

Wynagrodzenie za pracę wyrażone jest w formie opłaty za wydanie druku. W przypadku konieczności wydania dodatkowych egzemplarzy, należy zgłosić to do wydawcy przed rozpoczęciem druku. Wszelkie uwagi i sugestie należy zgłaszać do wydawcy przed rozpoczęciem druku. Wszelkie uwagi i sugestie należy zgłaszać do wydawcy przed rozpoczęciem druku.

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POTTERY TYPES AND MODES OF PRODUCTION: A COMMENT ON THE PAPER "THE RECONSTRUCTION OF PREHISTORIC POTTERY PRODUCTION – AN EXAMPLE FROM CENTRAL FRANCE" BY CHRISTOPHER CUMBERPATCH (1989)

Fragments of clay vessels are the basic category of archaeological remains at the overwhelming majority of sites dated from the Neolithic up to the modern times. Hence, all the proposals concerned with analysis of this mass-scale material and with the drawing of the conclusions based on it must be carefully considered by the whole archaeologists' community and evaluated not only from the point of view of their usefulness in solving a specific research problem set for himself by a given author, but also from the point of view of their contribution to the general theory of inference from archaeological data.

Highly appreciating the problem-oriented program of analyses of old pottery presented above in the same volume by C. Cumberpatch (1989), encouraged by the "hope of provoking comment, criticism and debate" expressed by him, we should like to point out the controversial nature of a few theoretical views presented in his study, the significance of which goes far beyond the particular example of investigations into the Aulnat pottery considered by the author.

The study by C. Cumberpatch is particularly interesting as an attempt at developing the methodology of pottery research proposed for the first time by H. Balfet (1965), and later by S. E. van der Leeuw (1977, 1980, see also U. Kobylińska, Z. Kobyliński 1982) and D. P. S. Peacock (1982). Namely what is in question is the reconstruction of modes of pottery production in the past from the properties of pottery material from excavations.

The first, necessary stage of such a research procedure is to define the possible modes of production and to determine their characteristics. On the basis of ethnographic and historical sources, H. Balfet distinguished three modes of production, S. van der Leeuw – six, D. P. S. Peacock – eight, whereas C. Cumberpatch sees five modes to be potentially possible in the period of his interest. Already from this simple comparison it can be seen that even a systemization of ample data on the contemporary world is not an unambiguous question. Let us consider the sources of this ambiguity.

The aim of the above-mentioned authors was to find out if the manifold of individual ethnographic descriptions could be reduced to a relatively small number of states of the system of clay vessel production. These states would exhaust almost all the possible variations, constituting at the same time a set of potential explanations of archaeologically identified situations. This aim requires the determination of measurement variables, uniform for all the cases, which would characterize well the pottery production system, and would offer at the same time the opportunity of passing over to the archaeologically observable properties of pottery. It

is exactly here that the differences between the particular authors become distinct – although, in general, they can see similar variables as essentially characteristic of the states of the pottery system, the number and structure of these variables are, however, not the same. As an example, it can be interesting to mention that S. van der Leeuw (1977, pp. 70-71, Table 1) described the particular modes of production by means of 16 variables, whereas C. Cumberpatch distinguished 11 such variables.

Moreover, we should point out that the variables considered by the author in his characterization of modes of pottery production are not mutually independent. It seems that the variables from the group labelled “labour” and “market” are variables which determine the others, and due to this exactly these variables, archaeologically inobservable, forejudge the specific form of production mode. Therefore, while reading the study by C. Cumberpatch, one can have the impression that this author does not discern the existence of what, in Polish contemporary philosophy (e.g., L. Nowak 1977), is called the “essential structure of phenomena”, and that reality is characterized by him at the superficial level, without reaching out to the significant conditionings. Certainly, an author is free to present a different ontological stand, but in this specific case the assumption of this stance involves far-reaching practical consequences.

Namely, C. Cumberpatch's characterization of production modes involves variables with different degrees of significance, mutual dependence and differentiated archaeological observability. What is lacking in this characterization is the consideration of the interdependence of these variables. What is also lacking is the application of even the simplest correlation procedure which as a result of the identified covariance would make it possible to reduce the description of a given production mode to several most significant factors.

Unfortunately, the analytical procedure presented by the author in a further part of the study does not involve any operationalization of the variables which he defines, nor a description of adequate measurement tools. Therefore, we can suspect that, according to his conception, just as in that of S. E. van der Leeuw, the identification of particular pottery production modes is carried out from nominal measurement. So, e.g., one does not know the critical value of the variable “quantity”, encouraging the author to attribute the result of empirical observation to the “high” rather than “low” category. Similar objections can be made with regard to the whole table worked out by the author.

