

Grasping the Untouchable: Establishing New Realities at the Virtual-Actual Interface

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This thesis and its practice-based components explore the relationship between the representation of reality and the generation of reality. The study considers the externalization of the artist's conceptions through media based reflexivity. This process is significantly augmented in the materialization of virtual entities as actual objects. // In its analysis, the research makes use of theories and scholarship from both the humanities and the sciences. Focusing on a series of case studies from the artist's practice, the study investigates a core concern - the translation of mental representations into material. It identifies interactions and interventions with forms of reality in the use of photography, print, digital imaging and rapid prototyping. // Key to translating the artist's mental constructs into material is the concept of digital morphogenesis, a time-based process that establishes the specific characteristics of virtually generated entities as actual objects. This evolution of the virtual, enables the artist to externalize his existence and to register his material sense of being. Ultimately the process of digital morphogenesis locates the intensive properties of geometry and duration in the extensive expression of the material art object. // The automated process of rapid prototyping is identified as an appropriate means to express the substance of the artist's thoughts. This technology shortens the distance between conceptualizing and making. It eliminates structural concerns and enables an intuitive expression of form. Most significantly, in translating a virtual entity into an actual sculpture, a natural evolutionary process is enabled. This process establishes new realities at the virtual-actual interface.