Salton Sea Revisited: An Aesthetic Study of Realtime Lapse

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Fig. 1. Salton Sea Revisited. 6 March 2012. 0600—1800.

Abstract—As an artist, my work and research are guided by the study of the relationship between our body and space, primarily the space of the natural landscape devoid of the built environment. In this process I honed in on our perception of time being significant to understanding the space of our reality. Therefore I began a series of projects on altered realities based on our perception of time and space, to capture the subjective and perceptual qualities of time expressed as events, moments, memory and landscape. The topics of these projects span Time as Elastic, Time as Memory, and Time as Landscape. The proposed project, Salton Sea Revisited, is part of the Time as Landscape series with the goal to break the linear experience of time, allowing viewers to perceive multiple times within a single viewpoint. This paper present two aesthetic discoveries under a new term of realtime lapse: First, the emergence of data not perceivable in a moment-by-moment based experience of time; second, insignificant moments become significant events through the simultaneous experience of time, heightening one's experience of the landscape and one's existence in that particular moment in time and space.

Index Terms—Realtime lapse, Perception, Body, Aesthetic Experiment, Data Rarefication and Saturation, Moment—Event.

1 Introduction

Philosopher Vilem Flusser puts forward a hypothesis of two events that have changed the course of civilization: first the invention of linear type which moved us away from a cyclical experience of time to a linear, chronological experience, and second, the invention of the technical image which allows the recollection of time and memory through space and anachronistically [1]. I have added a third event, perhaps a subset of Flusser's second point: the simultaneous experience of different scales of space and time, from nano to galactic and beyond. My particular focus is on scale and being able to shift the perception of the body through different scales and temporal experiences of space.

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2 Architectural Body

Through the technical image our perceived body and the perception we have of the time and space we occupy are altered. Being able to shift the perceived boundaries of our body is the first paradigm for becoming what Madeline Gins and Arakawa call 'architectural bodies'. An architectural body is an 'organism-person-environment', where through the perceptual dispersion of oneself through the environment we construct meaning. Tentativeness of this experiential constructing leads to a body in flux, and detached from Cartesian space.

> *Against the environment of the new territory that is her extended I, a person throws tentatives that land as functions and schemata, most of which join up with her, becoming of her by reprogramming her. Although the organism-person*

has the potential to become a person, it does not necessarily become one, or remain one. Everything begins for these organisms with a tentative constructing toward a holding in place. The environmental communal, which has everything to do with how an organism persons, can, when reworked in a concerted manner, lead to persons being able to supersede themselves [2].

What I am specifically aiming for in my general body of work is this last point: being able to supersede oneself through perception. Subjectivity resides beyond the point where proof exists. The study of perception is purely subjective and the epistemology is gained through varying ontologies making it incapable of being proven. Salton Sea Revisited and accompanying works focus on a very subjective and specific empirical knowledge: perception of self through perception of time and space. However, the result is not purely subjective but seeks realization and actuation in our current cultural, industrial and technological society.

With the aim of studying the limits of removing the body from experience—the two are intertwined—how will new aesthetic techniques and technological innovations of altering perceptions of self, time and space arise? The reverse is also worth studying: How do we create new experiences that induce a sense of dematerialization? The study of the perceptual qualities of time and space will connect with studies of sustainability, mindfulness, innovation and forward thinking once we learn how much rides on perception and how it can be teased out and altered for the greater good. This body of work looks at this very topic of perception of time and space to redefine architecture to a utopian and body-centered environment.

3 Realtime Lapse

The only reason for time is so that everything doesn't happen at once.—Albert Einstein

Everything does happen at once: at every given moment almost all imaginable things are happening for billions of living beings, at once. What does not happen at once is our experience of a moment in time.

The first image that altered my perception, inducing an awe such that my course of thinking about my work shifted drastically to revisit my philosophy and aesthetics, is from the Hubble Ultra Deep Field, an image of the universe in infancy, 13.7 billion years ago [3]. What we see is time travel (I am a science fiction fan), and most importantly where we see this from is at a universal scale of our body: by holding the image of a space so great in magnitude that it is incomprehensible if we were at the same scale, the image becomes accessible by nature of perceiving ourselves to be greater in scale.

