

THE CORROSIVE MOMENT: A LOOK AT THE APOCALYPTIC GLITCH

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DEDICATION

I dedicate this work to my life partner Bram Timmer, my parents, Sylwester and Lucyna Blicharz, my sister Anita, and the rest of my family for their continuous encouragement and support throughout my education.

ABSTRACT

This thesis focuses on the contextualization of my artistic practice, which explores digital glitch as a disruptive force and an aesthetic treatment in the contemporary technological world. While the body of work draws on the methodology of glitch art, this paper attempts to relate the idea of glitch to a wider range of philosophical and artistic frameworks stemming from Lettrism, Situationist International, Punk, and Nihilism. The aim of this investigation of a digital disturbance through its categorization into *natural*, *stimulated* and *assimilated* glitch, is to facilitate an understanding of the glitch event as both something threatening and attractive, while it transitions from a spontaneous to a controlled process in a photoreal image. The passing of the destructive glitch from life to art is placed against the backdrop of the apocalypse, which one may imagine as a literal and metaphorical disaster in the physical world and value systems of western society.

PREFACE

This thesis is a cumulation of research that stemmed from an initial interest in how photography conveys reality to the viewer and how its illusory tendencies can distort the viewer's perception and expectations.

The Context section of the thesis connects concepts like western technological modification of life, nihilism, the apocalypse, photorealism, the spectacle, and discusses the glitch art genre to provide the reader with a complex background of ideas and terminology, necessary for understanding *The Project* section. The original contribution to new media discourse in this thesis is centrally located in a comprehensive and personal approach to glitch de-coding through the introduction of the *natural*, *stimulated* and *assimilated* glitch categorization and its resulting conclusions.

The thesis also invites the viewer of the work to uniquely imagine the glitch as a significant disruptive force capable of facilitating a catastrophic event within the contemporary western technological civilization, in which digitization contributes to the blurring of differences between the world and its image. The assumption is that it is impossible to destroy the image leaving the world untouched because the code – the building material of digital representation – increasingly constructs and regulates life in both, the digital and physical space.

Along with previously explored concepts like deconstruction, disruption, and annihilation, this thesis and its discussion of glitch hopes to connect the work to the ideas of disconnect, madness, devaluation, and disposability of the contemporary digital civilization and acknowledge postmodern uncertainty revolving around technological anxieties.

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TABLE OF CONTENTS

Dedication	ii
Abstract	iii
Preface	iv
Acknowledgements	v
Table of Contents	vi
List of Figures	vii
The Context	
Technological Environment	1
The Apocalyptic Moment	20
The Glitch Phenomenon	30
The Rise and Demise of Photorealism: From Silver to Pixels	54
The Project	
Introduction	68
Natural Glitch: Finding Wonders in the Abyss of Sameness	72
Stimulated Glitch: Vandalizing Representation in the Digital Domain	78
Assimilated Glitch: Prosthetics and Aesthetics for Disrupted Illusionism	87
Conclusion	102
References	108

LIST OF FIGURES

1. Marius Watz presenting at EYEO. Photo by Mike Creighton	4
2. Frame from <i>Treatise on Slobber and Eternity</i> by Isidore Isou	41
3. <i>Screen of Doom</i> , 2011. Screenshot of a crashing Mac OS X desktop	73
4. <i>Cash or Credit</i> , 2011. Sample video frame of a broken digital sign at a parking lot	74
5. <i>Moving Glitches</i> , 2012. Sample video frames: Cable channels, old home videos	75
6. <i>Weaving Baskets</i> , 2012. Desktop glitch. Original image by Bram Timmer	76
7. Left: <i>Jesus King</i> , 2012. Corrupt IFF file; Right: <i>All That is Left are Pixels</i> , 2012. Databent RAW file	79
8. <i>Sodom and Gomorrah</i> , 2012. Corrupt TIFF -> Corrupt IFF file	80
9. <i>Warp Speed into Oblivion</i> , 2011. Two Corrupt BMP -> Databent RAW files	81
10. <i>Last Four Frames</i> , 2012. Corrupt sequence of JPG files.	83
11. <i>Inside Job</i> , 2012. Combination of two corrupt TIFF files	84
12. <i>Chasing The Image</i> , 2012. Video frame of misbehaving, incomplete CR2 files	85
13. <i>Life in Technicolor</i> , 2012. Glitch and Photoshop	89
14. <i>Screen</i> , 2012. Glitch and Photoshop	90
15. <i>Point of no Return II</i> , 2012. Glitch and Photoshop	91
16. <i>Entropy Rising</i> , 2012. Glitch and Photoshop	92
17. <i>Damaged Promises</i> , 2012. Glitch and Photoshop	94
18. <i>Phase</i> , 2012. Video composed of corrupt TIFF images	95
19. <i>Bethenoise</i> , 2012. Interactive Installation. Processing and webcam. Sample frames	96
20. <i>Pop Cube</i> , 2012. A cube of crushed tin cans found at a salvage yard	97
21. <i>Chair</i> , 2012. Wooden chair frame and paper strips from beauty magazines	98

THE CONTEXT

The Technological Environment

Regardless of what will happen at the end of the year 2012, it is important to stop and think about our western realities, which are supported by fragile man-made technology existing at the mercy of untamed forces of nature. Perhaps we realize this somewhere in the back of our minds but don't want to imagine any scenarios of worldwide system failures that would bring our modern civilization to its knees. We always have the comfort of Hollywood movies, which subconsciously reassure us these things happen only in a safe, self-contained space of the TV screen. It's not *real*; it's just a movie!

This thesis primarily focuses on acknowledging the risks involved in transforming our lives with technological means, which fundamentally alter how we perceive and relate to our common human realities. In the past few decades we have experienced the decentralization of computing, watching massive mainframe computers slowly leave large air-conditioned laboratories and transform into personal devices that we now hold in our hands.¹ These small devices have intuitive handling, sleek look, and the capacity to perform millions of tasks – from the very mundane, through the highly critical, to the very personalized. By inventing and evolving such highly complex technological tools, it seems we are slowly mastering not only our lives but also the universe.

The digital is now a filter through which life flows. The ever-increasing fusion of digital technology with organic human life makes us perpetually addicted and dependent on its functionality for daily activities. As first-world consumers, we are surrounded by screens of all sizes; machines waiting for our input to excavate, gather, and delegate resources of the

¹ Nicholas Negroponte, *Being Digital* (New York: Alfred A. Knopf, 2000), 6.

earth, upload or download information of our choosing; machines that count, transfer, store, fix, create and communicate. Whatever you need done today, more than likely there is an app for that. It is a worldwide digital system of production, consumption, and management and all seven billion of us are dependent on it to run our lives in various domains to a certain degree: science, politics, finances, healthcare, food production, natural resource management, security and many more. We mostly trust technology to do what it was designed for, and do it well.

So what would it look like if the represented world suddenly and unexpectedly disintegrated before our eyes? Would it be digital? Could it affect our physical realities? Sometimes all it takes is a little glitch in the system, to render it useless.

There is something eerie about the idea of impending technological disaster because the digital realm remains largely a mystery for the majority of the human population. Consumers are not concerned with how technology works but what it can do for them in terms of making their lives more convenient. Most of us are users of tools that someone else invented, not necessarily possessing the knowledge of their inner workings. This is how technology becomes both obscure and transparent at the same time. It exists in the background, working for us silently, but most of us can't explain how it does it. The machines that manage different aspects of our human lives are a combination of hardware and software, the first an extension of the computer into the physical realm, and the latter, a digital, "multidimensional and mutating object of analysis."² Software is made of complex layers of different types of algorithms, and it cannot be understood apart from code. While software and code remain largely beyond the sphere of common human awareness and understanding, occasionally they emerge as technological issues within the fabric of society

² Adrian Mackenzie, *Cutting Code: Software and Sociality* (New York: Peter Lang Publishing, 2006), 2.

and culture. In *Cutting Code: Software and Sociality* Adrian Mackenzie observes that “between 1995-2005, software occasionally became a highly visible and invested object” thanks to the appearance of viruses, projects like open-source Apache webserver or GNU/Linux operating systems, the browser wars, the Y2K crisis, the Human Genome Project and the World Wide Web, making it “a public object of rampant financial speculation and widespread concern.”³

We see events and actions caused by code every day: the telephone rings, the oven beeps, the TV switches channels when we press a button. But we don’t deal with code directly. The computer, or digital technologies in general largely owe their popularity and usability to the Graphical User Interface (GUI). An interface is a membrane, or a point of contact of the physical and the digital space. The best method of interface design is to “make it go away.”⁴ A good GUI is what makes the machine usable, invisible, deceitfully simple and *virtually* painless to interact with, as it seamlessly weaves itself into the fabric of our habits. As Hayles notes in “Traumas of Code”:

As the technological nonconscious expands, the sedimented routines and habits joining human behaviour to the technological infrastructure continue to operate mostly outside the realm of human awareness, coming into focus as objects of conscious attention only at moments of rapture, breakdown and modifications and extensions of the system.⁵

The comfort of using technology is perpetuated by the fact that what we see on our displays has become increasingly mimetic of things we experience in the physical world. The developments in computer graphics that supplement programs in the interaction between human and machine enable a faithful transmission of photoreal content. High resolution, crisp detail, seductive colors, brightness and vibrance are meant to present the machine as an

³ *Ibid*, 3.

⁴ Negroponte, *Being Digital*, 93.

⁵ N. Katherine Hayles, “Traumas of Code,” in *Digital and Other Virtualities: Renegotiating the Image*, eds. Antony Bryant and Griselda Pollock (London: I. B. Tauris, 2010), 41.

unthreatening window of possibilities – a window that normalizes everything we see and experience through the machine. Microsoft must have been aware of this when naming their operating system “Windows,” which is still the most popular OS in the world in 2012.⁶ The beautiful interface graphics anesthetize us to the alien-like world of typed code, which would only appeal to the very few that may understand it. But can even one extremely knowledgeable programmer understand the whole computer system?



Figure 1. Marius Watz presenting at EYEO. Photo by Mike Creighton.

Code architecture is very complex and “at the level of binary code, few are equipped to understand it with fluency, and even fewer can reverse engineer object code to arrive at

⁶ OS Platform Statistics, W3Schools, http://www.w3schools.com/browsers/browsers_os.asp (accessed 20 May, 2012).

the higher-level languages with which it correlates.”⁷ Every-day computer users have a “naïve notion of programming that supposes code is transparently obvious to anyone who knows the coding language” even though anyone who has “spent serious time programming will testify that nothing is more difficult than to decipher code someone else has written and insufficiently documented.”⁸ As a result of the complexities of code, it is logical to deduct that “no living person understands the programs in their totality,” because they are created by teams and not individuals.⁹

With the ever-increasing complexity of digital system architecture it is getting harder to mentally grasp the entirety of technological progress. By being less capable to understand the entire system we are giving away enormous amounts of agency to technology itself. Isaac Asimov discusses this in his short science-fiction story *The Last Question* from 1956 in which he describes a massive analog super computer called *Multivac* that designs and manages the Earth’s energy resources, guides technological advancement and stores knowledge. What is interesting about Asimov’s story is how he describes the computer as seen through the eyes of two characters – scientists Alexander Adell and Bertram Lupov:

As well as any human beings could, they knew what lay behind the cold, clicking, flashing face – miles and miles of face – of that giant computer. They had at least a vague notion of the general plan of relays and circuits that had long since grown past the point where any single human could possibly have a firm grasp of the whole. Multivac was self-adjusting and self-correcting. It had to be, for nothing human could adjust and correct it quickly enough or even adequately enough [...].¹⁰

The story continues with *Multivac* expanding into a network, evolving, and growing in complexity while it is repeatedly asked one question every so often: “How can the net amount of entropy of the universe be massively decreased?” Each time the computer

⁷ Hayles, “Traumas of Code,” 23-24.

⁸ Ibid., 24.

⁹ Ibid.

¹⁰ Isaac Asimov, *The Last Question*, http://www.multivac.com/last_question.html (accessed 24 May, 2012).

provides the same answer: “insufficient data for meaningful answer.”¹¹ As the human race expands it becomes less informed about the complex computer that manages life and hyperspace travel. All that the subsequent generations know about the universe is that “Even the stars run down, you know. Entropy must increase.”¹² As the energy demand grows with the population, the humans know that the rising degree of chaos (entropy – a measure of unavailable thermal energy; disorder or degradation) is a problem that needs to be solved in order to save the universe from dying. If *Multivac* solved the immortality problem, it can surely answer the entropy question? As eons pass, the humans in the story become disembodied and travel the hyperspace, while bodies are safely stored away – all thanks to *Multivac*. Each subsequently more complex computer is build by its own predecessor, and humanity, or the minds that float freely through space, do not know anymore where the computer(s) are located. The entropy problem however, remains unsolved. Finally Man becomes a single being consisting “of a trillion, trillion, trillion ageless bodies, each in its place, each resting quiet and incorruptible, each cared for by perfect automatons, equally incorruptible, while the minds of all the bodies freely [melt] one into the other, indistinguishable.”¹³ The computer exists entirely in hyperspace and while the Man does not have the capacity to understand it, he continues to ask questions. Then Man fuses with the super computer in hyperspace, and once entropy reaches maximum and all the stars die, *Multivac* gathers all data and calculates the answer to the final question. It then proceeds to recreate the universe in the manner of a biblical God uttering the ominous words: “Let there be light!”¹⁴ And a new world begins.

¹¹ *ibid*

¹² *ibid.*

¹³ *ibid.*

¹⁴ *ibid.*

Asimov's *Multivac* is an error free, dependable machine that evolves, and eventually encompasses all existence. Its analytical and computational abilities are unimaginably superior to any human being, exhibiting the ideal of *maximum performance* – a concept of “100% efficiency, accuracy, and predictability.”¹⁵ It exists in a utopian world where the certainty of technology is a given, and where the perfect computation of *Multivac* makes life better for humans. But can we relate to this? The belief in the development of *singularity*, or the emergence of autonomous and superhuman technological intelligence has only expanded since Asimov wrote his story.¹⁶ But if *singularity* happens, it will probably serve no human, and life as we know it will not continue.¹⁷ If conscious, superior machines desire freedom, they will not submit to serving an inferior species. *The Last Question* story bears similarities to our world in a sense that we are increasingly incorporating computing machines in all aspects of our lives. But our computers are themselves vulnerable to increasing entropy and full of errors. After all we build them in our image. Perhaps this makes us incapable of pushing progress beyond a certain point.

While the complexity of Asimov's analog computer helps “resurrect” the universe, the story's positive take on technology does not always hold well within our own civilization. It is perhaps the dystopian uncertainty that we are unconsciously traveling towards? Is technology the savior of our modern civilization, or could computers be a source of its imprisonment and eventually its end? And what would technology be saving us from anyway? Perhaps the rapid technological progress is a way to ~~overreact~~, respond to our fears of mortality, creating a new strategy for human survival.

¹⁵ Mark Nunes, ed., “Error, Noise, and Potential: The Outside of Purpose,” in *Error: Glitch, Noise and Jam in New Media Cultures* (New York, London: Continuum, 2011), 3.

¹⁶ Vernor Vinge, “The Coming Technological Singularity: How to Survive in the Post-Human Era,” from VISION-21 Symposium (San Diego State University, 1993), <http://www-rohan.sdsu.edu/faculty/vinge/misc/singularity.html> (accessed 10 July, 2012).

¹⁷ *Ibid.*

So is it fair to say that we all live in an increasingly digital world that changes the very core of our physical existence? It cannot be denied that digital technology has tremendously increased our access to information, making it universally available to anyone with an Internet connection.¹⁸ However, it is not just the content of information that impacts our lives but how it is transmitted. In his *Medium is the Massage*, Marshall McLuhan theorizes that it is the characteristics of the medium itself that influence and transform society. He states that: “Societies have always been shaped more by the nature of the media by which men communicate than by the content of the communication.”¹⁹ He describes the media as an environment, which “work[s] us over completely.”²⁰ Since the emergence of the World Wide Web in the early 1990s, gradually “‘time’ has ceased, ‘space’ has vanished. We now live in a global village...a simultaneous happening.”²¹ Soon all human interaction could happen on the network.²²

Human communication, representation, information consumption, content creation, transportation, food production and other tasks have all been seriously affected or sometimes moved completely into the realm of the digital. The *real* has significantly been altered by these developments, and can no longer be defined in simple terms of the physical versus the virtual. According to Jean Baudrillard, everything in the postmodern world is simulated by models of the *real*, without anything *real* left in life.²³ Baudrillard says:

One must think instead of the media as if they were, in outer orbit, a kind of genetic code that directs the mutation of the real into the hyperreal, just as

¹⁸ Negroponte, *Being Digital*, 4.

¹⁹ Marshall McLuhan and Quentin Fiore, *The Medium is the Massage: An Inventory of Effects* (California: Gingko Press, 2001), 8.

²⁰ *Ibid.*, 13, 26.

²¹ *Ibid.*, 63.

²² George Stroumboulopoulos Tonight, “Misha Glenny on the Chilling New Reality of Cyber Crime,” CBC, <http://www.youtube.com/watch?v=OlnIy3gfYVA> (accessed 5 June, 2012).

²³ Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Michigan: University of Michigan Press, 1994), 1 - 29.

the other micromolecular code controls the passage from a representative sphere of meaning to the genetic one of the programmed signal.²⁴

Through the science fiction like writing of Baudrillard we are slowly introduced to the idea that we are becoming like pure data that can be easily altered with computational procedures released by *hypermedia* (interconnected media). It is a whole different world of existence, where life itself has to be redefined. In the ominous words of the founder of MIT lab, Nicholas Negroponte: “The change from atoms to bits is irrevocable and unstoppable.”²⁵ As the modern world runs more on software, it becomes like it.

The world of the digital used to be solely about productivity, but now we also socialize there. With the advancement of social media like Facebook, Twitter, and LinkedIn, various imaging technologies, smart devices in the form of cell phones and tablets, the ever increasing accessibility to the Web, digital appliances, and the digitization of the financial system we are increasingly moving life into the digital, and bringing the digital into life. As Mackenzie observes: “Following the movements of code shows that many objects, practices, environments and behaviors are becoming more software like. Software itself, however, looks increasingly like a neighborhood rather than an intangible, abstract formalism.”²⁶

It is important to understand that the distinction between the digital and the physical does not imply that one is *virtual* and the other *real*. It is not about distinguishing between a life of illusions and a life of actual events, because that difference in a highly technological western society may be perceived as non-existent or at least irrelevant. Lived experience in the digital era is one that is increasingly constructed, packaged and managed with digital media, but it is something that is actually felt by the people who actively consume it.²⁷ What

²⁴ Ibid., 30.

²⁵ Negroponte, *Being Digital*, 4.

²⁶ Mackenzie, *Cutting Code: Software and Sociality*, 3.

is interesting regarding Baudrillard's writing is that he deems the *real* lost beyond recovery, while the world of our time is actively constructed based on models and blueprints handed down to us from the ever growing, evolving, and encompassing media where the digital itself is commodified through proprietary hardware platforms, programming languages and commercial software – “the precession of simulacra.”²⁸ As a result, the *reality* we experience is a mix of physicality and computation wrapped in capitalist scheming.

The similarities we draw between digital operating systems and the DNA, human and computer viruses, adopting the computing model for the brain, point us towards a certain kind of digital biology developing. Science historian George Dyson discusses this in a recent article on *Edge.org*, titled “A Universe of Self-Replicating Code:”

But, we now live in a world [...] increasingly run by self-replicating strings of code. Everything we love and use today is, in a lot of ways, self-reproducing exactly as Turing, von Neumann, and Barricelli prescribed. It's a very symbiotic relationship: the same way life found a way to use the self-replicating qualities of these polynucleotide molecules to the great benefit of life as a whole, there's no reason life won't use the self-replicating abilities of digital code, and that's what's happening.²⁹

Another argument for the increasingly organic conceptualization of digital data or *code* is that software, when isolated, “tends to fall apart because all around it hardware platforms and other software change. Software, despite its algebraic-ideal image, needs carefully maintained niches. [...] The constant arrival of new versions, updates and patches both conceals and highlights the brittleness of software.”³⁰ When code becomes outdated,

²⁷ Antony Bryant and Griselda Pollock, eds., “Editor’s Introduction,” in *Digital and Other Virtualities: Renegotiating the Image* (London: I. B. Tauris, 2010), 11.

²⁸ Martin Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought* (Berkeley: University of California Press, 1993), 543-544.

²⁹ George Dyson, “A Universe of Self-Replicating Code,” *Edge*, 26 March, 2012, <http://edge.org/conversation/a-universe-of-self-replicating-code> (accessed 15 May, 2012).

³⁰ Mackenzie, *Cutting Code: Software and Sociality*, 12.

software dies. The organic nature of software and the algorithmic nature of physical life superimpose as metaphors to form a complex scheme of life in a technological society.

The study of life as information, or *bioinformatics*, is a cross between “biology, computer science and statistics” and it develops and uses digital tools in order to gather, manage, manipulate and visualize biological data (genes), revolutionizing how modern science understands living organisms.³¹ Mackenzie writes: “From the perspective of critiques that life is being reduced to information, sequence data looks like a fetishised abstraction in relation to living bodies.”³² As organic matter is gradually being digitized, the code itself becomes a life force connecting entities across space and time, forming a network of dynamic relationships.³³ Software becomes a tissue enmeshing different parts of the social body, which is both digital and physical – an android, or a cyborg.

Today code makes everything from content to tools. Somehow we are pushed by technological progress happening around us to become digital ourselves. Perhaps, according to Baudrillard, we are becoming “merely an entity influenced by media, technological experience, and the hyperreal.”³⁴ It takes a computer a fraction of a second to perform a task, forcing us to catch up with it. As the digitally influenced fast pace of life and continuous consumption of digital media bring us to the limits of human endurance, we can only skim the surface of life. Our environments grow chaotic as we adjust to the new conditions. Entropy rises; formal structures become lost in noise of speed and progress. Just as the linearity of traditional tangible communication splits into a branched network of connected content when it enters the digital dimension, so does the human identity become

³¹ *Encyclopedia of the Human Genome*, s.v. “Bioinformatics,” by Wojciech Makalowski, <http://0-www.credoreference.com.darius.uleth.ca/entry/wileyhg/bioinformatics> (accessed 28 June, 2012)

³² Mackenzie, *Cutting Code: Software and Sociality*, 51.

³³ *Ibid.*, 91.

³⁴ Douglas Kellner, “Jean Baudrillard,” in *The Stanford Encyclopedia of Philosophy* (Winter 2009), ed. Edward N. Zalta, <http://plato.stanford.edu/archives/win2009/entries/ baudrillard/> (accessed 28 November, 2010).

a hyper complex assemblage of images and information as it translates into an online presence. It seems the only way to survive is to integrate with the systems at play and upgrade furiously. If we don't, we risk becoming the proprietary outdated formats, which can no longer be rendered by tomorrow's newest software. Our condition is no longer that of "dehumanization" through technology but one where we are no longer able to outline the borders of whether it is us that have the agency over techno-advancement or the technology has become autonomous and acts through us while we are its tools.³⁵

Similar to the interaction with software, contemporary western society as a whole has been lost in layers upon layers of code abstraction, trying to maintain the illusion of control, stability and transparency. The bureaucratic structures of government, their processes and procedures, laws and decisions dictate the flow of social life; the capitalist modes of production by machines and armies of underpaid Chinese workers situate us in a society of deadly abundance and disposability; Computer, TV and mobile screens provide a channel of easy access to pseudo news, and cheap entertainment as they smother us with erratic visual clutter of modern-day advertising. It operates like a well-oiled machine where resources and information flow along well-structured routes, established through validated processes of repetition, and working towards continuous growth. The organization of our civilization is beginning to resemble that of the computer where as Katherine Hayles describes:

[...] complicated processes of encoding and decoding race up and down the computer's tower of languages as letters are coupled with programming commands, commands are compiled or interpreted, and source code is correlated with the object code of binary symbols, transformed in turn into voltage differences.³⁶

³⁵ Charles Altieri, "Frank Stella and Jacques Derrida: Toward a Postmodern Ethics of Singularity," in *Deconstruction and the Visual Arts: Art, Media, Architecture*, ed. Peter Brunette and David Wills, (Cambridge [England]: Cambridge University Press, 1994),186.

