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ANTH 258 and CIS 106: Visualizing the Past/Peopling the Past

December 21, 2018

Assignment 6c: Final Project Text

Decorating the Body:

Hair, Piercings, and Body Art in the Amazon

**Introduction:**

The body serves as the conduit between the person and the physical world and acts as more than a transient barrier or a vessel in which the soul is contained. In the eyes of others, the body becomes inseparable from the person. Individuals know each other through the recognition of bodies distinct from themselves. This abjection, or recognition of oneself as an individual, comes through the acquisition of authority over one’s own body. Famous feminist theorist Julia Kristeva, defines the abject as the space between subject and object which is established through the psychoanalytical realization that one is a separate being from the mother and the abjection of the maternal to establish the self (Kristeva 1982). However, beyond this primordial abjection, people continue to other themselves or be made other through their bodies throughout their lifetime.

While questions of race and gender are often held at the forefront of discussions regarding body politics, there are other less innate ways by which individuals and peoples actively use their bodies to distinguish themselves within their communities. Sometimes these alterations of the body are considered rites of passage, but they can also be used to denote oneself as outsider from the mainstream. For example, in the United States, a young girl is often allowed to get her ears pierced at a certain age determined by her parents. Through this act, she can establish herself as an insider among her peers who already have pierced ears and denote herself as a young woman capable of the responsibility of maintaining the new holes. However, another teenage girl could perform the same act of bodily mutilation in piercing her own ears without her parents’ permission and through this small rebellion affirm her bodily autonomy. A few more piercings and she could even establish herself as a punk, an outsider to the mainstream, to strangers through just her appearance.

Because the body exists both as an extension of the self and as an imagined entity defined by others, these changes to the body can also passively be made into signifiers of exoticism or outsider status by people of a different cultural heritage. An act meant to be inclusive could be seen as a signifier of difference among another crowd. For example, if the same young girl who got her ears pierced to fit in with the other girls at her school were to transfer to a school where she was the only one with pierced ears, she may be seen as an outsider or a rebel in a way she did not intend. Even if she were to remove the earrings the holes would still take time to close.

This small, westernized example introduces a larger discussion about bodily mutation and bodily authority. The central question in this debate is about who has control in defining the person through the body, the individual or others.  However, in many ways, the answer will always be both. When people view others, they are always going to bring their past and prejudices with them. In a popular anthropological context, when readers flip through *National Geographic* people in native dress will always appear exotic in the sense that they are different from the reader and their community. When done with respect for the culture and fair detailed research with the involvement of experts and native people, photographs and reconstructions can be a positive way of learning about other cultures and people as subjects of their own narrative (Pyburn and Wilk 1995). However, publications like National Geographic often *make* exotic the bodies of native people.  With geographically and racially biased uses of native people’s bodies in traditional dress and ornamentation to contextualize artifacts and ruins in South America, Africa, and the Middle East, these publications perpetuate the narrative of backwards, less-evolved native peoples occupying an earlier stage of history to perpetuate the superficial, capitalist, imperialist system that has subjugated and objectified them in the first place (Gero and Root 1990).

Finding the balance between subject and object in reconstructions, such as physical scaled models or detailed paintings of imagined scenes, can be a difficult and daunting task. The decisions in representation made by the artist can become the history or the culture to their audience (Moser 2001). While reconstructive artists have more room for imagination, and therefore for error, in recreating prehistoric people, creating scenes from recorded history still requires the artist to make some key decisions when it comes to peopling the past. While reference photographs and direct modern descendants can take some of the guesswork out of determining physical features such as skin and hair color, body structure, and facial features, there are significant decisions still left to be made. Some of these include deciding how many people to show, what actions they should be performing, the gender composition of the scene, and the ages of the people being depicted.

