MINING THE OCEAN

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Introduction

Industrial society developed with a focus on human needs and economic growth, while disregarding the well-being of native species and the environment. This fact influences my thinking and research, and deeply affects my creative process. Destruction of the ocean ecosystems by humans is the primary subject of my research, and the tragic environmental impacts on endangered species are my main source of visual and spiritual motivation. Humans’ obsession with mining resources from nature with little regard to the impact they have on the earth results in significant damage to the marine ecosystem. I fabricate collections of fishing implements such as hooks and harpoons as symbolic objects of human consumerism and desire. The audience may feel both drawn to and repelled by the beauty and power of these suggestive objects.

The objects/Collections

Referencing the history of these tools, I craft hybrid forms that illustrate both animal bodies and the industrialized tools used to penetrate their flesh. With advanced manufacturing technology and raw material process, fishing tools have been progressively designed to penetrate deeper into animals’ bodies to extract them from their environment. My work seeks to grab the attention of the audience to convey the lack of care and understanding that is primarily caused by humans. My crafted fishing tools are exhibited in three collections, Series of Hooks and Seagrasses, Series of Harpoons and Grown Series: Hooks and Harpoons. In the Series of Hooks and Seagrasses, sea creatures such as seaweed and corals are represented to be caught and snagged by fishing nets and hooks. Through the Series of Harpoons, I created harpoons and hooks as dangerous objects by metal forming, crafting those produced to slay animals. In the “Grown Series: Hooks and Harpoons”, historical fishing tool references are fused with electroforming to create the animal body and skin through various textures. These objects show the connectivity between human and
animal, and my creative work indicates how humans have unfortunately considered the animal as one of their possessions.

Hooks and Harpoons are tools that have been made by humans from the Paleolithic to the present day. Fishing tools, such as nets, harpoons, and hooks, are long-standing familiar weapons used to catch other creatures. The reason for the decreased number of sea creatures is that humans autonomously captured them, or various human activities systematically affected the natural ecosystem, causing the environment to become barren with less surviving creatures. Humankind has developed the environment anthropocentrically, with little regard for the interconnectivity of plant and animal species over the economic growth. My luring fishing tools reveal human greed as I create narrative objects through which man has directly acquired surplus of animals using these fishing tools.

**History of fishing tools**

1. **The oldest fishhooks**

Prehistoric fishing was a necessary practice that humans acquired to live as hunter-gatherer. Hand crafting the fishhook and fishing devices from bone, sea snail shells, stone and horns began many thousand years ago. According to *The Guardian*, Kate Lyons announced that Archaeologists have found the world’s oldest fishhooks, made by shells of sea snails, in Sakitari Cave, Okinawa Island, Japan, and the hooks were assumed approximately 23,000 years old (Lyons). Lyons notes that charred eels, frogs, fish, and birds were excavated in Sakitari cave, and the evidence of eating habits and hooks by ancient Okinawans suggests that humans had technology to survive on an isolated island (Lyons).
ii. Fishing as commodity

In the early history of Egypt, fish was the basic diet for Egyptians which helped increased the population and it was used as rewards, national revenue, and a means of trade. According to the book, "Fishing: How the Sea Fed Civilization," Brian Fagan indicated that in around 3250 BC Egypt, the pyramids, temples, palaces, and estates began to establish a system of hierarchy with a supreme leader commanding, and rations for feeding laborers (Fagan 155). Fagan stated that the Egyptian seine net, huge and heavy equipment which demanded team labor, caused enormous catches, and tomb paintings showed the trace of nets and rope (155). Egyptians invented various fishing methods such as woven nets, woven willow baskets branches, harpoons, and hooks, and their lifestyle of fishing was documented in the tomb hieroglyphics, drawings, and on papyruses. Fishing was not only a necessity for the survival of humans, but it is evident here that it became a profitable trade due to the abundant number of creatures in the ocean.
iii. Invention of trawler

Modernism sparked the consumerist mentality that dominates the current world. According to the website, the Granton Trawler, author stated that the steam trawler was introduced during 1875 and remastered during 1877 at Leith Edinburgh United Kingdom, to utilize the steam engine as commercial fishing boats to drag and pull large nets (“The Steam Trawler”). The Author Brian Fagan explained that steam trawlers were invented to tow huge nets four-hundred meters deep in the ocean, and could be stretched fifteen meters or more, four times the length of prior sailing vessels (Fagan 289). Trawlers have caught a huge amount of sea life including unmarketable fish and have destroyed ocean habitat by dragging heavy nets and metal on the seabed. According to the article, “What Is Bottom Trawling and Why Is It Bad for The Environment?” by Greenpeace, Ellie Hooper pointed out that many un-purposed species, including turtles, juvenile fish, and invertebrates, have been caught by bottom trawling and it has destroyed the community of the deep-sea coral forests, which had been clustered through centuries (Hooper). Compared with the
practices of ancient Egyptian fishing strategy with only manual labor, it has been witnessed that the present economy has considered more capitalist consumption than sustainable development.

