



Undergraduate Research Symposium May 17, 2019 Mary Gates Hall

Online Proceedings

VISUAL ARTS & DESIGN SHOWCASE

Odegaard Undergraduate Library

3:00 PM to 4:30 PM

* Note: Titles in order of presentation.

Let the Record Play

Nyles Tavarr Green, Senior, Community, Environment, & Planning

Mentor: Nico Martinucci, Community, Environment & Planning

The Pacific Northwest has always been distinct from other regions because of its diverse environments, histories, and cultures. Seattle is widely regarded for its punk and grunge music scene; however, Seattle’s punk and grunge overshadows music from other genres in the region. The purpose of this project is to tell the story of musicians in the Pacific Northwest, specifically black musicians, exploring their successes and struggles during a time when gentrification is rapidly changing the demographic make-up of Seattle at an unprecedented rate. Because music is an auditory experience best expressed and understood through the ears, this story will be told through a series of podcast episodes. Each episode features interviews and discussions about musicians and their craft to create an overarching narrative of Seattle’s music scene from the perspective of black musicians and their music to give audiences a greater understanding of Seattle music. Academia from University of Washington’s American Ethnic Studies will be incorporated into the research process and preparatory work for the podcast. This podcast aims at preserving the stories of African-American musicians during a time where communities of color are weakened by the effects of gentrification while also highlighting the successes of emerging local musicians. Link to podcast: <http://uwpodcast.com/category/let-the-record-play/>

”Power of Uchiha” (”????????????????????”) and ”Death to Wayne(Wei)”

Jason Liang, Senior, Interdisciplinary Visual Arts

Mentor: Zhi Lin, Art

My pieces are an exploration of how characters from manga and comics intersect with my own identity. The first piece is called the “Power of Uchiha Snake”. I am the character Uchiha Sasuke from Naruto who possesses the Uchiha blood-

line special visual power Sharingans. The second piece is called “Death to Wayne(Wei)”. Adapted from the Deadpool movie poster. Wayne, and “Wei” is the last character of my Chinese name. Deadpool has super power of infinite regeneration. Although he runs his mouth, no matter how mad he gets his enemies, they won’t be able to destroy him. For these two pieces, I used the techniques and visual patterns of capturing the geometric shapes of human figures, and the rules of composing art works, and analyzing the shading to get how the light hits on the figures as well as the perspective analysis. Figure study is when human figures exist visually as geometric shape, proportions of figures are supposed to be treated as lines, lines of geometric shapes. In terms of the study of art history, European art is directly derived from the Christianity trinity. The triangle pattern is the central balance of human figure, as human figures are derived from the God himself. The lines form the geometric balance and then the balance itself forms human figures into perfect combination. The light determines the perspective significantly for the dimensions closer to the viewer are thicker while the further side of the dimension are relatively vague in visual. It creates the perspectives of human figures on the drawing. In the photographic term, it’s called “depth of field”. This enables the figures on paper to be dimensional and closer to real human figures. My conclusion of the drawings as present, is that human eyes is an interesting tool, that gifted the mankind.

3-D Modeling of Ion Trap Mass Spectrometers Coupled to a Tunable Wavelength Laser for UV-Vis Photodissociation Action Spectroscopy Experiments

Brandon Mozzone, Senior, Biochemistry, Chemistry

Mentor: Frantisek Turecek, Chemistry

Harmful radiation, such as UV photons from the sun, can damage DNA in a manner that results in cation-radical formation which leads to nucleobase loss and strand breakage. In the Frantisek Turecek research group, DNA cation-radicals were generated in the gas phase, isolated and subjected to incremental wavelengths between 210-700 nm with intent to

observe their absorption action spectra that can be used to assign structures and intrinsic properties. The difficulty with these experiments is the ability to effectively communicate the experimental set-up of mass spectrometers, tunable lasers, and various other pieces of equipment in a supporting manner that delivers concise information to be understood regardless of prior knowledge in this specific field. I had the unique opportunity to take two-dimensional, over-simplified schematics and transform them into three-dimensional, professional and photorealistic images of our experimental arrangements using Siemens NX CAD modeling software.

