

The Texture of Light

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1 Abstract

The Texture of Light is research on lighting principles and the exploration of life feed video metamorphosis in the public space using reflection of light on transparent materials. The Texture of Light is an attempt to fight the boredom of everyday life. This project employs the simple use of chemistry, Plexiglas, and plastic patterns to form a reconstruction of reality, giving it a texture and an expressive form. The transformation of life feed video comes from physical, plastic circles that act as different masks of reality. These masks can be moved around and swapped by the public, enabling collective expression. This metamorphosis of the public space is presented in real time as a moving painting and is projected on city walls. The public can record video clips of their 'moving painting' and project them back onto different city locations.

2 Digital versus tangible life feed video metamorphosis

Life feed video metamorphosis of the public space can be done digitally by applying mathematical formulas to the captured digital visuals as in Gate Vision by Kazuhiko Kobayashi. The circular metaphor of visuals transformed digitally was shown in movie experimentations such as Lapis by James Whitney (1966), an abstract art film composed of images produced by an analog computer.

The tangible potential of the direct use of light on Plexiglas lenses and transparent materials presents three opportunities that are critical to this project. First is the collaboration in the public space facilitated by tangible means. The second opportunity is the improvisation and experimentation space offered by such tangible and mechanical systems. The third is the reinvestigation of the physical texture of light materialized, allowing a direct understanding of the effects of light properties on transparent materials e.g. reflection, color transformation, density, diffraction.

3 Video versus still picture

The Texture of light transforms moving images. The author had to decide between working on still or visual captures. Transforming a still image did not appear as powerful as the moving image metamorphosis. One can easily recompose the still image by understanding its light distortions. However, attempting to apply lighting principles on a moving image is a difficult mental re-composition task. The attempt to re-interpret the unknown becomes very engaging. The reality becomes a moving painting (see figure 1).

4 Experiments

The author originally sought to transform a picture by mechanically applying different transparent sheets between the captured image and the projected final image. A series of experiments with transparent materials involved pattern analysis of the video metamorphosis. During these experiments, water on clear plastic, gel, polyoptic 1410 clear plastic, and crystal clear flex were tested. The author particularly invested in diffraction phenomena to transform light passing through transparent materials (diffraction being the apparent "bending" of light waves around obstacles in its path).

5 Design of The Texture of Light

Researcher Saul Griffith has shown that magnifying lenses can be reconstructed using liquid plastic. Experimental cinema has shown the use of water, oil, and glass material for visual transformation, as seen in the film *Au Bord du Lac* (1993) by Patrick Bokanowski. The investigation of Texture of Light is grounded on the belief that cinema offers an interpretation, a point of view of reality. What if this point of view was due to light transformation? Bokanowski's work in experimental cinema inspired the analysis of the type of imagery that presents a distortion of light and offers a possible reinterpretation of its meaning.

The current prototype of the Texture of Light is composed of a set of lenses, an iSight video camera, a rotary knob and a computer. Laser cut Plexiglas lenses are used as clear plastic molds. Lenses are designed with different lens sizes, pattern shapes and pattern sizes (see figure 2). The author also conceived of and implemented a software piece that links the life feed video to a projection screen. A rotary knob controls the application. By pressing for more than two seconds on the knob, the software records a video clip coming from the life feed video. By pressing on the knob, the software plays back the recorded clip and projects it onto the screen. By turning the knob, the software returns to life feed mode. The video clips are collected onto a server and can be accessed by other computers from different locations. This instantly creates a canvas of multiple transformed city video clips controlled and created by the inhabitants of each city.

The author envisions this project on a larger scale, such as building-size panels that the public will mechanically control using remote devices. Each panel will be specific to different patterns and transparent materials. Two Plexiglas sheets could embed a water-fall, or viscous transparent material the user could distribute along his/her selected point of view. The software will allow media distribution among cities so that the outcomes of the public performances will be exposed on the panels of other cities.



Figure 1: excerpt of life feed video metamorphosis using transparent medium hexagons on a large lens



Figure 2: large stars, a small lens and its video metamorphosis

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