



Daniel Jeremy Silver Collection Digitization Project

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Cleveland Museum of Natural History, correspondence and grant
proposal, 1960-1961.



THE CLEVELAND MUSEUM OF NATURAL HISTORY

10600 East Boulevard

SWcetbriar 1-7966

Cleveland 6, Ohio

October 24, 1960

Rabbi Dan Silver
The Temple
Cleveland 6, Ohio

Dear Rabbi Dan:

I enclose two copies (more available if required) of our Israel proposal.

I am sorry for the delay in sending this, but due to my absence in Boston, things got held up.

With kind regards,

Olaf H. Prufer
Curator of Anthropology

OHP:dlh

Enclosures 2

ISRAEL PROPOSALI. Outline of Project.

The following proposal outlines a project for research in Israel on problems of the Old Stone Age. Israel especially, and the Near East in general, present ideal conditions for this kind of investigation because of the wealth of paleolithic remains known to exist there.

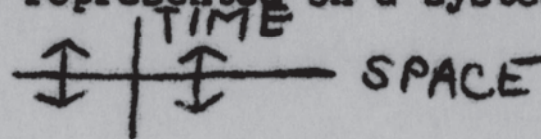
The writer believes that Stone Age research has reached an impasse because no longer can the conventional methods of description and descriptive analysis provide new and significant insights into the development of Early Man and his culture. The writer is convinced that the application of advanced statistical methods to the limited material remains of the Old Stone Age will give fruitful results not otherwise obtainable.

Some attempts have been made in recent times, notably by Bordes and Bohmers, to apply statistics to problems of the Old Stone Age. Most of these attempts ~~however, betray~~ a high degree of unfamiliarity with the nature and possibilities of statistics. For instance, Bordes' celebrated cumulative graphs and indices are no more analytical than the older, conventional "statistical" methods. His indices, instead of being means to an end, remain essentially descriptive devices; they are not, as they should be, basic units for more complex operations.

In the Near East, a number of paleolithic assemblages date from Middle Paleolithic times. These industries represent various facies of the Levallois-Mousterian, more or less 'diluted' with presumably younger blade elements of Upper Paleolithic habitus, or with presumably older handaxes and flake tools of Lower Paleolithic cast. These assemblages occur profusely on surface sites (encampments) as well as in more or less stratified cave deposits. A number of regional as well as chronological facies have thus been distinguished. In theory, the admixed 'older' or 'younger' elements indicate greater or lesser antiquity,

while specific local tool types at any given time horizon characterize regional variations.

These variations can be represented on a system of axes:



where the space axis can be moved along the time axis, in order to define any given industry within an area composed of various regions at any specific time level.

Thus far, stratified sites--caves as a rule--have yielded chronological evidence reflected by changing tool assemblage compositions. The important sites of this kind in the Near East are the Mount Carmel caves, Jabrud, Ksar Akil, and Shanidar. These sites, though not all equally well excavated, provide a very rough picture of the sequence of paleolithic development as expressed by stone industries. This picture is by no means very clear, i.e. it poses many problems that have defied solution. Yet, to a certain extent, this evidence can be used as a framework for further research.

Excavations are costly, hence they cannot very often be undertaken at a large scale. Also, they are, by their very nature, restricted to one or two sites per operation. On the other hand, the Near East is very rich in surface sites (encampments) of paleolithic hunters which can be investigated relatively quickly. These surface sites have not as yet been explored adequately with a view to defining refined regional and chronological assemblages and 'culture'- groups that could be linked to the evidence of stratified sites. Yet this is possible with the aid of advanced statistical methods.

Two problems can be attacked as far as surface sites are concerned.

1. What is the sites' chronological position in the framework of the Near Eastern Old Stone Age.

2. Assuming that a rough (discrete) chronological horizon can be defined, to what extent do observable variations represent valid facies; to what extent do superficial variation (variations by descriptive inspection) represent genuine divergent developments (regional and/or chronological), or mere random variations that result from peculiarities of individual tool makers in a given group of humans represented by an encampment.

These two problems can be converted into hypotheses as follows:

1. General, but relatively narrow time horizons for paleolithic tool assemblages can be determined on the grounds of mere inspection of the tool components in conjunction with the evidence of stratified sites.
2. Within a given ('discrete') time horizon-assemblage divergences in the composition of the component tools represent significant 'genetic' variations the farther the tested assemblages are removed from each other in time and/or space.

