OF GODS, BEASTS AND MEN: DIGITAL SCULPTURE

by

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ABSTRACT

My most recent body of work explores the synthesis of my influences, interests and life experiences into imagery of common themes: The expression of dynamic figures and forms and colors in digital 3d space, cinematic composition, and vibrant color, expressed through a semblance of Aztec culture and wildlife. My sculptures of nature and ancient culture are created using contemporary digital art creation technologies and techniques. I examine the art and religion of the Aztecs and the universal search for understanding and purpose in the world and the forces around and beyond us.
FOR CRAIG
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INTRODUCTION

SETTING THE STAGE

Having worked as an artist in the computer graphics industry since 1991 has afforded me opportunities to live many of my dreams, such as participating in the production of feature films, video games, broadcast animation, and a host of other applications. I have had the chance to work in many aspects of digital production such as 3d modeling, painting textures, developing animation rigs to control and animate digital characters, working with motion capture data and animation and automating repetitive tasks through scripts. I was afforded the opportunity to meet and work with film producers, actors and athletes, and travel extensively. For all of this I feel very fortunate, and my experience has led to my current position with the University of Central Florida as the Art Director for FIEA, or the Florida Interactive Entertainment Academy, a graduate program in interactive entertainment.

My forte has been digital sculpture, particularly of the figure, characters and creatures. This didn't come easy though, as I had to work hard to prove my abilities in order to be rewarded with the character and creature tasks that I had competed for early on in my first major job as a digital sculptor at Viewpoint Datalabs in Orem, Utah. Through my various professional endeavors, I eventually achieved a high level of competency in manipulating polygons and curved surfaces into exactly the shape that I wanted them to be. As an artist though, I often felt like there was something missing. The work I created or supervised was usually a smaller component of a greater whole determined by the client, director or publisher.
I yearned for the chance to design and build my own characters, environments and stories from start to finish. Long hours on the job and family responsibilities made it difficult to spend as much time as I would have liked to on my own projects.

I was also very passionate about animation and was ultimately hired as a video game animator on two occasions, but my skills at modeling often seemed to take priority and categorize me in the role of a character modeler. I created base models from reference for games and mentored and taught junior artists, which was one aspect of my responsibilities that I found rewarding.

TEACHING DIGITAL SCULPTURE ABROAD

While working on a professional wrestling title for game publisher Electronic Arts, I was asked to travel to Vancouver, British Columbia and teach a character modeling workshop to the Canadian Studio artists. I was developing a better sense and understanding of anatomy and beginning to quantify my digital sculpting approach. Later, while working for Microsoft Game Studios as an art lead for an externally developed Xbox game, I traveled to Paris, France to help the studio artists with the aesthetics, proportions and technical aspects of their video game characters.

I was captivated and amazed at the historic sculptures and art that I saw in my visit to the Louvre, the Notre Dame Cathedral and all throughout the beautiful city of Paris. I was deeply inspired with the history of art and religion that prevailed there. I also marveled at the fact that I was an artist from Utah, teaching digital sculpting to French artists in Paris!
GOLDEN HANDCUFFS

I had become restless in production at the particular studio I was working at. Too many extended periods of grueling hours and unrealistic deadlines were taking their toll on my body, mind and spirit. My back and hands hurt from sitting and manipulating polygons, pixels and virtual skeletal joints and virtual manipulators via the mouse, tablet and keyboard. I wanted more creative freedom and creative opportunities in other areas of computer graphics, but I was wearing golden handcuffs. After all, I knew that I had been very fortunate and that hard work had paid off, and I was able to make a living doing something that I enjoyed. As time passed, the idea of returning to school and pursuing a graduate degree was something that I began to investigate. I enjoyed teaching, and I reasoned that after slowly chipping away at a degree while working, I could eventually find a job teaching and perhaps have more regular hours and energy in which to pursue additional artistic and technical interests.

