 4 discussion, the inferred proposal to abandon the term "Iron Age" itself (as far as this is concerned, it makes little difference whether one describes a certain site as Iron Age, or its occupants as using iron or having knowledge of iron working techniques).

The implication here is that the instigators of the recommendations have set out basically to re-organise Stone Age terminology and have not taken the Iron Age properly, if at all, into account. Are the terms suggested in Recommendation 1 - Industrial Complex and Industry - fully applicable as they are defined to each and every site without any hint of confusion?

Take the term "Industry": as defined in the Oxford English Dictionary it means a "branch of trade or manufacture":

and this is the sense in which it is used to describe a potting industry or an iron working industry. At a particular site, a single occupation surface or archaeological horizon may have elements of any number of different specialised industries - potting, iron working, bead manufacture, stone working etc. Each of these is an industry, and together they form a collection or complex of industries. But an industry as defined in Recommendation 1 is represented by all objects manufactured by a particular group over some span of time. Hence an industry as defined by the Recommendation would be made up of a number of industries of the Oxford English Dictionary type, which together form an industrial complex at a single site. But an industrial complex as exemplified in the Recommendation (e.g. Acheulian, Mousterian etc.) consists of several different sites over perhaps a very wide area and period, which is a totally different interpretation. The result therefore is a confusion of terms, a different sense being implied, depending on the complexity and sophistication of individual communities: a stone age hunting site, consisting of only stone tools, represents a single industry as defined: at a deserted village site of the 17th century, all the known objects manufactured by that group of people consist of several industries. Logically, the terms suggested in the Recommendation fail to satisfy all relevant circumstances, and the scheme collapses.

As an alternative, I suggest the following:

1. Archaeological complex (as suggested in Recommendation 1, discussion, paragraph 8) to supersede "culture".
2. Industrial complex to supersede "culture" as in "Kenya Capsian culture" etc.
3. Industry to describe individual specialised trades and crafts.
4. Phase to describe phases or stages of an industrial complex temporally or spatially.
5. Archaeological horizon as defined in the Recommendation.

II. Recommendation 7 paragraph 1

Protohistory: the lack of archaeological implication in the term "protohistory" is no more nor less than in "prehistory". Both describe a state of knowledge in any

given area in relation to historical reference. If one is discontinued, both should be. A particular group of people, having no means of writing records are deemed to be prehistoric. If a foreign traveller passes through and mentions them briefly, one aspect of their way of life is recorded and is therefore historical. Basically they are prehistoric but there is an isolated historical overtone, a situation which is adequately covered by the term "protohistoric".

III. Recommendation 6

Neolithic: It is widely agreed that the term "Neolithic" is ambiguous, having almost as many definitions as there are archaeologists. If the term is to be retained, it must be adequately and clearly defined, the best definition in my opinion being the presence of food production. Such material innovations as pottery and polished stone tools are only circumstantial evidence for this. But in West Africa, at least, direct evidence for food production - faunal and floral remains, both macroscopic and microscopic, grain impressions in pottery, etc. - are very rare. In Ghana there is none prior to the introduction of iron, and so the term cannot yet be used. However, in more favourable parts of Africa where such evidence survives, there can be no danger in retaining the term Neolithic if it is clearly understood as to its meaning, viz. the definite presence of food production.

A distinction between agriculture (e.g. rice) and vegetable culture (e.g. yams), discussion paragraph 1), is superfluous. The process of planting is basically the same in each case: a part of an old plant is put in the ground, in a field, and looked after according to its requirements. Agriculture or "cultivation of the soil" is relevant in each case, as distinct from stock breeding etc. Any further distinction between crops can be clearly and simply stated as "at site x, rice was cultivated, or yams were cultivated".

Resumé

Quelques Observations sur les Recommandations et Discussions
de Terminologie d'Archéologie africaine à Fourah Bay Juin 1966

par

David Calvocoressi

Il semble que les recommandations ont comme base la réorganisation de la terminologie de l'Age de Pierre, sans admettre les propres besoins de l'Age de Fer. Le terme 'Industry' s'applique proprement à un métier isolé, et le terme 'Culture' peut être mieux substitué par les termes 'Archaeological Complex' et 'Industrial Complex'. Le terme 'Proto-history' décrit convenablement l'état de notre connaissance tout comme le terme 'Prehistory'... Si l'on veut retenir le terme 'Neolithic', il doit signifier la production de la nourriture.

"AN APOLOGY FOR 'CULTURE'"

by

Graham Connah

In the various suggestions for substituting new terms for those currently used for defining the various "levels of archaeological abstraction" the abandonment of the term "culture" in favour of "industrial complex" is unfortunate. An archaeological "culture" may be defined as a collection of apparently significantly related archaeological phenomena which has a geographical and chronological entity and has implications from which it is possible to reconstruct some sort of a picture of the social, economic, technological, political and philosophical traits of a postulated group of people. It might be suggested that many of the complaints which have been voiced in recent years against the use of this term in African archaeology are caused not so much by the term as by its misuse. It is obviously necessary for an archaeologist seeking to define a new culture to demonstrate by stratigraphical or statistical, or any other means at his disposal, that the different archaeological phenomena he has discovered are significantly related. Yet there are cases where this has clearly not been done and here we might well attempt to emulate more closely the rules of procedure which have become accepted in some of the natural sciences - for instance in botany where anyone claiming the right to name a new plant is normally expected to publish a description, with illustrations, in a leading journal, the text of which is presented both in Latin and in his or her own vernacular. It is also expected that type-specimens will be deposited in a selection of internationally famous herbaria. Presumably we could spare ourselves the Latin although its use might help to curb the weed-like profusion with which new cultures sometimes spring up!

It will be noticed that I have implied that one of the particular advantages of the term "culture" is its very breadth of connotation. "Industrial complex" lacks this. Its connotations are technological: are bound indeed to that narrow and dusty road of artifact typology that English-speaking archaeology at any rate has resisted for 30 years or more. In this respect it may be suitable for archaeological assemblages of limited breadth - to Stone Age tool assemblages for instance. In fact it probably suits particularly the conditions of Saharan and North African archaeology where phenomena are of such a restricted character and where research

endeavour has long tended towards surface collections to the detriment of actual excavation. What, however, of the African Iron Age? Of the Iron Age in West Africa for instance? Are we to speak of the Benin or Ife "industrial complex" when dealing with archaeological phenomena representing social entities of which history or art can illumine so many more varied aspects than can ever be revealed from a surface collection of stone tools in the Sahara?

The problem is deeper than this, however. It seems that in the process by which an archaeologist seeks to reconstruct human history there are two levels of mental approach. Firstly there is the need to classify and analyse one's actual material. This might be called, for the sake of giving it a rather idealized name, the objective aspect. Beyond this is another, the interpretative aspect, which is the process of using those classifications and analyses actually to reconstruct the past. The recommended new terms and even some of the discussion at Freetown in June 1966 seem to have overlooked this dichotomy. Thus "industrial complex" may or may not be a reasonable term for objective analysis but it cannot be held to replace the term "culture" which more properly belongs to the interpretative aspect. Thus also the Freetown comment "that culture, in the true sense, was only present if socio-economic evidence, as well as material culture, existed at a site" is largely irrelevant. Clearly if some material remains are deficient in socio-economic evidence then it will be difficult to attain an interpretative level. As with many palaeolithic stone assemblages one's task will be rather to classify and to analyse. Surely the real answer to this lies in field-research and over the years many assemblages difficult of cultural interpretation have been clothed with flesh and blood by excavation in such waterlogged, perma-frost or desiccated conditions as will broaden the basis of the available information.

In the end, however, one supposes that all that really matters is that we define clearly the terms we use, or the way in which we are using them. For if care is not taken, we may, in trying to impose a system of terms applicable throughout the continent, finish with terms that are unsuitable for particular periods or areas. We may alternately become so frightened of the limitations of any nomenclature in use that we jettison everything and cannot talk to one another because, for example, in speech it is too cumbersome to try to put inverted commas round such terms as "neolithic"!

Resumé

Justification du terme 'Culture'

par

Graham Connah

Le terme 'culture', qui implique le possibilité de reconstruire une image des traits, sociaux, économiques et autres, d'un groupe de gens, a une signification beaucoup plus large que le terme 'industrial complex'. Peut-être ce dernier va-t-il bien dans l'aspect objectif de l'archéologie mais il ne peut pas remplacer le premier dans l'aspect interprétatif.

COMMENTS ON THE TERMINOLOGY AND TYPOLOGY RECOMMENDATIONS OF THE
BURG-WARTENSTEIN CONFERENCE (1965)

by

S. G. H. Daniels

1. The immediate questions which come to mind with regard to these recommendations are:-

- (i) What is their general importance?
- (ii) What relevance have they to the specific studies being carried out in West Africa today?

To take the first question first; I do not think it is a matter of lasting importance what names are used to refer to certain entities. A standardisation of labels certainly makes communication easier, but the most enthusiastic changing of labels has no effect on the referents, and it is the referents in these recommendations which cause me deep concern. As I understand our discussions at Freetown, the recommendations with which I am concerned are intended to lie within the sphere of what I term 'Pure Archaeology' (cf. Archaeol. Newsl. 5, p. 43; para. 2) - the study and analysis of relationships between the observed data of archaeological research, before

its interpretation in historical or anthropological terms. The referents of the Burg-Wartenstein recommendations, particularly numbers 1 to 4 and 10, are the basic concepts of typology and cultural dynamics upon which the validity of pure archaeology as a discipline must stand or fall. Thus I consider it important that the Pan-African Congress should not lend the weight of its authority to a set of recommendations embodying what are, to my mind, unsatisfactory concepts.

It has been suggested to me that for work on the West African Iron Age, which to some extent is richer and more 'historical' than in many other parts of sub-Saharan Africa, the recommendations, which appear to spring from a basis in the more arid discipline of Stone Age studies, have little relevance. To the extent that workers are using historical or ethnographical, as well as archaeological, evidence in their interpretations, it is evident that their conclusions will rest less exclusively on the validity of basic archaeological concepts: to the extent that archaeological evidence is being used at all, so far should the validity of the concepts be a concern to us all. The 'Stone Age origins' of the recommendations do not invalidate their application to Iron Age work. It is natural that workers on the Stone Age, with its paucity of information from other sources, should be driven to a rigorous approach to their basic concepts: the comparative richness and diversity of information in Iron Age work has made this problem seem less immediate. While the emphasis in historical reconstruction may differ, the same concepts must underlie the evidence of pure archaeology, whatever the period under study.