**Phenomena Occurrence**

In the 21st century, environmental pollution, excessive fishing, and sport capturing had decreased the number of creatures in the ocean. According to the article, “Faroe Islands’ Killings Of Dolphins Denounced” by The New York Times, Isabella Kwai reported that traditionally the whale and dolphin hunting was practiced over the century in the Faroe Island for the locals’ diet, and mostly 1,400 white-sided dolphins were killed by attaching their spinal cords via an instrument in September 2021 (Kwai 11). Through the blog “Season Ends for Taiji’s Dolphin Drive Hunt” by Dolphin Project, Ric O’Barry reported the whale hunting scene that slaughtered 547 whales and dolphins and 140 being captured and kept tied with ropes around the tail in 2020 and 2021 (O’Barry). Also, the aftermath of the slaughtering remaining set nets were spotted with humpback whales entangled in them (O’Barry). Some species such as the elephant seal, the humphead wrasse (aka. Napoleon wrasse), seahorses, and the gray whale have become extinct or are in the crisis of going extinct. Fishing has a long history with the advent of mankind, and since the 19th century, human activities have spread throughout the world. Human civilization has advanced and reached unexplored areas allowing for more resources and the engagement of exploitative activities. This transition in human civilization has resulted in innumerable threats to ecosystems.

**Creative Metalsmithing and Toolmaking**

Through in-depth observation of historical tools, I re-construct and invent fishing tools, such as hooks, harpoons, and nets, as symbolic objects to reference the hunting of fish for consumerist desire. I craft wieldable tools and weapons that invite the human body so that people
can feel the destruction of the environment and the pain of living creatures. Through this research, I have been creating harpoons and hooks to observe how humans have slaughtered animals through the development of metalsmithing and the evolution of equipment. While holding and making these tools, I feel a sense of dread and sadness that overwhelms me. These handmade tools are a powerful way to convey my thematic message toward our society. I want viewers to connect with nature through my expressive fishing tools and to consider the relationship between humans, tools, and the fragile natural world. For example, in *Grown Series: Hooks and Harpoons*, I incorporated animal features into the collection of fishing tools to further correlate the relationship of human society and the natural world. I used electroforming to add animal skin textures such as turtle, humphead wrasses and sea snake on the tool surface as an organic form. The electroforming hollow form textures are reminiscent to the animal body that identifies the fragility of animal skin.

![Image of handmade tools](image)

*Figure 3. Dawoon Jeong, *Grown Series: Hooks and Harpoons*, Copper, Various Patinas 2022.*

The double flue harpoon has long been used, and while it is viewed as dangerous due to its heavy weight, whales often escaped because the harpoon tip could not penetrate deeply into the whale's flesh. In the 19th century, the one flue harpoon was developed with a narrower head and
was constructed to penetrate whale’s flesh easier. According to the website, the National Museum of American History, writer stated that in the mid-19th century, Lewis Temple, well known as an African American blacksmith and inventor, re-designed an advanced toggling harpoon, and his iron toggle began to be widely used for whale hunting in the U.S (“Temple Toggle Iron”). Author explained that the head of the toggling harpoon is designed to penetrate the skin and fat of the whale, and the tail end of the harpoon is fixed to the muscle, preventing the whale from escaping when pulling the harpoon back (“Temple Toggle Iron”). Through the design evolution of the harpoon, we can observe how the mass hunting of animals has developed and progressed in the modern age. Series of Harpoons thus become more violent, as I create them depicting this pattern of aggression of the modern age. I express this aggression by implementing more severely pointed tips, smooth desirable surfaces, and fabricating overall larger scaled objects.

Figure 4. Dawoon Jeong, Series of Harpoons, Copper, Various Patinas 2022.

