

II. Discourse on the History of Archaeology

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The History of Stratigraphic Excavation In Latin American Archaeology: A New Look

by

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Introduction:

Allow me to do some history of archaeology. In 1984 and jointly with Jaime Litvak King, we organized a congress that gathered at the UNAM, Mexico, with the purpose of paying homage to Ignacio Bernal called "The History of Archaeology in Mexico." On that occasion my paper raised heated controversies, as it revised the origins of stratigraphy in Mexico, a country in which the image of Manuel Gamio was highly respected and admired, while William Holmes, in those days, happened to be a perfect nobody. In 1986, an English version of that paper was presented at the First World Archaeological Congress of Southampton. In the meantime, Gordon Willey sent me a letter telling me about his interest for my rediscovery of Holmes' work in Mexico, his work taking place in 1884. I wrote back to him with additional information which he used to complete a review he was in the process of writing (Willey 1994) on David J. Meltzer and Robert C. Dunnell's book about Holmes (1992). He also wrote how excited he was for my having pointed to the French Scientific Mission in Mexico (1864-1847) as those who initiated scientific archaeology in Mexico and as the first to introduce the notions of applying certain special techniques for excavation such as excavation in stratigraphic layers (Schavélzon 1994).

Therefore, and in view of the ongoing and significant contributions about the origins of stratigraphy in our continent (Browman and Givens 1996; Browman 1997, Warren and Rose 1994), perhaps it could be interesting that my above mentioned paper is published, as it reflects a different way of considering the same issue. And perhaps now more than before, at a time when in Alain Schnapp's last book (1997) stratigraphy has been traced as early as 1697 in Olof Dudbeck, when he established the relationship between sedimentation, historical chronology and layers. What follows is the final, unpublished version of that 15-year old paper:

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Writing about the history of stratigraphy as a scientific method has not to do merely with the curiosity of knowing "who did it first"; in fact, the issue has been so often discussed because the intention is to try to understand stratigraphy as the scientific method of a science that was in the process of being born at the turn of the 20th century. In fact, the issue we are now revisiting is the significance of the new scientific paradigm that exploded throughout the continent by the end of the century, one that replaced the French Americanism with that of the new museums and professional institutions. That is why, to understand the situation, it is also necessary to understand the evolution of the notion of the eventual existence of a scientific method applied in the excavations carried out by researchers of different countries including some Latin American scientists throughout the 19th century. And to understand this process it is necessary to take a look, if only slightly, at the context of those days. In previous years, the origin of the stratigraphic method has been attributed to the pioneer work of Manuel Gamio in Mexico (Adams 1960, Matos 1972) and even in the entire Latin American territory (Strug 1971). Other historians would point to Nels C. Nelson (Woodbury 1960a, 1960b) and still others pointed to Franz Boas (Mark 1980). Also, some short references were made to William H. Holmes (Willey and Sabloff 1973, Bernal 1979) and to Max Uble (Rowe 1954, Linares Mlaga 1964).

In Latin America, stratigraphy had its origins in two well defined stages: that of the stratigraphic observations and that of the excavations themselves, by following the method of either the artificial or the natural layers. Between the two stages lies the confusing period I want to discuss.

The first stage is featured by the observation and the establishment of temporal relations between the stratigraphy observed and the objects each layer contained. This phenomenon had been extensively used by geologists and anthropologists concerned with the "prehistoric man" in throughout the world. In Latin America Florentino Ameghino used it since the decade of 1870s and in Europe it was common a quarter of a century before that. But it would seem that the passage of one field of knowledge to the other was not that simple, in spite of being so close from one another, and in spite of the fact that particularly in France, the same scientists would work both with "prehistoric man" issues and an archaeology of more recent times.

