Sustainable Cinema: The Windmills

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1. Introduction

As an artist who mixes cinema with emerging technologies, I often focus on the physical properties of generating the moving image—the energy, the light, the screen itself. The Book of Film Care, an older brochure by Kodak, boasted that film was ‘animal, vegetable, and mineral’—bragging how all the materials used to make celluloid came from the natural world (Gordon, 1983). The first century of cinema was made with ground cattle bones and wood pulp. The screen also had organic beginnings. The term ‘silver screen’ derived from the embedding of silver into silk fabric, while even earlier shadow puppet shows projected onto opaque animal skin. Like painting and sculpture, the history of film began with materials directly from the earth. This series of artworks considers alternative systems to create a moving image, as if cinema had continued to evolve with sustainable elements instead of being influenced by the industrial and digital ages.

2. Background

My artworks often investigate a deepening dynamic relationship between the moving image and its environment. I began as a video artist and filmmaker in Los Angeles in the 1980’s, introduced computational programming and interactivity to my films, and now create kinetic public sculptures that react directly to the natural forces found in sites. Either directly or through computational sensing, each of my cinematic artworks is shaped by interaction with the natural environment.

To do this, I have mixed film with sensors, robotics, and alternative forms of interactivity. All of them are experimental cinema generating systems, players. Over the years I have made movies generated through topology (“Mulholland Drive”), sensed environmental data (“Brakelights”), complex data sets (“Celestial Mechanics”), and viewer location and movement (“GPSFilm”).

3. Current Work

Sustainable Cinema is a series of five kinetic public sculptures powered with sustainable energy sources and intended to start a conversation about sustainable energy and media. By using natural power—wind, water—to create the optical illusions that led to the beginnings of cinema, the sculptures reference the histories of the moving image and industrialization. They explore a possible future of environmentally responsible media—looking forward by looking back.

The spreading audiovisuality of our culture means that we are surrounded by screens, yet rarely understand the technology behind them. These sculptures offer a moment where the mystery of the moving image can be grasped. They are simple illusions created with simple energy to make us reflect on how removed we are from the original magic of the moving image. It is a primal media experience, which, due to the rapid development of cinema technologies, is no longer an oxymoron.

4. Conclusions

An irony of the green energy movement is that the oldest energy forms—wind, water—are considered new replacements for more recently developed ones. Sustainable energy is actually a reimagining of the old, and these works aspire to do the same. Additionally, they are meant to stimulate public awareness and conversation about sustainable development. The cinematic elements first entertain and then inform the public about the fundamentals of sustainable design. The sculpture takes the abstract principles of sustainable energy and makes them tangible; by simplifying the processes, it becomes more accessible.

References