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Discovery, Historical Frameworks, and Scientific Status: Joao Moleiro* and the History of Archaeology

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The history of archaeology does not necessarily include "Who, What, When, and Where?" Despite the common sense of beginning from details that are among the easiest to establish, many histories distort this groundwork in behalf of "scientific context." The result is a history biased in behalf of the persons or institutions of greatest power during the period of advance. Archaeologists often recognize the colleague that publicizes and gains acceptance for ideas/finds, when the process of discovery actually involves many factors within and outside of the elite circle of status-holding archaeologists. I use the term "discovery" loosely here, as the critique applies to theoretical advances as well (as in the "NMew" archaeologist illustrates). Differential impact of prestigious individuals/institutions has been discussed by Rudwick (1985), Givens (1992) and Hodder (1991). The aim of this paper is to illustrate by example the "status bias" of writing history of archaeology through the perspective of power players, and neglecting the underlying processes.

Status bias in researching the history of archaeology resides in attaching inappropriate significance to an event or individual. Certainly archaeologists that publish or are in other ways responsible for the widespread acceptance of an idea are worthy of analysis. Yet the primary goal of history of archaeology is not to reward those individuals that receive acceptance. In many cases, the process of archaeological discovery is a mosaic of influences, from professional archaeologists to institutions, to social and political influences within the broader society, to scientists in other fields, and even to amateurs (see Christenson 1989 and Reyman 1992 for examples). A responsible historian will attempt to sort out this mix, with a series of questions concerning importance. This filtering process often creates a conservatively-biased view favoring the prevailing intellectual climate of the study period. This critique is not levied at the archaeologists who only briefly acknowledges a landowner who found some "arrowheads" on his/her property. Neither is it attempting to reconstruct history of archaeology to include any and all cases of "contextual" bias and underrepresentation that can be found. The sociology of our discipline (Kelley and Hanen 1988) should be a source of critical examination of historical accounts, but not every influence is interesting, or more importantly, significant to a historian of science.

Rather, history must recognize those that were "doing" science. Finding a site is not significant in and of itself, but recognizing its significance within the context of analytical debate is significant. The Folsom discovery exemplifies this point (Jackson and Thacker 1992). Casual speculation about a prehistoric culture, even if right, is not significant. Yet if done within the context of observation, hypothesis testing, and falsification, history has an obligation to credit that innovator, even if in passing. The field of biology provides an example: Gregor Mendel never saw his accomplishments impact the discipline. Furthermore, cross-breeding plants was widely practiced long before Mendel. He is historically important because of how he approach the hybrid. He recorded observations, quantified his results, and reproduced his experiments. He was using the scientific method. In sum, a consistent scale of significance must underlie an account of the history of science. Operationally, a historian should explicitly acknowledge why a historical account is being written, and closely link significance to the dynamic of the scientific method.

Joao Moleiro and Status Bias

Scientific status bias is demonstrated in the history of Upper Paleolithic archaeology in Portugal from 1930 to 1960. As discussed by Zilhao (1988, 1990), n.e.) the dominating personality of his period was Manuel Heleno. Using the Museum Nacional de Arqueologia e Etnologia in Lisbon (hereafter referred to as the National Museum) as his base, he directed research in many regions of Portugal. Perhaps his most famous work was in Portuguese Estremadura. In particular, the vicinity of Rio Maior contained several large open-air sites that provided assemblages which Heleno used to define the Upper Paleolithic of Portugal (Araujo and Zilhao 1991).

Heleno undertook Upper Paleolithic research largely for nationalistic reasons (Zilhao 1988). The typology of lithic tools firmly rooted Portugal in the European technological tradition, rather than supporting an African origin. The relationship between the timing of Heleno's work, and Portugal's socio-political environment cannot be denied. Zilhao comments that Heleno was actually more historian than archaeologists, and his work was firmly "cultural-historical." As a result, his few publications were concerned with type fossils, with a corresponding under-emphasis on assemblage variability. Heleno remains today one of the founders of paleolithic archaeology in Portugal, as does the National Museum. In turn, the history and success of the National Museum as an institution within Portugal is connected to the political evolution of the nation. Heleno had clout as a result, and he deserves credit within that context.

