



**Compartment_Complex : Subverting Obsolescence – Media Archaeology and the
Materiality of Analog Video**

Par Ke Medley

**Mémoire présenté à l'Université du Québec à Chicoutimi en vue de l'obtention du grade de
Maîtrise en Art (concentration design numérique)**

Québec, Canada

© Ké Medley, 2022

ABSTRACT

(ENG)

Obsolescence devours media at an astonishing rate, especially electronic media. Although still useful, cutting-edge technology is rapidly obsoleted, creating mountains of junk to be shipped off to countries that can't afford to refuse it. Avant-garde artists, such as Duchamp with his "Readymades", have demonstrated that culture is clearly reflected in the things it throws out. This is doubly true for video media; from home movies to commercial programming, video media has proven itself a solid illustration of society – our hopes, our fears, and the lies we tell each other. Though unfortunately, analogue video is quickly being eclipsed by the ravenous tide of time and digitization, along with a portion of our media history.

Here, I aim to answer: within the context of media archaeology, can an artist or researcher subvert analog video's obsolescence by engendering new forms of mediated experience? Evidence suggests that theories and methodologies of media-archaeological figureheads, such as Jussi Parikka, Erkki Huhtamo, Michel Foucault and Friedrich Kittler offer promising avenues in exploring this question through artistic research-creation - the result being my multi-screen, interactive video installation : Compartement_Complex. This paper concludes with a self-analysis of my installation, and how it relates to media-archaeological methodologies. The analysis demonstrates an effective approach to subverting obsolescence through artistic practice.

(FR)

Les processus d'obsolescence des technologies dévorent l'histoire médiatique, particulièrement l'histoire des médias électroniques, à un rythme incroyable. Les nombreux appareils électroniques de fine-pointe qui peuplent nos vies deviennent rapidement obsolètes, ce qui crée une pollution industrielle qui se retrouve dans des pays qui n'ont pas les moyens de les refuser. De nombreux artistes avant-gardistes, tels que Duchamp et ses « Ready Made », ont bien démontré que notre culture se révèle aussi dans les choses que nous jetons. Ceci est doublement vrai à la fois pour les dispositifs techniques que pour leurs produits ; grâce aux films de famille et aux émissions commerciales, les médias vidéo se sont montrés de solides aperçus de notre société. Ils illustrent nos espoirs, nos peurs et les mensonges que nous nous partageons. Dans ce contexte, en l'espace d'approximativement trente ans, la vidéo

analogique s'est rapidement éclipsée due à la voracité du temps et de la numérisation, emportant avec elle une partie de notre histoire médiatique.

Ici, je tenterai répondre à la question suivante : comment peut-on subvertir l'obsolescence de la vidéo analogique et engendrer de nouvelles formes d'expériences médiatique, afin d'interroger son occultation de l'histoire de l'art? Pour répondre à cette question, je me pencherai sur des noms importants dans le domaine de l'archéologie des médias, tels que Jussi Parikka, Michel Foucault, Friedrich Kittler et plus. Ceux-ci guideront la création et l'analyse de mon projet d'installation interactive *Compartment_Complex*.

TABLE OF CONTENTS

ABSTRACT	ii
TABLE OF CONTENTS	iv
ACKNOWLEDGEMENTS	v
LIST OF IMAGES	vi
FOREWORD	vii
INTRODUCTION	1
CHAPTER 1	7
Setting the Scene	7
1.1 Avant-Garde Art and Computer Technology	7
1.2 Introducing Media Archaeology	10
CHAPTER 2 : Framework – Main Tenets	14
2.1 Materiality	14
2.2 Obsolescence	17
2.3 Subversion	21
CHAPTER 3 : Methodology – A Media-Archaeological Approach	24
3.1 Alternative Histories	27
3.2 Hardware Hacking	30
3.3 Art from Obsolescence	35
CHAPTER 4 : Analysis – Art through the lens of Media Archaeology	38
4.1 The Materiality of Compartment_Complex	38
4.2 Subverting Obsolescence	42
CONCLUSION	49
BIBLIOGRAPHY and REFERENCES	51
ANNEX 1	54
Tech Sheet – Compartment_Complex installation	54

ACKNOWLEDGEMENTS

I would like to thank my director Yan Breuleux and co-director Louis-Philippe Rondeau for their help and guidance throughout the course of my research. I am also very grateful to the Hexagram network for allowing me to make use of their exhibition space and technical assistance, provided through their residency program.