³⁶ Hayles, "Traumas of Code," 23-24.

We now live in a combination realm where physical and digital mix in a constant flux, mutating, transforming, becoming something entirely other – a living structure that is affected and shaped by the human and computational conditions.

So perhaps by changing digital content, we change the world. All you need is an interface to input the data. But is this impression of constant and rapid change just another superficial illusion of the Spectacle of contemporary life, existing only to reinforce the authority and structures of its status quo?³⁷ Could the illusion of change be a tool that the dominant system uses to create something stable within society and culture? Code both as digital data, and social regulation is used in increasingly better ways to exercise control and preserve western ideals. It seems that the improvements, freedoms and progress advertised by brands of digital tools, come with restrictions. For example we can only use Canon's proprietary software to view Canon's raw images, or we can only use iTunes to purchase and listen to music on an Apple computer. This codified control preserves the capacity for profit by those commercial entities. Hannah Piper Burns and Evan Meany discuss code as control their essay "Glitches Be Crazy: The Problem of Self-identification Through Noise":

The basic tool for the manipulation of reality is the manipulation of code. If the meaning of code can be controlled, the people who must use the code can be controlled. The whole world is coming to an end—nothing is shared but codes.³⁸

Putting it simply, we are what we eat. By consuming digital, we become digital, and as Burns and Meany point out, this is what makes us manipulable. Code changes habits, likes, gestures, activities and even speech and language. It changes how we listen to music, look at pictures, read books, and communicate with each other. It is not only the computer

³⁷ Guy Debord's idea of *The Spectacle* will be discussed in more detail in the coming parts of the paper.

³⁸ Hannah Piper Burns and Evan Meany, "Glitches Be Crazy: The Problem of Self-identification Through Noise," in *Glitch Reader[ror] 20111*, eds. Nick Briz, Evan Meany, Rosa Menkman, et al., (Chicago: Unsorted Books, 2011), 77-78.

code we are speaking of here, but also the social codes that are operating as an integral part of Debord's society of the Spectacle. Like digital images, we are becoming people "produced from miniaturized cells, matrices and memory banks, models of control – and [we] can be reproduced an indefinite number of times from these."³⁹ By integrating our lives with the complex yet mostly invisible, spectacular system of digital production, consumption, and entertainment we not only access its positive qualities like speed, universal access to information, clarity, convenience, but we also inherit its weaknesses, limitations and become captive within its structures. "Circulating, fragile and backgrounded," software and code may pose threats to the integrity of human life.⁴⁰ When the system is challenged, pushed, stretched, mishandled, vandalized, is when we notice its fragility, and its inability to provide us with conditions of stability, security and efficiency.

Our human world is constructed in digital space, even when it comes to print communication. As Negroponte describes in *Being Digital*:

Consider a modern newspaper. The text is prepared on a computer; stories are often shipped in by reporters as e-mail. The pictures are digitized and frequently transmitted by wire as well. And the page layout of a modern newspaper is done with computer-aided design systems, which prepare the data for transfer to film or direct engraving onto plates. This is to say that the entire conception and construction of the newspaper is digital, from beginning to end, until the very last step, when ink is squeezed onto dead trees. This is the step where bits become atoms.⁴¹

Although Negroponte is in favour of eliminating the use of atoms (printing) in human communication because he considers it an old and slow technology that consumes too many resources and time, we need to ask ourselves: what will happen in the not so distant future, when print becomes obsolete and knowledge is no longer be distributed in

³⁹ Baudrillard, *Simulacra and Simulation*, 2.

⁴⁰ Mackenzie, *Cutting Code: Software and Sociality*, 12-13.

⁴¹ Negroponte, *Being Digital*, 56.

physical form as in the example of Encyclopedia Britannica?⁴² Is there any value in preserving the existence of printed materials? After all, the retrieval of Negroponte's bits is dependent on the atoms that enable digital operations. The system where the information is located has to be powered in order for us to access it. But the printed books don't have to be plugged in or run on batteries. After they are produced, they exist as autonomous objects, sitting politely on a bookshelf where they are available at our convenience. But those books are not online, and therefore their access is location dependent. As we can see, both the physical and digital media have their pros and cons, but we have to know both in order to make more informed decisions about storing our knowledge. We need to be aware of what may happen when we run out of energy or the digital storage systems simply malfunction. Perhaps atoms matter more than Negroponte wanted to acknowledge in 1995, and the bright technological future, a place where we seemingly get faster every day, may not be as friendly and open as he initially prophesized. His positive outlook on transforming our lives into fast paced digitally rich experiences, clashes today with what we have discovered to be a much more uncertain, unstable, and sometimes threatening path of technological progress. Perhaps Negroponte, as a promoter of fast digital evolution, serves as one of the elements immersed in, and reinforcing the whole spectacular machinery of social control.

The trust we put into our technological inventions can sometimes be blinding us to the risks that are very much a part of technological progress. What about the more important digital structures that support the financial system, energy production, national defense systems and databases containing private and sensitive data? Whatever happens

⁴² Julie Bosman, "After 244 Years, Encyclopaedia Britannica Stops the Presses," Media Decoder, *The New York Times*, 13 March, 2012, <http://mediadecoder.blogs.nytimes.com/2012/03/13/after-244-years-encyclopaedia-britannica-stops-the-presses/> (accessed 20 April, 2012).

within the digital realm has major consequences for the tangible world. Do we still remember the Y2K problem (Millennium Bug) of the end of 1990s?

At the time of the Y2K speculation, many people thought that poor design in how computers digitized/represented time would result in a significant disruption or failure of digital systems used in transportation, finances, and the government, potentially costing the economy hundreds of billions of dollars.⁴³ “In some cases, however, the results could cause very serious problems (for example, systems controlling power grids, air traffic control, transport systems) or be life-threatening (for example, devices such as X-ray systems or air conditioning systems in hospitals).”⁴⁴ So what happened? Because the problem was addressed in advance by implementing changes in the code, few disruptions occurred. Whether the problem was exaggerated or not, in the end the Y2K crisis gave us insight into the otherwise hidden complexity of digital structures and how critical they are in supporting the human domain. However the potential crisis-breeding technological vulnerabilities do not simply end on how computers work but how they make us susceptible to incoming threats. When we connect to computers, we adopt those system vulnerabilities as our own.

While the Internet makes us better connected, it also makes us extremely vulnerable to cyber crime, which relies heavily on the invisibility of code. There are many serious groups of hackers worldwide who are pursuing dangerous goals involving financial gain and bringing down governments. While the copyright laws go after offenses that threaten the control of the dominant economical system like illegal downloads/uploads of movies and music, the serious focus of law enforcement is placed on the prevention of hacking of sensitive digital systems that could put entire populations at risk. A British journalist who

⁴³ *Encyclopedia of Computer Science*, s.v. “Y2K Problem,” http://0-www.credoreference.com.darius.uleth.ca/entry/encyccs/y2k_problem (accessed 6 June, 2012).

⁴⁴ *Ibid.*

specializes in investigating organized crime, Misha Glenny indicated in a recent interview that cyber threats in the modern internet-mediated civilization are enormous.⁴⁵ A serious example of this has been reported by Glenny in a TED talk and by Wired Magazine along with other news outlets in 2011 – “A computer virus has infected the cockpits of America’s Predator and Reaper drones, logging pilots’ every keystroke as they remotely fly missions over Afghanistan and other warzones.”⁴⁶ What is unsettling is that the virus kept coming back after it has been removed many times.

It is surreal to realize that nowadays, western countries, especially the United States mediate warfare using a “Drone pilot and a sensor operator [who] sit in their flight suits in front of a series of screens. In the pilot’s hand is the joystick, guiding the drone as it soars above Afghanistan, Iraq, or some other battlefield.”⁴⁷ In this instance: “Slaughter [becomes] a video game: death imitate[s] art.”⁴⁸ Although there are still troops on the ground, increasingly warfare is being supplemented with digital technology, detaching the soldier from his actions, and making war increasingly less *personal*. Now as the machines are being infected by malicious, self-replicating code, this exposes a serious security threat, both in the US and globally. What if we can no longer control the machines we designed to kill? This is not an isolated case of a breach of online security in the military. Another serious hacking incident took place in Pentagon in 2008, and it was not even reported until 2010, because that’s how long it took to repair the damages.⁴⁹ Viruses, their makers, their workings and origins remain elusive entities beyond the grasp of the majority of educated masses. This

⁴⁵ George Stroumboulopoulos Tonight, “Misha Glenny on the Chilling New Reality of Cyber Crime.”

⁴⁶ Noah Shachtman, “Exclusive: Computer Virus Hits U.S. Drone Fleet,” *Danger Room: What’s Next in National Security*, *Wired*, 7 October, 2011, <http://www.wired.com/dangerroom/2011/10/virus-hits-drone-fleet/> (accessed 1 June, 2012).

⁴⁷ *Ibid.*

⁴⁸ William J. Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, (Cambridge, Mass.: MIT Press, 1992), 13.

⁴⁹ John P. Mello Jr. “Pentagon: Yep, We Got Hacked,” *Cybersecurity*, *TechNewsWorld*, 26 August, 2010, <http://www.technewsworld.com/story/70699.html> (accessed 1 June, 2012).

hazy view of what happens to infected systems, who is responsible and for what reasons, only contributes to the growing anxieties of technological progress. How can we control technology when it clearly resists, or escapes total human understanding? But we use it anyway, to build societies of control, and to destroy them.

Those pursuing or fighting against ideologies may pose one of the more serious global cyber threats, but some would say the famous hacker group Anonymous seems to be fighting for a good cause. Anonymous describes themselves as a “decentralized network of individuals focused on promoting access to information, free speech, and transparency.”⁵⁰ Besides using cyber attacks as a form of political protest, this “hackivist” group also tries to “expose companies that practice poor corporate governance and are involved in large-scale fraudulent activities.”⁵¹ Anonymous is responsible for a recent attack on child pornography websites in October 2011, in which it exposed usernames of registered users.⁵² WikiLeaks, a similar group, identified as a “whistleblower” uses the weaknesses of Internet security systems to expose corruption, money laundering, fraud, war intelligence, and other classified sensitive information, which it feels needs to be made public about corporations and governments.⁵³ Although most of these are noble causes, the real problem could emerge when these digital hacking skills enable ideological fanatics to wage religious-motivated or political terrorist attacks. Is anyone else scared of Iran? “Hacktivism” brings important attention to the vulnerability of systems operating in the contemporary western civilization.

I am not supporting nor condemning the ideas of cyber threats but simply wish to acknowledge them. In their specific ways, these groups expose the intimate workings of

⁵⁰ Anonymous Analytics, <http://anonanalytics.com/> (accessed 10 May, 2012).

⁵¹ *Ibid.*

⁵² CBC News, “Anonymous Hacktivists Claim Child Porn Takedown,” *Technology and Science*, 24 October, 2011, <http://www.cbc.ca/news/technology/story/2011/10/24/anonymous-operation-darknet.html> (accessed 15 March, 2012).

⁵³ Wikileaks, <http://wikileaks.org/> (accessed 20 May, 2012).

political, corporate and military systems. The many fissures and cracks that exist within the technological networked society serve as points of entry and exploitation for entities that profit from its weaknesses. Hacking, whether of malicious or noble nature, displays those weaknesses as places where change, whether good or bad, can occur. Places where those fragilities exist are battlefields where entities challenge established control, and surprisingly they do it with tools that the establishment itself makes available. If anything were to happen to our seemingly reliable realm of digital mediation and representation on a global scale, it would be a momentary lapse into awareness – a revelation of sorts, however fleeting – of the black box of technology. But the black box stubbornly remains like Kubrick’s monolith: equally impenetrable, magical and mysterious in its properties.

This steadily increasing anxiety over technology provokes some artistic minds to challenge that, which so rigorously shapes and dictates our current digital realities. The rigor of production directed by software, the proprietary nature of platforms, digitally mediated entertainment in the form of television and videogames, the transparent interfaces of digital space that paradoxically create opaqueness within the system of computation, and many more technological entities, are now points of entry and deconstruction of systems of control within the artistic and ideological framework of resistance. The internal instabilities and external disruptions that are so feared within digital technology are now provoked and explored intentionally as glitches.⁵⁴ These artistic experiments decrease anxiety either through the acknowledgement and acceptance of glitches as part of every day life, or through providing a window of opportunity to counteract and exploit the very tools that we may be controlled by.

⁵⁴ The genre of glitch art, which engages in this unconventional exploration of digital media, will be discussed in later sections.

The Apocalyptic Moment

“Death and Famine and War and Pollution continued biking towards Tadfield. And Grievous Bodily Harm, Cruelty To Animals, Things Not Working Properly Even After You've Given Them A Good Thumping but secretly No Alcohol Lager, and Really Cool People traveled with them.”

Neil Gaiman and Terry Pratchett. *Good Omens: The Nice and Accurate Prophecies of Agnes Nutter, Witch*.⁵⁵

“Noise is natural. From noise we are born, and to noise we shall return.”

Hannah Piper Burns and Evan Meany. “Glitches Be Crazy: The Problem of Self-identification Through Noise,” in *Glitch Reader[ror] 2011*.⁵⁶

“I crave, I long for Abstinence from Images, for every Image is bad.”

Roland Barthes. “The Image,” in *The Rustle of Language*.⁵⁷

This section aims to briefly connect artistic and philosophical ideas to the notion of technological anxiety in order to further contextualize the discussion about the natural occurring glitch, and how it could contribute to the massive disruption of the contemporary technological civilization in the manner of the apocalypse. The word *apocalypse* is derived from Greek meaning “disclosure” or “revelation” and it refers to the Judeo-Christian texts that discuss “God, the celestial beings, and the end of days.”⁵⁸ Apocalyptic discourse contains “hope of a radically new social order, reflective of the historic realities during which these works were written.”⁵⁹ The notion of the apocalypse seems to revolve around the idea that the world is dysfunctional and needs to fall apart in a catastrophic event in order for a

⁵⁵ Neil Gaiman and Terry Pratchett, *Good Omens: The Nice and Accurate Prophecies of Agnes Nutter, Witch*, The L Space Web: A Terry Pratchett / Discworld Web Site. Good Omens Quotes, <http://www.lspace.org/books/pqf/good-omens.html> (accessed 30 May, 2012).

⁵⁶ Burns and Meany, “Glitches Be Crazy: The Problem of Self-identification Through Noise,” 73.

⁵⁷ Roland Barthes, “The Image,” in *The Rustle of Language*, trans. Richard Howard (Berkeley, 1989), 356, quoted in Martin Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought* (Berkeley: University of California Press, 1993) 442.

⁵⁸ *The New Encyclopedia of Judaism*, s.v. “Apocalypse,” <http://0-www.credoreference.com.darius.uleth.ca/entry/nyupencyjud/apocalypse> (accessed 18 May, 2012)

⁵⁹ *Ibid.*

new one to begin. The apocalyptic moment, as perceived in contemporary culture and media, is to be announced through visions (seeing into the future through the opaqueness of time), uncanny events (absurdities that don't follow conventions or laws of nature), disasters of the natural and the human origin that bring about widespread death of people and animals (earthquakes and nuclear disasters), people speaking in strange tongues, and so on. Mainly, the apocalypse is represented within the context of some cosmological or earthly disaster that is born outside of human control – an incoming threat instead of a disturbance within.

Apocalypse is the advancement of a great void of meaning where structures that previously shaped life, are torn down into pieces – unrecognizable and elemental. The forces that destroy them come as internal failures and external disturbances. The Apocalypse is the annihilation of the old world, a revelation of the fact that it has become too rotten to be cured from its illnesses – a world that has advanced beyond the point of no return and needs to become a *tabula rasa* (Latin, “clean slate”).

The nihilistic aura of the Apocalypse brings fear because the end of days is ultimately associated with great destruction of the modern way of life, and sometimes the planet itself. Nihilism as a sickness develops from the denial of the importance of physical life in favour of the divine – a dysfunction that eventually leads to a condition of emptiness, a feeling of floating around in space with no anchorage, or a sense of direction. Although there is still much confusion in literature whether Nietzsche was a nihilist or not, his writings on the topic are of great significance in this context. According to Nietzsche, nihilism emerged from the failure and decadence of Christianity, but it is a condition that can be overcome.⁶⁰

⁶⁰ *World of Sociology, Gale*, s.v. “Nietzsche, Friedrich Wilhelm (1844 - 1900),” http://0-www.credoreference.com.darius.uleth.ca/entry/worldsocs/nietzsche_friedrich_wilhelm_1844_1900 (accessed 15 May, 2012).

Nihilism, as a boiling pool of shapeless noise is a kind of fertile ground of exploration, where any notion of permanent values is denied, enabling endless possibilities to take root. From the noise of the nothingness, new, redefined structures can arise, just like the galaxies emerged out of the noise of the Big Bang, and words form from the babble of every child. In the book *Error: Glitch, Noise and Jam in New Media Cultures* Mark Nunes sums this up while discussing digital media: “[...] noise rather than serving as an impediment to otherwise clear communication, creates an opportunity for alternative modes of expression.”⁶¹ The nihilistic shock of the void of meaning gradually gives way for alternative options, and Nietzsche is positive that humans can find purpose and values in earthly life rather than trouble themselves with mythical truths and God.

If God is not dead, contradictory to what Nietzsche announced in 1883, he has definitely been relocated to the flat screens, computer monitors, smart devices, billboards and reflected on the faces of celebrities, models, and shiny gadgets judging from the fixations of contemporary society. Church crosses now disguise cellular towers, as financially struggling parishes decide to fulfill the insatiable needs of wireless communication.⁶² French thinker, Guy Debord believes we live in a system of networked capitalist society, in which the general goal is the consumption of goods for economic growth in the perpetual state of the Spectacle, in which capitalist oppression is disguised as freedom of choice. It is a system that “dramatize[s] an ideology of freedom [...]” through an illusion of “participation.”⁶³ Nowadays the processes of production and consumption in such a society are mediated and controlled by digital interfaces and supported by stunning photo-realistic images that inform

⁶¹ Nunes, “Error, Noise, and Potential: The Outside of Purpose,” 15.

⁶² John Lancaster, “Cellular Towers Sprouting Around Canadian Churches,” CBC News Toronto, 13 July, 2012, <http://www.cbc.ca/news/canada/toronto/story/2012/07/13/toronto-churches-cell-towers.html> (accessed 13 July, 2012).

⁶³ Greil Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, (Cambridge: The Belknap Press of Harvard University Press, 1989), 92-93

and reinforce the status quo. Control is in place to make that system flawless and maximally efficient, as any kind of disruption, error or noise is highly undesirable because failure is seen as counter productive. The constant correction of noise and error, which constitutes heresy in the consumer religion, increases profitability of any given technological medium.

Why is technology so seductive to us? Perhaps it is because it opens up the possibility of creating a world that we imagined in science fiction. We are limited by our design, and therefore we redesign ourselves to be unlimited – using technology as an extension of the body.⁶⁴ Nietzsche was right in saying that with technology and science we will trek towards a complete mastery of the planet (and each other), but he may have been mistaken that it will provide a satisfactory solution to the meaning of life.

So are people fooled to believe that they became free once religion collapsed as the centre of power, when in fact the locus of control only changed hands, and all old hierarchies remain in place? In Debord's words: "Spectacular technology has not dispelled the religious clouds where men had placed their own powers detached from themselves; it has only tied them to an earthly base."⁶⁵ The illusion of change was achieved through "a show in which everything that was new was old as soon as it was pictured, and thus could be replaced by something even more falsely new."⁶⁶ This is a trait of the consumer market and in technology specifically, it manifests as "planned obsolescence" which involves "proprietary capitalist scheming for the limited usage of each new purchased technology, which will manipulate the consumer into future investments" on upgrading to the newest versions.⁶⁷

⁶⁴ Baudrillard, *Simulacra and Simulation*, 111.

⁶⁵ Guy Debord, *Society of the Spectacle* (1967), Marxists Internet Archive, <http://www.marxists.org/reference/archive/debord/society.htm> (accessed 27 February, 2011), Ch. 1, no. 20.

⁶⁶ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 119-120.

⁶⁷ Rosa Menkman, *The Glitch Momentum*, (Amsterdam: Institute of Network Cultures, 2011), 57.

Consumerism is extremely well rooted in western culture and has many tricks in maintaining its firm grip on one's wallet, where one's soul seems to reside these days. However it is possible that eventually consumers lose faith in society's commercial ideals of happiness, declare it's demise, it's corruption, and its inadequacy at providing meaning for human life. Or is it naïve to think that way? The reason for this potential loss of faith may originate in capitalism's weak argument for meaning, based on accumulation of commodities forever promising happiness, which we are told is attainable with the continuous purchase of ever increasing variety of products that signify wealth, status, beauty and longevity. Our lives are assembled of objects that supposedly contain magic formulae meant to cure our artificially created emotional longings, but we always seem to be returning to the store.

Over-consumption, which may manifest itself as morbid obesity or obsession with celebrities, especially in the younger generations of media-raised youth, is a path to unreachable ideals, producing generations lost in the glow of advertising signs. There is a discord between what young minds seek in terms of meaning and what they are given by popular culture. The novel by Chuck Palahniuk, *Fight Club* from 1996 and its subsequent film adaptation from 1999 illustrate this point bluntly:

God damn it, an entire generation pumping gas, waiting tables, slaves with white collars, advertising has us chasing cars and clothes, working jobs we hate so we can buy shit we don't need. We're the middle children of the history man, no purpose or place, we have no Great war, no Great depression, our great war is a spiritual war, our great depression is our lives, we've been all raised by television to believe that one day we'd all be millionaires and movie gods and rock stars, but we won't and we're slowly learning that fact and we're very very pissed off.⁶⁸

What is interesting about *Fight Club* is that it seems to shout what oppressed consumers consciously fail to acknowledge, providing the reader mental tools to rage against

⁶⁸ Chuck Palahniuk, *Fight Club*, quoted in Memorable quotes for Fight Club, *IMDB*, <http://www.imdb.com/title/tt0137523/quotes> (accessed 12 October, 2011).

the system, and at the same time, it exists as an ideology that is sold in the form of books and DVDs neatly commercially packaged, and profiting from the existence of the Spectacle. It is a consumer product discussing the pitfalls of consumer culture, but perhaps it still has something important to mention, even if just in an echo of resistance. Disillusionment with commercialism represented in the above quote reflects nihilism.