2. The keynotes of the Burg-Wartenstein recommendations are precision, definition and standardisation of terminology. It seems to me that these, as immediate and primary goals, are illusory and their strict application liable to lead to fossilisation. The erection of a rigid terminological superstructure over shaky logical foundations must lead either to the collapse of the superstructure, or, more disastrously, to the warping of the foundations to fit the superstructure. What is surely required is a foundation of rigorous logic with a highly flexible superstructure of application. Reality does not, particularly at the complex level of human behaviour, fit neatly into classifications and terminologies. Every working archaeologist must be all too familiar with the failure of classificatory systems to meet the needs of his particular study. The imposition of a new terminology on a continent-wide scale is going to satisfy few for any length of time. The goals which we should substitute for the precision,

definition and standardisation of terminology of Burg-Wartenstein, are logical rigour, analysis and flexibility of terminology. The practical difficulties of intelligible communication may be equally well, and much more safely, overcome if workers explain the sense in which they are using terms, rather than if they are forced to use terms which may anyway be inapplicable to their work.

With these considerations in mind we may examine in detail those recommendations which most immediately imply basic logical concepts, and I shall suggest a logical structure in broad outline, and attempt to relate the recommendations to this structure.

3. Cultural-Stratigraphic Nomenclature

- 1(a) 'An Industrial Complex is that grouping of industries ... considered to represent parts of the same whole.'

This definition would appear to be tautological and may be translated as:-

'An Industrial Complex is a set of Industries which are members of that Industrial Complex.'

The question which arises is 'Out of all the possible sets of Industries, what makes some sets Industrial Complexes and others not?'

- 1(b) 'An Industry is represented by all the known objects that a group of prehistoric people manufactured in one area over some span of time.'

Here the definition rests on the interpretation which it is desired to put on the evidence. It is a concept drawn from History and not from Pure Archaeology.

- 1(c) 'Phase. An Industry may comprise a series of successive or, in some cases, distinctive, contemporaneous Phases.'

i.e. a phase is a subset of an industry, homogenous in respect of either time or, presumably, space. But what apart from such homogeneity makes any particular subset a phase or not a phase?

1(d) 'An Archaeological Horizon, alternatively Archaeological Occurrence, is the minimal cultural-stratigraphic unit which can be defined at any place.'

Note: This term constitutes a point of contact with stratigraphy; it denotes the cultural material in its context.'

I would agree that this term must connect with stratigraphy, but I must confess to not understanding the term 'cultural-stratigraphic', which seems to me to embody a confusion between two ideas, reflected in the fact that this term in the hierarchy seems to be doing duty for two separate entities.

In general: This system is intended to be hierarchical. I am not convinced that the 'different levels of archaeological abstraction' which the stages of the hierarchy are intended to codify are meaningful as different levels. I am doubtful whether archaeological data can be satisfactorily fitted into a vertical hierarchy any more than into a horizontal classification. The reasons for this will become apparent in the outline logical structure suggested below.

4. Suggested Logical Structure

The fundamental concept on which this structure rests is the 'Similarity Set', which we may define as follows:-

A Similarity Set is a set of points within a finite enumerated field for which the difference between members of the set is less than the difference between members and non-members.

Without going too deeply into this concept we may note some essential implications.

- (1) The restriction to the finite enumerated field is necessary since difference between members and non-members cannot be assessed in an infinite or non-enumerated field.
- (2) For quantitative mathematical handling of the concept it is necessary to define:-
 - (a) The observed variables from which the difference is calculated.
 - (b) A difference coefficient.

- (c) A method of comparing the difference between members with the difference between members and non-members.

The concept may, however, be applied without quantification in an intuitive and qualitative sense, in which case these three points may be implicitly understood.

(3) Similarity sets may 'nest' within each other. Thus (A,B,C) may be a similarity set, while (A,B,C,D) may also be a similarity set. Thus it is also necessary to apply a criterion by which the most 'meaningful' of a nesting group of similarity sets may be selected. Examples of this selection made by mathematical treatment are the various techniques of Cluster Analysis. Where no definite criterion is adopted the choice of the most 'meaningful' similarity set becomes a subject of considerable difficulty - a fact which is directly related to the unsatisfactoriness of classification systems when applied to archaeological data. For the remainder of this structure I shall use the term 'Similarity Set' implying 'a most meaningful one', with the reservation that this is an extremely subjective idea when approached qualitatively.

Then if a hierarchical structure is desired it may be erected as follows:-

An Industrial Complex: A similarity set of Industries.

An Industry: A similarity set of Phases;

A Phase: A similarity set of Stratigraphic Artifact Groups.

A Stratigraphic Artifact Group: A set of artifacts whose spatial co-ordinates are points in a continuum not uniquely divisible on stratigraphical grounds.

An Archaeological Occurrence: A spatial continuum, not uniquely divisible on stratigraphical grounds, containing one or more artifacts.

An Artifact: A phenomenon, or member of a similarity set of phenomena, whose statistical density within a finite portion of space-time is significantly different from what would be expected to result from natural processes.

It is assumed that among the attributes considered when evaluating difference are location in space and time, thus implying homogeneity with respect to both.

The definition of the term 'Artifact' brings within the structure not only tools and other objects whose shape has been modified by man, but also such things as imported objects (e.g. bones, raw material, vegetables) and traces of modifications in the environment (e.g. cereals in pollen spectrum).

The different levels of this hierarchy do not have any intrinsic historical significance. An Industry 'A' contains more stratigraphic artifact groups than any one of its phases but not necessarily more than another phase which is not a member of Industry 'A'. It may also be noted that the structure does not necessarily assign any particular Stratigraphic Artifact Group to a higher-order grouping.

The restriction of a similarity set to a subset of a finite enumerated field has important consequences. Further archaeological work changes the field by adding additional 'points', and changes in the field may generate changes in the similarity sets which can be found within it. Thus in speaking of an Industry we must remember that the concept of such an entity as an Industry is indissolubly linked to its field and thus to the state of knowledge at any given time.

5. Comparison of Burg-Wartenstein Rec. 1 with the suggested structure

I should stress again, at the risk of becoming tedious, that the above structure is a logical structure in pure archaeology, a model of the way in which archaeological data can be handled to produce a certain kind of information on which historical reconstruction may be based. Despite the already noted intention that the Burg-Wartenstein recommendations should achieve 'greater precision' in pure archaeological analysis without reference to historical or anthropological inferences, it seems that a certain amount of confusion between the two ideas remains. The Burg-Wartenstein hierarchy, as exemplified by definitions 1(a) and 1(b) is essentially an interpretative scheme. There is nothing against the existence and use of such a scheme, providing it is recognised for what it is, and is not confused with an analytical scheme. But in so far as it is interpretative, and lies within the domain of History or Prehistory, I find myself in sympathy with the position that an interpretative scheme derived from Stone Age studies may prove unsatisfactory for handling the interpretative problems of later periods.

6. The typological recommendations (Nos. 3 and 10)

The same concept of the similarity set may be applied to the question of typology, where we may define a Type Set

as a similarity set of artifacts. As with the Industrial terminology, the difficulties in the application of a rigid terminology stem from the restrictions on the field. If a type set X is distinguished in a field F_1 , then that type set is distinguished only for F_1 . To say that an artifact which is a member of a field F_2 (and not of F_1) is a member of type set X is to assume that F_1 and F_2 are both representative samples of a single population field F_p within which there is a type set X_p . But in general this assumption is just what our typological procedures are intended to demonstrate. The argument becomes circular. In a typology based on the similarity set concept, which I would term Analytical Typology, every Stratigraphic Artifact Group generates its own type sets, and these type sets are themselves not simply a tool for comparisons but cultural phenomena to be studied in their own right. It remains possible to work with non-stratigraphic artifact groups (e.g. all the artifacts of an industry, or collections of a limited range of artifacts such as the British Beaker corpus of D.L. Clarke) to establish type sets within the field chosen. Here, however, there is a loss of information stemming from the grouping process, in addition to the fact that the archaeologist's assumptions as to the homogeneity of the field become involved with the results of the analysis. The information loss involved in producing a continent-wide analytical typology would appear to be unwarrantably large.

The alternative conceptual system, which I would call Classificatory Typology, assigns an artifact to a particular category if it possesses certain characteristics of form and substance, regardless of its context. A first class classificatory typology should approximate to an analytical typology applied over a very large field. However, in addition to the drawbacks inherent in the wide application of an analytical typology, there is the added disadvantage that the rigid structure which it entails rules out any attempt, within the system, at investigation of the tendency of particular artifact groups to produce type sets in the analytical sense. For the study of an intrinsic cultural dynamic is substituted a static system related to the archaeologist's convenience rather than to the cultural behaviour of the makers.

The sudden and general adoption of an analytical approach to typology, besides ideally requiring an acquaintance with quantitative techniques which many archaeologists do not possess, would result in widespread chaos in terminology and I would not advocate such an upheaval. It seems to me, however, that the work involved in standardising a classificatory

system for African archaeology at this juncture would obscure the necessity for a move towards the analytical approach and I cannot therefore view it with enthusiasm. What concerns me most is that we might find decided by decree or consensus that which I consider a fit and proper subject for investigation and controversy.

Nevertheless, if the Standardisation project goes ahead, regardless of the conceptual basis, I would urge most strongly that the African Typology Card Catalogue of Recommendation 10, must include the following information:-

- (1) A full description of the 'typical' specimen.
- (2) A comprehensive definition of the limits of variation of the type.
- (3) Dimensional information for both the above requirements.
- (4) The relative frequency of the type within the Artifact Group in which it was distinguished.

Resumé

Quelques Observations sur les Recommandations au sujet de Terminologie et Typologie du Congrès de Burg-Wartenstein (1965)

par

S. G. H. Daniels

Les recommandations impliquent des concepts logiques qui sont imparfaits pour moi, bien qu'ils ne soient pas invalidés parce qu'ils appuyent tant sur l'Age de Pierre. Une terminologie et une typologie qui sont rigides peuvent amener à une fossilisation des concepts. Une typologie analytique sera plus objective et plus flexible mais si l'on adopterait tout à coup une grande confusion en résultera.