In Mexico, one of the oldest observations is the one recorded by Henri Baradere (1834) when he reported the findings occurred at different depths in the book *Antiquites Mexicaines* by Dupaix and Castaneda. There was a later observation made by Captain Soyer, when he described the findings of an artesian well (1865); the article was rescued by Ernest Hamy and published again (1902). In 1864, the members of the Commission Scientifique Française brought to Mexico a whole set of new ideas, as for instance the still misty relationship that existed between layers, contents and temporal-

ity. The Comision Cientifica de Pachuca, a branch of the French scientific commission, was the one to initiate the application of the method, during the excavations carried out in Teotihuacan (Almaraz 1865) conducted by one of the greatest scientists of those days: Antonio Garcia Cubas, a geographer and a naturalist. As a consequence of that experience, he performed many other excavations, including a second work on the field in Teotihuacan, in 1895. In June 9, 1865, Garcia Cubas wrote that for the excavation of the mounds he laid out trenches or "ditches" along the old construction, observing each layer and clearing them one by one. The excavator did not recognize this novelty but instead, he said he was told to work in such a manner by "more clever and respectable gentlemen." Who they were, he does not say, but we should keep in mind that the Comision Cientifica de Pachuca had been created as the local branch of the French scientific commission, who funded the works they carried out and the publication of the results thereof (Schavélzon 1994). Undoubtedly, this was the first scientific survey of an archaeological site, one that introduced, among other original techniques, the drawing of maps using a theodolite-the longitudinal cut of the entire site-topography included - and the advanced hypothesis that connected the superimposition of buildings with chronology. The latter point took half a century before it was accepted. But the fall of the Commission following the defeat of the French army in 1867 and the permanent criticisms that for a long time the scientists had been enduring (as they were considered collaborators of the French intruders) did not allow for the publication of the detailed studies carried out during these excavations.

In the years that followed, that which Garcia Cubas had done was repeated by other excavators in Mexico. In 1883 Auguste Le Plongeon explored the Platform of the Eagles in Chichen Itza and he applied stratigraphic techniques, although he never published the information obtained (Desmond 1981). The superimposition of buildings, seemingly so closely related to the concept of the stratigraphic sequence was sensed by George B. Gordon in Playa de los Muertos, Honduras, when he worked for the Peabody Museum (1898). However, after he passed away, the issue was muddled among his many articles. He made the attempt to demonstrate that the Hieroglyphic Stairway in Copán was an example of temporal sequence rather than a bizarre constructive system as it was generally considered. It is not by accident that the first ceramic stratigraphy in the Maya zone was accomplished by Alfred Tozzer and Raymond Merwin, who presented an interesting interpretation of the constructive sequence of buildings, one that was studied after 1909 and published much later (Tozzer and Vaillant 1932). Tozzer also published the results of his works in Holmul (1910) carried out by means of the same technique. I shall later refer to the relationship between Tozzer and Gamio.

In South America, most authors agree in pointing to Max Uhle as the introducer of this method, while he was said to have taken the idea from his teachers, the geologists Wilhem Reiss and Alphons Stubel, who in 1880 had made some relevant observations in Paracas and other Peruvian sites (Reiss and Stubel 1880/87; Uhle and Stubel 1892). Uhle's work in Pachacamac in 1896 constitutes the beginning of the use of the method in South America, and following the corresponding publication (1906) the method began to be more widely known. Between 1905 and 1910, several works that included the description of the cultural contents of the different layers and the conclusions thereof were published in the region: those of Juan Ambrosetti (1906), Eric Boman (1914) and Luis María Torres (1907 and 1910).

The end of the period of stratigraphic observation was signalled by work carried out by William H. Holmes in 1884. Holmes already had an experience as a geologist and in drawing and had conducted several extended exploration trips across the United States (Leary 1916). By the end of 1883

he married Kate Clifton Osgood, and for the honeymoon they planned a trip to Mexico with some other people in a wagon they had for themselves in a train rented for that purpose. For two months they remained at the Central Mexican Railroad Station -presently Buenavista- where Holmes wrote several articles: two of them had to do with archaeological forgeries (1882 and 1889), another one with the monumental sculpture of Teotihuacan (1885b) and there was another one with his studies about the stratigraphy of the Valley of Mexico (1885a). In the following years he kept writing about Mesoamerica, and the trip he made in 1895 through Yucatan and Oaxaca provided him with the tools to write one of the most significant books on American archaeology, namely, *Archaeological Studies Among the Ancient Cities of Mexico* (1895-1897). Later in 1916, he would return with Samuel Lothrop and Sylvanus Morley. Years later, Manuel Gamio ignored Holmes' works and we presume that his trip of 1895 might have had something to do with Gamio's attitude.

