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Menalar Khayal
Reasoning The Imagination

Michael Binuko Sri Herawan

Program Studi Seni Rupa, Fakultas Seni Rupa dan Desain
Institut Teknologi Bandung, Bandung, Indonesia

Abstract

"Menalar Khayal" (Reasoning the Imagination) is an art project that tried to elaborate between fiction (imagining) and scientific (reasoning) processes to create a series of artworks that illustrates a fictitious study about a creature named Megaptera novalevitae, a fictional flying whale. The process of reasoning the imagination was a back-and-forth process and affected the creation of the artworks.

The artwork configuration in this project tried to illustrate an idea about this fictional creature. Then, it combined it with visuals that remind us of the illustrations from science or school textbooks. This approach was made to absorb audiences into the fictional whale and develop their imagination and story about the creature. Using this approach, I also aim to create different kinds of storytelling using artworks.

The visual presentation in this project tried to bring audiences' imagination to the illustrations or study properties when technology was not so advanced and relied on people's adept skills to illustrate and record their findings. Therefore, this project used conventional mediums: drawings, prints, and sculpture.

This project departs from my imagination, particularly having an interest in studies and observations of the field of science, especially biology and paleontology. In this project, the imagination is the main engine of the creation process, as it needs to be equipped to read the works.

Keywords

Reason, Imagination, Fiction, Art, Science, Creature, Illustration

Michael Binuko Sri Herawan
Email :
michael.binuko@gmail.com
Address
Jl Ganesha no. 10, Bandung
Indonesia 40132

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INTRODUCTION

The main objective of this project is to create a series of artworks that combine art and science. In doing so, I made a series of artworks centred on a fictional creature, with the type of visualisation as if the creature was real and underwent several studies and investigations. I started this project by imagining one creature that underwent extreme mutation, and with the aid of the scientific method, I assembled the logic about how such a creature can live and breed. Because I sought to make the creature as logical as possible, the project became a reciprocal process between imagining and reasoning. Each piece of artwork tells different aspects or features of the beast itself.

This project used various media like drawings, prints, and sculptures to illustrate a fictional creature named *Megaptera novalevitae*, a flying whale that was a product of my imagination. Since I thought that just making an imaginary creature was a relatively easy task, I aim to elevate this project's challenge by incorporating scientific study to make this project more logical and believable. I wanted the audience to dwell in the world I created while, at some point, they would still understand that the creature I presented was fiction.

For example, fictional creatures can be found quickly in video games like Final Fantasy or other popular Japanese television series like Pokemon. Throughout art history, we can discover fictional creatures in surrealist paintings like the infamous "The Elephants" by Salvador Dali, portrayed with elongated legs, or animals in the "Codex Seraphinianus" book by Luigi Serafini. And finding artists that show their fictional creatures in detail is harder. "Detailed manners" refers to a thorough explanation using a visual approach. This rarity sparks the idea to develop further the concept of flying whales, not only creating it but also explaining its biological and physiological features.

The creation of this fictional creature was inspired by the condition of the beach and sea in northern Jakarta when I did my residence program around 2010 in Pasar Seni Ancol. The colour of the seawater around was rather black, as opposed to the sea we usually see in postcards' photos or tourist destinations. This condition raised my imagination about what if the ocean becomes unhabitable one day. I imagined such harsh conditions forced sea creatures to experience extreme mutation to live in a more suitable habitat, such as air. In this project, I purposely hid a critique of the haphazard and unsustainable lifestyle that produces unrecycled waste.

The objective was to find suitable creatures that supposedly live in clean and uncorrupted areas and use them as a sign of rampant contamination. From simple research, I discovered that whale suits this role. The whale is known to live in the deep sea, which is supposedly far from land and the pollution, which I presume is dominantly produced from the ground. Size-wise, whales are also majestic and heavy. Logically speaking, they cannot roam freely outside the sea, let alone fly. By creating a flying whale, I aim to make audiences realise that the creature in my artwork is a product of fiction the moment they see it. I also mutated the whale in this project to signify the sea's harmful condition as it even forced its creature to move from its natural habitat.