These "facts" can be found in most current articles on Portuguese Upper Paleolithic prehistory. The status bias is perhaps not evident. It is implied that Heleno found the sites, he directed the excavations, and he was responsible for publicizing the sites within the European community of prehistorians. A more robust history must eliminate these assumptions through research. It was in answering these basic questions that I came across the contribution of Joao Molerio.

Joao Molerio was a farmer who lived in the Rio Maior area. He was hired as a field worker by Heleno in 1936. The first meeting came through Moleiro's wife's father, who had been hired by Heleno to excavate at Gruta de Senhora da Luz. Moleiro's father-in-law could not read, and Heleno was looking for a field director who could correspond frequently. Heleno and Moleiro began a partnership that lasted over 20 years.

Joao Moleiro quickly became responsible for conducting extensive survey projects and excavation of prehistoric sites. Heleno directed *in absentia*, as he would often visit the field only once a month. Moleiro would begin field work in late spring, and continue until December. In fact, the important Magdalenian site of Carneira was dug entirely during a two year period when Heleno was very sick. Although he published data from the site, Heleno never witnessed excavations at Carneira. Throughout his employment, Moleiro corresponded twice a week (Wednesdays and Saturdays) with observations and field notes. At the close of the excavations, he would box up the artifacts and send them by train to Lisbon. At the museum, Heleno would sort the assemblages, and from the collections and Moleiro's notes, reach "a personal view of the cultural background" (Heleno 1956:226). The National Museum quickly gained a high reputation with French and Spanish prehistorians.

What made Joao Moleiro more than just a good fieldworker? Why include him in history of research? In short, he did science or at least as much as Heleno did. He learned from Heleno the French names of stone tools and descriptions of retouched implements. He knew how to recognize important stratified sites from surface scatters, based on the amounts and distribution of artifacts. Neither Heleno nor Moleiro practiced scientific archaeology as defined today. Heleno was most interested in the artifacts for their own sake, while Moleiro was more a field archaeologist. Moleiro was trusted to know what was archaeologically significant in the field, which in a scientific framework was the core of Heleno's project. Through this time, Heleno promised Moleiro a job at the museum if he finished school. Moleiro did finish his education, but no job materialized.

Joao Moleiro was also responsible for the discovery of fraudulent Upper Paleolithic tools. Heleno told his workmen that he would award the worker who found the most beautiful tool each week with a cash bonus. One of the workmen took to retouching artifacts himself. Moleiro discovered the non-patinated retouch and informed Heleno.

Perhaps the influence of Joao Moleiro on Portuguese archaeology was best illustrated during Abbè Henri Breuil's visit in 1941. It was Moleiro, not Heleno, that showed Breuil the Gravettian site of Terra do Manual (excavations were relocated and extended recently, for details see Marks et. al. 1993). Despite the language barriers, Moleiro discussed the artifact levels and geological stratigraphy with the French prehistorian.

Joao Moleiro remarked in 1992, "I wanted to understand how past people lived." Heleno's conclusions and resulting prominence would have been drastically reduced in scale without Moleiro's expertise and research decisions in the field. Not simply a worker, Moleiro was essential to the success of the projects. He was denied a place in the influential circle of Portuguese archaeologists. He certainly did not fit the social role of a "museum person," but Portuguese prehistory would be profoundly different without his contributions. If one were to omit the sites he found during his career, a series of Portugal's most important sites would be lost spanning prehistoric periods to the Romans. In the concelho (county) of Rio Maior, over 60% (more than 40) of known sites in 1992 were found by Moleiro.

