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Unstable Systems or Why Is My Junk So Raw?

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Unstable Systems or Why Is My Junk So Raw?

A Thesis Presented

by

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Department of Art

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ABSTRACT

UNSTABLE SYSTEMS OR WHY IS MY JUNK SO RAW?

MAY 2016

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Unstable Systems or *Why Is My Junk So Raw?* is an exploration in the raw aesthetics of exposed electronics; showing the complicated systems that make our everyday electronics work using the visual language of formalism to display these "broken" consumer electronics as art. The work in my thesis show explores the creative potential of death and impermanence through the failing of technology. The work in the exhibition combines my interest and childhood fascination in electronics as well as my experience with my father's illness. Accidentally and intentionally broken TV's and electronics are producing live glitches which emphasize the instability of these otherwise closed systems.

TABLE OF CONTENTS

CHAPTER 1

INTRO

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Unstable Systems or *Why Is My Junk So Raw?* is an exploration in the raw aesthetics of exposed electronics; showing the complicated systems that make our everyday electronics work using the visual language of formalism to display these "broken" consumer electronics as art. The work in my thesis show explores the creative potential of death and impermanence through the failing of technology. The work in the exhibition combines my interest and childhood fascination in electronics as well as my experience with my father's illness. Accidentally and intentionally broken TV's and electronics are producing live glitches which emphasize the instability of these otherwise closed systems.

I take a very practical, utilitarian, and minimalist approach and try to pare the presentation down to feature only what is necessary to make the system work. For instance, if a piece does not feature sound, I remove the speakers that came attached to the television. If a video source does not need all of its parts, then I remove them. I want the viewer's focus to be on the raw system and consider its brokenness as a visually interesting and desirable output.

I quit playing sports when I was in high school to take computer lessons. I learned some basic Linux commands, but didn't get very deep into it. I did however, build my own computer. I was given a budget to pick out and order all of the components. With help from my teacher we put the computer together. I learned what a motherboard is and how all of the pieces (such as the sound card, graphics card, etc.) of the computer attached to it. I remember putting in the CPU last and then my teacher jokingly saying, "Now for the smoke test – let's turn it on." It was pretty funny and scary at the same time because the CPU actually did smoke. Up until recently, you could turn on the computer and the CPU wouldn't burn, but the AMD processor that I picked out for my computer was powerful enough that it could only be run with the heat sink and fan attached. My teacher bought me a new CPU out of his own pocket because he felt bad that he had burnt mine. My computer always worked kind of funny and would crash randomly. It was finicky and I attributed it to the CPU being burned in the motherboard. I would have my computer sitting on my bedroom floor with the outer shell off. I would spaz if people ate or put anything on the desk near it incase anything spilled or fell into my computer. I kept the shell off b/c I wanted the computer to have maximum air flow. I would only really put the computer case together if I was bringing my computer somewhere like a LAN party. From about 16 I had my own computer that I built, maintained, and upgraded when I could. It was a fickle machine but I knew how to make it work.

CHAPTER 2

▵GLITCH_DEFINITION▵

The definition of "glitch" in the art community is often debated. The earliest genesis of the word "glitch" can be traced back to the 1940s. In the 1940s if a "radio talker" would misspeak during a broadcast they would call it a "fluff." If the radio talker made a "bad" mistake they would call it a "glitch". This definition is narrow, language-based, and likely a reflection of the limited technology at the time.

The meaning of the word "glitch" shifted in the 1960s from describing an error committed by a person to describing an error committed by electronics.

This reconstruction of the word's semantic history seems to be entirely based on a 1962 quote (the earliest given by the OED and other dictionaries) from John Glenn, in his contribution to *Into Orbit*, a book jointly written by the original seven astronauts of Project Mercury. Glenn wrote:

> Another term we adopted to describe some of our problems was "glitch." Literally, a glitch is a spike or change in voltage in an electrical circuit which takes place when the circuit suddenly has a new load put on it. You have probably noticed a dimming of lights in your home when you turn a switch or start the dryer or the television set. Normally, these changes in voltage are protected by fuses. A glitch, however, is such a minute change in voltage that no fuse could protect against it." [1]

[1] http://www.visualthesaurus.com/cm/wordroutes/the-hidden-history-of-glitch/

The act of invoking, producing, or causing a system to glitch is referred to as “glitching out” the system. When an artist is fully glitching out a system, the system is being pushed to the point of being unrecognizable or glitches are pushed to full bloom.

A “natural” glitch is an unintended interruption in a system. Within the Glitch Art community, there is a distinction between glitches that happen “naturally” and glitches that happen intentionally. You may have seen a glitch in an electronic subway sign or a billboard. These glitches were not supposed to happen so they would be considered “natural” glitches. When an artist deliberately causes something to glitch, the glitches caused fall into a different category—intentional glitches.