The idea about this fictional creature is then combined with visuals that remind us of the illustrations from science or school textbooks. This approach was made to absorb audiences into the fictional whale and develop their imagination and story about the creature. This was done by creating works from different techniques and mediums, visualising flying whales' lives from different features. Using this approach, I aim to develop another type of storytelling using artworks.

METHODS

The artworks' visualisation started with simple research to find sea creatures inhabiting the ocean or deep sea. Ocean or deep sea was chosen because it is far from landmass or modern civilisation, and is supposedly unaffected by human waste. The idea is to mutate the creature to speak about environmental pollution tacitly. I chose the humpback whale (*Megaptera novaeangliae*) for this research because the animal is commonly known yet still meets the criteria.

My next step was to decide what kind of new habitat I should put this whale into, as it also affected how I imagined the creatures' physiology. I made this creature live in the sky to narrate that the ocean was no longer habitable. From that decision, I sketched the forms of the beast. The sketching process is the most crucial part because I had to think back and forth between the structure of the creature, its habitat, and its physiology, as it will affect how the final form of the beast will be. All the visuals of my artwork in this project will take shape. This was the step when I was reasoning my imagination.

To make a sketch, I combined several visual references and data from literature studies to create a new one that fits the creature's anatomical design. For example, to make sketches of the spine, I took reference from the backbone of a humpback whale that I found in the books and the internet. Combined with the findings about birds' hollow bones, I create a backbone for the creature. This method made the artworks more convincing as if they were the results of scientific studies.

During this step, I also went to the local Geological Museum and interviewed an expert in paleontology, Prof. Yan Rizal, from the Geology Department at Bandung Institute of Technology. I did some studies about how scientists illustrated and reported their findings in the era when photography and digital print were not as standard as they are now. This was done to find the proper visualisation method in my artworks and to strengthen the position of those done manually. I also researched whale and bird anatomy to combine them in my fictional flying whale.

After several sketches, I chose one similar to humpback whales but with longer pectoral fins that can act like wings on birds. The whale's back was designed to have a lot of semi-circular grooves inspired by the golf ball to lessen the wind resistance. The bones had to be hollowed to make them lighter and enable them to contain more air. This type of bone is commonly referred to as tubular bone. These tiny cavities allow them to fly because the density of the bones is directly proportional to the weight the creature has to bear. By reducing bone density, flying creatures get compensation from lighter weight [1]. The whale's mouth is also designed to be similar to the beak. However, I didn't put any leg on this flying whale to make it closer to whales or other marine mammals, rather than birds and for a room for audiences' imagination about how these creatures land or take off.

I created drawings from those sketches that illustrate how the whale flies, frontal and side view, and top and bottom view. The idea behind these visuals came from multiple perspectives in design or assembling charts. The drawing process started with rough sketches of the estimated size and visualisation. After it was done, I transferred the sketch onto a more comprehensive paper and outlined essential parts using a pencil before finishing it with a ballpoint.

I also used the etching technique to create illustrations about the birth process of the flying whale, its eye, skull, and bone structure. The process started with sketches on paper. After refining the drawing, I scanned it before adding some transcription. This was done to shorten the process time, so I did not need to use letterpress to create the writing. After that, I mirrored the image, inverted the colour, and printed it using a photocopier. The printed sketch was then transferred to the plate using acetone. Then, I reinforced the plate's non-printing area using asphalt before putting it into an acid bath. After the plate was ready, I cleaned it before printing it.

For the sculpting process, I started by making reinforcement for the main body and wings using paper and aluminium foil, according to the ratio I decided from my previous drawing. After the support, I used clay to develop its shape roughly. This process is followed by adding and carving clay to get closer to the desired shape. The next step is detailing by using carving and modelling tools for clay. After I met the preferred form and shape, I created a gypsum mould and waited until it dried. After the mould dried, I removed the model and cleaned the mold from the clay residues. Later, I filled the mould using another gypsum to cast the final product.

DISCUSSION

In this project, I aimed to create works that visualise a series of studies of a fictitious flying whale that looks convincing. The audience does not necessarily need to believe that this creature is real. Instead, I want them to realise that these works are products of imagination.