Additionally, I would also like to thank Oli Sorenson and Benoit Melançon for graciously accepting to serve as jury members for my thesis evaluation.

LIST OF IMAGES

FIG.1 <i>Compartment_Complex</i> . Interactive video installation	Pg. 4
FIG.2 <i>Compartment_Complex</i> . Close-up of the controller and console.	Pg. 5
FIG.3 Star Trek, season 1, playing on a <i>Compartment_Complex</i> prototype	Pg. 21
FIG.4 <i>Compartment_complex</i> . Early prototypes	Pg. 35
FIG.5 Test with coax cabling and subsequent composite cable fix	Pg. 36
FIG.6 Graph representing my personal impressions of the flow of obsolescence.	Pg. 39

FOREWORD

“No effort will be made to nail down ‘correct’ principles or methodological guidelines or to mark fixed boundaries for a new discipline” (Parikka & Huhtamo, 2011, p. 2).

Likewise, this paper does not attempt to nail down the specifics and limits of media archaeology. Rather, it details a personal account of an artist and researcher (myself) who considers their approach to be media-archaeological in nature. This example serves as a sort of beacon to whoever might want to carve out their own space in the vast field of media archaeology.

INTRODUCTION

Obsolescence devours media at an astonishing rate, especially electronic media. In today's consumer culture, we are regularly expected to throw out our used cell phones and televisions in favour of the next top-of-the-line model. This obsolescence is largely attributable to unsustainable capitalist practices (Bulow, 1986). Indeed, planned obsolescence is particularly prominent in most of today's major tech enterprises – an insidious practice that encourages the consumption of new products by rendering legacy software and hardware nearly unusable/unreadable. Though still useful, cutting-edge technology is rapidly obsoleted, quickly filling unnumerable landfills in countries who can't afford to refuse it. Avant-garde artists, such as Arman with his "*Poubelles*", have demonstrated that culture is clearly reflected in the things it throws out.

This is doubly true for video media; from home-movies to commercial programming, video has proven itself a solid illustration of society – our hopes, fears, and the lies we tell each other. Acting as a social mirror, sitcoms and other TV shows project their own version of life into our living rooms, while we sit watching together. Sometimes, something especially striking happens; people that tuned in on January 20, 1986 and saw the Challenger spacecraft explode probably did not expect such a shattering event to occur on an otherwise ordinary day. At that moment, everyone tuning in shared a profound experience. Undoubtedly, television has absolutely changed the way we interact with each other. As such, it stands to reason that television might carry some emotional significance. Similarly, retro tech tends to linger, especially if it manages to nestle itself into our nostalgia. Certain media formats are

associated with potent memories of the past, such as Polaroid and vinyl, which are regularly linked to a sense of deep-seated nostalgia.

It is easy to see how media archaeology fits into a wider cultural situation where vintage is considered better than the new, Super-8 and 8-bit sounds are objects of not only nostalgia but also revival and retrocultures seem to be as natural a part of the digital-culture landscape as high-definition screen technology and super-fast broadband. (Parrika, 2013, p. 3)

Nostalgia certainly is an intoxicating emotion. Looking back into the past feels to me like the warm embrace of a blanket knitted by a deceased relative. It's a bittersweet emotion, undoubtedly, but also a powerful driving force. Nostalgia spurs a sort of yearning for simpler times, or perhaps even dissatisfaction with our current situation. Like many others, I've amassed a small collection of items from my past which I occasionally rummage through. Among these artifacts, a small pile of old video game cartridges or Compact Discs (CDs) exudes an especially potent emotional charge. Whenever I contemplate these old games, I am instantly transported back to my basement in Nova Scotia, playing GameCube games in the dark on an old 30-inch cathode ray tube (CRT) television.

