

Lateral Improvements

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MFA-Thesis

May 26, 2015

The modern era can be characterized as a constant stream of updates and upgrades. Our technological advancements, in particular, are continuously reiterated with newly invented tools, hardware upgrades, and software updates. In medical science, progress provides new treatments and cures for existing diseases, and with this, new doors have been opened regarding genetic interventions for both prevention and treatment of various conditions. Regarding this progress, ethicists Ingmar Persson and Julian Savulescu have raised new questions about our moral imperative to change and to improve. In this era of constant, so-called improvements, what are we looking for? How can we define success and who is qualified to do so? Is there a point at which our improvements ultimately become a hindrance? Science writer J. B. MacKinnon brings up similar questions about human interaction in nature. Persson and Savulescu's ideas regarding human augmentation, coupled with MacKinnon's research on evolutionary disruptions in nature have prompted my own exploration of new possibilities for natural motifs in body adornment and to question the idea of improvement.

Persson and Savulescu argue that we have a moral obligation to genetically change ourselves, or at least, our future generations. They write in their book, *Unfit for the Future: The Need for Moral Enhancement*, that as science and technology advance at the current pace, our moral capacity has not increased at the same rate. In particular, these authors refer to our ability to create weapons of mass destruction, including chemical and biological weapons,

as a result of good-natured research gone awry (47). In one interview, Savulescu argues that as medical science advances, we will have the ability to genetically alter embryos to create “better” — smarter, less violent, and free of genetic disease — children. Though immediately controversial, he argues that we attempt this, and have attempted this throughout human history, through our education systems (Savulescu). We teach, mold, and train children to function well in our society according to a certain standard. Even before having children we, consciously or unconsciously, choose our mates for optimal offspring. His arguments have prompted criticism and questioning by critics asking where do we draw the line? How much modification is too much, and what will the consequences of that modification be?

The questions raised by Persson and Savulescu’s arguments are interesting when applied to non-human organisms as well. Our plants are now genetically modified (or proudly advertised as not) to be larger, more colorful, ideally shaped, and more delicious. Should we ask the same question of where to draw the line? If you improve one element of an organism, will another aspect suffer? I am interested in exploring the concept of improvement, what it is, and what it costs. What other effects can occur? One criticism of Persson and Savulescu is that parents may choose to create embryos free of psychological disorders, but history has shown that many of history’s greatest artists suffered from depression, bipolar disorder or schizophrenia. In this case, would our improvements lead to a dearth of an ability to think and act creatively and

individuality (Sackur)? Another criticism of Persson and Savulescu is that those who have had genetic modification to be less violent may be taken advantage of by those who have not (Fenton, 150). Similarly, plants that become domesticated for the benefit of people, may not thrive secondary to increased predation. The lack of spikes, thorns, poisons and other noxious aspects of herbaceous organisms, while not appealing initially, are ultimately necessary for survival.

Science writer J. B. MacKinnon has explored this idea of human interaction and its consequences in nature in his book *The Once and Future World: Nature As it Was, As it Is, As it Could Be*. His exploration of the loss of biodiversity as well as human efforts to “reintroduce” lost varieties and species is particularly relevant today. He uses the term “change blindness” to explain the idea that we are unable to remember or appreciate what the world used to look like, making our improvements and reintroductions difficult or essentially futile. He also explores how far humans will go to attempt to bring nature back to its original state. He questions the validity of our assumptions on how to go about any restoration and he questions the efficacy of any end result. He points out that opponents of nature’s preservation or restoration will claim that nature is always changing; however, while this is not a valid argument against preservation, he explains, it does prompt the question of how we can match or recreate nature’s history (MacKinnon). To what extent will humans modify their present environment and will the result ultimately be an improvement?

The natural motif has appeared as a decorative mechanism for ages.

Since Neanderthals, humans have used depictions of biological organisms as decoration. There are examples of this in every civilization, including Persian and Egyptian murals, Japanese screens, and Burmese ceramics.