However, another component that should also be given proper thought and representation in reconstructions is body modifications including hair styles, piercings, body paints, or tattoos. These changes to the body signify an active role in the construction of self and can reorient the individuals in the scene as subjects when done with research and respect, properly contextualized into a scene and historic time period. These attributes lie in the middle of the spectrum of self and other. While not there from birth and as innate as gender, race, or facial features, these body modifications are not as easily removable as clothing or other accessories which have a clear separation from the body.

In the precolumbian Bolivian Amazon, where clothing is minimal due to the heat, body modifications and decorations of the native people serve as clear demarcations of tribal inclusion and of otherness to researchers and later explorers. These body alterations and their relationship to the environment is a useful axis upon which to explore subjectivity and objectivity and analyze the notions of self and other in native peoples and their observers. Researching hair, piercings, and body art of the Baure and Mojo through this lens will also help provide the foundation through which accurate and respectful reconstructions can be built and incorporated into the Unreal virtual reality simulation of the region which this project is supporting. While the bodies of native people in reconstructions of the past will always to some extent be objectified by the viewer, building a foundation of research and adding the purposeful self modifications of the people into the scene will help establish subjectivity and bodily authority in a virtual landscape currently dominated by objects and environment.

**Goals:**

The goal of this project is to exhibit research on the styles, origins, and meanings of body modifications in the precolumbian Amazon. Research will be presented on hair, piercings, and body paint in the Baure and Mojo as well as neighboring groups. This project will build a foundation for further research in the framework of body politics and defend the incorporation of body modifications into human models in the 3D virtual world in Unreal. The research process will be briefly described as well as the process and results of creating a body paint stamp using Maya modeling software and an animation of the paint being applied to a human model. The final goal is to introduce future possible 3D modeling projects and research regarding body modifications in the Bolivian Amazon and propose relationships to cultural debates in the western world.

**Data/Research:**

**Hair:**

 Authors of various recorded accounts describe how hair was cut, styled, and maintained by the Mojo, Baure, and related groups since first European contact was made.  In the 18th century, seemingly respecting their hair practices, Jesuit missionary Francisco Eder writes that the “Indians have very rough black hair that reaches almost the lower back and to which they bring great care and attention” (2009:103).  However, Eder contradicts this sentiment by also claiming, “before they adopt Christian manners, the Indians rarely paint their hair, which they wear almost always free, to look even wilder” (ibid). He is associating the native body with wildness through a constructed temporal divide between paganism and Christianity.  However, this hairstyle is not wild, or absent of culture and consideration. In describing general characteristics across native peoples in Matto Grasso, Brazil, Vincenzo Petrullo describes the women as having long black hair cut straight across in the front like bangs and worn loose in the back (Petrullo 1932:168) (Figure 1). Petrullo elaborates on the symbolic importance of this hairstyle for young women. Unlike young boys who sometimes have a shaved head during childhood, girls wear the same style as adult women until they reach puberty at which point they cannot cut their hair until after the initiatory period ends. Instead, they allow the bangs to grow to cover their face during this time.

 According to Alfred Métraux, Mojo men also often wear their hair long and tie it back out of their face using cotton strings which they could cover with bark and decorate with feathers (1943:415). In the 18th century, Eder describes this long hair as a great source of pride for men who could even be punished for a crime by having their hair cut down to shoulder length (2009:103). In his work on another Arawak group, the Wapisiana, who are located in the far northeast in the Brazilian Amazon, William C. Farabee also describes men as having long hair which they would draw through decorated bamboo tubes that hung down their back (1918:81). However, Farabee says that many men were transitioning at the time of his recording to wearing their hair short as European men did. Writing a little over a decade after Farabee, Petrullo describes a short hair style becoming popular among the native men in Matto Grasso where the hair is cut evenly around the head, sometimes with the crown of the head being shaved forming a ring of hair (Petrullo 1932:168) (Figure 2). In the western binary of short hair on men and long hair on women, native men could be signified as “the other” by their long hair. In this way, the pressure to conform can result in the abjection of one’s heritage and identity and the loss of a cultural value such as that of long, well cared for  hair in this case.

