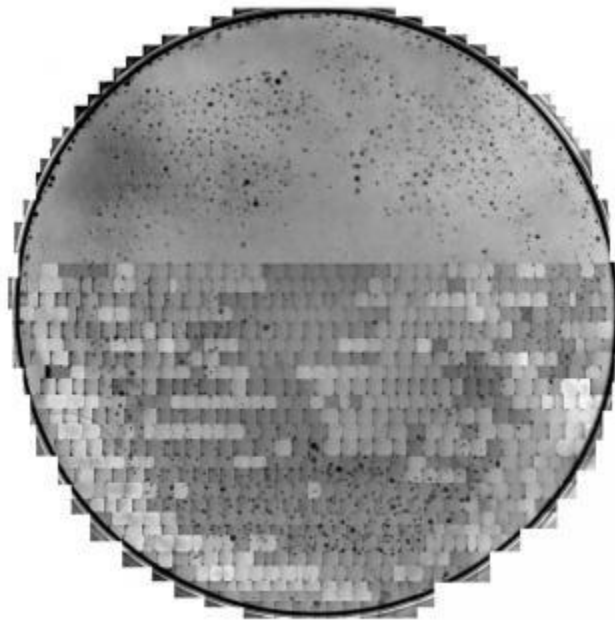


# PERIPATETIC VISUALIZATIONS: WANDERING BETWEEN ART AND SCIENCE

**Christina Nguyen Hung**

Through this work, I create situations in which viewers are required to negotiate space and engage in kinetic activity – to move their bodies in order to experience the “scientific” visual material on display. In this situation, no single perspective is privileged as ideal. It is designed to prevent a disembodied, cinematic mode of viewing and all the privilege, knowledge and power that such a mode of viewing implies.



*Neurons In Vitro, 2010, Christina Nguyen Hung, high-resolution image of chick embryo neurons in vitro  
144 × 144 in.; 365.76 × 365.76 cm.*

In my most recent work with high-resolution images, I use microscopy equipment and techniques to visualize a wide variety of biological and geological materials. This work began with the assistance of a former graduate student of Clemson’s Bioengineering program. With his assistance I attempted to control the growth pattern of chick embryo neurons in vitro. While our efforts to produce a specific pattern (of text) were not successful, the failure of our experiment yielded results that were in fact more interesting to us than what we had set out to create. The neurons formed groups roughly equal in size and the groups were spaced evenly across the petri dish. The student confessed that he had never seen anything like it and I found the results to be visually, quite compelling. Unfortunately, due to disciplinary and research constraints, the student did not have the freedom to investigate our results further. For the student scientist, the work ended there. I on the other hand, photographed the sample – the entire 35mm petri dish -- at 10x magnification, a process that yielded over two thousand images.

Since I photographed the neuron culture at the end of 2009, I've been analyzing and aligning the individual images in an effort to create a single image that, when completed, will allow us to see both the individual cells and the entire in vitro environment, simultaneously. This produces a second interesting research problem: the visual (image) I am attempting to create far exceeds the capacity of any large format printing system and pushes the limits of new high-resolution digital display system. When complete, the printed neuron image will measure at least twelve by twelve feet.

Through this work, I intend to create situations in which viewers are required to negotiate space and engage in kinetic activity – to move their bodies in order to experience the “scientific” visual material on display. In such a situation, no single perspective is privileged as ideal. One cannot claim with any certainty that one has fully experienced the image and therefore cannot claim full knowledge of the object represented, without also having to acknowledge that their relationship to the visual material is contingent, deeply subjective, limited by their location in time and space and the physical limitations of one's own body. This situation is profoundly different from the way we are permitted to access large amounts of visual scientific data through software interfaces such as Google Earth, Gigapan and other screen-based interactive game/display spaces. Through such software interfaces, the viewer participates in a disembodied, cinematic mode of viewing and all the privilege that such a view implies, in terms of knowledge and power, remains unquestioned.

In the future, the large quantities of video and photographic material I gather will provide the foundation for interactive, semi-immersive art installations. Through these installations, I will be able to extend the conceptual basis for my current work by modeling extreme differences of vision. For instance, such work might permit us to imagine the world as it might be seen through a compound eye structure, much like that of the common housefly. The premise for this work being that it is entirely conceivable that such a visual experience might further reveal how our understanding of the material world and our relations to it have been entirely governed by the very anatomy, the limitations of our human, binocular visual system. It is my hope that these installations (images and immersive experiences) will allow us to rethink our relation to the world around us in radically new ways.

For example, in “Mapping the Empire v.1,” four HD video cameras are strapped to my wrists and ankles as I traverse a rock formation. A “map” of the terrain emerges from the process that suggests a mode of perception that is distributed, and polyvalent. This approach represents an inversion of the landscape tradition, which reproduces the perspective of a single human and uses the window as an organizing compositional metaphor. Taking my cues from GPS, and social networking technologies I employ an approach to visualization that is ecological, collective, and distributed: data is gathered, processed and then [de/re]composed. In Empire, the “map” I create nonsensical, more accurate as a record of motion defined by the logic of living flesh, rather than a systematic grid-like construction of space and time.

This claim: that a new, technology aided system of vision might allow us to experience the world in new ways by generating models of extreme difference, is not a new one. Many of us who work with new visualization technology hope that our work will inspire others, especially those within the scientific community, to be more open to “difference” or at least, to pause and consider other possible interpretations and meanings presented by the visualizations we all create. What is interesting to me about this claim is that few researchers seem willing to contemplate and articulate the assumptions about difference per se that are implied in such a claim, and even fewer are willing to explore the impact that their work might have on our cultural understandings of difference. What is implied in the claim is that we, as makers of new visualizations hope our work will inspire tolerance of difference and that representations

of extreme difference will affect our cultures, leading them to embrace diversity in material, thought, cultural and bodily forms. Obviously, I myself harbor this hope.

In part, what I hope to achieve through this work is, in a limited sense, an intervention of sorts. By using new visualizations technologies and processes, I create images and experiences that are not only different but that prompt questions about the practice of visualization in contemporary science and knowledge generated by these practices. In works like "Shattered," "Crushed" and "Burned," there is no attempt to ascribe a scientific value to the image. Historical, literary and cultural narratives are impossible to avoid when one looks at these images as they are constructed so that historical and cultural contexts are foregrounded, along with obvious references to imaging in science and technology. Through these images, researchers in science and technology are asked to respond to the social context in which they work in a new way, just as scholars in the arts and humanities must respond to new models of thought and creativity posed by developments in new technology.