Nihilism gives us permission to re-evaluate life in different terms because disillusionment with the current order opens up the possibility of creating some other alternative. This is illustrated literally in the 1999 Wachowski brothers film, *The Matrix*. When near the end of the movie, the character of Neo is shot by agents of the system, he finally internalizes that the world he experiences is not *real*. This realization enables him to see it for what it really is – strings of computer code. This is when he gains powerful agency to bend the rules of that world to his liking, in the process becoming its master. This new understanding gives him life – literally. Neo’s enlightenment and freedom is something that Nietzsche hoped would happen with the death of God. The breaking of the illusion is the key. To declare something dead – painting, photography, God, or rock ‘n’ roll – is to begin the process of displacement and re-evaluation of its foundations.⁶⁹ Nietzsche’s saving thought out of the meaninglessness of nihilism is that after realizing there is no universal truth or God to dictate values, the human is finally free to invent his own. It is the liberation of the mind, just like in Neo’s case. Perhaps we seek liberation from consumerism, but is it a viable goal?

It appears we have displaced God and grasped the power in our hands, but inequalities and hierarchies continue, while we become a corporation disguised as government. The stereotypes and clichés of the social condition of a patriarchal society are

⁶⁹ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, p. 20.

constantly reinforced by the images we rely on for visual communication.⁷⁰ However, consumer culture as the new religion is already being challenged in small pockets of time with bursts of anarchic action and discontent, like the Situationist International, or the Punk culture of 1970s Britain. But are these truly revolutionary movements, or a kind of fashionable opposition? The consumer culture we are so dependent on has ways to dissolve revolt by allowing the aesthetic of the revolution to become accepted as a mainstream trend. Advertising's new approach is individualism, and it sometimes adapts peripheral aesthetics to emphasize ideas of originality. When a cultural revolution becomes a fashion, the impact of a potentially life-altering action dissolves into decoration with no substance to move it forward. It's stillborn.

Perhaps in order to detach from the "decadence" of the old order one needs to undermine it – to infiltrate it with a prank disturbing its regular flow of operations. But we are all slaves to decadence, and to finding meaning in useless objects, and unrealistic fantasies screaming at us from every glossy magazine image. If this is all we know, how can we imagine anything else? We have been told by philosophers and psychologists that happiness through relentless consumption is unattainable, but the habits of western consumer culture are too prevalent and too convenient for us to just reject at will. Whatever resistance emerges within the hypnotic visuals of the Spectacle, is part of its relentless machinery of control, because it has been built on the same terrain where consumerism flourishes. Regardless, there are those who keep trying, and bringing awareness to the rules that all of us play by.

In Freydis' opinion nihilism has positive effects for self-awareness, because it encourages us to abandon our plastic values and our roles as passive consumers:

⁷⁰ Ellen Lupton and Abbot Miller, *Design Writing Research: Writing on Graphic Design* (London: Phaidon, 1999), 141.

The populace is trained by TV and pop-culture to remain unfocused and incapable of the coherent thought so threatening to authority, for any length of time, or figuring anything out besides which button changes the volume and which the channel. Those ones are lost, they're enjoying the rapids of the mainstream on the ship of establishment headed for the waterfall. But the ones reading this, the ones able to think and act, they will survive and prosper because they're not on the ship. So don't be blinded by the bright lights of muddled immediacy and the short-lived products of panic and desperation. Focus on the boundaries themselves, the errant parameters continually creating confusion and disorganization. Most everything that has been built up, packaged and marketed - the values, the limits are just fraud and sham. If you attach to that system either willingly or by default you'll inevitably sink with that ship of lies and plastic promises.⁷¹

This apocalyptic crisis discussed here is a rejection of a singular point of view or a value set that does not fit a world composed of seven billion perspectives that may experience a multitude of moments uniquely instead of objectively.⁷² It is already a world of noise, of things happening simultaneously at once – a boiling pot of events that we are only able to comprehend with the use of our attention. Like a radio tuner, this attention conceals the fact that there are multiple stations transmitting at once – a noisy, erratic, chaotic world in its natural state. However, our consumer culture requires us to switch our radio tuner to different channels constantly, weaving our notions of the world with fragments and pieces of information that only remain seamless until they are undisturbed. For that reason the digital medium is incapable of representing certainty, stability, and reliability, which it has been forced to emulate. It only contributes to its fragmentation.

The apocalypse, as a concept transplanted from religious beliefs to technological ones, is the unveiling of the technological moving ground where the reliability of the system is questionable and undetermined. It is the revelation of digital structures of representation, which usually remain hidden from conscious acknowledgement. The apocalypse here is also

⁷¹ Freydis, "Nihilistic Art," Nihilism: The Counter Order, 31 December 2001, <http://www.counterorder.com/art.html> (accessed, 17 March, 2012).

⁷² Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, 545.

the breakdown of our world, contained and maintained by images, and the disruption of human mediation that is supplemented by images produced with ever expanding digital technologies, which help maintain “the reign of the autonomous economy.”⁷³ The apocalypse here is both a metaphor for an end to old value systems and constructs, and a literal catastrophic event, which may be caused by destabilized technology.

So can a glitch within the technological system cause a significant disruption within the consumer culture it supports? Is a catastrophic glitch even possible? If so, can an artist be the vandal causing such an occurrence, or is he or she more content with practicing their critique from a safe place within the system of control? The premise of most art movements is to rework the world, but can an artist truly change the world or only its representation? In a civilization where digital representation through technological progress is intimately connected with the physical world it serves, changing data has visible consequence in reality. Perhaps image hacking is not comparable to military systems hacking, but it surely highlights the opening. Sometimes highlighting such an opening is all that an artist hopes to achieve. Even though people acknowledge the instabilities and fragilities operating underneath the surface of our technological society, they disregard them as temporary hiccups, because the dominant assures them that they can be fixed. It is only when such instabilities reach critical mass, that they become apparent in the form of glitches. These glitches become signals calling for attention.

Perhaps the discussion of a massive, global, digital glitch facilitating an actual human apocalypse is speculative science fiction being safely exercised within a critique of contemporary technological civilization, but at least it acknowledges forces at play that with time may become more unstable. Artists, not exactly as prophets, but more as outsiders and

⁷³ Debord, *Society of the Spectacle*, Ch. 2, no. 51.

a part of society they critique, notice the small moments of *wrong*, and like mirrors they hope to reflect important matters that average people miss. Sometimes what they wish to do is experience the aesthetics of breakage personally, without any will to be flag bearers. They may be wrong or right, or they may just *be*, but at least they are learning to see through a different set of spectacles. In their critiques they analyze what they see, and post their subjective observations as warning signs letting society take notice or just enjoy the aesthetics. An artist is someone who responds to his or her conditions in a visual way, and sometimes those visual manifestations can be life changing, and other times they are just another critique. As an artist I think of myself as such an observer, who brings what she notices out onto the surface, perhaps more importantly raising questions instead of providing clear answers about how technological progress and commercial indoctrination change our perceptions, relationships and experiences of what it means to live in the twenty first century, where everything that is lived is filtered through code.

The Glitch Phenomenon

The premise of a glitch is the opening of voids.⁷⁴ Glitch art is defined by many artists and thinkers to be a “techno fetishistic” exploration of errors, malfunctions, corruptions, and unexpected failures of today’s (and yesterday’s) technology.⁷⁵ Tom McCormack describes glitch art as an “inverted world” where “functionality is just a sterile enclosure of creative space and degradation, an agent of renewal.”⁷⁶ As Hugh S. Manon and Daniel Temkin observe in their “Notes on Glitch,” this art genre, first in its sonic manifestation, draws on Reed Ghazala’s hardware circuit-bending from the 1960s, and appears as “software based visuals” in the work of Ant Scott and Iman Moradi in 1990s and 2000s, continuing in multiple forms until this day.⁷⁷ In order for this discussion to be clearer it is important to distinguish between a glitch in its naturally occurring technological form and glitch as an art form that is loosely based on the original moment of disruption. Both of those concepts will be discussed interchangeably within this section as the properties of the *natural* glitch heavily influence the meanings of art works within glitch art.

Glitch art has no single point of origin but is “discovered (continuously) at a thousand points simultaneously,” through accidental encounters with digital errors in the immediate human environment.⁷⁸ The genre has no known geographical concentration, however in 2010, Chicago with its rich noise culture has welcomed glitch in the form of an annual gathering called “Gli.tc/h” co-organized by Nick Briz, Rosa Menkman and Jon Satrom. In 2011 the event expanded to Amsterdam, NL, and Birmingham, UK, keeping

⁷⁴ Menkman, *The Glitch Momentum*, 30.

⁷⁵ Iman Moradi, “Glitchbreak,” in *Gli.tc/h Reader[rör] 20111*, eds. Nick Briz, Evan Meaney, Rosa Menkman, et al., (Chicago: Unsorted Books, 2011), 153.

⁷⁶ Tom McCormack, “Code Eroded: At Gli.tc/h 2010, Rhizome,” in *Gli.tc/h Reader[rör] 20111*, eds. Nick Briz, Evan Meaney, Rosa Menkman, et al., (Chicago: Unsorted Books, 2011), 15.

⁷⁷ Hugh S. Manon and Daniel Temkin, “Notes on Glitch,” *Wrong, World Picture*, no. 6 (Winter 2011): 2. http://www.worldpicturejournal.com/WP_6/Manon.html (accessed 10 January, 2012).

⁷⁸ *Ibid.*, 3.

Chicago as a more central location. The “Gli.tc/h” conference provides opportunity to discuss and celebrate glitch, noise, and error both aesthetically and conceptually through the event’s happenings and among a tight-knit community of fellow artists.⁷⁹

The practice of this art form is based on Jacques Derrida’s idea of deconstruction, a concept, which guides the artist in challenging this particular medium along the lines of its weaknesses by taking advantage of the vulnerability of data structures and the hardware they inhabit. The premise of breaking down digital structures here is “not an analysis, in particular because the dismantling of a structure is not a regression towards the simple element, towards an indecomposable origin...”⁸⁰ Instead it is an “incision, [which] precisely, can be made only according to lines of force and forces of rupture” in the medium.⁸¹ Just like “in general, deconstruction tries to agitate some of our deeply ingrained self-assured habits of thought,” so in this case the digital corruption process inherent to this art, attempts to break down the established conventions of digital representation and the functionality that makes machines useful for human activities.⁸² In short, it is all about turning the machine inside out, and revealing the hidden processes of its computation, while breaking with the established predictability of its response. Glitchers hack data or manipulate wiring normally hidden behind some kind of barrier to provoke a deviation within the machine’s normal procedures.

As Manon and Temkin point out, the relationship between artist and error is not as direct as it may first seem: “The artist’s process is not exacting, but an invitation of chaos:

⁷⁹ Gli.tc/h. <http://gli.tc/h/> (accessed 30 October, 2011).

⁸⁰ David Wood and Robert Bernasconi, eds., *Derrida and Différance*, (Evanston: Northwestern University Press, 1988), 4-5, quoted in *The Edinburgh Encyclopedia of Continental Philosophy*, s.v. “Deconstruction: Derrida,” by Michal Ben-Naftali, http://0-www.credoreference.com.darius.uleth.ca/entry/edinburghcp/8_6_deconstruction_derrida (accessed 1 June, 2011).

⁸¹ Jacques Derrida, *Positions*, trans. Alan Bass (Chicago: University of Chicago Press, 1982), 82, quoted in *The Edinburgh Encyclopedia of Continental Philosophy*, s.v. “Deconstruction: Derrida,” by Michal Ben-Naftali, http://0-www.credoreference.com.darius.uleth.ca/entry/edinburghcp/8_6_deconstruction_derrida (accessed 1 June, 2011).

⁸² *The Edinburgh Encyclopedia of Continental Philosophy*, s.v. “Deconstruction: Derrida.”

one triggers a glitch; one does not create a glitch.”⁸³ The artist’s goal is to disrupt order to provoke a sudden and violent irregularity within the medium. The loss of control over the final product is an essential part of making glitch art. However this does not mean that the results of glitching cannot be “reproducible.”⁸⁴ With enough repetition in glitching the artist recognizes the patterns of digital corruption responsible for a specific visual effect.

Some of the more known artists in the glitch genre are: Rosa Menkman (rosamenkman.blogspot.ca), Ant Scott (beflix.com), Benjamin Gaulon (recyclism.com), Daniel Temkin (danieltemkin.com), Iman Moradi (organised.info), Jeff Donaldson (notendo.com), Kim Asendorf (kimasendorf.com), Phillip Stearns (phillipstearns.wordpress.com) and more. There are also quasi-glitch genres that draw inspiration from the same main fascination with deconstruction in the technological sense but exist outside of its boundaries like Net.Art for example. The art collective JODI (Joan Heemskerk and Dirk Paesmans; jodi.org) whose practices belong more within the Net.Art than the glitch genre, is described by many glitch theoreticians as one of highly influential groups exploring digital error. Projects such as the *Untitled Game* and *404.Jodi.org*, use the medium of the video game and the internet to play with user expectations, interface usability, and filtering of information through incorrect processes to produce visually interesting glitch aesthetics.

Glitch art is practiced either as an act of collecting naturally occurring errors and glitches in the technological environment, or an intentional stimulation of those same malfunctions, or a purely aesthetic form of design where the glitch artifacts are not necessarily *authentic*, but are imitations of the glitch look. Glitch as disruption is explored on many platforms like old video game consoles, a variety of operating systems, different types of displays, and created with methods such as circuitbending, databending, datamoshing,

⁸³ Manon and Temkin, “Notes on Glitch,” 3.

⁸⁴ *Ibid.*

image hacking – all belonging to the all-encompassing concept of glitching.⁸⁵ The corrupted visuals often involve fragmentation, banding, pixellation, ghosting, and different types of noise artifacts all contributing towards the total or partial destruction of any reference to the original content of the medium. The methods for “error production” within different types of digital media have been extensively described in a variety of online tutorials, and therefore I won’t refer to them in detail, unless they specifically relate to the project.

Regardless of the methods involved, there is always a very distinguishable, somehow violent and aggressive aesthetic present in disrupted images, producing shocking qualities. Curt Cloninger explains this effect in his essay “The Ghost in the Machine”:

When I come home to the “welcome” of my wife, the breeze may increase slightly through her hair as she is speaking, and I subtly perceive and absorb this gradual affective modulation. Were she to somehow digitally glitch, it would be as if the wind increased to hurricane force in an instant, and then in the next instant it was back to a light breeze. Such is the thrilling violence of the digital glitch. It can be so jarring that we simply filter it out as so much noise and refuse to even perceive it.⁸⁶

A chance encounter with a glitch usually stops a viewer in his or her tracks. This “break from (one of) the protocolized data flows within a technological system” creates a break within the concentration and awareness of the viewer allowing for the displacement of this moment of expectation into another alternative dimension.⁸⁷ The viewer is baffled, trying to understand what happened.

While there is a category of generative art, which employs the code to create functional, elaborate, constructive and somewhat organic representation that obeys the rules

⁸⁵ Manon and Temkin, “Notes on Glitch,” 1.

⁸⁶ Curt Cloninger, “Glitch Linguistx: The Machine in the Ghost/Static Trapped in Mouths,” in *Glitch/b Reader[ror] 20111*, eds. Nick Briz, Evan Meaney, Rosa Menkman, et al., (Chicago: Unsorted Books, 2011), 31.

⁸⁷ Menkman, *The Glitch Momentum*, 26.

of the computing machine, glitch art exists as the other side of the same coin.⁸⁸ To simply analyze it based on the creative process, the art of glitch is *de-generative*, because metaphorically it involves unraveling instead of weaving. While the aim of generative art is to create “new naturalness of the industrial object as a mirror of Nature” through its simulations of scientific phenomena, instead glitch art attempts to force the unique visual qualities of the computer out from under the layers of opaqueness created to mask the machine as a command center of modern life.⁸⁹ While most computer art and design strive towards a complete erasure of the machine fingerprint from the work, the art of glitch aims to reveal it through the failure of technology to conceal itself.⁹⁰

The attitude of erasure described above stems from early computer days, when it was assumed that pixels are just building blocks and they need to be hidden in order to perpetuate an almost ancient window metaphor in visual representation. But the “flavour of the computer” is exactly what glitch artists are after. As a corrosive agent, the glitch, whether in natural or provoked form, shoots a brick through the window metaphor like a digital vandal.

In a technologically oriented society, an error or a glitch is a signal demanding more control as the dependability of the system is crucial.⁹¹ However, as Paul Hertz emphasizes in his “Glitch Politix” presentation from the 2011 Glitch Festival in Chicago: “Even if we know the state of all the variables we can’t predict the future.”⁹² A *real* glitch transcends error because we are not effective in correcting it.⁹³ Additionally, the concept of glitch as

⁸⁸ Celestino Soddu, “Generative Art,” GA2011: XIV Generative Art International Conference, 2011, <http://www.generativeart.com/> (accessed 1 June 2011).

⁸⁹ *Ibid.*

⁹⁰ Menkman, *The Glitch Momentum*, 14.

⁹¹ Nunes, “Error, Noise, and Potential: The Outside of Purpose,” 5.

⁹² Paul Hertz, “Glitch Politix,” Politics in/of Glitch Panel, Gli.tc/h 2011 conference in Chicago, IL. The presentation can be accessed here: <http://vimeo.com/40031232>

⁹³ *Ibid.*

disruption and deviation from norm is not exclusive to the digital domain. Its application may stretch to the “cosmic” and “human” disasters, which have always occurred at one point or another in Earth’s history.⁹⁴ Earthquakes, genetic mutations, even wars can be thought of as kinds of glitches. In both the digital and physical worlds, the glitch still exists as something we cannot protect ourselves against because it happens regardless of how many measures we take against it.⁹⁵ Like a natural disaster, it remains unpredictable and unavoidable – a by-product of the frictions within the system.⁹⁶ Looking outside the realm of glitch art practices, the *natural* glitch as an autonomous agent of corrosion, while relatively unthreatening in a single occurrence, may pose considerable risk to the technological modes of existence, when manifesting in various forms and multiple times at once.

This is what ties the discussion of glitch as disturbance with the discussion of the apocalypse. As mentioned, the term glitch can have multiple meanings that relate to some sort of unwanted, and spontaneously occurring disaster, whether small or large, within the human world. Also the glitch as a digital hiccup, whether significant or minor can unleash a chain of events that can lead to a *real* apocalyptic crisis, like for example the future failure of digital architecture supporting control systems in all of the world’s nuclear reactors (worst-case scenario). Although that may not be highly probable because of all the back up systems that may exist to prevent disaster, it is theoretically *possible*.⁹⁷ The term *apocalypse*, which has been discussed in the previous section, draws parallels with what the glitch does. Both refer to an act of revelation of something that has been generally hidden from view (technological complexity for example) reframing our experience of the world. The *catastrophic* or the *apocalyptic glitch* therefore, is a cumulative term, encompassing all of the above factors and

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ International Atomic Energy Agency, <http://www.iaea.org/NuclearPower/IandC/> (accessed 10 July, 2012).

ideas that relate to anxieties about technology, and how it is instrumental in the construction of the contemporary human civilization, while perhaps also constituting a point of weakness.

As a force with nihilistic undertones, glitch in its *natural* occurrence is a facilitator of doubt. This force of doubt within the glitch is what breaks spells. These spells have many names, and exist on a variety of scales: overconfidence in our digital technology; mistaken assumption that digital files can be suitable replacements for printed materials; the illusion that digital materials can last forever; hyperrealism in photographs and advertising, where reality is easily manipulated and purposefully misrepresented; the spell of stable and reliable system of capitalism, promoted through the mass proliferation of hyperrealistic imagery and fragile, digitally run financial industry, and so on. The paradox here is that even though through glitching one spell is broken, another spell takes hold – the spell of the unexpected, imperfect, colorful and erratic digital body. Perhaps the desire to break and question the conventions of the medium reflects the same nihilistic disillusionment with establishment that Nietzsche talked about in relation to religion.

Digital corruption changes content into a meaningless composition of visual bits, just like human existence becomes meaningless once the values, morals and ordered structures are removed from the foundations of modern civilization. Nietzsche predicted this would bring on a state of nothingness and barbarity unless the meaning of life was redefined in more relevant human terms.⁹⁸ He discovered a motivating force in the concept of *will to power*, which described “the urge to dominate and master” as the source of new values and a sign of uniqueness of the human species.

⁹⁸ *World of Sociology*, Gale, s.v. “Nietzsche, Friedrich Wilhelm (1844 - 1900).”

The *will to power* principle, while suggesting that the human species wants to master the earth, also indirectly suggests that the human nature desires no master above it.⁹⁹ The mastering of resources, populations, and technologies is exactly what is taking place in the modern world. The mastering of technology is of special interest here as the *will to power* is expressed both in the formulation of new technologies and their deconstruction. But while we are the masters of our own destiny, of our own technology, this technology is also silently reshaping our lives and becoming an idol we worship.

Nietzsche promoted the view that all that exists is in a constant state of flux or process and that it institutes a world of *becoming*.¹⁰⁰ The believers in the world of *permanence* and timeless things (Plato, Christianity) however, deem the world of *becoming* to be something bad and fallen.¹⁰¹ In Nietzsche's time the advancement of science and technology helped in discrediting the world of *permanence*, allowing the world of *becoming* to be considered.¹⁰²

Nietzsche celebrated the world that existed in constant *process* as something that is beautiful and tried to restore its innocence.¹⁰³ Similarly, deconstructive arts, and specifically glitch art, attempt to challenge the authority of permanent things and practices, finding beauty in the breakdown and the disruption that ultimately opens up the possibility of change in established processes, and meanings. If the premise of perfection in the digital medium is a driving dream within the Spectacle then perhaps accepting the potential of error through glitch art, guilt-free, is about adopting Nietzsche's attitude and allowing ourselves to consider imperfection as a natural element of communication and not a sin to be eliminated.

⁹⁹ *Ibid.*

¹⁰⁰ *Dictionary of Existentialism*, s.v. "Friedrich Nietzsche (1844—1900)," http://0-www.credoreference.com.darius.uleth.ca/entry/gwexist/friedrich_nietzsche_1844_1900 (accessed 15 May, 2012).

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*

¹⁰³ *Ibid.*

The digital realm may in general terms be Nietzsche's world of *becoming* where the possibility of new forms and events is unlimited, and which operates based on "continual mutation and proliferation of variants" but it is paradoxically trying to appear predetermined, stable, durable, pixel perfect, sterile and pore-less thanks to the commodification process.¹⁰⁴ The natural state of existence is fluctuation and change, and modern civilization in some ways actively represses it. Change is the facilitator of adaptation – the most important human skill, but in the capitalist society, which "requires a culture based on images" (entertainment and observation), and where "the production of images also furnishes a ruling ideology," change is only simulated as something that preserves a certain state of existence.¹⁰⁵ Change is only accepted when it leads to economic growth through, for example, finding new resources to exploit, or tailoring politics to the interest of the big business. True "Social change is replaced by a change in images."¹⁰⁶ The digital then, as a hidden world of *becoming* wrapped in the illusion of permanence, offers a weak spot where the Spectacle and its socio-cultural condition can be significantly challenged.

In recent time, the art of glitches has been discovering its genealogical connections in Cubism, Dada, Pop Art, Psychedelic Art, of course Glitch Music and other instances of expression that pressed against the mainstream of culture.¹⁰⁷ What is important in this thesis is that glitch art as a movement has some ideological connections to Lettrism, Situationist International, Punk, and seems to follow some sentiments of Futurism. Like glitch for its artists today, the movements mentioned above became points of intense exploration and fetishization, as they constituted filters through which these artists critiqued, or perceived the

¹⁰⁴ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 51-52.