The Art of Cultural Outreach

Kyler H Pahang, Senior, Art

Mary Gates Scholar, UW Honors Program

Mentor: Zhi Lin, Art

Mentor: Michael Swaine, School of Art + Art History + Design

I have always wanted to see someone that looks like me in a museum. This desire to be represented in society is something people fight for. I want to create work that empowers cultures and features that are not represented. I want to depict those that have been colonized in the same way their colonizers have been historically celebrated, through paintings. This series of paintings will go beyond just my culture but others that share similar wounds and scars from colonization. Addressing problems that come with colonization such as assimilation, patriarchy, cultural disconnect. The process of my paintings is finding a model that inspires me to paint. The model will most likely have features that don't follow these western idealizations. Then I look into the model's heritage and find clothing, embellishments, weaponry from their culture with the use of the Burke museum's data base. I begin to draw the model adorned with these objects. Hours of preliminary work goes into composing these objects with the model. I will have set up the model in a pose that was popular in western paintings depicting royalty or power. I want to flip these preconceived notions of these colonized nations on its head. I invite the discussion of cultural identity and colonized beauty. The goal is to preserve these cultural aesthetics that were pre-colonial. I want to come out of this project with a deeper knowledge of who I am. I also want to have a body of work that provides the viewer insight into my culture and many other cultures that lack representation.

Electric Pocket Bike Kit for Adolescent Children

William Clarence Perry, Senior, Community, Environment, & Planning

Mentor: Nico Martinucci, Community, Environment & Planning

Encouraging creativity among children is important, especially during their adolescence. As children age, their inter-

ests shift, however, some activities provide consistent excitement throughout their childhood. Learning how to ride a bike has remained a cultural norm in countries across the world for decades, providing children and adults with function and fun alike. Using this concept as a foundation, further research was done to see how biking can become a learning experience on top of the existing purposes. Aimed to spark STEM-based interests within children of the biking community, I have created a kit where adolescent children are able to build their own electric pocket bike. With the frame template made out of high-grade marine plywood and aluminum reinforcements, the kit will instruct the builder how to assemble the product. In addition to the written instructions, illustrations will be provided to assist visual learners. Through hands-on work, these children will have the opportunity to build their own "invention", along with building self-confidence, accomplishment, and improved relationships.

Designs by Origin

Madelyn Lea (Mady) Richardson, Senior, Community, Environment, & Planning

Mentor: Alex Hill, Anthropology

Human behavior can be understood through the lense of evolutionary psychology as the product of biological and psychological adaptations to an ancestral environment. This approach serves as my conceptual basis for design as I ask the question, how can we create public spaces best suited to our evolved needs as Homo sapiens? I begin the process by compiling a list of evolutionary theories for a variety of human behaviors. Preliminary designs for public spaces in a range of urban contexts are then sketched, expounded upon using digital design software including Adobe Illustrator, and clarified for inclusion in my final product, the urban design look book: *Designs by Origin*. Existing public space designs accessed online serve as precedents within the final lookbook and as inspiration during my creative process. Accompanying my final designs are explanations of the evolutionary theories that inspired them as well as visual aids addressing both my creative process and the underlying science. This exploration of evolutionary psychology and urban design in tandem reveals a new method for design and a new lens through which the urban environment can be viewed. *Designs by Origin* will provide urban designers of all disciplines with an understanding of the dynamic natural process that produced their intended users and a relevant method for using this information to inform public space design.

False Witness

Sadie Wigen, Senior, Art

Mentor: Curt Labitzke, Art

This work is an investigation into the multifaceted world of fairy tales. Through history, fairy tales and fables have been

collected from story tellers, edited, and presented to the world in print. Through this process, tales with dark or racy subjects are painstakingly polished, added on to, and moralized. Many were warped and nearly completely overwritten to fit within the views and biases of the collectors and editors. Hundreds of years down the line and through the Disney lens, fairytales are mostly known by their bright, cheery exteriors, with little of their original content to be found. Through the use of stage design and illustration, I worked to create an environment that would display this dichotomy. Once installed, the work creates a bright fairy tale forest for the audience to enter. When they turn to exit, they are faced with the dark underside of the fairy tale world.