

“Allegories of the Genome” exploring genetic and genomic science

Ellen Jantzen –“Cyclam calcis” and “Arum digiti” from the “Artificial Evolution” series

“Artificial Evolution” thematically deals with creating hybrid life forms; life forms that may include manmade elements in the mix. The key formal element is symmetry. Ellen explores issues of GMO’s (genetically modified organisms) with their creation of Chimera-like new life forms and “Intelligent Design” with it’s slant on evolution being designed by a creator. She is using the features of modifying and design to create new imagery. Along with her interest in nature, Ellen finds the digital world of computer technology compelling and is drawn to the juxtaposition of its reality with the natural world.

Each image in the series is titled as if it were a new life form.

Philip Galanter – “Untitled (2007)” Photographic LaserJet Print

Most of Philip’s creative work is in the realm of Generative Art, defined as “any art practice where the artist uses a system, such as a set of natural language rules, a computer program, a machine, or other procedural invention, which is set into motion with some degree of autonomy contributing to or resulting in a completed work of art”

This “drawing” is generated using software Philip has written in Matlab to drive Corel Painter as a rendering engine. After he sets some initial conditions, the drawing emerges without intervention. All aspects of the picture, from the overall composition to the

smallest detail, are generative and self-organized. The resulting very high-resolution digital image (about 12000 by 9000 pixels) is rendered on standard photographic material using a LightJet printer. The LightJet is unique in that it uses 3 laser beams (red, green, and blue) to create true continuous tone dots.

Elaine Whittaker - “Cloneology”

In “Cloneology”, a series of small wax paintings contain photographic images of C.elegans (that Elaine shot through a camera mounted on a high powered laboratory microscope). They are juxtaposed with wax-filled petri dishes depicting the natural stages of cell division, known as mitosis. Above a metal shelf is located a larger wax painting containing a photographic image of a set of C. elegans eggs (shot through the same microscope). This set of eggs has been ‘cloned’, not through human intervention in a biological context, but through artistic manipulation using computer technology. On the shelf rest piles of petri dishes, containing scanned images of the CEO’s of Canada’s top forty biotechnology companies. These images, also encapsulated in wax, are undergoing their own transformation, as colonies of cells form over the surface via artistic experimentation.

Leslie Sobel - “Metastasis” and “debug_creation”

These pieces are about the analysis of biological data in the context of finding better matches for chemotherapy drugs through evolutionary computing processes. The use of biotechnology has great potential - to provide better treatments for devastating diseases. Analyzing and working with our genome has the potential to make us godlike in our control of our own biology but it is also a highly risky endeavor. In particular, Leslie is compelled to wonder if we’re controlling our environment or wandering down a chaotic and unpredictable path as we manipulate the biological world. We live

in an ever more virtual, engineered place until physical reality rubs our noses in the messy inconvenient marvellous real world.

The work incorporates photomicrographs shot through Leslie's collection of antique and toy microscopes, genetic programming code and other biomedical imagery all manipulated within Photoshop. Some are mixed media pieces incorporating encaustic and collage, others are archival inkjet prints.

Bill Fisher - "Seritypes"

In answer to those who would demand we disregard the Constitution and common decency and live in silent, surveilled fear of unseen, dark enemies as Proof of our patriotism, we now reaffirm our belief in a shared humanity. The Human Genome Project has proven the concept of Race to be a construct, and illustrates the infinitesimal biological difference between individuals. We deny race, gender, borders and the construct of "other," a key mechanism in the dehumanization of the Oppressed and the Oppressor. We affirm the fundamental parity of all individuals as revealed through analysis of the human genome.

Combining the genetic material supplied by hundreds of international participants with our serigraphic inks, the phenotypes of the (arguably) two most powerful men on the planet merge. Though seemingly polar opposites politically and philosophically, their rich common ground is now reified for all to witness.

Susan Alexander - "Sequencia"

The sound recording, "Sequencia", features original music derived from the molecular frequencies of DNA. The science is solid, but the end result is an artist's vision of how sonic patterns, deep in the fabric of the body's molecular structures, might sound to our ears.

The debate or discussion that this inspires is not so much a debate as a hopeful viewpoint...the vibrational patterns that emerge reveal intelligence, elegance, and harmony.

Debra Swack - "My perfect child"

"My Perfect Child" explores the history of engineering the perfect child through genetics, cloning, reproductive technology and selective abortion and its origins in literature, psychology, anthropology, and child-rearing manuals. The work contains paraphrased quotes from "Designing Babies" by reproductive expert Roger Gosden.

There are real concerns that improving the quality of our young could be dangerously close to Eugenics. The author of "Designing Babies" acknowledges this but argues that little room for abuse exists if these decisions lie within the realm of individual couples. The problem is that when Reproductive Technology becomes more readily available there will be pressure to use it and those that don't (or who don't use it in the same way) may be discriminated against or perish. Additionally it may be very expensive so class divisions could develop between those who can afford to do it and those who can't. Then the ones who can't could be discriminated against, perish, or be eliminated. Cloning could destroy the meaning of family as we know it. Who will be the parent, child. What role will the clone/child play and what rights does the clone have?

Sarah Hauser – “Puppyfish II”, “Porcuphant sculpture”, and “Porcuphant Answering His Mother’s Call”, from the “Hybrid animal” series

In 2004, Sarah began a new series of hybrid animals. These evolved from her animal series, adding an element of scientific aberration. During the development of several ongoing animal series, she began swapping body parts. Each successive morphological juxtaposition added momentum to this new series. Drawing reference from natural history illustration and mythology, an imaginary animal world is being assembled. Her research for this project has spanned such topics as animals and history, skeletal structure, and habitat. As the entire series matures, there is a vibrant dialogue between the historical, mythological and modern taking shape.

Billions of years of genetic experimentation have yielded an incomprehensibly wide spectrum of life forms. While doing paleontological research, one can see unbelievably strange and sometimes hilarious twists and turns in genealogy that are no less strange than Sarah’s surreal cogitations. The deeper she delves into research, the more connections she finds between strange beasts of the past and those that were born in her imagination.

Gabriel Harp – “Chromosoma”

These objects suggest an analogy between the genome and the cinema. Shared histories of discovery and language offer additional support and point to an opportunity for discovering unmarked classes in the genome as new methods of representing the “genetic unseen” arise through the analogy of cinematic language. This analogy takes into account preexisting metaphors which are not satisfying given the current state of scientific understanding. Pre-existing metaphors such as blueprint, code, and map also fail to satisfy the social requirement that metaphors be accessible and gender neutral. The

value of this presentation is the familiarity it affords when using a cinematic model to structure our understanding of the genome.

Holly Longstaff- “The junk we left behind”

“The junk we left behind” explores the ethical dimensions of online genetic testing by contrasting the reality of “Discreet” paternity testing with idealized nursery artifacts.

Genetic testing for paternity can now be conducted by online companies through so called “Discreet” DNA tests. Companies offering such tests teach individuals how to access useable DNA while bypassing thorny issues like informed consent. Potential clients are advised to collect discarded samples and submit them in ordinary plastic bags. Each bag shown in Holly’s installation contains enough DNA to conclusively identify a biological father. The results of such tests can lead to violent outcomes and have the propensity to change the trajectory of many lives. Yet, unlike other forms of genetic tests, counseling is not required.