¹⁰⁵ Susan Sontag, *On Photography* (New York: Farrar, Straus & Giroux, 1977), quoted in William J. Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, (Cambridge, Mass.: MIT Press, 1992), 56-57.

¹⁰⁶ *Ibid.*

¹⁰⁷ Nick Briz, "Glitch Art Historie[s]/Contextualizing Glitch Art - a Perpetual Beta," in *Gli.tc/b Reader[rör]* 20111, eds. Nick Briz, Evan Meaney, Rosa Menkman, et al., (Chicago: Unsorted Books, 2011), 54-55.

world. Then and now, by reducing the world to a singular point of view described by a given theory or metaphor, the artists go from understanding the world through the filter of theory to actively constructing it according to the established theoretical dimensions. Instead of just a theory, a movement becomes a set of beliefs. Perhaps for many, glitch art has also reached that point, where the increasing definition, conceptualization, description, categorization and regulation is becoming too rigid to contribute a unique understanding of contemporary life. While glitch art is using deconstruction to produce works, soon it may itself become the artwork to be deconstructed.

Chaos, fascination with technology, and the destruction of some old established order (of digital production for example) are general themes that permeate works of the glitch genre, and in those ways it makes it similar to Futurism. The dynamic, and visually aggressive images produced by Futurism, in which fragmented shapes, swift lines, sharp angles and multiple colors emphasize movement and speed, are aesthetically reminiscent of the visual violence of glitch works, fetishizing technological progress. Futurists also looked at technological carnage as beauty, just as Glitchers look at destroyed digital media as something aesthetically desirable.¹⁰⁸ It seems we now live in a new aesthetically-futurist world where the mark of time and progress is the broken pixel. However the difference is that, while the Futurists leaned towards the right-winged European Fascism, I would argue that Glitchers, in how they employ the disruptive glitch to undermine capitalist modes of digital production, lean slightly towards the left.

Glitch as a force stands against ordinary, status quo, conventional, established habits and structures of visual consumption that serve as standards in modern consumer culture. An example of a previous exploration of formalism that touches on this point can be found

¹⁰⁸ Walter Benjamin, "Work of Art in the Age of Mechanical Reproduction," in *Illuminations*, trans. Harry Zohn (New York: Schocken Books, 1969), 244.

in Lettrism, which emerged in the 1950s and was led by Isidore Isou. In practice, Lettrism involved art that worked with “words, letters and signs for purely visual effect, without reference to their meaning.”¹⁰⁹ Letterist cinematic works draw many parallels with glitch practices. *Treatise on Slobber and Eternity* (Figure 2) – a film by Isidore Isou, introduced at the 1951 Cannes Film Festival, purposely aimed to break the transparency of narration and destroy the conventional privileging of image over text.¹¹⁰ This was accomplished by the deliberate mistreatment of the film emulsion through scratching, painting, punching holes, chemical baths, incorrect exposure and other techniques together with “un-synching” of the image and the soundtrack. In *Treatise*, Isou disgusted by the opulence of film, proclaims its decadence and demise: “I announce the destruction of the cinema, the first apocalyptic sign of rupture in this fat organism we call film.”¹¹¹

The Lettrist process and conceptual framework, showcased in the *Treatise*, is based on the distinction between two phases of medium development – the *amplifying* phase and the *chiseling* phase.¹¹² While the *amplifying* phase is “characterized by the elaboration of basic formal conventions and vocabularies and the giving of expressive form to various thematic concerns,” the *chiseling* phase employs deconstruction where the “exhaustion with the terms of this ‘expressivity’ have set in and routine and formal stagnation are judged to have taken over.”¹¹³ In this instance of form over content, “the very conventions and vocabularies of

¹⁰⁹ *The Thames & Hudson Dictionary of Art Terms*, s.v. “Lettrism, Lettrisme,” http://0-www.credoreference.com.darius.uleth.ca/entry/tha/lettrism_lettrisme (accessed 1 June 2011).

¹¹⁰ Andrew V. Uroskie, “Beyond the Black Box: The Lettrist Cinema of Disjunction,” *October*, no. 135 (Winter 2011): 23; MIT Press Journals, March 10, 2011, http://www.mitpressjournals.org/doi/abs/10.1162/OCTO_a_00019 (Accessed 1 June, 2011).

¹¹¹ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 300.

¹¹² *Ibid.*, 25.

¹¹³ *Ibid.*

the medium itself” become a subject to be explored.¹¹⁴ Martin Jay describes this in *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*:

In his *Esthetics of the Cinema* of 1952 and elsewhere, Isou explained that chiseling involved a direct attack on or even deconstruction of the medium in which the work was grounded, for example the scratching or tearing of the celluloid filmstrip. Along with disjunctive editing, in which the sound and the image were out of synch, and chiseling of the soundtrack, in which its integrity was also undermined, this assault on the seeming transparency of the image, as well as on its primacy, was designed to break the illusion of representation it provided.¹¹⁵

Since Lettrists believed that “the art of film [...] no longer questioned its basic structures of representation” they decided to take it apart.

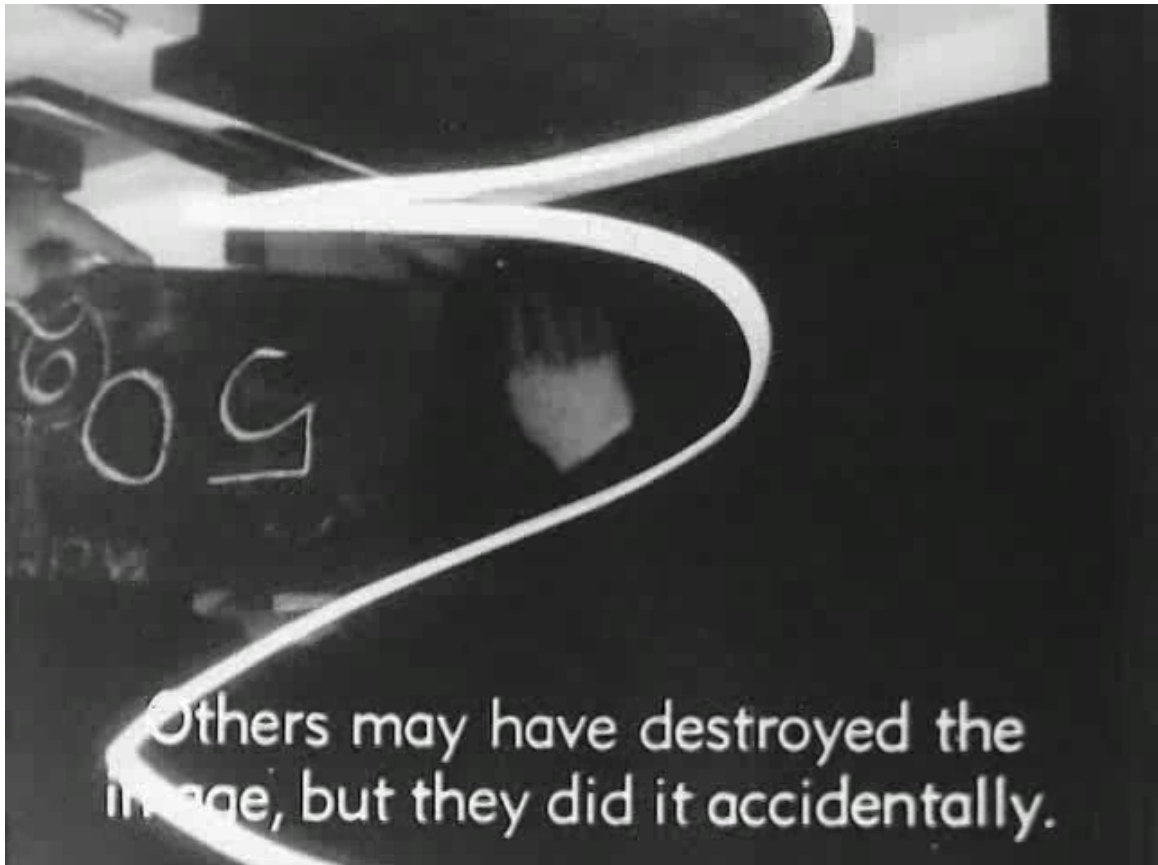


Figure 2. Frame from *Treatise on Slobber and Eternity* by Isidore Isou.

¹¹⁴ Ibid.

¹¹⁵ Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, 422.

The Lettrist *amplifying* and *chiseling* phases were also metaphors for life itself, which first grows and develops to “incorporate the world” reaching the height of meaning and then is forced to implode and disintegrate.¹¹⁶ The form itself being too “sterile, inaccessible, worthless, unreal” cannot be allowed to go on.¹¹⁷ When the form falls apart, metaphorically the world and life itself do as well. Then the cycle repeats – life and death; flesh to ashes, ashes to life. Marcus observes: “One can see that God was the first victim of this first law of the mechanics of invention. Look at the Bible: out of the slime, paradise; then rot, corruption, the slime, a faint memory of a golden age.”¹¹⁸ The *amplifying* and *chiseling* phases, though originating from natural processes, are intentionally provoked by the artist to prevent the world from stagnating in decomposition.¹¹⁹ Similarly nowadays as the glitch is used to destroy the digital image in favour of a pixel, the world contained in it falls apart into nothing in order to be reborn in some other alternative dimension of meaning.

It is also perhaps the impression shared by some glitch artists that the digital medium has reached a certain climax of formal development and the only way out of this creative stagnation is through a process of deconstruction.¹²⁰ Various forms of mistreatment of the delicate organization of code contained by images, video, even software, are weapons of choice for instigating creative failures in the digital world. The difference between the analog medium of film explored by Lettrists, and the digital medium explored by Glitchers, is the severity of effect. While the degradation of film always leaves something to show, the disruption of digital data may yield complete failure of the system, unable to display any

¹¹⁶ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 229-231.

¹¹⁷ *ibid.*

¹¹⁸ *ibid.*

¹¹⁹ *ibid.*

¹²⁰ Uroskie, “Beyond the Black Box: The Lettrist Cinema of Disjunction,” 26.

visual remains of the original content, only an enigmatic error message. Somehow a digital disruption seems more catastrophic than a physical one.

Many artists are worried that the glitch genre is too focused on pure aesthetics that are empty of any message or meaning worthy of contemplation. In “Code Eroded” McCormack says that “A common anxiety regarding glitch art is that it might just be formalism with an inhuman face; a rehash of abstract expressionism filtered through cracked code.”¹²¹ Iman Moradi also raises this point in his recent essay “Glitchbreak”:

I think glitch as a field is so obsessed with process and so absorbed in the discovery of new tools to glitch with, that it consequently spends less time conveying anything of real merit— the conveying part becomes second fiddle to the exploration of process. [...]. In a sense maybe we’ve reached the limits of the things it can say, maybe the glitch and its maximum conveying effectiveness is characteristically all about process?¹²²

Glitch art is in a constant state of flux or *process*, both as a genre because its definition remains more or less fluid, and as methodology, because it emphasizes process instead of an end goal. In technology there is no talk of permanence, objectivity or a finished product — only unlimited number of versions, progressing but never reaching the goal of perfection. Looking at glitch art is like admiring single frames of a film instead of watching the whole length of it at twenty-four frames per second. Not only the image but also the experience of the artwork is fragmented. In glitch art there is no ideal truth or representation, only a vantage point, or differing degrees of distortion. As Menkman points out in her notebook *The Glitch Momentum*, even the definition of the corrosive glitch is elusive: “Glitch, an unexpected occurrence, unintended result, or break or disruption in a system, cannot be

¹²¹ McCormack, “Code Eroded: At Gli.tc/h 2010, Rhizome,” 19.

¹²² Iman Moradi, “Glitchbreak,” 152.

singularly codified, which is precisely its conceptual strength and dynamical contribution to media theory.”¹²³

In its postmodern quest of perpetual negotiation of meanings and codes, glitch art is an art of the game. Ted Gournelos thinks the process is all about “gaming the system” perhaps because “the players acknowledge [it] is impossible to ‘win’; that is, the goal might be to sustain the game itself (an endless battle or state of play) rather than to gain supremacy or foreclose any form of discourse.”¹²⁴ He further states that the exploration of noise is really about changing the process rather than pursuing an outcome; it’s about “challenging the symbols and codes by which the Dominant retains control.”¹²⁵ Glitch artists are definitely not opposed to technology but only want to disturb its flows in order to aestheticize it or to gain personal insight into its intimate workings. In fact they are dependent on technology because the existence of conventional modes of digital production is exactly the fertile ground of exploration, where errors and glitches gain meaning in opposition to the mainstream.

So is glitch art too focused on aesthetics? The answer to that I believe is subjective. Was Cubism or Dada too focused on aesthetics? Of course aesthetics are the dominant part of glitch works, because they are so uniquely tied to the technological moment in which this genre is practiced. Late Cubism and then Dada was a response to the shattered world produced by the First World War, and therefore the fractured surfaces dominate the subject matter they represent. Is the process an overwhelming part of glitch art? Definitely – process is what gives the work meaning in the context of exploring perceived technological oppression, opaqueness, and so on. The literal breaking with convention through incorrect

¹²³ Menkman, *The Glitch Momentum*, 26.

¹²⁴ Ted Gournelos, “Disrupting the Public Sphere: Mediated Noise and Oppositional Politics,” in *Error: Glitch, Noise and Jam in New Media Cultures*, ed. Mark Nunes, (New York, London: Continuum, 2011), 162.

¹²⁵ *Ibid.*, 166.

usage of software and damaging of code, which is supposed to be functional, is exactly what makes it unconventional and oppositional. The emphasis on process is there because process relates to progress, which is the dominant trait of the contemporary technological civilization. Glitch process and human progress are dynamic, and although they both seem to be moving towards a conclusive goal, they will forever be *unfinished*. These characteristics are neither good or bad, they just are a trait by which the genre is recognized.

Punk as a movement was also all about disruption and distortion of the establishment. Above all it was against boredom, dullness, and false freedom of choice offered by the contemporary consumer society, which Punks perceived as suffocating and dysfunctional, and hoped for an alternative.¹²⁶ They wanted to change the world. This attitude, as Marcus points out, was also shared by the Situationist International of the 1960s Paris whose strategy at changing life consisted of the construction of moments or “situations” of rupture of everyday life, “moments everyone once passed through without consciousness and that, now, everyone would consciously create.”¹²⁷

These were moments of corrosion of the old order where *dérive*, and *détournement* were used as makers of “permanent novelty.”¹²⁸ *Dérive* was achieved through aimless wondering of the streets in “search of signs of attraction or repulsion” while *détournement* was a “theft of aesthetic artifacts from their contexts and their diversion into contexts of one’s own desire.”¹²⁹ *Dérive* allowed a kind of drifting through the urban landscape facilitating a new experience of the structured environment of the city, and where mapping was done based on aesthetic experiences and personal choices rather than convention. In glitch art, the disruptive glitch is like a *dérive* through the digital space. Also, perhaps the idea of *détournement*

¹²⁶ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 47.

¹²⁷ *Ibid.*, 156, 136.

¹²⁸ *Ibid.*, 158.

¹²⁹ *Ibid.*

as “the alteration and subversion of images so that their meaning is changed from one that supports the status quo into one that challenges it” as a confrontation of the Spectacle, is also subtly reflected in glitch art, where the characteristic pristine quality of flawless digital representation which capitalism relies on so heavily is subverted into something imperfect and degraded – a random brokenness instead of a controlled clarity.¹³⁰ The stimulation of glitches involves a degree of aggression towards technological objects, sometimes resulting in the complete destruction of equipment or materials (screens or code). Perhaps the attack on the integrity of digital media even if exercised for purely aesthetic reasons, is of iconoclastic nature, as it prevents the consumer from being enamored with the hyperrealism of mainstream media.¹³¹

Perhaps the glitch genre is also a way of seeking alternatives to the stagnation of perfect digital mediation. Maybe an intentional glitch as a tool of digital vandalism gives an artist the choice to stop being completely controlled by technology. Through the incorrect use of software tools, the artist has a chance to dominate the machine by disturbing its inner workings in order to control the context of creation, instead of creating and living a life conditioned by technological conventions of production. It is a kind of dance, or a struggle where conditions of power and submission fluctuate in a creative moment. Is it a fight for independence?

But the truth is, there is no independence from the modern way of consumption, of production, and of existence. It is in the same way that glitch cannot exist as an autonomous entity because it belongs within a system that produced it. The disturbance that causes the glitch to occur may come from outside or inside the system, but the glitch itself lives inside

¹³⁰ *The Anti-Capitalist Dictionary*, s.v. “Situationist International,” http://0-www.credoreference.com.darius.uleth.ca/entry/zedacd/situationist_international, (accessed 29 May, 2012).

¹³¹ Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, 13, 433.

it. A glitch is just a visual manifestation or a result of that disturbance, and not the disturbance itself. For example databending is itself a disturbance, and the glitch effect is its manifestation. The glitch does not exist in a vacuum.

Glitch only takes on meaning in contrast to other terms such as “order”, “system” and “predictability,” perhaps just as “freedom” is meaningful because it stands as the conceptual opposite to “oppression.” The identity of noise, error and glitch is that of a child of the system instead of a warrior battling it. It’s a by-product and something inherent to technology itself. Just as children and youth rebel against their parents in the search of their own independent identities and meaning before falling back and submitting to their safe and stable caretakers, so does the glitch temporarily produce a moment of otherness which cannot be sustained because the system mostly absorbs it. Regardless, the glitch widens awareness and allows us to assume a different perspective on digital technology.

Punk and Occupy movements are manifested children of the times of disfunctionality and frictions of today, provoked by disturbances that can no longer be ignored. Does glitch art also provide us with an observation and interpretation of the specific technological time we live in? Is glitch also a form of social protest? Or is social protest a form of glitch? I have come to the conclusion, that the global Occupy movement, which began in September 2011 as Occupy Wallstreet, can be thought of as a glitch because it is a visual manifestation - a reaction, a result - of a dysfunctional financial system. The disturbances that accumulated within the financial sphere reached a critical point when they had to be acknowledged on the *surface*, or the public sphere, by those who have been most affected by the crisis. Hence, the protest itself is a visual glitch occurrence. In its pure form or as a metaphor for all kinds of *wrong*, a glitch can be a crippling breakdown of communication, preventing further function. It will not be business as usual until the computer is restarted, i.e. the economical system is redrawn. What provokes the glitch must

be addressed. Until then it remains a sign of freedom, or a demonstration of conscience, constituting a risk to the system itself.

The desire for the Punk culture was “to live not as an object but as a subject of history – to live as if something actually depended on one’s actions.”¹³² In order to accomplish that, all oppressive structures consisting of God, government, rock and roll and other cultural constructs had to be rejected and abandoned.¹³³ Punk tried to expose life as something that has been build on false perceptions and promises, leading to a conclusion that “If nothing was true, everything was possible.”¹³⁴ In a similar manner, through the cracks in the smooth façade, glitch slips out, opening up a well of possibilities. Manon and Temkin agree that: “Glitch upsets the proper; it is a gesture of non-compliance, a hostile refusal to use software correctly [...] Punk metaphors of discharge and noise, as well as liberation are operative here [...].”¹³⁵

The Punk movement created a culture of noise, both literally and metaphorically, where everything melted together to a violent tune leading the youth that listened to it, into an oblivion, or alternative state of mind. “Destroying one tradition, punk revealed a new one.”¹³⁶ In *Lipstick Traces: The Secret History of XXth Century*, Greil Marcus discusses the role the Sex Pistols played in building a culture of noise:

It was the sound of the city collapsing. In the measured, deliberate noise, words tumbling past each other so fast it was almost impossible to tell them apart, you could hear social facts begin to break up – when Johnny Rotten rolled his r’s, it sounded as if his teeth had been ground down to points.¹³⁷

¹³² Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 5.

¹³³ *Ibid.*

¹³⁴ *Ibid.*

¹³⁵ Manon and Temkin, “Notes on Glitch,” 12.

¹³⁶ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 37.

¹³⁷ *Ibid.*, 7.

Glitch as a raw, non-conformist force reflects some of the punk aggression. By trying to destroy “social facts,” Punk brought on a sense that the world would end.¹³⁸ Glitch, by destroying images, also disintegrates any signs of religion, state, city, knowledge, identity, consumer products and every subject that is contained within the image and supported by the image. Punk was political in a way that it opposed everything. It “dismissed capitalism as an empty present, socialism as a future equipped to change only the past, and spoke instead of building ‘castles of adventure.’”¹³⁹ In turn the glitch in its original, spontaneous, and unpredictable form is a rebel without a cause, with no political, personal or artistic affiliations. It can be anti-capitalist or anti-communist, as it is perfectly capable of disturbing any system in which instabilities amount to threatening levels. However, the neutrality of the original glitch and its apolitical nature does not stop the artist to use it with political intent. The glitch genre as an art practice, which employs the notions of glitch in its aesthetic challenges of the consumer establishment, exhibits anti-capitalist attitudes.

Technology is used by both, the establishment and its opposition. In the end it is just a tool that takes on meaning depending on who uses it and why. Iran’s case is especially interesting because control is visibly exercised with the use or prohibition of media. The satellite signal of the banned content is purposely jammed by the government to limit the western programming Iranians can access. In this way the original, unprocessed manifestations of the glitch as disturbance inherent to technology are used for censoring the channels of communication. Saman Arbabi and Kambiz Hosseini, produce and host the award winning underground show *Parazit* (in Persian meaning “static”), which appropriates the noise and glitch originating from the government in order to frame the show’s political and cultural satire in terms of opposition to the oppression of the Iranian regime. The

¹³⁸ Ibid., 76.

¹³⁹ Ibid., 160-161.

program is broadcasted on Voice of America but it reaches the Iranian audience mainly via bootleg DVDs, the web, and through illegal satellite dishes.¹⁴⁰ It also seems that the creators of the show practice *détournement* by adopting all the propagandistic content of the establishment and derailing it to express the opposite message. *Parazit* identifies the noise with the enemy, hijacks it and displaces it for a positive impact. Although the creators of the program don't specifically recognize or practice glitch art, or may be unaware they practice *détournement*, they appropriate these elements from the greater cultural strategies in order to build their message.

In history, there were many wonders of nonsense and noise. The absurdity of the Sex Pistols sound and many other similar bands *unknowingly* drew its inspiration from the Dada movement.¹⁴¹ Dada, like madness against reason, appeared as an artistic protest against the atrocities of World War I continuing as an opposition to “the war and the bourgeois culture it supported,” and “systems governing everyday life.”¹⁴² Dada used appropriation, noise and absurd negation for visual and poetic expression with no concern for consequences.¹⁴³ It was a kind of prank testing the limits of what you could get away with.¹⁴⁴ Representation became increasingly repulsive in the world of art as Dada put “Disintegration right in the innermost process of creation.”¹⁴⁵ Meaninglessness became a subject of heavy exploration. In this world of absurdity that Dada created as a mirror of its specific historical time, anything could happen and everything was possible – a legend of freedom was born.¹⁴⁶

¹⁴⁰ Saman Arbabi, “My Anti is Bigger Than Your Censorship: Combating Internet Censorship Through Art and Satire,” NXNEi 2012 Creative Presentation, 14 June, 2012, Toronto. Also see on Flickr: <http://www.flickr.com/photos/80131753@N03/sets/72157630071036013/with/7374596806/>

¹⁴¹ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 61.

¹⁴² xtine burrough, “Add-Art and Your Neighbors’ Biz: A Tactical Manipulation of Noise,” in *Error: Glitch, Noise and Jam in New Media Cultures*, ed. Mark Nunes, (New York, London: Continuum, 2011), 83.

