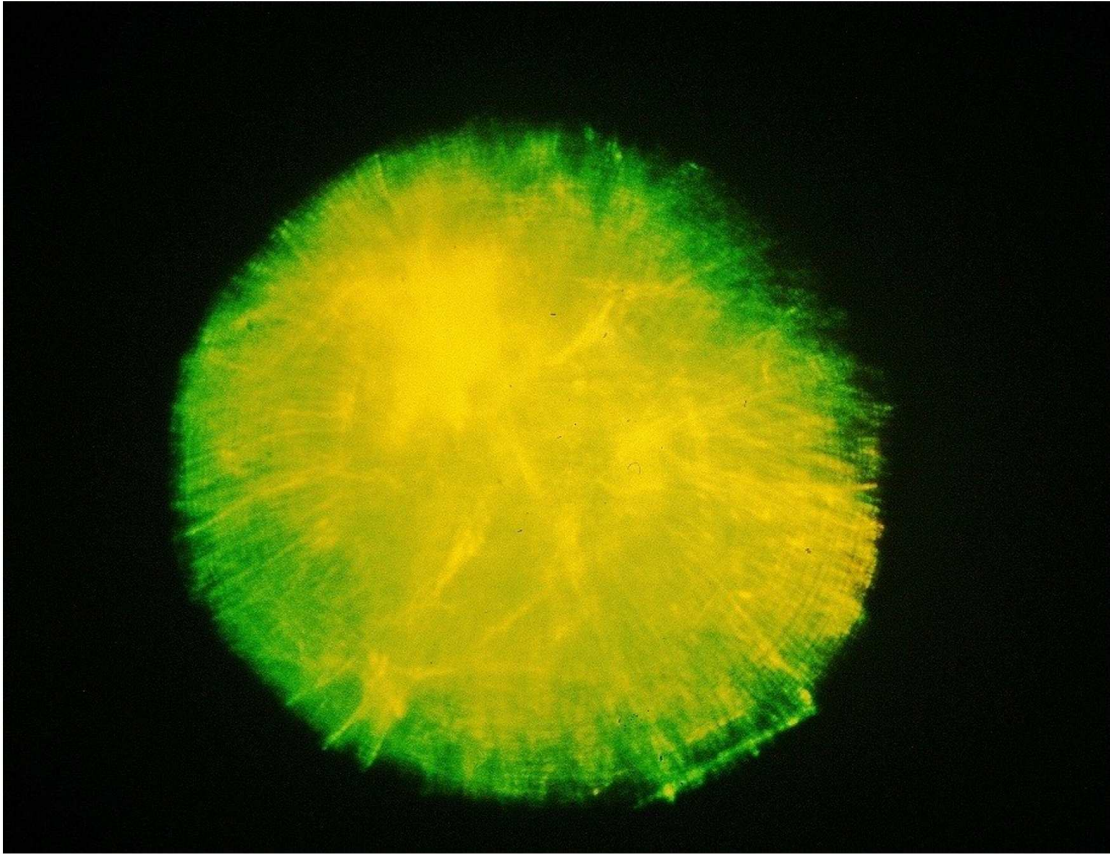


# The Holodam Universe



by Larry Lieberman

A inspirational story about art  
in the business world



# The HoloDam Universe



The Door Hologram, 1988  
by Larry Lieberman

# The HoloDam Universe

A true story about artist  
Larry Lieberman's journey  
in the HoloDam Universe

By Larry Lieberman

An inspirational story about art  
in the business world.

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# The HoloDam Universe

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# The HoloDam Universe

## Introduction

Holography was first invented in 1948 by Dennis Gabor and received a Nobel Prize in 1971.

A Hologram is a three dimensional image recorded by the interference of light rays inside the depth of a special photographic film emulation. When the film is played back by light, we see a true 3D image of what was recorded. The word Hologram means, “the whole message.”

Holography can be used to make three-dimensional art that has been seen as magazine covers, novelty items and fine art. Holograms have been made into art for high level artist and children stickers. It is these extremes in applications that cause confusion and why it often finds resistance from the fine art world. Fine art holography is an exciting cutting edge modern high-tech art media that has profound meaning.

This is a true story about artist Larry Lieberman and his work in the holography art field for 35 years.

This is a story about Larry’s climb to the top of the holographic art field by developing a high quality full color printing process and then, working with some of the greatest artist of the 20th century.



# The HoloDam Universe

The Holodam Universe is the concept that the hologram is a balance between two opposite poles. These opposite poles are positive and negative. As with just about everything, holography can be used in a positive or negative way.

In the worlds of art and business, the polarity is often swayed too, by negative and positive influences. These opposite poles can also upset the subtle balance, in making holograms and set progress back.

The Hologram Universe is based on the Holographic theory how the universe works. The Holodam universe is the positive and negative side of one of the most profound art forms and philosophies of our times.

In the book “The Holographic Paradigm and other Paradoxes”, Exploring the Leading Edge of Science, Ken Wilber give details about the Holographic Theories by Physicist David Bohm and how the holographic theory shows us how everything is interrelated and connected- -it is the **Holographic Theory** of the universe.

“Physicist David Bohm says that the hologram is the starting point for a new description of reality: the enfolded order. Classical reality has focused on secondary manifestations-the unfolded aspect of things, not the source. These appearances are abstracted from an intangible, invisible flux that is not comprised of parts, it is an inseparable interconnectedness.”

Holographic paradoxes. Ref. #2

## The HoloDam Universe

*"By combining holographic theory, spiritual thought and real experience, I found a place where I could **except** what is and flow or surrender to it. The more I surrendered to the way it is, the happier I was."*

*"In the hard times, I struggled to find a balance and keep a positive outlook –even loosing it a few times. But in the end, thank God, I found a way to see the forest before the trees and light at the end of the tunnel."*

### The Holo/Buddha Philosophy

The Holo/Buddha Philosophy is a simple concept of **surrendering** but in this hurry up age of modern life it is sometimes hard to actually accomplish. The method of *letting go* and flowing **with the yin/yang** energies is the *Holo/Buddha state*.

Knowing and trusting that whenever you need it, it will be there. The Holo/Buddha state is always there. It is a state of mind and uses an energy also known as chi energy.

To feel chi energy:

*Simply: Go to a quite place and center yourself. Sit still in a straight back chair. Allow yourself to let go. Take a deep slow breath through your nose, and let it out slowly through your mouth. Do this a few times. Quite yourself. Let your thoughts go by –eventually they will clear out and you can be in the present. As the breath is released slowly- relax and let go of everything. As you let go and let your breath out, let the chi in. As you relax more and more, breath the chi energy in. See that all things are as they are and except them. Feel the energy?*

## The HoloDam Universe

I have studied many religions and find they all have important philosophies that can be used to keep a healthy balance and perspective in life. Eastern religion teaches yoga and meditation which is a very positive practice to learn more about balance and energy.

It is the Holo/Buddha state, that has enabled me to survive many hardships in the Hologram/Holodam Universe and still find happiness in a hectic world.

From my experiences in holography, I realized that there is “more than meets the eye” in life. Just as the caterpillar becomes the butterfly. We too can transform into a higher state.

To me, Holography shows us in a symbolic and a true way, that more dimensions exists then we can see.

*“When the mind is activated, the brain can receive new ideographic (i.e., “living” holographic forms,) and cybernetic of Light constituted by several sets of signals which are made fully comprehensible.”The Book of Knowledge: The Keys of Enoch: By James Hurtak. Ref #5*

# The HoloDam Universe

## Chapter 1

### Concept of Holography 101

The word “Hologram” means *The Whole Message*.

The whole message is the study of all things. In the Hologram Universe, all things and all people have things to teach us and we must try to be open to them.

How does a hologram work?

A Hologram is said to be a model of the way reality works.

If you take a classical **glass** hologram- which is made and viewed with a laser. It is the first hologram (H1). If you drop the H1 on the floor, it breaks into a many pieces.

The interesting thing is that **each piece** of the broken H1, contains the **whole image**, essentially, you now have lots of little H1’s but from a unique perspective.

This is the profound thing!

The whole image is in each piece, only from the perspective where that piece was located in the original glass H1 hologram.

If you look at each of the little piece of the H1’s, using the laser for a light source, you **see the whole image**, only from where it was located in the original H1 hologram.

This has been documented and demonstrated by one of the leading physicist and educator in holography, Doctor TH Jeong in his **Encyclopedia Britannica** video on Holography.

# The HoloDam Universe

We are the Holograms!

If we can imagine, for a moment, that the main big broken hologram is our universe and the little broken pieces are human beings. Imagine that we are all little holograms in the big holographic universe. In other words, we are all little unique holograms from the main big hologram.

Many leading scientist feel we are actually living in a holographic dimension:

Albert Einstein said:

*“We must remember that we do not observe nature as it actually exists, but nature exposed to our methods of perception.”*

Bohn and Pribram came to the same conclusions from a slightly different direction:

*“Our Physical reality is made up of holograms that give the illusion of a three-dimensional objects when they are ,in fact, nothing more than frequency patterns.”*

Page 348, “Tales from the Time Loop” David Icke. Ref. #6

**This is the theory of the holographic universe.**

Like our DNA, that contains all of the information to reproduce a new you.

Holograms are also like humans, in the way our DNA carries our whole message or information that makes us up.

Each cell in the human body can reproduce a new you!

Very holographic. Don't you agree?

# The HoloDam Universe

We are holograms?

The hologram is said to be a model for the way the universe works. A metaphor for the way we are all connected and each carry a piece of the bigger picture, a piece of the light. A piece of the Holo/Light/Universe.

If we can all see that we have a piece of the **whole** in us, then maybe the world can be a better place. If we can see that we are all connected and all have a part of the light, then the maybe the whole world can benefit.

It is my experience that we can look to the holographic theory of the universe and see that this theory can be used to explain how we are all connected and part of the holographic universe.

## **Philosophical Question:**

*If we put the Holographic theory and the Buddha concept together can we create a complete perspective that can be used for transformation?*

The Hologram/Holodam Universe

The Hologram/Holodam Universe is a journey of a lifetime in the holographic art and business world.

The Hologram/Holodam Universe is a two sided system. The reality of the material world. The Yin/Yang effect. The Hologram is the positive side and the Holodam is the negative side to the Holographic theory.

## The HoloDam Universe

Both sides are there, just as man has 2 sides. Just as the atom has both positive and negative – it is what makes the dynamic energy move.

We would not know one without the other -positive and negative aspect. Day and night, black and white and positive and negative, exist side by side.

Could we know happiness if we did not know sadness?

In the hologram universe we have to flow with the positive and negative energy and try to find a middle ground when possible.

The middle ground is the resting place, where we can find peace. In the meadow, in the field where the nice cool stream runs through it.

This is where the Buddha State is found. Peace and Happiness.

Through the journey in the holographic universe, in the art/business worlds, life **will** be positive and negative. It is sometimes, a long hard journey but because the hologram/holodam universe is a demanding endeavor, it is often **out of balance**.

Sometimes it is in total chaos and we have to fight to bring it back to some workable balance. Try to keep in mind that when the negative energy creeps up – and it will – that important lessons can be learned. These are the times when having the Holo/Buddha philosophy in mind will prove to be very valuable. Breathe in slow deep breaths and let it go. Bring in the chi energy and let the negative energy out and survive to fight on another day.

# The HoloDam Universe

Sometimes, the individual can lose the vision of the big picture. The image of the whole can fall out of sink. But never are we disconnected from the source of our light. As we look at the big picture, the journey and the vision in the holo/holodam universe, we will see the light and gain a positive perspectives.

Through these philosophies, I found order in a sometimes-chaotic hologram/holodam universe.

## Chapter 2

### Holographic Art

Holography is a great art form – it has all the important aspects to make it one of the most profound art forms of all times. When we look closely at holography, as an art form, we can see how the science and philosophy of holography has a **complete whole**.

It is this, **complete whole**, that gives holographic art the possibility to make a true renaissance in art. Art, science and philosophy are all part of the complete picture of holography. I call these three aspects of the holographic theory the **Holo-trinity** which is required for wholeness and balance. See paper “Why I choose holography as my media”, Lectures 1994 Lake Forest.

### The Art Establishment

In the early days of art holography, the art establishment did not except holography as an art media- this is now changing because you can not deign its power as an art media forever. Once you see a good hologram you will never forget it.



## The HoloDam Universe

Remember it took photography over 100 years to be excepted as fine art. It is well known, that any new media, is slow to be excepted in the art world.

Several theories suggest holographic fine art is slow to be excepted in the art world because it has a variety of formats. Some of the formats have been used as gift and novelty items, which seem to put a negative aspect on holographic fine art.

Many holography galleries and museums, in the early days, sold gift items in their gift stores to support themselves. The museum of holography in NY, Chicago and Paris supported a lot of their efforts by regular gift sales.

*“Despite holography’s appearance as one of the few entirely uncharted new mediums for art in the second half of the twentieth century, its acceptance by the art community was remarkably slow.*

*Surveying the reception of laser holography in art from its invention in 1962 through 1993, the critic Edward Lucie-Smith noted that critics had almost universally considered it as “irredeemable kitsch”. New Museum brochure for Holography Show, ‘Pictures from the Moon’, 2012, p.1, Ref # 7*

# The HoloDam Universe

## Chapter 3

### Business and Holographic Art

One of the problems with holographic art is that to produce a hologram, at its highest level, it becomes a very **expensive** (capital intense) art form. To do holography at a high level, large lasers and labs are needed and are expensive. Because of this aspect, it normally has to become a business. And often, when art and business join, it is often an awkward marriage.

It is true that many artists have produced holograms with a low tech, homegrown approach and some have been successful. This is rare and hard to sustain for the long run.

Since, a totally low- tech approach often leads to additional problems with the demanding riggers of holography. It is true; that some low-tech applications are beneficial and the combination of low–tech/high- tech is preferable when applied well. In fact, it is part of the balance, used for success in the hologram/holodam universe.

See: Consistent Results with Reflection Holograms.  
Lectures 1990.

To understand why holography and business are an awkward marriage, we can look at how a hologram is made and what makes a successful business.

# The HoloDam Universe

## The Hologram Side

A hologram is made by the interference of light waves. A simple hologram is made by dividing one laser beam into two beams. One beam is the object beam and the other is the reference beam.

To make the hologram, you bring these two laser beams back together to form interference fringes. When the fringes are perfectly still, the interference form, standing waves and can be recorded on the holographic film. If the light waves are perfectly still during the exposure, you can capture the interference and record the fringes and capture the image in 3D, in the depth of the holographic film.

When these fringes are recorded correctly on the holographic film, you form the three dimensional image, this is called the hologram. The more stable the fringes are during the recording the brighter the holographic image.

A hologram is said to be a window into another dimension since it can record the artist vision as if we are looking through the looking glass.

It is said to be a **true** three-dimensional image, since it contains all the exact optical properties of the original image.

# The HoloDam Universe

## Holograms and the Brain

Some scientist have claimed our brains work and store information like a hologram. Holographic brain theory “The Holographic Universe” Ref. # 1  
[http://en.wikipedia.org/wiki/Holonomic\\_brain\\_theory](http://en.wikipedia.org/wiki/Holonomic_brain_theory)

Experiments have been done on mice that where trained to travel through a maze to get to their food. Then, pieces of their brains were removed. The mice still remembered the way through the maze even when most of the brain was removed.  
Holographic Universe, Ref. # 1

In his book Transformative Vision, Jose Arguelles, talks about when both sides of the brain are working in harmony aesthetic activity can flourish.

In the chapter 8 on William Blake, Arguelles responds to Blakes terms that state we are living in times that are in a reveres of mans natural state:

*“ What I have been describing as the Transformative Vision is both the degenerative civilization process away from eternal vision, which is the basis of wisdom, as well as the persistence of eternal vision, which provides the basis or ground for a return to man’s natural state of being. In order for the ground to be fruitful, seeds of renewed and awakened consciousness must fall to the soil.”*

*"These seeds are the prophets or visionaries. The deeper the seed is planted, the more awakened and renewed the consciousness, the more capable the visionary is of projecting an understanding that is globally significant.” p.83 Ref. # 3*

# The HoloDam Universe

Arguelles goes on to say, in chapter 23, Art as Internal Technology:

*"We are in a unique evolutionary position, and when I speak of tradition and the necessity of developing an internal technology, I am by no means advocating the thoughtless or wholesale embrace of traditions of another culture. Yet to begin at the beginning, to begin again, is to embark on an archaic path."*

*"Through the shamans and the yogis of the existing archaic traditions may offer the post-Faustian refugee essential help, the point is not to become them but to become ourselves. The vision of what we are to become is already within us, awaiting the proper discipline through which it might be appropriately expressed." p. 280 Ref. 3*

Artist and art is dominated with the Right brained processing.