In my understanding, amalgamation between art and science is achieved by combining high-tech, digital media, or other sophisticated laboratory equipment. As an artist with no background in such knowledge and experience, it took a lot of work to make artworks combine art and science by utilising conventional tools that I am already familiar with. These traditional media are not commonly used to create art intersecting with science. This initial thought brought me to two main mediums: drawings and printmaking. Later in the process, I experimented with sculpture because illustrating the idea in two-dimensional mediums was seemingly insufficient. Based on this idea, I determined to find a visualisation style that can remind audiences of the scientific world, as I later found in science illustration. In the process, I became more absorbed into thinking that the artworks had to be able to bring the audiences' imagination as if they were in an era when manual labour and craftsmanship were necessary in the process of producing images.

This fictional creature is named *Megaptera novalevitae*, from *Megaptera novaeangliae* (humpback whale). The Latin name was intended to give more sense of a scientific approach as if the creature was real. The naming of living things in biology has rules that must be followed. In the rules for naming living things, Carolus Linnaeus introduced a system of scientific nomenclature called binomial nomenclature (double nomenclature), which means the name of the genus followed by the name of the species. This naming must comply with several rules, including:

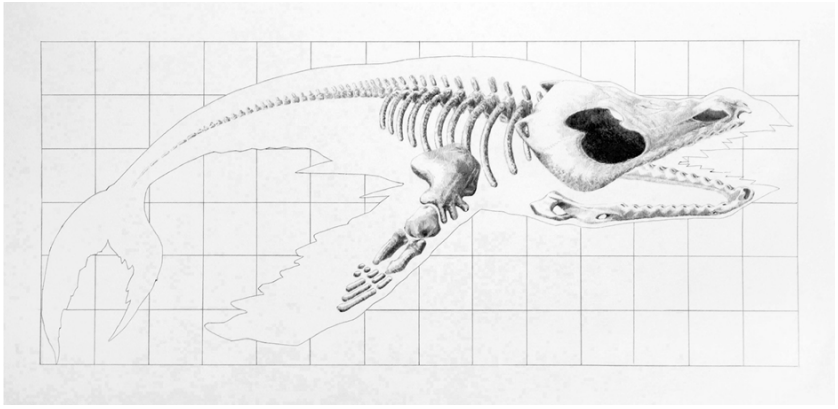
1. Naming using Latin or a Latinized foreign language.
2. Both genus and species names must be italicised.
3. The name must be underlined if written by hand or typewriter, which is not supported by the italics feature.
4. The initial letter of the genus name is capitalised, while the species name is all lowercase.
5. The species' name must be unique and one-of-a-kind. This name is taken from the special features of the species that distinguish it from other species. This particular feature can be taken from the name of the discovery area or the living creature's physiological aspects [2].

I chose drawings to mimic illustration from the day before the photograph became easily accessible, so scientist (biologist and botanist) relies on their drawing skill to record their findings. The practical nature of drawing also brings the image closer to myth and imagination [3]. Conceptually, the several phases of my works were likened to the development or journey of a scientist constantly exploring the object of his research, like what Feldman wrote in his book *"Art as Image and Idea"* [4].

