Lowell Milken Center for Unsung Heroes
ARTEFFECT

Impact Statement

Loren Joung, Grade 11
Between Earth and Experiment
Acrylic, pencil on canvas, 20 x 15 inches
Kamiak High School, Mukilteo, Washington, USA
Unsung Hero: Dr. Justus von Liebig

My artwork, *Between Earth and Experiment*, is about Dr. Justus von Liebig, a nineteenth century German chemist whose work transformed our understanding of chemistry, agriculture, nutrition, and the connections between science and everyday life. Liebig was a pioneer of organic and agricultural chemistry. When he began teaching at the University of Giessen, he envisioned a new kind of scientific education, one based not simply on memorization, but on hands-on experimentation. When the university rejected his proposal and desire for new ways of learning, he created his own laboratory in which he developed a more innovative approach where students learned by conducting real experiments in small groups together. His laboratory and teaching methods became the model for scientific education, where experimentation and questions are what shape science education today.

This part of Liebig's story strongly influenced my artistic vision. I wanted to portray him not as an untouchable historical figure, but as a person deeply engaged and interested in the process of discovery. The open books, glass vessels in use, papers, and plants surrounding him represent the connection between learning, experiments, and curiosity. His raised hand holding a plant close to him represents the visual relationship of the painting, where science is meant to be learned about through creativity and hands-on work. Liebig's determination also extended beyond the laboratory. He had witnessed devastating food shortages, which helped him advocate for and research agricultural chemistry and the problem of food production. His research helped establish the importance of mineral nutrients to plant growth and contributed to the development of modern fertilizer science as well. His work ultimately helped connect chemistry with the production of enough food for people to survive on.

As for my artistic choices for this painting, I chose warm and earthy colors as well as natural light to merge Liebig's laboratory with the world outside his window. The greenery, birds, and botanical plants symbolize the living systems he sought to understand, and the more grayish interior represents the efforts humans make to understand the processes of the world around them. I used layered brushwork and textured strokes to create an atmosphere that feels historical and alive at the same time, showing the awe and significance of his discoveries. I

wanted this artwork to communicate the power of curiosity and perseverance when it comes to solving an issue. Liebig faced rejection yet transformed that into an opportunity to build a new system of learning that people still implement today. He applied his scientific knowledge to challenges affecting entire communities, which inspired me to create this painting.

Through this artwork, I hope to introduce others to a hero they may have never heard of, and to help others realize that being willing to challenge norms and ask questions is what helps us learn to create a better world. I believe that Liebig's legacy reminds us that discovery always starts with creativity, curiosity, and a desire to learn through experience, which are valuable skills that help us create a better world for all people. I do not believe we always have to have answers to our problems, but Liebig's story reminds us that all solutions start with curiosity.