

Meta-Ton

Digital Design at the Intersection of Abstract Computability and Material-specific Empirical Knowledge

Abstract

This article addresses the use of clay as a ceramic building material and as a digital entity. Clay requires a high level of technical know-how and understanding due to its specific dynamic parameters in the forming and manufacturing process. It is necessary to talk about how with increasing digitalization, a dematerialization in methodology can be avoided. For this purpose, the seminar *We Clay*, which was developed and tested at the RWTH Aachen University, carried out empirical investigations, the results of which will be described in more detail in this article. The transfer of the clay-specific characteristics into a digital environment and the description of the resulting findings and new properties have been summarized by the authors under the term *Meta-Ton*. This term is a parametric construct that brings together the experience and skill of the designer with the shaping and simulation capabilities of the software. The digital tool extension provides the designer with new ways of shaping. These new methods are derived from the laws of the material, extend traditional rules of ceramic design and can lead to a new dimension within the design process.

Keywords

Clay, 3D-printing, Experiment, Material research, Form-design