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Authenticity Testing In Canadian Museums

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Museums throughout the world share a common problem: fakes in their collections. Often these forgeries go undetected, consequently sharing the same exhibition

space as genuine pieces. This can damage a museum's reputation, dupe the public at large and create havoc with serious research.

Museum (ROM) and the George R. Gardiner Museum of Ceramic Art, both in Toronto, Canada, to ferret out fakes among their Mexican collections.¹

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This year, a group of researchers from the National Autonomous University of Mexico (UNAM) teamed up with two Canadian institutions, the Royal Ontario

In particular, the UNAM study focuses on Zapotec funeral urns, poorly understood art and ritual objects usually found in tombs. Most of these tombs are locat-



Genuine piece. ROM: cat. HM 1399.

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Fake. Museum für Völkerkunde, Berlin: cat. 39.741. The museum has only one of this type.

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Fake. Museum of Man, Paris. Four identical pieces in the collection.

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ed in the Central Valleys of Oaxaca. The artifacts are made of clay and formed by adhering an effigy to a vase; they can be as small as a coffee cup or up to a meter in height. Clearly, the urns are funeral pieces, but their specific function remains unknown and many of the effigies are still unidentified. The ROM has a very large collection of these objects, approximately 200. The Gardiner, a smaller, specialized ceramic museum across from the ROM, has only five pieces, but all spectacular examples of Zapotec artistic expression.

The principal aim of the project is to distinguish the fakes from the genuine article in the museums' collections, but a secondary concern is to fully document still unpublished Zapotec treasures. To reach the first goal we intend to apply a series of scientific tests which will reveal the chemical composition of the clay bodies of the urns, thereby giving us a better understanding of when and where they were produced. Through these tests we also hope to find out about the nature and origin of the forgeries from Oaxaca; products of a clandestine industry that has injected great quantities of fakes into the world market.

Genuine Zapotec urns have a particular quality that makes them difficult to separate from the hundreds of forgeries in existence. In ancient times, many of the urns were copied in series and placed in a row in front of the tomb door or inside the tomb itself. These series of urns could consist of two or three objects or up to seven or eight. Collectors who came to possess a series of urns would often separate the group and sell the individual pieces, dispersing them throughout private collections and museums alike.



Constantine G. Rickards.

Unfortunately, the forgers also copied the serial urns by fashioning their molds from the original's details. This makes the task of visual identification virtually impossible, precisely because one is unsure if the piece is part of the original arrangement or a contemporary copy.

An original urn in the ROM collection illustrates this problem. The piece was reportedly found in a tomb with three other identical copies, though the whereabouts of these is unknown. However, European museums have a number of contemporary copies of the piece, only recently identified as fakes by scientific methods.

Visual identification continues to be the most common way of identifying fakes. However, for Zapotec urns, given their serial nature and the often excellent quality of the forgeries, this method is inaccurate. Scientific tests yield much more precise results. Why, then, do we not just routinely test every object? In a perfect world that would happen. How-

ever, tests are expensive, and to test hundreds of pieces is beyond the budget of most cash-strapped institutions. For this reason it is important to begin with a clear objective when proposing authenticity testing for a collection. This includes selecting key pieces for study, as it would be a waste of resources to test pieces that are obviously genuine.

Before testing begins, it is also important to obtain as much historical information about a collection as possible to establish a context. Two points are significant here, both results of a historical process. The first is, as Kurz said, "Fakes hunt in packs,"² meaning that when you find one forgery in a collection you will undoubtedly find another. At certain times enthusiastic collectors abound and usually they have more money than sense. Given this, and taking into account the law of supply and demand, archaeological forgers also flourish. It follows, then, that the time frame when the pieces were collected is important. Conventional wisdom has held that the older a collection, the more likely it will contain authentic pieces. However, we now know that many skilled forgers of Zapotec urns were active early in the century; therefore, older collections are more likely to contain fakes. The story behind the ROM collection illustrates both these points, and serves as a very probable model for how many Mexican collections of pre-Hispanic artifacts ended up in foreign museums.

The Zapotec urns at the ROM were collected by Constantine G. Rickards in the state of Oaxaca around the turn of the century. Rickards was a Mexican born of English parentage; he owned a gold mine, worked as a lawyer and was vice-consul at the British Consulate in



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Rickard's collection in his house in Oaxaca, circa 1917.

the city of Oaxaca. His passion for pre-Hispanic history took him on mule trips throughout Zapotec country, principally the Central Valleys of Oaxaca, where he bought antiquities from the locals or unofficially excavated tombs. At its height, his collection numbered over 1,500 pieces, from large effigy urns to small implements of gold and jade.

When the Mexican revolution broke out in 1910, Rickards' fortunes ended, his mines were confiscated, and he was forced to flee to Mexico City. His new economic situation forced him to put the collection up for sale. It was first offered to the National Museum³ in Mexico City, but for some unknown reason they declined, despite recognizing its unique value.⁴ By 1919 Rickards had contacted another buyer, C.T. Currelly, the director of the ROM in Canada. In April of that same year, Currelly and a sidekick, Col. J. H. Elliott, braved Pancho Villa's raiding parties and traveled to Mexico to inspect the offer. They were immediate-

ly impressed and bought almost all of it, except, as Currelly states in his memoirs, for a few pieces which the Mexican Museum did not want to let go.