COMMENTS ON THE RECOMMENDATIONS OF THE BURG-WARTENSTEIN
CONFERENCE AS SET OUT IN S.A.A.B. 21 (1966), pp. 114-21

by

O. Davies

(This is the only account of these recommendations to which I have had access.)

(1) A number of terms which I have had to devise for Ghana and neighbouring lands find no place in these recommendations, as set out in S.A.A.B. It may be that they formed part of the geological recommendations, which were not printed in the Bulletin. These terms have all been clearly defined by me in Q.C.G. and elsewhere, but I am not sure that all of them are the best available, and assistance from the other West African archaeologists would be welcome, though of course they cannot be altered in matter already published.

Terms for high sea-levels are international and wider than panafrikan, and in my opinion should not be discussed by the Panafrican Congress but by Inqua.

The terms I have used for river-terraces apply at present only to the coastal region of West Africa, hardly farther than 11° N. They cannot be applied either to the interior plain (including the Jos Plateau and the Niger valley), or to southern Africa where even near the coast the sequence is different.

These terms are:

High Terrace
Middle Terrace
Low Terrace
Basal Gravel
Inner silt-terrace
Outer silt-terrace

I discovered that in Louisiana the term Levee is used for the last. I do not think that this is suitable in W.A., because this unit is not always embanked above the inner silt-terrace.

The terms I have used in soil-sections are:

Lower stone-line
Upper stone-line

Block-laterite
Biscuity laterite
Nodular or Pisolithic laterite.

The term Pisolith is properly formed; but I would enter the strongest protest against Pisolite, used by some geologists who completely lack education. I have clearly defined in W.A.B.E. what I myself mean by Laterite. It is a term badly formed and loosely used; but no convenient and euphonic alternative has been devised.

All the above terms in West Africa have a chronological significance and are associated with defined artefactual stages.

(2) Recommendation 4(2):

I see no reason for not retaining terms which are easily pronouncable though obsolete in relation to the localities whence they are derived, such as Chellean and Kalinian. The meaning of these two terms has been clearly defined for West Africa, and they have lost all their original topographical significance. The assemblages indicated have been illustrated, and the geological horizons in which they occur have been explained. If on the other hand one were to push this recommendation to its logical conclusion, older established terms should also be abolished, such as celt, which is no longer associated by anyone anywhere with the people whence the name is derived.

(3) Recommendation 4(4):

I have never heard of the Kéréman, and would like some enlightenment.

As to the Ténéré-culture (or industry), or more kakophonically Tenerean, or more barbarously Tenerian, I consider that in no sense it falls into the group of "cultural stratigraphical terms clearly defined and appropriate". So far as I know, every neolithic collection from Niger is a surface-collection; there has been no excavation, and no stratigraphy has been recorded. In W.A.B.E. I have tried, on the basis of the surface-collections in Dakar and the patchy publications, to sort out the neolithic of Niger. I believe that there are other collections in Paris and perhaps Algiers. My attempt will probably attract criticism; but I feel that this will be due to the unsatisfactory nature of the material available. I have distinguished three phases, the agricultural neolithic, the hunting-and-fishing neolithic, and the Ténéré-neolithic;

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and I have made out a long table of artefacts (which I hope to send before the meeting), indicating in which of the phases each artefact occurs. I am sure that this table is very incomplete; but it is meant as a first attempt by one who has seen a good deal of the material but not the sites. It is not at all clear whether these phases represent separate and contemporary ecologies, or whether they are chronologically successive; from what we know of dates in the Sahara, the neolithic in Niger could well have lasted more than 2000 years. There is apparently no stratigraphy. In addition to these three phases, there is in the Niger valley an offshoot of the Guinea mesoneolithic. I have seen several sites, but not enough, to determine its differences from farther south, or whether it is the parent of the mesoneolithic of the southern savannah and forest or a late development. N.B. Hugot records a rough Ténéré-industry based on quartzite etc. and not jasper, apparently as different from the main industry as Mossel Bay is from Pietersburg.

I would therefore suggest that from Rec. 4(4) the term Tenerean be deleted.

(4) Recommendation 6:

The well-known terms Mesolithic and Neolithic are very difficult. In Q.C.G. I used both; but tried to shew how a basic microlithic industry acquired certain "neolithic" traits, perhaps not all at once, probably from outside Ghana and the neighbouring territories mainly discussed in that book. This development was clearly indicated in the stratification at Legon Botanic Gardens (report accepted for publication by I.F.A.N. but not yet in proof). This site was practically unique in the depth of stratified soil. I have indicated a number of other sites where two microlithic layers occur, but the whole depth is not more than a very few inches. In W.A.B.E. I have as far as possible tried to avoid the terms Mesolithic and Neolithic (except for such well defined cultures as the Kintampo-neolithic, which probably contains a large immigrant element); and I have tried to use the term Mesoneolithic. This term is exceedingly useful, and it would be disastrous to abolish it. It indicated at once:

- a microlithic industry with sometimes other elements added, like celts, but perhaps not pottery;
- a geological position, at or just above the horizon of lateritic nodules or equivalent, and at base of the soil;

a climatic phase, subsequent to the displuvial of Sub-pluvial II, when lateritisation had ceased to take place, seeing that the microliths are white and never stained.

(5) Recommendation 7(2)(c):

With great caution ethnic and linguistic terms may be applied to cultures and industries, provided that such cultures can be traced back in continuous succession from modern times, to which the ethnic or linguistic terms primarily apply. For instance, I consider that with great caution the term Akan can be applied to the sequence of cultures from about 1600 A.D.

If one were to push this recommendation to its logical conclusion, terms like Roman, Romano-British, Ionic etc. would be banished from archaeology.

Resumé

Quelques Observations sur les Recommandations du Congrès de Burg-Wartenstein contenues dans le rapport du S.A.A.B. 21 (1966), pp. 114-121

par

O. Davies

Dans 'The Quaternary in the Coastlands of Guinea' je me suis servi des termes géologiques, clairement définis, qui ne se trouve pas dans les recommandations. On peut retenir les termes qui sont bien entendus mais qui ne sont pas encore associés avec leur localité d'origine. Je ne crois pas que le Ténééré-culture appartient aux termes culturels-stratigraphiques qui sont bien définis, et je propose qu'il soit rayé de la Recommandation 4.4. Le terme 'Mesoneolithic' a de valeur, parce qu'il signifie une association culturelle, un horizon géologique et une phase climatique.

A NOTE ON PROBLEMS OF CULTURAL TAXONOMY

by

Colin Flight

This note is a very tentative outline, very quickly written, of the kind of approach to the problem of cultural taxonomy which is needed if we are ever to attain to "precision and definition". The Burg-Wartenstein recommendations, though they may be well meant, seem to me profoundly unsatisfactory on this point. They rely on 2 tacit assumptions: first, that different taxonomic levels exist, second, that the levels are fixed regardless of time and space. No attempt is made to substantiate either assumption. The scheme is quite arbitrary.

It is very important and very difficult to evaluate these assumptions. What we need is some unit or index to measure the degree of differentiation between any 2 assemblages or cultures, but I have no idea how such a procedure might be devised.

The problem is more manageable if we restrict our attention to one area, one bracket of time, and one broadly comparable group of assemblages. I have taken as an example the data tabulated by Bohmers for 16 assemblages of the N-W European Upper Palaeolithic, which will I imagine be generally available (Brothwell and Higgs, fig. 67). For the sake of simplicity I have only analysed data on the typological composition of the assemblages - that is, the percentages of the 31 tool-types which he recognizes in this material. These data have of course the disadvantage that they are all correlated, but it is possible to make allowance for this. I have then estimated the degree of differentiation between each pair of assemblages, 120 pairs altogether, a score of 0 meaning that the 2 assemblages are virtually identical - e.g. Neer III/Budel IV (Ahrensburgian). There is no upper limit to the possible score; but the maximum score for this particular group of assemblages is 30, for Milheze (Tjongerian)/Hasswisch (Hamburgian).

It is hardly worth describing the improvised scoring system; all that needs to be said is that the results make sense, and are repeatable within 3 or 4 points at the most.

The scores are entered in the accompanying matrix, which has been slightly reshuffled, by trial and error, from the order of Bohmers' fig. 67. (For any larger set of data a computer would be needed.)

Assume, even if only for the sake of argument, that these figures are meaningful, that they express accurately enough the differences between the assemblages. The matrix confirms the 3-fold division into Hamburgian, Tjongerian, Ahrensburgian, and is at least consistent with the accepted relative chronology. There is a suggestion though, that the 3 taxa are not all on exactly the same level, the Hamburgian being the most variable: scores for differentiation with the Hamburgian range from 4-15 (average 9); within the Tjongerian from 4-11 (average 8); within the Ahrensburgian from 0-6 (average 4).

There is a hint too of variation in the degree of between-taxon differentiation: scores for Hamburgian/Tjongerian differentiation range from 15-30 (average 20); for Hamburgian/Ahrensburgian from 15-30 (average 21); for Tjongerian/Ahrensburgian from 13-23 (average 17). That is, Tjongerian and Ahrensburgian are rather more like one another than either is like the Hamburgian.

The Hamburgian looks as if it was tending to split along a line between Meiendorf and Marum. It is noticeable that the Ahrensburgian is significantly closer to the Marum-Ureterp end of the Hamburgian range (average score $17\frac{1}{2}$) than to the Meiendorf-Borneck end (average score 24). The same may be true too of the Tjongerian.

Another approach is to plot the overall frequency with which various scores occur. The resulting histogram is somewhat irregular, but is essentially bimodal, with peaks at 6-18 separated by a minimum at 12. We can infer 2 taxonomic levels. But there is no a priori reason to expect the same levels to be represented in other Upper Palaeolithic assemblages, let alone in archaeological assemblages generally. So I would refrain from giving these 2 levels names like 'variant' or 'culture', which imply universal validity. It would be better to describe them simply as the ≤ 12 level and the > 12 level. There are no doubt levels higher still: differentiation from la Madeleine VI for all 3 N-W European taxa, for instance, averages about 30.

