

Undergraduate Research Symposium May 19, 2017 Mary Gates Hall

Online Proceedings

SESSION 2C

USING SPECULATION, POETICS, AND ART TO UNDERSTAND BIOLOGICAL RELATIONSHIPS

Session Moderator: Phillip Thurtle, Comparative History of Ideas

MGH 231

3:30 PM to 5:15 PM

* Note: Titles in order of presentation.

Noise Pollution Effects on Whales

Viviana Carolina (Viviana) Castillo Contreras, Senior, Oceanography

Mary Gates Scholar

Mentor: Phillip Thurtle, Comparative History of Ideas

Mentor: Rebecca Cummins, School of Art + Art History + Design

Mentor: Tyler Fox, Human Centered Design & Engineering, College of Engineering, UW

Mentor: Joel Ong

What happens when the form in which whales communicate, locate food and find each other, is clouded by large ships, sonar technology and increased ice cracking noise in their environments? This presentation considers what the world of whales looks like beneath the ocean. I address this by taking a closer look at the auditory world of whales as a direct result of the lack of visual abilities due to limited light. I have focused on the chaos whales feel as a result of noise inserted within the depths of the ocean. With an increase in technological advances we see an increase in the number of ships and consequently of noise in the ocean. Underwater noise pollution is also attributed to ice fractures and collisions. These events do not occur at one singular time, they occur simultaneously for unknown periods of time and unpredictable areas. Understanding how animals feel and what they think is a difficult task, but we can better understand them by taking a closer look at their behaviors as the noise in the ocean becomes more abundant. My intention is that I will be able to formulate the chaos heard underwater into a humanized perspective and begin to understand these creatures as the hearing, feeling mammals they are.

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Data Day: Mindful Tracking of Changes in Emotions

Gerlene Ragsac, Senior, Comparative History of Ideas

Mary Gates Scholar

Mentor: Phillip Thurtle, Comparative History of Ideas

Mentor: Rebecca Cummins, School of Art + Art History + Design

Mentor: Tyler Fox, Human Centered Design & Engineering, College of Engineering, UW

Mentor: Joel Ong

I view energy as strongly intertwined with emotions, and that they are powerful forces that fluctuate and influence decisions. Thus, I chose to track instances where I felt a change in emotion in conjunction with its duration, what thought caused it to emerge, and if there was an attempt to deliberately shift moods. By developing my own codes and keys, I was able to monitor these fairly accurately on paper. However, I wanted to present this data in ways that differed from “traditional” portrayals of information. Hence, I used yarn and glitter in glass bottles to mimic bar graphs and liquid samples, respectively. These materials also served to emphasize the therapeutic nature within my project. The ideas of tracking something and its presentation were heavily inspired by duration exercises, which were done as assignments for the Summer Institute in the Arts & Humanities 2016, as well as Dear Data. The former required us to keep track of the passage of time for a minute, an hour, and 24 hours; the latter was a collaboration between Giorgia Lupi and Stefanie Posavec where they exchanged weekly postcards over the course of one year. Each week’s postcard included a theme of what they would both monitor in their daily life, a visual representation of the data they collected, and a key to decipher the image. Initially, my desire for this project was to encourage others to engage in

mindful practices in order to experience the benefits it may have in their everyday life. However, by making this project deeply intertwined with something so personal as emotions, I also hope to challenge people to contemplate the relationship between emotions and data and the emphasis placed on pursuing objective results.

POSTER SESSION 3

Commons West, Easel 39

2:30 PM to 4:00 PM

The Sound of Light: Transduction as a Way of Knowing

Nathan Christopher Mahr, Senior, Comparative History of Ideas

Mary Gates Scholar

Mentor: Tyler Fox, Human Centered Design & Engineering, College of Engineering, UW

Mentor: Phillip Thurtle, Comparative History of Ideas

Mentor: Rebecca Cummins, School of Art + Art History + Design

Mentor: Joel Ong, Department of Computational Arts

What would it mean to be able to hear light? How could this new perspective on light illuminate the fundamental intricacies of light energy? In Gilbert Simondon's musings on individuation he argues that the individual is never given in advance but is constantly coming into being through a process of interacting with its milieu and realizing potentials out of huge pool of possibilities. This work uses Simondon's focus on individuation and life as a never ending process of development to understand how energy exists through a similar process of change and potentials. Utilizing solar panels hacked into speakers, this installation seeks to employ the construction of a new relationship to light as a methodology for thinking about how energy emerges. The solar panels in the installation transduce light energy into electrical energy which is then fed into speakers for the participants to hear. Energy is most essentially a process of change, disruption and movement. It demonstrates to us the myriad of potentials which lie within and between us and energy. Through the use of transduction of energies this installation allows us to peer into the minutiae of our relationship with energy and begin to conceive of how we absorb, alter, collaborate and connect with it on a daily basis.

VISUAL ARTS & DESIGN SHOWCASE

Odegaard Undergraduate Library

3:00 PM to 4:30 PM

* Note: Titles in order of presentation.

Excesses

Kevin Middleton, Senior, Comparative History of Ideas

Mary Gates Scholar

Mentor: Joel Ong

Mentor: Phillip Thurtle, Comparative History of Ideas

Mentor: Tyler Fox, Human Centered Design & Engineering, College of Engineering, UW

Mentor: Rebecca Cummins, School of Art + Art History + Design

Can the fullness of conscious experience be communicated? Can one trace the diffuse paths of energy traversing through and beyond their perceptive faculties? In other words, can one render intelligible that which they cannot fully comprehend, and if not, of what value is the cultivation of mind? These questions are the fervent mysteries at the center of my research and artistic work investigating how our perception of depth orients us in the world. The depth I refer to is not simply distance between points in space, it is the depth of one's psychological appreciation that all phenomena is a confluence of interrelating entities that can be labelled neither subject nor object. In my research thus far, I am drawn to theories of "speculative realism", a branch of epistemology that attempts to construct less 'certain' theoretical frameworks by which to understand how organisms both human and nonhuman interact in nature. Steven Shaviro's *Discognition*, for instance, compellingly argues a history of misplaced certainty in neuroscientific explanations of consciousness and the difficulty of communicating "qualia", or qualitative experience. He lays out a theory wherein experiential dimension is of indefinite depth, incommunicable at its core, and thus translatable only through a distance, requiring faith that one's words can accurately convey the nuances of whatever experience unfolds before them. I endeavor with my art to express the notion that observation is, as Gilles Deleuze said, "a flow of flows", a way of playing with delimitation of relations that may capture traces of the energetically-excessive phenomena of the world. My installation, a 3d-rendered video reflected by glass into a projection feedback circuit, is an attempt to visualize the barely visible, and under-appreciated, depth of perception. I've tried to craft a truly dynamic moving picture; one that radiates its energetic excess, beckoning the viewer to consider what complex dimensionality lay in the gulf between the grid lines superimposed by language (the threshold at which the descriptive accuracy about sensory content becomes too broad) and the unspeakable depths of phenomenological experience.