Therefore, the model of variability of pottery production modes and their characteristics can be subject to serious criticism. Above all, we should underline the controversial nature of the variables conceptualized by the author and the above-mentioned weak operationalization of the variables in the form of measurement tools. Moreover, this model is a purely descriptive one: showing which variables characterize the state of the system, but refraining from the evaluations of their inter-relations, the significance hierarchy and the susceptibility to external influences. Therefore, it is impossible to treat this model as an analytical tool even for studies on the contemporary modes of pottery production.

Just as the preceding model elaborated by S. E. van der Leeuw (see the remarks by U. Kobylińska and Z. Kobyliński 1982), the model formulated by C. Cumberpatch must also be severely appreciated from the other, opposing point of view. Namely, it offers very limited possibilities of drawing conclusions about the potential properties of old pottery, being the remnant of each of the states of the described system, i.e., in the author's terms, each of the production modes. It is above all in technology analysis that the author sees the possibilities of reconstructing the production mode on the basis of fragments of old pottery. Since, however, no empirical implications on the products of a given production mode were derived from the presented model, one could not say how C. Cumberpatch aims to identify the production modes on the basis of the performed technological typology of pottery fragments. Namely, no hypotheses were formulated about the relation between the past pottery production modes and the properties of a set of old pottery coming from archaeological excavations. Thus, both the objective value of the research tool, which is, according to the author, the notion of type, and its adequacy to the achievement of a subjective, particular cognitive aim, remain unknown.

Since, however, the notion of 'type' plays a fundamental role in the author's research strategy, it is worthwhile to devote some space to the discussion of this problem.

In the philosophy of science, there are traditionally two ways of understanding the epistemological status of classification: the subjectivist, which sees in it the conventional mode of the bringing of order by the cognitive subject into the surrounding world, and the objectivist, which recognizes that the world in itself is distinct from different points of view, and the subject simply reflects this real differentiation in the constructed classifications (G. Banaszak 1979, p. 39). At several points of his text, C. Cumberpatch declares openly his disbelief in the existence of "absolute" typology, whereas the traditions of Polish Marxist philosophy show rather the other of the above-mentioned points of view (e.g., W. Krajewski 1963, p. 246).

Certainly, in archaeology, just as in any other science, it is possible to create various classifications or typologies, depending on the purposes set. Therefore, it is possible to classify the same sets of fragments of pottery in many ways, and each of them can be recognized as correct from the logical point of view. The correctness of the classification should not, however, be the only purpose of the researcher. The taxonomy should be helpful not only in the ordering of phenomena but also in the understanding of their essence. As, e.g., A. Rapaport (1976, p. 51; see also A. Buko 1981, p. 132) pointed out, there is no a priori argument against the classification of animals into large and small, dangerous and harmless, and edible and inedible. In fact, such classifications served specific practical purposes, none of them, however, would lead to evolution theory. Therefore, the formation of a classification or typology of real-world objects should be preceded by the stage of empirical or theoretical determination of the essence of these objects. In other words, the typology of phenomena must result from hypotheses describing the essential structure of these phenomena. Such an ideal typology, or classification, can be called "ontic", in contrast to the "epistemic" typologies created by various researchers and reflecting to a various degree the actual differentiation of the real world. These epistemic classifications can be evaluated from the point of view of agreement with the ontic classification of a given phenomenon.

Each fragment of pottery can be defined as a system of definite morphological, "semiotic" and technological properties. Therefore, we can identify it with the following vector

$$f = (m_1, \dots, m_n, s_1, \dots, s_1, t_1, \dots, t_k),$$

where m_i are the morphological properties, s – "semiotic" properties and t_i – technological properties (A. Buko 1981, p. 179).

In addition, each pottery fragment collected in the course of excavations can be characterized in terms of the properties p describing its preservation state (such as, e.g., the size of fragments and the degree of erosion), resulting from the course of depositional and post-depositional processes. Therefore, finally, after modification, the formula proposed by A. Buko becomes

$$f = (m_1, \dots, m_n, s_1, \dots, s_1, t_1, \dots, t_k, p_1, \dots, p_j).$$

So far in Polish archaeology, above all, typologies concerned with the differentiation of morphological properties have been created (see A. Buko 1981, pp. 128-145). According to C. Cumberpatch, a typology based on the method of technology analysis is "more objective than the traditional shape technology". However, two doubts arise with respect to the judgment thus formulated.

