



SUMMER 2017 COURSE SPOTLIGHT:

LACS 321-202: The Archaeology of Mexico and Peru: Inca, Aztec, and the Spanish Conquest

Instructor: Dr. Howard Tsai

Interview by Alana Rodriguez, LACS Academic Program Specialist

Howard Tsai is a lecturer at the Center for Latin American & Caribbean Studies. He received his Ph.D. in anthropology from the University of Michigan specializing in the archaeology and prehistory of Andean South America. His research examines the interaction of ethnic groups in the river valleys of the Andes Mountains. He is the director of the Las Varas Archaeological Project, which investigated ethnic interaction at an 11th-century village located in the Middle Jequetepeque Valley, Peru. The results of his excavation at Las Varas will be published by the University of Alabama Press.

Tell me about the history of developing your course on the archaeology of Mexico and Peru

The inspiration behind this course initially came from my dissertation advisor, Dr. Joyce Marcus (UM Anthropology). In 2012 Dr. Lenny Ureña, LACS assistant director, approached me to see if I was interested in teaching a course on the archaeology of Latin America; I consulted Professor Marcus and she suggested that I cover not only the Incas and Aztecs, but also that crucial moment straddling archaeology and history—the Spanish Conquest of the Americas. I was trained as an archaeologist and my expertise was on prehispanic periods, so learning about early colonial society was a real eye opener for me. Much of the assumed common knowledge about the Incas or Aztecs in fact came from Spanish sources at the moment of contact or, more specifically, after the dust of conquest had settled.

In developing this course I had the wonderful opportunity of collaborating with various research units and facilities around campus. My deepest gratitude goes to the Museum of Anthropology, my major benefactor in providing my class with access to artifacts from Peru and Mexico. The importance and joy of utilizing these materials for teaching are impossible to describe. Students get to see artifacts right in front of them, out of the museum display case,

and that is a once-in-a-lifetime opportunity.

I am extremely grateful for the help I received from the staff members of the Hatcher Map Library (Tim and Karl), Clements Historical Library (Brian), and the 3D Lab (Shawn and Ted); I cannot give them enough thanks. Years spent teaching this class have introduced me to such amazing resources on campus like 16th-century maps, letters, and books, and a cutting-edge 3D Lab engaged in various 3D printing, scanning, and virtual reality projects. Students taking this class will discover these hidden gems of the university.

What are the principal learning objectives in this course?

The goal of this course is to familiarize students with the cultures of the Incas and Aztecs, the native empires of Peru and Mexico encountered by Spanish conquerors around the 16th century. Since these societies did not possess writing, we rely largely on Spanish records and research by archaeologists and anthropologists to understand native ideologies and cosmologies. We use analytic tools from disciplines ranging from history, anthropology, to archaeology. Since no single source or line of evidence is perfect, we must combine them to arrive at the best explanation of events or processes. Every era has its own

version of fake news, so I want students to acquire the critical thinking skills that will help them resolve or at least gain a deeper understanding of contradictory historical accounts.

An overarching theme of this class is media, or the means by which information is transferred. We need to think deeply about how we transmit knowledge and how that affects our thinking and way of life. For example, students are surprised to learn that the Incas and Aztecs did not develop a true writing system, even though they were perfectly fine running large empires. It is we who have writing that constitute a strange society. Humans as a species have evolved and survived for hundreds of thousands of year relying solely on speech, song, dance, ritual, and craft.

How did indigenous American societies adapt to writing when it was introduced by Spanish authorities?

As we will find out in class, resilient native communities, facing decimation and near extinction, quickly learned that the written text could become their weapon in fighting against the injustices of Spanish colonial rule. In discussing the radical changes writing had inflicted on our cognition, I hope to get

“What do I ask of a painting? I ask it to astonish, disturb, seduce, convince.”

– Lucian Freud

students thinking about how information and media can transform their lives and shape the way they view the world.

What do you especially enjoy about teaching this course?