Holographic art is mostly right brained processing. Intuitive and experimental, spontaneous, and a creative art form? But advance holography requires processing on the both sides of the brain, creative right brain and left brain technical calculations, math, chemistry and physics.

Therefore, when you look at holography as a whole, it is both technical and artistic and uses both sides of the brain to process completely. i.e. the whole message. "Transformative Vision"

The Business is dominated by left brains activity and requires careful planning. However, new business models include creative problem solving.

Essentially, Holography and Business are opposites on two ends of the pendulum.

# The HoloDam Universe

Holographic Art is Esoteric

When you examine all the aspects of art holography from the science and philosophy side, you can begin to see it from a kind of Esoteric -pseudo-Zen/religious /art form. It is made with light and can get into a metaphysical philosophy.

When I started making holograms I had the idea:

*I was going into the dark to bring out the light.*

# The HoloDam Universe

## Chapter 4

### Making Holograms

To make holograms you need a lot of high-tech equipment, including lasers and advanced optics.

You need perfect stability and climate controls. All to have a chance to freeze the interfering light beams. To make a light recording and reconstruct a three-dimensional images that is viewed with light.

The problem- hologram/holodam madness.

When we are to make high level art using holography, we often need to form a business out of this esoteric art form.

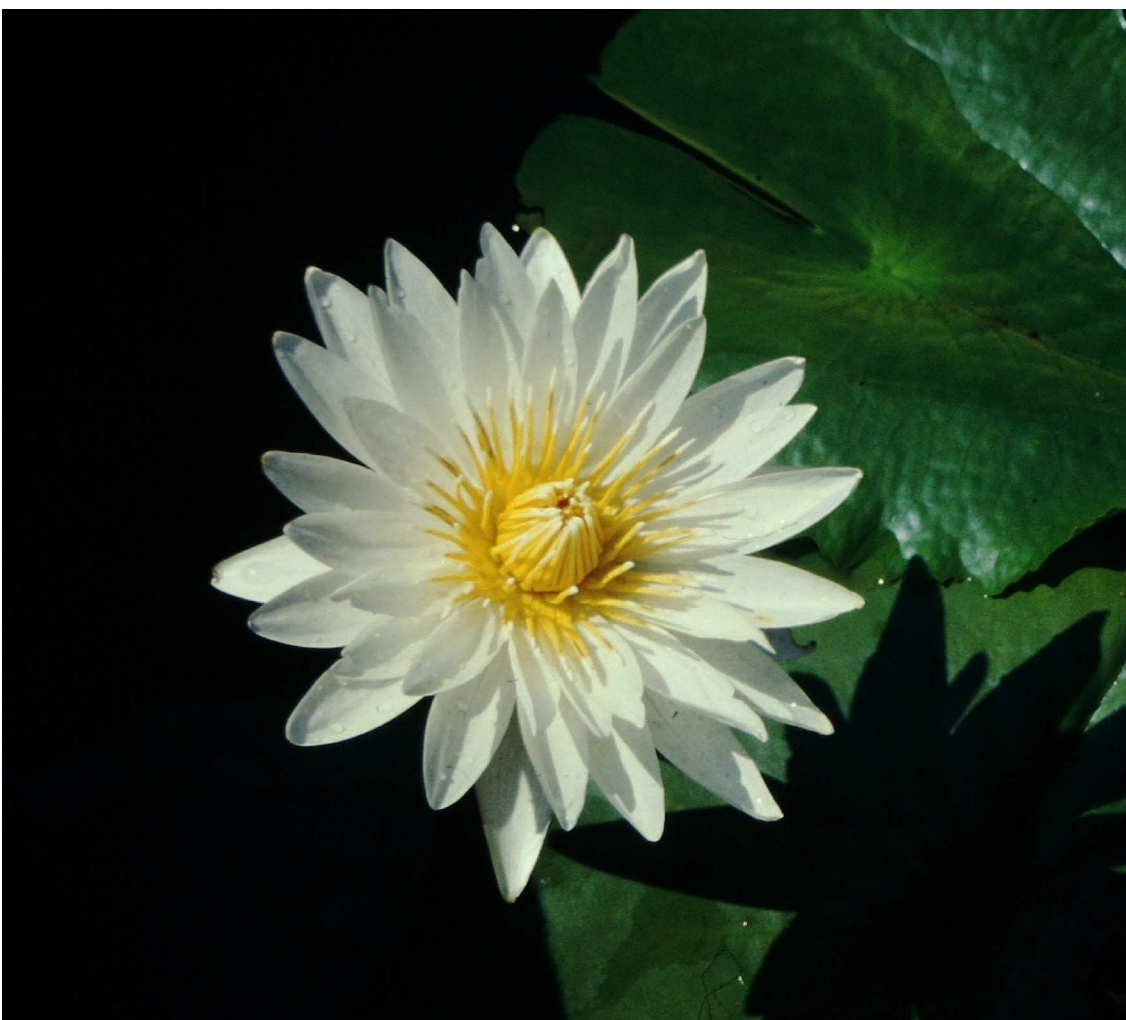
To do it at its highest level, the cost can reach over several hundred thousand dollars for a good set up. To justify spending hundreds of thousands of dollars for an art form, it should be a profitable business or it is just a very expensive hobby.

Now, since art is like a flower in nature. You can not tell the flower when to bloom. Nature and art has it own timetable. In business, things have to happen on schedule and sometimes very fast.

The boss wants results, on a time line with no excuses. Plans are in place and schedules must be met.

**The bottom line and scheduling** is life or death in business. Return on investment is the name of the game.

Try to tell the flower exactly when to bloom!



In nature the flower blooms when it is ready.



## The HoloDam Universe

Now we see the problem is to get the flower to bloom on schedule! Bloom now and perfect every time. We know nature does not work that way. And if an artist progresses naturally, art does not always work that way either.

So we can see, just as in all arts/business relationships – when you try to make it a business, you often have problems.

Art and artist try to work with the nature and flow with it and in business, push gets to shove, when schedules do not meet the plans, the fragile petals start to fall off. Holodam

My problem was, when I started making holograms, I kept telling myself that I was going into the dark to bring out the light. Businessmen, say: What?

Little did I know that this light had such a high cost. That I would need to form a business and have partners and investors. Formation of the Hologam/Holodam universe.

As I took this journey through the gram/dam universe, I found out, that if we stay true to ourselves and our vision, that we can get to a place of reasonable balance. I also, found out that to find the light, you sometimes have to go through the dark.

In Holography, to get to a high level -it is a bit like attempting to climb Mt. Everest? As you get closer to the top – the climb can get even harder.

If you choose to make holograms, the artist should enjoy a **challenge** and should enjoy viewing life from a diverse perspective. It involves Science, Philosophy, and art and some Zen thrown in for good measure.

# The HoloDam Universe

Sometimes, I am asked by students that think they might want to be holographers and ask me what to study- ***I tell them, everything!***

***Go to MIT and learn everything!***

**In addition to the study of art and science, you should include health and fitness, since holography is not just a desk job and can be physical at times.**

The more you bring to your art the better it will be. But remember, holography, as an art media, is only one aspect of art as a whole!

If you are going to be successful at art, you must keep your eye on the whole picture.

A larger foundation in art disciplines is helpful. Many times in art you can express an idea using a 2D photograph, a painting, computer graphics or a printed image. The point is, artist should have many tools and skills to use at his disposal. In fact, sometime an idea may call for using multiple media's in one presentation.

This is one of the attractions to holography. You can use many art media and incorporate them into a hologram. Computer Graphics, photography, painting and sculpture techniques can be used to make a hologram. This is one of things that attracted me to make holography my art media.

I have seen multimedia art presentations that are much more powerful than any one of them alone. For an example, a hologram incorporated into a painting or a photograph might work much better than just a hologram alone.

## The HoloDam Universe

Before diving into the Hologram/Holodam Universe, let me say, I have always enjoyed making holograms – if I didn't, I would not have spent 36 years of my life doing it.

Holography will – I have no doubt, make some of the best art ever produced.

The reality is, however, that it is one of the most demanding art media in the history of art to master. It may, in fact, never totally be mastered by more than a couple of artist – if that. Many have tried but few have mastered it. There are many levels in holography, just like painting or photography or any art media.

I do believe that there will be holographers that will master the art form to make some of the most amazing art the world has ever seen.

One must however, keep in mind, that holography can be a double edge sword, as you will read in the following account of my journey in the Hologram/Holodam Universe.



"Dancers in the Sky", Laser Viewable Hologram, by  
Larry Lieberman, "4 x 6", 1975

# The HoloDam Universe

## Chapter 5

### The Dream

I have had several dreams about holograms.  
Holomadness. Publications, Leonardo Vol. 25.

I had been making holograms for several months at Ohio State University and woke up in the middle of the night one night.

I had a dream – one of those dreams that makes you sit up in bed and go “wow – I just did that.” It was so real, I could feel it and touch it.

I was flying my holograms in New York’s Central Park. There was a big crowd of people watching. I was flying my holograms of dancers in the sky. It was beautiful and everyone watching, loved it.

Large spot light lit the holograms as they rotated high in the sky. It was an event to promote an art holography opening at one of the art museums in NY.

After the dream, I set out my course in life to actually do the dream and put the dancers in the sky.

Little did I know, that the dream was a metaphor for a life that ended up much different then expected. Not only did the dream send me on a life making art holograms but on a journey of looking at reality altogether differently. I could see another side of reality that was a multi dimensional, spiritual side and in the back of my mind, I really wanted to try to make that dream happen.

## The HoloDam Universe

In The Transformative Vision chapter 11, Arguelles gives an example how Baudelaire, saw the artist dream as a tool for his expression.

*“Baudelaire rightly and prophetically defined the subjective domain of dreams as the valid domain for the visual artist; he also displayed a certain right-hemisphere paranoia, a fear that the powers of imagination and intuitive vision would themselves be usurped by this automatic method of drawing with light.”*

*p. 121. Ref. 3*

# The HoloDam Universe

## Chapter 6

### The Beginning

I was an art student at Ohio State University in 1975 and had just returned from an art study program/tour in Europe, where I saw holograms at the Salvador Dali Museum in Spain. Dali had commissioned Lloyd Cross at the Multiplex Company to make several holograms, through Dali's agents, Selwyn Lissack, of Alice Cooper.

A few years earlier, I had first seen this type of motion stereogram, Multiplex hologram in San Francisco, in a tent, at a Rainbow Festival. The holograms I saw were made by the Multiplex Company in San Francisco, California.

The holograms I saw in Spain had a very strong effect on me and I just could not get it off my mind. I decided I wanted to try to work with this type of hologram.

As an artist – I was searching for a media and style to work with and I had studied how artist were using technology to make important art. “Art and The Future”, Douglas Davis, Ref # 4

I felt this type of motion hologram was an art form but also could be used to make a living selling the service commercially, as a trade show display.

After I returned to Ohio State from Europe, I talked to a friend. Mark Landsman, (Crow) who was an art history major. We went to the same high school, Bexley High School in Columbus and had the same art teacher, Travella.

Mark said, “there was a display of holograms at the physics department.”



Professor Stuart Collins,  
Ohio State University,  
Welding Engineering Lab, 1975



## The HoloDam Universe

I ran right over to the physics building to check it out. I inquired at the physics office who to talk to about the holograms on display and they refereed me to, Professor Stuart Collins in the Electrical Engineering Department.

I also went into the physics library to read about holograms.

I met with Professor Collins and also met with one of my painting instructors Larry Camp about what I could do as a painting student with holograms and he said, “it might be something some day.” “You should keep going at it.”

I was to graduate soon so, I took Larry Camps advice and set up a special, Independent Study Program at OSU, between the art department and the Physic Departments, to explore holography as an art form. After graduation, I kept making holograms as a continuing education student, for a couple more quarters.

Some years later, OSU formed a course and made holography a requirement in the art department.

<http://www.physics.ohio-state.edu/~kagan/holography/>

I had read in a book called “Art and the Future”, how holograms were being used as high tech art of the future, where artist Gary Indiana collaborated with holographer Lloyd Cross to make art holograms. Ref. # 4

After my first quarter as a continuing education student, I had the keys to the Electrical Engineering and the Physics Department Laser labs. Out of 60 thousand students on campus – I was the only one making holograms as art – I really did not totally understand what I was doing, I just felt: *I was going into the dark to bring out the light.*

## The HoloDam Universe

I made laser viewable holograms of slides of art work that were dimensional holographic compositions.

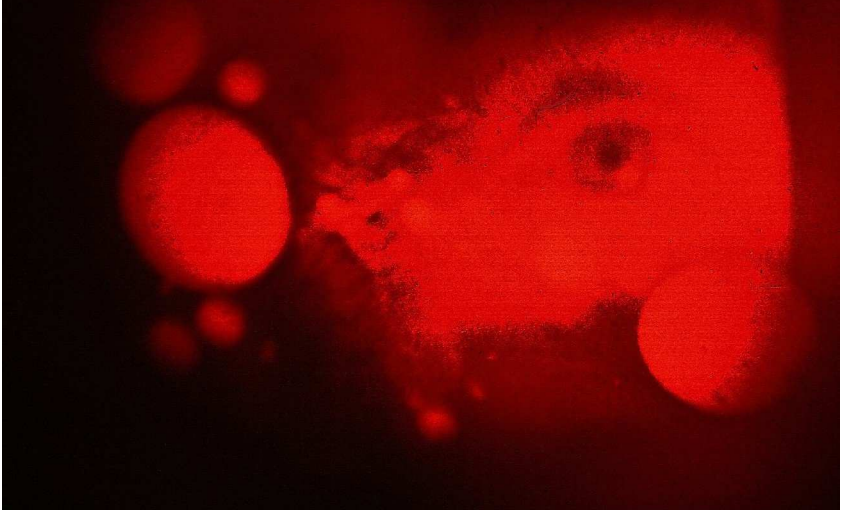
That year OSU wrote me up in the school newspaper **The Lantern** as an artist using technology to make art. “Artist Uses Technology” Aug. 9, 1977.

After classes where I audited several physics classes, I went to the Physics Lab, I went into the dark laser room and used lasers to make some holograms on special film. I used slides of my painting and composed images that I called “spacescape compositions. With Holography, I could grid off the image area and overlap several image into the depth of image and use the volume of the XY and Z space.

One night, I gave a laser and hologram demonstration to several friends at the lab at OSU. Canneto and several friends were partying one night – **this was not the best idea**. Since laser safety should be a very important part of any holography program – it only takes a small laser directly in the eye to cause permanent blindness.

What was exciting, was that, I could use several different media’s in my art. I had studied graphics, printing, sculpture and jewelry, photography and painting and wanted a way to use all these skills in my art, in one media and with holography it was possible.

Holography was a great way to use old images with new ones and make really unique art. One image that I did, was a small sculpture of a man and a woman flying in outer space. Using holograms I could combine sculpture, painted and photographic images to produced images of outer space.



Laser viewable hologram by Larry 1975



Flying, Laser Viewable Hologram by Larry

## The HoloDam Universe

I could superimposed photograph of dances and space images in the XYZ volume to form spacescapes.

These first holographic images I produced were really cool, except they were laser viewable which made them hard to view and display.

At that time, not too many people had ever heard of holograms but my painting instructor keep encouraging me to continue.

I would bring home these little pieces of clear film to show my roommates, Bruce and Frank, how excited I was. They looked at them and thought I was losing my mind.

Problem my roommates were having was they saw nothing on the films. Holograms at that time, were hard to view and had a limited viewing angle. Holograms were only viewable with a laser or special filtered light. The viewer had to look straight in front of the film, right in front of the image, at a critical angle (the exact angle that the laser was used when they were made) with a special monochromatic filtered light source. The person right in front of the film could see the image but if you were slightly off to one side (like my roommates) you would see nothing. Many years later we had a good laugh about this.