Firstly, since, as was mentioned above, a pottery fragment can be characterized in terms of a manifold of properties, why should only technological variables determine the objective differentiation of the set. The limitation of the notion of type exclusively to technological properties can raise well-understood doubts. Namely, an a priori assumption is the connection of only the properties of this group with the mode of pottery production. In an equal range, the production mode can also be reflected by morphological and "semiotic" properties. A reasonable solution would be statistical verification of hypotheses on the internal correlation of the set of

variables and the distinguishing on this basis of the variables or their groups which would essentially differentiate the analyzed set of fragments. Certainly, one can argue that in this case the author assumed that technological properties conditioned all the other characteristics of a ceramic artefact. It is an interesting hypothesis, but so far, unproved.

Secondly, one should ask if the analytical procedures proposed by the author really guarantee the objectivity of his classification. Namely, the example of the card of description of pottery and the description of the empirical procedure in the analysis of material are far, at least, from the laboratory procedures recently presented, e.g., by G. Bronitsky (1986) or M. B. Schiffer, and J. M. Skibo (1987).

What is most lacking in the study by C. Cumberpatch is an attempt to form an ideational theory, defining the connection between the determined factor (a specific form of the ceramic artefact, or rather a specific form of a uni-temporary set of pottery fragments), and the determining of one (a particular form of the mode of production). Obviously, it is difficult to imagine that such a theory could be made up from conditionless statements – it could rather involve statements with statistical nature. Namely, it does not happen so that the production mode determines only the technological properties of a pottery artefact; it is not true, either, that the technological properties are determined exclusively by the production mode. Exactly, there can be at work also other symbolic conditionings, tradition, magical factors etc., making the diffusion and acceptance of technological novelties difficult, or determining the use of only some raw materials out of the manifold of the accessible ones (see, e.g., D. Arnold 1985, pp. 221-224; K. Nicklin 1979).

The formulation of such a “middle range theory”, based on the results of ethnographic, ethnoarchaeological and experimental observations of the connection between the production mode and the properties of a pottery product, should be preceded by the stage of analysis and classification, since it is out of such a theory that conclusions should be drawn about the number and kind of observed and documented properties of the set of old pottery fragments, and even should come before the very stage of archaeological excavations, since it is out of this theory that conclusions should be drawn about the questions so essential as the distributions of the trenches, the minimum size necessary for investigating the site area, the exploration procedure and the way of collecting the artefacts.

Of the components and variables defining the five possible, according to the author, production modes in the Iron Age, only technological raw materials could be directly determined on the basis of the results of analysis of a pottery artefact. Moreover, the values of these variables seem to be insensitive to changes in the course of the stratification (depositional and post-depositional) and the discovery process. Meanwhile, the determination of the value of such a variable as the “quantity and variability of output” requires a detailed consideration of the distortions of data resulting from the applied sampling procedure and the chosen way of recording finds. It also requires attempts to determine, on the basis of available pottery fragments, the number of vessels of a given type which were used at one given point in time. This, in turn, requires the evaluation of the duration of settlement, the utilization period of vessels of a given type, experimental and ethnoarchaeological observations of breaking up of vessels and ways of refuse disposal in communities resembling the investigated one in respect to the conditions of existence. (For more on the subject, see U. Kobylińska, Z. Kobyliński 1981).

Therefore, the basic question resulting from the paper by C. Cumberpatch is if really, as the author thinks, the “mode of production can, to a large extent, be reconstructed from archaeological data”, in particular, if we bear in mind that, of the variables characterizing, according to the author, the modes of production, only two are archaeologically observable, and, moreover, those that are dependent on the other inobservable ones, and the character of this dependence has not been identified. In fact, the extreme forms of modes of production can probably be differentiated, but the imprecise definition of the variable values which are supposed to characterize the intermediate state, certainly effectively prevents the achieving of this purpose in their case.

Thus, C. Cumberpatch presented an interesting attempt to use "indicator" inference (in the terminology of S. Nowak 1965, and T. Pawłowski 1969), or, in other words, the "intermediate measurement" (in the terminology of B. Tuchańska 1980) for the past modes of pottery production. In the inference or measurement of this type, however, the most essential question is the construction of the indicator itself, i.e., the formation of a theory describing the relation between what we want to observe, or "measure", and what is in fact subject to observation. Unfortunately, no such theory can be found in this study, no matter how interesting.