I love teaching this class! Its narrative arc is epic: here is the creation of the modern world resulting from a clash of civilizations, European and American, two worlds that had been separated by more than 14,000 years. We start with the completion of the Iberian Reconquest in 1492 that would set the stage for Spain's emergence as a world empire. We then cover a variety of fascinating topics: the rise of the Aztecs, their building of a magnificent city in the middle of a lake that would later become Ciudad de Mexico; Aztec mythology of the five suns, the fifth (our current) sun needing the blood of sacrificed humans; the siege of lake city, Tenochtitlan, by Cortes' launching of 13 ships; the birth of America's largest indigenous empire in the Andes Mountain of South America; the vast Inca system of administration that awed the Spanish colonial government; Pizarro's capture and dastardly extortion of the last Inca king, Atahualpa, leading to entire rooms being filled with gold and silver; the Great Inca Rebellion against Spanish rule, resulting in Inca rebels holding out in the jungle citadel of Vilcabamba for more than 30 years; old man Pizarro's last sword duel

against 16 assassins—his fellow Spaniards—and killing two of them before finally succumbing; archaeologist Hiram Bingham's search for Vilcabamba which resulted in his discovery of Machu Picchu; the tragic and apocalyptic decimation of native populations by smallpox; the end of Spanish conquests and the birth of Latin America. These stories would make a great movie or HBO series.

How often is this course offered?

This course is offered in the summer semester. It is a 7-week class starting in late June and ending in mid-August.

You mentioned your own training as an archaeologist led to some eye-opening moments regarding the amount of assumed knowledge of Aztec and Inca peoples that

actually came from Spanish sources. What surprises your students the most in this course?

I take a page from Matthew Restall's book *Seven Myths of the Spanish Conquest* and debunk stereotypes about Mesoamerican and Andean societies and Spanish colonialism. These historical surprises are great pedagogical tools because they leave a deep impression in students' minds when presented à la MythBusters.

Probably the biggest twist in the plot was the messiness and bizarre legalism of the Spanish conquest. Spanish expeditions were from the onset filled with internal strife that resulted in not only squabble but also murder and assassination of fellow Spaniards. The amount of Spanish-on-Spanish violence so alarmed the Crown as to produce documents, which we will read in class, designed to restore law and order in the colonies. I think many students come into the



class thinking that there was an unified Spanish effort to conquer and destroy indigenous societies, but in reality the Spanish colonial government, out of self-interest, wanted to preserve a large chunk of native political systems to effectively extract labor and tribute. There was also a major ecclesiastic effort to learn indigenous languages and native religious practices for purposes of spreading Christianity and wiping out idolatry. There's something unsettling, maybe a little sinister, about knowing someone or some culture just so you can change it.

Another surprise is the tremendous linguistic diversity that characterized Mesoamerica, Andes, and early modern Europe. 1492 was when the first Castilian (what we now call Spanish) grammar book was published, and at the time most people in Spain, France, or Italy did not speak what was supposed to be the "official" language of those countries. Pre-modern societies were extremely diverse linguistically. The number of indigenous languages spoken in present-day Mexico is amazing: Nahuatl, Maya (and what I'm listing now include families of languages), Otomi, Zapotec,

Mixtec, Totonac, etc. The church of Andahuaylillas in Cusco has the phrase "I baptize you in the name of the father, son, and Holy Spirit" written in three indigenous languages — Quechua, Aymara, and Puquina (now extinct). Overall, this course is full of surprises, but I shouldn't give out too many spoilers.

You have been experimenting with innovative uses of technology in your teaching. When did you start taking students to the U-M 3D Lab and why??

I first saw a demonstration of a 3D scanner on north campus in the last years of my graduate studies (2012) and I remember being quite impressed. I thought to myself, "Wow this will be very important for archaeology." Because of the rapid progress in



thinking about the application of 3D technology to education and research. I returned to U-M in 2014 to teach the Inca/Aztec course, and the first thing I did, back in Ann Arbor, was to contact the 3D Lab to see how we can incorporate 3D technology into the classroom.

3D technology has implications for issues of heritage and antiquity. There was a big dispute between Yale University and Peru over ownership of the Machu Picchu artifacts. Eventually Yale gave back the artifacts, but the problem of cultural heritage has not gone away: how can we provide teaching materials and resources to universities throughout the world so students can learn about ancient Latin America? Perhaps, in the future, everybody will have a 3D printer and will be able to print out artifacts and models of ancient buildings?