HIGHER PURSUITS

I found out about an opening at FIEA for an experienced game artist while attending Games Developer Conference in San Francisco in February of 2005. I submitted my application and was eventually hired to develop and teach the art curriculum for the opening FIEA class of Fall 2005. This also meant that I should now pursue a terminal degree. The MFA curriculum as outlined in the catalog seemed rigorous, which I knew would be difficult while working full time, but The MFA in Studio Art & The Computer at UCF was an exciting, and relevant choice for me.
INFLUENCES

PAUL SALISBURY

First and first and foremost, the greatest art influence in my life is that of my grandfather, Paul Salisbury, (1903-1973) He painted oils of western themes, consisting of beautiful landscapes, Native Americans, and pioneers navigating the expansive terrain, or the cowboy catching a smoke in the evening kneeling by his horse.

Figure 1: Christmas, Paul Salisbury
To me art was very simple. The paintings by my grandfather that hung on the walls of the family home were exquisite examples of fine art. I was very proud of my grandpa's workmanship and subject matter of animals and nature, indigenous cultures, pioneers and landscapes of the western United States. These themes and representational styles of painting continue to attract me. I'm very interested in depictions of nature, wildlife, and both native and ancient cultures of the American continents.

Figure 2: Navajos, Paul Salisbury
As much as I admired my Grandfather’s work, and learned to draw horses myself as a youngster, I felt that I should pursue my own subject matter and medium. I had many interests and influences, such as cartoons and science fiction and film. As a youngster, I spent a lot of time drawing, sketching and doodling animals and cartoon characters. I always had a bucket of sculpting clay on hand and enjoyed building figures with my hands. My interest in animation was realized through creating animated flip books using paperback novels or reinforced paper noted pads. In High School, I studied painting and animation. I spent my time doodling and drawing during other classes when I should have paid more attention and realized how a better grasp of math and science could one day benefit me in the use of computers.

**COMPUTER GRAPHICS**

It was also during these years that I spent a lot of time at the video game arcades. I was intrigued by what was being accomplished on a computer screen with simple graphics. The interactivity with the computer held my interest, more so than a pencil, and I had a sense that this was just the tip of the iceberg. The film "Tron" was released in 1982 when I was a senior in High School. It was a Disney feature film based on a video game world. The term "computer graphics" was used to describe this growing interest of mine. From that point on, I knew that I wanted to pursue CG in college.
MFA WORK

THE ART STUDENT

During my undergraduate work at Arizona State University, I began my degree in art, and managed to gain acceptance to the graphic design program. I ultimately transferred to an Industrial Technology degree that had a focus on computer graphics, designed as an interdisciplinary program accommodating a specialization from another department such as art. In hindsight, I would have benefited from more art history classes, particularly that of modern art.

I had a difficult time grasping performance art such as the graduate student that I saw curl up into a ball and throw a screaming tantrum on the floor as part of his gallery installation. I was puzzled and annoyed by the class art project that required me to purchase a large fish from an Asian market so that we could toss it on the dirt, pour tequila on it and burn it. It seemed like a waste of time, fish and tequila.

Fast forward 20 years to 2006. Although I was both apprehensive and uninformed about the contemporary fine art world, I was genuinely excited about the prospects of undertaking the Studio Art & The Computer MFA degree program, eager to explore creatures and figures of my own design, subjects of tropical landscapes, wildlife and ancient American cultures. I would sharpen my skills of animation, painting and other mediums and software, unshackled from the routine expectations of employers and drudgery of project deadlines.
EARLY MFA WORK

Early work included revamping a Knight that I had done previously into a more intimidating knight and animation sequence with some assistance from my colleagues that would ultimately became an animation that was played after UCF touchdowns in the football stadium.

Figure 3: Bigger and Bolder Knight Concept

Figure 4: Stadium Touchdown Animation Storyboard
The Knight was a donated creative piece for UCF, so I was considering it as part of my MFA work. The irony here is that though I was creating something completely of my design and direction, it was still ultimately done to satisfy the needs of specific client.

