

THE TRANSLATIONS
(OR THE LOSS OF NOW)

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Chapter One: Focus

My work is about how we as humans, try to capture ourselves, our world, our experiences and the people most important to us. This is attempted through photography, painting, video, three-dimensional scanning, and other various forms of media, but the true nature of the thing or the moment is never really captured. There is a loss of information as we try to capture these things: information about space, feeling, time, and literally the moment itself. Through the recent history of modern technology (and even further back), we are on a quest to capture the moment, the “now”. We may come very, very close to capturing the moment, but there is always a loss of information. Similarly my work tries to capture something that is impossible to capture, and then represent it. Like the cubists, I am attempting to represent people, objects, and environments in new ways that cannot be seen by traditional means. Looking at an object, we see one side, but through a cubist lens, we can see multiple sides or facets of the object. By capturing the image or object, building the object anew, then reinterpreting it through multiple viewpoints, we can see the object in a way that would otherwise be impossible to see. Philosophically too, I am trying to get at the concept that a moment is lost as soon as it happens. Therefore, most of us are never really living in the moment.

I use new technology to capture and reinterpret the world around me. Using the most cutting edge or experimental technology is important because it allows me to insure that I am able to reconstruct and remix these captured objects or spaces with the highest possible

resolution. This gives me the flexibility to reconstruct and reinterpret the content the most available information in the outcome or end product. I use technology such as three-dimensional scanning, three-dimensional printing, virtual three-dimensional worlds within the computer, and high-resolution photography and video techniques. But even with these state of the art tools, as I capture and record people, objects, and environments, I am often left with faulty data, due to technological limitations.

Three-dimensional scanning data is often askew or misaligned due to the fragile and delicate nature of the technology. This process of building three-dimensional spaces or objects within the computer can be done in a variety of ways. Most recently, I have been using a process of stitching photographs together to build virtual three-dimensional spaces or objects. Faulty data is produced when the technique of stitching photos together is used to go from a two-dimensional image to a virtual three-dimensional object. Using various techniques to achieve this effect, I prefer the ones that offer some control of how the imagery is stitched together. The computer program that I am using to achieve these effects attaches multiple photographs together and is where my faulty data is produced. The edges and details are often lost in this process. I use this loss or lack of information as the catalyst for the content of my new work. I call this new series of work, the *Translations*.

Many times, when capturing and recording, the technology will fail or misread the subject in novel ways. For example, in the process of stitching photos together to make *Translations*, the program will sometimes attach the wrong pieces together to form a bricolage or digital collage. These mistakes and loss of information are a breeding ground for interesting reinterpretations, and transformations into something completely new. From this point, I begin to

make new work. Rather than leave the captured content as is, I digitally sculpt, manipulate, adjust, choreograph, and collage the imagery into new work.

My work consists of a play or interaction between the medium and myself. While I use programming and code to build much of my work, I often inject randomization, physical interaction, and iteration into the work, adding to a more organic processes, and significance. For example, with my generative work using purely code as a working medium, I might design systems that have moving and growing parts, that change over time and randomly change shape, move, or alternate in color. I would almost consider this to be a “drawing machine” except that I will also make sure to include physical inputs (interactions with the computer like a mouse, for example) that alternate the program in real time, where the outcome might change because of variables such as; the mouse movement, camera, or light sensors. In this way, my interactions with the work actually result in a more organic and less systematic outcome. By allowing the organic nature of my decisions and movements to affect the work, the result is also more playful and interesting.

My work is using bricolage to create new work from a combination of various media and techniques. Since (in the above example), the final result is after a process of capturing imagery, altering it with code, then outputting this to print, in terms of new media, this technique is closely aligned with intermedia, that is media that “falls between media.”¹ according to Elwell J. Sage’s book *Crisis of Transcendence: A Theory and Art in Digital Culture*. This is why I title much of my current work *Translations*, because it is a process of moving between and through media and coming out on the other side as a new language or idea of the original object.