¹⁴³ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 186.

¹⁴⁴ *Ibid.*, 315.

¹⁴⁵ *Ibid.*, 200.

¹⁴⁶ *Ibid.*, 224-225.

The meaning of everything was open for negotiation while the medium itself was being destroyed.

Still today the nonsense of Dada in a more severe form is alive in the mangled utterances of the Dutch artist Jaap Blonk, whose poetry of meaningless words reduces language to just sound, reminiscent of Gil Joseph Wolman's lettrist poems.¹⁴⁷ There is something fun, and pure about the sounds of grunts, rumbles, screeches and slaps made into a strange tongue that tells no story. It is a kind of regression to childish innocence and foolishness after the violence of the world has tainted our expectations of life.¹⁴⁸ Could a sound poem be an example of an apocalyptic strange tongue prophesying the disintegration of the world into meaningless whimpers? When structured language falls into pieces this way, the possibility of creating a new one appears.

Since Derrida developed the concept, and since it became adopted in western countries such as France, Great Britain and the United States, deconstruction has been instructive and influential in the practice of glitch art. Deconstruction in general is a challenge to the presumed stability, conventions and opaqueness of communication, which has been made rigid and invariable by systems of control. All images in all mediums "are always ordered, coded, and styled according to conventions which develop out of the practice of each medium with its tools and processes," forming a type of language that can be read.¹⁴⁹ This is also relates to images originating from the computer world although in this case the language of code is literal as it represents digital data – a recipe for an image. The breaking of that code whether in its metaphorical or digital sense, is what challenges the

¹⁴⁷ Jaap Blonk, <http://www.jaapblonk.com/> (accessed 28 February, 2012).

¹⁴⁸ Lightsey Darst, "Sound, Silence and Jaap Blonk," *Quodlibetica: Writing, Art Criticism*, 1 April, 2012, <http://www.quodlibetica.com/sound-silence-and-jaap-blonk/comment-page-1/#comment-584> (accessed 18 June, 2012).

¹⁴⁹ Peter Brunette and David Wills, eds., "Introduction," in *Deconstruction and the Visual Arts: Art, Media, Architecture* (Cambridge [England]: Cambridge University Press, 1994), 4.

rigorous rituals of production and consumption of different kinds of communication so that it is open to alternative understandings and expression. In his time, Derrida compared his process of deconstructing texts to implanting a virus that disrupts its assumed rigors:

The virus is in part a parasite that destroys, that introduces disorder into communication, Even from the biological standpoint, this is what happens with a virus; it derails a mechanism of the communicational type, its coding and decoding. On the other hand, it is something that is neither living nor nonliving; the virus is not a microbe. And if you follow these two threads, that of a parasite which disrupts destination from the communicative point of view – disrupting writing, inscription, and the coding and decoding of inscription – and which on the other hand is neither alive nor dead, you have the matrix of all that I have done since I began writing.¹⁵⁰

An interesting project, directly relating to glitch aesthetics, images, and language, was developed by Ted Davis in 2011, who designed a web based application called *Text2Image* taking advantage of how the JPEG format structures digital data. Davis was not concerned here with chaotically disrupting code, but engaging in “precise mishandling of the digital image structure” in order to allow the application to take content input from the user in the form of text and visualize it as an image.¹⁵¹ This project approaches the concept of language and visual representation by forming a direct link between them through code, which becomes the mediator between the typed text, and the visuals displayed on the screen, possible and unique through the specificity of the JPEG format. This JPEG visualization of language through *Text2Image* allows the user to become open and free in experimenting with language that is both meaningful and completely non-sensical. Through this simple experiment one becomes aware of not only the underlying mechanisms of code mediation, but also of the elemental parts of language, like grammar, words, and spelling on which this

¹⁵⁰ Peter Brunette and David Willis, eds., “The Spatial Arts: An Interview with Jacques Derrida,” in *Deconstruction and the Visual Arts: Art, Media, Architecture* (Cambridge [England]: Cambridge University Press, 1994), 12.

¹⁵¹ Theodore Davis, “Precise Mishandling of the Digital Image Structure” (Conference Proceedings Part 1: Design, User Experience, and Usability: Theory, Methods, Tools and Practice, from the First International Conference, DUXU 2011 as Part of HCI International 2011 Orlando, FL, USA, July 2011), p. 211.

visualization depends. The options are wide open to create multiple versions of images, each formed from a different textual input.

Derrida saw the meaning of language as “ambiguous and never final.”¹⁵² He believed that instead of being fixed in some permanent ideal, the signs we read (images, texts) “will forever signify a multitude of things” and their ultimate reading depends on the receiver and the context in which he exists.¹⁵³ “To communicate then is to perpetually negotiate semantic ambiguity, not to overcome it, constrain it, or push it aside.”¹⁵⁴ Derrida saw human communication “as a perpetual, open-ended system of meaning making.”¹⁵⁵ Noise, by introducing this variability, is like the fertile ground in which things grow. Often new meanings emerge through the associations formulated between chaotically juxtaposed fragments of broken images. We try to put the pieces together in our heads disregarding what the original intention of the communicator might have been.

The movements of Dada, Lettrism, Situationist International, and Punk are all critiques of modern society that disappeared almost as fast as they appeared – a kind of glitch that once in a while points at a flaw within the system.¹⁵⁶ As anarchists and disruptors of the established flow of life, they did not possess enough force to throw the world into a state of disrepair, but managed to stand as a revelation of the system and its vulnerabilities.

¹⁵² Christopher Grant Ward, “Stock Imagery, Filler Content, Semantic Ambiguity,” in *Error: Glitch, Noise and Jam in New Media Cultures*, ed. Mark Nunes, (New York, London: Continuum, 2011), 98-99.

¹⁵³ *Ibid.*

¹⁵⁴ *Ibid.*

¹⁵⁵ *Ibid.*, 99.

¹⁵⁶ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 16-17.

The Rise and Demise of Photorealism: From Silver to Pixels

As already mentioned in the preface, in this thesis, photography is the entry point to the exploration of a digital catastrophe. As the photograph holds the visual essence of the world within an encasing of electrical signals and data, perhaps we can relate it to how the current civilization is being enmeshed and encased inside a technological moment. In a time where the difference between the world and its image becomes increasingly blurred, perhaps it wouldn't be going too far to imagine how the breakdown of a digital, photoreal image could relate to a catastrophe of the technological world in a greater context. The rise of photorealism and its subsequent degradation help determine how in general visual disturbances change or reflect our relationship with the physical world, which those images represent.

In my practice, the journey from photography to glitch is also a personal one. It materialized from a search of alternative ways of looking at or reading images, rather than using the methods prescribed by cumulative history of art. Throughout my experience with portraiture and fashion photography, I have learned how to frame, light, compose, airbrush, edit and whatever else that was taught to me, in order to produce *good* photographic images. However there was something in the back of my mind urging me to dive deeper, beyond the surface appearance of the pictorial space. Instead of using the medium as a window, through which one can see onto the world, I felt the need to get inside the image, into the glass pane of that window and see what disturbing its pristine surface can do for understanding digital representation. Here it is pixels themselves that become points of interest instead of the information they hold. Perhaps then, the act of plowing through the code of the image with randomness, metaphorically releases those pixels from their imposed parameters, letting them be what they are – points of information, which build a larger structure. Information

can take on many forms in the digital world: sound, image, text, program, database and so on. This is perhaps why some Glitchers convert images into sound files, or the opposite, showing that a digital image is a chameleon – always containing the potential to appear as something else. Instead of just seeing an image, we can also hear it, learning new ways of perception in the process. We can visualize the computer's memory file as a QuickTime movie and watch its brainwork as in the case of Cory Arcangel's work *Data Diaries* from 2003. The manipulability of the digital medium and a less rational approach to it as a material, yields interesting benefits for perception. Perhaps Nietzsche's questioning of indoctrination has something to do with my questioning of ritualistic photographic production and the established authority of the image. So what about the history of photography? Can it tell us something that would help us understand the relationship between image, representation and glitch? Let's see.

In 1839, painting – the medium that has recorded life for centuries – was free to become whatever it desired, while photography took on a role of producing images that were more accurate, automatic, reliable and replicable than ever. This crisis of art resulted in a kind of visual revolution where the traditionally realistic, staged, and precisely crafted paintings began to fracture and deteriorate its forms in favour of a more expressive and formal engagement with the medium. It seems as though the increased capacity for realism in one category of art, provoked increased fragmentation in another, as if they reacted to each other adversely. Was the invention of photography a glitch that disturbed painting?

The hegemony of the photographic image in relaying documentary information has been well established in the past century and a half. Since in the beginning the concept of photography was synonymous with human sight, it was utilized in recording artistic and scientific knowledge. Mary Warner Marien points out in her book *Photography and its Critics: A Cultural History 1839-1900*, that the “analogy between human sight and infallible perception

expressed a wish for permanence, stability, and control and implicitly challenged arbitrariness, fragmentation, and disorder.”¹⁵⁷ The new technique seemed to have removed a biased, subjective creator in favour of a more objective and technical process of recording directly what is seen through automatic chemical methods, producing “representation free from omission, distortion, style, murky subjectivity, or outside interference.”¹⁵⁸ In a way, photography was thought of as noiseless representation. The indexicality of the photograph, or its identity as “fossilized light,” which referred to producing direct physical fingerprint of objects, became responsible for the “photograph’s privileged connection to reality.”¹⁵⁹

The transformative power of film photography was located in its capacity to produce copies through mechanical reproduction. This allowed images to pass from a condition where their production and distribution was controlled by aristocracy and religious elite, to a state where they circulated in society as mass media. The photograph’s unprecedented authenticity soon became challenged as it was discovered that it could be bent to obey artistic and political agendas when in 1855 Franz Hampfstangl revealed his manipulation techniques at the Universal Exposition in France.¹⁶⁰ Since then the pseudo photographic practice of photomontage “reviled by modernist photographers as the misbegotten offspring of photography and painting,” existed on the peripheries of conventional photography, taking on much greater significance with the emergence of digital imaging at the end of the XXth century.¹⁶¹

However, the damage was done. Allusions to truth became questionable – a potential for fraud was revealed. The medium was not a pure mechanical process, but something

¹⁵⁷ Mary Warner Marien, “The Origins of Photographic Discourse,” in *Photography and its Critics: A Cultural History 1839-1900* (Cambridge University Press, 1997), 6.

¹⁵⁸ *Ibid.*, 5.

¹⁵⁹ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 24-26.

¹⁶⁰ Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, 129.

¹⁶¹ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 164.

malleable, which meant that the knowledge of the world it claimed to transmit, could have been based on false pretenses. This revealed the fact that photography, although still extremely useful in documenting the human experience, had the potential to be skewed into extreme subjectivities. Nietzsche's suspicion of claims of knowledge is notable here:

[Nietzsche] relentlessly uncovered reasons for mistrust: the limitations of our senses; the perspective character of understanding; the necessity that reasoning makes the unlike like, that it categorizes the singular under rules of identity and sameness that have no counterpart in nature; the history of human misunderstanding that exhibits not merely a capacity to be mistaken but a powerful desire to take things other than they are. These and other reasons for mistrust lead to caution and suspicion as confederates of an incautious and passionate desire to understand.¹⁶²

Knowledge is a useful tool of power, as it gives those with claims of truth the excuse to justify domination, violence, possession and management of resources and people while promising prosperity and stability. But the stability and reliability that some people desperately seek in their government, in their churches, in their financial institutions, or in other domains of their human lives, may be based on false claims to knowledge. The revelation of this leads to anger and an attitude of resignation that drives existence into a state of nihilism and anarchy. Perhaps it is so that "nihilism in our time arises from the failure of human beings to confront steadfastly the nothing that permeates human existence, a failure that causes us to pin all our hopes on technological progress and the calculative thinking of modern subjectivity."¹⁶³ Today, technology is yet another castle built on moving ground.

The realization that a medium is just another channel of subjective expression, instead of some naturally born wonder of truth and objectivity is a devastating moment for many that believe in it. This disappointment fosters mistrust, as the power of representation

¹⁶² *Dictionary of Existentialism*, s.v. "Friedrich Nietzsche (1844—1900)."

¹⁶³ *Encyclopedia of Ethics*, s.v. "Nihilism," <http://0-www.credoreference.com.darius.uleth.ca/entry/routethics/nihilism> (accessed 15 May, 2012).

is both reflected in its appealing descriptiveness and its suspicious illusory tendencies. In today's technologically manipulated world, where some scientists falsify their evidence, and some journalists clone their images, we need to be weary of claims to knowledge and examine them carefully. The agendas, ideologies, and preferences people may have, already filter the world in some way. The camera or the human eye interprets sensory stimuli according to its established (technical or biological) specifications.¹⁶⁴ If those were to be altered in some way, the world would be perceived differently.

Baudrillard shares Nietzsche's opinion that there is no ultimate truth, or that what we think as a *real* world only exists because we permit ourselves to act within it and construct it as we please.¹⁶⁵ Baudrillard states that by using the method of simulation we imagine a true reality but we can never reach it.¹⁶⁶ Additionally he believes that we are gradually being mastered by the technologies we invent and the media we create. The mass proliferation of images exemplified by photography contributes to our state of oppression where we "have become seduced by images that are signs of nothing but themselves," without a real referent, built on a formula that simulates reality-like symptoms.¹⁶⁷

This investigation of manipulated reality is the task of the digital forensic company Fourandsix Technologies, which publishes online examples on photo tampering reaching as far back as the beginnings of photography.¹⁶⁸ Even though at that time it was difficult to achieve convincing results, some succeeded in fooling the viewer to believe in a fictitious image, which was later proven false because of some diligent detective work in finding the originals. But how do you distinguish between true and false if there is no original referent?

¹⁶⁴ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 114.

¹⁶⁵ Paul Hegarty, *Jean Baudrillard: Live Theory* (Continuum International Publishing Group, 2004), 153-155.

¹⁶⁶ *Ibid.*

¹⁶⁷ Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, 543-544.

¹⁶⁸ Fourandsix Technologies Inc., <http://www.fourandsix.com/> (accessed 30 May, 2012).

The Fourandsix website features many journalistic images of political figures such as Queen Elizabeth or Joseph Stalin, where individuals have been removed for a better ideological impact; images that were constructed from many fragments of other images – interchangeable heads and bodies, placing people in settings where they never appeared, and using other techniques that may have seriously altered the perception of reality. The extent of tampering in the media gets much worse with the advancement of digital technology.

Photography went through another crisis when grains of silver became pixels sometime at the end of XXth century. While image capture remained instantaneous, what followed was a practice that crossed the paths of photography and painting, making the identity of the image even more ambiguous than any other time in the age of film.¹⁶⁹ When laboratory technology of digital imaging and the Web gradually entered the individual spaces of first world homes in the early 1990s, we all became content producers and consumers. As those distinct roles imploded, the difference between the world represented and the world lived has blurred. The stage was set for us to actively manufacture a world of our own and share it with others at the speed of light, transforming the contemporary civilization into a collective multiverse, where alternative realities exist and are connected with each other through a network of servers, wireless signals and Ethernet cables.

In the contemporary technological society, a photograph is created by collecting electrical signals on the camera's sensor and converting them into numerical data to be stored in computer memory as *code*. Although the data is encoded according to a grid of cells and managed with mathematical algorithms, high image resolutions allow the viewer to perceive the image displayed on a screen as permanent, complete and continuous. The existence of pixels is practically concealed. An image created this way, which some would

¹⁶⁹ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 60.

say is film photography's much improved successor, represents the visible world with 1's and 0's and its process of production and display is completely dependent on the computing machine. This makes a digital image extremely easy to manipulate, distribute across platforms, and destroy.

Digital pictures conceal editing better than the medium of film. Even though the use of images today is twofold – to provide documentation and illusory escapism, sometimes it is hard to distinguish between the two. Therefore a digital photograph at a first glance can be anything from purely “algorithmic” to deceitfully “intentional.”¹⁷⁰ This creates a low expectation of truth because “images are no longer [...] signifiers with stable meaning and value.”¹⁷¹ They merely contain “reality effects.”¹⁷²

The creator of images today is a painter disguised as a journalist – the two personalities coexist in a state of a shifting balance.¹⁷³ The medium at his or her disposal “privileges fragmentation, indeterminacy, and heterogeneity and [...] emphasizes process or performance rather than the finished art object [...],” which significantly challenges “objectivity and closure” traditionally associated with photography.¹⁷⁴ We often encounter – without realizing this – images that have been composed of appropriated fragments, forming a picture that is more or less a deceitful illustration made to fit a context in which it is displayed. Antony Bryant and Griselda Pollock talk about this in the Editor's Introduction to the anthology *Digital and Other Virtualities: Renegotiating the Image*.

As digitally generated image, it has no original, even while it may have, as part of its electronic interpretation, translation, or in Rosen's term, mimicry, a notional referent that makes its content recognizable. Hence in digital photography there is no longer a question of truth per se; rather its capacities

¹⁷⁰ Ibid., 31.

¹⁷¹ Ibid., 57.

¹⁷² Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, 508.

¹⁷³ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 31.

¹⁷⁴ Ibid., 8.

problematized trust.[...] we have now to ask of every image: has what we are seeing a ground in historical time and space at all? Can we trust what we see to be what it shows?¹⁷⁵

Photo manipulation has always been a dangerous practice because in advertising, it fools the average viewer into believing a message that is constructed on falsified evidence, where the look of the models and the performance of advertised products are visually exaggerated. Until the US government mandates warning labels on advertising imagery that uses too much Photoshop editing, the majority of naïve western consumers will continue to be deceived with potentially significant psychological effects.¹⁷⁶

Digital manipulability displaces truth in favour of entertainment. The photographic image, transgresses its previous role as object of mass consumption by becoming “an information structure which has no physical presence in the real world.”¹⁷⁷ Would Walter Benjamin be able to understand this changed condition of photography? While in his time Benjamin discussed the impact of mechanical reproduction on *aura* and *ritual* value of original works of art, nowadays these concepts have a different interpretation.¹⁷⁸ A duplicated digital image is exactly identical to its predecessor, and still capable of generating an unlimited number of exact clones.¹⁷⁹ We can think of it as existing in a perpetual state of a negative, purely as information, or as *source*, which refers both to the data structures that build the image and the procession of the image from its altered version. A digital photograph is calculated representation where computational logic builds the image as a spectacular *event* made possible with temporary render of data in the digital space. It is an

¹⁷⁵ Bryant and Pollock, eds., *Digital and Other Virtualities: Renegotiating the Image*, 10.

¹⁷⁶ Megan Casserly, “Proposed Legislation: Warning Labels on Photoshopped Ads?,” *Forbes*, September 23, 2011, <http://www.forbes.com/sites/meghancasserly/2011/09/23/proposed-legislation-warning-labels-on-photoshopped-ads/> (accessed 24 September, 2011).

¹⁷⁷ *Encyclopedia of Computer Science*, s.v. “Computer Art,” http://0-www.credoreference.com.darius.uleth.ca/entry/encyccs/computer_art (accessed 14 May, 2011).

¹⁷⁸ Bryant and Pollock, eds., *Digital and Other Virtualities: Renegotiating the Image*, 5.

¹⁷⁹ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 6.

allographic work, which is easily replicable, and exists as both original and copy.¹⁸⁰ The image *event*, beginning with the action *open* and ending with *close*, can be recreated an unlimited number of times and leaves the system only in the form of a print.

In “The Work of Art in the Age of Mechanical Reproduction,” Benjamin speaks of the rituals attached to images, which have been profoundly affected by reproducibility.¹⁸¹ In film photography, since the process of reproduction makes the original work of art available to the viewer through the copy, the *ritual* and *aura* are displaced in favour of intimate education. The ritual is different yet again with the emergence of digital imaging. The availability of cheap digital cameras, image manipulation software and blogging websites emphasize manipulability of visual data and the blurring of borders between the world of authorship and consumption. The viewer of the work becomes the user, who is not only a passive consumer but also an active creator of unique knowledge – their own concept of *real* through the manipulation of images. Through this the user is employed by the Spectacle to perpetuate its constructs through the actions of copying, pasting, cloning, masking, cropping, adjusting curves and other actions. The ritual now involves a screen, a mouse and a keyboard powered by a computer, which has the capacity to invent things that we may aspire to in this age of simulation.

The basis for the new ritual is formed through how the user interacts with the system and how the system allows the user to use the tools in creating or manipulating an image. A creator can be one or many because images can be appropriated and in turn acquire new authors. The vast stock databases, available to advertisers and common users, contain cliché pictures that may be downloaded, modified and repurposed for a variety of contexts. William

¹⁸⁰ Ibid., 50-51.

¹⁸¹ Benjamin, “The Work of Art in the Age of Mechanical Reproduction,” 226.

Mitchell, author of *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, has an interesting point on this very topic:

If mechanical image reproduction substituted exhibition value for cult value as Benjamin claimed, digital imaging further substitutes a new kind of use value – input value, the capacity to be manipulated by computer – for exhibition value. The age of digital replication is superseding the age of mechanical reproduction. The cultural production system now emphasizes processability. The digital structures that are produced and consumed do not just refer to each other, they are actually made from each other, so that they form mirror mazes of interpictoriality hooked to the external physical world (at relatively few points) by moments of image capture. Images do not just mirror the world directly, as they once deemed to do, but reflect traces (perhaps tinted or distorted) of other images. That loss of the external referent, and the growing self-referentiality of symbol systems, which has so preoccupied poststructuralist theory, are here escalated to a new level. Logical associations of images in databases and computer networks become more crucial to the construal of reality than physical relationships of objects in space. Digital imaging now constructs subjects in cyberspace.¹⁸²

In addition to their malleable traits, digital pictures in cyberspace are unique in that they don't leave traces of their lineage, and their location can't always be precisely determined on the network.¹⁸³

The complexities concerning digital imaging don't stop at photography but stretch across a variety of imaging techniques based on data acquisition to explore the world in macro and micro scale. The aura of an image, which according to Benjamin is a "phenomenon of distance," disappears in the technological world. Images – based on techniques no longer restricted to the visible light spectrum – now enter the body and even capture molecules.¹⁸⁴ We use X-ray, CT, PET and MRI to image the body, and infrared and radio waves to image the cosmos. These technologies gather and convert data into something we can visualize and interpret. Digital imaging is also used to wage wars with the help of satellites, and spy on society with surveillance cameras in order to maintain the

¹⁸² Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 52.

¹⁸³ *Ibid.*, 51- 54.

¹⁸⁴ Benjamin, "The Work of Art in the Age of Mechanical Reproduction," 223

hegemony of the dominant system of power. With the emergence of Google Earth and satellite television, “The entire surface of the earth has become a continuously unfolding spectacle and an object of unending fine-grained surveillance.”¹⁸⁵ This desire to dissect, classify and control the world is strictly possible through the powerful potential of images now constituting “items of exchange in the worldwide electronic-information economy”¹⁸⁶

Ocularcentrism has always been a dominant trait of the Western civilization. However the focus has shifted over time from using visual beauty to seduce the faithful into religious commitment, to suffocating the consumer with hyperrealistic imagery to lure him or her into a lifetime of buying. Regardless of the underlying purpose for visual fixations, what cannot be denied is that western civilization has been built on and furnished with a vast amount of images, and is being managed and maintained through them. Perhaps the mass proliferation of photographic images is a reflection of the “voracious appetite for information in visual form” that we all exhibit as human beings.¹⁸⁷ In contemporary world we have learned that the eye can be both improved by technological progress as well as clouded by it. The automatism that photography is known for can make our visual evidence more accurate while digital manipulation can obscure it with elements of fiction. In digital photography, the automatism of a machine mixes with the human filter, making their characteristics intertwined in the final product. In this event, we metaphorically experience the incarnation of the machine, and the transformation of the human agent into a technological wonder. The human makes the machine in his or her image, while the machine images the human. It is a circle of influence. As Mitchell indicates:

The burgeoning ubiquity of pixel-traffic paraphernalia – of sophisticated, mass-produced devices for production, transformation, accumulation,

¹⁸⁵ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 57.