There is a further distinction in the realm of glitches between what is called “glitch-a-like” and “pure” glitch. This distinction is fairly simple. A “pure” glitch is a glitch that is actually happening in real time due to the electronics working in a way that was not originally intended. “Glitch-a-like” is when something looks like a glitch but is not in fact actually glitching. Video filters are a good example of this. Just because imagery resembles the aesthetics of a glitch that does not mean that the imagery is actually the result of a glitch.

A glitch can be caused by multiple things, but always happens based on some kind of error. As glitches can have a variety of root causes, glitches can also take many forms and look very different. Often, the differences between glitches can be traced back to how they were caused. When talking about electronics, glitches are traditionally thought to be caused by either a fault in the hardware, or an error in the software. Technically, a glitch can be caused by a fault or error in both the software and hardware at the same time. Glitches can also be caused by an interruption in the data flow/stream/connection. When this happens the

software that is decoding the data usually is not making a mistake decoding the data. The glitching is caused due to the data that was lost en route. The image is displayed correctly- the message is wrong. When the software interprets the data, an unintended image is displayed.

The common causes of a glitch can be traced back to an error in the code, an interruption in the signal stream, or a change in voltage to the machine. Dust, dirt, or debris in the system can cause a glitch. Faulty electrical components, their soldered connections or wiring can also cause glitches. Because a glitch is based on a mistake or fault it is often thought to be synonymous with an error. In my work I am working to rebuke this idea, by claiming the error as intentional and desirable.

CHAPTER 3

PERSONAL CONNECTION

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Glitch resonates deeply for me because of my family. When I was young my father was diagnosed with multiple sclerosis. Multiple sclerosis is "an unpredictable disease of the central nervous system, multiple sclerosis (MS) can range from relatively benign to somewhat disabling to devastating, as communication between the brain and other parts of the body is disrupted." [2]

Growing up, multiple sclerosis was described to me as being a disease where the wrapping of my father's spinal cord deteriorates or his body is attacking it. This causes lesions in his nervous system. His brain will send messages to his muscles but the messages will be interrupted. So, an example of this is his brain will tell his leg to move forward in order to take a step. The message will get messed up en route to the muscles and his leg will not properly come forward, resulting in him falling over.

Over the course of your life you watch the natural deterioration of your parents. Entropy is inevitable. Due to the lesions developing in his nervous system, my father's disease has made this deterioration more pronounced, due to the lesions developing in his nervous system. The sabotage of his nervous system causes him to glitch when trying to walk. His experience of

[2] http://www.ninds.nih.gov/disorders/multiple_sclerosis/multiple_sclerosis.htm

using his body is like trying to operate a glitchy system. Over time his body-system becomes increasingly compromised and parts of his system eventually go offline.

When I was a child I was diagnosed with "learning disabilities", which explained my trouble reading and writing. I was told that I had trouble "decoding" words. In high school I was told that it is ok to switch out of an advanced math class and it was not my fault that I did not understand the material because people's brains develop at different rates, and that my brain had not yet developed the "connections" and synapses necessary for the class. This was a blow to my self-esteem and a disappointment to my parents, who were very hard on me to get good grades. Overachieving in math made up for my underachieving in reading and writing. Shortcomings in my brain now being responsible for lackluster performance in both Math and English classes was cause for some worry. Although I do not really buy the brain connection explanation or that I have trouble decoding words, both of these ideas have fascinated and stuck with me.

My experience with my father's illness and my own learning disabilities inspire my interest in the glitches inherent in technology. Watching my father deteriorate due to his illness is reminiscent of the deterioration that occurs in modified systems. There is a parallel between faulty biological connections and faults in electronics that result in glitches.

CHAPTER 4

IMPERMANENCES → DEATH

Light, entropy, the fleeting moment, and experiential art work.

There is an experiential quality to watching machines glitch. An aspect of glitch that I really like is that the glitch is fleeting, that the glitch appears and then is gone. Even when something is constantly producing glitches, there are particular compositions that are visually more interesting and therefore more valuable to the viewer.

That these images appear and then are gone is attractive. It is attractive partly because it cannot be contained and possibly not obtained again. That the desired glitch compositions cannot be conjured or recalled on demand makes them more valuable due to their scarcity.