THE RACE

The animation bug was back, and I started to work on creating some creatures that would lend themselves to expressive zany cartoon animation. These were based on ideas of alien amphibians that I toyed with years ago. Satisfied with the new designs, digital models and initial story boards of a race, I spent time with rigging the animation controls and designing a framework in my scenes that would allow for maximum flexibility and efficiency. I was interested in the process and would hope to eventually catalogue it for inclusion in future animation lectures.
Figure 6: Amphibliens Concepts

The production of an animated short film is a huge undertaking for one person. To do it properly would take at least a year or two, and my progress became a source of frustration for myself and some of the faculty alike. They wanted to see me push the visuals to a more finished state with something more meaningful to say with them.
I was more involved at the time with the initial technical "under the hood setup", and was primarily interested in testing and establishing my animation style. The final 3d rendered visuals, sets and light hearted social commentary of my story were still in unfinished forms. The Irony of production had set in once again. My clients were my now my professors, doing their best to push me creatively, each with their own suggestions about where the work should go.

My apprehensions toward somehow fitting these light and cartoony creatures into the contemporary fine art world and my artistic vision, goals and time frame for this piece were colliding. The race animation would have to wait.

Figure 7: Amphibliens 3D Models
FROGS!

My fascination with frogs is evident. They have a jovial quality about them that seems to embody a living cartoon. Among other animals and creatures, I had built a frog many years before. Encountering colorful frogs in Florida inspired me to revisit them. I sculpted a new digital frog, and wanted to push the form, color and expression. An initial idea of frogs splashing about in spilled paint and wreaking havoc on wet oil paintings somehow evolved into a series of areal frog and water ballets.

Figure 8: Old and New Frogs
I found myself inspired with the tropical flavor and coastal landscapes of Florida. One day I stumbled upon a baby sea turtle at the beach. It was an alluring creature and an exhilarating experience. I contemplated following suit with the turtles and other creatures in the same style as with the frogs until I was asked if I was going to build a sea turtle next. Perhaps I didn’t want to be so predictable in my work with regional artistic clichés, at least with the rest of my graduate research.
Figure 11: Splash!

DIGITAL PAINTING

I spent some time working on my figure painting skills, and contemplated my next step toward developing a meaningful body of work that was relevant to my investment in CG and teaching.
Figure 12: Digitally Painted Nude

Figure 13: Digitally Painted Portrait
DIGITAL SCULPTURE

THE SCULPTRESS

I had an idea for creating a sculpture of a sculptor creating a sculpture. I was looking for something clever in that she was an Aztec or Mayan sculptress using a tropical bird as reference for a menacing feathered serpent, an iconic theme in Mesoamerica. I liked the idea and commenced work on a new sculpture study of human anatomy, something that I had planned on doing in order to stay current with recent radically evolving 3d modeling technologies.

Figure 14: Aztec Sculptress Concept
Figure 15: Aztec Sculptress Digital Sculpture
DEEP TANGENTS, UNSEEN FORCES & SPANISH PRACTICE

The digital figure sculpture and the Aztec idea of the feathered serpent brought about some reflection and introspection into memories of an earlier chapter in my life that point to an abrupt tangent:

Late one Friday night 1983, an unexpected and significant turn of events in my life occurred. My two good friends and I had an exceptionally horrific and supernatural experience that to this day has left all three of us satisfied in our belief that there are unseen beings and forces in the world.

I hadn't attended church services in quite some time, but the following Sunday I sought spiritual guidance from my Bishop. All of the sudden there seemed to be a lot of substance to matters of religion and good and evil that I had heard about through life, and as a result of which I soon found myself putting my high school Spanish to good use doing missionary work for the Church of Jesus Christ of Latter Day Saints (LDS) in Mexico.

Living amidst the simple lifestyle and pleasant nature of the people and culture in the central northern regions of Mexico was a unique and rewarding experience. The influence of the Roman Catholic Church was very prominent both in the imagery and faith of the Mexican people. Though magnificent Cathedrals and symbols of Catholicism were prominent in my every day experiences, I did see remnants of Iconography from ancient cultures that I have always found fascinating. My interest in pre Colombian themes and art had a lot to do with my experiences while living in Mexico and ultimately became the catalyst for my art.
THE AZTECS

QUETZALCOATL

Initially, after having sculpted my Aztec Sculptress, I set out to model my own version of a feathered serpent. I experimented quite a bit, but my ferocious feathered serpent was looking a little like an oversized parrot. I like parrots, they just don’t appear ferocious, that is until they bite.