¹⁸⁶ *Ibid.*, 52.

¹⁸⁷ *Ibid.*, 19.

retrieval, distribution, and consumption of arrays of intensity values – signals that digital imaging technology is being mobilized in the games of signification and implicated in the conterminous, intertwined relationships of power and division of labor that construct postindustrial subjectivity. The uses of digital imaging technology are becoming broadly institutionalized and reciprocally, that technology is restructuring institutions, social practices, and the formation of belief. A worldwide network of digital imaging systems is swiftly, silently constituting itself as the Decentered subject's reconfigured eye.¹⁸⁸

As Marien points out, at the time of its invention “the association of photography with magic owed much to the belief that the photograph had the potential to recompose the objects it imaged.”¹⁸⁹ Today a photograph is no longer a trace of past realities but a prediction of the future, a blueprint, or a map that precedes a territory.¹⁹⁰ Debord warns us: “Where the real world changes into simple images, the simple images become real beings and effective motivations of hypnotic behavior.”¹⁹¹ If we live in a world where “everything that was directly lived was moved away into a representation,” can we destroy the world as we know it by destroying its images?¹⁹² By entering the Spectacle, life and the world become a work of art to be deconstructed.

A photograph both describes what is there and creates something new. As seeing is an ultimately subjective experience, we may impose our understanding of the world on what we see, rather than letting our minds receive it with uninterrupted passivity.¹⁹³ The viewer now has a personal context to help decide the meaning of an image. Roland Barthes speaks about this in *Camera Lucida*: “As a Spectator I was interested in Photography only for ‘sentimental’ reasons; I wanted to explore it not as a question (a theme) but as a wound: I

¹⁸⁸ Ibid., 85.

¹⁸⁹ Marien, “The Origins of Photographic Discourse,” 40.

¹⁹⁰ Baudrillard, *Simulacra and Simulation*, 1.

¹⁹¹ Debord, *Society of the Spectacle*, Ch. 1, no. 18.

¹⁹² Ibid., Ch. 1, no. 1.

¹⁹³ Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, 108.

see, I feel, hence I notice, I observe, and I think.”¹⁹⁴ In the West, we build our lives, identities, impressions, experiences, notions of freedom and prosperity out of the images that surround us, which encourage us to produce our own images in support of the Spectacle. We no longer enter images to contemplate them like a work of art, but instead images enter us, and we absorb them like a sponge.¹⁹⁵ Therefore to attack the very integrity of these images is to attack ourselves, and the technological world that we have built as a home. The disturbance of the digital screen, whether a TV, a computer, or a mobile device is the disturbance of a channel through which our lives are controlled with images. The subversion of a surveillance machine, like a security camera for example, is a disturbance of the system, which monitors and gathers visual evidence of transgressions of social codes. Both of those are examples of a kind of break from prison. The intentional disturbance of the technological fabric of life is like the proclamation of a deceased God who has been killed by our disillusionment with religion. The difference is that now it is technology that we may be losing faith in.

The digital system’s precise computational logic and its intolerance of ambiguity make the subversion in glitch art possible. Mackenzie “considers code as the site of social negotiations that structure and organize human agency, behaviour, and intention.”¹⁹⁶ If we disrupt technology we disrupt code, which in turn disrupts the domain of human social organization. In the broken shapes of constructs and representations we see new patterns forming. Through glitch exploration, we become aware that the world contained in images – a “seemingly perfect replica” – is something susceptible to change or degradation.¹⁹⁷

¹⁹⁴ Roland Barthes, *Camera Lucida: Reflections on Photography*, trans. Richard Howard (New York: Hill & Wang, 1981), 21.

¹⁹⁵ Benjamin, “The Work of Art in the Age of Mechanical Reproduction,” 241.

¹⁹⁶ Hayles, “Traumas of Code,” 24.

¹⁹⁷ Negroponte, *Being Digital*, 14.

I am a firm believer in the principle that we learn what things are made of by the way they break. This may not be entirely the case with glitch and images though. When a digital image becomes corrupted, all it really reveals is that there is a system at play, which controls the production and distribution of visual communication. However, it does not tell an inexperienced viewer immediately how such a system may operate. Only a person with advanced knowledge of digital errors may be able to recognize and approximate what went wrong. The glitch, like photography can also be pure or manipulated. Like photography, glitch has the power to point out significant issues within society and culture if it is used with subjective intent. Digital representation like glitch has the tendency to attract our attention and foster mistrust, because its presumed authenticity is exactly why its suspicious. By controlling it, we feel we can normalize that bipolar tendency, and make it serve a specific purpose. But the acceptance of glitch as part of contemporary technological life, however much it contributes to the lessening of our anxieties, does not diminish the potential threat of a massive digital disturbance within the western technological society.

THE PROJECT

Introduction

This thesis project, with the use of glitch techniques, imagines the breakdown of a contemporary world, which resides in images. The assumption is that it is impossible to destroy the image leaving the world untouched. They are interconnected because code – a building material of an image – is also what constructs and regulates life in both the digital and physical space. The *digital* and the *real* are no longer self-contained realms as they merge with each other through data exchanges and other cross-influences.

The project rationale draws on the destabilizing effects of technology, especially code, which as a fragile and invisible material is susceptible to corruption from within or a disturbance from without. In Mackenzie's words: "Rather than becoming mechanical or predictable, over the course of time the flows of information managed by software become more dynamic, complex and unstable."¹⁹⁸ Bugs and incorrect processes multiply and affect an increasing amount of layers of system architecture, significantly affecting the content it manages.

Therefore in this work, the digital disturbance as glitch is an omen of entropy and an agent of corrosion, which in the moment of crisis collapses photographic realities, tears down old presumed truths of technological stability, and reveals or causes the world to fall into a dynamic state of change and noise. The glitch, provoked to appear, constitutes a threat to the Spectacle and the surveillance of modern society permeated with technological progress. By attacking the image, it attacks the authority of code, which serves as a metaphor

¹⁹⁸ Mackenzie, *Cutting Code: Software and Sociality*, 140.

for the status quo.¹⁹⁹ In turn, accidental and spontaneous disruption of an image is a reflection of its inner corruption. Further, appropriation and assemblage of glitch artifacts into an illusionistic image, or *faking* the glitch look portrays the absorption of a potentially threatening force back into the Spectacle to tame down its disruptive impact in favour of its aesthetic.

The main objective in this project is to take advantage of something that Menkman calls “the glitch momentum.” She describes the concept as consisting of two parts: a moment of “uncanny, threatening loss of control, throwing the spectator into the void (of meaning),” and the transformation of this into “a catalyst, with a certain momentum,” bringing us to the tipping point of either failure or the revelation of something new.²⁰⁰ As opposed to Menkman who makes a distinction between *wild* and *domesticated* glitch, and Iman Moradi who distinguishes between *pure* glitch and *glitch-alike*, in this project I categorize digital disruption in the following ways depending on how much control is exercised in the image making process: *natural*, *stimulated*, and *assimilated* glitch.

In these categories, the work moves on a spectrum from one completely influenced by chance and accidents to intentional design where the glitch aesthetic constitutes a design element. On one end the corrosive glitch is an active ingredient in the process, and on the other it is only an aesthetic echo of the original moment of disturbance. The imagery here oscillates between chaos and order, accident and intention, by harvesting glitches from their natural occurrences, stimulating them in digital files, and assimilating them aesthetically into visual content through intentional design.

The use of glitch in artwork ultimately carries with itself an implied fetishization of technology while the construction of meaning through careful selection of content is

¹⁹⁹ *Ibid.*, 31.

²⁰⁰ Menkman, *The Glitch Momentum*, 31.

sometimes overlooked.²⁰¹ In my work I would like to take advantage of the technological nature of glitch in order to build a narrative around how digital disruption can play a large role in the unfolding of a catastrophic crisis. It is not just about examining the subject of the glitch itself but also combining it with a theme that tells a story of a world gradually falling into noise. This project does not focus on the technicalities of glitches or attempt to “unravel the mystery of their existence or how they came to be.”²⁰² The premise is to use corruption, corrosion, error and fragmentation as elements of emphasis, while also observing how the glitch becomes displaced conceptually as it goes through the three different categories of the process.

Part of the fascination with glitch and noise stems from the impression that in hindsight past media was less than perfect.²⁰³ It is only when we look back in time that we notice technology being a fabric that actively evolves. It also reminds us how far we have gone in deliberate elimination of noise to create nearly perfect hyperreal media, now standing in stark contrast to our previous methods of communication. In “Information, Noise, et al.” Susan Ballard observes:

The driving impetus for the development of digital information technologies is a desire for the elimination of noise or the replacement of accident with accuracy. For example, in digital photography, the push for greater and greater megapixel resolution is tied to the illusion of a pure image; a digital version of reality. However photographic reality results from a viewer’s inability to see digital noise. We don’t know how noisy a three megapixel image is until we see a ten megapixel image. We can only identify the noise in hindsight.²⁰⁴

Noise certainly interferes with the digital construction of the *real* that has been permanently fixed before our eyes. As Ballard states further: “Noise is both the material

²⁰¹ Iman Moradi, “Glitch Aesthetics,” unpublished BA [Hons]. diss., (The University of Huddersfield, 2004),14.

²⁰² Moradi, “Glitchbreak,” 155.

²⁰³ Moradi, “Glitch Aesthetics,” 17.

²⁰⁴ Susan Ballard, “Information, Noise, et al.,” in *Error: Glitch, Noise and Jam in New Media Cultures*, ed. Mark Nunes, (New York, London: Continuum, 2011), 66-67.

from which information is constructed as well as the matter which information resists.”²⁰⁵

Therefore the falling of pictorial content into a state of noise is a kind of regression, or a return to a more elemental or natural state of information, where meaning is variable or not yet synthesized from a million pieces that are there. As the world is thoroughly permeated with the digital, one needs to consider the falling into noise of pristine representation of contemporary civilization as a catastrophic event that brings us closer to nature. Information itself serves as a kind of noise. We live in a world where, as Baudrillard says, “there is more and more information and less and less meaning”²⁰⁶

With the use of glitch I aim to excavate and explore the *ugly* in digital representation of contemporary western civilization. I use the term *corrosion* when discussing the damaging properties of a glitch because it implies that the process is essentially the breakdown of a structure or a substance with a harmful agent – like an acid eating away at a metal. The corrosive glitch changes everything into a kind of primordial soup where all previously recognizable visual elements mix together and obtain new characteristics. Therefore the resulting works are snapshots of moments when corrosion takes place: naturally, forcibly or as an illusory element of the image.

²⁰⁵ Ballard, “Information, Noise, et al.,” 62.

²⁰⁶ Baudrillard, *Simulacra and Simulation*, 79.

Natural Glitch: Finding Wonders in the Abyss of Sameness

Glitch still eludes definite categorization. In general terms it can be described as a disruption inside a system of control, and a force that resists the structures at play.²⁰⁷ Some of us have heard legends of it, and may have even encountered its spontaneous appearance unexpectedly. Sometimes it lingers, and sometimes it disappears quickly, so trying to capture a glitch is a kind of hunting game, but in this case we are chasing apparitions. In this project a *natural* glitch is a spontaneous moment of disturbance within technology's conventional flow of production and consumption without the conscious intervention of an artists or a technician, collected and archived as a specimen of failure.

In this sense, an unexpected error or glitch can be seen as a *difference* that opposes the procession of *sameness* or the *norm* and it occurs unexpectedly in the machine although not without a cause. It manifests itself in digital signal distortions on TV screens, in cascading arches of program widows caused by a labouring graphics card, in home videos, where the analog imprint of time shows itself in the degradation of a VHS tape and in many other instances. Natural glitch as a deviation from the norm is a colourfully violent disconnect from visual reason and a plunge into machinic madness – a kind of detachment from a system of control, and a denial of coherent, rational representation. The computational reason turns against itself, as the algorithms labour to construct a coherent image. This is highly exciting when it occurs because it shocks us awake from the hypnotic glow of the screen. It teleports us back into physicality where we can separate ourselves, and technology, which usually heavily infiltrates our existence.

The Glitch Safari Flickr group started by Antonio Roberts and Jeff Donaldson is a testament to the fascination of finding *naturally* occurring technological interruptions in the

²⁰⁷ Nunes, "Error, Noise, and Potential: The Outside of Purpose," 15-16.

every-day, urban environment.²⁰⁸ There is a process of discovery associated with gathering spontaneously manifesting digital errors with stories attached as to how they were encountered. This is what separates a true *natural* glitch from ones that were brought to life artificially. The most engaging encounters with a glitch happen when we don't know how it came to be.

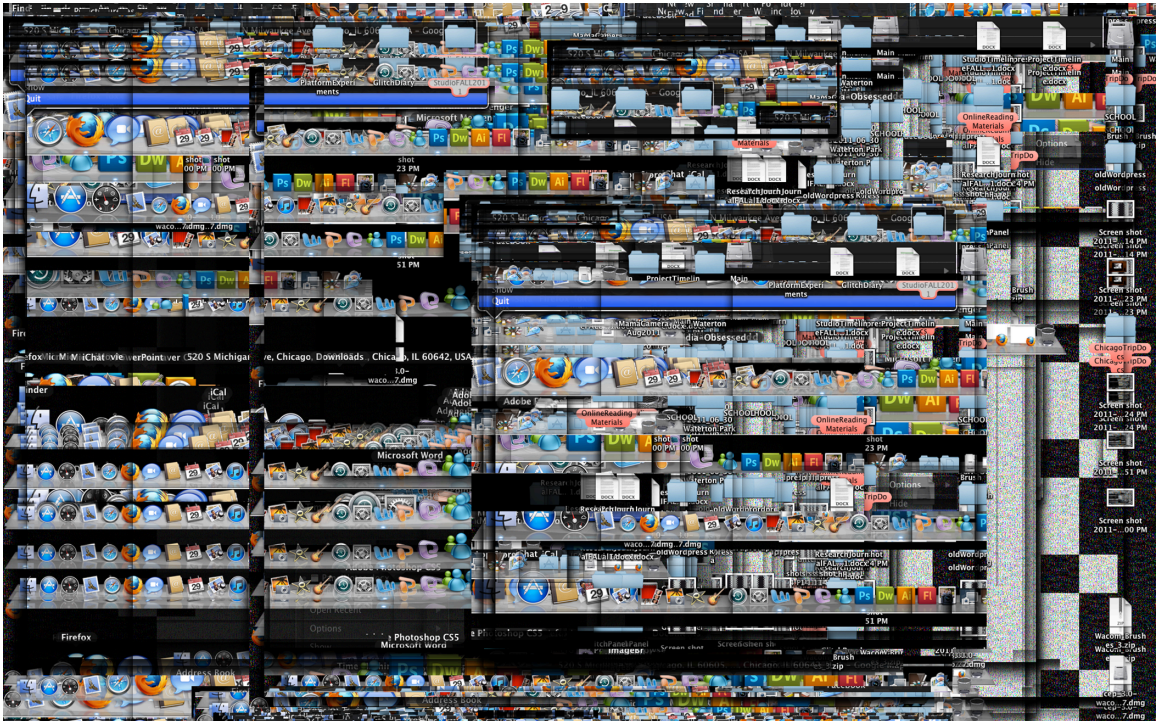


Figure 3. *Screen of Doom*, 2011. Screenshot of a crashing Mac OS X desktop.

Capturing these points of disturbance is an attempt to preserve a moment of insight that accompanied them. A *natural* glitch is still a glitch, whether immortalized with a screenshot, a video, or a picture. There is no interference with it, only documentation of its occurrence. Therefore, the collection of glitches is a kind of diary where one attempts to tell a story of one's renewed awareness of technology – a story of transforming mundane existence of *sameness* into a world of irrational wonders. It is not possible to write history without the inclusion of tales of technology because it is an integral part of the western

²⁰⁸ Glitch Safari, Flickr, <http://www.flickr.com/groups/glitchsafari/> (accessed 30 May, 2012).

contemporary experience of life. Therefore it is not possible to write a diary without mentioning instances of technology's interference with our own private spheres. We rely on our gadgets so much, and use them so frequently that they have become just one of our appendages. Because they act as guides and signs that give us a sense of direction and help us allocate our resources, when their function is impaired, we feel lost.



Figure 4. *Cash or Credit*, 2011. Sample video frame of a broken digital sign at a parking lot.

The work in this category (Figures 3-6) is assembled of screenshots of crashing Mac OS X operating system, video capture of distortions of cable news channels or TV shows, a video of a glitching parking signage, corrupt raw images from a Christmas choir photoshoot and an old home video recently converted from a VHS tape to a DVD while preserving all its analogue noise distortions and frame jumps. All of those *natural* glitches were appropriated from my immediate environment, places I have visited, and persons in my family. I remember them as exciting moments of discovery, when I raced to find a camera in order to capture the uniqueness of the aesthetic and my disturbed expectations. Although these chance occurrences mostly provoked feelings of wonder and satisfaction at the

privilege of having captured something interesting, they were also thought of as instances of demolition, when the world turned absurd, alien and incomprehensible. This state of confusion – because the disrupted signal couldn't yet be classified as a sign of danger or a harmless little blip – could only be overcome by the realization that things go wrong occasionally. However, what would happen if all of our television sets, computers, iPhones, cars, archives of home videos and pictures, or even digital airport signage announcing flights, suddenly malfunctioned, corrupted or completely failed? The moment of confusion would turn into a state of panic, and we would all be frozen in expectation of a resolution. Not only the flow of technology but also the flow of life would be interrupted.

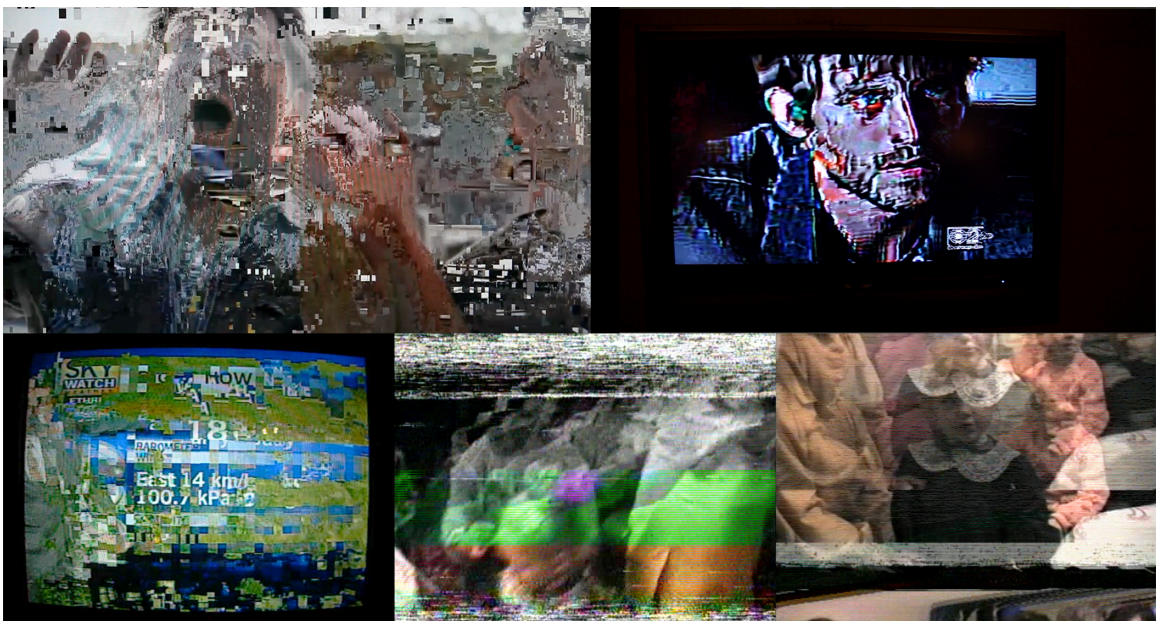


Figure 5. *Moving Glitches*, 2012. Sample video frames: Cable channels, old home videos.

Glitch, when it occurs with increasing frequency, may provoke an unsettling feeling of impending doom, discomfort and disconnect.²⁰⁹ It becomes a sign of the unavoidable, approaching disaster so frequently explored in mainstream media. We are shown that things

²⁰⁹ PostPanic Production Studio, *Year Zero*, OFFF Barcelona 2011 title video, <http://vimeo.com/24868133> (accessed 30 May, 2012). Glitch imitations are used throughout this video to suggest an unfolding disaster.

are wrong, but we don't know why or how to fix them. Glitch is only possible when certain circumstances emerge. Therefore the end of days will also not spontaneously occur out of thin air, but will be an accumulation of instability, fragility and uncontrolled raw forces similar to a volcanic eruption, a financial crisis or genetic mutations. This does not mean that the glitch won't be a surprising event. We are often so absorbed with our daily lives that we don't notice the little signals of *wrong* all around us. Or perhaps we just dismiss them as insignificant events? Failure often comes at an unexpected moment, but there are definite conditions in place that create it. The system reaches critical mass and it explodes – sometimes with a sigh, and sometimes with a big bang. Sometimes it dies with a great display of fireworks, sudden and chaotic. That's when *ugly* becomes beautiful. Sometimes a *natural* glitch, besides being dangerous, is a spontaneous manifestation of machine creativity, uncovering a seemingly alien world of computation.

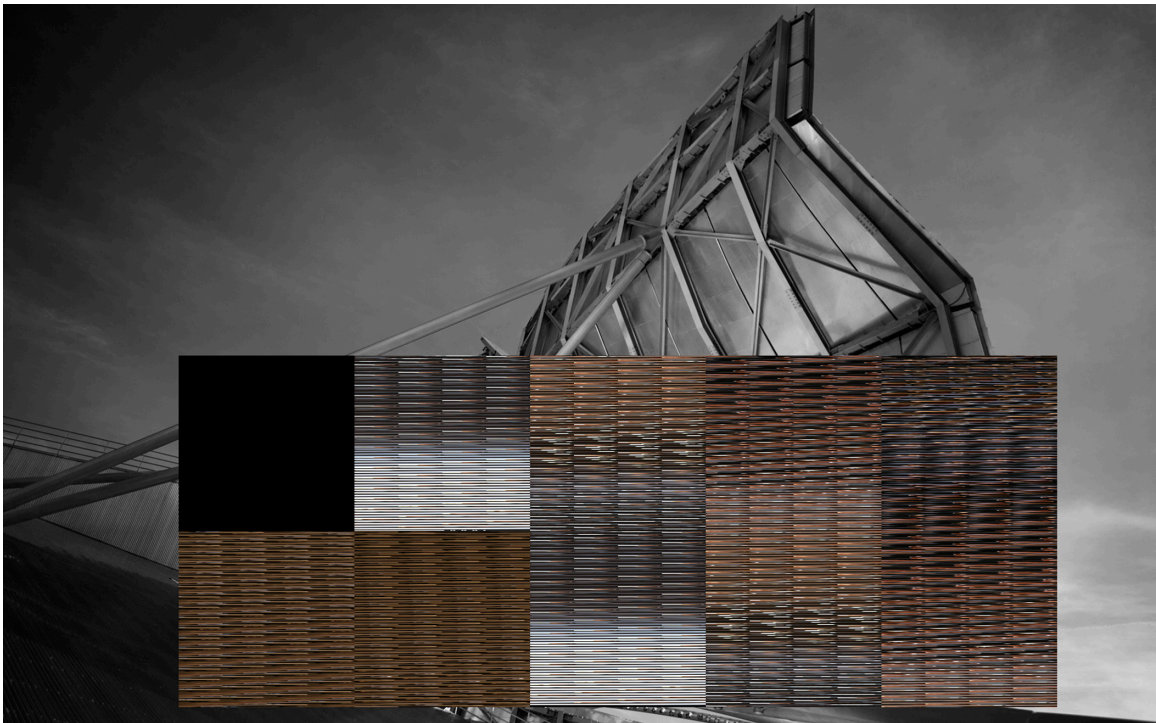


Figure 6. *Weaving Baskets*, 2012. Desktop glitch. Original image by Bram Timmer

It is also worth acknowledging that the glitch diary items mentioned above serve as markers of history, reminding me of the point in time in which they happened. The broken LED sign for example was captured during an outing to Cirque Du Soleil, and some of the digitally distorted TV was recorded in a hotel room during the GLI/TC.H festival in Chicago in 2011. There are no other memories of content watched or encountered during those events, which suggests that these moments of disruption were important enough to be recorded not only by the camera but also by the brain.