Left: Nick Phillips 1933-2009 Professor in London, Chemist and leading holographic researcher.

Right: Steve Benton 1941-2003 Inventor of Rainbow white light holography , Director of MIT Center of Advanced Visual Studies.

# The HoloDam Universe

## Chapter 7

### The White Light Hologram (WLH)

Several months later, I learned how researchers at Polaroid Corporation invented a way to make white light viewable holograms.

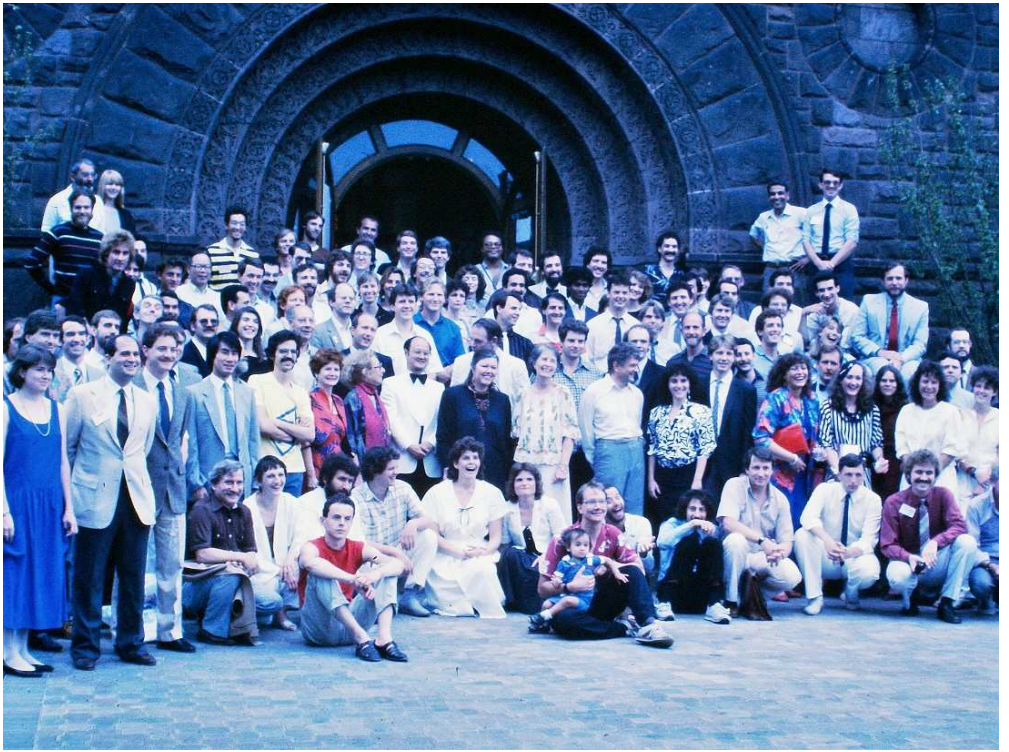
Professor Collins gave me a brochure about Lake Forest College.

My first workshop at Lake Forest in 1976, I produce a WLH of playboy bunny logo that Professor TH Jeong at Lake Forest made.

Lake Forest College (LF) was responsible for many advancements of holography and holographic fine art by sponsoring workshops, art shows and conferences for many years.

At these Lake Forest conferences, the idea was that scientist and artist, got together in an idea of open sharing in a true educational exchange. This concept proved very important to the expansion of holography in the early years.

International Symposium on Display Holography and it's beginnings, Lake Forest College.  
(<http://river-valley.tv/international-symposium-on-display-holography-and-lake-forest-college-usa/>)



Lake Forest College, International Symposium  
on Display Holography, 1982

# The HoloDam Universe

## Chapter 8

### Looking Trough the Looking Glass

In another vivid dream one night, I could hold up a hologram and see into another dimension. Only when I looked into that hologram I could see into the dimension as looking through a window, it was an optical orgy. In frosted rainbow colors, I looking into a peep show that was taking place in that dimensions.

What was really astounding in that dream was that the hologram acted as a optical window into a reality or a spirit dimension that is happening at the same time – as ours –a parallel universe. This demonstrated that the Matrix concept may, in fact, be real. Is a hologram a metaphor for multiple dimensions? Are we living in an illusion as many metaphorical theories proclaim?

In the book, “Tales from the Time Loop”, David Icke, goes into this real possibility. *Level Three, “Its all an illusion”* p.329, Ref # 6

In David’s second ayahuasa experience, he was told, *“the whole of five-sense reality is a holographic illusion that only exists in a ‘solid’ form because the human mind/brain makes it appear that way. The 3-D world of landscape, sea, buildings and human bodies, only exists in that form when we look at it! Otherwise it is a mass of vibrational fields and codes.”* p. 322. Ref. # 6

### **Back to Reality**

I wanted to be successful at my art and make a living with it but I ended up with rewards of another kind. Ones that no one can take away, ones that last for always.



## The HoloDam Universe

You see, the problem I always seem to have is that I worked really hard to research holography. Studying, traveling to conferences, setting up equipment and experimenting. Then when I had something interesting, I needed a partner to expand or market it.

For some reason, in the early days, the holographic business attracts businessmen that see tremendous opportunity for large financial gains. It is this type of businessmen that once they see it is not a, get rich quick idea, they try to use business manipulation tactics to try to take over or use legal manipulations that put an artist at a disadvantage.

This is one reason why I am writing the story of the Hologram/Holodam Universe.

The Hologram/Holodam universe is symbolic of what became a side of our society/business practice that says “Greed is good”.

The Holodam universe is the “dark side that in the end, can lead to light” and how, I found another side of life, that real riches exists, ones, that no one can take away from you. That is, by surrendering to the light side. We can find light, in a simple but often overlooked method of:

***“letting go and going with the flow”.***

***Realization:***

***“We are the light, we are the holograms”. I learned that the hologram was the metaphor for the real holograms: us.***

# The HoloDam Universe

In the hard times:

I learned to use lessons from religious studies to look beyond, for answers and that whatever business tactics were being used to gain control, that with patience and surrender – good and truth can prevail.

By keeping **an eye on the bigger picture** and my experiences with holograms, I discovered that a natural balance exist. When negative influences creep in, be patient and let go, in time, things will turn around, balance will be restored. It is, the way it is. Balance is the natural state. The universe is in balance as it is. It is the natural state. Yes, it too goes through times of expansion and contraction which seem out of balance – but in time it too will restore its balance. Its yin/yang will restore.

The earth will go through some rough patches but will always restore herself. Breath deep let it out slowly, feel the balance.

The yin/yang of life is a Chinese philosophy that explains that, in the good is a little bad and in bad is a little good, which is the symbol of the yin /yang.

Knowing this, people are not perfect and we need to look past a bad moment or two and know it will pass and the balance will be found again.

When making holograms, this concept was verified many times. Everything was going along OK – then, all of a sudden, things started to change. Nothing seemed to work as it did. But with persistence, patience and hard work, we were able to find our way back to balance and productive progress.

# The HoloDam Universe

## Chapter 9

### Background

I was raised in a middle class family in an above average income town in the heart of America. It was a little town called Bexley in Columbus, Ohio. I was the baby of the family and had a older sister; Diane and brother Ron. I was born Jewish but my mother and grandmother were Baha'i. Baha'i is a religious faith that believes that there is only one God and we are all leaves of one tree. In Fact, All religions are from the same source but come to earth at a different times to bring a new needed message. Our heritage always remains but we add to it the new message. Baha'i message is unity among all religions.

As a child, I was taken to many Baha'i functions and it had a strong effect on me since I felt a strong feeling of love and unity.

Baha'i is the study of all religions since they emphasize Progressive Revelation; where God sends his prophets in stages.

I studied all the different religions. Little did I know that, what my mother and grandmother had taught me, was, the gift, that would keep me safe and lead me out of the dark - to the light.

This story is not about religion or meant to preach, although hologyraphy seems at times, like a religion. I really just want to point out, that Baha'i is part of my background and gave me a diverse/broad perspective. Since, as a Baha'i, you study all religions. Baha'i teaches that the prophets of the past, each teach a new message to us. For an example, Christianity teaches us to love each other, while Buddhism, teaches to surrender to Gods will and Judaism teaches us about justice.

# The HoloDam Universe

I tried to learn the message from each religion which gave me a diverse perspective, from many points of view. In other words, I saw things holographic, before I knew about holography. When I refer to Buddha, I am referring to all the masters. When you study any master, you are really studying them all, since each is the other, just from a different perspective.

## High School

I enjoyed playing high school sports and my favorite subjects were art and shop class since I loved making things with my hands.

As a child, I remember loving to create things and work with my father's tools. I got lost in the basement or garage often, making something. I was interested in how things were put together and I always took things apart to see what made them tick.

In art and shop classes– I could be creative and make things. My art teacher, Ralph Travella (T), was a big early influence - I had him since the 3ed grade. T was a real artist who got caught up in the teaching of art instead of just being an artist and living the artist life. But his students who had the creative spirit learned a lot about art and creativity from him.

When I graduated from high school, I wanted to continue making my art. I started out by signing up to be an industrial art teacher and later turned to construction engineering. After a couple of years I started to miss making my art. I knew it was very hard to make a good living as an artist. Like most people, I did want to make a good living and live the good life that money can afford.



From Left: Chris Lieberman, Bruce Hanners  
and Larry Lieberman, Miami 1994

## The HoloDam Universe

I was offered a art scholarship to the Columbus School of Fine Art but turned it down because I wanted a broader education. I wanted my education to include science and some business, not just art and graphics. I wanted it to include some traditional art and drawing but I wanted more diversity. To me, art was about more then just to draw something.

I lived with my best buddies at OSU.

Bruce Hanners, who I met in the 5th grade and was good friends throughout high school and were co-captains of the wrestling team. Frank Millman was also a good friend and we traveled around the country together.

I went to the University of Florida to study construction for a year and a half but realized that I missed my art work to much.

So, I packed up and headed back to OSU and finished up my fine art degree. I studied graphics, print making, jewelry and holography. During my last 2 years at OSU the holography bug bit me hard.



Irvin Lieberman, Larry's father at Campus Optical - across from OSU Campus, 1975. Larry worked at Campus Optical throughout college.

# The HoloDam Universe

## Chapter 10

### Ohio State University

Campus Optical Co. was my fathers business – selling glasses and contact lenses. I would go in and grind lenses on the colbern machine to go into glasses. This gave me a good feel for optics and how lenses worked.

Around the same time, I did a jewelry apprenticeship with Stephen Canneto who produced art jewelry and sculpture.

I worked with Stephen for 8 years which gave me a back up craft/profession when holography was not doing well and saved me many times!

Canneto is a great artist who did incredible jewelry and realistic small sculptures. For learning the jewelry craft and having a place to work, me and Crow, would help prepare Stephen's work for shows.

One show included a meeting with Salvador Dali in NY where Dali was considering using Canneto's foundry for hire with some of the Dali sculpture work. Dali was in NY to present a new painting he did for the American Bicentennial. The painting was of Gala looking out at the Mediterranean Sea and when the viewer looks at it from a different distance it turned into Abraham Lincoln.

I remember the day I announced to Canneto, that I was going back to OSU art school to finish my degree in art and study holography.



Dali Painting in his Studio  
Dali worked with Holographer  
Selvyn Lissak to produce his Holograms



Artist Canneto in his studio  
1976



Mark Landsman (Crow)  
Larry's Friend at OSU  
1978

# The HoloDam Universe

## Chapter 11

### Lake Forest College

One day Professor Stuart Collins at OSU –gave me a brochure about a summer workshop programs on holography at Lake Forest College.

I had read about two important new inventions to help holography be more viewable in white light and I thought I could learn more about them at Lake Forest.

One of the new invention was a white light viewable rainbow hologram invented by Steve Benton at the Polaroid Corporation. The other was a white light viewable reflection hologram, invented by the Russian holographer Yuri Denisyuk.

I wanted to learn how to make the white light holograms, so I went to my first workshop at Lake Forest College that summer 1976.

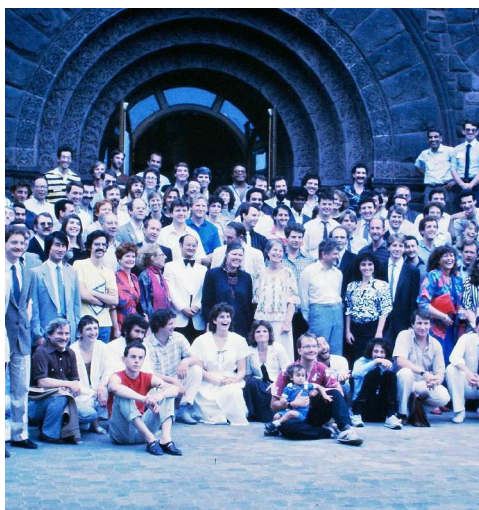
I made my first White Light Hologram (WLH) of playboy bunny logo that Doctor Jeong (TJ) had made the master of some years earlier for a demo for the Playboy Club in Chicago.

I later went on to attend yearly conferences, lectured and show my holograms at the annual symposiums at Lake Forest college.

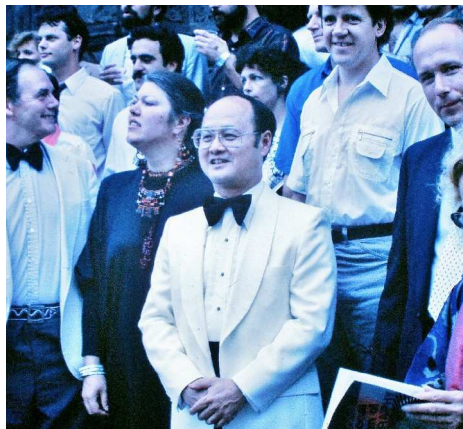
The International Symposium of Display Holography was a international gathering of the holographers and scientist from around the world.



Cutting the ribbon at the opening of the art show at the first International Exhibition of Holography, Lake Forest College, 1982, From left: Virginia Crist, Dr Jeong, Michael Croydon and Linda Law-Curator



Group Photograph 1982



Dr Jeong Fake Forest conference 1982

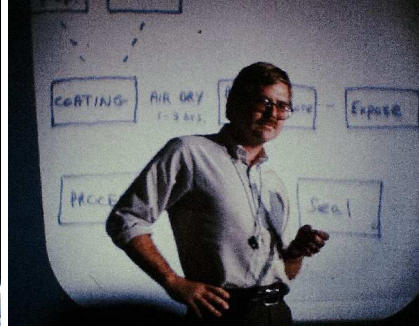


From Left to right: Buds fooling around, Marvin Segal, Justin McNolty, Jim McNolty, Ben Nagel and Larry Lieberman, 1982

A few Lectures at Lake Forest College  
The Holodam Universe



Steve Benton - inventor of White Light (Rainbow) Holography at The Polaroid Corp. and was the Director of Center for Advanced Visual Studies at MIT



Fred Unterseher, wrote: The Holography Handbook 1987



Emmitt Leith with Juris Upatnieks of the University of Michigan, the co-inventor of three-dimensional holography .



Dr TH Jeong, professor at Lake Forest College, Lake Forest, Illinois, One of the leading educators the field of holography.

"<http://river-valley.tv/international-symposium-on-display-holography-and-lake-forest-college-usa/>"

## The HoloDam Universe

At OSU, Professor Collins worked on a laser viewable stereogram system in the Engineering Department. A stereogram system at that time, used movie frames to construct a 3 dimensional image. In the OSU system, several hundred frames had to be positioned by hand in a film gate and then exposed to the holographic film.

Professor Collins mentioned to me that he would like to have an automated stereogram set up so he could load the films and let the system run until all of the hundreds of frames were exposed on the hologram.

At Lake Forest College workshop Professor Jeong showed the class some holograms that Lloyd Cross from San Francisco made. One image was the famous “Kiss Hologram” and the other was two girls. My eyes were wide open since these were the type of holograms I was most interested to make.

The story is that Lloyd Cross saw some holograms produced by Steve Benton at Polaroid using his Rainbow patented invention. Lloyd had been working with the Dali project to make laser viewable holograms.

Once Lloyd saw the Benton Rainbows hologram he went back to his lab to apply the rainbow technique to his stereogram system by added his large liquid lens.