¹ Sage, Elwell J. *Crisis of Transcendence: A Theory and Art in Digital Culture*. (Blue Ridge Summit, PA: Lexington Books, 2011), 124

Chapter Two: Contexts of Thought

Brian Greene and Lawrence Krauss's research in physics on multiple universes and parallel worlds opened my mind to new possibilities surrounding conceptual frameworks about my work. In the simplest sense, I can compare their work with mine in the sense that a parallel universe is something that is really impossible to capture with current technology. The Calabi-Yau Manifold is a concept in physics to which Green and Krauss often refer. This is often mentioned in relation to string theory. String theory can explain how multiple dimensions may exist by representing particles as strings. The Calabi-Yau is a form that is representational of a multi-dimensional universe. But the Calabi-Yau cannot really be visualized. This makes it an "impossible" object to represent. Green explains the Calabi-Yau: "One of the most beautiful features of string theory... the strings are so tiny... they vibrate into the tiny, curled up dimensions... And much as air streams flowing through a wind instrument have vibrational patterns dictated by the geometrical form of the curled-up dimensions."²

The connection between nature, science, religion lies within the sublime, the unexplainable. Emanuel Kant begins to get at what I mean by this. His very simple definition explains what I am trying to get at.

Kant explains what he means in terms of the definition of the existence of a thing:

² Greene, Brian. *The Elegant Universe*. (New York, NY: W.W. Norton & Company, 2003), 91

“If the word nature is taken simply in its *formal* meaning, where it means the first inner principle of all that belongs to the existence of a thing, then there can be as many different natural sciences as there are specifically different things, each of which must contain its own peculiar inner principle of the determinations belonging to its existence.”³

In addition to Kant, Phillip Fisher has also been of great conceptual influence to my work. His work, *Wonder the Rainbow and the Aesthetic of Rare Experiences* tries to get at what the sublime and the subtle experiences we have during observation and experience. For me, the sublime is sort of unexplainable, something to wonder at and look in awe. Fisher comments on Kant and his idea of what Kant is really trying to get at with his idea of the *sublime*. “...Kant showed in the case of what he called the mathematical sublime, and to whatever link there might be between mathematics and the most essential details of thinking itself.”⁴ For me, Fisher is trying to get at what is not obvious, but is the apparent connection between physics, nature, and the human mind. He is talking about the human mind as a mathematical and machine of the universe. It is this edge between the obvious observable world around us, and the invisible workings of physics and nature that also fascinates me.

For my work, the sublime exists as a subtle balance between aesthetic minimalism and surreal or otherworldly subjects. It is sort of a visual representation of this boundary space

³ Kant, Emanuel. *Metaphysical Foundations of Natural Science* (Cambridge University Press, 1786), 3

⁴ Fisher, Philip. *Wonder the Rainbow and the Aesthetic of Rare Experiences*. (President and Fellow of Harvard College, 1998), 1

between human thought and the world of mathematics and physics. This boundary is somewhere between observation, representation, and perception. As Kant was explaining about the *inner principal* of a thing, this is what I also mean. What I am capturing is a non-thing, it is the essence of the thing, or what surrounds that thing, rather than literally the thing itself.

The connection between my studio process and the conceptual meaning is most clearly explained by looking at early artists of the 1960's assemblage or Dada movements. William Seitz, in his fascinating book about the art of assemblage really gets at this idea of the process beginning to explain the work or art, or non-art. Seitz explains in the introduction of his book, "...the title of this book could have been "The Art, Non-Art, and Anti-Art of Assemblage"... There are even some pieces here that cannot be called "art" at all in the accepted sense of that term."⁵ The idea of assemblage, and technological processes are actually very close. The use of technology is typically not an ends to a means, but maybe it is. Maybe there does not need to be apparent meaning behind the resulting technology. Maybe the mere presentation of technology as art makes it art.

Furthermore, in terms of conceptual and contextual thought in terms of my current work, Walter Benjamin is a wonderful person to mention. His essay *The Work of Art in the Age of Mechanical Reproduction*, written in 1936 is a seminal work that has shaped how we perceive digital media today. The core point he makes about reproduction is that the essence of the unique or traditional piece of art is lost in the process of mechanical reproduction. He is foreshadowing the use of digital techniques now used in mainstream society for everything from advertisement, to fashion, to art.

