Courtney Daub

ANTH 258/CIS 106

Visualizing the Past/Peopling the Past

Assignment 6c

December 23, 2018

**Digitizing Affect: Visualizing a Shaman’s Curing Ceremony**

**Introduction: Project Scope and Goals**

Plumes of tobacco smoke reach a sky whose hue changes from night to day alongside soft chanting and rattle rhythms. The source of the sound is an older man whose voice and arm have been at work for hours. He shows little signs of exhaustion or even awareness of his corporeal form. He seems engaged elsewhere, perhaps under a more colorful ayahuasca-induced sky. As these few sentences demonstrate, shamanistic practices are heavily sensory by nature. The long periods of time spent chanting or shaking a rattle, often under the influence of hallucinogens, and the accompanying visions and communication with spirits require a full-body commitment.

When recreating images of the past, specifically by engaging with the discipline of archaeology, artists have argued that the intangible, human aspects of the past that extend beyond the immediate evidence are not only important for engagement, but essential to the interpretive area of the discipline itself (Sorrell 1981.) While recognizing this value, others find the desire to create affective representations of the past in tension with the tendency of artistic expression to impose present biases on the past (Solometo and Moss 2013) Even as a creator attempts to portray the past accurately, pre-existing visual and social traditions affect viewer perception beyond their control.

For shamanism, these tensions are amplified. Not only are ritualistic traditions difficult to understand entirely due to their grounding beyond material culture (Davison 1984.), shamanism has been generalized within public consciousness today. In contemporary South America, ayahuasca shamanism is a somewhat popular among tourists seeking an authentic sensory experience, which some have argued has led to harmful cultural erasure (Fotiou 2016.) The introductory description itself raises questions of accurate representation: is the trance-state a fair description of shamanistic communication? How lengthy were average shamanistic rituals and how did they divide that time? How does this vary by culture?

The goal of this project has been to attempt to people shamanistic practice with a partial focus on the immaterial within a curing ceremony, mainly sound and motion. To this end, I wanted to include chants and rattle shaking in addition to modelling the rattle, which also lends itself to shamanistic subjectivity. However, I also wanted to discuss the challenges of balancing these elements while also trying to attend to any cultural specificities of the Baures region in the pre-Columbian Bolivian Amazon.

**Source Information: Exploring Shamanism(s)**

Defining shamanism in precise terms is difficult given its ubiquity. The term itself has traditionally been used among anthropologists to describe an almost global cultural phenomena and has only grown in popular usage beginning in the early twentieth century and skyrocketing mid-century (Walsh 1989.) In the pre-Columbian Amazon, Shamanism is often grouped with religion, medicine and sometimes governance (Steward 1940.) The most common and important ability of shamans, often male, is communicating with and sometimes embodying spirits, which means they often possess more power than heads of indigenous groups. Shamans can be a bad influence that interfere with the well-being and affairs of other peoples or a good influence, diagnosing illness and performing ceremonies to attempt to heal the sick. This project focuses on the motive and auditory aspects of the ritual aspects of the healing process, which differs slightly from the process of preparing and in taking the hallucinogenic ayahuasca which is also important to the sensory aspects of shamanistic communication with spirits. Gourd rattles are among one of the main items used among shamans especially in the healing or ceremonial context. Paired with the rattle is a set of invocations or chants typically meant as a form of communicating with spirits (Métraux 1940).

These aspects of shamanism are generalized for pre-Columbian South America. While the rattle and invocations are mainstays of the ritual healing process, the specifics of the rattle rhythms, the invocations, the spirits and their role in the healing process are varied. Missionary Francisco Eder, who lived in Baures in the eighteenth century, provided the closest account through a missionary lens, of the shaman’s specific healing rituals in Bolivia (2009 [1727-1772]). Although Eder does not mention rattles or invocations, h highlights one of the traditional methods of healing in the Americas that involved sucking on or applying pressure to parts of the afflicted person’s body and pulling out objects, such as a snail’s shell. Eder’s account, as is the case for many missionary accounts, makes ascertaining any native subjectivity difficult, but the account is still useful for its description of events. In Eder’s mind, shamans deceived people to maintain power and get what they want. Eder described the shaman pretending to drink what he gave to others that made them sick or claiming that a tiger was going to come so that people would bring the shaman food. While these accounts are not wholly accurate for determining the shaman’s intentions and character, they suggest that the animism existed among native peoples in Baures and that the shaman had the ability to foresee events pertaining to spirits.