Creating or discovering a glitch is just the first step. So much of glitch art is trying to stabilize a system to be able to display the intended glitch. The most reliable way to stabilize a glitch is to capture and record it. A stable recording will reliably play back the captured glitch. Doing this means that the glitch is not happening live—that the machine is not actually glitching; it is functioning properly. This is different than a system that has been modified to glitch. You could argue that since a piece of artwork is made to glitch it too is functioning properly due to its new intent. However, I don't think it is because the original intent of the system is to work a certain way and it has been changed to create glitches. This differs from the recording which was always intended to be stable and play properly.

Having the system glitch, or operate in a way that it was not intended to, provides additional strain on the system. When watching systems glitch, you are watching them malfunction and die. Systems that are not operating as they were designed wear out more quickly. Just like us, machines have a life span. Entropy is inevitable and the impermanence coaxes the viewer toward thinking about their own mortality.

> "the mobile mysteries of electronic presence yielding to a logic that equated electronic static with cultural and even biological stasis."[3]

Watching a dying machine makes you think about dying. When you think about dying you may think about how you too are going to die. There is no heaven, no hell, no afterlife. We are all lights that eventually burn out. Once your light has burnt out all that is left of you is energy that resonates in someone else. Your carcass is left to deteriorate and be forgotten like a burnt out television in a landfill.

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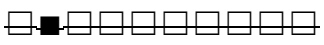

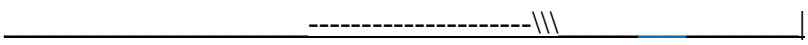

[3] Jeffery Sconce, Haunted Media: Electronic Presence from Telegraphy to Television, 131

CHAPTER 5

GLITCH ART

My interest in glitch art started seven years ago while I was a student at the School of the Art Institute of Chicago (SAIC). I transferred into SAIC from Greenfield Community College. While at GCC I had become very interested in Abstract Expressionist oil painting. Before graduating from GCC I was challenged by my painting teacher who ask me essentially what my generation could have to add to an art movement that has been around for 60 years. While at SAIC I grappled with this question until I was exposed to glitch art in the Film, Video, and New Media department. I had an Eureka moment and was instantly hooked. To me glitch art was an answer to the question my painting professor had posed. I have been making glitch art ever since.

When taking classes in the Film, Video, and New Media department at SAIC I was quickly introduced to, and regularly remind of, the work of Phil Morton. Phil Morton, who coincidentally was originally hired at SAIC to teach painting, founded the Video department as well as the Video Data Bank at SAIC. His beautiful videos, wild child attitude, and painting background inspired me and made me feel at home in the Film, Video, New Media Department.

To me the most influential and interesting glitch artist is Jon Satrom. His concept of “creative problem creating” as well as “creative problem solving” has instilled in me the artistic practice of “doing the wrong thing the right way”. Jon has also been instrumental in building the glitch art community by co-founding the glitch art gathering GLI.TC/H.

CHAPTER 6

CHANCE [↘↘CIRCUIT↖↘BENDING↖↖] AND HARDWARE GLITCHING

The glitches in my work are mostly a result of alterations I have made to the hardware. I am interested in hardware glitches for a number of reasons. I like the sculptural qualities—the object-ness of hardware, that it is here in real space, yet creates virtual space. I appreciate the tactility of hardware, that I can touch, move, and alter it.

While hardware is physically here, the electricity that runs through it, creating a digital world is invisible. I'm fascinated that hardware opens a portal into the digital. I like opening up electronics and seeing the hardware that the electricity is running through. Electricity is being harnessed and put to use in the hardware. The electricity is dangerous, and I'm interested in that because it creates an element of risk when working with hardware. Although I cannot see the electricity I know that it is there. Sometimes I can feel the electricity. The feeling of electricity can range from a tickle to death. Along with risk, there is also an element of chance.

> "Fantastic effects are yielded in such accounts through minimal but well-chosen or accidental acts that ripple through volatile systems. One should seek out the simple and then distrust it." [4]

When manipulating hardware, I am making a simple gesture of connecting one point to another that has a huge effect on the output, but the output is not reliably the same.

[4] Matthew Fuller and Andrew Goffey, Evil Media, 59

In my artwork, I use a technique of modifying the electronics called circuit bending. The searching for connections and rewiring of electronics that happens in circuit bending, is a metaphoric gesture of making connections in my brain. Circuit bending is a technique originally employed in sound work.

> "With the circuit making a sound, touch one end of the wire to the circuit points and the other end of the wire to another circuit point. If this results in an interesting sound, mark the circuit to show where the ends of the wire were placed to create that new sound. While keeping one end of the wire stationary on the initial spot, touch the other end of the wire—let us call it the traveling end—to another arbitrary spot. If a new sound is created, mark the circuit board again. If the entire circuit is searched in this way and the searcher is not yet content with the found sounds, start all over again, but with the stationary end of the wire on a new spot. The traveling end repeats its tour." [5]

Although there is still a large component of chance, when I apply this technique to video circuits I need to be more careful and intentional than I would when bending an audio circuit. There is quite a bit of trial and error when searching for active points while circuit bending. It is necessary to be persistent and systematic when hacking a system. I often research and try to decode schematics for the electronics that I bend. This kind of art practice has a firm foothold in the Fine Art canon and traces back to Nam June Paik's work with modifying television sets.