To be fair, Heleno deserves all the credit he received. He did procure funding, orient projects with long term vision, publish in the discipline, as well as succeed as a professional administrator. This paper should not be interpreted as denying Heleno's importance. He and Moleiro were both crucial. If the question asked is: "Who is responsible within professional archaeology for recognizing and articulating the Upper Paleolithic in Portugal?", then one must answer Manual Heleno.

Heleno's importance is predetermined from the questions asked by most historians. The scientific status of Heleno quickly outweighed Moleiro. It follows that Heleno would have a great impact in archaeology, particularly when Moleiro was denied a position at the museum. This rejection was not malicious, and they remained friends long after professional connections were terminated. Heleno was better educated, politically savvy, and was in a position to be heard by prehistorians. But Moleiro was in some ways a better archaeologist, and scientist, than Heleno. He did the fieldwork to answer the questions posed by Heleno. Thus the history of archaeology must include Joao Moleiro as a significant individual, a "second author" to Heleno's accomplishments.

Conclusion

Existing history of archaeology can often over-represent the bearers of scientific status with the field. This status bias is the direct result of the professionalization of a discipline, and is particularly problematic when the professionalization process is heavily interrelated with political or social trends. Historians must be careful not to write a "professional history" if a history of science is desired. Accounts should clearly indicate how historical significance is determined, and consistently integrate a regard for how historical significance is determined and consistently integrate a regard for how science operates. Discovery is meaningless without understanding. Yet articulation and resolution within the social clique of "scientists" is equally hollow without a demonstration of objectivity and scientific reasoning. Eliminating status bias allows history to become a record of the dynamic of scientific progress.

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* Joao Moleiro's full name is Joao Pedro Dos Santos. He is popularly known throughout the Rio Maior area as Joao Moleiro. I chose to use his common name in this article.

Note: An audio tape of the interview with Joao Moleiro will be housed at the regional museum in Rio Maior, currently under construction.

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III. Current Research

Daniel Schávelzon (Universitaria de Buenos Aires) is completing a history of historical archaeology in Argentina. The completion date is July 1994.

Anne Thackeray (Post Office Box 37526, Faerie Glen, Pretoria 0043, South Africa) is contributing notes on the history of archaeology in Africa to *The Cambridge Illustrated History of Archaeology* (edited by Paul Bahn). Anne is searching for historical photographs to accompany her text and would welcome suggestions and offers of assistance.

IV. Bibliographic/Archival Material Relating to the History of Archaeology

A. Recent Work by Subscribers

Schávelzon, Daniel

1993 "Arqueología Como Ciencia O Como Ficción: La Vida de Arthur Posnansky en Tiahuanaco," in *Todo Es Historia*, number 309: 32-49 (Buenos Aires)

Woodbury, Richard B.

1993 *Sixty Years of Southwestern Archaeology: A History of the Pecos Conference*, University of New Mexico Press, Albuquerque.

B. Doctoral Dissertations/Master's Thesis

Smith, Pamela

1993 "Sir Grahame Clark: A Passionate Connoisseur of Flints" (An Internalist Study of Clark's Early Publications), University of Victoria, Vancouver.

Abstract of Thesis

An internalist approach to Clark's early publications from 1927 to 1939 is used to examine his goals, methods, and assumptions, definitions of archaeology, immediate academic influences, and intellectual change. Defining archaeology as "the study of past distribution of culture-traits in time and space, and of the factors governing their distribution," Clark was especially astute when fulfilling the first part of this definition (Clark 1933h:232). His greatest early strength was his methodological exactness in creating typologies and chronologies based on the assumption that lithic and pottery forms evolved and can be arranged in chronological order by studying morphological changes. During his early career, Clark's primary goals were the establishment of relative dates for British assemblages and the definition of the Mesolithic as a unique period. He exhibited occasional difficulties when considering the factors which governed the distribution of cultures, and did not discuss diffusion in depth or detail. Clark used the term Mesolithic to indicate both a time period and a group of cultures.

Clark was a founding member of the interdisciplinary Fenland Research Committee, publishing with the Committee throughout the