 To care for their hair and keep it clean, smooth, and shiny, as well as to rid themselves of lice, the Mojo use oil in their hair. According to Eder, this oil is extracted from roasted seeds from palm trees and used all over the body before bathing (2009:103). However other accounts suggest that the oil could be derived from coconuts (Barnadas and Plaza 2005:98). Regardless, this use of beneficial natural extracts along with culturally significant cuts and styles shows the great care and effort native people put into their hair despite Eder’s claims about their wild and free appearance.

 The Maya model of the woman from past student projects which has been used to populate the Unreal virtual reality landscape does not have the bangs characteristic of women in this region. Because of their significance as a rite of passage in Baure and Mojo culture during puberty, adding bangs onto some of the female models would provide a more accurate and nuanced representation. The bangs could be different lengths to signify different ages and stages of development. Potential hairstyles could be modeled based on historic photographs or artwork of native people (Figure 3-4).

**Piercings:**

 Three types of piercings are generally associated with Amazonian indigenous people: lip, nose, and ear piercings. Piercings are a direct mutilation of the body and merging of the subject with a foreign object. Facial ornamentation is common across many indigenous groups in the Amazon with the Baure and Mojo having their own distinct style.  Most noticeable, lip piercings and plugs called labrets are described in various accounts. Eder describes how some Baure people would pierce both their upper and bottom lips (2009:101). The labrets had larger bases that rested between the gums and the lip to be held in place. Eder describes a specific style where the piercings protruding out from both the upper and bottom lips had small balls on the tips which would make noise when they hit each other as the wearer spoke (Figure 5). The anonymous author of a report describing the Mojos of Peru in 1754 makes a comparison between the double labrets and a bird’s beak (Anonymous in Barnadas and Plaza 2005:97). He describes the piercings as two long cylinders of resin and amber, four fingers long and one finger thick. He writes, “It was a strange thing that caused a laugh to see them in their mouth when they spoke, because those two sticks followed the compass and movement of the lips in the words and they imitated with great property the songs of the birds” (ibid). This description and the prospect that their ornamentation naturally invokes strangeness or humor in its contrast to the white viewer epitomize the perceived otherness of native people through their modified bodies.

While these double lip piercings are relatively specific to the Baure and Mojo, other authors such as Métraux describe a single silver labret in the lower lip as a popular choice among the Mojo and other neighboring groups (1943:415). Taruma men, farther southeast in Brazil, have been photographed wearing lip piercings that closely resemble this description (Figure 6). William Farabee’s research on the Wapisiana includes an account of the use of long sticks as lower lip piercings (1918:81). Cesar Bianchi’s drawings, photographs, and diagrams of Shuar men and women in northern Peru and Ecuador show where and how these sticks may have been placed and the proportions of the piercings in comparison to the face (Figures 7 - 9). These images suggest that the sticks could be almost the length of the face and worn angled downward to elongate the chin (Bianchi 182-183, 225).

Facial modification also included the piercing of the nose. The hole is generally made in the cartilage between the nostrils. Métraux briefly describes the piercing as a short silver rod, but other accounts seem to lean towards the popularity of rings (1943:415). Eder describes the piercing as “a ring or wire, with small stones dangling on both sides of the nasal wall. When they speak or walk, they clash for the pleasure of those who wear them” (2009:101) (Figure 10). As with the labrets, he again emphasizes the sound and movement of the piercings as a motivation for the modification beyond aesthetics. While brief and somewhat condescending in his analysis and emphasizing his perceived naivety of the native people, Eder still shows some inclination to view the native person as the subject altering their body for himself or herself rather than as a pre-decorated object. Farabee describes the use of a solid silver disc among the Wapisiana as a septum piercing which falls in the same place and exhibits similar movement with speech as the beaded ring (Farabee 1918:81) (Figure 11).

