

What happens to artifacts after they have been excavated? For the most part, they are stored in facilities within the institution responsible for the excavation. The artifacts are handled thereafter by those who manage the facilities, but are frequently still accessible to researchers who are able to obtain admission. Facilities with sufficient resources may publish photos of diagnostic artifacts—especially if the facility is actually a museum and not just a repository—but more often, the director of the excavational project is responsible for publishing photos or drawings in field reports. Not only are these field reports difficult to access without top-tier libraries at hand, it may take years for photos or drawings from a given field season to be published.

In envisioning my capstone project, I hoped to address this issue of artifact accessibility, specifically as it pertains to my current undergraduate thesis on the spouted vessels from the Maya site of Colha, Belize. I have been interested in the practical applications of 3D modeling in archaeology, so my desire to incorporate a public-facing component into my thesis has compelled me to create 3D models of the vessels about which I am writing.

Part of my motivation for this project lay in the difficulty I faced in finding images of spouted vessels from Colha's surrounding sites. There being no convenient way to find these images online, I have had to spend long hours tracking down ceramics reports from various sites, sometimes to no avail. Disappointing still, ceramics reports that I did get my hands on sometimes only had drawings of the vessel form I was researching. The drawings would not be so bad if they were not just a few centimeters across; however, as I am interested in the iconography on these vessels, no matter how basic—the small size of these images obfuscates the more minute details I am hoping to find.

It was not long, then, before I realized that my thesis work served as an opportunity for me to work beyond my research itself. I finally have the chance to do my own part in making artifacts more accessible learning tools, and the way I want to do it is simple enough. I will use photogrammetric methods to 3D model Colha's spouted vessels, then publish them on Sketchfab, a free, online platform for sharing 3D models.

While I initially designed this project as a way to engage the public and benefit ancient Mesoamerica enthusiasts and scholars in ways outside my research alone, 3D modeling also serves an important role in documenting artifacts for posterity. For example, Alfred Maudslay's photography of inscriptions in Maya ruins in the late 1800s remain important documents today, because the exposure of these sites to the elements since then has resulted in their erosion. In some of these sites, where inscriptions have become difficult to make out, Maudslay's photographs provide documentation of them in a state of much better preservation.

Now, with the technology for 3D modeling, there is a greater sense of insurance for archaeological features and artifacts. 3D models are more comprehensive documents than drawings and photos, and in the event that the artifacts suffer any damage, the models can even be printed. Though my project is small in scope—I will only have around fifteen vessels to model—I see this work as being part of a larger effort to demystify the ancient Maya by increasing public accessibility to prehispanic material culture and improving the general understanding of Mesoamerican history.