[5] Qubais Reed Ghazala, The Folk Music of Chance Electronics: Circuit-bending the Modern Coconut pg 99

> "Using circuit diagrams and handbooks, he familiarized himself with the inner life of the sets, intending to interfere with the order he found there. After an intervention by Paik, not much remains of the message but the medium. This electronic tinkering is also a destructive Fluxus gesture. …he was not concerned with mere interference, but with altering the function of the set. There was no need to learn from Marshall McLuhan; the significance of television to everyday life was already obvious." [6]

There is an element of risk in that a possible, sometimes probable, result of circuit bending is a total loss of the device. The possibility of completely frying the system adds to the excitement of finding and creating a working, stable glitch. If there were no risk involved, circuit bending would be very straight forward, and a relatively simple exercise in trial and error. The chance of total loss of the device requires acceptance that all of your work may be for naught; that you may have to start over with a new machine. The accidental frying of machines while circuit bending is good preparation for their inevitable demise as glitch art objects. There is also the risk of electrocution, injury, and even possible death when circuit bending. I have developed a healthy respect for machines and habits to minimize these risks. Physical risk certainly is not unique to circuit bending and is an aspect of the practice that I tolerate, but not something I think about much.

It may seem odd being excited at creating a stable bend, when a bend, by definition, is creating instability in the system. But being able to conjure up or re/create a glitch on command is desirable to share the glitch with others and experience it again for yourself.

[6] Edith Decker, Nam June Paik: Video Time, Video Space, Hardware, 67

When invoking glitches, I feel like I am more involved in hardware glitching because it requires direct physical alteration rather than the exploitation of intangible bugs inherent in the system. I do not know how to code, so I have less control making interventions than I do when physically altering hardware. I cannot alter things in the digital the same way that I can in the physical world. If I was a fluent coder I do not think I could cause the same output or results that I can when modifying the physical hardware. I do not think that code can control the electricity the same way.

When the unstable system is played, or used to make art, it does not always give the exact same results. The results are slightly different depending on the humidity, voltage, and energy that is running through the system. Also the life and decay of the system has to be taken into account. Asking or demanding that the system work in a way that it was not originally designed to taxes the system. This taxing causes the circuits and the system to die over time.

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CHAPTER 7

METHODOLOGY OF GLITCH ART

Planned Obsolescence

My practice benefits from planned obsolescence. Planned obsolescence makes for low cost and widely available video equipment with which I tinker. My curiosity leads me to want to buy state of the art, brand new, electronics and see what kind of glitches I can get them to make. The increased sophistication of hardware allows for the opportunity to create increasingly sophisticated glitches. The complexity of the glitch going from one generation of a technology to another, i.e. PlayStation → PlayStation 2, excites me and makes me wonder what the next generation can do. Trying to glitch and modify a newer version of the technology is more complicated due to the development of new technologies and the increased complexity of the machines. Pushing their limits, I get to know and understand these technologies and electronics better.

The pushing of my own limits to understand and find vulnerable places in the design of the technology excites me. There is a challenge in finding the unintended glitches in the latest technologies and in seeing new possibilities of glitches.

Part of the reason that I use older systems, aside from them being easier to circuit bend, is because of their affordability. Except for fetishized vintage systems, obsolete systems generally reside in the waste stream. The fact that I obtained these systems from the waste

stream makes it easier to break them for financial reasons. Having little money invested in the obsolete technology makes it economically more feasible to destroy.

> "Our society's electronic discards, like coconuts fallen to the sea, collect at the high-tide lines of garage sales and flea markets, secondhand shops and garbage bins. Circuit-benders see these circuits as the island native saw the coconut. These circuits are coconuts of our island. Adapt the coconut, adapt the circuit." [7]

If money was no object, allowing me to tinker with the latest technology, I would. There is a challenge about finding the hidden or unintended uses of the latest luxury technology that interests me. Combined with the gesture of subverting the technology and using it instead to produce a glitch imbues the glitch with the value of the luxury item, while using the luxury item for an altered purpose.

The constant evolution of electronics causes what was once a luxury good to inevitably become obsolete and devalued. Rarely do electronics become a vintage commodity that retain their value or appreciate. TVs and entertainment consoles are marketed as luxury goods. Their cutting-edge visuals quickly fade in a matter of a few years.