Holmes' article about stratigraphy was written in Washington shortly after his return from Mexico and was published under the title of "Evidences of the Antiquity of Man on the Site of the City of Mexico", in the *Transactions of the Anthropological Society* (1885a), a magazine that was periodically received in Mexico. The author explained that he had visited the National Museum, whose collection was of outstanding esthetic value, lacked the necessary references as to the precise origins and antiquity of the objects. Therefore, he made the decision to cast some light on the situation by means of observations he would initiate in the surroundings of the train station, a zone that not only was rich in surface earthenware fragments, where the ditches dug to obtain blocks of mud to manufacture clay bricks were several meters deep. Holmes selected a ditch with dimensions of 30 meters long and 2.40 meters deep in which, according to his statements, "the layers remained untouched since the day they were deposited". He made a drawing of the profile, of the contents, and of "their mutual relationship". The profile presented two major strata which showed in turn a number of differences in the interior; consequently, Holmes analyzed the ceramic fragments from each layer without mixing them, and then he established comparisons between both groups. Also, he compared them with the National Museum's collection, among others he checked as well. The first results obtained pointed to the existence of two major periods, with two subperiods each: the Archaic one - as he named the oldest one- and its archaic ceramic evidences of a long and extended occupation. A second subperiod corresponded to a pan-Mesoamerican stratum possibly related with Cholula, one he called Intermediate. As to the Upper period, the first stage was featured by its similarities with objects originated in Teotihuacan and with the orange ceramic found in Texcoco, Texcotzingo and Cholula. The final stage was the so-called Aztec, the most widely known in those days. In the corresponding stratum, remains of huts, obsidian and stone implements were found. Similarly, Holmes carried out a very simple analysis of the ornamental motifs of the ceramics. The concept of an Archaic period, in addition, took thirty years to be properly defined (Willey 1981). So Holmes was advancing that which the International School would propose twenty-five years later as the cultural sequence of the Valley and the possible existence of an Archaic culture, something that Manuel Gamio would only prove in 1911 with his excavations at Atzacotalco (1913).

And this is of no secondary importance. Holmes observed that were two major layers with two subdivisions each, thus making a total of four. However, Gamio saw only three periods which were taken as the basis for the chronology of the Valley of Mexico up to the decade of the 1940's when the excavations carried out in Tula finally proved the existence of a fourth Toltec stage. Holmes had associated his post-Teotihuacan and pre-Aztec stages with Cholula rather than with Tula, as this one had not yet been discovered. His observations resulted in more accurate excavations for the International School under Boas' direct influence.

No doubt it was Gamio who institutionalized the method of artificial stratigraphic excavation in Mexico. However, he never said a word to indicate that such ideas were not new. Several years later Gamio mentioned Holmes in the footnote of an article that led me to question whether Gamio was familiar with Holmes' work, and if so, why he ignored him. This may be only speculation but it shows the complexities of the period and the existing situation of the struggle in which different groups were engaged in the pursuit of academic preeminence during the years of the Mexican Revolution.

First, we must keep in mind that Gamio was in debt to Frans Boas for his professional career in the United States. Gamio was Boas' indisputable disciple and the major interpreter of his ideas. But simultaneously Boas was a friend and collaborator of Frederick Putnam's, the most renowned personality in the U.S. anthropology. And Putnam was an unreconcilable opponent of William Holmes. The controversies between these two giants have filled countless books, and it must have been out of the question, then, at a time and in a situation that led to an open confrontation between Harvard and Washington, to openly accept that Holmes was the creator of such an important development that was crucial for the type of archaeology Gamio was proposing. Today it is possible to consider Holmes as the man who developed stratigraphy in the United States (Wiley and Sabloff 1974), and today we can assume that his work in Mexico must have helped him in his endeavors; but back in those days Putnam claimed those credits for himself, based on his excavations at the Trenton quarries. The situation was so tense that the incorporation of Sylvanus Morley, a friend of Holmes', into the Carnegie Institution prevented that institution from doing archaeology in Mexico until 1923. In 1936 the animosity had not calmed down and Franz Boas, a scholar with an indisputable prestige, would state the following: "It is true that I have done little archaeological work on my own. My only contribution has been to establish the sequence of the Archaic, Teotihuacan and Aztec types in Mexico; I think this was, with the exception of Dall's studies in the Aleutians, the first stratigraphical work ever carried out in North America" (Mark 1981).