I was excited to see the Cross holograms at Lake Forest since these were the technique used to make the Dali’s holograms I had seen in Europe. Later, I learned Lloyd Cross was commissioned by Salvador Dali to make his holograms through another holographer/Laser showman named Selvyn Lissak.

## The HoloDam Universe

One Day in Columbus I called Lloyd Cross on the phone in San Francisco. I remember (Crow) was with me.

Lloyd was very cordial and said I could come to visit him and see the printer (automatic stereogram machine) he was building for a company in Chicago.

I asked Peg my girl friend, at that time, if she wanted to travel to California with Mark and me to see the Cross printer? She agreed to go, so we started packing and gassed up the Laser Explorer ( a small Converted van RV my father bought for me to travel across country.

I documented Lloyd's printer he was building for another company. Professor Collins was quite impressed and I told him my plan was to go back to SF and build my own printer.



**Lloyd Cross, 1977, Inventor of the  
Multiplex hologram, At The  
San Francisco School of Holography**

# The San Francisco School of Holography



The Laser Explorer van in the warehouse on Florida Street in The San Francisco School of Holography 1977



Lloyd Cross, Inventor of the Multiplex Hologram, The San Francisco School of Holography, 1977.



Chico and Sharon McCormack (<http://www.mccormackholography.com/>) at The San Francisco School of Holography. 1977.



Michael Kan - produced homemade all dialectic optics used to make hologram



# The HoloDam Universe

## Chapter 12

### San Francisco

When we got to San Francisco we went right to Shotwell Street to meet Lloyd and his staff for his morning staff meeting behind his house.

I met his devoted assistants Michael Kahn, Sharon McCormick and Chico.

They would plan the day and go over any problems they were trying to solve with the printer – each had their specialties.

As they worked, I documented the printer with hand drawn working drawings.

We parked the laser Explorer right out front of the Multiplex Company. At that time, Lloyd's house was a block away and he was ex-communicated from the Multiplex Company that he started due to a hostile takeover. I interfaced with Ruffas Fredman to make a 360 degree hologram of Peg and me called Universal Man and Woman, later written up in a book about holography by Jeff Berners – The Holography Book.

The first trip to San Francisco was for 10 days and I agreed to return to build my own printer. My father loaned me \$7,000.00 to give to Lloyd for the project.

Lloyd rented a large warehouse on Florida Street where he had the San Francisco School of Holography to teach classes. I drove the laser explorer right into the warehouse and built my stereogram printer.

## The HoloDam Universe

Also working with me in the SF School of Holography warehouse was Fred Unterseher also built a stereogram printer. Fred later wrote the Holographic Handbook.

Except for the lens, the printer was totally built from wood.

I considered it a working prototype, which gave me the foundation I needed to progress it into a production tool.

After about 2 months, I finished up the prototype printer and said good bye to Lloyd and his crew and loaded up the printer in a U-haul and headed back to Columbus.

# The HoloDam Universe

## Chapter 13

### The Winter Palace

I rented a large house off of East Broad Street on Latta Ave in Columbus and set up, Holographic Research Labs (HRL).

The idea was to provide a 360 hologram printing service to holographers and produce trade show application holograms.

Peg and I were married in the winter palace in 1978.

I set up the lab in the Palace's large basement and set out to get the printer running. I needed to upgrade the mechanical parts so it could be a reliable machine.

We started to run out of money and Peg went to work to support us and I looked for a partner.

Crow, who was also living with Peg and I, knew an industrial designer named Frenchy, who wanted to work with holography. Frenchy had a friend, David Koehler, who wanted to invest in a small start up business. David and I formed a 50/50 partnership.

We brought in Michael Kahn to help fine tune in the printer. We went through about \$20,000 of David's money, as agreed, to upgrade the printer, print some brochures and start doing some hologram jobs.

I consulted with Dr Jeong from time to time about problems with the printer. At one point, TJ advised us on making a 360 drum type set up – we did that and it worked with some optical modifications to overcome distortions in the image. TJ disclosed our system at the Holographic conference in Prague in 1980.

## The HoloDam Universe

Once the printer was working good, I was producing holograms for several trade accounts including: Mark Diamond and Jim McNolty. I produced the Sake Mohammed Alfasy, Isiaac Bashevis Singer for Mark and The Pent House Pet of the Year for Jim McNolty.

Holographic Research Labs produced holograms for Warner Cable Company of Flippo and Todd Rundgren and we were a featured guest on cable talk shows.

One day I came home from a small shopping outing and found David and Frenchy working on the printer. I was very upset, since I was the holographer in this company and I had just spent months working day and night to get the printer working. What they were doing was beyond my comprehension and I lost my cool. For several weeks the tension was so thick you could cut it with a knife. Add money and takeover tension from stock offers to Frenchy and things got very uneasy around Holographic Research Labs. HoloDam.

Dr Jeong told me about an opportunity at The Museum of Holography in Chicago.

With the advice of my attorney, to go make a living, we were off to Chicago.



Larry and David



Filming Flippo



David and Frenchy



Bill Paveto  
Cinematographer

# The HoloDam Universe

## Chapter 14

### Chicago

Things got so tense at HRL – with the advise of our lawyer “you have the right to make a living”, with the lead from Dr. Jeong and after a meeting with Loren and Bob Billings-owners of Gallery 1134 and The Museum of Holography-Chicago, we were off.

The Chicago Museum of Holography was a large building near downtown Chicago. We packed up our home and lab and headed to Chicago to the Museum of Holography and Gallery 1134. OK, we were young and we had a mission and liked an adventure. Right?

### On the Move

We arrived in Chicago and went to work at the museum.

It was going really good and we liked working there. Peg was working as an administration assistant and I was building a large scale version of the printer. I was planning to produce 4 foot stereogram. I was almost finished when we found out that we were being paid from a questionable CETA work programs and our lawyer advised us to move out.

This was unfortunate since we were starting to feel at home there and Peg was pregnant. I placed an ad in the local papers for a new investor/partner and Peg looked for work.

We found a potential investor and was starting to set up, when my old partner David tracked us down and messed it up. We loaded up the moving van and headed back to Ohio. HoloDam.

# The HoloDam Universe

On the move

Back to Columbus to smooth thing over with David.

David was moving and got a good job with his commodities work. He moved to the west coast, so I could continue with the holograms without much involvement from him.

Peg and I lived with my parents for 6 months and had our baby Christopher Allen on May 3, 1982.

We rented a small house on Campus.

I had the stereogram printer in the basement and a jewelry bench upstairs. I produced 360 holograms for the holographic industry at night and made jewelry in the day.

It was finally working pretty good, so I rented a warehouse on Goodale Blvd. in the old part of downtown Columbus. I had about 3000 sq. ft., which was nice at that time. I had a show room/gallery, offices, and all my labs including a copy reproduction room.. I hired Tim Hanners to help me produce copies and run the productions. Tim is Bruce Hanners brother, my best friend.

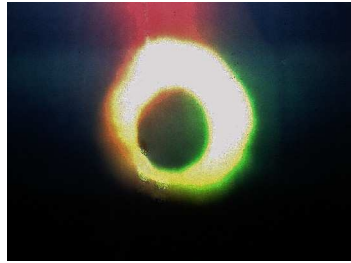
I was finally a full time independent holographer and was producing holograms for trade show displays and supplied prints for customers in the holographic industry. I produced many holograms for Jason Sapan's New York Holographic Studio.

The shop was going good and one day I got a call from Bruce that he was talking to Frank Millman, our high school buddy and college roommate about visiting us as a possible investor.

Stereogram produced at Holographic Research Lab and Holographic Image Inc Columbus, Ohio



Man on the Moon NASA  
In Assos. with Mark Diamond



Solar Eclipse Produced for  
Marvin Segal



Magic Show



Inviabile Man and Woman  
customer



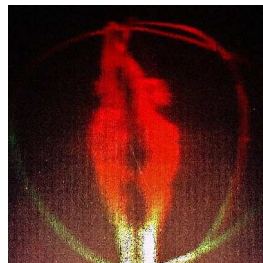
The Couple, for Jason Sapan



Hip Joint, for Michael Page



Eagle produced for The Ohio State  
Forestry Department



Universal Man and Woman by  
Larry Lieberman 1978



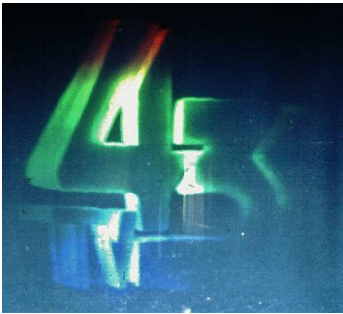
Stereogram produced at Holographic Research Labs



Budweiser Stereogram



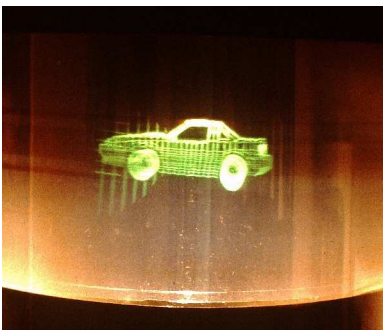
Rotating Gears



43 TV



Photographer



Large format  
Computer Generated Car by  
Michael Page



Pelvic section for  
Stanford University



Bruce and Marcy,  
Miami 1987

## The HoloDam Universe

Frank was a good friend since junior high school – we had traveled out west together for the whole summer and had always got along very good. I wanted to expand my business so it seemed like a good idea to talk about what we could do together.

Frank was successful in the software business in Miami with a computer program called Form Tool. Form Tool was a business software for filling in forms that he developed while working at his fathers construction company in Miami. Franks father was a very successful contractor in Miami who built many large condos in Miami Beach during the construction boom in the 60's and 70's.

# The HoloDam Universe

## Chapter 15

### Holographic Images Inc. (HII)

I had already formed Holographic Images Inc. (HII) and wanted to buy out my old partner David Koehler and expand to embossed holography, where I saw the main holographic business headed.

Frank was a crafty (creative) experienced businessman and worked out a plan to buy out David and put some investment into HII.

Frank liked the higher level look to reflection holograms, as compared to emboss. My idea was to make money with emboss first and then go into the art side of holography. However, Frank persuaded me to work on art and color holograms.

I consulted with Thomas Cvetkovich, a fellow holographer, who had a lot of experience with color control for reflection holograms.

In a short time, I had expanded the operation to produce high quality reflection holograms.

Holographer Ben Nagal set up a table in the basement. Ben had a good adventures spirit and together we spent many evenings testing chemical formula for the best and brightest holograms.

In the mean time, Frank got me in touch with a high-level ad agency in Miami and they wanted to produce a trade show hologram for a pharmaceutical client. They commissioned me to produce 3 color holograms for that trade show.

I produced the first two holograms for the company in Miami and was working on the final one.

## The HoloDam Universe

It was a Friday night and Peg had come over to the lab and asked me to hurry up and finish what I was doing so we could go out to dinner. I hurried up and put the plaster sculpture model I was working on into a wood film dryer I had gotten recently from a photo lab that went out of business a few doors down from my studio.

Tim had a small office next store, where he was setting up a small frame shop. I took my mobile phone and headed down there to meet Peg. I just sat down when I got a call from my security company.

They asked me if I had a fire. I said no, I just left there but I would go check.

I went into my office to find smoke. I went into the back copy room and open the curtain and was hit by a wall of flames!

I hit the floor and crawled out. I remember the smoke was heavy and thick black with only a small space on the floor clear enough to crawl out on my hands and knees. My nice lab was devastated from the fire, smoke and water from the fire department.  
Holodam

After several months of planning and rebuilding, we decided to move to Miami.

Luckily, I had purchased insurance and an alarm system that was linked to the call service.

With the insurance, with a business interruption clause, we were able to move me, my family and the lab to Miami Beach and located us with my partner Frank.

# The HoloDam Universe

It took one year to set up our new facility in Miami Beach in a office building under the direction of the chief of the fire department.

We had to use three sheets of drywall to make the copy room totally fire proof including explosion proof electrical outlets inside of an upscale Miami Beach office building.

## Chapter 16

### Color Holograms

With additional funding from Frank, I was able to essentially lock myself in the lab for the first year and perfect the color reflection hologram process. The idea was to produce our own line of limited edition, art prints, for the home deco market.

I had gained the basic color theory at the Lake Forest workshops and then went on to invent a 3 color reproduction system from my experience in color lithographic print making, in art school.

When we first started making full color holograms, I tried everything I could think of, on a trial and error method. The trick we came up with, was to index a piece of film and scan it with the laser. Scan it to each of a red, green and blue, H2 masters, to produce full color holograms. See: Paint with Light Lectures, 1991.

The method was making 3 laser viewable master holograms (H1's) that are color separated by painting the art model with B & W paint. All steps are done using mono color holographic film and lasers. I use white and black gesso primer to paint the model to produce color separations.

## The HoloDam Universe

The model is painted three times, using computer (photo shop) color separations, as guides.

Then 3 (H2) reflection copy masters are made. These reflection masters are tuned to play back brightest in the copy laser wavelength.

Once you have a set of color separated, H2 master holograms of your H1's, testing can begin on the color prints using a single sheet of holographic film. TEA is used on the film, to produce all the colors. Editions are then produced.

We were able to make the process flow pretty fast once we assembled a dedicated; H1, H2 tables and copy room.

At Holographic Images Inc. (HII) we perfected to process to produce full color reflection holograms using the single red laser method and limited edition copies were sold throughout the world.

We were producing incredibly bright holograms by using the combination of Agfa masters H1's and H2's and copies on Ilford film.

Holograms have the potential to diffract light at very high diffraction efficiency (DE).

We must have been getting DE of about 80-90 percent since you could feel the light on your eyes from the holographic image. This was a 2-3 color hologram. Which is DE diminished somewhat from the  $1/n$  law. The  $1/n$  law states that the DE is diminished by the number of times your record a hologram in the same film. If you record 2 holograms in the same piece of film – you lose  $\frac{1}{2}$  of the DE.



Larry with multi-color "Shells", Hologram  
11 x 14", 1989



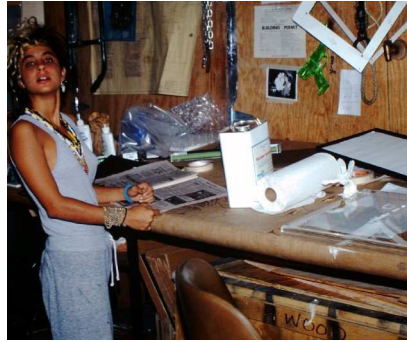


Production at Team Holographic Images Inc.  
From Left: Larry Lieberman, Chris Soloperto,  
Peg Lieberman and Tim Hanners and  
Matt Schreiber. Miami Beach, Florida 1986-1995

Holographic Production Staff at Holographic Images Inc Miami Beach Florida



Tim Hanners  
Head of Production



Chris Soloperto  
Lamination, Production and  
Shipping



Matt Schreiber, Artist,  
Holographer and Production



Larry Lieberman, Artist,  
Holographer Holomadness

# The HoloDam Universe

We were getting the holograms so bright that, at one point, Ilford came to visit us.

Ilford and 3-4 of their top film/chemical scientist were taking measurements in HII small copy room to try and figure out how were making our holograms so bright.

No one in the world was getting the results we were getting! We thought, "Wow", Ilford Lt. was using our holograms at trade show to sell their film.

## Chapter 17

### The Mid-Line

The goal and business plan was to put holograms on the average Mow and Paw's walls.

Shells was the breakthrough.

It took one year to perfect the color process and produce HII first master hologram called "Shells". I enjoyed going fishing and Miami was a fisherman's paradise. On fishing outings, I would stop at the tourist shell shops and buy shells for making holograms. I would mount the shells on different layers of glass to form a nice composition.

When we produced Shells, Frank would have all his employees from his software company, from upstairs, come to look at it. One by one they would file in with open eyes.

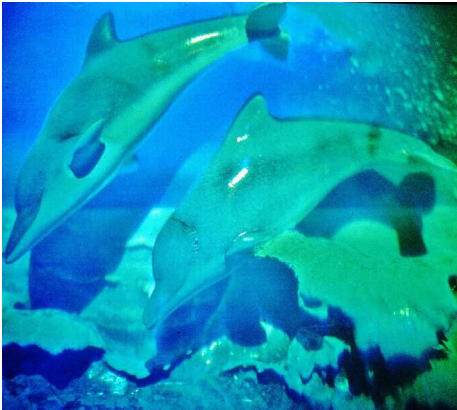
HII produce several art holograms by an artist by the name of Margeaux Lucas. Margeaux came in one day with a sketch of a mans face. I will never forget its intensity.



