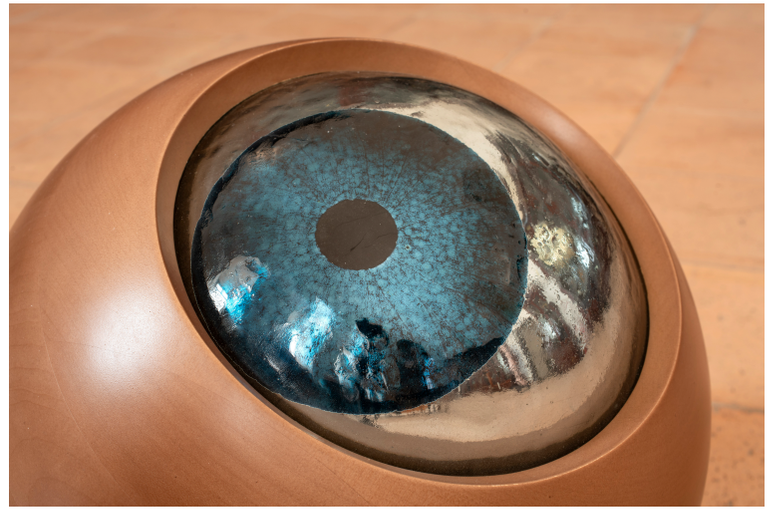
THE ERROR

Marta Frėjutė

An artist's creative process is often an interdisciplinary combination of different crafts and technologies. The philosopher is left to think and write, and an artist, while creating objects, encounters materiality. I considered the process to be pretty contrasting: you sketch in half a minute and the idea comes as lightning; this is usually exciting and motivating until it has yet to acquire materiality. Then you move to a completely different stage of matter, where you have to figure out how to make the piece. Paraphrasing the Lithuanian artist Birutė Žilytė, this is the time when the idea, "a part of my inner life, turns closed in itself, becomes independent, and moves away from me" (Žilytė 2015, 256; translated by Marta Frėjutė).

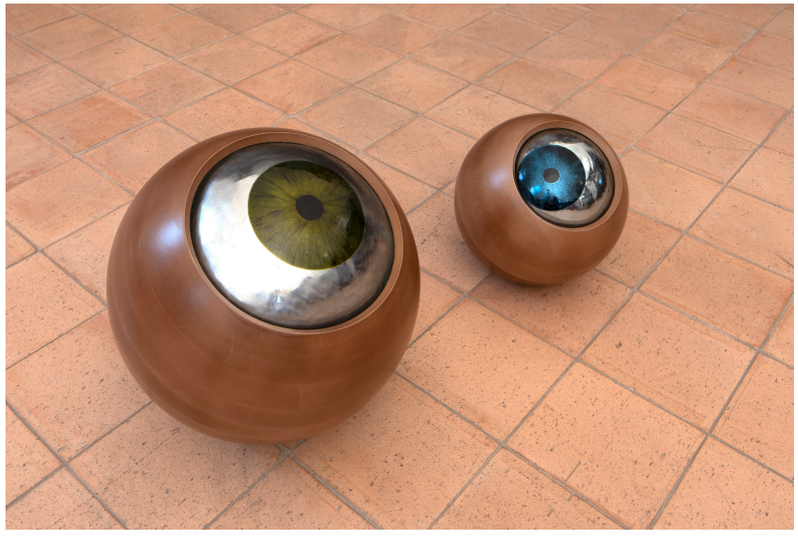
It can become disappointing and tiring; it is often not possible to implement what you want, and the material looks different in reality than in your head or on paper. This process is often sticky and long, complete with experimentation, and often riddled with failed attempts. Nevertheless, sometimes it happens that everything works exactly as you wanted, or on the contrary—the materiality speaks more than you expected, almost as if it produced its own mind.



When encountering materiality, you encounter the creative production of new interpretations and thoughts. It creates possibility, and it expands.

Materiality and working with materials are important parts of my artistic practice. In June 2023, I was invited to make a research trip to Naples, Italy. The project aimed to find points of encounter between contemporary artistic production and scientific knowledge by inviting artists to engage with a range of scientific museums in Naples. During the research trip, we visited the city's Natural Science Museums. Together with the museum directors, we had a chance to discuss a collection of scientific objects, their history of research, and the politics of these spaces. This trip was crucial for exploring the city's local context, and preparing an artistic project that would be implemented during the following year in one of the museums. That is how I, and subsequently my artwork, landed at the Museum of Physics in Naples.