⁵ Seitz, William. *The Art of Assemblage*. (The Museum of Modern Art, New York, 1961), 6

Benjamin in his own words:

“In the case of the art object, a most sensitive nucleus—namely, its authenticity—is interfered with whereas no natural object is vulnerable on that score... Since the historical testimony rests on the authenticity, the former, too, is jeopardized by reproduction when substantive duration ceases to matter... the technique of reproduction detaches the reproduced object from the domain of tradition. By making many reproductions it substitutes a plurality of copies for a unique existence.”⁶

This may be true, but there is another form of production that comes from new digital media techniques, not only reproduction. Michael Rush writes about Walter Benjamin in his book *New Media in Art*. Rush also points out that although Benjamin was correct in his point that a reproduced work may somehow remove the magic that might otherwise be contained with a “unique” art object, digital production methods make possible new forms of production, not just reproduction. Rush explains it like this: “Using digital technology artists are now able to introduce new forms of ‘production,’ not ‘reproduction.’... ‘We are entering a world where there won’t be one, but two realities: the actual and the virtual. There is no simulation, but substitution.’”⁷ This leads me into a discussion about my studio process and materials.

⁶ Benjamin, Walter. *The Work of Art in the Age of Mechanical Reproduction*. (1936), 3

⁷ Rush, Michael. *New Media in Art*. (London: Thames & Hudson, 2005), 181

Chapter Three: Studio Process

My studio practice includes using various types of new media, processes and materials. Computer vision and additive manufacturing processes as well as virtual reality are employed in the production of my work. These processes have developed over time as a result of the research and experimentation with artificial intelligence and human-computer interaction used in conjunction with creative processes. These processes are called new media or multimedia. William Gibson (the great science fiction writer) provides us with a very clear and precise definition of this new form of creation.

Gibson give us his definition of multimedia:

“Multimedia, in my view, is not an invention but an ongoing discovery of how the mind and the universes it imagines (or vice versa, depending) fit together and interact. Multimedia is where we have always been going. Geeks and artboys, emerging together from the caves of Altamira, have long been about this great work.”⁸

Much of my work comes out of experimentation with these new technologies. I utilize loss of information and hacking to determine the boundaries that can be pushed. Through

⁸ Packer, Randall and Ken Jordan. *Multimedia: From Wagner to Virtual Reality*. (Norton and Company, 2001), xiv

hacking I use elements of the technology in ways that they are not intended. When discussing a hacked object, we must mention Duchamp. Although his work might not be considered to be “new media” per se, we may consider some of his work to be multimedia, as he was pushing the boundaries of the technology of the time. Especially in his installation *Étant Donnés*, in which Duchamp used many moving parts (mechanically) and careful lighting to build his work. He was using motors, lights, and bits of human hair to build *Étant Donnés*. Furthermore, Duchamp can be seen as the grandfather of the genre of new media, but also interactive media. Duchamp’s spinning optical disks called ‘Rotary Glass Plates’ were his attempt to create the first three-dimensional film. They could be considered to be interactive media because they used electronic motors to start the disks into motion. At this time, Duchamp was trying to break down the barrier between the audience and the object. He believed that the work only came to life once the viewer ‘participated’ by observing the work. To make the point more clear, I cite one of Duchamp’s contemporaries and friends, Jean Tinguely, who is a huge influence on my work. Tinguely created machines that he named *Métamatics*, made with metal and had many moving parts. They were essentially randomized drawing machines. When the machine would be in action, it would generate a new and unique drawing each time. Pierre Cabanne, writer of *Duchamp & Co.* explains more about Tinguely’s creations. “(Tinguely) invented his *Métamatics*, painting machines which operated in an automatic world of potentially infinite metamorphoses. Though them, he created a new approach to reality as radical as that which had come into being with the readymades.”⁹ The point here is that with Tinguely’s *Métamatics*, he was essentially creating early generative art. By setting up a system in which there were rules, but also randomization,

⁹ Cabanne, Pierre. *Duchamp & Co.* (Paris, France: Terrail, 1997), 187

the product would never really be the same twice. While I often will attempt to essentially create a “drawing machine” though digital means (code), it is that process of discovery and building a system that contains many variables that is at the core of my current work. Looking at Tinguely’s moving sculptures, his systems were even more interesting because they used both physical and systemic elements to alter and build his works.

