Moving Pigments

Automating and scaling up the co-design of textiles with pigment-producing bacteria
Moving Pigments

Hosted by: Charlotte Werth

Project Information (EN)

The high degree of uniformity demanded in the context of mass production and consumer capitalism has led to extensive usage of petrochemical dyes. These often have disastrous impacts on ecosystems through the pollution of water courses and landscapes. In contrast, bacteria dye has many environmentally friendly advantages, including far lower water-usage and no use of harmful chemicals. Placing this method within the industry’s context is desirable and necessary to provide an alternative to the destructive status quo. Bacteria dyeing is a rather beautiful and unique method of dyeing, creating colour-gradients and lines when guided, which can not be imitated easily. Nevertheless, the microbes grow in slightly unexpected ways and thus take part in the design-process. Through centring living organisms as an integral part of a collaborative production process, the outcome can be explicitly designed but never foreseen precisely. Co-designing and co-producing with microorganisms means understanding their way of growing and applying that when generating patterns. The aim of this work is to explore the possibility of reproducing this predictably unpredictable practice on a larger scale. Challenging the established separation of human and non-human species can create meaningful innovation. Designing with and not against nature necessitates alternative practices and new instruments. The machine developed within this work is designed to experiment and explore the process of bacteria dyeing through automation. It represents a case study for the prospective large scale implementation of sustainable co-designing dye practices.

Image List

Filename	Caption	Credit
charlotte-werth-moving-pigments-photo_1660515830.png	Bacteria Dye Machine_01	Tom Mannion
charlotte-werth-image4_1662376074.jpg	Bacteria Dyed Textile	Suzie McMurtry
charlotte-werth-image7_1662376474.jpg		
charlotte-werth-process3_1662376517.jpg		
charlotte-werth-image5_1662376531.jpg		

The images above are included in the ZIP under `/images`.