Nostalgia isn't forged overnight. It is the sneaky product of time, slowly creeping into memories of a seemingly simpler time. Subjectively speaking, vestiges of domestic electronics don't really have any legitimate value; from a consumer's perspective, there are multitudes of devices more efficient than CRT televisions at a far cheaper price. However, this perspective overlooks their cultural significance, rich history, and creative potential. Unfortunately, I can feel the past slipping through my fingers. The rapid succession of technological "advancements" is making it more and more difficult to experience obsolete technology. In fact, the same could be said of radio; I'm sure the vast majority of us have

fond memories of listening to the car radio during long quiet drives. Sadly, that sort of activity is quickly being replaced by more expedient alternatives like Spotify and other such services. Sooner or later, and perhaps for the better, we'll all have moved on and abandoned analog technology – but only if we assume that newer is better.

Analogue video is steadily being eclipsed by the eroding tide of time and digitization, along with a portion of our media history. Some of us aren't ready to let go – there is still untapped artistic potential in analog video media. While there may be a lack of technical or formal reasons to employ these obsolete devices, they are nonetheless endowed with massive political, social and emotional value. To that end, media archaeology might offer some consolation.

Here, we focus on this question: within the context of media archaeology, how does one subvert analog video's obsolescence to engender new forms of mediated experience? I'll begin answering this by giving a brief overview of media archaeology and how it fits in an artistic context. In doing so I will detail key media-archaeological notions such as materiality, obsolescence, and subversion, followed by an analysis of media-archaeological methodologies. Lastly, I will parse through the results of my research by analyzing my data – namely, my installation *Compartment_Complex*.

Before continuing, we'll be taking a brief look at my installation (*Compartment_Complex*), as the process behind its creation served as the foundation for this research and study (see the tech sheet and diagrams found in the annex).

Compartment_Complex is the manifestation of the compartmentalization of certain aspects of my life and psyche. As we approach the haphazard stack of CRT televisions, wires strewn wildly about, the electric buzz of CRT monitors swarms our ears (fig.1). A small CRT

screen, set apart from the main stack, displays a series of pictographic instructions on operating the “video game”. Using a small controller adorned with a classic arcade joystick, the “player” takes control of a bizarre avatar as they navigate between the installation’s screens. Each monitor represents an individual room of a gloomy, monochromatic apartment complex, populated by unsettling denizens. The sounds of dripping faucets and murmuring neighbors echo throughout the installation. The players explore the rooms, collecting and exchanging items with the inhabitants who respond with weirdly cryptic and poetic dialogue. The players are left to piece together the perplexing events of their experience, constructing their own narrative.



Fig.1 - *Compartment_Complex*. Interactive video installation. © Ke Medley, 2021.

How does *Compartment_Complex* work? The installation makes use of a few different components – there's the computer, which runs an instance of my “game” on Unreal Engine 4. Connected to the computer, there is a custom universal USB joystick controller, a custom “console” (fig. 2), and a set of speakers. The “console” is made up of an Arduino Uno, a

relay switchboard, and an HDMI to analog converter. The rest of the installation is composed of nine stacked CRT televisions of various sizes and an assortment of composite cables.



Fig.2 - *Complartment_Complex*. Close-up of the controller and console. © Ke Medley, 2021.

While the game is running, the computer passes a video signal to an HDMI analog converter module, which is in turn split nine ways with the help of several component cables. Those nine video outputs are then connected to their own relay switch in a “normally closed” (NC) configuration. The output of each relay switch is subsequently connected to its own CRT television through more component cables.

When the relay switch is closed, the television does not receive a video signal, but instead displays white noise or a blue/black screen. Once opened, the relay switch passes the video signal from the converter to the appropriate CRT screen. The relay switches are

controlled by an Arduino, which communicates with Unreal Engine through USB. When the player avatar walks off the edge of a screen, it triggers an event in Unreal Engine – this sends a signal to the Arduino to activate the neighboring relay switch, thus switching the source of the video signal one screen over and creating the illusion of moving from one screen to another.