Music and any other sound-based elements of culture, especially for pre-Columbian cultures, are especially hard to accurately know and describe due to lack of recording-technology. Work pertaining to indigenous South American music and its many functions often comes from early to mid-twentieth century ethnographies by anthropologists and ethnomusicologists. Ethnomusicologist Anthony Seeger has spent much of his career writing ethnographies of and recording indigenous South American music, specifically with the Suya of Brazil. According to Seeger, among the Suya, invocations could be used to imbibe a body part that is blown on after the invocation with non-human characteristics (Seeger 1987.) The invocations, he notes, were used especially among shamans in healing context although they decline with the introduction of Western medicine. The process sounds familiar to the curing ceremony described by Eder, but even with the presence of animism in the Bolivian amazon and the general use of invocation for communicating with spirits, the Suya practice could likely be entirely different from the indigenous peoples of Baures. In a more specific article dedicated to Shaman’s and music in Brazil, which attempts to generalize for indigenous groups across South America, shaman “music” is described as, depending on the specific tribe, making the shaman a conduit for spirit communication, articulating people’s relationships to animals and other aspects of the natural world and embodying spirits themselves (Seeger 1988).

I searched the online database of the University of Pennsylvania Museum of Archaeology and Anthropology (Penn Museum) for shamans’ rattles and other paraphernalia from the Bolivian Amazon. Unfortunately, none were found, so I used two Yaruro rattles from Venezuela for my modelling and animation (Figure 1). Five rattles were collected for the Penn Museum by anthropologist Vincenzo Petrullo during his expedition with the Yaruro in the 1933 (Petrullo 1934). Petrullo was a less than stellar anthropologist and was dismissed from the museum shortly after his expedition in Venezuela. Fortunately, his ethnography on the Yaruro contains detailed descriptions of the rattles and their use by a shaman with whom he became well-acquainted (Figures 7-- 9.) In Petrullo’s description, the shaman, unlike the typical isolated figure, appears to also occupy the position of the headman. Petrullo described the shaman shaking the rattle horizontally and vertically in different rhythms and singing while others men and women joined and dance. In the case of a curing ritual, the shaman also sings and shakes the rattle at the head of the sick person. in Petrullo’s description, the ceremony is also a group process as other people line up behind the shaman to sing and dance. The rattle is significant to the shaman, as Petrullo described the Yaruro people thinking he was a shaman because he used the rattle. Petrullo also described the shaman carving the rattle. The designs on the rattle are said to represent Kuma, the creator of all things of whom the shaman is only able to communicate. The carvings in the gourd rattles represent the dreams of the shaman (Petrullo 1934.) A spirit or god that is the creator of everything, such as Kuma, is common among indigenous South Americans (Métraux 1940). The precolumbian people of Baures may have also carved their rattles and communicated with an important religious figure.

**Process**

Before modeling, with the help of Dr. Erickson, I photographed three rattles from different angles and chose two of them to model. One of the rattles, which I will refer to as rattle one, included both a handle approximately 20 centimeters long and an elongated-spherical gourd with two holes that cover about a third of the handle (Figures 2 and 6). The other rattle, which I will call rattle two included only a smaller more-spherical gourd (Figures 3-5). Unlike other rattles present, neither contained anything inside for sound. Both rattles are carved with decorations representing the dreams of the shaman. Rattle one specifically includes gods and spirit ancestors, while rattle two has repeated dancing figures. The goal of modelling was to capture this detail so personally connected to the shaman.

Before focusing on texturing, the simple shape of the rattles needed to be modelled. After accidentally inserting a NURBS sphere and discovering I could not edit this sphere since its surface was not divided into faces, I placed a polygon sphere into Maya. I created two free image planes and inserted reference photographs of two of the rattles I had photographed at the Penn Museum with the scale included (Figure 10.) With the photographs scaled to a centimeter grid in Maya, I then enlarged the sphere to the match the photograph. The same process was followed with a polygon cylinder to create the handle. Since being new to Maya, I had to review the in-class tutorial instructions.

After shaping the rattles, I turned to the more difficult task of texturing and adding detail. To texture the handle of rattle, I assigned a new lambert material and tried different wood-texture images by uploading them into the color box (Figure 11.) The most difficult part of the modelling process was figure out how to texture the spherical part of the rattles to match both the gourd color and texture and include the carved details. I tried three different approaches, some suggested as possibilities by Dr. Erickson.