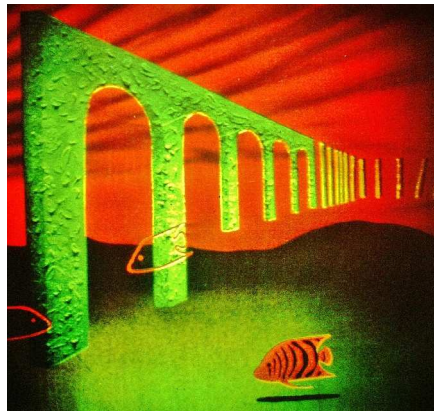
Shells by  
artist Larry Lieberman  
11" 14" 1988



Fish by  
artist Larry Lieberman  
11" x 14" 1989



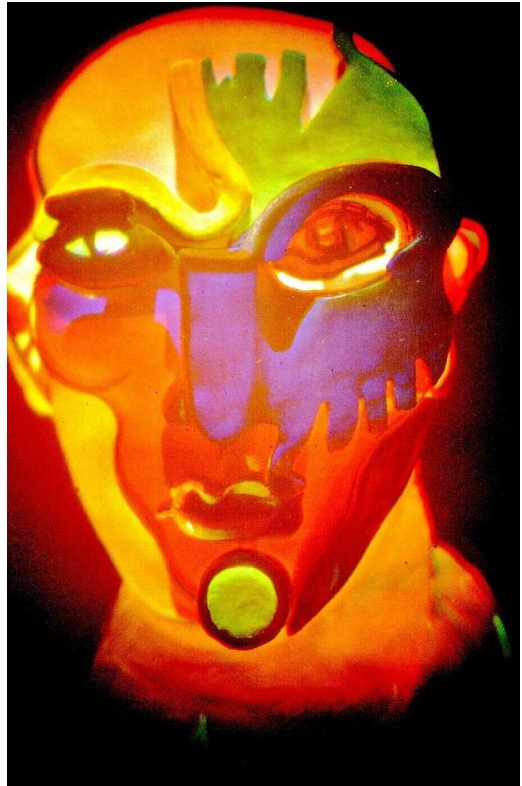
Dolphins, by  
artist Bruce Hanners,  
11" 14" 1988



Surreal Seascape by  
artist Rich Garcia  
11" x 14" 1989



Original painting



Color Hologram, "Primary Man" by Margiaux Lucas in collaboration with holographer Larry Lieberman, 1990

## The HoloDam Universe

Margeaux did a 3D model that was very average of the image, so I asked her to produce another one, with simple shapes that could be color separated in the process.

Margeaux came back with the perfect model.

We called it Primary Man. Now we were making art.

Margeaux's "Primary Man" won Paris Prix award in 1991.

After The Primary Man we did The Primary Woman and Tree of life and many others for Margeaux, which proved to be a very successful line of Holograms.

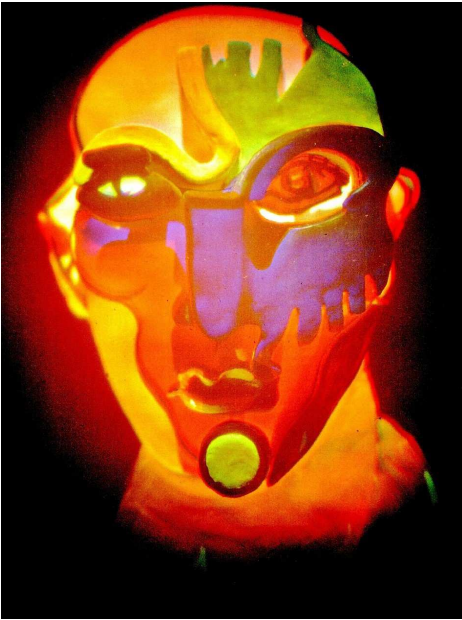
For 10 Years HII produced high quality full color limited edition holograms that sold through-out the world.

HII produce mid-line color limited edition holograms with artist Bruce Hanners, Rich Garcia, Zeno Sanchez Ramos, Jose Tree Garcia, Mark Callaghan, Larry Lieberman, Sarah Lindsley, Mitch Henrion, AuMarta Minujin, Azar, Alfredo Ratinoff, August, Muth, Hani Shinhada, Carmenza Dominguez, Harret Casdin-Silver, Wynston Gearhart, Mark Johnson and Roberta Booth.

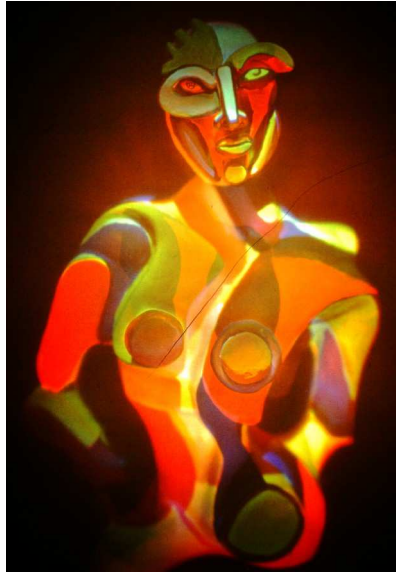
HII produced full color reflection stereogram – The Parrots and Dragonfly and Reclining Nude.

Holographic Installation for The Rolling Stones, Miami Night Club.

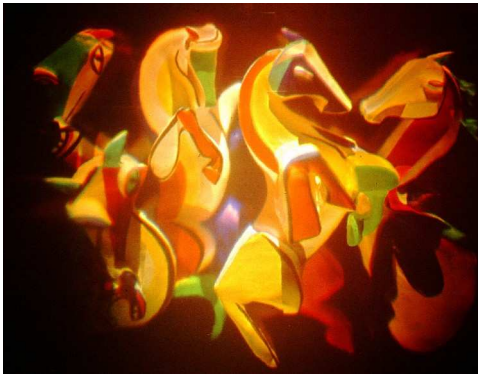
The Bee Gee Studio –HII did Barry Gibbs hologram portrait and Andy Gibbs last portrait.



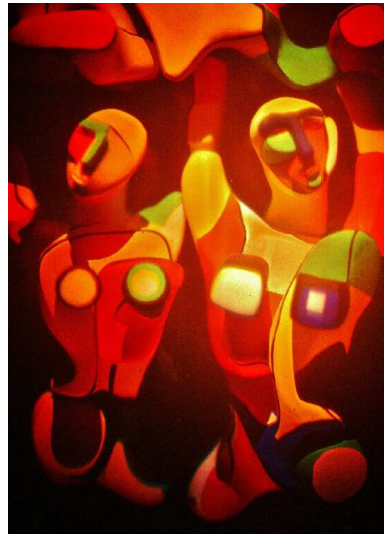
Margeaux Lucas, , Primary Man,  
11" x 14" 1990  
All Collaboration with Larry



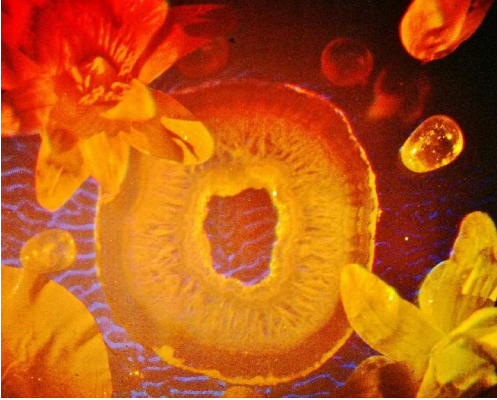
Margeaux Lucas,  
Primary Woman  
11" x 14" 1990



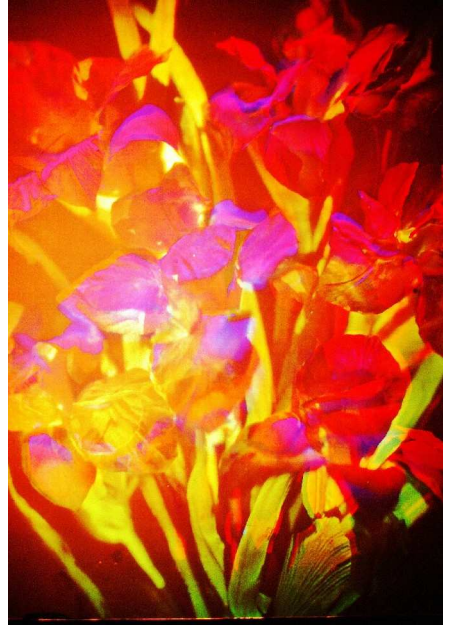
Margeaux Lucas,  
Wild Horses  
14" x 18" 1990



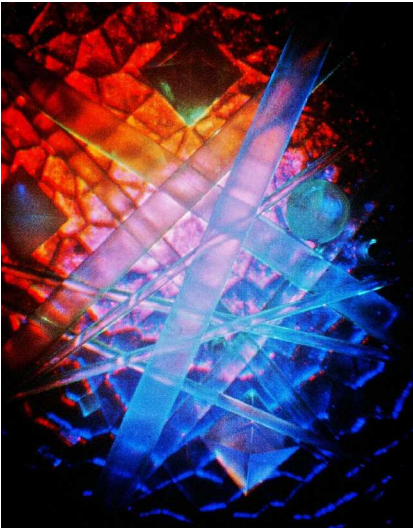
Margeaux Lucas,  
Couple  
11" x 14" 1990



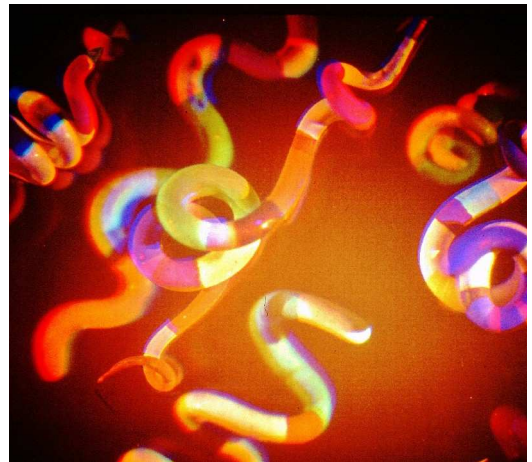
Lotus by Larry Lieberman



Iris by Larry Lieberman



Abstract by Larry Lieberman



Quarks by Larry Lieberman

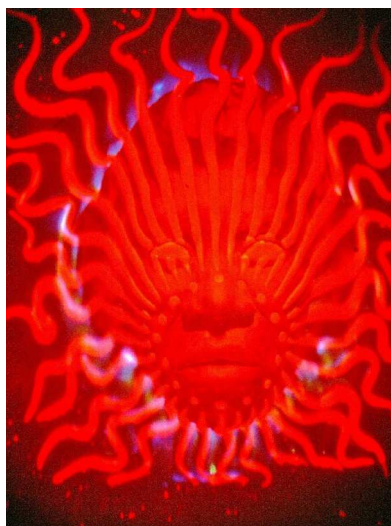




Crystal Dreams by Zeno in  
Collaboration with Larry 1989



Crystal Reflections by Larry  
Lieberman in Assoc with Mark  
Diamond and Jim Hurtak  
1992



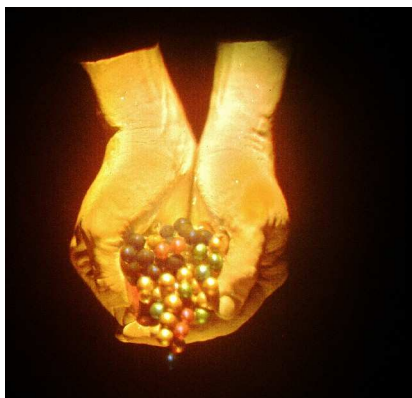
Mask by Tree Garcia in  
collaboration with Larry  
1989



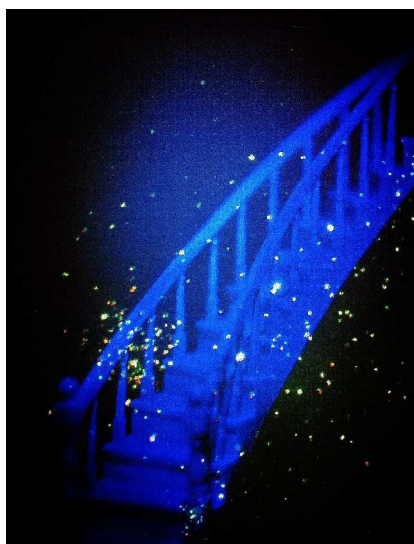
Sun Temple by Mark Callaghan 1990  
In collaboration with Larry



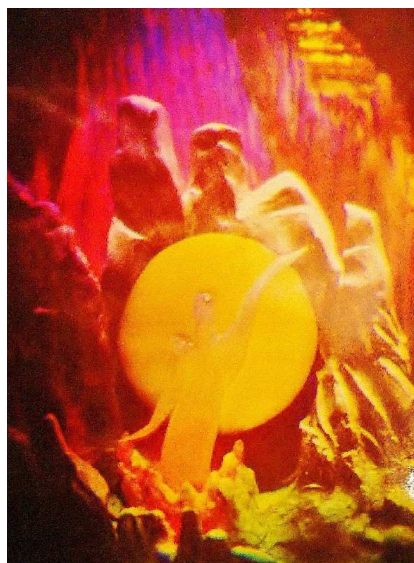
Living Room  
by Larry Lieberman



Giving Hands  
by Larry Lieberman



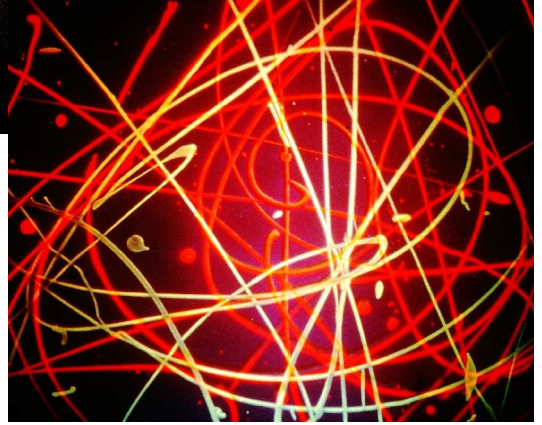
Stairway  
by Larry Lieberman



In Search of Truth  
by Hani Shinhada in  
collaboration with Larry



Reclining Nude  
by Larry Lieberman



Hurricane  
by Larry Lieberman



Hands by artist August Muth  
Production by Larry



Collage, Painting and  
Holograms  
by Larry Lieberman



Seeking Our Future, artist  
Azar, in Collaboration with  
Larry, 1993



Egyptian Cinema, artist  
Alfredo Ratinoff, 1991



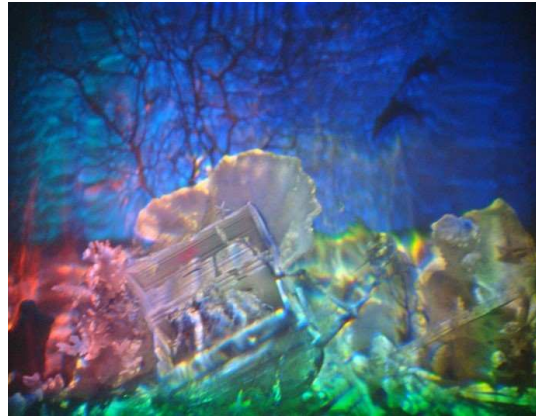
Hurricane, Done after  
Hurricane Andrew  
(8/16/92) Miami  
by Larry, 1993



Rhythm Leads by  
Wynston Gearhart, 1991



Flower, by Larry 1987



Treasure by artist Mark Johnson  
1989



Dragonfly by computer  
image, by Sarah Lindsley  
and Mitch Henrion -  
Hologram printing by Larry



Venus by Marta Minujin  
Argentina artist, 1990  
In Assoc. with Holographic  
Dimensions Inc.