Additionally, during the course of my research I conducted a roundtable with several artists and professors from various – but similar – disciplines. While not necessarily under the banner of media archaeology, all participants were interested in older, often obsolete electronic devices. Like constructing *Compartment_Complex*, this roundtable also constituted an integral part of my research, since it defines the context and scope of my approach to media archeology.

The event was recorded and posted online (<https://youtu.be/pCGwwldxiq0>). For a better understanding of this thesis, I recommend viewing this recording before proceeding. It serves to contextualize my research and approach, while showing a glimpse into the current state of obsolete electronic technology in artistic practices.

CHAPTER 1

Setting the Scene

1.1 Avant-Garde Art and Computer Technology

After an exhausting 6 years of brutal war, Germany signed the armistice in 1945. Though the world may be at peace on paper, nothing was farther from the truth in actuality; Shortly after this brief victory, the Cold War breaks out on the world stage. As such, the world remained mired in a deeply political atmosphere. In a post-war and highly industrial world, artists channeled this energy into the advent of new artistic practices with political and ideological leanings (Riout, 2000). In Europe, for instance, disseminating a manifesto became a staple of establishing a movement. Each proposed their own way of reinventing life and art (Goodall, 2019). A good deal of these movements, such as France's Nouveau Realism or Italy's Arte Povera, were particularly concerned with industry and consumerism. As Pierre Restany, Author of the Nouveau Realism manifesto, puts it –

C'est la réalité sociologique tout entière, le bien commun de l'activité de tous les hommes, la grande république de nos échanges sociaux, de notre commerce en société, qui est assignée à comparaître. [...] Nous passons de l'esthétique généralisée à l'éthique généralisée. (Inter, 2003, p. 14)

Indeed, there was a notable shift away from the formal qualities of art, towards a sort of activism. Up until this point, modernism had a firm hold over the arts. Cubism, futurism, and color field... all were of undeniable popularity from the late 19th century throughout the better part of the 20th century. The main goal of modernist movements was to grasp the nature of art, generally assuming that certain universal truths could be used to explain reality and art.

Consequently, modernist artists had a progressivist approach and tended to focus on form and technique rather than the represented subject (Tate.org, 2021). In contrast, a significant portion of avant-garde artists felt that they ought to shorten the gap between mundane life and art, rather than focus on formal qualities. The increasingly political interests of artists in post-war Europe led to an explosion of diverse groups and movements, all similarly flavoured though quite unique in their specificity. The Nouveau Realists, for instance, used mundane, industrial, and commercial objects in their art to account for the reality of their time – François Dufrêne’s *Décollage* made use of carefully lacerated posters, while Arman’s *Poubelles* were often comprised of junk fished out of public trash cans. Restany calls this a “poetic recycling of urban, industrial and advertising reality” (Restany, 1990, p. 7). The Nouveaux Realistes sought to break down the glamourization of art and commodities. This sentiment manifested itself through performances, junk art, and public displays. Indeed, the ephemeral nature of performance and junk art was called forth as a way to subvert commodification (Causey, 1998).

In the background of all this political and artistic discourse, technology grew at an astonishing rate. The Electronic Numerical Integrator and Computer (or ENIAC, for short) saw the light of day in 1946. Weighing almost 50 tonnes, it was the first electronic programmable computer (O’Regan, 2012). This machine laid the foundation for what was going to be an incredible paradigm shift. Shortly after, in 1948 at Manchester University, the Manchester Baby was conceived. By 1953, the Ferranti Mark 1 was being sold commercially. These computers were not only able to perform miraculous feats of calculation but could also play games like tic-tac-toe and NIM. Then came along Tennis for Two, a game developed in 1958 on a Donner Model 30 analog computer. The game operated with an oscilloscope and

simulated a tennis match. Then, the invention of transistors and integrated circuits gave rise to a new generation of computers. In 1961, *SpaceWar!* was developed for the PDP-1 mainframe computer at the Massachusetts Institute of Technology (MIT) (O'Regan, 2012).