And there was one more thing that contributed to Gamio's attitude in disapproving of Holmes' work: the relationship Holmes had with Allison Armour, a tycoon in the meat industry and the friend who brought along Holmes on his trip across the Yucatan in 1894. Edward Thompson, the U.S. consul and one of Gamio's major opponents associated with Leopoldo Batres (Gamio's predecessor in his position as Monuments Inspector and a member of Porfirio Diaz's *intelligenzia*) was also a member of the party. Gamio represented the new Revolution, while Thompson and Batres represented the times of Porfirio Diaz and the dictatorship. Thompson was also the representative of Harvester and Company, a company that monopolized the sisal production in Yucatan and one that has been repeatedly pointed to as the accomplice and promoter of the exploitation of thousands of Maya Indians, and the use of slaves up to 1880. Thompson had been sponsored by Putnam -an open adversary of Boas, Gamio's mentor, to excavate in Chichen Itza. Sylvanus Morley was forced to publish an article in the United States criticizing Batres, to obtain Gamio's authorization to work in Mexico. And moreover, to excavate in Chichen Itza he was forced to put an end to his relationship with Thompson, who was tried and separated from his position and sentenced by a court of law.

Gamio had been competing for the appointment of Monuments Inspector since 1910 and in 1913 he finally won in the competition between himself and Francisco Rodriguez, one of Batres' successors. It was more or less in that period when the question of the stratigraphic excavations was institutionalized that Tozzer submitted his research on Maya ceramics. In 1913, the same year when Gamio

published the results of his excavations in Azcapotzalco, Tozzer excavated and published his work in San Miguel Ahuizotla. There, he conducted research on the superimposition of architecture which was a model for subsequent studies on prehispanic architecture. At the International School, which Tozzer had helped found, the issue of the cultural sequence of the Valley of Mexico became (following Boas' initiatives) the main subject. The significant support of the geologist Jorge Engerrand (1913), who also worked in archaeology was of great help and his works are still waiting a detailed study. Boas encouraged Gamio to excavate stratigraphically and to establish an accurate chronology. Ironically, as it sometimes happens in history, Holmes' chronology was more complete. Antonio Garcia Cubas was totally forgotten, even though, by then, he was still alive.

However, by 1920 Gamio made the attempt to clarify the situation. He tried to separate the development of the stratigraphic method in itself from the discovery of the so-called Archaic Culture. Gamio initiated his article quoting Holmes' article of 1885, subsequently indicating that other similar discoveries had been accomplished by Zelia Nuttal, Herbert Spinden, Frans Boas, Eduard Seler and G. Niven. He pointed out that it was Boas who suggested to him to keep working on the sequence and that it was him who should be credited for the first description of the Archaic ceramic type. Gordon Willey already discussed this subject when he referred to Spinden (Willey 1981); but Gamio's timely reference to Holmes did not change things, in fact, it represented nothing more than a much delayed acknowledgement of the antecedents.

This period comes to an end with the diffusion of the artificial stratigraphic method made by Gamio and institutionalized by his excavations in Teotihuacan. There's no question about that credit. But it still was Holmes who applied the method in field observation for the very first time. The scientific reconstruction of the cultural process of the Valley of Mexico, besides his conclusions, have lasted a whole century and for the most part are still in force. On the other side, Garcia Cubas must be similarly credited, as he did exactly the same thing, but conducted excavations long before that.

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