Once a particular consumer product is no longer being manufactured, there are a finite number of units that have been produced. Most of these units will find their way to the waste

[7] Qubais Reed Ghazala, The Folk Music of Chance Electronics: Circuit-bending the Modern Coconut pg 100

stream and be lost, destroyed, and possibly recycled. If the electrical components that make up a device are no longer being made, once one or more of the components in a device eventually fail or burn out, it cannot be replaced, unless one can be found in the waste stream.

Years down the line, when the electronic components required to run the devices used in my show are no longer manufactured there will be a finite number of them left in the waste stream. So, when one or more of the electronic components inevitably break or burn out, the device will not be able to be repaired. Additionally, what is on view over the course of my show, may not be the same as what other viewers see at another given time over the course of the show because the electronics are slowly dying and the components are burning out. In viewing my artwork, you may never see what you see ever again.

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Magic→

Electronics are innovative manufactured goods that are marketed as the future. Electronics are marketed, and largely misunderstood, to be magical. Someone will receive a ‘magical

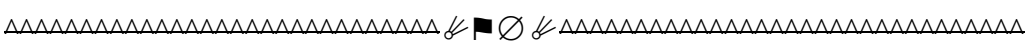
sensation' from technology because they do not understand how the technology works. Magic is used to explain their state of awe and lack of understanding. Magic is imbued into the computer. From the very beginning of the personal computer magic has been used to explain how and what the computer does and is used for. Magic is still used in marketing campaigns for electronics today, i.e. Apple's iPad.

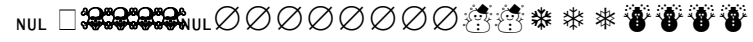
We have used magic over the course of history to explain away what we do not understand. The same technique is used to explain how computers work or what they are good for. This esoteric emphasis is also useful for justifying electronics' high prices and proprietization in the name "personal computer."

When installing new software users rely on the Install Wizard to properly unpack and install a program, so that it will properly run on our system. When the computer is malfunctioning the user can task the wizard to run diagnostic tests on the system to tell you what is wrong with it and how to fix it.

Originally computers were huge. They were built, maintained, and used by a group or collection of people. Since that time they have become more and more personal.
Also they are maintained less and less by the users. Technical support went from your computer being fixed by the "geeks" to being fixed by the "geniuses." The user's role of maintaining and upgrading their system has become increasingly a task for a specialized professional with proprietary tools.

Electronics have become a sealed product that is very personally yours but not for you to look inside of. We grow closer and closer to computers. By relying on them more for day-to-day things. We have also become more intimate with our computers as they witness, record, send, share, more and more of our lives. Simultaneously, we are more locked out of the devices as the inner workings of the machines that we are becoming more reliant on and intimate with, become more slickly packaged and hidden.





H4CK1NG

Hacking is not a trick. Hacking is a **methodology**. There is a big difference between following directions to modify a circuit board and figuring it out yourself. Following instructions or steps to modify a circuit board is not the same as hacking the circuit board. When any modification is first discovered, the system is hacked. But thereafter, when someone follows the directions to modify their electronic device they are not hacking, because they are following instructions and will not have to figure anything out. Hacking is about finding weaknesses in the system to exploit. What it really comes down to is creativity, curiosity, and trying to do something new. There is a strategy to hacking something, which consists of experimentation and planning.

The creativity, problem solving, research, planning, etc. are all important aspects of creating a hack. Without all of these, you would not be able to find exploits to manipulate.

When opening an electronic device, I am sometimes surprised at what I find inside. An electronic device that is produced, especially in high quantities, for several years often is produced at different manufacturing facilities. Sometimes the manufacturers of a given electronic device may change over the course of the production of the unit, resulting in the boards or chips being slightly different even among units that appear identical on the outside.

Planning is important to figure out how you are going to accomplish the project. Gathering information about the device is the first step in hacking. You need to research so that at the very least you hopefully do not physically harm yourself or get yourself into some other kind of trouble. More to the point, you need to figure out how it properly works in order to push it to do more or different things. To find exploits to make a system do something unintended, you must figure out how the system works and how to keep it working while you search for exploits. By exploring, altering, and pushing the limits of what a device can do, you learn about the device and its capabilities, both intended and unintended.

> "While artists have mastered video technology, they've always had to work within the predetermined scope it offered. Experimental artists like Paik certainly managed to elicit new functions from the technology that had not been anticipated by designers and manufacturers, but mined by the equipment itself." [8]

[8] Edith Decker, Nam June Paik: Video Time, Video Space, Hardware, 67

The outer plastic covering of electronics is a shell. It is designed to make you feel a certain way about that product. It is designed to tell you what the product is for and how to interact with the product. The shell is often opaque and hides how the piece of technology works. The shell hides the components and the potential. People don't question the black box, or what is going on inside the opaque plastic case that electronics come in. It just works. People assume that it is working properly. It also sets up an expectation. They don't question how it works. They just know that it works, "like magic."