Whether all or any of this is correct does not really matter. All I want to show is the kind of information we need, and one way in which we may eventually come by it. Names are not important. What we must develop is a technique for measuring differentiation, so that we can express quantitatively the variability of any one cultural taxon, and the extent to which it differs from another.

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DIFFERENTIATION SCORES
FOR 16 NORTH-WEST EUROPEAN
UPPER PALAEOLITHIC ASSEMBLAGES

Hasewisch

7	Borneck														
6	4	Meiendorf													
7	8	6	Marum												
15	10	8	4	Ureterp											
15	14	11	9	10	Havelte II										
24	23	22	20	17	18	Drunen III									
21	19	17	19	15	17	6	Makkinga								
19	16	19	19	18	18	7	4	Donkerbroek II							
23	18	18	22	20	17	10	8	7	Heythuizen						
26	23	19	21	18	17	9	7	8	6	De Banen					
30	23	23	26	25	22	11	11	9	8	7	Milheze				
23	21	23	18	15	16	16	15	14	16	15	21	Neer III			
21	23	22	18	16	15	16	14	19	17	15	18	0	Budel IV		
24	26	25	19	16	18	16	13	17	18	15	16	3	3	Geldrop	
29	28	24	21	20	19	17	17	19	16	18	23	6	6	6	Vessem

Estimated from data given by A. Bohmers: 'A statistical analysis of flint artifacts', in Higgs and Brothwell: 'Science in Archaeology' (Thames and Hudson, 1963) pp. 472-3, fig. 67.

Une Note sur les Problèmes de Taxonomie Culturelle

par

Colin Flight

Le système de Burg-Wartenstein suppose arbitrairement que des niveaux taxonomiques différents existent et sont établis sans se soucier du temps et de l'espace. Ce qu'on doit faire est illustré par une analyse d'une matrice des différences entre seize gisements européens de la Paléolithique supérieure, qui propose trois catégories, qui ne sont pas du même niveau. Je ne veux pas donner à ces niveaux des noms tels que 'culture', qui signifient une validité universelle.

COMMENTS ON THE DISCUSSIONS ON TERMINOLOGY IN AFRICAN
ARCHAEOLOGY AT THE FOURAH BAY CONFERENCE OF JUNE 1966

by

J. A. Myles

1. Facies (West African Archaeological Newsletter No. 5, 1966 page 41)

It is suggested that 'facies' be used in the general sense recommended for 'phase', and 'phase' used only where there is an additional factor of time implied.

2. Neolithic (Page 48 of West African Archaeological Newsletter No. 5, 1966)

While attempts are being made to find a suitable term that will imply food production, it is realized that positive evidence for food production in West Africa is hard to come by. Are we not increasing our problem by drawing a distinction between 'agriculture' and 'vegiculture'? For this distinction seems to imply that 'agriculture' is more advanced than 'vegiculture'; this is doubtful. Perhaps, we should make more effort in finding out more about indigenous food plants, particularly the identification of their wild and cultivated types.

3. Iron Age (Page 46 of West African Archaeological
Newsletter No. 5, 1966)

In some cases it is not easy to determine where Stone Age ends and Iron Age begins. Nevertheless, the Iron Age includes the protohistoric period which has some elements not present in the Stone Age. It therefore appears that we cannot always apply the same analytical methods for Stone Age and Iron Age.

Resumé

Quelques Observations sur les Discussions de Terminologie de
l'Archéologie Africaine au Congrès de Fourah Bay, Juin 1966

par

J. A. Myles

On ne doit pas se servir du terme 'phase' à moins qu'on veut signifier une période de temps. Il semble que la distinction entre 'agriculture' et 'vegeculture' ne fait qu'agrandir les difficultés de la Néolithique. Les mêmes procédés analytiques ne sont pas également convenables à l'Age de Pierre et l'Age de Fer.

The conference also had before it a copy of the resolutions of the African Research Committee Conference on the African Iron Age held at Champaign - Urbana, December 8 - 10, 1966, as set out below.

RESOLUTIONS PASSED AT THE A.R.C. CONFERENCE ON IRON AGE
ARCHAEOLOGY

The Conference discussed the proposed "Nomenclature of Cultural Stratigraphic Units" proposed by the 1965 Wenner Gren Symposium on the African Quaternary and reached the following conclusions:-

- (1) that there is great danger in attempting to impose a rigid system of nomenclature on the African Iron Age at this time.
- (2) certain of the words which are proposed are already in current and generally accepted use among archaeologists working in other continents, especially in the New World, e.g. Horizon, Industry and Complex. It is particularly regrettable that this last term should be proposed for the maximal unit in Africa when its use in America is for the minimal unit.
- (3) no distinction is made between geographical and chronological subdivisions, though such distinctions evidently need to be made.
- (4) the conference deplored the use of the term ethno-archaeology, which, like ethno-history, is both ambiguous and impolite to our African colleagues.

RESOLUTIONS ON TERMINOLOGY

The Conference welcomed the efforts of the Burg Wartenstein Symposium to bring clarity and precision to the terminology of African archaeology, and agreed, after lengthy discussion, on the following points concerning the recommendations of the Wenner-Gren Symposium:

1. The Burg Wartenstein system is unsatisfactory because it is largely an interpretative system and not, as it appears to claim to be (W.A.A.N. No. 5, p. 43), a purely analytical system. This is partly because the type of evidence available and the collateral disciplines used are different at different periods of time; thus the Burg Wartenstein system suits the earliest periods of African archaeology better than the later.
2. A hierarchical system like the Burg Wartenstein proposals is acceptable provided it is realised that it is a classificatory one only, imposed by research workers on the data for convenience of communication, and does not necessarily correspond to realities in the data or in the process of social evolution.
3. Great concern was expressed at the use of the term 'Cultural-Stratigraphic', which none of the participants could understand. Frank Willett had made enquiries of three members of the Wenner-Gren Symposium, (Desmond Clark, Glyn Isaac and Glen Cole) and had been assured that it was a complete abstraction, meaning 'a graded hierarchy of units of classification'. Participants suggested the substitution of the word 'classificatory'.
4. While participants welcomed the emphasis on basing units of classification on genuine associations demonstrated by stratigraphy, they felt that other sound methods of proving associations of artefacts, such as by the statistical analyses of surface finds, could be admitted.
5. Because of the ambiguity attached to the word 'horizon', it was felt that the term 'Archaeological Occurrence' was to be preferred for the minimum classificatory unit. 'Horizon' should be used to indicate the stratigraphical context of an 'Archaeological Occurrence', with a qualifying adjective (e.g. 'archaeological', 'geological') as appropriate.

6. The following definition for 'Industry' is preferred to the Burg Wartenstein one: 'An Industry is represented by all the known objects that a group of people used in an area during a period'.
7. It was considered useful to retain the distinction between 'phase' and 'facies'. Therefore, it was agreed that 'an Industry may consist of a series of successive phases or of distinctive contemporaneous facies. Any 'Archaeological Occurrence' may be in a particular phase or facies (or both)'.

The terms 'Phase' and 'Industry' when used as defined here should be spelt with a capital letter, but these words may continue to be used in an informal way using a lower case initial.

8. The following definition of 'Industrial Complex' was preferred to the Burg Wartenstein one: "'An Industrial Complex" is a grouping of similar Industries'.
9. It was recommended that the Panafrican Congress should give some formal recognition to the place of Iron Age archaeology and that a section should be allocated to it at each conference.
10. Burg Wartenstein recommendation No. 2. Unanimously endorsed.
11. Burg Wartenstein recommendation No. 3. No comment.
12. Burg Wartenstein recommendation No. 4. In relation to 4 (1) (a), it was agreed that the terms listed had become unsatisfactory, but that such higher order terms (above the level of Industrial Complex) are useful, particularly in general writing; it is hoped therefore, that acceptable new terms will be devised.

It was noted that in 4 (4) the quoting of the 'Tenerean' was not a very happy example, since it had not been stratigraphically established. Nevertheless, in view of the conference's widened basis for the acceptance of an archaeological unit and the fact that all the archaeologists who had seen the 'Tenerean' were agreed, it was felt that the term could be retained.

13. Burg Wartenstein recommendation No. 6. It is proposed that the use of the term 'neolithic' should be confined to a strictly technological use in the original sense indicating the presence of a ground stone cutting edge. If it is desired to indicate that food-production was present in an Industrial Complex, the term 'food-producing' ('producteur') should be used.

It is recommended that the one term 'agriculture' should be used to include the growing of grain crops, vegetative crops like yams, and food-producing trees; and that the term 'vegeculture' should be abandoned.

14. Burg Wartenstein recommendation No. 7. It was felt that precisely the same objections which had been levelled against the term 'protohistory' could be levelled against 'prehistory', and that if one term went, both must go; it was therefore suggested that 'protohistory' was a useful term to retain.

Agreement was expressed with 7 (2) (c) in relation to the classificatory system, but it was felt that at the interpretative level ethnic terms could sometimes properly be used.

15. Agreement was expressed with Burg Wartenstein recommendation No. 8, but it was recommended that the term 'Ethno-Archaeology' should be abandoned. The heading for the recommendation could simply be: 'The Use of Ethnographic Data'.
16. Burg Wartenstein recommendation No. 10. The conference recommended that in future, wherever possible, Fiches typologiques africaines should include:
- (1) A full description of the typical specimen.
 - (2) A comprehensive definition of the limits of variation of the type.
 - (3) Dimensional information for both the above requirements.
17. Burg Wartenstein recommendation No. 12. Unanimously endorsed.