Computers rapidly miniaturized, and by the 70s they began finding their way into our homes through personal computers and video game consoles. Now here we are, around 50 years later, and computers have become unequivocally important to our daily lives. However, that ubiquity has come at a certain cost: while computers were originally a scientific and technological enterprise, they also rapidly became a domineering commercial enterprise very early on (Sharpe, 1969). Then, 1991 witnessed the birth of Berners-Lee's World Wide Web, and a single year later, US congress agreed it could be used for commerce (OGC-00-33R Department of Commerce), further cementing the role of computers in the global economy. The added goal of profitability deeply affected the directional growth of computer technology. Whole new industries spawned from the widespread commercialization of computers and the internet, from the mining of raw materials like silicone to the assembly of parts and circuits. This also includes software and programs, a crucial aspect of computation – Microsoft has become a virtual default for most netizens thanks to Windows OS, with Google processing anywhere between 3 and 5 billion search requests per day. This, I believe, is what Restany meant when referencing “la grande république de nos échanges sociaux, de notre commerce en société” (Inter, 2003, p. 14).

Clearly, technology's role in daily life is becoming increasingly prominent. By extension, this also influences avant-gardist practices since they are intimately concerned with the everyday. However, properly situating its role is difficult due to its rapid growth and mutability. To that end, media archaeology may offer some answers – an equally mutable

perspective on media and technology which is flexible enough to wrangle the fast-paced world of technological arts. In this next section, I'll be explaining in more detail what that media archaeology entails and how I'll be broaching the subject throughout the course of this paper.

1.2 Introducing Media Archaeology

Before we jump into explaining media archaeology, it is necessary to stress that the “field” of media archaeology is by no means unified (Parikka, 2013). Generally, media theory is often traced back to two opposing authors – French philosopher Michel Foucault and German media theorist Friedrich Kittler. The former believed that media ought to be studied through its use and user, while the latter preferred to observe its formal facets. The dichotomy between Foucault and Kittler’s view of media epitomizes the conflicting and sometimes contradictory nature of media archaeology. On one hand, Foucauldian theorists seek to understand media through its cultural context. On the other hand, the German school of thought pay closer to material and physical processes (Goddard, 2015). Their theories have often been contested and contradicted, even by academics within the sphere of media archaeology.

So, what holds this field together? Prominent media-archaeological theorists like Jussi Parikka and Siegfried Zielinski believe that it’s their grievances with established media histories and narratives that bind them together (Parikka, 2013). The notion of “going against the grain” and subversion is very central to a great deal of media-archaeological practices, and its clear how that could cause issues in a field where everyone is constructing their own

interpretation of media history. As such, there isn't an especially rigid systemization of media archaeology.

With that in mind, how do we define media archaeology? Let's break the concept down and identify what "Media" is. First and foremost, in our context, the word "media" is used as the plural form of "Medium" (Oxford Languages, 2021). Truthfully, pinning down the true meaning of "media" is rather complex since its use has varied dramatically in a short period of time. The term was used to refer to tools and materials, though more recently it has been used to deal with means of mass communication. Due to this, "media" has become a sort of catch-all term. It can be used to refer to anything from modes of expression to expression itself. From a semiotic perspective, media theorist Marcel Danesi offers his point of view by categorizing the whole of media into 3 groups:

Media can be divided into three basic categories: A natural medium is one by which ideas are transmitted in some biologically-based way (through the voice, facial expressions, hand gestures, etc.). An artifactual medium is one by which ideas are represented and transmitted by means of some artifact (books, paintings, sculptures, letters, etc.). A mechanical medium is one by which ideas are transmitted by means of mechanical inventions such as telephones, radios, television sets, computers (Danesi, 2018, p. 11)

However, establishing a systemized categorization of media is a bit of a dubious task, especially considering the incredible transformative power of time and context. The distinction between computers and any other form of media is rapidly fading, blurring the lines between artifactual and mechanical mediums. Take a look at the examples of artifactual mediums Danesi provides – books, sculptures, paintings – all things which can be subsumed with a computer. What's more, artists like Nam June Paik often leave you wondering where the machine starts and the artwork begins; take Paik's *Magnet TV* (1965) – it can easily be

read as either (or both) a sculpture or mechanical device. So, when talking about media and technology, classification is difficult. Based on Danesi's writings, I believe we can safely assume that media is nearly anything that conveys a message, be it either explicit or implicit.