The first approach was to take the multiple overlapping photographs of the rattles and create a flat panoramic that could then be added as a texture to wrap around the rattle model. I spent some time researching free programs that create panoramas from photographs and chose Hugin. To isolate the gourd part of the rattles from the handle and background, I uploaded the photographs to a website called Online Photo Scissors that removes any part of an image that you mark (Figure 12). While the photographs angled straight down to the larger surface area parts of the gourd include most of the detail, the details toward the top and bottom of the gourd were captured in photographs were at a different angles. Trying to figure out which ones would work best with the program, the entire surface area of the rattle proved difficult.

When photographs are uploaded into Hugin, the program relies on overlapping points, called contact points, to stitch the photographs together. Even though the photographs overlapped considerably, the program had trouble recognizing the points of overlap called contact points it needed to stitch the images together. After manually choosing contact points, Hugin produced an image that was extremely blurry in the overlapping areas.

To address this issue, I thought of a simpler way I could create a flat image that could wrap around the sphere. While rattle one had an intricate design that required the precise stitching together of multiple photographs, rattle two, because of its row of repeating dancing figures, would be easier to construct an image using fewer photographs. I decided to attempt to piece together a vertical section of the sphere including the top middle and bottom, and then combine copies of the image into one large panoramic-like photograph.

Using the Penn Museum photographs, I took screenshots focusing on one of the figure’s legs, body and head that make up the bottom, middle and top portion of the rattle respectively. Using Online Photo Scissors again, I removed any unwanted background (Figure 13). In Word, I rotated, assembled and grouped the pieces together to create one figure and then copy and pasted that figure and grouped the resulting images to get one continuous pattern (Figure 14). When I applied this as a file color using the newly-assigned lambert material to the sphere, the figures were distorted enough to be unrecognizable (Figure 15).

For my third approach, the TA showed me that the UV shell can be changed from a rectangle to an “unwrapped” version of the sphere that could be saved as an image (Figure 16). She recommended that I use the image to manually map out how the patterns one the rattle would map onto the UV. I applied this approach to rattle one to again try to work with the more complicated design. I decided to print out the UV shell, cut the portions of the sphere out, and sketch the major details (Figure 17). To ensure alignment of the details across parts of the UV shell, I used tape to recreate the sphere from the paper UV. After sketching, I outlined the design in thicker black pen and scanned the sheet.

By watching a few YouTube tutorial videos, I learned to insert the photograph with all the parts of the UV sphere into Photoshop, created a new layer that included only the details outlined in black pen, and use the magic wand to select and remove all white space (Figure 18). I then assigned a new hue to the new layer and adjusted the saturation to make the lines a color closely resembling the color of the gourd-designs (Figure 19). After spending some time trying to figure out if how to layer multiple images into UV, I assembled all the pieces into one image would be easier. I had trouble using the slice tool in Photoshop to split the image into its different parts, so I uploaded the original unwrapped UV shell into word along with six versions of all the Photoshopped details of the sphere together. I also added the background color of the gourd using a screenshot from the Penn Museum photographs. I cropped the six images into their individual parts, sized the texture to the size of the UV map, sized the details to each of the UV shell parts and rotated everything to fit into the UV shells before grouping everything together into one image (Figure 20).

When adding the new file to the UV map, I moved and rotated the different parts of the UV shell so they would align properly (Figure 21). At this point, I had a greater grasp over what was required to make an image fit nicely into the UV and how I could manipulate the shell to account for any distortions or mistakes. I brought the image I constructed in approach two back into a rectangular UV shell (not unwrapped spherical) and rotated it to prevent distortion of the image.

The rattles still contain many flaws (Figure 22-24). When the details were finally layered with the texture underneath and applied to the sphere, red became apparent and the color appears more gold than anything. Despite my best efforts at reconstructing the sphere and drawing to ensure alignment, alignment of the patterns remains an issue. With the background removed in Photoshop the lines appear thinner and messier. While the image from approach two is not nearly as distorted, with the bottom faintly resembling the actual rattle, the figures are not clearly defined, and the model does not accurately reflect the beautifully detailed top of the rattle.