Through the technical image, not only do we see different scales of space, we experience different scales of our body. Can we assume our scale has any effect in how we experience time in different space scales? Can we be experiencing time as we are now—second by second—because of our small scale in relation to the space our time is in relation to, a space in which we are very small? Can we be infinitely huge and experience all of space and its time at once? What happens to our perception of reality, of space and of self, when we are able to experience time simultaneously?

The answer to these questions is what I set out to explore with my photography and video and the specific editing technique of slicing time and space to be experienced at once. The video and photography show the entire span of a day—usually from sunsight to sunclipse—being experienced at once. This simultaneous experience of time is akin to our experience of first seeing images of Earth—the sudden awe in seeing the massive scale of the whole. The activation of awe is key. Consequent studies show that awe expands the perception of time and involves perceptual vastness that arises 'when one encounters something so strikingly vast that it provokes a need to update one's mental schemas… meaning that it alters one's understanding of the world' [4]. In these images, I alter time and space to induce awe, to in return alter the perception of the body. The expanded moment leads to a feeling of psychological and physical expansion in and across space. Different from the referenced experimental psychology studies, I take the relationship between time and awe as a given for experiencing beauty of the extraordinary, or the unusual. Awe is necessary towards becoming architectural bodies.

Fig. 2. Salton Sea North Shore. 18 January 2010. 0600—1800.

Prior to my first image [Fig. 2], this technique of simultaneous spatial and temporal exploration had not been explored in this particular aesthetic, therefore naming this technique became a challenge in understanding the information the image puts forth. During 2009-2010 erroneously I called these images *time-lapses*, however, in a traditional time-lapse, time is continuous and only sped-up. Here time lapses in chunks, literally, a lapse, missing information both in time and landscape over time. By 2010-2011 I chose *time slices*, however in video, the nature of time and landscape lapsing is lost through the choice of 'slice'. In 2012, I settled on *real-time time-lapse* and finally *realtime lapse* to stress the real passage of time, though lapsing across the landscape in time. A recent feature of the work on the popular, curated data-visualization blog, Flowing Data, Nathan Yau referred to the work as 'time running parallel' [5]. Though intriguing, parallel time implies parallel space, in other words, different spaces that are adjacent, whereas the space in these videos and images are the same. This is a topic that needs to be further explored.

4 Aesthetic Experiments of Time Perception

A second challenge was determining the temporal length of the video and the image. In bands that are too long in duration or too wide in pixel, a sense of the moment, or perceptual present is lost. The perceptual present is the moment where information is collected, requiring no recollection of memory of the events that have taken place; it is the Now [6]. Studies report the duration of the present to be between 2 to 8 seconds, with 3 seconds being the most common reported [7]. To experience times across the day as one, simultaneous time event, the viewer must be constantly kept in the perceptual present and in the indifference interval, where underestimation or overestimation of time does not occur [8]. This also draws on what Stockhausen called *moment form*, 'where a piece unfolds as a succession of unrelated moments' [9]:

It has to be the degree of immediacy, of presence that unites the individual moments: the fact that everything has presence to the same degree, because as soon as certain events are more present than others, then immediately we have a hierarchy.

Tests of duration were done in 1 minute, 2, 3 and 5 minute lengths to learn which offers the best perception of repeated perceptual presents so that the viewer perceives many 'times' as one. This is dependant on the context of the scene and in a moderately paced environment a 3 to 3.5 minute length is ideal where the events of the scene fall within the 2-8 second passage. In the sub-challenge of widths for photographs, I was more concerned with how much movement is required by the eye to collect information before each slice of time was seen as a separate image as opposed to perceived as a continuation of the slices on either side of it. These aesthetic experiments draw on foundational Gestalt theory in both sound and visual realms and are very subjective and varied from one image or video to another. An average still image is between 40 and 50 slices from sunsight to sunclipse; the video varies depending on context, as explained above.

5 Aesthetic Discoveries of Data and Events

Two aesthetic discoveries have emerged from my video and photographic technique. First, the emergence of data not perceivable in a moment-by-moment based experience of time. The first successful image was compiled in January 2010 of a stormy day at the Salton Sea [Fig. 2]. It produced a striking visualization of the weather pattern throughout the day. Given that the Salton Sea is a major wetland for over 400 species of migrating birds from Eastern Russia to South America, subsequent images [Fig. 1] became rich visualizations of wildlife activity and patterns of behavior. Additional images in other locations [Fig. 3] showed dynamic movement of the landscape over time through one static image, a swifter visual data gathering and information processing method than looking at multiple, full-scene images side-by-side where our cognitive process is forced to parse useless information gathered by our vision. A recent exhibit focusing on air pollution in Los Angeles over the course of the month uses this technique, as well as another project that simply shows South Bank Centre in London [10, 11].