"Archaeology" is a similarly loaded term. Generally speaking, it is understood as the study of humanity's history through the excavation and analysis of sites and artefacts. In terms of media archaeology, it is the excavation of textual, visual, auditory, and technological artefacts (Parikka & Huhtamo, 2011). According to several key media-archaeological theorists, excavating and decoding the past helps us understand the present (and sometimes even potential futures). For them, the past isn't some sort of linear progression of succeeding technologies – "The past is brought to the present, and the present to the past; both inform and explain each other, raising questions and pointing to futures that may or may not be" (Parikka & Huhtamo, 2011, p. 15). Obsolete devices from media history are "revived", bringing about a fresh perspective in relation to where we've been, where we are and where we're going.

Evidently, what falls under the banner of media archaeology is quite large in scope. It often mingles flexibly with a wide array of other disciplines but does not establish fixed relationships with any of them. Even Parikka, when breaking down some of its key themes, mentions that his categorization is "by no means exhaustive in any way, and the amount of work that is in spirit, even if not always explicitly in name, media-archaeological is vast" (Parikka, 2013, p. 14). He argues that this "nomadicism" suits media-archaeological methodologies quite well, allowing media archaeology to exchange freely with humanities, sciences, and arts.

Emphasizing such heterogeneity is an attempt not so much to deliberately diversify the existing body of media-archaeological theory and praxis as to encourage “traveling” between discourses and disciplines. (Parikka, Huhtamo, 2011, p. 14)

Despite the heterogeneity of media archaeology, exchanges between disciplines do produce useful insights – not necessarily hard-and-fast rules, but talking points under which theorists and artists can dialogue. Indeed, several key concepts recur in the work of Jussi Parikka, Erkki Huhtamo, Siegfried Zielinski, and Friedrich Kittler. Among them are materiality, obsolescence, and subversion. In the next chapter, I will be detailing said tenets, laying out their confluence and examining how they can be used to achieve an artistic media-archaeological practice.

CHAPTER 2

Conceptual framework – Key concepts

2.1 Materiality

Typically, materiality refers to the “material” aspects of a medium, object, or practice. In other words, it’s what can be touched. A book, for instance – the words and their meaning contained inside may be immaterial, but the ink with which those words are printed isn’t. The materiality of a book is found in its paper, binding, and printing. For music, it would be in the instruments and the vibrations in the air they produce. Colors are photons and smells are chemical. Concerning `Compartment_Complex`, my focus is not necessarily the image on-screen, but rather the material components that make said image possible.

From transistors to integrated circuits, the materiality of electronic tech has been exponentially complexified since the 60s. Computers that used to run on a few thousand transistors now contain CPUs with over a billion transistors. The world has become a very different place since computers cemented themselves as an integral facet of our media culture and daily lives. As a result, media theorists and media archaeologists alike began paying close attention to science's role in our ever-changing cultural landscape and modes of perception (Parikka & Huhtamo, 2011). For instance, though he never formally ascribed himself to media archaeology, Kittler is often credited for bringing attention to the material, functional, and scientific aspects of media, which had been mostly studied as cultural objects up until then. In opposition to Foucault, Kittler believed that media ought to be understood through its non-human components.

In other words, not meaning, not representation, not any imaginary of media that is conditioned by the social, but the act of communication in its physical distributing and effective channeling of signals stands at the core of media (Parikka, 2013, p. 68)

According to Kittler, Foucault's notions were limited in the sense that they no longer “fit the time”. Having worked almost exclusively with written material and archives, Foucault's methods weren't properly adapted to the ever-changing technological reality (Goddard, 2015). With the rise of computer media, Kittler saw a certain progressive trajectory in their design; “Media are not pseudopods for extending the human body. They follow the logic of escalation that leaves us and written history behind it.” (Barlow, Leston, 2012, p. 27). The idea was to bring more attention to the empirical aspects of an artefact, instead of focusing on its cultural role. However, this view might be considered a bit dry – he disregards the humanities of media and tends to attribute the "transformation" of media to scientific/military endeavors (Parikka, 2013). Contrary to the Anglo-American tradition which championed the notion that technological development is tied to culture, the German school of thought tended to believe that technology was the primary driving force of development.