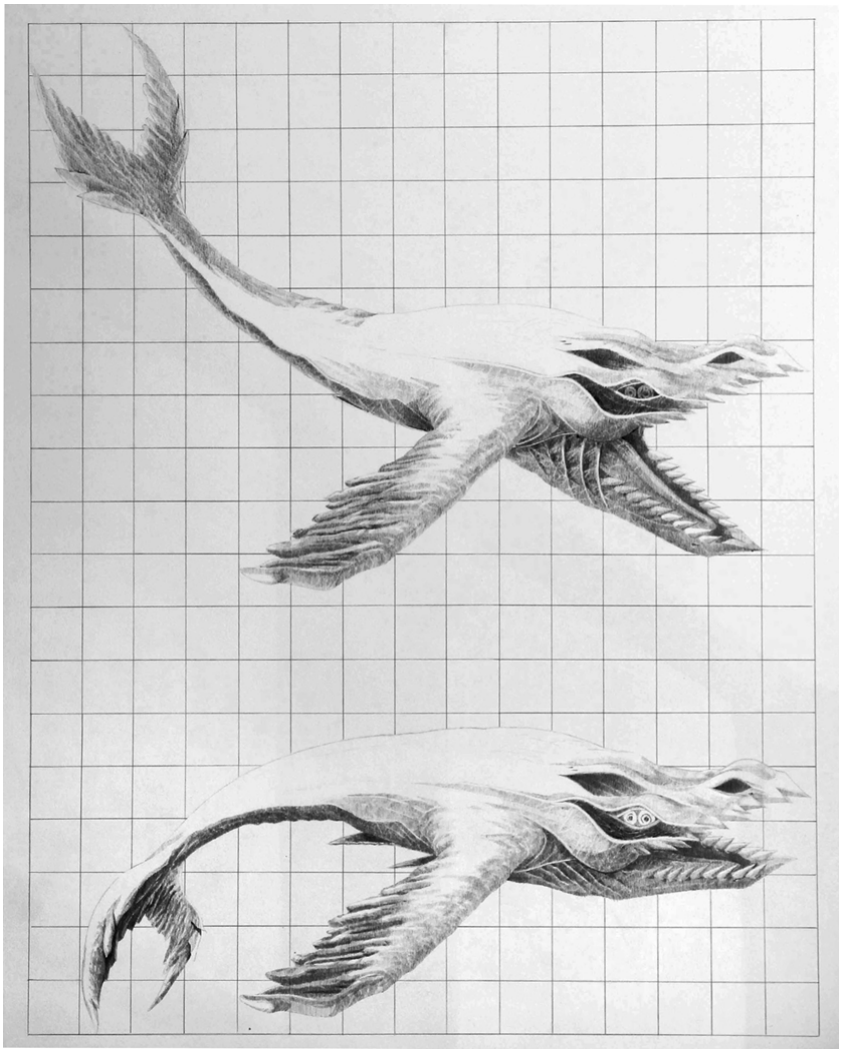
At a time filled with this "*ledakan gambar* (image explosion)" [5], where images can be presented easily and quickly, the skills manuals are still needed or at least appreciated. I chose this intense manual technique (drawing and statues) to counter contemporary discourses of fleetingness that exist today. I do not deny that there are works that utilise technology that require extensive preparation, immense thinking, and technical study. Still, I believe that the presence of workswork that are done manually has more ability to tell a story about the process.

Ballpoint was also chosen to catch the audience's attention by looking into the details of the lines in the drawings. Ballpoint as a tool also signifies the modern era developed in the same era as the camera [6]. I also wanted my drawings to be seen as fictional works mimicking the classical drawings rather than to be believed as a part of old documentation. Thus, the ballpoint hinted that the artworks are the work of fiction.

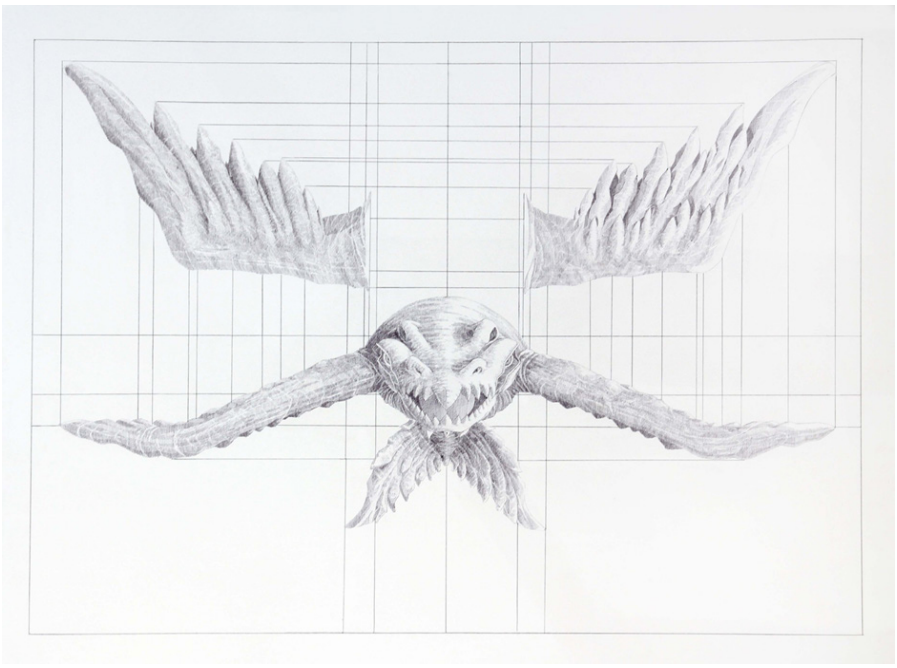
Picture 1. Michael Binuko, "Habitat 1" and "Habitat 2", Ballpoint on Paper 60 x 70 cm, 2012.