Figure 16: Feathered Serpent Design
I needed to familiarize myself more deeply in the visual language and vocabulary of that which I was attempting to portray. I began researching Aztec, Mayan and Incan art and culture, and I was reminded that the feathered serpent was a representation of Quetzalcoatl.

During the height of the Aztec empire, the Spanish Conquistadores, led by Hernán Cortés discovered the Aztec city of Tenochtitlan in 1519, which is now Mexico City. The Aztecs greeted Cortés as Quetzalcoatl, the great white bearded god who had promised to return. This is widely believed as one of the reasons for the relative ease in which the Spanish conquered the Aztecs.
Figure 18: The Legend of Quetzalcoatl, Diego Rivera

In the mural "The Legend of Quetzalcoatl", by Diego Rivera, on display in the Palacio Nacional in Mexico City, Quetzalcoatl is portrayed as bearded with fair skin and a white robe. Quetzalcoatl is usually represented as a feathered serpent.

The mistaken identity of Cortés as Quetzalcoatl by the Aztecs as the returning white bearded God is interesting to some members of the LDS faith. The significance is that they accept the account in the Book of Mormon of the visit of Jesus Christ to the Americas after his crucifixion, resurrection and ascension into heaven.
The Book of Mormon speaks of several groups of ancient inhabitants of America and chronicles their history, religion and rise and fall of their civilizations. There are interesting Parallels in artifacts, ruins, questions of DNA, etc. to the Book of Mormon, which are matters of theological and archaeological debate and inconclusive. The LDS view of Christ is based on faith, not an evolved Aztec figure, but based on my experience and background, this exploration of Quetzalcoatl has kindled my interest in this area of the world, and I have become fascinated with their art and culture.

For the Aztecs, there is religious meaning in most all of their artwork and sculpture. They believed in many gods that represented various levels of afterlife and underworlds. Their views are not so much like the Heaven or Hell in the Judeo Christian world but a very complex system of many gods that were often portrayed with animal aspects.

This research reminds me of the religious sculptures that had a profound effect on me that I saw in Europe. Being human, I have had my struggles with religion and questions of faith. The fact that religion has been an inspiration for art for centuries seems to bring things into perspective for me.
RIPE WITH OPPORTUNITY

Well Into the third year of my MFA process I found the theme of Aztec imagery ripe with opportunities in which to pursue my artistic interests. Design motifs, animals, nature, history, religion and culture are found in abundance within this study. For me, it has held an astounding level of depth visually, intellectually, and with religious themes that I hadn't anticipated. The boundaries of realism, abstraction, form, color and symbolism are taken to the extremes with Aztec Art. I have to ask myself what would they do with the tools that I posses at my fingertips?

The Aztecs settled in the area of Mexico City after having seen an eagle devouring a snake on a cactus, which was the fulfillment of an ancient prophecy, and is represented on the flag of Mexico. Ancient temples and artifacts were destroyed or buried by the Spanish Conquistadores and Mexico City was built on top of the ruins. The Aztecs were viewed as savage by the conquering Spanish due to their bloody rituals of carving out the hearts of their sacrificial victims, obtained through warfare and offered to the gods in order that the sun would continue to rise each day.

What remains of the art and architecture of the Aztecs is complex and bold, and their workmanship and themes are unmistakably iconic. Though much of the sculpture is abstract and redundant, the patterns are powerful, cryptic, and seemingly meaningful to the creators. In attempting to work within their motifs, I have gained a greater respect than ever before for non objective and abstract art. I have found that there is much more complexity to their designs than what I previously viewed as simplistic.
Figure 19: Quetzalcoatl
Although I constructed an Aztec Temple for a series of compound 3d scenes that would ultimately be inhabited by my original sculptress model, feathered serpents, subsequent eagle, jaguar, and other gods and decor that I built, it seemed a bit too much like a normal industry approach that was making me feel a bit constrained. I wanted to both explore my own ideas and designs based on Aztec motifs, and out of growing respect for the subject matter, re-create some of the magnificent imagery such as the Feathered Serpent as seen through my eyes and medium.