Larry and Tim installing in NY  
collaborative  
work with Tom Cvetkovich 1986



Detail of mural produced for Rolling  
Stones Bar in Miami Beach 1986



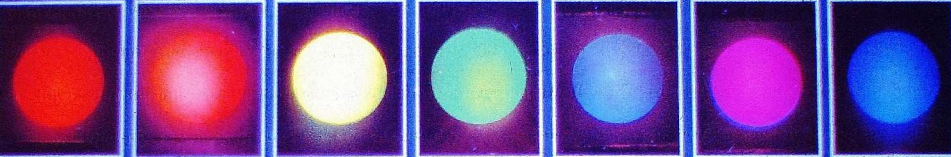
Hologram and painting by Larry Lieberman, 1993



Larry and Fay at Atmospheres Gallery, Miami Beach  
1993

Holographic Images Inc.

**FROM THE POWER  
OF PURE LIGHT**

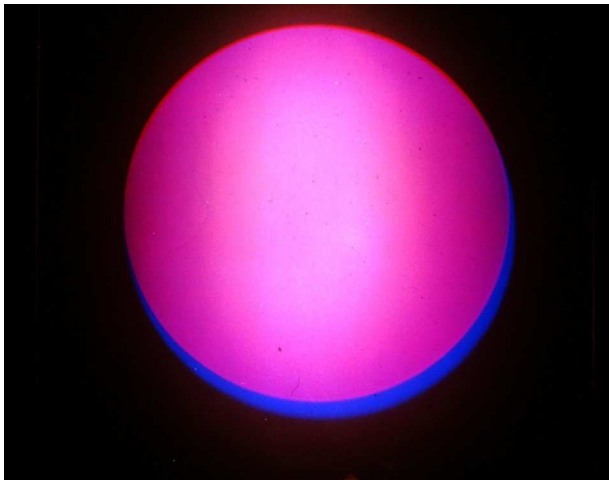


*"Enlightenment"*

ARTIST  
**ROBERTA BOOTH**

EACH ORIGINAL SET CONSISTS OF SEVEN PIECES AT 11" BY 11" EACH  
EDITION SIZE IS NINE

**HOLOGRAPHIC IMAGES, INC.**  
1301 DADE BOULEVARD, MIAMI BEACH FLORIDA 33139 (305) 531-5465



Roberta Booth, one of 7  
Color Hologram



## The HoloDam Universe

HII also worked with Higher level artist Fletcher Bention, Ron Mallory, Larry Bell, Eric Orr, Ramose, Larry Rivers and James Turrell.

We were enjoying some success and starting to see and the fruits of our labor pay off. But what we did not see, was the real reason Ilford came to visit. Ilford wanted to try to discover why we were having good results and no one else was.

Ilford needed to increase their sales. Ilford wanted/needed to capture more market share of the holographic film market. Most holographers could not seem to get the Ilford film to work as good as Agfa film. So Ilford wanted to adjust the film speed and increase the latitude, so more holographers would use the film. So, after their visit they did made changes. HoloDam.

Once Ilford made changes, we were never able to get the extreme bright results we once enjoyed. We did have exceptable results but never the incredible bright, clean, holograms that we had before they made the changes.

This was really unfortunate and may be the start of our decline in the mid 1990s.



**Artist  
Colin  
Fletcher**



**Hologram 1993**



From left- Larry, Eric Orr and Frank Millman  
at Holographic Image Inc. (HII)

Eric Orr –1940-1998

A pioneer of the California Light and Space Movement in  
the late 1960s, he was a sculptor and installation artist.

Eric and Larry collaborated on Eric's first hologram  
"Proto State" Miami Beach, Florida 1994

<http://www.youtube.com/watch?v=PYHu2Q815kQ>

## The HoloDam Universe

To make matters worse, some months later, I got a call from Glen Wood, head of Ilfords holographic film division, stating: “Ilford was to stop producing holographic film and closing it holographic film division.”

**This sent a shock wave through my spine!**

I could not believe what I was hearing!

We had just spent 10 years and 1.5 million US dollars perfecting our process, selling editions and starting to enjoy some success when the rug was pulled out from us. Holodam dam dam.

Some executive, hatchet man, at Ilford Limited, (I imagined) setting behind his desk, thousands of miles across the pond, looking at his spreadsheets bottom line, took another puff on his big cigar – drew a line through Holographic Film and my life.

I thought -20 years of very hard work down the drain?  
10 years of HII and 10 years of school, study, travel and Holographic Research labs. Gone Gone Gone.

To say the least, I was shocked and depressed.

Frank went to work on solving our problem from a creative business perspective.

At that point, we had already been working with some high level artist. So, we went to work to develop a new plan to go all out-high level. Buy as much Ilford film as possible, and sell only named artist.

## Chapter 18

### The C Project

The idea was to work with 20 of the most important artist of the 20th century on a new, rare and exclusive holographic film.

We bought 10,000, 12 x 16 inch pieces of Ilford film- cost - \$100,000. And stored the film like gold bars in a museum storage facility called The Fortress.

The C-project is a fine art project that worked with some of the most world-renowned artist of the 20th century. Started by Larry Lieberman Holographer and Frank Millman CFO. From 1995 –2000 in Miami Beach, Florida. C stands for the speed of light.

Video will be live at:  
<http://youtu.be/WbIDoewreNU>



From left: Larry Lieberman, center: Ron Mallory,  
Right: Frank Millman

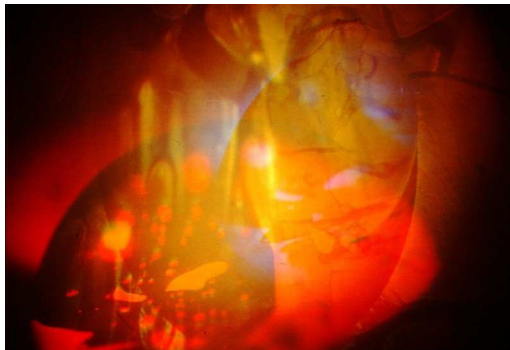
Giving the sign of the C -Project : The Speed of Light  
Ron – Artist Director of the C-Project

**Ronald Mallory** (born 1939) is an artist who worked in New York and now lives in Mexico. In the sixties he was one of the foundational members of the kinetic art movement.

<http://www.ronaldmallory.com/artstate.htm>



Ron Mallory Working in the lab at HII, 1994



“Insonia”, by artist Ron Mallory in Collaboration with Holographer Larry Lieberman, 11”x 14” One of a Kind, 1994

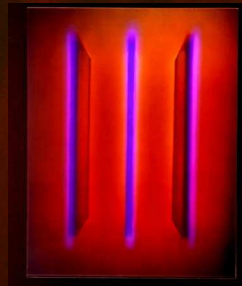


**Eric Orr working at  
the C Project  
1995**



**Eric Orr –1940-1998**  
A pioneer of the California Light  
and Space Movement in the late  
1960s, he was a sculptor and  
installation artist.

**Eric and Larry  
collaborated on Eric's  
first hologram  
"Proto State" Miami  
Beach, Florida 1994**





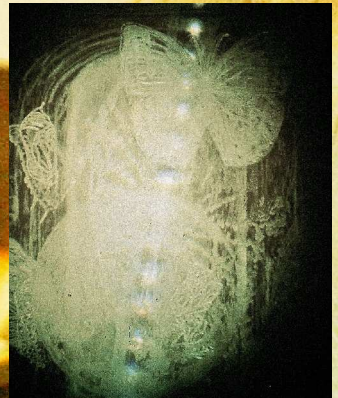


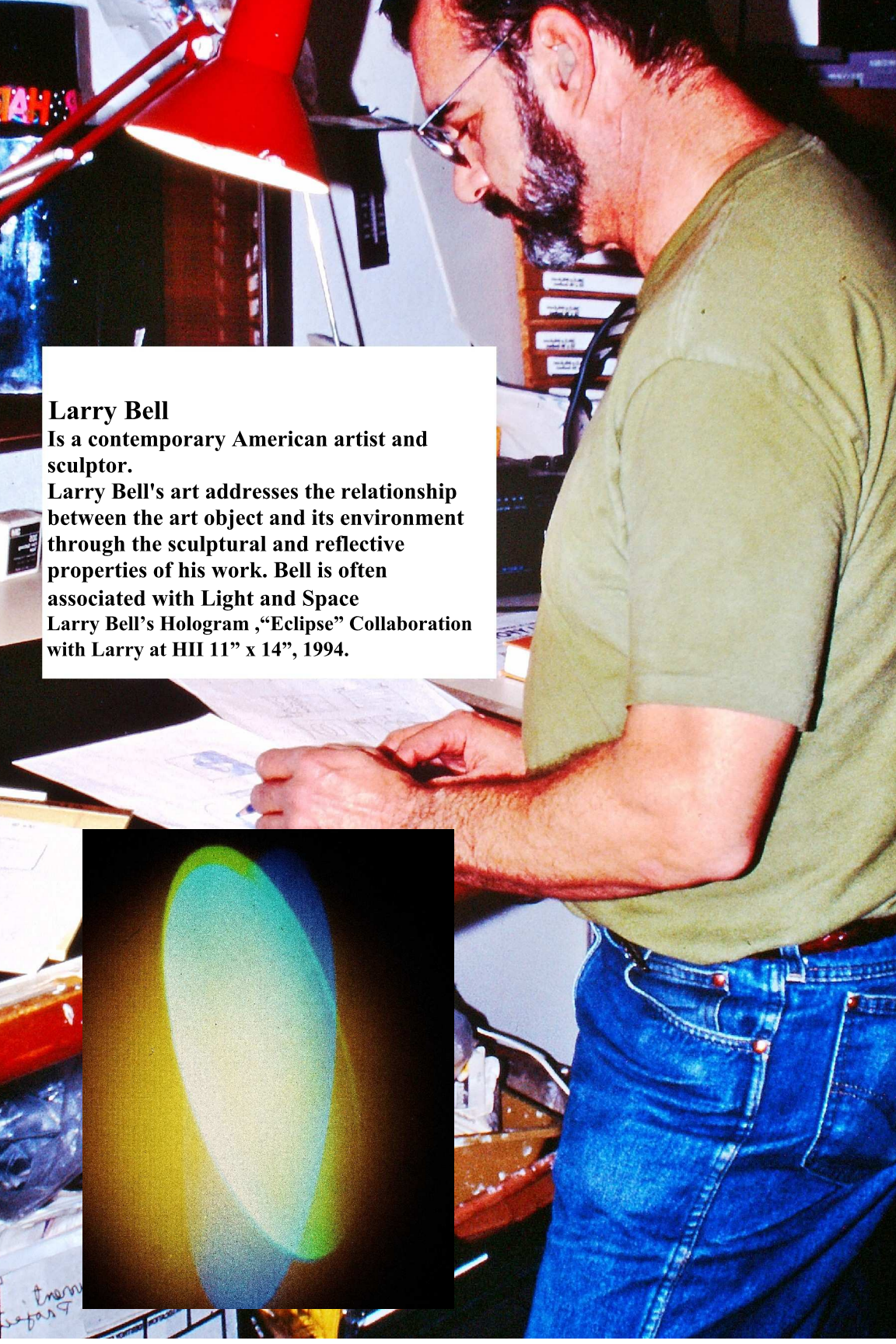
**Ann McCoy**

**The images in Ann McCoy's works  
come from dreams, a process known as  
incubation in the Greek world.**

**[http://www.youtube.com/watch?  
v=tR4Vh7kuxRA](http://www.youtube.com/watch?v=tR4Vh7kuxRA)**

**Ann's Hologram, "Holographic  
Study 1" In Collaboration with  
Larry at HII, 11" x 14" 1994.**



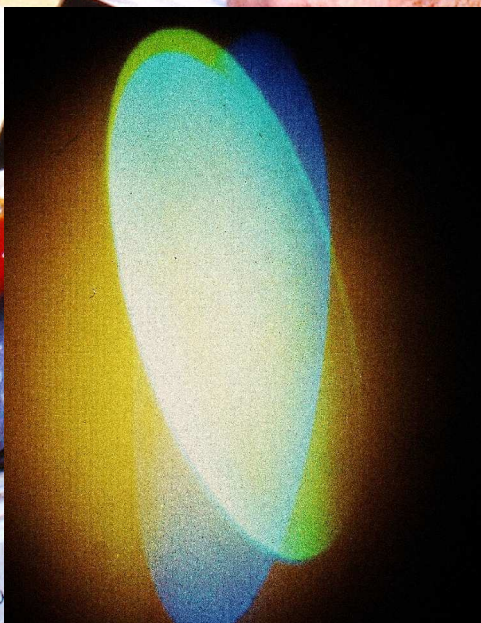


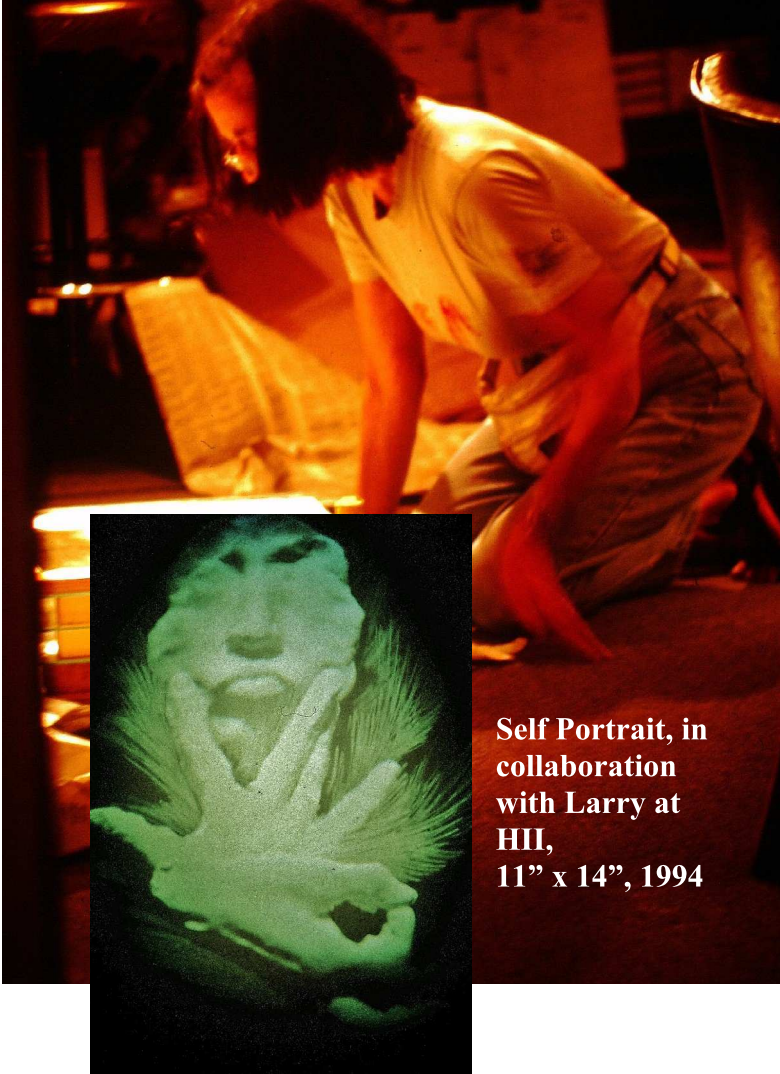
## **Larry Bell**

**Is a contemporary American artist and sculptor.**

**Larry Bell's art addresses the relationship between the art object and its environment through the sculptural and reflective properties of his work. Bell is often associated with Light and Space**