In my creative practice, I was never interested in science per se, but science and scientific objects are always a part of the subject that interests me: human relationship with the information and material world, with the accompanying distortion/augmentation of reality. Museum representation



Untitled (The Error), 2024, wood, glass, mixed media.
Photo: Maurizio Esposito

and its changes in historical times are never an objective reflector of the phenomena and exhibits presented. This project inspired me to create an artwork where ideas unfold through materiality. With this essay, I want to articulate the experiences and observations that emerged during the time spent at the Naples Physics Museum, where the exhibition was held, and the thoughts that occured while working with materials in my studio.

When you enter the Museum of Physics in Naples, you are simply bombarded with forms, shapes, and combinations of wood, glass, and metals—the materials typically used for the equipment of physics created before the invention of synthetic plastic (1907) and World War II, when the urgency of scientific instrumentation grew due to the demand of improved analyses of war products. I found it very interesting how the representation of science worked throughout the collection of scientific instruments. Instruments exhibited in a museum spread through their materiality. The exhibits in the museum are the equipment and instruments of scientists who contributed to the development of physics in the Kingdom of Naples. The museum was established in the Refectory of the Jesuits around 1680. Instruments exhibited in the museum were acquired mainly during the 19th and early 20th century, and had been made by prestigious English, French, German, and Neapolitan artisans.[1]

During the exhibition, my artwork was displayed in a room representing Optics. While visiting the museum, I was mainly attracted by the optical instruments and lenses, perhaps due to their materiality, which strongly interacts with the viewer by reflecting or distorting light. In a way, the physical problem of vision and light involves a human dimension in seeing, representation, and gaze. The artwork reflected the room with all its exposition and devices in its mirroring surface. It was surrounded by instruments like a large Fresnel lens, used by Macedonio Melloni to prove that the moon does not emit cold rays; different types of telescopes and reflecting spheres; the original wooden furniture in walnut root, 17th-century stuccoes, and an altarpiece depicting

1 There are about 800 instruments on display in the Museum, divided into three Collections: the Collection of the University Cabinet of Physics, the Collection of Bourbon Royal House and the Collection of instruments used by the physicist Macedonio Melloni.

the Circumcision of Jesus by the painter Marco Pino from Siena. The museum also contains exhibits and scientific instruments whose function is unknown. Like my piece, they are untitled, and their purpose is up for debate. With an anthropomorphic element in it, my sculpture was a set of alienating objects in space. Still, being reminiscent of the museum exhibits in their materiality, my sculptural piece



My sculpture among the museum collection,
Photo: Maurizio Esposito

could suggest that it belongs to one of the instruments in the museum collection.

In such a full display of objects, architectural elements, and wooden cabinets, the visitor's gaze alternately wanders around the abundance of things, and creates tension between seeing and knowing. The function of the objects appears clear only after conducting what museums typically classify as "mediation tools."[2] In the case of the Physics Museum, you are left to trust the traditional object labels and the museum worker Matteo, who willingly tells visitors about some of the scientific curiosities that interest him,

2 Mediation is usually defined by museums as full range of tools and resources used to forge a relationship between the visitor and a work of art: exhibitions, catalogs, guided tours, workshops and the work of curators are the most important facets of the museum's cultural mediation.

but, not being a physicist, is not always able to explain the function of an object and its meaning. According to the psychoanalyst Jacques Lacan, in our relation to things, "insofar as this relation is constituted by way of vision, and ordered in the figures of representation, something slips, passes, is transmitted, from stage to stage, and is always to some degree eluded in it, that is what we call the gaze" (1998, 73). There is always an *Error* in our vision, navigated by this wandering gaze.

The human eye is a complex organ responsible for our vision, feeding information to our brain about the outside world. The eye can be viewed as a living optical device, an optical system where light absorbed by chemicals results in an electrochemical signal that is passed from cell to cell, along the optic nerve, towards the brain, where vision is experienced. The visual world catches us by our gaze: "No



The reflection of my sculpture on one of the instruments in the collection. Photo: Maurizio Esposito

doubt in the depths of my eye the picture is painted. The picture certainly is in my eye. But I am in the picture," evokes Lacan in his classic seminar. The gaze, in other words, is an object that defines a visual field and marks the subject's unconscious desire within that field. When I walk through the rooms of the Physics Museum and look at the exhibits, my gaze is never neutral. I am always in the picture. The gaze for Lacan is something that is led by a distortion, a stain—an error. The Lacanian *Stain*—or the *Error*—that forms my own gaze in the museum must be recognized as an integral part

of the process of seeing. It cannot be excluded or fixed. The invisibility of something that is hidden in the picture, its status as a stain, is—to use Kantian terms—a condition for the possibility of seeing. Only by engaging the error as an autonomous part of seeing can we trace its lead and not allow ourselves to be completely possessed by it.