Through this process I have come full circle back to that which I have always seemed to gravitate towards. My work is about digital sculpture.
In Figure 19 and Figure 21 I have portrayed Quetzalcoatl and Xolotl fairly accurately. Though Quetzalcoatl is considered to be an important and benevolent god, Xolotl is more of a god of the underworld, and represented with skeletal and canine features. They are curiously seen as twins. My Xolotl sculpture is meant to look more like jade, which was considered more precious to the Aztecs than gold.

For the Aztecs, animals such as the eagle and jaguar were symbols of power. High ranking warriors were referred to as eagle or jaguar knights, and warrior costumes, armor and helmets were made out of jaguar skins and eagle feathers. In the ruins of the temples at Malinalco, which survived major destruction by the Spanish, a doorway appears to be carved in the form of a serpent’s mouth. This leads to a circular room, which appears to be of ritual significance and is adorned by carved seats in the forms of jaguars and eagles.

In Figure 22 I have taken much more artistic liberty with my Jaguar sculpture image. It is based on jaguar sculptures that are adorned with convenient receptacles for sacrificial human hearts.

On an interesting side note, my cat Soxie repeatedly attempted to sit right in front of me and snuggle throughout my work on the Jaguar, as if she knew I was modeling a cat. She has shown no such interest in any of my other sculptures or work.
Figure 22: Jaguar
In Figure 24, I renamed my sculptress to Coatlicue, based on the Aztec goddess of the same name. I took quite a few liberties with her also. The Aztec sculpture that was buried and re-discovered of her is fairly frightening and abstract. She has a double serpent head, serpent arms, a skirt made of serpents, with a human skull belt. She wears a necklace of hands and human hearts, and has jaguar feet.
Figure 24: Coatlicue
Most of my final digital sculpture work has been based on the Zbrush workflow. Unlike traditional 3d modeling software that requires you to manipulate individual polygons or surfaces, Zbrush is a software tool that takes an existing model and subdivides it many times, up to millions of polygons. This results in a surface that is pushed and pulled and manipulated like digital clay. Figure 26 illustrates this point with...
a low resolution model of a Jaguar that I roughed out in another program, and then brought into Zbrush and began the sculpting process with digital clay. Most people use Zbrush as a sculpting tool to generate models that they will take back into other 3d software to render. I chose to do my rendering in Zbrush, as it allows you to paint over your surfaces with color and shading materials. In essence, it is like painting in a 3d canvas. This has yielded a new paradigm free of traditional technical limitations that
exist with traditional 3d software. Zbrush represents the epitome of the idea of Studio Art & the Computer for me in harnessing the computer to realize your artistic vision.

I am truly happy with my current path and intend to continue refining my work and explore new potentials. I have been working with CG for 20 years now, and I feel like I've just barely started to scratch the surface of my potential. I often joke about drop kicking my computer some day in favor of a paint brush, but perhaps someday in the not too distant future I'll be modeling 3d sculptures with hologram technology from Star Trek.

I am glad to have had the chance to pursue an MFA. Although my interests don't necessarily lie in the International contemporary art markets, I do look at art differently now. My experience here will certainly influence my art and how and what I impart about art to my students.
CONCLUSION

We see a reflection of ourselves in nature and the beasts that we share our planet with. We see a reflection of ourselves as we examine the culture and religions of primitive ancient cultures. What is the origin of the existence God, Gods or Devils? As humans, there are universal questions that we ask. Where did we come from, why are we here, and where are we going? My digital sculpture invites the viewer to examine their own unique beliefs and connection to the universe as seen through my eyes.
BIBLIOGRAPHY


Wirth, Diane E. *Quetzalcoatl, the Maya Maize God, and Jesus Christ*. Provo: The Neal A. Maxwell Institute For Religious Scholarship, 2002

<http://maxwellinstitute.byu.edu/publications/jbms/?vol=11&num=1&id=298>


Lindsay, Jeff. *Overlooking the Obvious? Legends of Quetzalcoatl and Ties to the Book of Mormon*  