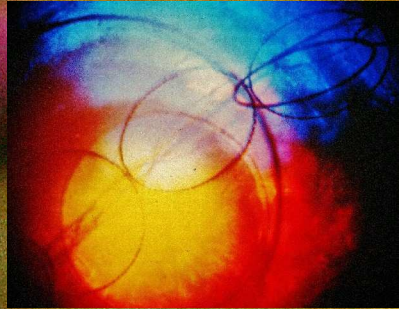
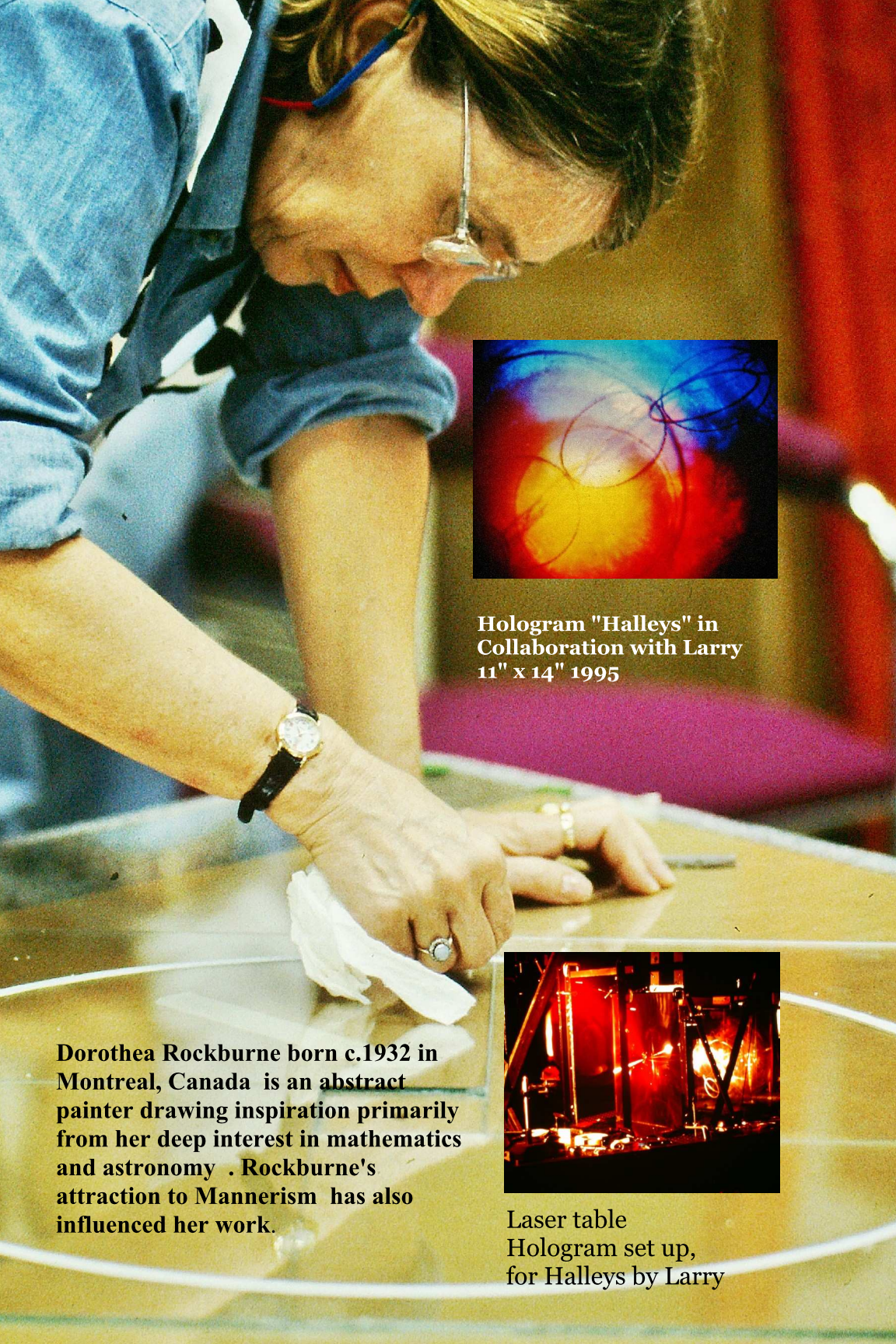
**Larry Bell's Hologram ,“Eclipse” Collaboration with Larry at H11 11” x 14”, 1994.**





**Self Portrait, in  
collaboration  
with Larry at  
HII,  
11" x 14", 1994**

**Maria Sol Escobar** (born May 22, 1930), otherwise known simply as **Marisol**, is a sculptor born in Paris of Venezuelan lineage, living in Europe , the United States and Caracas.  
[http://en.wikipedia.org/wiki/Marisol\\_Escobar](http://en.wikipedia.org/wiki/Marisol_Escobar)

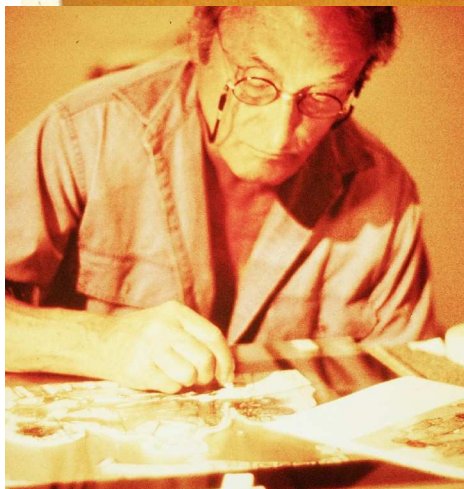


**Hologram "Halleys" in  
Collaboration with Larry  
11" x 14" 1995**

**Dorothea Rockburne born c.1932 in  
Montreal, Canada is an abstract  
painter drawing inspiration primarily  
from her deep interest in mathematics  
and astronomy . Rockburne's  
attraction to Mannerism has also  
influenced her work.**



**Laser table  
Hologram set up,  
for Halleys by Larry**



Here Larry Rivers works on his hologram –“Webster” 2001 at the C-Project



**Larry Rivers –1923-2002**

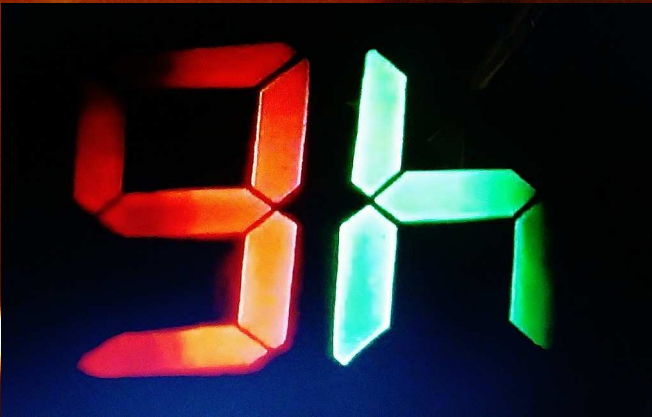
Larry Rivers (August 17, 1923 - August 14, 2002) was an American artist, musician, filmmaker and occasional actor. Rivers resided and maintained studios in New York City , Southampton, New York), New York (on Long Island ) and Zihuatanejo , Mexico .



Hologram –“Webster” 1996



Artist Tasuo Miyajima, Japanese artist,  
working on his hologram "Numbers"



Hologram Numbers 11" x 14" 1998



C is a constant and stands for the speed of light in the famous formula of Einstein's,  $E = MC^2$ .

We were to go **high level** by default, if we could come away, at the end of 5 years, with some profits.

We were being forced out of our building since they were turning our building into a storage facility. We also needed a new facility for high level artist to come to Miami Beach and play with light.

It had to be on Miami Beach – per Frank.

The concept was: artist would come and play with light, on a new, high tech art media, in a trendy resort city, on the cutting edge of technology and art.

Oh yah, and enjoy a little beach time.

The artist stayed at the Alexander Hotel, a trendy North Miami Beach Resort Hotel, we had decorated.

I found an empty warehouse on 5th and Michigan Ave, on South Beach. I did all the usual holographic and environmental testing (interferometer) to make sure holograms can be produced at the location.

We spent \$250,000 to rehabilitant an old warehouse into the new C project facility.

We found (through Bruce's contacts) and hired artist Ron Mallory as our, art director, to find and bring in named artist.

Ron was known as an artist and a social butterfly in the art world.

Ron knew just about every artist that was important in the art world.

C Project artist included:

Richard Artschwager, John Baldessari,  
Ross Bleckner, Chuck Close, Marisol Escobar, Al Held,  
Roy Lichtenstein, Tasuo Miyajima, Ann McCoy, Malcolm  
Morley, Ecic Orr, Larry Rivers, Ed Ruscha, Robert Ryman, Kiki  
Smith and James Turrell.

Everything seemed to fall in place. However, the construction delays took its toll on time lines, we managed to move in with some delay. Our new lab was a state of the art, lab, office, and gallery facility on trendy south beach. We opened our doors to some of the top artist of the 20th century in 1995.

However, behind the vale of a cutting edge new high tech art movement, was an economic and technical reality that caused extreme stress on Frank and I.

Holodam universe reared its head again.

Several times Frank made new demands and changes to our formal relationship, due to the amount of money committed.

Moving a working holographic lab and upgrading it is no easy task. Mostly, everything stayed on a tight schedule, per Franks critical and extensive spread sheets. Franks intensity rose with the amount of money spent, while I tried to maintain a calm demeanor and focused on the technical and artistic task.



A few times, construction got behind and Frank used a few tactics he learned in the construction business, to demand that the work speed up. Yelling at the construction manager, in front of the workers, this was a tactic used several times, very effectively.

Not only were we working all day to finish the lab but working to put all the required elements and lab personnel, meeting with artist and requirements to run the business in place every day and in the evenings. Many times, we would meet artist for breakfast at 9 AM and end our day at 12 AM the next day after late dinners on south beach.

Artist would visit and had to be shown the utmost hospitality.

The concept to interest the artist was: working with a new 3D cutting edge art media and spend time in the trendy newly renovated south beach, wining and dining and enjoying some R & R on the beach.

We also had to developed a educational program to bring the artist into a new dimension and movement in art.

The concept worked. Artist were into it.

The schedule got so intense that Frank wanted to hire a new person to take some of the social i.e. artist interface work load off of himself.

A special someone and to work and relate with the artist because it got to be too much for us and we needed to focus on producing the works of art and to do all that was required with daily chores.

In New York, Ron introduced Frank to Lee Lafin, a interior designer. Lee was first brought in to redo the artist apartment. The apartment was the lavish Alexander hotel on Ocean Drive. Everything in the apartment was done up in a trendy white, with a large white orchid as the centerpiece and Sharday music playing in the background.

Since Lee did a very nice job on the artist apartment, Frank thought Lee could do a good job interfacing and entertaining the artist. Lee did not want the job but Frank persuaded him to except, through many visits to NY.

Contracts were drawn up and Frank made demands that Lee was the right man for the job.

The day Lee showed up at the C Project the Vibe behind the veil went from tense to – lets just say – “off the charts, negative!

The mood shifted to a negative energy. Call it chemistry or just Some kind of astrological miss match but it was like a dark cloud came into the lab. It changed what was already a tense but workable environment, to a negative, dark force – that turned light into darkness. See Feature Article, Dieter Jungs Holographic Network, ”Stalking the C” p. 134.

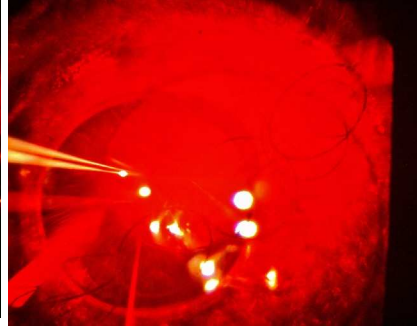
We had a 5 year plan that had to stay on a critical scheduling or we risked throwing off budgets and the bottom lines! The bottom line, was the business plan to produce 50 million dollars worth of fine holographic, limited edition, fine art, in 5 years.

#### Artist Plan

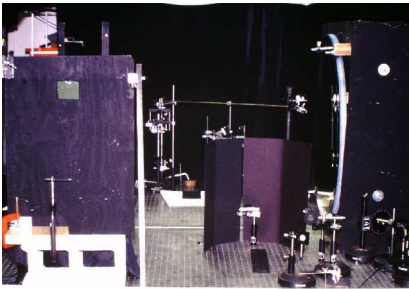
Artist were given the project plan–to create holographic art using- one art concept idea and 3 variations, for a total of 4 images per art piece.



Laser master set up



Detail of master H1 hologram



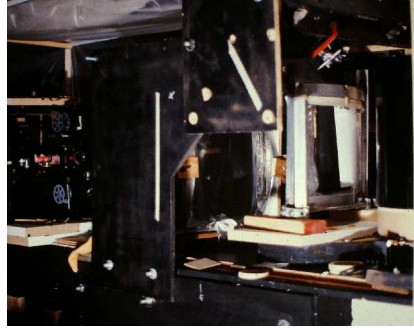
Laser with large collimating mirrors



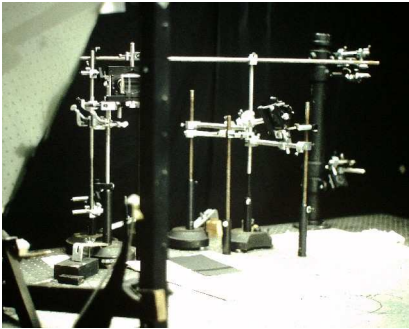
Mastering Room with 5 watt Krypton Laser



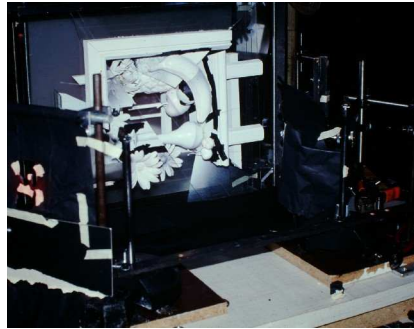
Laser table for reflection  
hologram master



Large format Stereogram  
Largest 360 - 16" 4 foot  
Diameter cylinder



Holographic Table



Model for Still Life hologram  
Set up for master.

The total plan called for - 20 signed different artist producing original fine art prints that were produced as limited editions.

The proposed plan called for us to produce, a new set of 4 full color master H1 and H2 holograms per month. From beginning to end – including educating the artist and producing the full art editions of:

20 sets, of finished, approved and signed art, over 5 years. This required more then 20 artist, since some either did not finish their project for whatever reason and some artist got busy with other projects or died during the process.

At Holographic Images Inc, we used to spend at least a month to produce one finished full color limited edition, this plan required 4 times that.

The concept worked very good to interest the artist but the balance tilted off center with the additional ***the win/dine and beach time***. The added idea of the artist/working/vacation, side of the formula, scheduling became difficult.

Artist had a hard time, getting into the lab, to get some work done. Between breakfast, lunch and dinners on Lincoln Road and Ocean Drive and beach time, with sometimes their families members, it took time and energy away from the real purpose – to produce art.

The costs skyrocketed from a workable \$5000 a month to a staggering \$120,000 per month when the plan took full effect with, working lab, staff and visiting artist.

At the onset, it was exciting to see the plan come together but in time, it took its toll on us mentally, physically, emotionally and financially.

As time went on, the stress grew. I thought, “is this us or the just the way the holodam universe works?”

As schedules drifted off, the concept of *an art happening* was developed.

To make perfect holograms, as art, it often required redoing the works several times.

Re-mastering holograms H1 and H2 is a time consuming process and caused our schedule to get behind.

Art Happening

Since the time to remake a hologram would throw the schedule off a month for each redo the concept that the hologram (art) was a **result** of the interaction with C staff and the artist (a collaboration) was adopted.

The **result** of the interaction, was the finished- end product. No technical flows could be allowed but the interactive art was the final art piece. This way, the project could stay on its critical schedule.

The happening concept was agreed on by all management and staff and activated.

The concept seemed to work except some on the staff did not seem to **get** the concept totally.

This caused some division between staff and management. Part of the staff was using the concept, to stay on schedule and the other part, did not implement the concept at all.

Lee (our in-house designer) now in charge of quality control, wanted to re-do any slight color shift from print to print. Lee felt that each is a print and all of them had to match! Which caused further delays. I, on the other hand, kept to the happening concept and professed the results of some color change makes the prints more unique.

This became a real problem especially in, now- our weekly, quality control meetings.

When you have an additional division in the staff, that really does not like being there in the first place. Negativity, spreads fast and caused friction thru the ranks.

Coupled that with loud voices to art directors that fell behind scheduling, the new artist visits.

Things got out of hand fast!

The air thickened behind the scenes of the once happy tranquil environment at the C project. The mood shifted. Holodam.

Furthermore, when our quality control fell behind due to a miss understanding of, how the physics of color holography works, and clashed and with the environmental changes of South Beach's tropical temperature and humidity changes.

Tension got downright uncomfortable.  
"A real pain in the you know what."