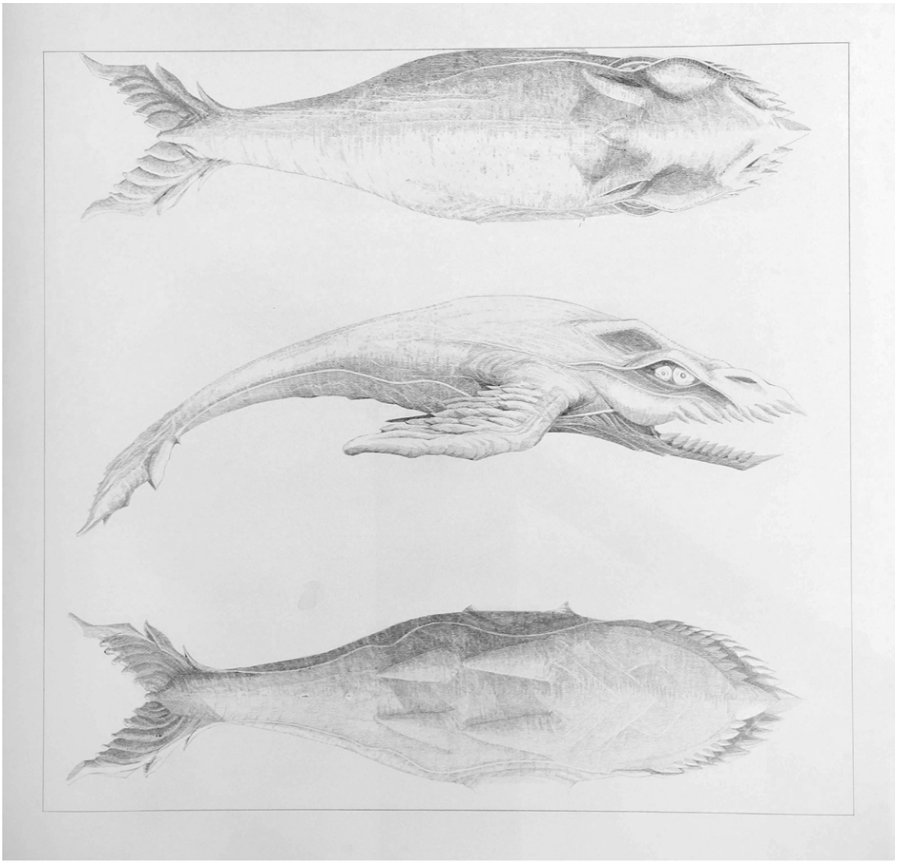
Picture 2. Michael Binuko, “Skeletal”, Ballpoint on Paper 24 x 56 cm, 2012.



Picture 3. Michael Binuko, “Maneuver Study”, Ballpoint on Paper 72 x 60 cm, 2012.