The electronic components of the systems become smaller over time. The complexity of the systems increases and parts become more compact. As systems become more complex the hacker/tinker/tickler is more closed out of the system. The parts of the system become increasingly difficult to penetrate, weaknesses are harder to find. Hackers are still going to be able to hack the systems, but amateurs will not be able to. As the complexity of the system increases, so does the inability of hacking it. This closes the door to beginners. A lot of hacking has to do with experience. Having hacked simple systems, you learn patterns and what to look for. With experience you learn more about how systems work, which parts of them to disregard, and which are more useful.

By closing the system manufacturers stifle creativity. By voiding the warranty or tech support if a customer opens the plastic casing the company stifles modification and punishes users who want to modify, build upon, advance, or use the unit in a different way. It also leaves the company/manufacturer without knowledge of other possibilities and uses that may be desirable to their customers.

> It is in the interests of hackers to be free to hack for hacking's sake. The free and unlimited hacking of the new produces not just "the" future, but an infinite possible array of futures, the future itself as virtuality. Every hack is an expression of the inexhaustible multiplicity of the future, of virtuality. Yet every hack, if it is to be realized as a form of property and assigned a value, must take the form not of an expression of multiplicity, but of a representation of something repeatable and reproducible. Property traps only one aspect of the hack, its representation and objectification as property. It cannot capture the infinite and unlimited virtuality from which the hack draws its potential. [9]

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[9] McKenzie Wark, Hacker Manifesto, 47, section 078

CHAPTER 8

ARTWORKZ

Playing the electricity is how I made *Period Face*. *Period Face* is a video piece that is made from multiple layers of processing a video recording. The original footage was recorded in my bathroom mirror. The footage was then manipulated and edited in software to make a video loop. The edited video loop was then played through a bent piece of video equipment allowing me to physically play the bends with my hands. That video signal was then fed through a video encoder and the output was recorded on another computer.

Period Face is a bloody nose self portrait played on a television. The title of the piece references menstruation. Endometrial tissue can form anywhere in the body. In this video loop the subject's nose is bleeding and he is lapping up or eating the blood. The subject alternates from making eye contact with the viewer to looking slightly away or past the viewer. The original video footage was taken in my bathroom mirror, which is common in selfie culture. The color saturation and immediacy of *Period Face* gives a nod to Andy Warhol self portrait screenprints. In this piece I use "television as a means toward the estrangement and disassociation of the subject."[10] Playing the video loop on a television furthers these effects and pushes the un-realness of television's mediated world. "Seemingly

[10] Jeffery Sconce, Haunted Media: Electronic Presence from Telegraphy to Television, 191

imbued with an uncanny electrical consciousness that mirrors our own, as well as the ability to counterfeit our real world, the animated presence of television has long been regarded as a potentially invasive psychic threat to the viewer."[11] As a result of video processing with my circuit bent equipment, the saturation and busyness of the footage is emphasized.

Leaning TV

The Television is portrait oriented and leaning against a wall. This is the most immediate way to install the piece. The screen is broken due to impact resulting in colored striations which divide the image plane. This piece is referencing formalist abstract art from the New York School, e.g. Barnett Newman, Richard Serra.

> "Their simple, assertive fields of colour hit the eye with a curiously anaesthetic shock. They do not seem sensuous: sensuality is all relationships. Rather, they appear abolitionist, fierce, and mute."[12]

Leaning is a common trope in Richard Serra's formalist, minimalist work from 1969. This work is simultaneously referencing these canonized visual conversations while also working in a punk rock ethos: a combination of formalism and 'fuck it'. I use the code of formalism to legitimize the presentation of broken systems as 'Art'. The *leaning* of the television is a sort of intellectual handshake understood by those familiar with Modern art history. That the object is a television, something found in virtually every home in America, domesticizes the

[11] Jeffery Sconce, Haunted Media: Electronic Presence from Telegraphy to Television, 191
[12] Robert Hughes, The Shock of the New, 318

piece and makes it universally familiar. Being a domestic object makes it approachable in the gallery but being in the gallery allows it to be elevated to an art object. Leaning it against the wall calls attention to the television's object-ness. The display of the flat screen TV, placed sideways and leaning against the wall divorces it from its proper orientation and mounting.