Ear piercing is common of most Amazonian native peoples. Métraux describes small tin piercings with a few strands of beads hanging from them which can be seen in many paintings and diagrams of Bolivian native peoples (Métraux 1943:415) (Figure 12-13). Farabee also describes the intricate beadwork of the Wapisiana in ear piercings and other accessories like arm and leg bands (Figure 14). However, instead of tin or other metals, the ear piercings from which the beads are strung according to his account are short sticks (Farabee 1918:81) (Figure 15). Sometimes feathers are used instead of beads to decorate the sticks which is common among Amazonian people because their environment is populated by diverse and brightly colored bird species (Figure 16). Accessories and ornaments collected by Farabee from the Ataroi, who have since been absorbed into the Wapisiana, show the extensive use and various styles of beads and feathers in necklaces, arm and leg bands, and piercings (Farabee 1918: 131) (Figure 17-18). Photographs of the earrings collected by Farabee at the Penn Museum capture the rich detail and bright colors of piercings which would have stood out against the native people’s black thick hair (Figure 19). These impressively long earrings, decorated with bright red, blue, yellow, and white feathers, are made from a thick cotton cord which is put through the hole in the earlobe.

To accommodate elaborate and heavy piercings, Eder describes a process used by native people to gradually expand the pierced hole in the earlobe (2009:101). After the earlobe is pierced, larger and larger rods are introduced to widen the hole to the size of a pea. Then, a flexible wand is used to manually twist and stretch the skin to the point where a nut could be passed through.  Finally, pendants are suspended as weights to stretch the earlobe even more sometimes until it reaches the shoulder. Unlike a regular piercing which will close up after the earring is left out for a certain amount of time, this process leaves the body permanently altered. This deliberate and active form of modification can distinguish the native person as an insider in their community and as an outsider to the western world even after removing the foreign object from their body. Because of their role as a signifier of insider and outsider status and of active authority over the body, the addition of piercings to the human models in Unreal would help establish their subjecthood and imply conscious expression in the scene.

**Body Paint:**

 Another form of body modification popular among native Amazonian people is body painting. Native people primarily use two shades of pigment, a red paint called urucú and a black juice called genipa. Urucú comes from the *Bixa orellana* plant, a small tree or shrub that grows in the Amazon, which produces seeds that can be dried in the sun and crushed into powder. This powder is mixed with water or coconut oil to create the pigment used to paint the face, body, and clothing (Eder 2009: 100). Genipa comes from the *Genipa americana* tree which yields fruit with the juice that is used as the pigment genipa, also called ionoboca. When painted onto the body, the juice will dry and stain the skin in the design that remains like a temporary tattoo for over a week (ibid.) (Figures 20-21). The use of these pigments is common throughout Amazonian native groups and neighbors who could trade for them. Farabee describes the extensive use of urucú among the Wapisiana in Northern Brazil who would dye their clothes with it because the color would transfer between skin and clothe anyway (1918:79). He also describes the use of genipa to paint black bands around the arms, legs, and body (1918: 184).

Regarding the people of Matto Grasso, Petrullo writes about the extensive use of urucú to cover the face and body. He writes that, “Most commonly used is urucúm which is put on the entire body in a thick layer, even to covering the hair. [...] The women often covered the forehead and the face down to the cheekbones with a thick layer of urucúm” (1932:167). Métraux writes of the Mojos, “Both sexes painted themselves with urucú and genipa. The women traced on their male relatives' bodies elaborate designs in the same style as those decorating their pottery” (1943:416). Gordon R. Willey writes about the transfer of designs between different crafts, noting that the people of the upper Amazon often create similar patterns on their pottery, woodwork, and bodies (1949: 149). Geometric patterns found on pottery from the Llanos de Mojos may have also been used in body and face painting (Figure 22).