Nevertheless, several opposing scholars have accused the group of technological determinism as a result (Parikka & Huhtamo 2011). Indeed, a good deal of artists would disagree with the notion that media is not an extension of the body – video games, virtual reality (VR), and augmented reality (AR) all extend and enhance the human experience, and I believe these media formats will resist being “left behind” as Kittler puts it. Furthermore, in saying “Media are not pseudopods for extending the human body”, Kittler’s perspective ignores the role certain technologies have in our daily acts of communication. Smart phones have essentially become an extension of our body – always in our pockets, filled with apps that help us navigate through life. Likewise, artificial intelligence can also be considered as

an extension of humanity since we are teaching machines to perceive and interact with the world the same way humans do. The development of these technologies does not take place in a vacuum – it is driven by our habits as people. It is an extension of ourselves.

For Foucault, the study of media was essentially human. To understand media, one must examine not only its use, but its function in a larger cultural context (Goddard, 2015). Foucault's archaeological approach focused on what he calls "conditions of existence" (Parikka, 2012, p. 18). In other words, asking "why" – why was this made? Why does a particular device function a certain way? Why do certain media formats thrive while others die off? These questions are, at the core, cultural ones – they reveal important aspects of our society, like commerce and ethics. Similarly, Parikka believes that media archaeology can be used as a method to critique the world around us – be it politically, economically, or socially; “Novel assemblages consisting of already-existing material – whether material that is found or that is intentionally preserved in archival institutions – can be seen as fresh, interesting and even political.” (Parikka, 2013, p. 145). Considering this, Kittler's interpretation of materiality seems cold compared to Parikka's – media history is filled with failures, and by assuming that technological progress advances from simple to complex, one neglects a huge portion of media history. This reminds me of an old adage – history is written by the winners. However, we know now that victors are not always righteous, nor do they represent the best possible outcome. This is especially true when considering planned obsolescence. I plan on addressing this by making use of CRT televisions in a way that taps into the overlooked creative potential of their materiality.

2.2 Obsolescence

To Kittler's credit, modernity and technological progress did indeed have a pronounced effect on media archaeology. Science, war, and the effects of growing capitalism quickly widened the pool of emerging technologies (Greenstein, 2015). On the surface, this all seems great; new tech allowed artists and scientists alike to explore new modes of communication and expression. Naturally, this led to the abandonment of certain forms of media – the new replaces the old. The days of floppy disks and VHS cassettes have long passed. This is the process of obsolescence – a sort of rolling tide that eats away at the fringes of media history. Though more recently, the concentration of material assets and intellectual property into the hands of a few major tech players has interfered with the natural process of obsolescence and decay. Planned obsolescence, in particular, is a prominent practice in most of today's major tech enterprises (Morris, 2020). According to Hertz and Parikka (2013), the concept of planned obsolescence was popularized by Bernard London in 1932. London argued that the use and reuse of old tools contributed to the economic downturn of the Great Depression. He proposed a tax on objects used past their "obsolescence date". This would essentially mean that everything from shoes to shirts would have an expiration date. Thankfully, his ideas were only partially implemented, but the notion of planned obsolescence was nonetheless adopted by designers from the commercial industry.