Resumé

Décisions au sujet de la Terminologie

Le congrès accueillait les efforts du Congrès de Burg-Wartenstein afin d'apporter de la clarté et de la précision à la terminologie de l'archéologie africaine. Après de longues discussions les participants se sont mis d'accord au sujet des recommandations de Burg-Wartenstein comme suite:

1. Le système de Burg-Wartenstein n'est pas bien utile parce qu'il prétend, semble-t-il, un système purement analytique. Ceci provient du fait que les sources des données et les disciplines collatérales utilisées ne sont pas les mêmes à des périodes différents; ainsi le système de Burg-Wartenstein est mieux adapté aux temps les plus anciens en Afrique et moins adapté aux périodes plus récents.
2. Nous admettons un système hiérarchique, comme celui de Burg-Wartenstein pourvu qu'on accepte qu'il n'est qu'un système de classification, dont les chercheurs ont besoin pour communiquer entre eux et qu'il ne se conforme pas nécessairement aux réalités des données ou du cours de l'évolution sociale.
3. On a exprimé une grande inquiétude au sujet du terme 'Cultural-Stratigraphique', que personne ne pouvait entendre. On a dit qu'il voulait dire 'a graded hierarchy of units of classification'. Les membres participants aimaient mieux le mot 'classificatory'.
4. Le congrès acceptait l'importance de baser les unités de classification sur les associations vrais de stratigraphie, mais on a cru qu'on peut admettre d'autres méthodes valides pour démontrer l'association des objets, tel que l'analyse statistique des objets récoltés de la surface du sol.
5. Parce que le mot 'Horizon' est équivoque, les membres participants aimaient mieux le terme 'Archaeological Occurrence' pour l'unité le plus petit de la classification. On peut se servir de 'Horizon' afin d'indiquer l'état stratigraphique d'un 'Archaeological Occurrence'.
6. Pour le mot 'Industry' le congrès aimait mieux la définition: 'An Industry is represented by all the known objects that a group of people used in an area during a period.'

7. On a cru qu'il était valable de faire une distinction entre 'phase' et 'facies'. Alors on a dit: 'An Industry may consist of a series of successive phases or of distinctive contemporaneous facies.'
8. Pour la phrase 'Industrial Complex' le congrès a préféré comme définition: 'An Industrial Complex is a grouping of similar industries.'
9. Le congrès a recommandé que le Congrès Panafricain doit accepter formellement l'établissement de l'archéologie de l'Age de Fer en Afrique.
10. Recommandation de Burg-Wartenstein No. 2: accepté à l'unanimité.
11. Recommandation de Burg-Wartenstein No. 3: pas de commentaire.
12. Recommandation de Burg-Wartenstein No. 4. Quant à 4 (1) (a) les membres participants étaient d'accord que les termes donnés étaient devenus moins utiles, mais ils croyaient que des termes des ordres supérieurs sont valables; alors ils espèrent que de nouveaux termes seront élaborés.
13. Recommandation de Burg-Wartenstein No. 6. Le congrès propose que le terme 'neolithic' sera limité à un emploi strictement technologique, pour indiquer un tranchant poli. Si l'on veut indiquer que la production de la nourriture appartenait à un 'Industrial Complex', on peut dire 'food-producing' ('producteur'). On ne doit plus employer le terme 'vegeculture'; le terme 'agriculture' doit indiquer toutes les méthodes de production de la nourriture.
14. Le congrès voulait retenir le terme 'Protohistory'.
15. Recommandation de Burg-Wartenstein No. 8: accepté pourvu que la phrase 'The Use of Ethnographic Data' soit substituée pour 'Ethno-Archaeology'.
16. Recommandation de Burg-Wartenstein No. 10. Le congrès désirait qu'à l'avenir, si possible, les Fiches Typologiques Africaines comprennent:
 - 1) Une description complète du modèle typique.
 - 2) Une définition complète des limites de variation du type.
 - 3) Les dimensions pour 1) et 2).
17. Recommandation de Burg-Wartenstein No. 12: accepté à l'unanimité.

OTHER RESOLUTIONS OF THE CONFERENCE

1. The Conference expressed appreciation of all the funds given by Governments and Foundations for archaeological research in West Africa. Participants commented upon the large amount of work going on of which indications had been given at the conference. Recognising that adequate publication is an essential part of archaeological research, members hoped that research funds could be devoted to the establishment of a West African Journal of Archaeology.
2. The desire was expressed that the Panafrican Congress should emphasise the importance of and need for palynological work in Africa (especially West Africa) and do all in its power to promote the necessary research. Such work is also desired by soil scientists, geologists, foresters and others.
3. There was some discussion on the formation of a West African Archaeological Association. It was felt that this was desirable but that further careful consideration to the proposal should be given at the next conference. Mr. Graham Connah undertook to collect information.
4. In the light of the long discussions on terminology and typology, the conference felt it would be useful if an archaeologist could be appointed to specialize in the analysis of West African archaeological material.

Resumé

Autres Décisions du Congrès

1. Le congrès exprimait sa reconnaissance des fonds donnés par les gouvernements et les fondations à la recherche archéologique de l'Ouest africain. Les membres participants ont remarqué la grande quantité de travail en cours; parce que la publication en détail des résultats est une partie essentielle de la recherche archéologique, ils espèrent que des fonds de recherche peuvent être appliqués à l'établissement d'un 'West African Journal of Archaeology'.
2. Le congrès voulait bien que le Congrès Panafricain soulignerait l'importance et le besoin de travail palynologique en Afrique, surtout en Afrique de l'Ouest, et ferait tout son possible afin de projeter la recherche nécessaire.
3. On a parlé de la formation d'une Société Archéologique de l'Ouest Africain, et on s'est décidé à examiner la question de nouveau au congrès prochain des archéologues de l'Ouest africain.
4. Suivant les longues discussions au sujet de la terminologie et de la typologie le congrès voulait voir nommé un archéologue qui se spécialiserait dans l'étude analytique des matériaux archéologiques de l'Ouest africain.

COMMENTS ON THE RESOLUTIONS BY PROFESSOR DESMOND CLARK

A copy of the resolutions on terminology was sent to Professor Desmond Clark and elicited the following comments.

'Thank you very much for sending me the summary of the recommendations of the Ibadan conference. Glynn Isaac and I have been very interested to see these which are certainly most helpful for showing up the shortcomings of the suggestions made by the Burg Wartenstein group. Following from the attempts to have as many people as possible examine and criticise the recommendations of that conference before Dakar, we think it is very obvious that the Pan-African Congress, when it meets, should not attempt to legislate on matters of terminology as has been done in the past. At best it should make recommendations that workers would be free to follow if they wish. Thus, for example, if some workers want to retain the use of "proto-history" and others prefer some other term, each should be free to employ whichever they wish, provided they define clearly the meaning of the terms they use. We feel that the Congress should try to establish some form of hierarchical system that can form the basis for more precise definition and description in the future. There is an awful mess at present, when you look into it!

We should like to comment briefly on the points raised in the Ibadan conference summary. Firstly, we think there must still have been some misunderstanding of the meaning of some of the recommendations of the Wartenstein conference. These recommendations are further explained in the paper by Cole, Isaac, Kleindienst and myself in the South African Archaeological Bulletin which does, we think, help to clarify what the conference had in mind and the implications of the terminological recommendations. It does not seem as if this paper had been referred to by the Ibadan group.

The chief points that we would like to comment on are those concerning "cultural-stratigraphic" nomenclature - what you have referred to as "the Burg Wartenstein system". While this is not intended to be purely interpretative, it is certainly analytical and I think there is a basic confusion here with what the nomenclature sets out to do. The suggested hierarchy of cultural terms is primarily an archaeological one - it is largely independent of any chronometric, palaeobotanical, palaeontological, ethnographic or other collateral evidence that might be associated with the different archaeological units. These units are established on the basis of

the artifacts themselves and on no other evidence, though stratigraphy and geography will guide the archaeologist in his decision. It is envisaged as analagous to the way in which a biologist classifies his material in the various units of biological taxonomy e.g. species, genera, sub-families and families. It works just as well for the latest archaeological material as it does for the earliest, which was the point made by the specialists in "Iron Age" archaeology who were at Wartenstein (there were six of them - Inskeep, Summers, Fagan, Posnansky, Mauny, Nenquin and two others, Mason and myself, who are equally concerned with the "Iron Age"). Of course, everything else being equal, the later the material the greater the amount of associated data from collateral disciplines and the more complete the reconstruction the archaeologist can attempt. However, this does not detract from the validity of the taxonomic units "the Wartenstein system" proposes. The content of your 2 indicates that this was, in fact, the view of the Ibadan group. The "process of social evolution" is, of course, an interpretation based upon the data provided by the "culture hierarchy" in the same way as in zoology as well as by the evidence from other disciplines.

3. The term "cultural-stratigraphic" as used in the Wartenstein proposal has clearly led to misunderstanding and should be amended or qualified. It relates only indirectly to geological stratigraphy and implies primarily a classificatory system made up of abstract cultural units inferred from concrete evidence and arranged in graded order of magnitude. It certainly is not "a complete abstraction" but a graded system of categories each incorporating items with similarities at increasingly general levels - Archaeological Horizon or Occurrence, Phase, Industry, etc. The term "cultural-stratigraphic" needs explaining or rewording, as you indicate.

4. If one does not have anything other than surface finds then one has to do the best one can with them but, owing to the amount of proved contamination and mixing, we would suggest that they can only be used as the basis for a "working hypothesis".

5. Archaeological Horizon (alternatively Archaeological Occurrence) has a precise meaning as defined in the "taxonomy". As already stated the choice between using "horizon" or "occurrence" is one every scholar is free to make for himself. In passing, it should be noted that, if reference is required to the artifacts out of their context, then one or other of the terms "aggregate", "sample" or "assemblage" would be appropriate.

6. We don't like the Burg Wartenstein definition of an industry and feel that yours has the same shortcomings. Reference to a "group of people" is bad since they can never be seen directly in the archaeological evidence. We feel that there is a need to draw up a new definition for this at Dakar or, better still, for scholars individually to publish suggestions and worked out "examples".

7. We agree about the usefulness of retaining a distinction between "Phase" and "Facies" as also with the comment regarding formal and informal usage.

8. No comment.

9. This is usually done anyway and the papers are grouped according to subject matter, one or more sessions being devoted to "Iron Age" archaeology. Incidentally, we want to avoid dividing archaeology, or palaeo-anthropology, into arbitrary compartments. Recent work is demonstrating how integrated is the later part of the "Stone Age" and the earlier part of the "Iron Age" and the same is becoming apparent for earlier times.

12. We agree that such terms as "Earlier", "Middle" and "Later Stone Age" must be retained, at any rate until they are replaced by better terms. There is a misunderstanding here, however, in that these are not terms that belong in the proposed "cultural hierarchy" system (and are not, therefore, above the level of Industrial Complex) as they have confused culture-stratigraphic and time-stratigraphic connotations. We feel that they should be used informally, that is between quotation marks.