The second discovery, and one more in line with my research goals of becoming architectural bodies and moving beyond the limits of the body, is that insignificant moments become significant events through the simultaneous experience of time. In Cinema 1: The Movement-Image, Gilles Deleuze defines every image as a set of rarefied or saturated data [12]. Through the rarefication of the landscape by cutting it up across time and eliminating most of the information, I get a saturation of information. So the image does not hold one or the other form of data, but both. This saturation across time that is experienced at once leads to moments becoming events. What is an event but a significant moment? Events expand the moment; this expansion leads to awe; awe alters our perception of time. Time therefore becomes limitless.

In a sense of limitless time we become infinite.

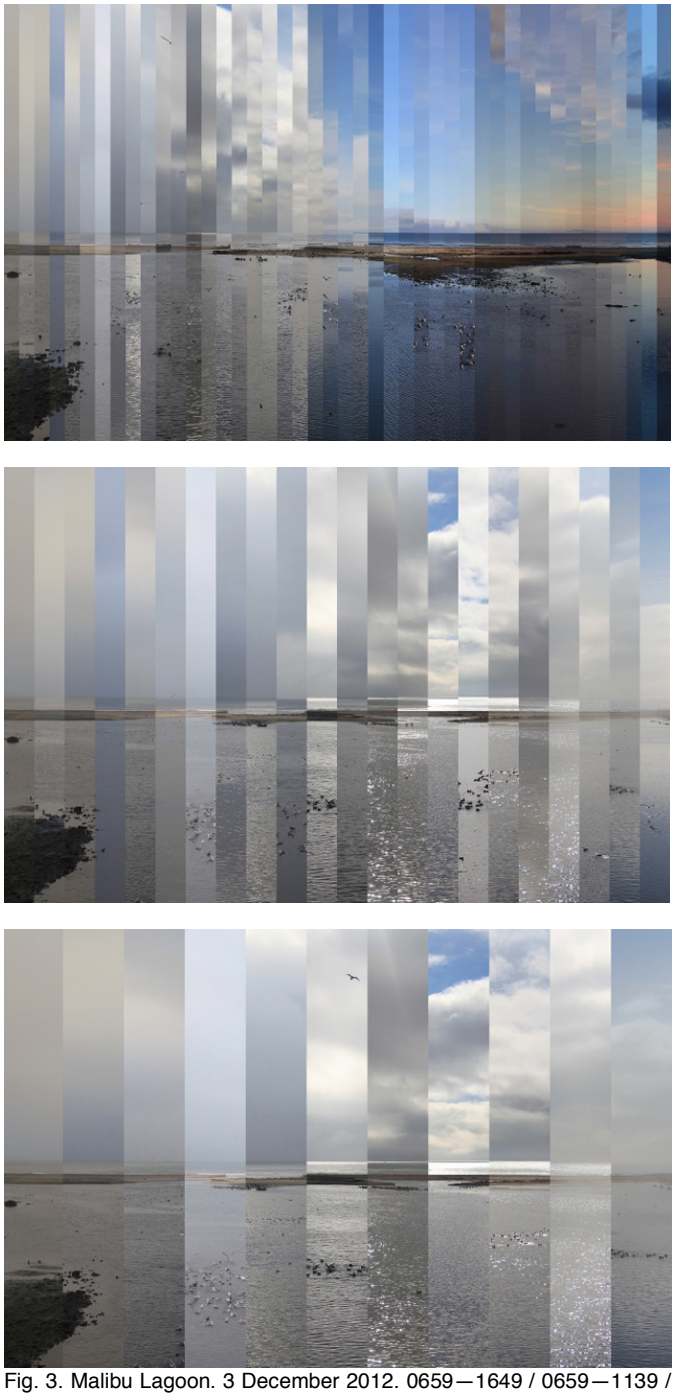

Fig. 3. Malibu Lagoon. 3 December 2012. 0659—1649 / 0659—1139 / 0659—1139.

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