Hulten explains Tinguely’s process very clearly here:

“In machines intended for practical use the engineer tries to reduce the irregularities as much as possible. Tinguely is after the exact opposite. His objective is mechanical disorder. His cog-wheels are so constructed that they jump the cogs continually, jam, and start turning again, unpredictably.(...) The same movement can appear ten times in succession and then, apparently, never be repeated again. The creates an unusually acute sense of time.”¹⁰

What Tinguely was doing here was creating a system that had built in randomization, but still controlled randomization. He was not only using technology, but built custom technology. Furthermore, the pieces produced from his *Métamatics* were not necessarily what were important in the end, the importance was the *Métamatics* themselves. Furthermore, Tinguely’s *Métamatics* can also be seen as a very early integration of human and machine language working together. They are reminiscent of very early computer art and Hulten goes on to explain this further here:

¹⁰ Scha, Remake. *Radical Art*. Institute of Artificial Art Amsterdam. ND. Web, 1

“Carried out in a very precise way, such movements result in stark geometric images with pretty Moire-effects. (This is what we see in many early computer-generated graphics.) But the mechanical imperfections of Tinguely’s machines creates an abundance of irregularities, deviations and interruptions; this results in a suggestion of expressive human gesture.”¹¹

Many discoveries are made during the process of experimentation with technology. Some of the earliest innovators using media transform art were those involved in the Fluxus art movement. Nam June Paik and Yoko Ono were the major figures in Fluxus art. Even as early as the 1950’s, Nam June Paik was experimenting with video signals in a very raw and unusual ways, we have seen new media artists making discoveries to push beyond the media and medium to create something new. Paik’s use of television screens to create multi-channel video installations was a completely radical notion at the time. Video installation has since become a widely accepted medium in the “mainstream” art world. Paik’s performances were heavily influenced by his mentor, Karlheinz Stockhausen. Stockhausen as well as Duchamp and the Dada movements were of great influence to the Fluxus.

John Cage is also another great example of an artist that used media in completely unusual and uncontrollable ways. In his live performance composition *Variations V*, he and several other performers used a variety of “instruments” including live radio transmission, phones, and modified electronic equipment. Cage did this intentionally to have elements used

¹¹ Scha, Remake. *Radical Art*. Institute of Artificial Art Amsterdam. ND. Web, 1

that they could not have total control over. In a similar way to my work, Cage was not controlling the outcome of his work as much as the process used to come to those ends. Although Paik and other early new media artists were incorporating performance into their work, Cage pushed experimentation with randomization and unconventional equipment to the next level, paving the way for modern electronic music and experimental new media.

From a more modern perspective, looking at the Jodi art collective who in 1999 used computer video game technology and content in their work to create subversive worlds. Christiane Paul is a renowned curator and professor of new media. Paul explains how their work was created through a process of discovery and experimentation with technology that is not normally used in this way, but also incorporates unstable and random elements that are inherent in this media. “Jodi used the original game engine as a tool for the creation of abstract art. Glitches and bugs in the original code were employed to produce aesthetically beautiful effects from the original system’s failures.”¹² Similar to my process, Jodi’s work employs the “system’s failures” to create a new composition.

The artist whose work is close to a true artificial intelligence based generative art is Harold Cohen. His project AARON is a painting and drawing system that uses artificial learning to make decisions over time to improve and change its style. AARON has greatly influenced my work in terms of incorporating generative systems into my process. Ray Kurzweil, the well-known futurist and inventor has extensively written about Cohen’s work over the years. In Kurzweil’s book *The Age of Spiritual Machines*, he talks about Cohen’s work with AARON and how it is probably the closest to true machine art.