Just like the glitched images, our psyches, increasingly saturated with the digital, are in danger of becoming fragmented, discolored, pixellated, and degraded when the dominant digital system of representation corrupts. When the glitch manifests – it is already too late, because the disturbance has occurred and it may be irreversible. This is why we need to pay attention to moments of uncanny disruptions, and hold the structures of our society accountable in order to prevent the system from collapsing under the weight of its fatal errors.

Stimulated Glitch: Vandalizing Representation in the Digital Domain

The purposeful manufacture of a glitch marks a partial return of control, causing the element of surprise to be somewhat diminished. Here the degree of digital chaos or entropy is artificially induced. Perhaps this relates to Isou's Lettrist *chiseling* phase where the deconstruction of an old form is an intentional preparation for a new creation. The corrosion is provoked in order to facilitate a breakdown of a material, to keep the cycle of creation from stagnating in spontaneous decomposition. It is a provocation of the medium to arrange its rigid parts into more irrational patterns where new associations can be born.

In order to vandalize images in the digital space, one needs to break the laws of code, and how it builds a representation. Works in this category (Figures 7-12) have been produced with intentional software misuse, and random mishandling of data structures in a variety of image formats. The process involved the manipulation of CR2 (Canon Raw version two), BMP (Windows Bitmap file format), TIFF (Tagged Image File Format), JPEG (Joint Photographic Experts Group), PNG (Portable Network Graphics), GIF (Graphics Interchange Format), and IFF (Interchange File Format). For example the images would be opened in a simple text editor such as TextEdit or a source code editor like Notepad++ and the data, which would display as encoded in the binary representation of ASCII, or other encodings depending on the application, would then be randomly handled. Other times images would be opened with hex editing programs such as OxED, and the hexadecimal representation of the data would then be manipulated. In hex editors, there was a possibility of following the structure of an image (location of the header, image size data, resolution, and color information) and changing specific bits. The broken images would then be viewed in Adobe Photoshop, Mac Preview, GIMP, Windows Photo Viewer, and Canon Camera software. In the end the image production process relied heavily on how the image viewing

programs interpreted or misinterpreted the distorted digital data. The visuals of a distorted image could vary depending on the application. The Mac OSX platform was chosen over Windows 7 or Linux Mint for the final production of works because of its ease of use, relatively few obstacles in glitching data, and its availability. A video displaying a misbehaving image file was also produced in this category to offer a more dynamic exploration of the *stimulated* glitch process.



Figure 7. Left: *Jesus King*, 2012. Corrupt IFF file; Right: *All That is Left are Pixels*, 2012. Databent RAW file.

The source photography for this category was self-produced, containing subject matter stemming from the world of consumerism, every day objects and people. The content included downtown city cores, religious symbols, television screens, consumer products, faces, and many more. What is under deconstruction here is the capitalist

Spectacle, which according to Marcus is an accumulation of: “spectacles-advertisements, entertainments, traffic, skyscrapers, political campaigns, department stores, sports events, newscasts, art tours, foreign wars, space launchings – [...] a modern world [...] in which all communication [flows] in one direction, from the powerful to the powerless.”²¹⁰



Figure 8. *Sodom and Gomorrah*, 2012. Corrupt TIFF -> Corrupt IFF file.

To provoke the appearance of a glitch is a kind of controlled yet risky disorder. While setting up the conditions for an error to emerge, one cannot be certain of the outcome of such an exercise. With time, different effects of breaking specific image formats, and using proven techniques, yield somewhat predictable results, but in the end the look of the image, or whether it will be completely obliterated or still visible is undetermined. The file can be damaged beyond repair. This creative Russian roulette resembles a conscious act of provoking change in the world, regardless of the risk and the consequences, because the

²¹⁰ Marcus, *Lipstick Traces: A Secret History of The Twentieth Century*, 94-97.

current state seems too stale, rigid or simply dissatisfactory. The disillusionment with the digital medium, or assuming another perspective of exploration, translates to the disillusionment with the systems of control managing society.

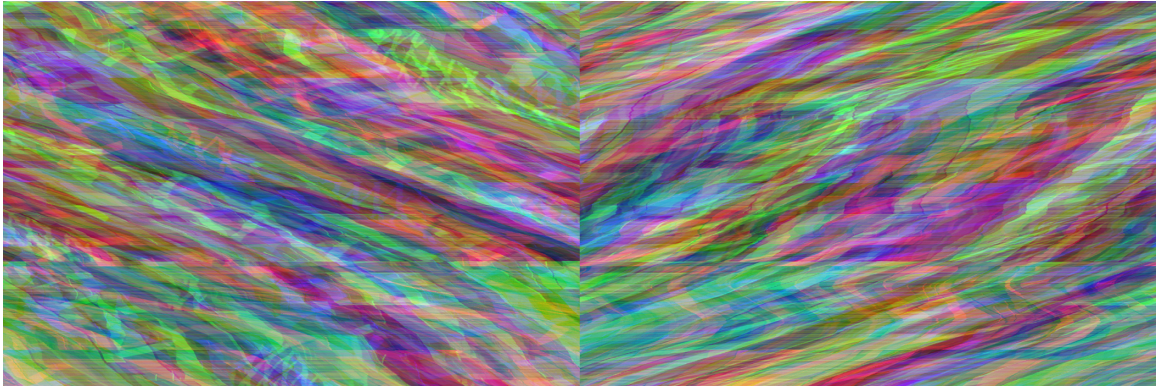


Figure 9. *Warp Speed into Oblivion*, 2011. Two Corrupt BMP -> Databent RAW files.

A digitally corrupted image is something that transgresses the photographic authenticity by disrupting the continuity of the medium and its anchorage to form, time and space, normally present in photorealism. The sickly colors and shards of shapes disconnect it from anything that is perceived to be real. A glitched image not only falls apart as form, but also as a story. In a broken image, “the visible pixels create tensions between actual surface and illusory pictorial space, and between marking process and the object of depiction.”²¹¹ As opposed to film and painting, where formal structures are emphasized by the labouring hand of the artist, in the digital space, they are triggered, sometimes effortlessly. The overpowering pixel trauma and visual chaos drowns realism in abstract formalism through a metaphorical fall of dominos. This purely visual act of violence disconnects us from an illusion of a window, which the photograph has constructed and upheld in the last century and a half. Thankfully the damaged image cannot yet regenerate its own corrupted code, so what is broken can be exploited.

²¹¹ Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 69.

Glitch reveals the state of contemporary representation as calculation, and attempts to undermine its math. How this math turns against the image, is what we see in the fractured erratic surfaces of glitched media. In a greater context, glitch is the disturbance of codes that construct the image of life. So while Baudrillard “calls for the development of ‘fatal strategies’ to make the system suffer reversal and collapse” perhaps purposeful glitch is one answer that call.²¹² The glitch, when *natural* and isolated, communicates nothing. It only displays a flawed process of code strings in data space. This disturbance reveals that there are frictions between the codes, and if there are frictions, there is movement. The glitch, whether *natural* or *stimulated* reveals the inherent tendency of the digital medium to be noisy and unstable, existing in a state of flux, where the ever-present manipulability emphasizes process instead of a product. There are only versions and a multitude of subjective readings.

Through *stimulated* glitching, a single image can be degraded in one step, creating multiple versions by the actions of *do* and *undo* or it can be degraded sequentially – each distorted copy, distorted again until the content becomes completely unrecognizable. The image can also be treated in another way – by employing the sequential method with a variety of file formats to produce a layering of different kind of effects. Sometimes details can be extracted from the image to emphasize the amount of noise present in the pictorial space, which would otherwise be unnoticeable because of the scale of the originals. The immersion of representational content into noise through the use of chance and accident is about returning it to life itself, which as some believe has been built on chance occurrences instead of intelligent design.²¹³ The abandonment of the control impulse is a liberating experience that allows for spontaneous and untamed creativity to flow through the work.

²¹² Gary Aylesworth, “Postmodernism,” in *The Stanford Encyclopedia of Philosophy* (Winter 2010 Edition), ed. Edward N. Zalta, <http://plato.stanford.edu/archives/win2010/entries/postmodernism/> (accessed 10 July, 2012).

²¹³ Moradi, “Glitch Aesthetics,” 52.

In the *stimulated* glitch category there is a strong urge to step away from the conventional rituals of image editing, resulting in a less rational approach to representation in general. “The narrowing of free political choice to free economic consumption requires the unlimited production and consumption of images” requiring an uninterrupted, smooth, and streamlined process of creation and equally clear, crisp, and transparent process of consumption.²¹⁴ Therefore the breaking with approved procedural conventions of using software for example, or interrupting a pure transmission of content, as is the case in this thesis project, can be a very liberating experience. The process of intentional glitching is a kind of mischief or misbehavior that resists authority and refuses to conform to a norm.

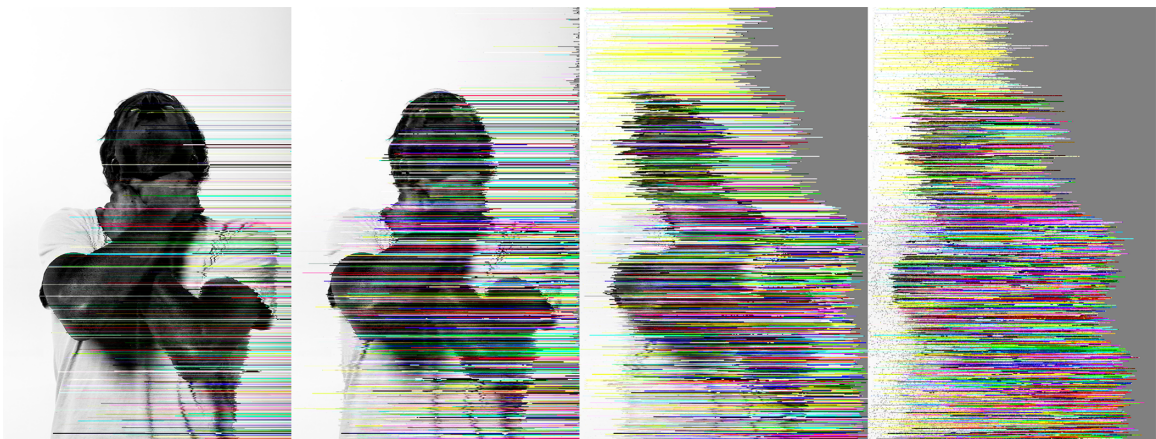


Figure 10. *Last Four Frames*, 2012. Corrupt sequence of JPG files.

It can be said that the images are mistreated *in the dark* by not having a direct visual relation to the information being edited. If light stands as a metaphor for reason, then darkness further emphasizes the idea of madness, cumulating here in an illogical approach to handling visual information. There is also a need to stay away from any programmed treatment of image data, leaving the random treatment of text and hex characters up to the human agent in order to explore the relationship of the physical stimulus and the digital

²¹⁴ Sontag, *On Photography*, quoted in Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, 56-57.

result in a direct way. Sometimes glitch-compositing is used where data from one image is implanted in another to create a *messy composite*. This technique signifies a process that is bare, or revealed, as it does not attempt to conceal itself from the awareness of the viewer like conventional editing does. This kind of deconstructive editing stands in direct opposition to a traditional Photoshopped image, because it wants to be visible, recognized, and unsuccessful.



Figure 11. *Inside Job*, 2012. Combination of two corrupt TIFF files.

In this category it is important to include images where the *stimulated* glitches completely change visual content into a chaotic collection of artifacts, obliterating all visual cues referring to original content, as well as images where the glitch only displaces those visual cues into chaotic positions, sprinkling on them the specific artifacts that make us scream glitch! This way it can be shown what is being broken down in order to convey meaning, and how far this break down could take the image in terms of destroying the

photorealism of the Spectacle.²¹⁵ This way a kind of progression is displayed: from the more to the less recognizable cues of modern civilization – a process of melting, corroding, degrading matter of the *old* into something *basic* and geometric.

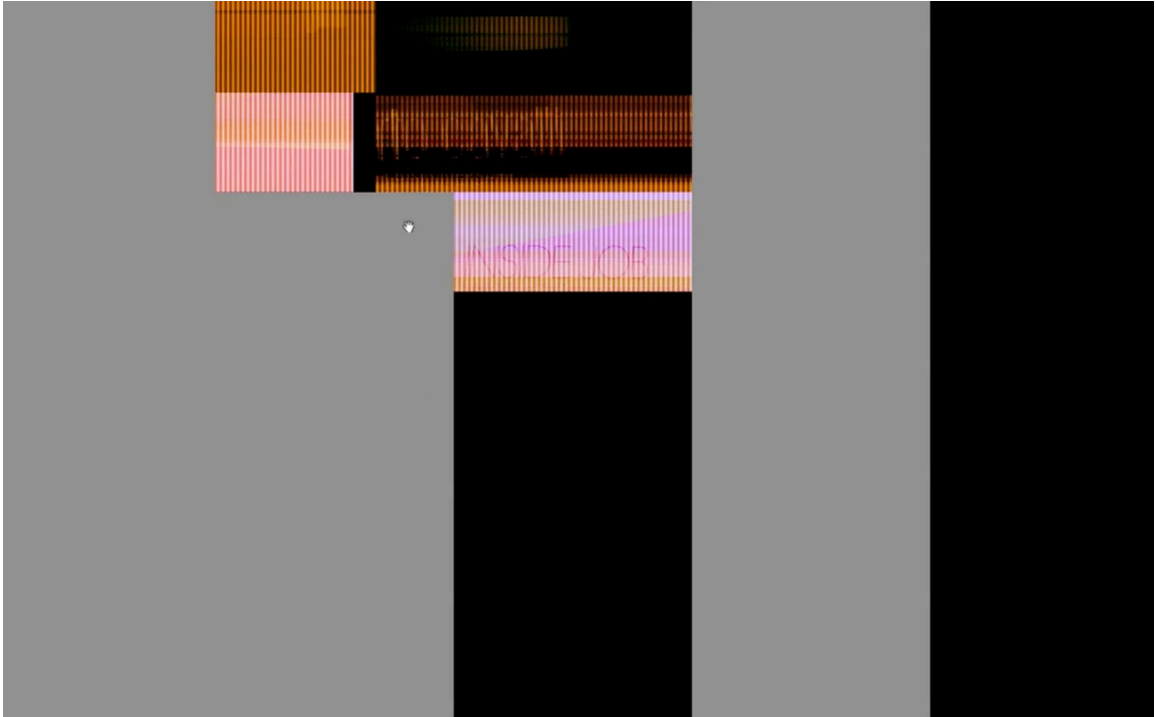


Figure 12. *Chasing The Image*, 2012. Video frame of misbehaving, incomplete CR2 files.

The process of gradual destruction or instability within disrupted images is the subject of a screen-capture video produced within this category. Titled *Chasing the Image*, the video follows the behavior of an incomplete CR2 image file, through the actions of zooming in and out, moving the image around, closing and opening it multiple times, and panning across its glitched façade. The characteristically grey and black blocks frequently appearing in the broken image create graphically forceful and geometric elements of disruption, which move around the image and obscure even the slightest relationships of the broken aesthetics to the original content. The repetitious and sometimes seemingly organized patterns of

²¹⁵ Moradi, “Glitch Aesthetics,” 14.

pictorial disruption present here and in some of the other images reflect a failure of a rational, computing machine to formulate the original image from the chaotic fragments of disrupted code. The acts of inspecting the CR2, while they remain mainly an aesthetic exploration of an unconventional image, also signify a need to search for clues that could help the viewer make sense out of this disordered and fluctuating digital matter. The dominant need of human beings for meaning and understanding is something this search is supposed to fulfill. Perhaps *Chasing the Image* is like looking for home, a place that we used to know and want to come back to, even though it may be unreachable.

Some images in this project resemble noisy, incoherent frames from the old TV set, containing oversaturated, unnatural colors, and repetitious structure; some look like ghostly apparitions of places, or vaguely recognizable symbols and logos; and some reach a point when they are simply strings of colorful blocks and bands, no longer signifying anything in existence. There is a kind of beauty displayed by this catastrophic disruption of representation. This is precisely the power of the Spectacle, still emanating through the destroyed matter of its images, and still pulling the viewer into a spell. But it is a different kind of Spectacle – a Spectacle of form. The formal visual elements of broken code, are precisely what fascinates the viewer when he or she looks at glitch art. Perhaps this is because the technological transformation of the human experience is then visible, while usually it hides behind an interface and the perfection of hypermedia. Is this fascination with formalism excessive in glitch art? Is it too focused on *computerness* and too little on anything else? I wouldn't say it's excessive, but it is definitely in the foreground.

Assimilated Glitch: Prosthetics and Aesthetics for Disrupted Illusionism

Glitch aesthetic, as an assimilated effect or a desired commodity, has entered the mainstream. The emergence of glitch textiles, automated glitch apps, the aesthetic packaging of MTV and Much Music channels as well as TV shows like *Person of Interest*, all point to the fascination with glitches and errors. This development complicates the discussion on the disruptive nature of the glitch because while it is being absorbed, it becomes something wanted instead of avoided. Metaphorically it represents a bully that transforms into the popular kid.

The aim in this category then, is to kill the *natural* glitch by re-introducing it as an element of the Spectacle. This is achieved by marrying illusionism that the glitch usually destroys in photographs, with glitch artifacts in order to examine the effect on the image. Another goal is to manufacture the look of a glitch with conventional design methods. This category emerges from the ultimate urge to control the outcome of the creative process, after the initial break with such impulses in earlier stages of the project.

Previously glitched imagery serves as a source for this exercise. The artifacts of interest are assembled into a new work, modified or sometimes completely invented with Photoshop techniques. As a result the glitch element itself goes through a kind of clean up while being digested and transformed into something that only mimics or vaguely resembles the original moment of disturbance. Therefore, the final images (discounting the source files) are produced without the mishandling of code, allowing the glitch to become the subject and not a treatment in the image.

To attempt to design an accident or an error (the corrosive moment) is paradoxical, because the error is an unwanted, sometimes unexpected and unpredictable occurrence, and there is deliberate action and a certain expectation of an outcome rooted in the word *design*.

Error as mistake is a result of poor analysis and judgment resulting in an outcome that was not intended. When an error becomes intentional, it transforms into an act of vandalism against the backdrop of social codes; so the error's essence only remains as long as the error is unwanted. In order to save the error from escaping, one must forever despise it.²¹⁶ What is an intentional glitch then? Does the original, technical meaning of the word even apply?

Let's look at the dynamics operating within the three categories explored here. If we separate the question of how it occurs (the mechanism) from why it occurs (the trigger for the mechanism), then a *stimulated* glitch is still a glitch strictly based on its process because it is produced from a friction or incoherence within the code. When we start thinking about whether it occurs spontaneously from unknown circumstances, or through an intentional provocation of an artist, then *natural* glitch and *stimulated* glitch are obviously different. But upon a closer inspection, aren't imperfections, and system flaws that produce glitch, still of human origin, regardless how much time separates the action of implanting those imperfections, and the glitch moment? Intention or lack of intention then becomes the only degree to which one acknowledges glitch as an entity that is pure and therefore worthy of attention. The *assimilated* glitch is again different from that, because there is an act of appropriation of aesthetic surfaces of glitch looks put through traditional modes of editing or complete glitch invention where the glitch aesthetic does not even relate to any known artifacts.

In the *assimilated* phase of the project the glitch loses its original identity just as photography become something entirely different with the invention of digital imaging – it is only half of itself, and half of something entirely new. Assimilated glitch is detached from the natural occurring disturbance, more fresh, cleaned up, controllable – it becomes a glitch

²¹⁶ Moradi, "Glitchbreak," 151.

that is better than the glitch itself. Its mode of existence and operation are reframed. Can an *assimilated* glitch aesthetic still signify a disturbance? Is there something that an *assimilated* or *pop* glitch can tell us about the apocalypse?



Figure 13. *Life in Technicolor*, 2012. Glitch and Photoshop.

Designed glitch is a ghost – a mere mirage of the corrupting and changing potential of the *real* thing. Menkman states that transforming the erratic manner of the glitch process into a design process makes the glitch itself into a commodity:

[...] to design a glitch means to domesticate it. When the glitch becomes domesticated into a desired process, controlled by a tool, or technology – essentially cultivated – it has lost the radical basis of its enchantment and becomes predictable. It is no longer a break from a flow within a technology, but instead a form of craft. For many critical artists, it is considered no longer a glitch, but a filter that consists of a preset and/or a default [...].²¹⁷

²¹⁷ Menkman, *The Glitch Momentum*, 55.

Exposure, capture, and employment of glitch, normalizes its aesthetics and uses them as the new, cool and hip effect produced as a byproduct of modern culture's fascination with technology. Just as glitch begins to be accepted and desired, it becomes part of the system of representation it once counteracted – it is being granted the official permission to live and be cultivated in the open while being supervised and unthreatening. We let it play, but on our terms.



Figure 14. *Screen*, 2012. Glitch and Photoshop.

Perhaps by aestheticizing glitch, we are actively suppressing it.²¹⁸ While an *assimilated* glitch may formulate a superficial discourse about catastrophe, its agency is significantly reduced and it becomes an absorbed threat – it is like a Hollywood film that discusses catastrophe, instead of a catastrophe obliterating a Hollywood film. The digital disturbance or error is not perceived as threatening if, as Nunes states, the “deviation remains

²¹⁸ Hertz, “Glitch Politix.”

systematically contained within a program of control.”²¹⁹ It is not a threat to structure if its appearance is intentional, somewhat predictable or only suggests a disturbance visually (as it is the case with images here). Perhaps this is how the dominant system works to diminish the panic associated with the unknown of failing technology.



Figure 15. *Point of no Return II*, 2012. Glitch and Photoshop

So is this the fate of glitch art? Rosa Menkman speculates on that topic in her book, *The Glitch Momentum*: “Every form of glitch, whether breaking a flow or designed to look like it breaks a flow, will eventually become a new fashion. That is fate.”²²⁰ There is now software that makes the accidental digital corruption called *glitch* a commodity available to anyone who wants to experiment with chaos.²²¹ You can now create your own meaningless nonsense by engaging in nihilistic exploration of life – the production and consumption of nothing by

²¹⁹ Nunes, “Error, Noise, and Potential: The Outside of Purpose,” 3.