Willey describes the creation of ceramic stamps to transfer designs onto other crafts. While stamps were widely used to imprint designs into clay, Willey also writes that “pottery stamps were made for both body and textile ornamentation. Both plane or flat, and roller or cylindrical, stamps were used. Dyes or paints served as coloring.” (1949:150). He notes that the flat stamps are older and more widely used, but cylindrical stamps are found in Central America, Colombia, Ecuador, and the Orinoco (Willey 1949: 146) (Figure 23). Wood stamps are more common in the Amazon due to the abundance of trees. Métraux notes, “Prior to any important activity, such as traveling, visiting, or working in the fields, the ancient Yuracare printed elaborate colored designs on their bodies with wooden stamps” (Métraux 1943: 493) (Figure 24). The Yuracure are native to Eastern Bolivia like the Mojo and Baure. Cylindrical stamps could also be made from wood such as those from the Ataroi, now part of the Wapisiana, stored at the Penn Museum (Figures 25-30). The dark color on the raised parts of these stamps, which would come in contact with the skin or textile, may be stains from genipa (in Figures 25-27, distinctly absent from the unused stamp in Figure 28). While the Wapisiana are farther north in the Amazon, Bolivian native peoples like the Mojo and Baure likely used similar cylindrical stamps in order to reproduce the complicated designs on their pottery on their bodies.

The purpose for painting the body varies widely and is not fully recorded. Métraux has extensively studied and documented many groups across South America and specifically in Eastern Bolivia. Therefore, he has some authority to generalize and summarize about the meaning behind this nuanced practice:

While we seldom learn the reasons why Indians use body painting, we may surmise that they do attach magical or other values to this practice, from the circumstances under which they paint themselves or their relatives. Infants very often are smeared with urucú soon after birth. Menstruating girls usually are profusely painted. Warriors commonly go to battle wearing elaborate designs on their person. Mourners frequently paint their face or their body black with charcoal [...] or with genipa” (Métraux 1949:582)

This brief analysis suggests a deep cultural and spiritual meaning behind the practice of body painting which is used as a way of signaling within a community and cannot fully be understood by outsiders.

However, Petrullo also notes a practical reason for the extensive use of urucú in the Amazon: keeping insects away (1932:168-169). He writes that, along with Piki oil, urucú serves as a protective layer for men during long trips where their backs will be exposed, and their hands occupied paddling canoes. He notes that women tend to paint themselves with urucú more commonly, taking joy and pride in painting their faces and their children. He writes that men would sometimes also cover themselves in soot but would tell him different reasons for this practice. Some men claimed that the soot remained from recently clearing fields and others said that they had recently put it on for ceremonial purposes. One Bakuri man in northern Brazil that Petrullo interviewed painted his face with soot in a similar fashion to how women wore urucú. When asked about it, the man claimed that it protected his eyes from the sun’s glare. However, Petrullo writes, “The anxiety of the Bakairi to appear devoid of practices which are not European undoubtedly prevented getting the real reason. Soon after our conversation he wiped it off” (ibid.)

This inclination of indigenous men to conform to European standards, similar to the transition from long to shorter hairstyles, shows an emerging shift in the use of body modifications to establish oneself as western rather than native. Colonialism and the forced integration into a system that benefits those that conform to western practices have motivated this transition, brought on by increasing contact and encroachment into native environments. For this reason, including body and facial paint on the human models would be beneficial to the authenticity of the Unreal project. The inclusion of this practice would reorient the people as subjects with authority over their culture and their bodies unstifled by westernization and colonialism.

**Process:**

 I selected body politics, the use of the body as a signifier in sociopolitical and cultural contexts, as a framing topic because I have previously studied the theory in various other courses. I then defined the parameters for this paper to body modification. From this I further specified what topics I would cover that would provide a sufficient range of examples. I chose hair, piercings, and body art and began my research. I familiarized myself with the ornamentations of the Baure and Mojo through a thorough review of the accounts of Francisco Eder, Alfred Métraux, and Vincenzo Petrullo (Eder 2009; Métraux 1943; Petrullo 1932). I found these accounts to be particularly useful because the authors defined their research in a geographical and cultural framework specific to Eastern Bolivia.