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TYPY CERAMIKI I SPOSOBY PRODUKCJI: KOMENTARZ DO ARTYKUŁU CHRISTOPHERA CUMBERPATCHA

"THE RECONSTRUCTION OF THE ORGANISATION OF PREHISTORIC POTTERY PRODUCTION – AN EXAMPLE FROM CENTRAL FRANCE"

Streszczenie

Zamieszczony w tym samym tomie artykuł C. Cumberpatcha stanowi interesującą próbę „wnioskowania wskaźnikowego” (zgodnie z terminologią S. Nowaka 1965 i T. Pawłowskiego 1969) czy też, inaczej mówiąc, „pomiaru zapośredniczonego” (w terminologii B. Tuchańskiej, 1980) przeszłych sposobów produkcji garncarskiej na podstawie właściwości dostępnego obserwacji archeologicznej zespołu fragmentów ceramiki zabytkowej z wykopalisk. Procedura tego rodzaju wymaga jednak konstrukcji wskaźnika, a więc teorii opisującej związek między tym, co chcemy obserwować lub „mierzyć”, a tym, co rzeczywiście obserwacji jest dostępne. Takiej teorii brak niestety w artykule C. Cumberpatcha. Nie sformułował on bowiem żadnych hipotez czy oczekiwań, odnoszących się do empirycznych cech ceramiki zabytkowej. Założenie o odzwierciedleniu sposobów produkcji w technologicznych właściwościach wytworu ceramicznego jest zbyt uproszczone (zakłada bowiem jednoznaczny związek między tymi fenomenami) i sformułowane zbyt ogólnikowo, aby mogło spełniać rolę narzędzia analizy. Również ograniczenie zakresu pojęcia typu wyłącznie do zmiennych technologicznych budzić może poważne wątpliwości, skoro każdy fragment ceramiki charakteryzowany jest przez wielość zmiennych technologicznych, semiotycznych, morfologicznych i zmiennych opisujących jego aktualny stan zachowania.

Model sposobów produkcji garncarskiej sformułowany został w kategoriach opisowych, z konieczności nieprecyzyjnych, a przez to nie mogących służyć jako analityczne narzędzie do badań sposobów produkcji nawet w dostępnych obserwacji, egzystujących społecznościach. Nie przeprowadzono hierarchizacji zmiennych służących do opisu wyróżnionych przez autora stanów, ani też nie rozważono ich wzajemnego powiązania. Spośród tych zmiennych, nieliczne tylko, odnoszące się do technologii i surowca, podlegają obserwacji archeologicznej, te jednak zmienne nie są najistotniejsze w charakterystyce sposobów produkcji, lecz wynikają z innych

istotnych charakterystyk społecznych, ekonomicznych i kulturowych, nie podlegających obserwacji.

Problemowo zorientowany program badawczy, przedstawiony przez C. Cumberpatcha, budzi zatem poważne wątpliwości natury metodologicznej.

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ON THE PROGRAMME OF RESEARCH ON THE LATENIAN CULTURE POTTERY (ON THE MARGIN OF THE 'ALLNAT PROGRAMME')

A widespread discussed fact is that the progress in archaeological research, consisting in the expansion of the source base (due to new excavations), in a more diligent reading out of the contents of cultural levels (due to improvements in the technique of excavation and the application of a broad programme of natural-sciences analysis), and also in the accumulated knowledge of monuments (due to continuous improvements in archaeological analysis and an extension of the range of natural-sciences analysis), was not accompanied by equally significant progress in the cognition of the history of European communities which used to inhabit the European continent in the past. One of the main reasons for this is no doubt the insufficient progress in the development of the theory of archaeological research, in the improvement of the archaeological research workshop and perhaps above all the slight effect of the theoretical achievements of theory in these ranges on the practical research activity carried out by most archaeologists.

Beginning with the Neolithic, pottery has been the basic mass of archaeological sources. Naturally, any attempt to deepen general knowledge of this category of sources and also attempts at its broader use in studies on prehistory evokes a special interest. The real progress in this range should be reached by optimization of description and classification of vessels which is necessary for the computer analysis of the data. It should be noted that a long time ago detailed methodological assumptions were prepared for the translation of a description of pottery into mathematical language, with reference to the Latenian culture pottery¹, and also in Polish archaeology (see, e.g., A. Boko 1976, M. Pancerowski 1977). However, the latter programmes were not implemented with respect to mass material, because of the fact that it would involve enormous work on the preparation of the data bank.

A new project of this type was undertaken at the University of Sheffield by Ch. Cumberpatch with respect to the rich set of pottery from the late Latenian settlement in Aulnat, France,

¹ The programme prepared by Prof. Dr. L. Berger and Dr. A. Furger-Guent in the early 1970s at the University of Basel, concerned with the processing of the pottery from the late Latenian settlement in Basel-Guddefink, the result of which is still only the publication of a catalogue of materials from this site (see A. Furger-Guent, L. Berger 1982).