The first of these hypotheses can be tested by restricting research to sites with assemblages that fall essentially within an industrial horizon--say, the Levallois-Mousterian--as traditionally defined, i.e. the search can be restricted to sites that represent clear Levallois-Mousterian elements. Such sites, in the Near East, are quite common and readily accessible, which is the reason why they have been chosen here for investigation. In addition, of course, the Levallois-Mousterian stands at the end of a tradition which is followed by the Upper Paleolithic blade industries. As is well known, the argument as to the origins of the Upper Paleolithic in Europe and the Near East have been going on for more than two decades. Therefore, the Levallois-Mousterian especially in its later phases may yield extremely important clues as to the origins, autochthonous or otherwise of the succeeding blade industries.

The second hypothesis prerequisites for its testing a set of sites with discrete Levallois-Mousterian assemblages in a given region. Once such sites have been located, the following procedure has to be gone through for each:

1. A random collection of tools and debitage has to be made. This means

that no selective principle should be operative in collecting. A good method to be used is that employed by geologists in distribution studies of pebble sizes along marine beaches. An area is plotted out where, at a distance of every one foot, the nearest specimen is picked up. Covering a given site thus in a regular manner, a definite random collection is assured.

2. The collection thus obtained is then typologically analyzed. This, obviously, has to be done by inspection. However, objective criteria must guide this analysis, i.e. criteria that will find general acceptance among prehistorians. In short, the tool categories must be sufficiently general for wide agreement, that is to say, typological refinements, which reasonably result in disputes as to their significance, should not be considered. The criteria to be used are typo-morphological as well as technological.

3. A number of indices is then calculated for the given industry. Before indicating some of these indices, by way of exemplification, it must be pointed out that the valid sample for a given assemblage depends upon the number of 'objective' types that it contains. This has to be taken into account in the formula by the introduction of an adjustment factor. Thus, any given index would be represented by the formula:

$$I_x = \frac{x}{\frac{N_s}{N_t}}$$

where I_x = index to be determined
 x = specific critical feature (length for instance)
 $\frac{N_s}{N_t}$ = number of sample as a function of the number
of types

In addition to modified versions of Bordes' indices, a sample of newly developed indices will be given here:

1. The index of length

$$I_L = \frac{(\bar{\Sigma} L) 10}{\frac{N_s}{N_t}}$$

where ΣL = sum of axial lengths of all specimens.

2. The index of width

$$I_W = \frac{(\bar{\Sigma} W) 10}{\frac{N_s}{N_t}}$$

where ΣW = sum of axial widths of all specimens.

3. The index of thickness

$$I_T = \frac{(\bar{\Sigma} T) 10}{\frac{N_s}{N_t}}$$

where ΣT = sum of axial thicknesses of all specimens.

4. The index of massiveness

$$I_M = \frac{(\bar{\Sigma} L + \bar{\Sigma} W + \bar{\Sigma} T) 10}{\frac{N_s}{N_t}}$$

where $\Sigma L, \Sigma W, \Sigma T$ = stand for the sums of the respective axial dimensions as indicated before.

Similar analyses should be made for a series of 'discrete' sites. The evidence of all sites will then be coordinated by such statistical operations as factor analysis, cluster analysis, and analysis of variance. Theoretically, the results should indicate whether differences prima facie observable are random or whether they represent significant variations of a basic pattern through time and space.

This kind of research will, it is presumed, enable us to distinguish genuine geographic and chronological variations from spurious ones. It should also indicate the presence or absence of true continuities in the development of Middle Paleolithic to Upper Paleolithic industries of the Near East.

What evidence can be brought forth to suggest that the method outlined above may prove to be valid? The writer is currently in the process of publishing a paper on a related situation where the tests prove to be valid.

The situation in this case was thus: A series of mesolithic dune sites in Saxony, Germany, could be dated archaeologically and geologically by conventional methods. In this way, it could be established that certain sites were older while others were younger. Using this evidence as a control, the tools from the dunes in question were subjected to statistical operations related to and adapted from those outlined above. The hypothesis was that the industries, though within a discrete 'culture' (Eastern Tardenoisian), were divergent. The tests, made on a statistically significant sample, have shown that the assumption of the hypothesis was correct. In this case, the reason for the significant differences could be ascribed to chronological factors.

II. Conditions of Project

1. Fieldwork: About two months will be required for a survey of at least 25 sites. Two further months are required for the analysis of the series of artifacts, drawings, etc.
2. Finds; The Cleveland Museum of Natural History, which sponsors the project, would desire no more than a type series of the tools collected, for exhibition purposes. All the finds other than this small series will remain in Israel, properly labeled and identified.
3. Publications: The Cleveland Museum of Natural History reserves the right

April, 1960

of publication of the results of the investigations. Full credit will, of course, be given to the Government of Israel and to all other agencies in Israel and the United States who give aid and assistance to this research project.

4. Funds: The sum of \$10,000 will be required for traveling, field research, photography, drawing of tools, site plans, etc., payment of field assistants preparation of publication, and incidentals such as the use of computers. The funds will be raised in Cleveland, U.S.A. Financially, the project will in no way be dependent upon assistance from Israel.