In Europe, these motifs are found commonly on ancient Greek and Roman Vases. Then, during the Middle Ages and into the period of the Renaissance, there was a resurgence of interest in the natural world. The industrial revolution led to a greater popularity of bringing the organic home during the Victorian era. William Morris in the late 19th century and the Art Nouveau period created plant and animal designs on everything, including draperies, wallpaper, furniture and tile work. During the Art Deco period, these designs were more stylized, where the resemblance to plant or animal forms can be harder to immediately recognize. Today we see cows in the kitchen, sea creatures in the bathroom, and flowers in the bedroom. But why? There is a creation of commodity – and a resultant sense of power – when humans own plants and animals. People are attracted to the control of their environment and its elements. “Through selective breeding, humans have shaped domesticated animals and plants in part to make them more pleasant and attractive to live with.” (Flannery, *Jellyfish*, 240). This is the urge for biophilia- the innate human urge to have contact with other species. Natural motifs in jewelry is a perfect example of this manifestation of biophilia, instead of surrounding ourselves with representations of plants and animals, we wear them. Just as biophilia made its way across civilizations in many forms of art, this has also happened within jewelry (Flannery, *Weeds on the Lapel*, 44).

Using the notion of improvement, my work proposes upgrades and updates to existing botanical organisms and natural motifs, manipulating, exaggerating, and altering defining aspects of their characters. I use a combination of computer-aided design, machine manufacturing, and handwork, as well as attempting to leave some elements to chance. For each of the plants chosen to improve, I design the template for the finished piece and all of its elements, in Rhinoceros®, a computer-aided design program. I then either cut out the elements by hand or have them laser-cut. For some pieces I use other tools, like the rolling mill, with which I have varying degrees of control over the finished shape. For other pieces, I randomly place the elements, giving up some control regarding the final look.

German jeweler, Mirjam Hiller, develops complex flat patterns that can be folded to emulate botanical form. Each piece of Hiller's jewelry is fabricated from a single sheet of metal. When viewing this work I see this process as forcing her to reduce these forms and shapes to their essentials, as each line is a single and final cut in the metal. According to Hiller, central themes in her work are intensity and enchantment which she achieves through repetition and color (Mirjam Hiller: The Graphics to her Jewellery). Like Hiller, I also aim to distill the plant that I am exploring into simplified elements. However, this is not to enchant the viewer, but to point the focus on the element of the plant that suggests an improvement. The transformation of a botanical specimen into a two-dimensional template and back into a three-dimensional representation, allows control over the emphasized

elements and overall composition. Inevitably information is lost and created in this process, much like generational effects of genetic data or the attempts of human to reintroduce nature. I ask then, does this process communicate that an organism continues to be itself, despite minor or major changes, because of a retained essence.

For each plant that I chose to improve, I have a certain method of examining and understanding the object. I reduce the plant down to a basic color, shape, or movement, for the time being ignoring other aspect of the plant such as their smell, taste, or sound — elements that I would like to explore in the future. For each plant that I chose to improve, I isolated the vital component of the plant that makes it that particular type of plant. I explored visual aspects, biological aspects, and emotional aspects, as they pertained to my experience. Then, by making a certain improvement to that particular component, the same or similar questions arise: is the plant still *that* plant? Is this plant better, or is it worse? Is this process one of evolution, hybridization or mutation? In this case, there is no spontaneous error (mutation), there is no combination of separate parts (hybridization), and there is no selective pressure to change (evolution). The process is just change. In the future, applying improvements, or changes, to humans or other organisms may have drastic consequences. For each plant, my improvement is specific, and often reflects the emotional engagement I have with the plant. I have decided what will make the plant better for me, but I have

ignored the resultant disruptions the change may incur. Once the piece is finished, I am able to reflect upon consequences of my intended improvement.

There are many examples of humans' intended solutions causing unintended problems. MacKinnon discusses the effects of humans on natural ecosystems, citing specific historical examples. Due to global climate change and the use of pesticides, the number of pollinating bees has severely diminished over the last few years. In China, this led to problems for apple tree farmers, where a lack of bees left blossoms unpollinated. The farmers had to pay individual workers to pollinate each and every flower on a tree. What they found was while humans were better than bees at pollinating the trees- more consistent and were not deterred by weather, the cost to the farmers was debilitating. MacKinnon concludes that the worth of the bees was essentially priceless; they did the work for free (129-130, MacKinnon). Here, intentions to improve a human need with a single change (pesticide) led to a species' demise, which in turn led to economic turmoil.

One of the botanical families I chose to improve upon is cactus. The cactus is a plant elegantly adapted to survive in arid climates and it is one with an aesthetic appeal, prompting a sort of domestication where many people will keep one indoors. Most cacti have sharp spines that limit either intentional interaction or that can be painful with accidental contact. What if a cactus was genetically improved such that it no longer developed its spiky armor? While potentially safer for humans, the cactus would not survive as well in its native habitat, as it would

now be easy pray for herbivores. My improvement focuses on and is intended for the domesticated house cacti, as it would be assumed that the improvement would not function in the wild. Are the plants still cacti now that they have been improved upon? If not, have I even improved the plant? I then considered alternative defense mechanisms, and then chose to alter the color of the cactus, using very bright, aggressive, and sometimes contrasting colors. The colors may now be off-putting. It is now the case that the cactus is safe to touch, but now does one want to?

