The possible future

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ABSTRACT

Due to the non-degradable characteristics of plastic materials, which would exist and pollute nature for thousands of years, this project will use plastic as a medium to model the vision of the future world. The direct and indirect pollution of the soil will eventually lead to changes in the growth and extinction of creatures, which could seriously lead to an unpredictable future. With the pollution of water resources, the ecological chain of marine organisms will break, and they passively accept the non-degradable materials produced by human beings, which gradually destroy their bodies.
We are attempting to use fabrics and textiles as mimesis of this phenomenon, creating a sense of suffocation, which is their cry for help to the environment.
We are planning to use bioplastics combined with plastics as the medium of this project, and we will do some material experiments in the initial stage of this project. Compared to plastics, which cannot be degraded in the environment, we could find the possibility of material sustainability. Nowadays, as polluted plastics are buried and stacked in the soil, plastic surrounds the earth like a huge net, constraining the future of mankind. In addition, we will try to use Arduino to control the gas pump and balloon to achieve and simulate the frequency of biological respiration.

INTRODUCTION

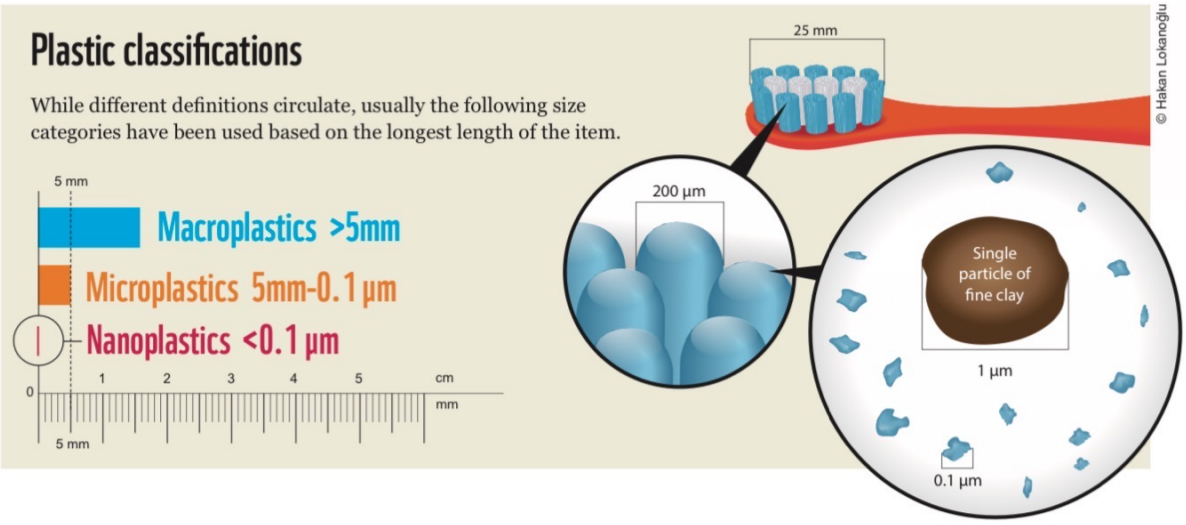
Facing the various social problems and environmental changes nowadays, we are attempting to build an installation artwork through our imagination about the world and society of the future. It could cooperate with a temperature detector, inflation machine, and so on. When we are trapped in a rapid development era, it also expresses our confusion and hesitation. We are going to use our works to talk with the future world.
This project combined the colors blue, green, and grey to simulate ocean pollution. To do a lot of experiences and make a wearable installation based on biodegradable bioplastics, using Arduino and an air pump to show breathing and display suffocation from plastic through a balloon inside the head.

BACKGROUND

Through research and Internet searches, we get the data from the essays. An estimated 4.4–12.7 million metric tons of plastic are added to the oceans annually. Plastic is not constrained by national boundaries, because it migrates via water and air currents and settles in benthic sediments. More than 50% of the ocean's area sits beyond national jurisdiction, including the infamous "garbage patches" in oceanic gyres where plastic accumulates.
We note that the scope of plastic pollution is vast and its harmful effects are enormous, indirectly leading to the endangerment or extinction of marine life.

"Due to the challenges of collecting ocean plastic and the persistent nature of plastic in the environment, once the plastic is in the ocean it's almost impossible to remove it. Moreover, once it has entered the ocean, it continues to break down: macroplastics become microplastics, and microplastics become nano plastics, making recovery even more unlikely. Even if all plastic pollution inputs into the ocean were to stop today, this degradation process means the mass of

microplastics in oceans and beaches will more than double between 2020 and 2050. And there's little evidence of plastic pollution inputs stopping or even slowing in the near future."
However, the Nano plastics in the project are tough to degrade, but the bioplastic we have created is soluble in water and can be used as feed for marine life to provide biological nutrition.



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METHODS

We have tried various ways to create different bioplastic types and decided to use coloring, fish glue powder, glycerine, and other edible materials to create this bioplastic.
In addition, on a technical level, we have used Arduino to program the air pump, which ultimately embodies and simulates the sense of biological respiration.
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RESULT

The plastic wraps around the model's head to achieve a sense of restraint and suffocation. We use a balloon inside the head to mimic the sense of breathing. The wearable device below the model's head is made up of several different types of homemade bioplastics that have been stitched together to form an umbrella-like structure.
In addition to this, the development board controls the air pump according to the body's breathing rate, while the bioplastic wrapped around the head expands or contracts in response to it to visualize breathing. At the same time, we add a blue-tinted flashing light to the plastic that will follow the breathing rate.

DISCUSSION

Why do we use the combination of plastic and bioplastic?
Our installation presents two forms of materials, one is traditional plastic and the other is bioplastic. The installation would reflect their different characteristics and textures through the combination of two different materials, allowing the audience to feel the difference through wearing and touching them. Based on the environmental protection level, plastic is not degradable, while bioplastic can be dissolved at high temperatures. In the end, we hope to show the difference between the two materials by heating this installation. Finally, we hope to reduce the use of plastic through this project and explore the feasibility of bioplastic in the future.
Why do we want to show it in the form of a garment?

We hope through the wearable device that the audience can feel the suffocating effect of plastic on marine creatures by wearing it. The whole installation is presented in a fully enclosed form so that when the audience is inside the installation, they can feel the helplessness of the marine creatures trapped by plastic pollution.
Why is it presented in this shape and material?
Unlike traditional garments, the installation presents a sense of expansion, which simulates the increased plastic pollution on the earth over time. At the same time, the layering of materials is used to show the random discarding and disposal of plastic materials in daily life.

CONCLUSION

We hope that we can use this installation to find alternatives to plastic in the future. There is no doubt that plastics will bring an impossible future to mankind. Nowadays, human beings are gradually realizing the importance of environmental protection. A possible future will be created through various environmentally friendly materials and methods.