Quietly lying there, as fossils of the development of modern optical science, the objects in the museum are no longer instruments used by physicists in their laboratories. Although they have not lost their power and properties: the curtains are permanently darkened near the solar radiation measuring device because on a brighter day the sun that enters through the window and shines on its lens can cause a fire. Objects that represent science in the king's chambers must have a specific representational materiality—after all, this collection was once a sign of status and power. But materiality in itself does not guarantee access to objects: materiality often misleads the reading of the object; it breaks into the symbolism of the object with its physical properties, its body mass, its composition of materials, and its position in space. The object—the symbol—can be deluded by materiality.

Errors accompany the manufacturing process itself: "Every instrument, however precise you can make it, is prone to producing errors" (Magiels 2010 p. 199). Manufacturing mistakes in creating scientific instruments will give inaccurate results in experiments that become the base of the theory. The collection of instruments in the Physics Museum in Naples was made in times when complex instruments used for examining physics were almost exclusively handmade. From the Fresnel lens to X-ray tubes, one can only guess what secrets and technologies lie behind the surface of these objects. Just like artists, scientists had to work with the material world to get the results of their ideas. The telescope lenses made by precise machines nowadays were handmade in 1645, when Evangelista Toricelli was polishing his lens—the most precious Physics Museum exhibit. When they experimented and tried to explain their ideas to the public, scientists always had to deal with craftsmen who were building

scientific instruments for them. Or they became craftsmen like Toricelli, who designed and built several telescopes and simple microscopes as well as produced high-quality lenses, whose creation process was "surrounded by a certain amount of mystery" (Robinson 1994, 37-47, 38).

Different technical processes were combined in the production of my artwork according to the material I worked with. But like Torriceli, I will leave some mystery about how my artwork was done and will not explain the process in a descriptive way, but will share ideas and emotions that appeared to me via intimate processes of encountering materiality. In the beginning, I had to find out how to produce the wooden part of the sculpture. I wanted it to be perfectly round and echo the woodiness and varnishing qualities of the tools exhibited in the museum. I used saws, lathes, grinding tools, CNC milling machines, glue, presses,