Reference the "Tenerean" - again, I think the word stratigraphic has led to a misunderstanding. The "Tenerean" has been defined by Tixier and Hugot and, therefore, has validity.

13. We neither of us favour the group's suggestions regarding the use of the term "Neolithic". At this rate two thirds of the "Later Stone Age" hunting cultures in southern Africa are "Neolithic". Though, of course, this is another problem which "legislation" cannot help.

14. Recommendation 7 of the Wartenstein group was made by the "Iron Age" archaeologists and there is obviously some divergence of opinion here with West African thinking that needs to be straightened out.

15. Agree.

16. An excellent point and it is most welcome that this has been brought up. It should not be lost sight of at Dakar.

If you would like to publish those parts of this letter relevant to nomenclature in the West African Newsletter, please do so as I hope they will clear up some of the problems raised in the Ibadan suggestions 1 - 16.

Part II CLASSIFICATION AND DESCRIPTION OF POTTERY

Members of the conference held a long discussion on the subject of the terminology to be used in the description of pottery, and were agreed on its importance. No conclusions were reached and it was recommended that this question should be considered further at the next Conference of West African Archaeologists.

The conference had the following paper by Frank Willett before it as a basis for discussion, and Richard York's contribution was read for him.

Resumé

Classification et Description de la Poterie

Les membres participants ont longtemps parlé de la terminologie de la description de la poterie et étaient d'accord sur son importance. Ils ont voulu que cette question serait sujet de discussion au congrès prochain des archéologues de l'Ouest africain.

POTTERY CLASSIFICATION IN AFRICAN ARCHAEOLOGY

A basis for discussion

by

Frank Willett

In the course of our archaeological work there are a number of things which we tend to take for granted, so I propose to begin by asking the question "what are we trying to do when we use pottery as archaeological data?" In the first place, we use it to attempt to reconstruct the way of life of the people. In the second place, we use it to establish the relative chronology between different archaeological deposits. And in the third place, and these may be considered secondary to the first two in so far as classification of pottery is concerned, we are interested also in evidence of trade and the movements of people and mutual cultural influences. In the light of these purposes what then must be the guiding principles behind our classification?

In order to reconstruct the way of life of the people we are studying we need to try to see it through their own eyes as far as possible. We need to look at a pot from the view point both of the potter who made it and of the housewife who bought it and used it. Obviously these are interrelated view points for the potter does not create abstract forms for her own satisfaction but functional vessels to supply the needs of her customers. To get some insight into the uses of different forms of vessel we need to observe current usage among present day African villagers. When we do this it is readily apparent that the same vessels are used for a variety of purposes, but that there are also vessels which serve only one specific function. For example, the Yoruba potters of Ilorin make a globular vessel with a stirrup-like handle, a ring base, and a narrow tubular spout opposed by a wider funnel with its own lid. This is a cooling vessel for drinking-water, which is put in through the funnel and poured out through the narrow spout. This is a highly specialized vessel, and we should be justified in describing it in terms of its function rather than its form. In general, functional terms may well be briefer and are certainly more convenient than detailed descriptions of form. In contrast one finds, also in Ilorin, large vessels twenty inches or more in diameter and two feet or more in height with rounded bases, usually slightly convex walls, and a constriction below the narrow rim. These vessels are used (a) to catch and store rain water as it runs off the eaves, (b) to store water brought from rivers and wells, (c) as the lower vessel in the dying process, and (d) in brewing beer. Evidently if we were to find such a vessel in situ we might be able to make reasonable inferences about its function, but we would not otherwise be justified in using a functional name in classifying it. We should be compelled to use a name which referred only to its form.

THE USE OF NATIVE NAMES FOR POTS

It is accepted anthropological usage to retain native names for objects and concepts which either cannot be translated, or which may suffer in translation. Many of these words have come into general use outside the societies of their origin, e.g. tabu and sibling. There would seem then to be a prima facie case for using native names for pots when there is no English equivalent. I have myself been using two Yoruba words for vessels which are very characteristic of the northern Yoruba ceramic tradition as represented at Old Oyo:

Adugan: a flat bottomed vessel with carinated walls and a medium sized everted lip, with a U shaped hole cut in

one side to allow air to enter for the charcoal fire. Inside the neck of the vessel are three decorated lugs on which the cooking pot sits, permitting the movement of air through the fire and out of the top. These vessels are usually made of sheet metal now-a-days. One could as well call this a fire-pot, or hearth pot, especially as there is another vessel of quite different and unrelated form which serves the same purpose. (This one I believe to be a post Islamic introduction. It consists of a shallow bowl set upon a hollow pedestal foot about four inches in height and two to three in diameter. This pedestal has a hole in the side for the entry of the air which passes upwards inside the pedestal foot and enters the bowl of the vessel through a series of slits made in its lowest part and hidden by the pedestal.)

Ishasun: This is a lidded cooking bowl (a bowl being a vessel which is greater in diameter than in depth) with a usually wide everted rim, and often a carinated shoulder. Now this type of vessel is not restricted to northern Yorubaland. It certainly is found in Togo and in a less elegant form among the Afo to the north of the Yoruba. I give these two examples as cases where I have found it convenient to use Yoruba words to describe a type of pot, simply because one Yoruba word can save a great many English words especially if one has to use a detailed technical description of the form. However, since for the first one a simple English word can be found, namely fire-pot, I do not consider the continued use of adugan can be justified. In the case of ishasun this is a characteristic type of bowl and although it is more widely spread than among the Yoruba, it was first described from there, so far as I know, in the archaeological literature and therefore this name could claim to have a certain priority. Certainly it is a vessel for which I know of no brief English descriptive term. It raises however the question of how far we are justified in using a term taken from one African language and applying it to pots which may occur among the speakers of other languages. Richard York has found it convenient to use words taken from Christaller's dictionary of the Twi language in classifying his pottery as a personal convenience and I think we should examine the way he has done this and see whether this type of use can be extended further or whether it is justified only in a purely regional study.

THE DECORATION OF POTTERY

In the same way that we have a dichotomy between form and function in classifying whole pots, so we have a choice of two methods of classifying pottery decoration. Most

obviously we have its appearance, but similar appearances can be produced by diverse means. We need to bear in mind once again the role of the potter and to consider primarily how the decoration was produced. This will give us a series of broad technical categories which can be subdivided to indicate the visual effect of the design.

The pottery fragments from our potsherd pavements in Ife provide a very wide range of decorative effects which have led me to produce the following overall scheme:

The classification of potsherds from Ife pavements is divided basically into three major subdivisions. The first is pots with a completely smooth surface. The second is pots with impressed decoration of the surface. And the third is pots with applied decoration raised up from the surface. There are also a number of smaller groups which reflect form rather than decoration. And of course there are in many cases fragments in the pavements from which it is possible to reconstruct the shape of a large part of the pot. (Although this system was worked out to deal with problems arising from the study of the pavements in Ife we have in fact incorporated pottery from most of the excavations at Ita Yemoo so that in many cases larger fragments are available for study than there could be from the pavements alone.)

A. Smooth surface.

1. Totally undecorated pots.
2. Smoothing of the surface. This is defined as pottery which shows a clear attempt to make the surface smooth although there is no sign of burnishing the surface and there is no sign of any deliberate attempt at achieving a pattern from the direction of the strokes used in smoothing the pot.
3. Burnishing. Here the pot has been deliberately rubbed in the leather hard state with the edge of a smooth pebble. This produces a faint faceting of the surface which may be in regular parallel lines or the lines may run at angles to each other. The lines themselves have a slight shine from the rubbing smooth of the pot, but the intention is clearly to make the pot smooth and shiny rather than to impress into the surface the edge of the pebble that is used for the purpose.
4. Painting. In Ife painting is found only rarely and the pigment is invariably red and, so far as I have

been able to discover so far, is applied as a continued wash over a large part of the pot. (We should note that in northern Yorubaland pottery is painted with red paint to make curvilinear designs which I suspect are a post-Islamic characteristic.)

B. Impressed decoration.

1. Incisions.

- a. Short incisions. These include decorations which have sometimes been called stabs.
- b. Continuous straight incisions. These may be grooves (which are narrow) or channels (which are wide). Each of these patterns, grooves and channels, may be in one single direction or be in multiple directions in which case the grooves include the decoration often referred to as cross-hatching.
- c. Continuous wavy lines. Again single or multiple.
- d. Carved comb incisions. These are patterns incised with the help of a wooden comb which has been carved to have teeth at the end which is used to decorate the pot.
- e. Combed decoration (equals broom). This type of comb is composed of the elements of palm frond of the type which is used to make an African broom. The decoration here may be straight in a single direction or in multiple directions. It may be wavy or it may be in arches.

2. Rouletting. This type of decoration is made by rolling a suitable cylindrical object over the surface of the pot to impress a decoration upon it.

- a. A corn (maize) cob or ear may be used for this purpose without any special preparation.
- b. Twisted (or plaited) string (i.e. grass or other fibre) may be used.
- c. Twisted (plaited) palm frond may be used. This gives a number of irregular but angular impressions and can produce a very wide variety of effects.

- d. Carved roulettes. These appear usually to be of wood and produce a very wide variety of designs some of which are especially characteristic of Ife. We may mention here checker-board or waffle design, basket-work designs, and various other roulettes which produce motifs like zig-zags. These can usually be distinguished from incision and stamping designs because the pattern is usually of a set width which repeats itself in a continuous design.

3. Stamping.

- a. With twisted string.
- b. With carved stamps.
- c. With natural objects, such as a fingernail or the end of a bone or a twig.
- d. Wooden combs which may be applied either straight or with a motion known sometimes as rockering or as the walking comb pattern in which the ends of the comb are moved alternately forwards across the surface of the pot producing a series of impressions which give an overall effect of a zig-zag.
- e. Stabbing with a pointed tool.

C. Applied decoration.

1. Bosses.
2. Relief strips. Of course bosses and relief strips may both occur on the same pot or may be applied in a unified decoration which could be classified as either.