 I reference Farabee’s work on the Wapisiana and Ataroi of Northern Brazil because the objects I studied at the Penn Museum and chose to model are from these groups. By relating Farabee’s research back to the Mojo and Baure, I have established a sufficient cultural and material connection between the groups to justify the use of an Ataroi object as the basis for a digital model to be inserted into a Baure scene.

 Finding reference photographs and diagrams of the Baure and Mojo in general proved to be difficult as they are relatively small indigenous groups. Because of this I found it useful to incorporate figures from other native groups and regions that closely resembled the textual descriptions of Baure and Mojo style and objects. Also, I had the opportunity to visit the collections of the Penn Museum and handle and photograph some of the objects collected by Farabee and referenced in his work. I included these photographs to provide the reader with a clear visual context to picture the colors and designs I reference in this paper. Seeing and holding the objects gave me a more complete perspective from which to orient my 3D modeling process. Photographing and viewing the objects from many angles helped me model the indigenous object I chose authentically without having to insert my own bias in imagining unseen sides, edges, or textures.

 The modeling process began with deciding what object to recreate using Maya 3D modeling software. Originally, I intended to model multiple piercings, but was unable to find any from Bolivia in the Penn Museum collections. The Brazilian earrings I did photograph at the museum seemed beyond my skill level to model due to their smaller, individually textured and colored components including metal, a cord, beads, and feathers (Figure 19). Thus, I decided to model one of the wooden stamps from the Ataroi that I studied and photographed.

 First, I gathered the best reference photographs of my selected stamp which is carved with a repeated zigzag pattern (Figures 31-34). Originally, I tried to construct the basic shape in Maya by connecting a large cylinder with two smaller cylinders on either side to form the handles (Figure 35). However, the result did not yield the shape I wanted (Figure 36) and made adjusting the proportions and adding symmetrical edge loops to each separate section of the figure difficult. However, from handling the stamp in person, I realized that native people carved the stamp from a single piece of wood into the final shape, not three pieces adhered together. With this insight, I started again from a single cylinder with I divided evenly with edge loops and adjusted ratios and extruded edges to create the basic shape that I wanted (Figures 37-38).

The modeling process proved more complicated than I had originally thought in creating the raised pattern which would come in contact with the skin or textile on which the stamp was used. To create this design, I triangulated the faces on the center cylinder of my model which I manually divided into small sections by adding more edge loops. Then, for each section of the pattern, I traced out the zigzag shape by selecting triangulated faces (Figure 39). I then extruded the selected faces to create the raised sections of the pattern (Figure 40). However, extruding these faces created extra faces and edges which I had to delete (Figure 41). I filled in the gaps left from deleting these faces by connecting the remaining vertices (Figure 42), thereby creating the coherent structure (Figure 43). I then used the extruding tool create smother, but still realistically sharp, edges in the handles (Figure 44). After hardening and smoothening all the edges, I achieved the final shape (Figures 45-46).

I decided to texture my model without the genipa stains like an unused stamp which would explain the near perfect condition of the edges of my model. I used the unused stamp that I photographed as the reference for finding a similar texture (Figure 47). However, most of the wooden textures I was able to find online appeared too polished or too bark like. When I finally found a texture with a similar appearance, it was in a far too white shade. I adjusted the tone to be more yellowish (Figure 48) and applied it to my model to create my final model (Figures 48-50).

In addition to modeling the stamp, I created an animation of a woman using the stamp to apply a pattern in urucú to her arm. I downloaded the female Maya model created by past students used in the Unreal scene. I used the 3D paint tool to apply body paint directly onto her body map. I chose to cover the forehead and the cheeks in red to represent the extensive use of urucú described in nearly every source and hand painted the pattern from the stamp across the cheek in black to represent genipa and the use of stamps on the face as described by Métraux (1943: 493) (Figures 51-52). I also hand painted the pattern on the arm in urucú red (Figure 53). Originally, I wanted the pattern to appear as the woman went over the area with the stamp in my animation, but this proved too difficult for my skill level.