In *Leaning TV,* the actual image field is broken—there are fractures in the screen that create layers and stripes of color dividing the plane of the different fractures. A child threw his toy at the television which caused the screen to break. A small portion of the screen can still display video imagery. The video input comes from a circuit bent PlayStation which is hung on the wall by a screw. PlayStation is often considered a child's toy.

I am interested in the act/reaction of the child being overstimulated by the media that it was viewing, to the point of physically lashing out at the source. I am interested in this because we develop a callus to protect us from the bombardment of imagery that we experience daily. A child has not become desensitized to media in the same way.

The physical breaking of the television screen disrupts the flow of the imagery and snaps you out of looking into the screen and instead forces you to look at the screen. This intervention causes the viewer to question the consumption of the imagery. The breaking of the screen also allows the viewer to get more of an understanding of how the monitor works. Taking off the plastic shell to expose the parts gives the viewer further insight into how it works.

TV Rubbing Piece

Video of TV rubbing played on monitor → hung low, close to floor. Rubbing TV on floor below monitor.

TV Rubbing Piece is made up of two flat screen televisions; one is playing a video and the other is an artifact from the making of the video. This piece is made from a recording of me rubbing the screen of a cracked plasma television while it lays, screen-side up, on the floor. When I rub the cracked plasma television liquid crystal light oozes around making celestial imagery. The rubbing of the plasma also mimics microscopic biological imagery. Both televisions are about the same size and are displayed in a mirroring fashion. The mirroring display references the visual similarities between the cosmic and the microscopic.

The rubbing and touch and pressure creates or causes light and activation of the screen. The light then fades away. The rubbing of the TV is a primitive exploration of trying to activate and understand the space within the screen. It is a readymade canvas for gestural activation of the screen. The light created by the gesture recedes into the oblivion of the screen. The activity of the light reminds me of the the electricity of a message being sent along the nervous system. The rubbing is a futile attempt to activate life within the machine. The light created when rubbing the TV disappears into the virtual void or "electronic nowhere"[13].

When I am making the video I feel a synergy with the machine. I feel I can get my energy and vibes into the television like a ghost in the machine and can effect it. I can meld with the machine and the electricity and I feel an intimacy and connection to the device. When

[13] Jeffery Sconce, Haunted Media: Electronic Presence from Telegraphy to Television, 131

touching and pressing on the screen I feel as though I can concentrate and channel energy into the machine.

Rope TV

Rope TV is literally a TV hanging from a rope. The rope is tied to the metal frame of the TV where a wall mount would attach. Since the plastic outer shell casing of the television is removed there there is space to tie a rope to the television. The rope is cut to my wing span and then both ends are tied to a point on the back of the television, and then hung on a wall mounting screw. I used the rope because I like the sense of immediacy that it gives. The rope lines on the wall echo the electrical cords used to power the machines. The TV is getting a video and audio signal from a media player, which is playing a video that I made using a circuit bent PlayStation 2. The cords from the television are allowed to spill along the wall. The lines made by the cords extend the piece outside of the frame of the television. The video source is not responsible for the imagery displayed, instead it is used as stimulation to keep the television active until it inevitably burns out. The imagery produced by the *Rope TV* is created due to the degrading of connections in the video encoder in the television. The trouble decoding the picture and the resulting glitched barf that happens in the *Rope TV* is a loose metaphor for my supposed trouble decoding words.

Floor Projection of Circuit Bent Electronics

This piece is made up of a circuit bent video equalizer that is effecting the imagery in real time. There is a media player that is playing a video loop of the glitched output of a bent PlayStation 2. In the middle of the video there is text that reads “There is no data.” This text

shows that there is no multimedia running on the system. This piece is an exploration in what glitches I can create using no additional software. These glitches are what I could get out of the device itself. “There is no data” displays the inability to use the device for its intended purpose of playing video games.

Laptop with Monitor

The laptop in this piece broke when my father dropped it. The screen of the laptop smashed when it hit the ground. Aside from the smashed screen, the laptop can still function as a computer, but needs to be plugged into a monitor. This removes the laptop from its portable, all-in-one intent and makes it so it can only function as a typical desktop. The computer is playing a glitchy video that I made. The monitor is hanging by its VGA cord suspended to rest above the laptop. The laptop is leaning against the wall on its corner in a position so that the laptop is clearly not intended for interaction. Most of the screen is obscured with brokenness except a small part of it where you can see part of the movie that is playing. The monitor is hanging upside down and you can see the whole movie playing. With some observation the viewer can tell that the two screens are playing the same video. The screens are close together to emphasize their relationship. The monitor is hung in an immediate way with a screw in the wall. There is a combination of frustration and balance to the piece.