There are also a number of minor groups which reflect form rather than decoration. For example, jug-handles, flanders, (that is to say perforated pots which may be used for straining or for carrying fire), necks of bottles, and discs (these are particularly important; they may be made from any type of pot but are rounded, often to a nearly perfect circle, and vary in size from about three quarters an inch to two inches in diameter. They appear only in the best quality of potsherd pavement where they appear to form a top dressing overlying the main pavement which is made quite irregular roughly rectangular pottery fragments).

This is no more than the general scheme of classification. Within any one of the smallest divisions here mentioned there are many different subdivisions. In addition we have not considered here the cases in which we have combinations of decoration. For example we have pottery which is both incised and painted, pottery which is incised and rouletted, pottery which is incised and stamped. We have similarly pottery which is rouletted and incised, pottery which is rouletted, incised and stamped, pottery which is rouletted and stamped, pottery which is rouletted and smoothed or incised. Similarly under relief decorations we find bosses with incision, bosses with rouletting, bosses with stamping, bosses with relief strip, bosses with relief strip and stamping, bosses with relief strip and incision, bosses with relief strip and stamping and incision, and also relief strip with incision relief strip with rouletting, relief strip with incision and very fine twisted string rouletting, relief strip with stamping with motifs of circles, points or fingernails, relief strip with comb stamping, and relief strip with twisted string stamping.

I have mentioned that the carved roulettes are particularly characteristic of Ife and we have divided these up into the following groups: chequers (which we have sometimes been in the habit of referring to as waffle design), rectangles, brick work, basket work, ladders, zig-zag, and a mixed class of other carved roulettes. As thus summarized the scheme of classification comprises six hundred minimal categories of design. When the statistical analysis is carried out it is hoped that it may be possible to reduce this number to something more manageable since in many cases the individual categories are likely to represent the impression of, for example, only one roulette. This general problem is discussed below.

Now of course other forms of decoration exist which are not represented at Ife. There are for example no slipped wares at all (though I have my doubts whether many of the wares described as slipped from some parts of Africa indeed are truly slipped. Many pots which I have examined show a difference of colour in the surface which is due entirely to the depth of penetration of the oxidation or reduction in firing and has nothing to do with a slip applied to the clay before firing). In addition, in Ife very few sherds have been painted. In sites in the Savannah to the north painted wares are much more frequent and on such sites would call for this particular section to be elaborated.

MULTIPLE DECORATIONS

There is of course a major problem of classifying decorations which employ several different techniques. Often these have been applied one over the other so that one can classify them either on the basis of a primary classification according to the decoration which was put on first, or on the basis of the one which is most obvious when looked at (though this might well be difficult to decide), or of course one could simply classify on a hierarchy of order, that is to say, the primary decorations could be ranked in order; e.g. if we have decided that smoothing is the primal method of decoration then any pot which shows smoothing and other characteristics will be classified under smoothing, with a sub-division of smoothing plus incision, smoothing plus incision plus rouletting, or whatever it may be. Now there are difficulties here. For example, in life basket-work rouletted decoration occurs on a particular type of very thin walled vessel. This is often found to have a band of diagonal incision (slashing) superimposed on it. The incision is most pronounced but the basket-work impression is the one which is most characteristic of this type of vessel so that to be significant our classification would have to emphasize the basket-work rather than the incision which goes into it, even though we might have decided, as we have done in the outline we have already described, that incision is one of the more primary types of decoration.

This is a very complex problem and I doubt whether any simple decision can be reached. I think each example will have to be judged on its own merits and this of course makes it very difficult to make sure that the same decision is reached every time when we are using a classification system to establish the statistics of occurrence of the different types of decoration in an archaeological deposit.

THE PROBLEM OF ZONES OF DECORATION

A pot which bears different zones of decoration is likely to go into more than one category when it is being classified from sherds alone. In such a case our statistics will represent the relative frequencies of each type of decoration and may not represent the relative frequencies of different types of pots. It is important that we should know exactly what our statistics do represent. Similarly undecorated sherds may come from decorated pots and so to classify these separately gives merely an index of the relative area of decorated to undecorated pot. Provided that we are aware of these limitations and these complications I do not think that any harm can come of classifying from potsherds. But we

must be quite clear that we are not classifying pots when we are classifying the sherds into which they have been broken.

CLASSIFICATION BY COLOUR

The colour of a pot cannot safely be used when one is describing potsherds because the conditions of firing in a wood fire vary considerably, to such an extent that one side of an individual pot may well be grey whilst the other side is red. It is therefore useless in describing sherds to place any emphasis on the surface colour. Only when a nearly complete pot is present can one safely use the colour of the pot as a criterion of classification.

THE ESTABLISHMENT OF METRICAL CRITERIA

It is clearly desirable to know what we mean when we speak of large, medium, or small pots. Similarly, the distinction between grooves, and channels is one which is essentially of size and therefore is subject to measurement. However if we set up specific measurements as criteria for these things we will have to apply them in every single case. In other words it will be necessary to take our calipers to every sherd we are classifying as incised or grooved. But it is in fact much more complicated than this because the same tool can produce a different size of incision or groove in different parts of the same pot simply because the potter has varied the pressure of her hand. I feel therefore that it is desirable to keep our definitions of these different types of decoration relatively imprecise, that is to say that we should not give specific measurements and set specific limits of size since these are not practicable. Similarly, absolute categories of large, medium, and small pots again seem scarcely to be justified. Particularly as in many cases we cannot establish the exact size when we are dealing with fragments: we may be able to establish the diameter but we often could not establish the depth. Nevertheless, three categories of size seem to be generally useful and I think probably the simplest way of using them is for each group of pots which is being studied to be segregated into these sizes of large, medium, and small as the material itself seems to demand of the archaeologist working upon it. And indeed large, medium, and small may refer to different sizes within different shape groups of pots.

THE DEGREE OF CLASSIFICATION

We need to set limits to the detail into which we are prepared to go in the course of our classification. However,

if we set relatively broad groups as the main classes, then we may not be able to distinguish as well as we should like between different assemblages of pottery. Our classification may be insufficiently sensitive. It is therefore desirable in the first place to classify in too great a detail rather than in too little detail, since small groups of no apparent significance can be subsumed under the larger groups without difficulty whereas if there is no distinction detectable in a relatively coarse type of classification one would have to go back to the original material and entirely reclassify it on a more elaborate scheme. It is therefore likely to be most economical in the long run to have a relatively elaborate classification and then to simplify it as the work proceeds rather than to attempt to do it the other way round.

However one needs yet again to bear in mind the practices of the modern potter when one is establishing the criteria that one is using. A form of decoration which is commonly found in the pottery from Old Oyo consists of a form of comb incision made by taking a small African broom made of the mid rib of palm leaves and fanning these out in the hand to form a comb making arcs around the shoulder of a large vessel. Obviously the number of strokes involved in such a decoration is quite haphazard and has no particular significance. Similarly to classify a quite elaborate neck form or rim form according to whether it has one, two, three, four, five, six, or seven lines of incision underneath seems to be to classify in far too great a detail ever to be of any significance.

In the case of rouletted decoration of the types which I have been working with at Ife, in some cases I suspect that the categories I have established represent the work of one individual roulette in its life time of use and do not even represent the work of merely one potter. Such a detail in classification could conceivably give us some significant results and one might indeed on occasion quite usefully study the work of individual potters where it is possible to detect them but this is a highly specialized possibility which need not, I think, bother us in this study. Rather we need to establish the basic principles of classification into which all pots can be fitted. The degree of elaboration will come in the finer and finer sub-divisions which are going to be necessary for individual regional studies but which do not need to be described in detail in this particular case.

A CENTRAL INDEX

The classification of pottery is evidently a complex matter and there is considerable risk that the same decoration is being described by different people in different ways. This needs to be avoided at all costs. It appears then that we need some central system for describing pottery decorations to which all new descriptions of pottery decoration can be referred for comparison and acceptance or rejection as being already validly described in the literature. Perhaps we could use Inventaria Archaeologica Africana in this way, by describing in the first place a long series of pottery decorations, their technique of manufacture, and with the excellent illustrations of that series, show very clearly their visual effect. And perhaps someone could be made responsible for checking all future descriptions which are submitted to make sure that they do not already match existing ones. Perhaps something on the lines of the card index of stone implements which is kept at the Musée de l'Homme might be more appropriate. I note also in going through the literature of archaeological excavation that there is no standard way of drawing pottery. A great variety of scales are used and a variety of symbols which in many cases are not entirely self-evident. Even the rims of pots are not always shown horizontally orientated. Perhaps we ought to make recommendations about the conventions for drawing pots. In particular, it seems very wasteful of effort to show every chip and crack on an excavated pot. What interests us is the potter's idea, not the exact condition in which the pot was found. It is much quicker to draw what amounts to a diagram of the original form of the pot, and it is only that which is of interest to us in cultural comparison.

ETHNOGRAPHIC DATA

A great deal of insight into archaeological pottery can be obtained from observing modern potters at work in Africa. This type of observation needs to be intensively undertaken in the present day when Japanese enamel-ware is being imported even imitating the form and colour of African pots. We need to compile a collection of pots and the tools used to decorate them. Samples of the impression made by these tools could be made on small tablets of clay which could be fired and distributed to a number of suitable museums or university centres and could serve as comparative standards for use in describing archaeological material.

Resumé

La Classification de la Poterie pour l'Archéologie Africaine

par

Frank Willett

Les archéologues peuvent se servir de la poterie pour reconstruire la vie des peuples anciens, pour établir des chronologies relatives, et pour faire voir la traite et les contacts culturels. La classification doit servir ces buts. On peut voir actuellement que des pots à formes très spécialisées existent en même temps que des formes à fonctions multiples. On peut classifier l'ornement soit par son aspect soit par la technique de fabrication; cette dernière doit être souveraine. La couleur des tessons n'est pas une marque de distinction assez utile parce qu'ils sont sujets à des cuissons variables. D'abord on doit faire trop de catégories plutôt que trop peu de catégories qui ne suffisent pas, parce qu'on peut facilement joindre des catégories plus tard. On a besoin d'un système d'accord pour décrire la poterie, autant qu'un système d'accord pour les dessiner.

POTTERY CLASSIFICATION: SOME METHODS AND RESULTS FROM NEW BUIPE

by

Richard York

Most of you were present when the New Buipe excavations were described at the Freetown Conference last year, but it will be necessary, for the purposes of this paper, to repeat briefly that description.