As mentioned earlier, a major theme of this class is media, or the mediums by which we communicate. We began by studying the cultures of Mexico and Peru that didn't have writing. They transmitted their culture through talk,

3D technology, those formative years—just six years ago—now seem like the Dark Ages.

In 2013 I left Ann Arbor to teach in Cusco (Peru), and there I was still



poetry, pottery, music, dance, clothing, and architecture. We then encounter the Spanish colonial system, which depended heavily on writing and documents to administer their American colonies. At each point information, data, and knowledge, and the means through they were transmitted, were crucial for a civilization's operation. Now we have the internet, but what next? Will 3D technology become the next medium of information transfer? Someone at the 3D Lab mentioned using noninvasive scalp electrodes to prevent motion sickness from 3D glasses—at that point we are just one step away from *The Matrix*.

What are the practical applications of the 3D lab's technology to the fields of history and archaeology?

The practical applications of 3D technology are twofold: (1) research/fieldwork and (2) education/dissemination. Not only can we 3D scan objects like artifacts, we can also 3D



scan what archaeologists call “features,” or ephemeral things in the ground that we simply can’t bag and take away. This would include remnants of houses like postholes and walls, trenches or pits dug by prehistoric people, a campfire used for cooking, etc. Paleontologists have now 3D scanned dinosaur footprints, and this is great because it’s a non-destructive method of copying a footprint, whereas the traditional method of using plaster casts can slightly erode away the footprint in the soil. So in the rare case that we find ancient human foot- or handprints in a prehistoric house (and there are famous examples), wouldn’t it be neat to scan those imprints in the field, upload

them to the cloud, and, copyright permitting, freely distribute them online?

There are, however, challenges to using 3D technology in the field. Archaeologists, believe it or not, often work in remote places that don’t have electricity much less the internet, so we might have trouble finding a place to charge the laptop and scanner, and heaven forbid the equipment from breaking down. I worry whether sophisticated technology can survive the rugged, unforgiving conditions of the field.

But let us assume that all is good and we successfully brought back tons of exciting 3D data from our



dig. This is great because now the professors and researchers can present their findings using 3D visualization. You are probably still wondering what a 1000-year-old posthole or hearth looks like. What if I show you a 3D model of these things or, even better, I print them out for you to see and touch and handle – then you will have a much better idea of what we archaeologists have found. Perhaps in the future every student will have an affordable 3D printer at home and they will be able to print 3D scans of ancient pottery, stone tools, and architectural models of temples, palaces, and cities. These printouts would make great educational materials.

There is another type of 3D technology: virtual reality headsets. I have started using these headsets in my class to show some of the sites and cities mentioned in the lecture. But I'm still trying to improve the

VR educational experience. I want to figure out a way to load a prerecorded tour so students can put on the headset and hear something like, "look to the right and you will see...to the left is the famous..." And have you heard of Microsoft HoloLens? These cost about \$3000 a pair —way too expensive for the average consumer, but they're really fun. You put them on, and while you're still able to see the real world around you, the lens projects these virtual reality objects or persons so they appear to be standing in front of you, sitting on a table, or resting on any real-world surface! Perhaps one day students can wear the "augmented-reality" glasses, see virtual ancient artifacts in front of them, pick up or interact with those objects, and even experience the entire classroom as part of an archaeological dig. Overall the VR experience is much more "intense" than a flat laptop or tablet screen, so educators need to think about shorter lesson modules (and provide alternatives for students who get motion sickness) that feature a quick burst of VR learning material. A different medium

= a totally different approach to classroom content and how it should be taught or presented.

Do you plan to incorporate more technology into this course in the future?

A disclaimer: I've become more cautious and introspective with using technology in the classroom after years of experience and experimentation. Not that I've become a luddite or anything, but I've seen too many "let's use technology for technology's sake" as encouraged by the industry. The truth is, I believe, there is still a poor integration of digital or online resources with traditional, but extremely valuable, set of learning skills (reading, writing, critical thinking). I will continue to incorporate technology into my classroom, but the real challenge is how to better integrate that technology. It's all good and fine for students to have a 3D or immersive experience, but they will still need to acquire those traditional skills of deep reading, critical reasoning, and clear writing.