Color from one print in the edition to another would drift off before all the prints could be completed. We tried about everything to overcome this problem but could never control the subtle nature of color drift and thin film interference, totally 100%. Color from one day to another would change – and that was not allowed in the world of matched designer wallpaper!

Color theory of TEA

“That is how the color of physics works!”

“Famous last words.”

To get to this point in the game – years of experience went into the work, by careful watching, and if you will – listening to the way color, in a hologram works- what made it possible.

We tried everything– our motto, try everything. – Think and read everything and try everything and see what happens, and take the best results and move on.

Color is color

TEA (Triethanolamine) was first invented in the 1960’s.

TEA is a process of color control – it gives back to you exactly what you give to it including things you can not control or see and things you do not want to see.

Holographic film emulsion is like a sponge- it absorbs the atmosphere, as well as the chemicals you put into it. Each color is produced by swelling the emulsion to a thickness that filters color light.



Just like holography. Remember holography is a model for our lives. We are the holograms. We must design with the rules around the nature or physics of holography or it will cause problems for your bottom line? That is art – you control what you can and you work with what you can not control.

Now, if we do not control all the variables perfectly the results are not as perfect as we want.

You have to understand something about the physics of the film emulsion. How does it work? What makes the color?

The problem is that when you are doing editions for artist you want consistency between one print and another. You want all the prints in an edition to be exactly alike. Right? Right?  
Holodam.

But it is very difficult to control all the variables 100% of the time.

It is a moving target. The earth moves, the environment changes. One day it rains, the next it is sunny. You have to understand the physics of holography to understand how color works and changes. How many other variables are there? Hundreds or more. You must bend with the wind grasshopper.  
Light is a tool. A language, an art and a craft.

The film is thicker then 2D photography or printing- 100's of times. It acts like a sponge – if the humidity goes up, the emulation expands and contracts accordingly – kind of like the balance of the universe. It is physics.

The film is a thin film, it is an emulsion, and the color is a result of thin film interference. Many layers of microscopic interference interacting with each other. The thickness of the bragg angles course the color to change in a reflection holograms.

Did you ever see gasoline floating on top of water in a puddle? See the colors? These colors need to be controlled, that we see floating on the water.

Now move the water. See how delicate it is? You move it a slit bit and it changes the colors – this is like the color in the holographic film.

It just is the way it is. Holographers try to work with the physics of light. The physics of light and color can drive business managers, quality control people, designers and sometimes artist crazy. Especially when you are trying to match a color in a print, done one day to a color print done another day. You can run all the quality control stripes you want but the color will shift some.

This was the problem at the C project. On the one hand, you have the business side and the high costs and on the other, you have art and holography. In between, you have designers that have only worked with printing, wallpaper and painting colors and they are your quality control guys without any experience with how holography works.

Holodam

The result is holomadness in a holodam universe.

Problem is that's not possible, since we cannot control how the universe is acting today. Exactly what the humidity is that day.

That is why you must store a hologram in a controlled environment or it will change.

Grasshopper, the grass must bend with the wind or the grass will brake.

You must design the color change variable into the formula.

Well, management took the advice of the designers, because all colors in an edition had to match. Instead of bending with the wind, or the advice of the experienced holographers, not to mention 35 years of friendship, management broke the backs of the blades of grass, that got it there.

The holodam universe reared its ugly head. Holodam. One day in a quality print review/control meeting, management stood up and said, "we have a problem". The next thing was to shuffle the deck. Bring in some other holographers and start over. That put me out after 15 years of hard work. Not to mention, the 20 years before that.

I had to go set up somewhere else and start over. Not an easy thing to do. I fell from the top of the industry to the bottom overnight. I went from a state of the art facility, that I built, to a back room with a sand table. I went from working with the top artist in the world to scratching around in the sand.

This is what tested my faith. This is what tested my fortitude. This was the holodam universe testing my foundation.

In an effort to re-establish a 35 year relationship with Frank my lawyer Bob Giffin, said to him, "together you stand, divided you fall." Frank, replied, "I do not think so."

But I thought differently.

I thought my lawyer was right.

I knew money was not everything. I was the guy that went into the dark. I knew the day to day hard work it took to make the magic happen.

I knew money plus knowledge, hard work, talent, know how, a little luck and a lot of faith is the formula for true success.

What was sad, was, what could have been.  
But during the year I was working at the C-Project, I did work with several artist.

Including:

Larry Rivers  
Larry Bell  
Eric Orr  
Mardasoll And Ann Mccoy.

I produced editions for each.

The C-project fortunately, did live on.

The C staff ( including Matt Schreiber and Dean Randazzo and others, went on to work with artist:  
Chuck Close, James Turrell,  
Malcom Morley, John Baldessari, Louise Bourgeois,  
Robert Ryman, Roy Lichtenstein, Al Held, Ross Bleckner and  
Richard Artschwager.

## Chapter 19 Conclusion

### Finding the Light and Flying Holograms – The Dance of Life.

#### **Realization that we are the Holograms.**

Yes, A hologram is a thing and an object, a material object. We are people- human beings but it is the metaphor, I am talking about, when I say we are holograms. The reason we are holograms is that we are all parts of the whole.

The thing that is important here, is the theoretical principal of what a hologram is, compared to what a human being is. OK, look at our cells; each cell that makes us up, contains our DNA – our DNA can be used to reproduce a clone or us. It contains the information of our whole self, which is a part of the whole universe.

The Holodam universe concept came because a few people that called and got my answering machines message at the Hologram Universe and thought it said, thank you for calling the whole dam universe. It now became the metaphor or the catch phrase for a reminder of the humor of it all – not to lose your sense of humor even in a serious situation and something, so profound as the concept of how the universe really works.

The theory or how our brains works – that memory is stored holographic way– that any part contains the whole memory. Studies, have been done on rats – where most of the brain was removed and the rats still remembered the way through the maze.

Just as a hologram is a theory of us and how the universe works, that each part contains the whole, it is a paradox of life – that we can, yin/yang, do good or we can do bad.

We have the choice.

A hologram is the same thing. It can be used for good or bad. Just as it's light, is used to illuminate it, is also what is destroying it. As most light contains UV rays. Like our sun. We can not live without the sun. To much sun and it will kill us. The hologram acts the same way. We make a hologram with light and we display it with light. The light we display it with has harmful rays– like the sun and contains UV – the film and plastics we use to make a hologram is slowly being destroyed by the light we use to view the hologram.

So what is the point of this discussions? Each must decide that for themselves but to me the hologram is a symbolic representation of how the human predicament is. A model of us and the way the universe works.

Lets just say that we are all holograms in a holographic universe, We are all related because we are all part of the whole.

Part but still unique because we see the picture from our unique perspective. With this in mind – why would we want to harm anyone or anything? They are part of ourselves? We should treat our fellow man like we want to be treated.

**Let there be light and so there is.**

Pictures from the moon exhibit at the New Museum 9-15-2012 was a huge success.

Eric Orr Holograms that I made with Eric was the center attraction.

I was in NY to participate in the panel discussion.



Color Holograms, By Artist Eric Orr for the C-Project  
In collaborations with holographer Larry Lieberman.

Displayed at The Museum of Contemporary art show, NY  
"Pictures from the Moon", 2012



Group Photograph outside of the Museum of Contemporary Art  
From left: Linda Law, Joseph Burns, Sam Moree, Peter Miller,  
Ken Dunkley and Larry Lieberman, 2012.  
Photo by Craig Morell



I was acknowledged what I had contributed to the C-Project  
And I gave a short talk at the very end to praise the museum, in  
the worlds number one art capital and how important it is to give  
credit to the holographers that collaborate with the artist to  
produce the works of art in light.

### **Participants:**

**Jody Burns** – Artist, Holographer, Cofounder of the Museum of Holography, NYC (opened in 1976)

**Sam Moree** – Cofounder of New York Holographic Laboratory (opened in 1977)

**Seth Riskin** – Director of Emerging Technologies and Holography/Spatial Imaging Initiative at MIT

**Matthew Schreiber** – Artist, Holographer, Manager of C-Project

### **Sponsors**

Funding for “Pictures from the Moon” is provided by the Robert Lehman Foundation.

The Producers Council of the New Museum is gratefully acknowledged.

Education and public programs are made possible by a generous grant from Goldman Sachs Gives at the recommendation of David and Hermine Heller.

“Pictures from the Moon: Artists’ Holograms 1969–2008,” 2012. Exhibition view: New Museum. Photo: Benoit Pailley  
To mark the closing of “Pictures from the Moon: Artists’ Holograms 1969–2008,” the New Museum will gather individuals from the fields of technology and art to discuss the history, present condition, and future possibilities of holography. Following a demonstration on how holograms are made, the

event will feature a discussion among leading holographers about their own experiences making holograms, the challenges they face in the medium, and what new developments are occurring in holography.

<http://www.newmuseum.org/calendar/view/pictures-from-the-moon-a-symposium-on-holograms-and-art>

### Learning to Fly

I felt like a caterpillar trying to become the butterfly – and when we do get our wings we can fly. Through trials and tribulations, in the holodam universe even though it is very difficult at times, we can learn to fly.

We are the light, we are the holograms- I went into the dark and came out in the light.

**The riches that no one can ever take away.**

The journey that was filled with trials and tribulations of greed and mistrust – I did walk through the valley of darkness and never lost my faith and came out the other end with love in my soul and peace in my heart.

That is the true riches!

Call it destiny or fate but Larry found happiness and riches in a simple life with a smile on his face.

I used to think success is about how much money you have but now, I know this is not the case. What I have learned is that success is finding the balance between having enough and not having too much. If having a lot of money was the answer then why isn't every rich person happy?

What I have found is that: Having no money is a big problem. This situation needs to be avoided. But the balance between too much and not enough is a nice place. For it is where true freedom can be found.

Buddha took the middle path and that is where I found happiness too.

Its not how much stuff you have at the end but how much light you have in your heart.

Thank-you for letting me share my journey in the hologram/dam universe with you, may you find your light, too.

Larry Lieberman



"The Buddha", Color Hologram  
by Larry Lieberman, Production copy  
by Tim Hanners, Final Hologram that was  
produced at Holographic Dimensions Inc, 2006

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2. Holographic Paradigm and other Paradoxes, Edited by Ken Wilber, Shambhala, 1985.
3. The Transformative Vision, Jose A. Arguelles, Shambhala, 1975.
4. Art and the Future, A History/Prophecy of the Collaboration between Science, Technology and Art by Douglas Davis, Praeger Publishers, New York, 1973.
5. The Book of Knowledge: The Keys of Enoch: By James J Hurtak, The Academy of Future Science, Sinclair Printing, 1973
6. Tales from the Time Loop, David Icke, Bridge of Love Publications, 2003
7. New Museum brochure for Holography Show, 'Pictures from the Moon', 2012.

Larry Lieberman  
LLieber741@aol.com

Education:

1977

Bachelor Degree in Fine Arts – Ohio State University Painting, Drawing, Graphics, Holography and Jewelry

1976-77

Advanced Abstract Painting Studies with Professor Larry Camp of Yale University

1975-77

Independent Study program between the Art, Physics and the Electrical Engineering Departments under Professor Larry Camp in Art and Professor Stuart Collins in Engineering. Holography, later turned into a requirement in the School of Fine Art, Ohio State University.

1976

Lake Forest College -Holographic Workshops under Professor T.H. Jeong.

1977

San Francisco School of Holography- Under Lloyd G. Gross Inventor of the Integral Multiplex Hologram, build a 360 stereogram laser optical printer.

## **Commercial Productions**

1978-80

Holographic Research Lab – Founded to offer integral hologram printing service.

1982

Holographic Images Inc. – Full service commercial venture to produce and market holograms.

1984

Holographic Images Inc.- expand to include multiple studios to offer both stereograms and Full Color Reflection Holograms.

1986

Holographic Images Inc.- working with artist to produce color limited edition art holograms.

1995

The C Project-Working with high level artist to produce limited edition fine art.

Produce “C-The Speed of Light” Video

<http://www.youtube.com/watch?v=WbIDoewreNU>

1996

Holographic Dimensions Inc. Production facility including embossed and silver halide.

1997

Larry Lieberman Holography and The Hologram Universe Inc. Internet based consortium to provide full service holography. Full color hologram, for DuPont, on photopolymer.

2000

Hspace-Holographic Products and Creative Environments Inc.

2005

United States Patent: No 6,844,948, January 18, 2005, integral Hologram revolving Lamp and Method for Making for Same, Inventor, Larry Lieberman.

2006

Holographic Productions – Silver Halide and Ultimate holographic productions.

### **Fine Art Exhibitions**

1988 Center for Photons Studies, Lake Forest College  
Third International Exhibition of Holography, Feature “Shells”.

1991

Center for Photonic Studies, Lake Forest College  
Fourth International Exhibition of Holography, Featuring  
“Mask”, “Primary Woman” and “Still Life”

1988

Sterling Gallery, Miami, Florida

1990

Tutweiler Fine Arts, Design center of the Americas, Dania  
Florida

1991

Korean Computer Expo, Seoul, Korea

1992



Obra Social y Cultural de la Daja de Ahorros de Asturias, Fiat Lux, Spain

1991

Paris Cite

Concourse Internationale des Technologies de la Creations, France.

1992

Chad Ellite Gallery, Miami, Florida

1993 Atmospheres Art Galleries, Miami, Florida

1999

Ohio State University, Holographic Transformations, Hopkins Hall Gallery, Columbus, Ohio

2001

Art Space , Toronto, Canada

2010

Bank of America, Ocala, Florida – one man show – paintings and holograms

### **Lectures**

1988

1. “The Next Step in the Production of Larger 360 degree Integral Holograms, International Symposium on Display Holography vol., p.667-670.

1990 2. “Consistent Results with Multi-Color Reflection Holograms”, Proceedings-Workshop II,

Display Holography, Lake Forest College.

1991

3. “Consistent Results with Multi-Color Reflection Holograms”,  
New Mexico State University.

1991

4. “Paint with Light”, International Symposium on Display  
Holography, SPIE  
Vol. 1600, p 224-228.

1994

“Why I choose holography as my media”, Fifth International  
Symposium on Display Holography, SPIE Vol.2333, p198-204.

2005

6. Ohio State University, “Exploring Light and Space with  
Holography” Wexner Center

### **Publications**

1. Coherence- National Holography and Imaging association  
Magazine “Color And Holography” and “Primary Woman” by  
Larry Lieberman –Front Cover Feature.

2. Holosphere- Museum of Holography, New York, “Notes on  
Fire Prevention” by Larry Lieberman, Vol.15, No.2 Summer  
1987 –p. 25-26.

3. Holosphere-Museum of Holography, New York, “ Full Color  
from Holographic Images”,  
By Larry Lieberman, Vol. 16, No. 4, fall 1989-p 24-25.

4. Leonardo- Journal of the International Society for the Arts,

Sciences and Technology, “Holomadness and the Search for the Hologenic Image”, by Larry Lieberman-Vol.25, Issue 2, 1992 p. 6-7.

5. Society of Photo-Optical Instrumentation and Engineers (SPIE) “Paint with Light”, By Larry Lieberman, Vol. 1600, International Symposium on Display Holography, P 224-228.

### **Feature Articles**

Chicago Sun-Times: Sunday, July 14 1991.

Holgraphia: Paris, France- Autumn 1991, Vol. 1

New Miami: January 1989

South Florida Guide to the Arts: Miami, Florida- April 1990, Vol. 4 No.3

Sydsvenskan: Malmo, Sweden- September 28, 1991

The Miami Herald: Monday, July 30, 1990

The Miami Herald: Neighbors Section\_ Thursday, December 29, 1988

Investors Business Daily, Entertainment, July 17, 2002.

“Dieter Jung, Holographic Network”, 2003, Rasch Verlag Bramsche, Stalking the “C”, p 134.



Larry and wife Fay and cat Elvis  
live in Ocala, Florida since 2002



Larry Lieberman



Into the Light, Photo by Larry





**This is a true story about artist Larry Lieberman and his work in the holography art field for 35 years.**

**This is a story about Larry's climb to the top of the holographic art field by developing a high quality full color printing process and then, working with some of the greatest artist of the 20th century.**

**Larry developed a spiritual philosophy based on the holographic universe and eastern thought, to overcome the ups and downs in the hologram/holodam universe and ended up going into the dark to bring out the light.**