The site consists of 3 mounds in a straight line parallel to the Black Volta at this point, about 160 yds. from the water on the North Bank, and occupying an area roughly 200 x 60 yds. Cuttings were made on one radius of each mound.

A total of 11,448 sherds was recovered from these three cuttings, over 80% of which were from Mounds A and C, as

Mound B was both smaller than the others and also considerably damaged by porcupine burrows. The total number of sherds recovered represents roughly 30% of those excavated, since a fairly stringent process of selection was applied at the site, on the principle that any sherd bearing no decoration that was not either a rim or a base was rejected.

Besides sherds, there was a comparatively large number of vessels sufficiently undamaged for complete reconstruction to be possible. The work of restoring these is by no means finished yet, but there are already over 120.

The amount of data provided by this site for research into the pottery of the Gonja region is thus without parallel. Before examining it, however, it would be as well to look briefly at the present interpretation of the site as a whole, in the light of the carbon 14 dates which have recently been obtained. The best unbroken sequence on the excavation was in the deepest trench on Mound A. During the 8th Century A.D., the site was occupied twice by people with similar cultural characteristics who knew the use of iron. (Periods II and III). About 800 years later, in the mid 16th Century, there began a continuous occupation by a different people, which can be divided into 4 distinct phases ending in the early 19th Century. Traces of human activity in the form of 2 child burials of an unknown date before the 8th Century occupation were also found. (Period I).

The date 1542 is an average of 4 results, 1 from Mound A, and 3 from Mound C. The other samples were taken from the trench shown. Smoking was known from the beginning of Period IV onwards, though it is not common until Period VI. The early 19th Century date for the site's abandonment is arrived at from the type of the latest tobacco-pipes and from the fact that there were no European imports on the site at all.

It seems probable that the Period IV occupation can be identified with the early Gonja invasion of the area, independently known from Arabic manuscript sources, and that the site's abandonment may be connected with the Ashanti defeat of Gonja under Osei Bonsu (early 19th Century).

Examination of the pottery has so far been conducted as follows: work began on the sherds from Mound B, simply because this mound produced the smallest amount, a total of 1,742; they seemed to fall conveniently into 15 different categories, which are themselves of 5 basic types:-

- (1) Established wares already recognised and defined elsewhere.
- (2) Sherds with one distinctive decorative feature.
- (3) Sherds with two or more of these features combined.
- (4) Sherds in which the decisive factor was the fabric.
- (5) All other sherds including those whose claim to a place in one of the preceding categories was doubtful. These last amounted to 14% of the total.

The examination of the Mound B sherds was useful in that the different basic categories emerged clearly; when it came to relating them to the stratigraphy, however, trouble arose as any useful trend which began to emerge was usually suspect, because of the large areas of disturbed material resulting from porcupine burrows. The same classificatory system was therefore again applied to the pottery from Mound A, Trench A, which, as we have already seen, is one of the most favourable small units in the excavation; 28 ft. of undisturbed stratified material, in which the seven periods and 3 of the carbon samples are represented. It produced 1,759 sherds, slightly more than all the eight trenches in Mound B together, and this paper will henceforward concern itself only with these.

All the sherds were grouped and counted by levels under the 15 categories established on Mound B. For 3 of these categories no representatives were found; they were, in any case, minority categories. The remaining 12 were as follows:-

Firstly,

(1). Wares already defined elsewhere - only one such was found, that is "Daboya Ware", so called from the type-site at which Davies found pieces in surface-collection, and defined by Flight, who recognised it at his Owansane excavation. His definition notes the characteristic features as:

- (i) hard light brown coarse gritty fabric
- (ii) everted wide-mouthed rim.

It is a curious fact that all the several hundred pieces we possess are rim-fragments. The form of the lower half of the vessel is thus conjectural; and Flight points out that the term "Daboya Rim" might thus perhaps be preferable until more is known. We are fortunate in possessing modern examples of the type of grass-roulette probably used in the manufacture

of this pottery, from Hamile and Bawku in Northern Ghana, which produce very similar impressions in plasticine to those observed on Daboya ware*.

Secondly,

- (2) Sherds with one distinctive decorative feature:
 - (a) painted pottery on which the paint is in a plain band or zone, called Plain Painted.
 - (b) Painted pottery on which the paint forms a recognisable motif or design, called Design Painted.
 - (c) Comb-impressed pottery.
 - (d) Grass-roulette-impressed pottery. This category was restricted to grass-roulette-impressions like those we have seen, as other types of roulette-impression, although often suspected, could usually have been made with a comb or other instrument as well.
 - (e) Incised designs.

Thirdly,

- (3) Sherds with 2 or more distinctive decorative features, (henceforward called Multiples): that is:-
 - (a) Combed painted.
 - (b) Incised painted.
 - (c) Micaceous slipped: this is a minority category in which a slip containing a high proportion of mica has been applied to the external surface to produce a gold or silver glitter. Almost all the examples found have a further slip of red clay applied to the inner surface. The fabric is usually a dark grey or black gritty paste.

Lastly,

- (4) Sherds in which the decisive factor was the fabric. In the majority of cases the fabric was a variant of reddish biscuit pastes, and I decided that it was not a helpful factor, except where it was quite distinctively different from this roughly homogeneous group. Such cases were totally black or grey fabrics, not merely the result of uneven firing of red pastes; and a distinctive coarse gritty yellow-orange paste which when combined with certain other features, that is

* See unpublished note 12 Sept. 1966, C. Flight.

massive thickness and/or characteristic rim and base formations, is diagnostic of an as yet ill-defined type for the present called Utility Ware.

Thus we have categories based on, or partly on fabric as follows:

- (a) Utility Ware.
- (b) Black Combed.
- (c) Black Painted.

It has been pointed out by Frank Willett that the greatest possible number of categories should be used at first when classifying pottery in this way, because one has no means of telling in advance which characteristics will prove to be of significance, whereas it is always possible to combine later categories which prove to have been separated on an insignificant distinction. I fully agree with this and initially I prepared categories in addition to those I have listed above for such eventualities as Incised Design Painted, Incised Black Painted, and so on. However, I found that either such categories remained empty, or a total of one or two sherds only was found to represent them, so that it seemed best to treat such multiples as belonging to the category next most appropriate, e.g. one Incised Design Painted sherd out of a total of 1,759 was of more significance when included in the category Design Painted than in a category of its own.

However, the whole problem of multiples needs to be treated with considerable care since it seems likely that in some cases pots bearing 2 or more forms of decoration may be interpreted in two ways; firstly as an index of more or less lengthy traditions extending over a definable time-span, and secondly of short lived practices extending over a definable area. This hypothesis is based on the assumption that in a pot of form A bearing decorations B and C, B may represent the motif traditionally associated with form A over several generations, while C is an idiosyncrasy of the potter which may be found on all her wares of whatever form and wherever they eventually are carried to, but which will probably last only during her lifetime.

To return from speculation to fact, however, the results of the 12 category classification of sherds from Mound A, Trench A, were as follows:-

I projected horizontally the total number in each category separately onto the appropriate part of the section,

so that each sherd found in the 10' x 5' horizontal area at level 15 was represented by a cross within the vertical space for level 15 on the section. This procedure was diagrammatic and stylised to the extent that the total number found was spread as centrally as possible within that level to give a more concise visual impression.

This procedure made it plain that two of the categories are a reliable indicator for Periods II and III, that is Daboya Ware as shown here, and Combed Painted Ware.

Less usefully, Utility Ware, may also be regarded as a Period II/III indicator; the stray sherds in upper levels are too many to be ignored however, and decision on this question must await closer definition of the ware. We may note in passing, however, that of so-called Utility Ware sherds of Periods later than III, four bear traces of paint, which does not occur in Periods II and III, and that in Period II alone are 3 Utility Ware fragments of flat-based vessels, of which 3 other semi-complete examples exist from this mound, all from the same Period.

A further Period II/III indicator, incidentally, is the small clay bracelet of subtriangular section of which 12 specimens were found in Mound A, either actually within Periods II and III, or immediately underlying the first Period IV floor.

The percentage of Combed Wares of all types found within this same time span is also noticeably high, but seems to point to some continuity of tradition over the long gap in the time between Periods III and IV. The same continuity is suggested by a projection of all types of Painted Ware together - the large gap in early Period IV is simply evidence that very few sherds of any kind were found there, since these levels largely consisted of solid floors.

If, however, we project Design Painted Ware by itself, it is seen to be predominantly a late type, belonging to Periods VI and VII. Moreover, of the 5 sherds in Period III, 2 bear a motif not found elsewhere, one being a series of quartered rectangles, and the other an unusual form of linked cross-hatchings.

I can for the present see no particular significance in the other groupings, often because the sample is simply too small from this one trench. When the other 9,000-odd sherds have also been examined, we may be able to add to the list of indicators. Those that we have already, however, make it

clear that while the early inhabitants of the site were different in many ways from the 16th Century arrivals, there were some points of similarity between their cultures. This might mean simply that the cultural characteristics of the last 4 Periods developed logically out of those of the first two, (witness for example the continuity of the use of paint) but that between Periods III and IV when the site was presumably abandoned for about 7/800 years, the intermediate stages postulated by this theory are not represented.

It could also mean that there had already been definite cultural contact between the 8th Century community and the ancestors of the 16th Century invaders in their homeland, or simply that both communities originally stemmed from an area where the use of paint has been a long established tradition.

Clearly the type of information available from sherd collections of this sort must be treated with great care; but as they form the bulk of the evidence on tropical African sites, it is essential that methods of evaluating them, such as those I have outlined, be thoroughly explored.

Resumé

La Classification de la Poterie: Techniques et Resultats de New Buipe

par

Richard York

L'année dernière on a décrit les fouilles à New Buipe, ou il y avaient deux niveaux appartenants au VIIIe siècle ap. J.-C. (Périodes II et III), et quatre niveaux supérieurs s'étendants du XVIe au XIXe siècles (Périodes IV - VII). On a commencé à faire l'analyse de la poterie, et les méthodes employées sont décrites. On a montré que 'Daboya Ware' et 'Combed Painted Ware' sont des fossiles indicateurs exacts pour les Périodes II et III; 'Design Painted Ware' est surtout un type plus récent qui appartient aux Périodes VI et VII.