Finally, I imported my modeled stamp into the scene with the painted woman, and using the rigging function in Maya, I positioned the stamp in her hand (Figure 54). Even when handling the stamp in person, getting my fingers positioned on the handles so that it could be rolled along one’s own body proved difficult because of its size in proportion to the average woman’s hands. This specific stamp may have been intended to be used on other people or on textiles with two hands. However, by proportionally decreasing the dimensions of the stamp, I was able to manipulate the woman’s hand around the object. I then positioned the woman to be in a natural position to paint her arm and created an animation by key framing her position, moving her slightly, and key framing again at a time mark a few seconds later (Figures 55-56). Finally, I played back and saved the final animation from multiple angles (Figure 57).

**Results:**

My results from this project are the wooden stamp model in Maya, the painted body map of the woman which can be applied to other female models, and the final animation of the woman using the stamp to paint her arm. I captured the animation from six different angles to show the details in her movement, body paint, and the stamp. This scene captures the autonomy and control over the body which is lacking in the current Unreal scene to which this model could be added.  This active model could help establish the subjecthood of the people in the virtual environment and show respect for the native body and their choices in modifying it.

**Further Research and Conclusions:**

 If this project were to be extended and worked on by others with more experience in Maya and Unreal, some of the female models should be given bangs and male models should be added to show off both long and short hair styles popular in the region. Modeling some forms of piercings such as labrets, nose rings, and earrings decorated with colorful beads and feathers would also be beneficial to the overall project. These piercings should then be added to the models in the Unreal scene. Finally, some of the models in the scene should have body paint in varying designs to show off the cultural skill and sentiment of the people. All would help reorient the people as the subjects of the scene, drawing the viewer’s attention to their altered bodies.

 Further research on this topic could include other forms of ornamenting the body including through the use of tattoos and accessories. Also, these modifications could be analyzed through the perspective of religion or shamanism with more emphasis on the personal meaning than the final result and abjection through which this paper frames the topic.

 This topic could be expanded beyond the Bolivian Amazon and connected to debates and cultural practices related to bodily modifications in the modern western world. For example, Eder’s contradictory praise for Amazonian hair care while denoting the wildness of their natural styles could be framed using debates regarding cultural appropriation of black hair styles. Specifically the debate over whether braids should be worn by white people within a culture that systematically antagonizes natural African hair and defines it as unprofessional or wild would provide an interesting parallel to colonizer accounts of native hair care and hygiene. Regarding piercings, the derogatory language used to describe the prominent facial piercings and stretched earlobes of native peoples, could be related to the use of piercings and gages by members of punk subcultures. Punks often use piercings to other themselves from the mainstream in a method that is removable if this interest turns out to only be a phase which could frame a discussion on permanence and identity in relation to native piercings. Similarly, the use of bodily modifications to signal the progression into adulthood in native communities, could be framed with a more extensive look at the western custom of piercing the ears as a rite of passage for young girls. The use of body paint in the Amazon can also be related to western debates over cultural appropriation versus appreciation regarding makeup trends, festival face paint, henna, and even black face.  Also the spectrum of permanence between body paint and tattoos could be reexamined in the context of the increasing popularity of laser removal processes and how this affects what people choose to add to their bodies. While these topics may seem incompatible with research on Bolivian indigenous peoples, these unexpected connections could lead to interesting new theories regarding cross cultural body politics.

 The preliminary research presented in this project and the final 3D models and animations created show the diverse subjects which can be analyzed through the lens of body politics and the nuanced connections this framework can bring to light. By presenting and analyzing source materials as not only a record of the past, but also as a biased perspective of that history, this paper has shown how hair, piercings, body art, and body modifications in general are influenced by cultural interactions which can enforce inclusion within a community and exclusion from the culture of the colonizer at the same time. Through these acts of self-modification, the native people establish their authority over their own bodies and presentation. This autonomy is largely absent from the Unreal scene in which the identical models of people serve the objects rather than acting as subjects themselves peopling the past with authentic representations of native bodies. This project lays the groundwork for incorporating body modifications into the Unreal scene.

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