CHAPTER 9

CONCLUSION

Through the glitching and deterioration of electronics the work in my thesis show explores impermanence and faulty biological connections. Using the technique of circuit bending I am making metaphoric connections that I am allegedly lacking in my brain. I am taking advantage of the fact that improperly functioning electronics deteriorate at an accelerated rate. The machine, although it is not alive, is capable of producing surprisingly organic imagery. That the electronics in my thesis show are dying means that their lifetimes are truly finite, making the time that you spend with them more valuable.

We all experience glitches in the electronics that we use daily. When our personal computers, TVs, or other devices glitch we react with frustration and want the electronics to just work. In this show I am re-contextualizing the glitch by using the language of formalism to transform these otherwise pieces of junk into gallery objects.

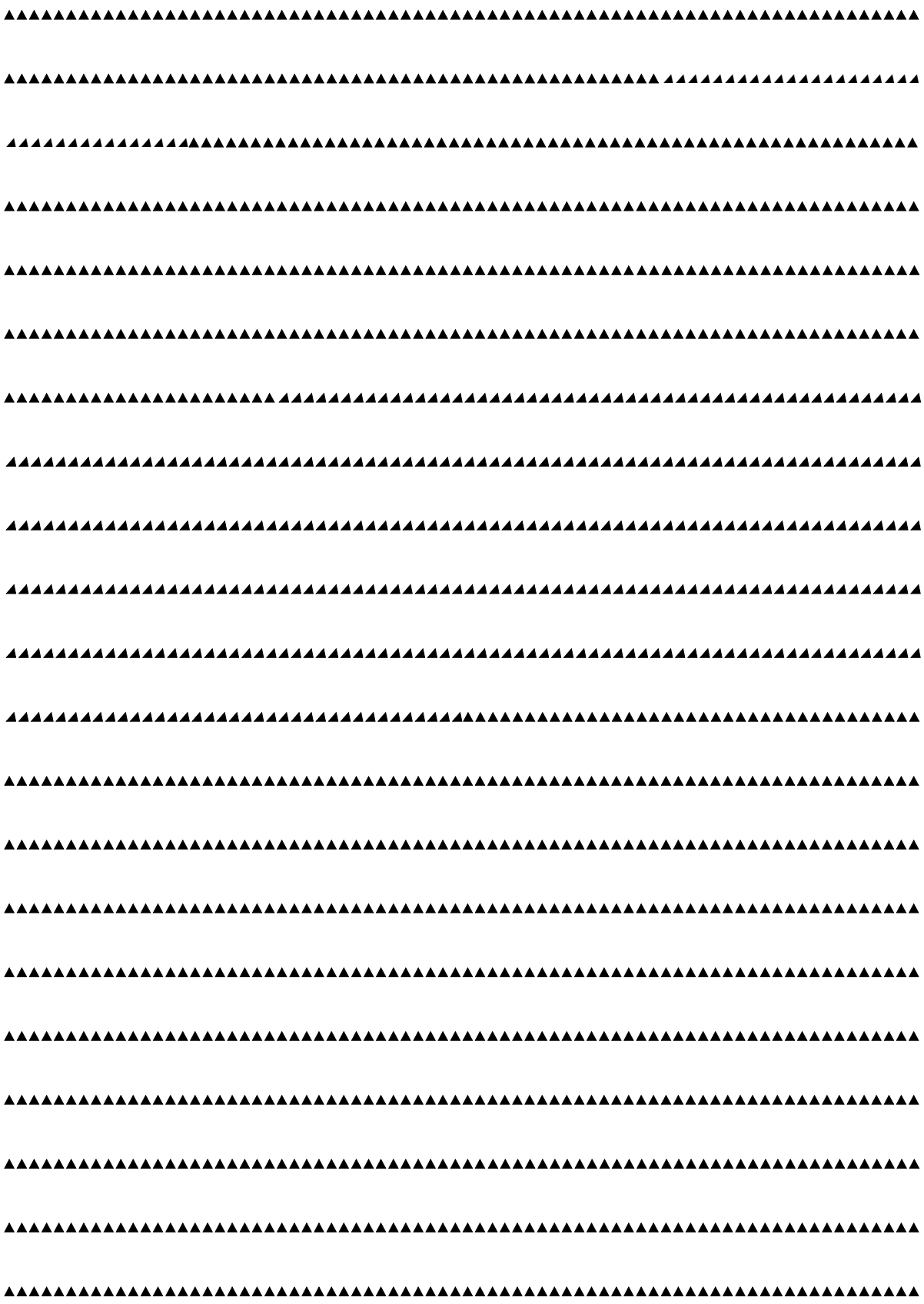

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PHOTO OF ARTIST AT WORK