5. Qualifications of the writer: I have received my A.B (1956, Phi Beta Kappa) and M.A. (1958) from Harvard University. I expect to receive my Ph. D. from Harvard University this year (1960) upon completion of my thesis.

I have done archaeological fieldwork in India (1948-1953), Germany (1959), and the United States (1954-1960) intermittently. I enclose a list of my publications, which includes a paper on the Near Eastern Paleolithic.

I am currently Instructor in Anthropology at Case Institute of Technology in Cleveland, and Curator of Anthropology at the Cleveland Museum of Natural History.

6. Proposed time of project: As possible.



THE CLEVELAND MUSEUM OF NATURAL HISTORY

10600 East Boulevard

SWetbriar 1-7966

Cleveland 6, Ohio

November 3, 1960

Rabbi Dan Silver
The Temple
East 105th St. & Silver Park
Cleveland 6, Ohio

Dear Rabbi Dan:

Forgive me for not having written sooner. I was due to write, but had no idea until yesterday that Olaf Prufer had written to you independently. I wanted to cover his resume of the problem with a statement to emphasize that the Museum organization would treasure the affiliation with The Temple Men's Club. I personally believe that this is also an excellent opportunity to demonstrate that the same institutions which have banded together to make University Circle what it is, are also working together in practical matters for the general enrichment of our entire culture.

Please urge the members of your Club to consider this trip as a significant undertaking, one which will not only attract attention, but more important, produce valuable scientific results.

If I can help in any way, do not hesitate to call upon me.

Sincerely yours,

William E. Scheele
Director

WES:bb
c.c. Mr. M. I. Rappaport



THE CLEVELAND MUSEUM OF NATURAL HISTORY

10600 East Boulevard

SWetbriar 1-7966

Cleveland 6, Ohio

January 14, 1961

Rabbi Daniel Jeremy Silver
The Temple
East 105th St. & Silver Park
Cleveland 6, Ohio

Dear Rabbi Dan:

Too much time has passed since you wrote to Rap, and I can only plead for your tolerance while we prepared our new hall for the public.

To get back to your questions in the letter dated November 4, Museum sources will expect to supply some of the funds. I would guess that we could safely say at least one-third. In addition, of course, we expect to take care of publishing costs. I believe these are quite vital since nothing much will be gained if we do not summarize and distribute the scientific conclusions that can be drawn after the venture is completed.

I would like to see the whole trip publicized as a three-way venture: The Temple Men's Club, the State of Israel, and the Museum. Rap tells me that his sources of support will not expect publicity.

I would further hope that the use of the material itself could give us all an opportunity to create a circulating special display. I would think that it could be coupled with a pictorial essay about Israel that would have a good effect in many communities in addition to our own. The small size of most things that we might hope to find would lend themselves ideally to a loan display.

At all phases of the publicity on this matter, each sponsoring agency would get a maximum opportunity for publicity.

If this still does not answer the questions you may have, please call Olaf Prufer. I have authorized him to carry on with the entire matter for us from this point.

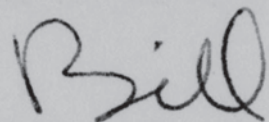
Rabbi D. J. Silver

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January 14, 1961

I would certainly be available myself for any necessary discussions with the Men's Club group or any other potential supporters if you think my presence would be helpful.

Sincerely yours,



William E. Scheele
Director

WES:bb

c.c. Mr. M. I. Rappaport
Mr. O. H. Prufer



RESEARCH ON EARLY MAN IN ISRAEL

The purpose of this project is to study the evidence for the diversification of culture during the last Ice Age in Israel. A great deal has been written on the Stone Age remains from the Mt. Carmel caves and other sites which yielded the physical and cultural remains of what has popularly been called Palestine Man. On the other hand, the processes that lead to the spread in time and space of these Stone Age assemblages are ill understood. They are, however, of very great importance to the picture of culture development and continuity in the greater Mediterranean region of Europe and the Near East. Specific problems to be investigated are:

1. How many and what kind of more or less local phases of these Stone Age industries (Levallois-Mousterian) were in existence in Israel.
2. Do observable variations in these assemblages reflect diversifications, i.e. developmental tendencies through time.
3. Do these industries 'evolve' into later Stone Age assemblages thus providing a more or less uninterrupted continuity from the very remote past to relatively younger times, or are discontinuities detectable.
4. What would the meaning of such discontinuities be, e.g. do they reflect the arrival of new types of human adaptations to changing environments.
5. How do these industries and their variations relate to their counterparts in Europe including Russia, North Africa, and the Middle East.

The methods for this sort of research are outlined in the main proposal. They are highly technical, being based upon refined statistical procedures.