When observing the anatomy of a fishhook, there is a pointed tip and a barb. The point’s purpose is to pierce into the flesh of a fish and the barb holds the flesh. The point and barb have
been structured to inflict pain and resist escape. The harpoon is likewise built to pierce the flesh of whales and retrieve their bodies, and since it must catch wild creatures that are bigger than humans, the harpoon is much larger than a fishing hook. Through size expansion, the harpoon point, where it digs into the flesh of living things, is dangerous, and the tools must be strong to pick up the sea creatures struggling to survive. Through the large fish hook in the *Series of Hooks and Seagrasses*, I bring a sense of empathy and fear for the individual who wears it and the audiences who observe it. The small fish hook used to catch marine creatures has been made large so that it can be hung over a person's neck and shoulders, and the point that penetrates the animal's flesh has the potential to inflict pain on the human body. Through my objects, these structural features have been interpreted from an artistic point of view, and these tools are made to fit the hand and imagine being engaged by the human body.

![Figure 5. Dawoon Jeong, Fishhook on the Shoulder (left figure), Copper, 2021.](image)

![Figure 6. Dawoon Jeong, Fishhook and Net on the Body (right figure), Copper and Cotton cord, 2021.](image)
Figure 7. Dawoon Jeong, *Series of Hooks and Seagrasses*, Copper, Cotton rope, Polypropylene net and Acrylic paint, 2022.

**Patina**

Mainly, I used copper in my collections, and I attended my objects with different finishing by patination such as using liver of sulfur, coarse salt, ammonia, and vinegar. My collections experimented with patina in various techniques to express the tools used in the sea and corrosion caused by the sea water. I found a way for the copper to turn red, green, and blue in color by non-toxic ingredients. Through the patination of vinegar and coarse salt, I mixed the ingredients with sawdust in a clear zipper bag in a vacuum state. After being stored in the sawdust for 2 to 3 days, my copper tools changed to a greenish color. Storing the objects at a temperature higher than room temperature tends to speed up the patination process. For red patination, the green patination objects were brushed off and wiped off by water to form the color red. Another method for patination, I used ammonia and coarse salt in the same method as vinegar patination in which I
mixed the ingredients with sawdust in the plastic bag in a vacuum state and this resulted in the copper objects becoming bluish green in color.

Figure 18. Dawoon Jeong, Example of Patination from Grown Series: Hooks and Harpoons, Copper, 2022.

Figure 19. Dawoon Jeong, Example of Patination from Grown Series: Hooks and Harpoons, Copper, 2022.
Display of Collections

Figure 8. Dawoon Jeong, Installation view of *Mining the Ocean*, Samuel Dorsky Museum of Art, State University of New York at New Paltz, 2022.

Three collections were installed in different ways to suggest the objects’ purpose. The collection *Series of Hooks and Seagrasses* was displayed 5’ by 10’ stretched against the wall with a plastic mesh net and a hand knotted rope. Seagrasses, corals, and hooks were entangled throughout the nets, emphasizing their vulnerability amid destructive acts. *Series of Harpoons* was knotted onto a low pedestal, influenced by various historic layouts of fishing tools and harpoon tips. My copper objects were tarnished by different patina processes, and these allowed each tool to be finished with different color, age, and oxidation. The collection, *Grown Series: Hooks and Harpoons*, was carefully installed via mount making strategies utilized in museums site displays. The mounting board was set on top of a table, and mounts were adjusted to slightly varying heights and angles, creating a fluid wave that animated the natural objects. All objects in this collection
were produced by electroforming for manifesting organic texture and antiquity formation of age through patination.

Figure 9 and 10. Dawoon Jeong, Installation view of *Series of Hooks and Seagrasses*, Samuel Dorsky Museum of Art, State University of New York at New Paltz, 2022.

Figure 11 and 12. Dawoon Jeong, Detailed View of *Series of Hooks and Seagrasses*, Copper, Cotton rope, Polypropylene net, and Acrylic paint, 2022.
Figure 15. Dawoon Jeong, Installation View of *Series of Harpoons* on 38”x 38” Pedestal, Samuel Dorsky Museum of Art, State University of New York at New Paltz, 2022.
Conclusion

Following an evolution of the fishing industry, my tool collections have been created as emblematic objects of human consumerism. My fabricated works draw curiosity with the refined metal objects themselves, but they also incite a sense of danger with sharp lines and points indicating that human consumerism is dangerous and harmful to the environment. My research has focused on the inevitable extinction of the voiceless sea creatures that are rapidly becoming endangered due to human activities. I examine how metals have been used in human history, how they have been wielded toward animals and the environment and I have reinterpreted these tools and weapons through the perspective of an artist. I invite the audience to explore the relationship between self, tools, and the fragile natural world, and to consider the direction in which we will make history on this planet.
Works Cited