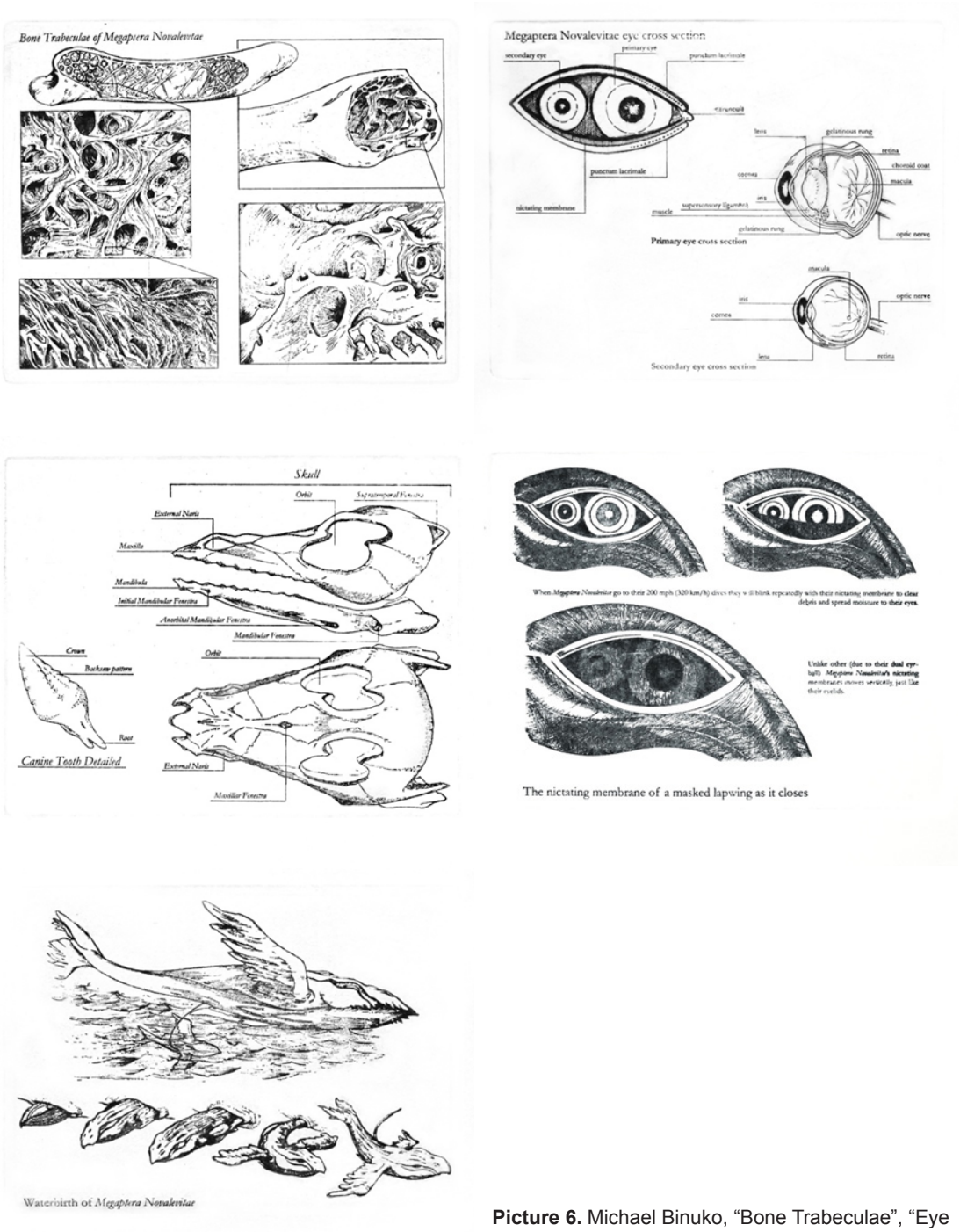
Picture 4.
Michael Binuko,
"Study of View 1",
Ballpoint on Paper
55 x 75 cm, 2012.



Picture 4.
Michael Binuko,
"Study of View 2",
Ballpoint on Paper
71 x 75 cm, 2012.

Etching was also used because it has a quality similar to drawing but slightly different because the emboss, and the thickness of the inks that felt different. Etching was commonly used in the Renaissance era to mass produce book illustrations, so this technique is related to disseminating knowledge (science). These etching works aimed to create more depth to the creature's narration.

I use gypsum to create sculpture as a three-dimensional model for the final works. This model