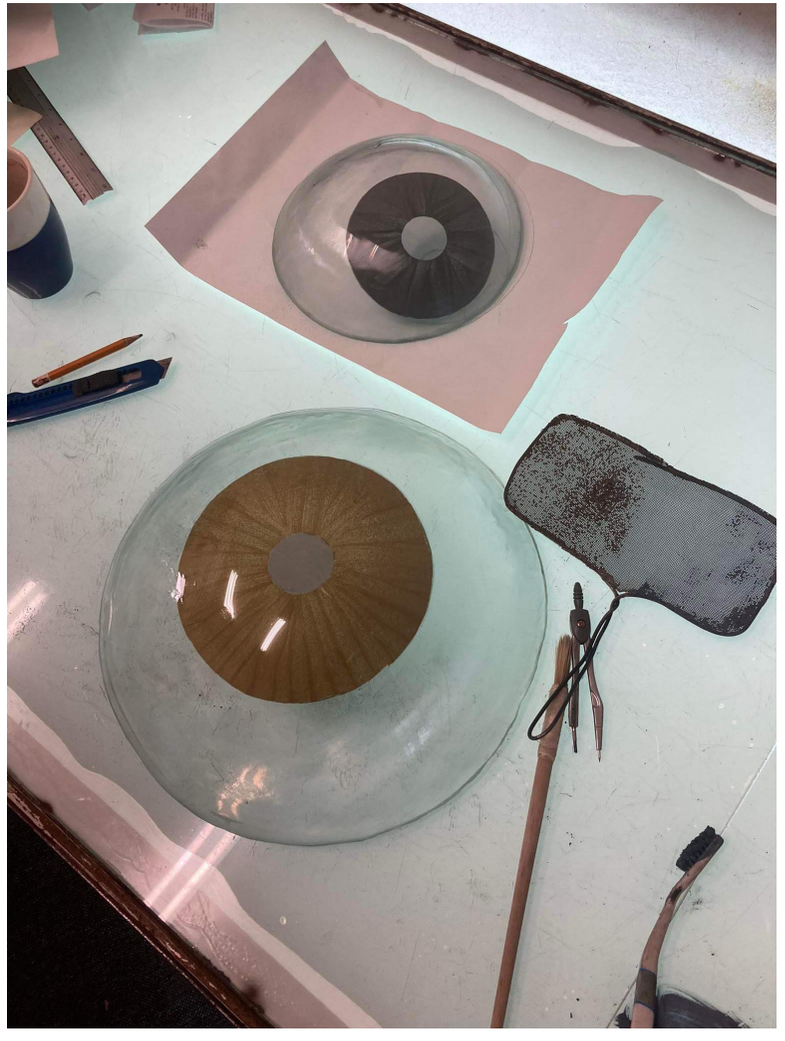
The process

angle grinders, varnishing, and waxing to produce them. When working with wood, you must know how it grows and behaves after being cut down. It is like a living creature that constantly changes during the process. Wood has its character and behavior. To use wood successfully, you must understand that pine will behave differently than maple or birch—different from oak. A craftsman who works with wood must take that behavior into account. As it were, the craftsman must create the form with material help. The maple wood I worked with was resistant; it didn't stop changing its appearance and moved throughout the process. The master in the wood workshop where I work, Donatas Stasiulis, had a theory about it. He thinks it is because the wood nowadays is cut in the most vibrant stage of its growth—summer. In older days, wood was usually cut in winter because of the most accessible transportation from the forest with a sled. That's why wood is even more lively when you work with it. This struggle with the material produces additional thoughts for the work, which spread through the object's materiality in the work itself. It is as if the excess of the idea of the work appeared in a joint operation with the material. As the philosopher Gilbert Simondon stresses, at this moment "matter is no longer pre-individual matter or molecular matter, but already individual. The potential energy which actualizes itself is an inter-elementary state of the system vaster than matter" (Simondon 1964 p. 27-39).

While creating this artwork, I had my first encounter with glass. To form a curved shape from the glass, I needed to make a ceramic mold for its firing, in which a straight sheet of glass, liquefied by the heat like a drop, would lean against its walls and curve. The drawing on the glass was created using what I found very painterly—the traditional stained glass technique. I used chemistry to form a mirroring part in the backside of my lenses so that the sculpture, similarly to the eye, would reflect the environment. For all these processes, you must comprehend at least the basics of the physics and chemistry of each material. There was a moment in the process when the glass part of my sculpture, as I call it—the lenses, remelted in the furnace. It turned

out that the master in the glass workshop decided that the glaze on the irises of the lens was too speckled.

When putting the glaze, I used the brush and sprayed the glaze through the mesh. He evaluated it as a glaze defect, and because he wanted it to melt more when firing the lenses for the second time, he put the temperature in the furnace too high, and the glass could not withstand it. It melted strongly and deformed. What he considered an error, for me, was a technical effect that I liked. I felt a sadness that I hadn't felt in a long period of time as if something so close to me was gone. The very material—glass, which I worked so carefully, polished and then glazed—became no



The process

longer suitable for my sculpture. That's when I realized how close my relationship was with the material itself. I became attached to it by forming it, and its loss had a strong emotional impact on me. Because I already knew the material and how it behaved, I did the second version of the lenses much faster; the process was more professional and less intimate. In the end, I was much more satisfied visually with the second version, and this re-making was beneficial to the work.

A work of art is a closed aesthetic material entity existing according to its laws. The final sculpture resulted from many different methods, materials, and processing technologies. You can only predict how those materials will combine in the sketch. However, you can only check if the artwork's materiality works when you have the different elements manufactured. There was a moment in the creative process when I already had a glass lens, albeit damaged and still without its mirror part, and glued polished wood, not covered with varnish yet, but it was already in its final form. Even though the artwork wasn't finished yet, at that moment my artwork started to function through the union of materials. The materiality itself had the final word.

The first lectures at the university for physics students are about dealing with errors accompanying the research process and experiment. As the human body ages, cells reproduce with more and more mistakes until they become unbearable errors that cause the human to die. Under the influence of another dimension—time—the materiality of the objects, just like our body, is constantly changing. Navigating through errors is also an important part of artistic practice. Materials are experienced practically rather than theorized. There are plenty of books about making Damascus steel, but only a blacksmith knows if the theory works.

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