The removal of such a large quantity of archaeological objects from Mexico was a delicate issue even in those early days. The affair caused a mild scandal in the media when it was characterized as "loot" by a loose-lipped Elliott. His verbal slip was soon glossed over by newspaper articles emphasizing the gift of some plaster casts the Mexican National Museum had presented to the ROM, including a reproduction of the head of Coyolxauhqui and three copies of relief carvings from the Temple Cross at Palenque. Curiously, in the news clippings of the day the real prize of the expedition was hardly mentioned, namely the Rickards collection, consisting of over 800 pre-Hispanic artifacts. Currelly referred to it in one Canadian newspaper article as "a number of objects" he was allowed to purchase.⁵ A month later, that same newspaper arti-

cle was translated verbatim in a Mexican daily.⁶ However, the part where Currelly was reported as saying "a number of objects" was translated in Spanish as: "a number of duplicated objects of indigenous art from tradesmen in that business."⁷ It is not entirely clear if the Mexican Museum knew the collection contained a large number of fakes. Certainly Currelly did not know or he would not have bought it.

Sixty years later many of the lingering suspicions regarding the collection were confirmed. In 1978, Phillippa Shaplin, an American art historian studying Zapotec iconography, applied a new technology called Thermoluminescence (TL) to 36 of the ROM's urns. Briefly, a TL test measures the amount of radiation that a piece has collected over the years. Ceramics that have been buried for thousands of years will register a much higher amount of radiation than those recently fired. To measure this radiation a small amount of material from the piece is burned and the

light it produces analyzed: an older item will produce a brighter glow than a recently-made piece. Unfortunately, in the case of the ROM urns, only 4 of the 36 tested were proven to have been fired in antiquity. This was a blow to the museum that had many of the pieces on display as originals; they were unceremoniously packed up in boxes and shelved.

Since that time the Rickards collection has not received much attention except for the important Mixtec codex which is part of it. Shaplin's tests seem to have left an unfair impression. However, it must be pointed out that for the purposes of her analysis she chose pieces that she thought were fake or doubtful, and since she had a good eye, she was easily vindicated by the test. Unfortunately, her method of selecting her sample gives the impression that the rest of the collection is the same. In fact, the opposite may be true, and many of the pieces are probably genuine. To prove this, the researchers at the UNAM decided to test a much greater number of pieces, and in March of this year, over 100 samples were taken from the urns at the ROM as well as the Gardiner Museum.

It may sound contradictory, but the ROM collection is attractive for our research precisely because we know it contains fakes interspersed with genuine material. Applying a series of tests to a mixed collection will help us design more robust techniques for future authenticity analysis. One such test is based on nuclear physics and is known as PIXE, or Particle Induced X-ray Emission. In this test a small sample of clay is placed in front of an ion beam produced by a particle accelerator. The beam bombards the sample with ions which in turn are measured by a computer. The result is a characteriza-



ROM storage, present location of the Rickards collection.

tion of the basic elements in the clay body. By comparing these elements with other samples of clay, from excavated sites and from clay sources in Oaxaca, it may be possible to pinpoint the original provenance of an artifact. Also, the PIXE test can corroborate authenticity if, as we hypothesize, the clay bodies used in the twentieth century do not contain the same components as those used 2,000 years ago.

The high technology necessary to carry out these tests is available at the UNAM. Perhaps more importantly, the personnel who understand both the process and the special handling of archaeological material are also here. One of those people is the scientist responsible for introducing PIXE technology to Mexico, the eminent Mexican physicist, Dr. George Rickards. If his name sounds familiar it is because his grandfather was Constantine Rickards, the famous Oaxacan collector. This is the result of a fortunate coincidence that will help unite the past with the present in more ways than one.

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The participation of Dr. Rickards and Dr. José Luis Ruvalcaba, both of the Institute of Physics, and of Oaxacan archaeologist Edith Ortiz and chemist Luz Lazos of the Institute for Anthropological Research shows the true interdisciplinary nature of the project and guarantees its success. At present we are at the stage of analyzing the samples taken from Canada and of collecting clay samples from Oaxaca for comparison. We hope the results of our study will not only define more accurately the pre-Hispanic collections in Canada but also be a step toward further understanding the complex problems associated with Zapotec ceramics. The overall result of this process will serve the museums and the public and significantly advance academic research. **NMM**

NOTES

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² Kurz, *Fakes*, 1967: vi.

³ Now called the National Museum of Anthropology and History.

⁴ Report by Dr. Sologuren, AGN, c. 158, exp. 33, f. 4.

⁵ "Mexican Gift to Ontario," *The Toronto Star* (July 1919), ROM archives.

⁶ "Lo que opina de México un verdadero arqueólogo," *El Universal* (13 August 1919), ROM archives.

⁷ The whole line reads, "Nos fue también permitido por el Departamento Arqueológico, dependiente de la Secretaría de Fomento, la compra de varios objetos duplicados de arte indígena a los comerciantes que se dedican a este negocio, los cuales, después de ser revisados y fotografiados, se remitieron a Ontario."