The modelling process taught me about the difficulties of working with UV. I was unaware in the beginning just how difficult modelling rattles when the most interesting parts of them involve the smaller details. My hope is that my attempts can help students in the future who seek to model something that is intricately detailed, especially with more complicated shapes such as spheres. With more time, I would refine my drawing of the details to ensure better alignment, and to return to Photoshop to improve the color of the details before going through the process of assembling the UV map again. For the second approach, I would also refine my assembly of the figure by better capturing in my screenshots the details of the upper portion of the figure. While I used Word and random online programs for cut-out and assembly, students in features to be explored on Photoshop that would help refine both of these approaches. I would not recommend sketching for the non-artistically inclined, but tracing programs would be an possible option. Given more time, I would also continue exploring Hugin. Beyond the UV, finding proper bump maps or using other rendering techniques to create a more realistic gourd and handle would also be something to explore with more time as well as adding more details such as a tassel. Overall, I would be more attentive before starting modelling to how UV works and develop a plan even before taking pictures of the object so you know what kinds of pictures would best help in recreating the detail.

The curing ceremony is a dynamic process. The movement around the body of the cured is as essential as the shaking of the rattle. My sources varied in the way they describe this movement. While Petrullo mentioned a dance, the only description of Baure was the sucking of the body parts, which motion capture would have been unable to record. To capture the animated movements of the Shaman, I used motion capture in the SIG laboratory (Figure 25). After getting into and adjusting the motion capture suit, I began with the simple shaking motion using connected markers to keep my hand position consistent. I opted to do a simple shaking motion of the rattle and then move around an area of the floor representing the body of a sick person.

For the rattle sounds, I recorded Dr. Erickson shaking one of the rattles from the Penn Museum. I was unable to locate some of Seeger’s ethnographic recordings. While I could have taken other chants online, they are likely removed from their original cultural context. As some incantations are considered sacred by current peoples, including them in a public project, especially one representing a different people, raises ethical concerns.

**Conclusion**

Attempting to recreate a shaman’s curing ceremony has raised challenges both expected and unexpected. Finding ways to model intricate detail using UV proved more challenging than I had initially expected. Locating culturally-specific shamanistic practices with limited time and resources was expectedly difficult. Through these difficulties I have a greater understanding of Maya and Photoshop and the true diversity of shamanistic practice.

The final project now consists of two shaman’s rattles, audio-recording of a rattle shaking and motion capture data for the shaman’s movements. Combined and uploaded in Unreal, these elements would only begin to resemble the full shamanistic experience. The goal of trying to recreate digitally the affective elements of shamanistic practice merits reflection. What does it mean, especially as shamanism is commodified today, to allow people to virtually witness ritual? Does “peopling the past” visually encourage the peopling of the practice as it exists contemporarily or reproduce an uncritical gaze? Incorporating these discussions within the public presentation of this project can inform as much as entice.

References Cited

Davison, Brian

1984 *Picturing the Past: Through the Eyes of Reconstruction Artists.* English Heritage Gatekeepers Series, Cadw.

Eder, Francisco Javier

2009 [1727-1772] *Missionnaire en Amazonia: récit du dix-huitième siècle d'un jésuite au Pérou, en Bolivie et dans les réductions indiennes*. Harmattan, Paris.

Metraux, Alfred

1940-1947 Religion and Shamanism. In *Handbook of South American Indians* , Vol. 5, edited by Julian H. Steward. Smithsonian Institution, Washington, DC

Petrullo, Vicenzo

1937 *The Yaruros of the Capanaero River*, Venezuela. Smithsonian Institution, Washington, DC.

Fotiou, Evgenia

2016 The Globalization of Ayahuasca Shamanism and the Erasure of Indigenous Shamanism. *Anthropology Conscious* 27:151-179.

Seeger, Anthony

1987 *Why Suya Sing.* University of Illinois Press. Champaign, Illinois.

Seeger, Anthony

1988 Voices, Flutes and Shamans in Brazil. *The World of Music* 30(2): 22-39.

Sorrell, Mark ed.

1981 The Artist and the Reconstruction. In *Alan Sorrell: Reconstructing the Past*. Batsford, London, pp. 20-26.

Solometo, Julie and Joshua Moss

2013 Picturing the Past: Gender in National Geographic Reconstructions of Prehistoric Life. *American Antiquity* 78(1):123-146

Walsh, Roger

1989 What is a Shaman? Definition, Origin and Distribution. *The Journal of Transpersonal Psychology* 21(1): 1-11