Another plant I chose to modify is the lilac. I have severe seasonal allergies that are particularly active in the spring when lilacs bloom. I struggle being caught between the awe I have for their beauty and the discomfort I have from the allergens they produce. In my necklace of lilacs, the pollen that causes my allergic reaction is gone, but I hope the beauty remains. To recreate the experiences of the real lilacs overwhelming my senses (both visually and immunologically), I made this necklace larger than life, as to overwhelm the body of the wearer. However, this modification has led to a heavy and perhaps ultimately un-wearable necklace. In this case, by attempting to improve upon the lilac I have merely made a lateral move, and I have to ask if I have improved the plant at all.

The trumpet flower is poisonous to ingest and irritating to the skin. My modified trumpet flower necklace is made out of metal and therefore no longer irritating, however the finished piece is quite heavy. Again, the wearer will be

overwhelmed by the weight of the necklace, consumed by the work, but will not need to fear to be poisoned.

Hydrangeas are a beautiful flower, even when dried out. However, they are brittle and easily fall apart. I wanted to create a dried out hydrangea that has the look of being dead, but would not fall apart. I used sandblasted zinc to create the petals, which has a dead look to it. The metal no longer shines, it looks almost paper like, similar to a dried hydrangea flower. However, this flower will not fall apart. The fields of tulips, so recognizable in Holland, are truly breathtaking. I wanted to make a necklace that would surround you with the feeling of the field and let you bring that feeling of looking at the field with you. For my daisy chain, I wanted to create an everlasting daisy chain, reminiscent of one that children make. I also wanted to make mine much longer than one would typically make, a sort of grown-up version of a daisy chain that resembles strands of pearls.

I don't think that anyone would argue that change is always better. Regardless, change is inevitable and is often packaged as an improvement. The necessity and consequence of change, as discussed by Persson, Savulescu and MacKinnon, have influenced my work to question the essence of an improvement. I have chosen to deconstruct elements of plants and modify them to highlight this inquiry. Ultimately, the value of improvement will have to be subjective but I hope that the viewers of my work will appreciate the sometimes-subtle trade-offs that exist with each change

Works Cited:

Fenton, Elizabeth. "The perils of failing to enhance: a response to Persson and Savulescu." *Journal of Medical Ethics* 36.3 (2010): 148-151.

Flannery, Maura C. "Weeds on the Lapel: Biology and Jewelry." *The American Biology Teacher* 69.1 (2007): 44-47.

Flannery, Maura C. "Jellyfish on their Ceiling and Deer in the Den: The Biology of Interior Decoration." *Leonardo* 38.3 (2005): 239-244.

Julian Savulescu, "As a Species, We Have a Moral Obligation to Enhance Ourselves" *Ideas.Ted.Com*. David Weber. Ted Talks, 19 Feb. 2014. Web. 19 Mar. 2015.

MacKinnon, J B. *The Once and Future World: Nature As It Was, As It Is, As It Could Be*. New York: Houghton Mifflin Harcourt, 2013.

"Mirjam Hiller: The Graphics to her Jewellery." *Klimt02 International Art Jewelry Online*. Web. 09 Dec. 2013.

Sackur, Stephen. "Julian Savulescu." Interview. Audio blog post. *Hardtalk*. BBC World Service, 13 Nov. 2013. Web. 16 Mar. 2015.

Persson, Ingmar, and Julian Savulescu. *Unfit for the Future: The Need for Moral Enhancement*. Oxford: Oxford UP, 2012.

Images:



Syringa 'Sizorum Nosneezum'
steel, silver



Syringa 'Sizorum Nosneezum'
steel, spray paint, flocking



Syringa 'Sizorum Nosneezum'
Steel, silicone rubber cord



Cactaceae 'Touch My Prick'
steel, silver, powder coat, spray paint, flocking, sand



Bellis 'You Can't Ever Go Wrong With Pearls'
steel, powder coat, thread



Brugmansia 'Overlove, Not Overwhelm'
steel



Brugmansia 'Overlove, Not Overwhelm'
steel, powder coat



Tulipa 'Lose Yourself But Don't Lose Me'
steel, silver, power coat, spray paint