¹² ¹² Paul, Christiane. *Digital Art*. (London: Thames & Hudson. 2003), 201

Kurzweil explains AARON:

“Probably the leading practitioner of computer-generated visual art is Harold Cohen... Cohen has spent more than three decades endowing his program with a knowledge of many aspects of the artistic process, including composition, drawing, perspective, and color, as well as a variety of styles.”¹³

AARON is probably the most advanced system today in terms of generative art. It is an extreme representation of automated and non-interactive new media. It is a completely automated system that does not take any real time user input, meaning that the system does not need a human to operate it. Other than Cohen’s programming, AARON is a fully independent system. Although this system is fascinating and influential for my work, I prefer to have more influence and control over my work today.

My goal is to not only experiment with the technology, but to allow for the technology to show me meaning from the form of the experiments. Experimenting, discovery, and revelation are all part of a never-ending creative process. It is this series of interactions that creates the spark needed to produce my work. The idea of making art from code was not a common idea in the traditional art world. But in the past ten years, the generative art movement has taken off. (People using computer code as their central medium, rather than paint, for example.) Today, generative art is known mostly for being created with computer code or a programming

¹³ Kurzweil, Ray. *The Age of Spiritual Machines*. (New York: Penguin Putnam, 1999), 166

language. What makes it generative is that the artist or programmer typically sets up a system that will “run” to generate a result. Often this work is based on or uses biological processes as a basis for the system. Randomization, chance, branching, and natural systems are all usually employed as well. Cellular automata is often mentioned as a very early basis for generative works. Cellular automata is a biological theory that basically means that each piece of the system is given rules and act autonomously. Therefore, each piece of the system acts with each other to form the overall interactive system. In programming, we use *classes*, and OOP (object oriented programming) to build “natural” systems like the ones that occur in nature. In this way, we can create a unique and ever changing work of art or system used to build the art. Each object in this case is given a set of rules (often with random elements varying the rules), and each object or cell can transform or react based on the others.

There is another form of digital art known as live coding, interactive, or new media performance art. In a sense, this type of process is on the opposite side of the new media spectrum. Mainly because generative art often has a closed system that is not affected by outside influence. Live coding is for example when one affects a program through outside means like physical input, therefore affecting the way the program functions. I feel that my work is somewhere between these two types of systems. Although I am often setting up a closed system initially, I will typically bring outside interaction into the work. So my work uses generative methods, but also incorporates interaction either during the studio process, or *in* the gallery space.

In terms of interaction in the gallery setting, I have recently swayed away from this type of work, and gravitated towards “pre-interactive” works, meaning that I interact with or have my

subjects interact with the media or medium in advance of the gallery showing. I feel that the resulting work from an in studio interaction is more powerful than in gallery interactive works. It is most interesting when users can see and understand that *their* interactions are affecting the image or media.

Using code as a medium actually opens up many more doors than a physical medium may. Using code allows the artist to build a wider variety of elements in their work: like user interaction, infinite compositions, and other forms of media, not just visual. Audio, video, movement, and physical touch can be incorporated here. All this creates new possibilities by allowing me to program a new language and a new world from scratch. The restrictions are also lower for artists because of the openness and open source nature of code. (Open source code means that any number of people from around the world can alter and add to the code). The code is shared in a way that is the opposite of copy written materials. If we cannot fully grasp or build a piece of the environment ourselves, we reach out for help from a vast community around the world, working in similar processes. This allows artists to work *like* scientists without having to dedicate all of their time to the field of computer science. Therefore, artists working with code have more time for their creative processes and experimentation.

Chapter Four: Integration of Content and Context

My work is constantly moving between the physical world and the virtual world within the computer. It is this play, the back and fourth conversation that ends up producing the end result. Because much of my work is “generative” or using a process of capturing and translating worlds into new interpretations, in some way I am not actually generating the work, but rather I am creating the systems or mechanisms that generate the work. I am often put in the position of selecting the final product, as a result of the system that I created. Often, I am left with an interesting result long before the work is concluded (at the point it will be displayed). This moment that I select is what the final work turns out to be. I am saying, “freeze” and this is the end result. Imagine an animation that has no end, but that is constantly changing; I have to say at some point, “Stop!” when the work seems to be in just the right place. But as the product is pushed back and fourth between the real world, new results form. An example of this push back and fourth, and ultimate translation into a new “language” (often a surprise even to myself):

- I may scan an object with a laser and multiple cameras.
- Clean up, position or alter the object in the computer.
- 3D print the object.
- Photograph the 3D printed object.
- Clean up or position in the computer.
- Print that photograph.
- Repeat

This process may continue or go back to multiple parts or steps before the work is complete. This process of experimentation will often allow me to arrive at a new conceptual place. My recent series of self-portraits using the above methods began as an experiment. It then become my job to extract the meaning and conceptual ideas after the fact of creation. At this point, the concepts become clear and I often begin a series based on these newly discovered processes or emerging conceptual ideas.