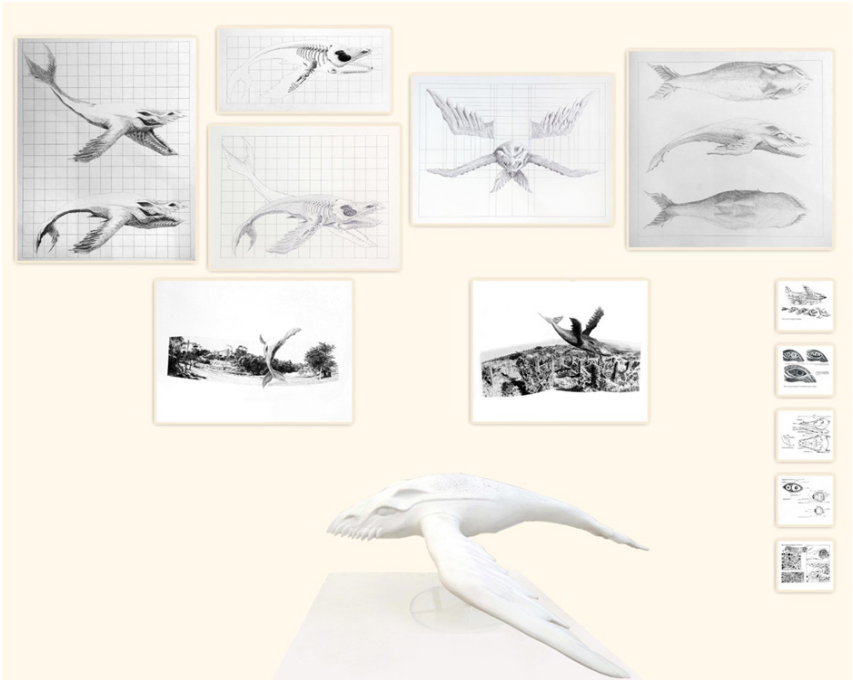


Picture 6. Michael Binuko, “Bone Trabeculae”, “Eye Cross Section”, “Skull & Canine Tooth”, “Nictating Membrane”, and “Waterbirth”, Etching on Paper 20 x 25 cm, 2012.

aimed to complete all the narration I have made previously. With three-dimensional objects, audiences can freely choose their point of view to investigate the shape and form of the creature. The gypsum sculpture was intended unpainted in expectation the audiences can imagine the creature’s colour in their mind and not dictated by the artist. The white gypsum was also inspired by the classical statue replicas made with the same material for teaching and learning purposes; in short, it conveys the nuances of a study.

At some points, imagination becomes the driving force that releases artists and scientists

Picture 7.
Michael Binuko, *"Megaptera novalevitae"*, Gypsum and Acrylic, 76 x 71 x 39 cm, 2012



Picture 8.
Michael Binuko, *"Megaptera novalevitae"* display layout.

from the shackles of thought. Inventions in both practical and theoretical fields are always based on imagination, an aspect recognised even by modern scientists as one part of the development of science itself. Even though science is always defended and imaged as a product of objective thinking, it is born from a subjective drive, namely a person's interest in researching something and the hypotheses and goals contained in the research he is doing. For the artist, the laboratories are both in their heads and when their artworks meet the audiences. Artists may consider the most sophisticated concept and its correlation with their chosen medium. Still, the final results can only be observed when the audience encounters the work.

Even though commonly believed to be the product of imagination, the artmaking process can involve reasoning and logic. In this project, for example, I underwent a back-and-forth process between imagining and reason to create the series of fictional creatures that are seemingly being studied and researched. Furthermore, I had to consider the suitable medium to deliver each visualisation so audiences could get into the fiction.

To develop the fictional study's visuality, I conducted thorough research to make this project logical. However, in the process, I learned that almost every aspect I did while doing this project is a series of reasoning processes, from finding the correlation between the medium and the concept I chose to decide the combination of biological features in the flying whale.

This project taught me that imagining and reasoning in artmaking is like a never-ending

process. Finding closure for one problem may lead to other ideas or imagination that may lead to other problems to solve. This happened; for example, after I decided to make the whale flies, I had to design the creature's morphology and the suitable bone structures that enable it to pass, followed by redesigning the morphology, choosing the appropriate medium to visualise, and so on. As a fictional work, this could be a challenge. I have to decide where to put the stop mark of the fiction. Does it have to be very convincing and blur the border between fact and fiction, or does it still hint at its fictitious nature? The artists must utilise more convincing mediums and technologies to appear convincingly. But if it stays in its fictional nature, it needs to keep its distance from reality.

This project shows a potential collaboration between science and art that can be achieved with conventional art-making methods without necessarily using up-to-date technological equipment. There are still many unexplored areas in science that provide a visual grammar or creative ideas for artists.

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