This is of course ambitious but I would like to spearhead some





kind of teacher-led technology initiative, with educators calling the shots in designing digital classroom resources. Too often the programmers are designing software or apps (“learning management system”) without consulting the teachers and professors, or even the students. The ideal is a simple, streamlined interface. There shouldn’t be needless training sessions to use online educational systems; by that point you know something has gotten way too complicated. So I see a very interesting future in the co-evolution of technology and education arising from a healthy, open, and productive

dialogue among practitioners.

Who should take this course?

Students who are not afraid of a bit of intellectual romp and raucous. I tell the class that the seminar room is a time machine that will transport them to a distant land and time. The classroom itself, in fact (4009 Ruthven), is in an old, historic building—Ruthven Museum of Natural History—built in 1928. That same room was where some of the finest archaeologists in the world had been trained. So here students will learn about the Incas and Aztecs, see their artifacts, and imagine a different way of life. If you enjoy this kind of intellectual adventure, then this course is for you.

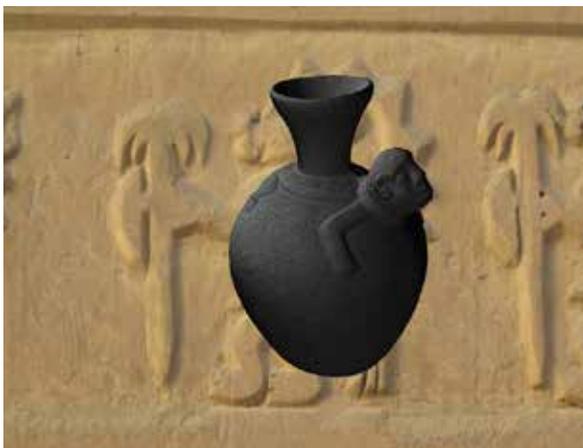
In terms of requirements and prerequisites, this course fulfills the LSA social science distribution and is suited for students of all majors. No prerequisites, and no background in history or archaeology is needed to take this course.

Do students need to have prior knowledge of Latin American history to take this course?

Not at all—students unfamiliar with Latin America are strongly encouraged to take this class. I teach this course like I’m promoting a tour package, a sales pitch I learned from Professor Christopher Donnan, with whom I took my first course on South American archaeology at UCLA. In class he repeatedly said that he expects every one of us, some day, to visit Peru, and he would list all the places we should see and all the foods we should try. So I’ve continued his tradition of telling students to go to Peru. In my class I divulge the secret locations of the best ceviche, chicha, and arroz chaufa, and students can see these places virtually with 3D glasses. Incas/Aztecs is a gateway course that will get you hooked on the wonderful sights and cultures of Latin America; you’ll travel there in hopes of kicking off the habit, only to relapse by taking more classes on the region and going back there time after time.

What movie/tv show do you quote/reference most in your class?

So this last semester (Summer 2017) it was Game of Thrones Season 7. The fight for the Iron Throne is kinda like the Inca Civil War between Atahualpa and Huascar. I have to be careful with movie references because if I quote something from the 80s or 90s, or even the early 2000s, students will immediately cast me as an old fogey.



This is a Chimu-Inca blackware that dates to ca. 1460-1532. It depicts a monkey. The potter made this with a 2-piece mold and then fired it in a reduced atmosphere, resulting in its black surface.

Collection: University of Michigan Museum of Anthropological Archaeology; Culture: Chimu-Inca; Material: Earthenware; Date: Late Horizon, AD 1460-1532

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Best viewed using Safari or Firefox

About the UM3D LAB

As an interdisciplinary service facility, the UM3D Lab provides the entire University of Michigan community access to the tools, expertise, and collaborative opportunities needed to support cutting edge research, academic initiatives, and innovative uses of technology in the general areas of: Teaching and Learning; Visualization and Simulation; 3D Printing and Scanning; Motion Capture; Modeling, Animation, and Design; Custom Tool and Application Development

The UM 3D Lab assists in the planning, design, and development of research, teaching, learning, and visualization projects for students, staff, and faculty across campus.

To learn more about this resource and samples of their projects, please visit their website at: **um3d.dc.umich.edu**

The Center for Latin American and Caribbean Studies (LACS) is committed to promoting a broader and deeper understanding of the region--its histories, cultures, and peoples. The center provides a venue for faculty, students, and the community to learn and share knowledge and partners with a host of units across campus on projects of mutual interest.

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