Christiane Paul, the new media expert and professor describes how in new media, the medium and the meaning are often blurred and also connected. (This is different, for example, than traditional art mediums, because a painter is rarely *talking* about paint as a piece of content.)

Paul explains what she considers to be the intersection of medium and content:

“It is problematic to claim that all digital artworks can be neatly categorized according to different forms: most of the time, these works combine various elements... It is important to be aware of the formal aspects upon which the art is based. Ultimately, every object - even the virtual one - is about its own materiality, which informs the ways in which it creates meaning.... While the formal aspects of a work are always inextricably interconnected with its content (the medium also being the message).”¹⁴

¹⁴ Paul, Christiane. *Digital Art*. (London: Thames & Hudson. 2003), 70

The intersection between the content, context and form of my work is also left intentionally ambiguous at times. I really want the viewer or participant to decide what the work or experience really means to them. For me, it is not really important if my message gets across to the viewer or not. I would like them to form their own interpretation of the work. This is where the content merges with possible narratives, especially in my recent work building artificial worlds through 3D scanning. These works appear to have clear or ambiguous narratives, but they are left up to the viewers to decide what those narratives are. Because we are using technologies to capture moments, friends, or experiences, the technology itself is only an interpretation of that thing. This edge between reality and the interpretation of that moment is where the loss happens. So, therefore, by using these so-called high technologies to capture and record my subject, but emphasizing the lost data, I am intertwining the medium and the meaning. The experimentation with technology *informs* my process and meaning. Rather than forcing meaning out of a disconnected material, I prefer to let the meaning emerge *out of* the technological experiments. This idea of the *loss of the now* came from my experimentation with the medium, building three dimensional objects and environments from two-dimensional photographs. It was reinforced by the recent loss of my father, a major event for me, which changed the way I see the world. Realizing that all the recorded moments in the world cannot really capture a person. It is only *the now* that exists. In fact, everything else is an illusion. By building these *Translations* I am teasing out the idea that our recorded memories (photos, video, etc) are merely illusions. Though we are living in an age where these media are becoming more and more ubiquitous, it seems that this fact of living in the now and here is slipping away. In a way, mobile computing, surveillance, and

other high technology are paradoxically pushing us further away from the now, rather than bringing us closer.

Chapter Five: The Future

My work is currently moving back into the non-static world of animation and interactive installation. My recent work has been autobiographical but is moving towards documentary like some of my older work. My interest in documentary work has arisen because of political and local concerns and addresses challenges in gathering new content. Being enclosed in my studio limits my content and going into the world to document people, places, and things will generate new material.. This future work and my current work are at an intersection. I am building my new works with the idea that I will output them in super high resolution or as a moving image. I am currently experimenting with these new processes; creating a moving image representing these alternate worlds or imaginary narratives seems like the next logical step in my process and work. My work has moved from video installation, to interactive installation, to generative print work, to three-dimensional printed work, to four-dimensional video work (four-dimensional video can be described as three-dimensional scanned images with video, rather than photographs). My current experimentation includes using some of these cutting edge techniques and combining them with some of my previous processes.

I am experimenting with video within the three dimensional environment of the computer. Using projected image and video furthers an abstract and unconventional narrative and opens new doors to me.. These new video processes that I have been using are hybrid technologies. This combination of technologies like using laser scanning technology combined with traditional film making are hacked processes and , use new media in untended ways. By expanding my processes, the loss of data and the loss of now will become more apparent with the use of video and moving image. Over time my work transforms and changes, and begins to merge these various techniques into a unified whole.

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