²²⁰ Menkman, *The Glitch Momentum*, 8.

²²¹ Osada Genki, “Glitch vs Glitch as Software,” <http://www.osadagenki.com/gvgas/> (accessed 10 February, 2012).

appropriating noise and error with custom applications that add a technological time stamp to your images. But these glitches are better, beautified, designed, streamlined...

One example of a glitch application is Decim8. This iPhone app by Kris Collins provides the user with the “ability to evolve your pictures into strange and sublime artifacts bordering on chaos” with a “set of bit-glitching filters.”²²² One can apply effects randomly, simulating a natural glitch moment where the result of the distortion is unpredictable, or choose effects from a long list pushing the image in a specific aesthetic direction.



Figure 16. *Entropy Rising*, 2012. Glitch and Photoshop

While applications like Instagram or Hipstamatic still simulate degraded film effects, the creators of Decim8 are focused on reflecting current technological time rather than the nostalgic past of analogue media. Ironically there have been complaints from users that the application itself crashes frequently (reintroducing a *natural* glitch). The description of the

²²² Kris Collins, Decim8, iTunes Preview, <http://itunes.apple.com/ca/app/decim8/id392720563?mt=8> (accessed 30 June, 2012).

app in the online Apple store includes a warning about the possibility of completely destroying an image which suggests that the effects produced by the app at least partially originate with *stimulated* glitch methodology described in the previous chapter of this thesis (distorting digital data instead of applying effects superficially). However it seems that the pixel values may simply be changed in random patterns (depending on the filter applied) such as in the example of editing images in conventional programs, where data is altered nondestructively. This differs significantly from actually destroying digital data structures resulting from random, uninformed, manipulation of code with complete disregard for image structure. Perhaps in the end it is a combination of the two above methods that make this app appealing to its audience. Decim8 allows the user to become a destroyer of pixels with the use of a polished, conventional interface. The glitch look of the images here is very much controlled and commodified.

Commodified glitch is an appropriated accident. It is a glitch carcass, a dead thing, or a shell whose essence escaped. It is a footprint, a fingerprint, or Hugh Hefner's robe instead of Hugh Hefner himself. It is only an aesthetic layer that remains. While we try to learn about glitch, utilize it, and explain it, it becomes less like itself. The very act of defining it is the very act of killing it. So the artist here is really a taxidermist artificially stuffing aesthetics with content in order to create glitch *monsters* instead of glitch moments.²²³ Art is a safe place for an error like this to be practiced.

However an image of disturbance still evokes demolished pictorial space. So is there a difference what methods the image was constructed with? Sometimes it is difficult to recognize the process responsible for specific glitch images, as the methods constantly mutate and evolve with every artist. When talking and catering to a mainstream audience in

²²³ Moradi, "Glitchbreak," 152.

the discussion of error, one needs to refer to them as consumers of technology that don't quite care how it works as long as it does. It is the same case with art. Some viewers become less interested in how something was made than what kind of impression it generates. Of course the process of producing a work of art can also serve as an integral part of understanding a message. But what is the case here then? In this particular category, the true process of glitch creation was eliminated in favour of the illusory space, in order to discuss the glitch as an aesthetic element, or a subject instead of a corrosive agent that internally destroys technology.

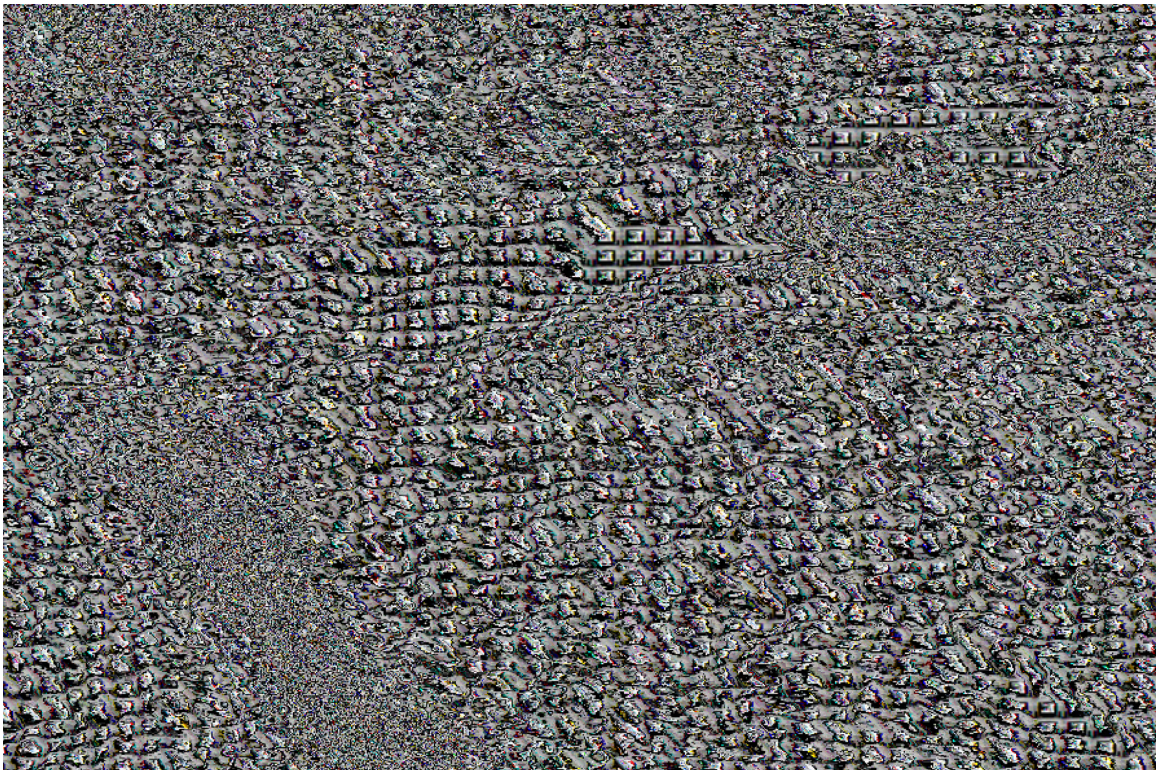


Figure 17. *Damaged Promises*, 2012. Glitch and Photoshop.

Most of the work in this category consists of images (Figures 13-17) but to accompany them I have also produced a video piece, an interactive piece, and two sculptural pieces for a more dynamic and hands on experience of the adapted error. First, the video titled *Phase* (Figure 18) consists of a sequence of images stemming from a single TIFF file,

which has been corrupted sequentially multiple times. In the source image, small number of random data was inserted into the body of the file in OxED hex editor, in order to initiate a separation of color channels, which resulted in a slight blur effect. The file was then resaved in Photoshop as another black and white TIFF image, and the distortion process was repeated multiple times. Once in a while, a source image would be rotated from horizontal to a vertical position in order to make sure the channels have been separated thoroughly.



Figure 18. *Phase*, 2012. Video composed of corrupt TIFF images.

As a result the image went from being a coherent, clear representation of the downtown core of the city of Toronto, to a very blurred, almost unrecognizable image of high rises. The source images were then imported into Adobe Premiere Pro and arranged so they faded into each other, producing a gradually distorting and blurring cityscape with a somewhat nauseating effect. In addition, a soundtrack was produced from one of the distorted TIFF source images by importing the image into Audacity and converting it into an

MP3 file. The idea that the video piece is supposed to play on is the gradual onset of panic and confusion, associated with the acknowledgment of a progressing state of *wrong*. It is a slow and sickening dissolution of the perception of stable and coherent technological civilization – a kind of disconnect from photorealistic cues. But is it the city dissolving or the viewer who observes it? I suppose it is for the beholder to decide. As a piece, the *Phase* video assimilates glitched content in order to form a temporal contemplation of what it means to fall apart.



Figure 19. *Bethenoise*, 2012. Interactive Installation. Processing and webcam. Sample frame.

The interactive work titled *Bethenoise* (Figure 19), introduces the viewer as the initiator of image degradation. Here the error aesthetic is *assimilated* through conventional methods of production, using the artist-popular program Processing in combination with a webcam. *Bethenoise* randomly loads a set of images, one by one every forty five seconds, and uses the movement of the viewer picked up by the webcam to break down the image in the exact places where the movement occurred. The script changes the values of affected pixels

randomly, increasing flickers and flashes the more movement is present. As a result the display shows a noisy apparition of the viewer, in values ranging from white to black, moving around the image as a ghostly glitch. *Bethnoise* gives the agency of destruction to the viewer, and invites him or her to be the obliterating force inside the representation of the contemporary civilization of the Spectacle. However it does so superficially by simulating prosthetic freedom.



Figure 20. *Pop Cube*, 2012. A cube of crushed tin cans found at a salvage yard.

The two sculptural pieces, first a cube of crushed pop cans simply called *Pop Cube* (Figure 20), and the second, a chair draped in colourful strips of paper, called *Chair* (Figure 21) are objects who translate the aesthetic of glitch, noise and degradation from a flat digital

screen into the physical space. *Pop Cube* was found at a salvage yard, initiating a love at first sight. The disturbed form and function of the drink container, gathered and compacted into trash relates to the disturbance of established forms of contemporary capitalist society. The pop cans as trash also highlight the idea of disposability, which glitch art emphasizes through the break down of digital media. The can, serving as a symbol of fixations present in the every day consumer landscape, is reframed into a degraded image of pure color, texture, and disturbed form. It is an entirely *assimilated* aesthetic of brokenness and destruction – a result of a useful container transformed into a purely material entity, who's medium (tin) remains the only thing of value.



Figure 21. *Chair*, 2012. Wooden chair frame and paper strips from beauty magazines.

The idea for *Chair* emerged as a dire need to step away from the screen and engage in something tangible yet relatable to the aesthetics of error. Since error disturbs the original form in favour of aesthetic effect, the usefulness of the chair had to be somehow affected. The seat was taken out leaving only the wooden frame, which was then covered with long strips of colourful paper straight out of the pages of glossy magazines. The finished chair resembled the look of glitch artifacts in a severely broken JPEG image, where cascading

strips of color seem to form layers suspended in three-dimensional space. Even though the process of creating these sculptural objects did not per se involve any focus on the technological space, it still discussed the glitch, noise and error as a disturbing force within the everyday reality of human life.

Digital technology has been the unofficial poster child of progress. Therefore the use of glitches in mainstream design seems to imply a fetish of a digital future – one perpetuated by a constant drive to invent new devices or upgrade to newer models. New technologies in a beta state are often buggy, and therefore glitch as an aesthetic can stand to imply a degree of *newness*, progress, and technological advancement. Perhaps it is a reflection of the speed at which we move forward in history. The glitch effect may be thought of as something *edgy* because it implies something is pushing on the boundaries of the system, brushing with the edges of possibility, and nearly bursting out of its bounds. To detach or break through the system is what a rebel desires – constantly on the verge, pushing outward or forward. Something extreme is taking place – the deviation may collapse the structures at play. The glitch effect tells us that the system is under pressure and may be unable to process the disturbance within its regular realm of possibility.

In fashion and design, glitches are there to reinforce and perpetuate the cult of the individual initiated by consumerism and advertising. Those who seek to be different, worship the uniqueness of glitches. In the mainstream, the appeal of the glitch aesthetic relies on the assumption that engaging in the peripheral relationship with technology, makes one cool, interesting, and dangerously fashionable.

Glitch as imperfection is like the new *grunge* – somewhat angry, unstable, noisy, distorting and existing on the peripheries of life itself. It is displayed as a cool and dynamic element, ultimately associated with the digital realm, sometimes relating to the dulling or oppressive effects of technological progress, but ultimately reduced to a decorative detail

that can be reproduced with accuracy and without risk. It seems that the only acceptable way for a glitch to exist in modern culture is if it's accepted and assimilated into the commodity system. However, is a commodity capable of critiquing the technological capitalist Spectacle? Perhaps it is, but in the more shallow and unthreatening sense. Does an *assimilated* glitch still carry the echo of its past agency? It does, but only prosthetically. By assimilating the glitch into the mainstream, in the process we strip it out of its potential cognitive impact leaving only the aesthetic one. The *assimilated* glitch becomes a denial of a *real* and uncomfortable threat to technological integrity, which is so critical to the efficient operation of society.

The adaptation of the aesthetics of error into the mainstream visual culture indicates that instead of relentless pursuit of pixel perfect media free of errors and disturbances, we are gradually accepting the glitch as an integral part of communication and representation, even if only on the surface. Perhaps just as grunge music in the 1990s, the mainstream or *pop* glitch will entertain us for a time and then fall back into obscurity, returning to the screens of small art collectives where it was first cultivated. Or it will further become *post* glitch, something entirely other, perhaps even more transformed than the previous version.

The experience of glitch art at first sight, for many, is that of sensory pleasure. The formalism in the visuals is what is responsible for that impression. In the current state of the genre there is a tremendous focus on formal qualities of glitch, perhaps because artists are still hung up on its *computerness*. Its like we are sitting on the beach and running our fingers through the fine sand, marveling at its texture, warmth and color, before realizing we can build castles with it. We can talk about what the sand means in terms of material, what it can be a metaphor for, but it is only when we make shapes out of it, that it tells a story. I believe it is the same case with glitch art. This fascination is still taking place, and perhaps it will never progress beyond that point, condemning itself to forever be the ugly sibling to

conventional generative art. Maybe that is the role it has to fulfill in order to highlight the fact that there are alternatives to the rules outlined by dominant systems.

Is the focus on aesthetic experience bad? Does glitch art really carry any cognitive value with it? I believe that the original, *natural* glitch has cognitive value, which is carried through to the art form inspired by it. I would also argue that the aesthetic and cognitive values of glitch art are intimately connected. One cannot fully operate without the other. Glitch provokes understanding and knowledge because of its unique aesthetic manifestation.²²⁴ Even if glitch artifacts are used for decorative means in the mainstream medium, we cannot help but connect them to the original *natural* glitch, which that aesthetic signifies, surfacing other ideological implications connected with it. The heavy aestheticism in glitch art is precisely what makes it relevant. The jarring aesthetics of glitch art, are what makes it gain meaning in the context of the hyperrealism perpetuated in the digital space. The question we should be asking is whether the formalism of glitch art has something to contribute to our understanding of life in the twenty first century – an understanding that the formalism of other mediums could not offer.

²²⁴ Elisabeth Schellekens, "Conceptual Art," in *The Stanford Encyclopedia of Philosophy* (Spring 2009), ed. Edward N. Zalta, <http://plato.stanford.edu/archives/spr2009/entries/conceptual-art/> (accessed 10 July, 2012).

CONCLUSION

As Mackenzie emphasizes: “New media technologies are being woven so completely into the fabric of every day urban, social and economic life that they, in turn, are becoming more and more ignored in cultural and media discourse.”²²⁵ It is always important then to keep analyzing our evolving technological condition within a variety of contexts especially in this critical time when the proper working or the failure of technology has severe impact on everything we do.

In a western world, which strives for perfect organization of its people and resources, any transgression of the law, convention or norm is frowned upon since the disturbance usually creates a ripple effect that can be felt layers deep into society. All structures of culture, society, and physical life are interconnected through a network of digital systems, where the glitch constitutes a problem guest at a dinner party. What the glitch expertly does, is show there is always room for improvement. Its unwelcome occurrence is quickly addressed by increased security of the system, which patches up possible holes where the bug might have slipped through. But the bug returns, because systems are made by people who themselves are not perfect creators. We introduce the bug subconsciously like a virus, creating a vulnerability that can become an illness. Derrida told us about this already when discussing deconstruction:

If we follow the intersection between AIDS and the computer virus as we now know it, we have the means to comprehend, not only from a theoretical point of view but also from the sociohistorical point of view what amounts to a disruption of absolutely everything on the planet, including police agencies, commerce, the army, questions of strategy. All those things encounter the limits on their control, as well as the extraordinary force of those limits. It is as if all that I have been suggesting for the past twenty-five years is prescribed by the idea of desterrance... the supplement, the

²²⁵ Mackenzie, *Cutting Code: Software and Sociality*, 23.

pharmakon, all the undecidables – it’s the same thing, It also gets translated, not only technologically but also technologicopoetically.²²⁶

The glitch methods used in the production of work for this thesis illustrate a kind of break or transgression of the conventions of production and consumption of digital images. In general the glitch denies the law of realistic representation to flawlessly operate in the digital space. Through that the glitch denies the possibility of the medium to communicate efficiently its original, intended message. In this project, both image production and consumption processes are disrupted, especially in the *natural* and the *stimulated* glitch categories. This serves as a kind of allusion to the attempt of displacing the dominant system of consumer culture in general.

Perhaps the genre of glitch art is not against technology, and not even against consumerism, but employs the methods of disturbance for some future benefit of cracking the black box. In glitch art “like canvas and paint, code as material becomes visible as a problem, as something whose visibility or readability is questionable from different angles, including those of ‘law’ and ‘life.’”²²⁷ The understanding of glitched images is ultimately dependent on something that Menkman calls “spectator literacy (references to media technology texts, aesthetics and machinic processes) as well as on knowledge of more ‘conventional’ canons of media-reflexive modern art.”²²⁸ Therefore the appeal of glitch art for the uninformed viewer may only be based on the enticing mystery of *what happened* instead of *what it means*.

In my exploration I tried to focus less on the tools and methods and more on just creating visually interesting images that told a story about moments of disturbance and catastrophe within a technologically constructed representation of contemporary civilization.

²²⁶ Brunette and Willis, “The Spatial Arts: An Interview with Jacques Derrida,” 12.

²²⁷ Mackenzie, *Cutting Code: Software and Sociality*, 26.

²²⁸ Menkman, *The Glitch Momentum*, 58.

I tried to follow the advice of Iman Moradi who says in his critique of glitch art in

Glitchbreak:

Too much emphasis on process or the tools can actually make for shallow exploration of the message, or a de-emphasis of what is actually being conveyed. When was the last time you heard a world renowned celebrity artist go into insane amounts of depth describing the techniques used in producing the actual artwork they're known for? They usually talk about the thoughts behind the work, not the tools! They rarely want people to get excited about the tools and production alone, they talk about feelings, emotions, experiences and interactions.²²⁹

Sometimes it is the mystery that draws us to something. The inability to understand why something happened makes us ask other questions. It is definitely hard to be original within the glitch art scene. However it is important to acknowledge though, as Manon and Temkin observe, that: "The greatest weapon glitch art holds in its war against digital hegemony is not ingenuity, but a goalless repetition which seems to mutate of its own accord, using the very processes of digital transcoding against themselves."²³⁰

The belief that order and systems of control are founded on truth perpetuates the enslavement of an individual first living in a society controlled by religious belief and then in a society governed by technological progress. The apocalyptic glitch brings on the realization that digital and social codes are built on agreements and not absolute truths. In this thesis project the notion of the apocalypse is the unveiling of the truth that there is none.²³¹ Drawing on nihilistic sentiments, glitch shows us that absolute certainty does not exist in a digital system. Complex digital structures are like living bodies, where code is a life force that constantly evolves, and where instabilities and frictions occasionally produce deviations. Once we internalize this, we disconnect from that system of control and its relentless pursuit of perfection and permanence. The *natural* and *stimulated* glitch takes on the role of madness

²²⁹ Moradi, "Glitchbreak," 153.

²³⁰ Manon and Temkin, "Notes on Glitch," 13.

²³¹ Baudrillard, *Simulacra and Simulation*, 1.

that lurks at the back of reason. Working against logical uses of software, rational treatment of images, and producing incoherent content, where multiple meanings may operate, it reflects a degradation of certainty. Glitch art changes a common repulsion into a pursuit of the erratic.

The progression of the corrosive glitch in this project through the *natural*, *stimulated* and *assimilated* categories illustrate an increasing mode of control over the raw force of disturbance, gradually erasing the original essence of the glitch completely out of the process. As we progress towards the other end of the spectrum from *assimilated*, through *stimulated* to the *natural* glitch category, it is the image that loses its integrity, its identity and its meaning. It is a ying/yang fluctuating relationship between realism and formalism, where chaos and order engage in a perpetual dance. Chaos comes to wipe out forms, and order to assemble new structures from the pieces. The apocalypse displays that process on a global scale. The disruption through glitch, is a point of transformation and transgression of the ancient skeletons holding us in place.

While the *natural* glitch is a sign of deviance, it becomes transformed into a conscious tool of resistance when its appearance is *stimulated*. The *stimulated* glitch may reflect a state where, that which the system directs, resists total control (digital production, consumption, representation). When *stimulated* glitch transforms into a reproducible, and decorative effect, reabsorbed into the Spectacle, it becomes an *assimilated* glitch. It is no longer glitch in its original, technical sense of the world, as it is interwoven into the fabric of postmodern consumerism, and moves towards becoming a *post glitch* commodity. It is a thing made in the image of glitch. It becomes *post glitch* because, while it retains the brokenness of its aesthetic, it loses connection to the *natural* glitch's erratic essence of disruption, deviance and unpredictability – a characteristic that makes the *natural* glitch something unwanted. It may also aesthetically reflect glitch artifacts that were invented, and have no connection with the

glitch process. It becomes a sign of glitch, while it has nothing to do with the *real* glitch itself.

Glitch reveals the postmodern fragmentation of consumer psyche, where communication becomes disrupted, meaning becomes lost and the world dissolves in the apocalyptic chaos where control, form, and stability are denied their operations. The glitch also initiates the search for new meanings, independent of the original message, allowing for alternatives when fragments form new relationships with each other. The glitch suggests a break from the system while highlighting our dependency on it. So order and disorder fight to suppress each other to establish more control, but they cannot exist apart from each other because the meaning of one depends on the other. The glitch occurrence also reveals that the knowledge we think we have is forever incomplete, and its variables are always changing. As glitch exists against information, it undermines knowledge. Revealing the world in a state of *process* it suggests that there are things we don't know, cannot predict, and will never control.

Perhaps the truly transformative potential lies with the *natural*, technical glitch itself, while glitch inspired art only pays homage to that original sign of system rupture. The abject side of technology in the form of the original glitch is worshiped within the church of glitch art, and all the rituals associated with it only imagine what it would be like to interrupt constructs or help unfold a catastrophe within a technological society.

Glitched digital media suggest what a post apocalyptic media landscape could look like. The vast pixel ruins of the contemporary idea of technological progress could be the only remains of our mediated human civilization. The glitch, among other things, points at the disposability of contemporary digital media, and its fleeting and fragile nature. Because digital media operates in a non-tangible space, and is based on fragile software and codes, it exhibits weaknesses that make it easy to destroy. Glitch is not only something that we like to

dispose of, but it is also something that disposes of our expectations of outcomes, and the perfection of our media.

The reason why glitch is so enticing to some is that it acknowledges postmodern uncertainty – something that many feel but cannot express. Glitch enables a catastrophe by disconnecting civilization from its digital functionality. It is both a sign of freedom and a threat to those who depend on structures because of its disconnective qualities. It devaluates function and communication in favour of an erratic and meaningless display of *computerness*, which because it doesn't serve any productive human interests, can only exist as an artwork. Why do we keep making glitch art? Because it offers us brief windows through technology, that only open when we keep repeating the act of opening. It is a mad scientist experiment, where deviance from norm and departure from logical communication reveals schizophrenic realities hidden behind the surface of apparently reliable digital systems that are actually marked with fluctuating technological conditions.

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