Tech enterprises have exacerbated the erosion of media history by artificially speeding up the flow of obsolescence, making it increasingly hard to experience our past media culture. As reported by Paola Rosa-Aquino of the New York Times (2020), major corporations like Apple have received substantial criticism for outright orchestrating the planned decay of iPhone batteries, resulting in new legislation regarding the "right to repair". Additionally,

Apple has been a fervent opponent of the “right to repair” movement, claiming that they run the risk of losing trade secrets and blueprints by allowing people to fix their own devices. In essence, Apple fabricates demand and stifles competition by artificially shortening the lifespan of their products and making them nearly impossible to repair. All this in pursuit of profit, resulting in vast landfills filled with electronic waste which could have otherwise still seen use. According to a study conducted by Oko-Institut, a German sustainability research group, the proportion of household appliances that broke or ceased functioning within five years of purchase rose from 3.5 percent in 2004 to 8.3 percent in 2012. Evidently, this isn’t a sustainable model; especially considering the planet’s current socio-political and meteorological climate.

We are the first culture to experience our own archaeology on a daily basis. Consider all the drawers, closets, and garages full of obsolete technological junk that only a few years ago represented a healthy investment and pride of ownership, not to mention an aura of utility. [...] There they rest, undergoing a slow decay—the bleeding out of readability. (Demarinis, 2011, p. 211)

Studying the ecological context of electronic waste and obsolescence has gained some traction in media-archaeological circles. More recently, Parikka has taken a stratigraphic approach to these notions, mapping out the ecology of computers and the internet by tracing their path from raw mining materials to post-industrial waste (Parikka, 2015). This incorporates media archaeology into a wider cultural perspective in respect to obsolescence. As discussed by Parikka (2015), the notion of e-waste highlights the commercial sector’s excessive need for technological progress and the toxic results of said excess.

Obsolescence doesn’t just affect devices. Legacy data formats are quickly becoming unsupported and unreadable, locking certain parts of our history behind a thick wall of

obsolescence. Like lost languages, old game cassettes and VHS tapes are rapidly “bleeding out of readability” (Demarinis, 2011) along with a portion of our media culture and history. However, the extinction of historical languages is a relatively slow process compared to the obsolescence of technology and media. After all, Latin is no longer spoken commonly, but is still taught in a good deal of universities, unlike CRT repair or VHS restoration. As I’ve mentioned before, obsolescence devours history at an astonishing rate (especially electronic media history). From an affluent consumer’s point of view, there is no reason to fish discarded technological artefacts out from the past if there exists a modern counterpart. After all, why bother using an old, decrepit shadow-lamp when modern projectors exist? Under the lens of media archaeology, “value” is not only bound by the formal attributes of a particular device or medium – aesthetics, as well as cultural significance, matter just as much (and in some cases, even more) (Goodall, 2019). For instance, some contemporary filmmakers deliberately introduce film grain into their work, despite it being an artefact of bygone film technology no longer present in today’s video equipment (Wu, 2019). The same could be said for popular video/photo editing softwares that utilise filters like “Sepia tones” or “ISO noise”.

Aided by the passage of time, some of these artefacts eventually give rise to intangible qualities like personal attachment or nostalgia (fig. 3). In other words, objects can have an aura. Over time, said aura accumulates onto objects like sediment builds at the bottom of a river. Perhaps that’s why certain filmmakers like Quentin Tarantino and Wes Anderson still shoot their movies on film instead of digital – “I’m very hopeful that future generations will be much smarter than this generation and realize what they lost” (Tarantino in Smith, 2014).



Fig.3 - StarTrek, season 1, playing on a Compartment_Complex prototype. © Ke Medley, 2021

Invariably, people attach emotional significance to certain objects. After all, some collectors are still adamant that vinyl records “sound better” than more modern formats such as CDs (despite the fact that CDs have a larger dynamic range and don't require de-essing). Their arguments often revolve around the “warmness” of the medium (Matthews, 2014) – the soft crackle and minor distortions that are inherent to the analogue format. People don't always enjoy media purely for its technical quality. In some cases, the media itself isn't as important as the memories we associate with them. The crackle, hiss, and pop of old vinyl records or the static-filled sounds of old car radios remind us that we are listening to a piece of the past – it transports us back to a different time and place, like our first apartment or a long road trip under the cover of twilight. For myself, that sentiment is found in the memories I associate with CRT televisions.

This sonic technical ‘error’ and failure has been turned into a virtue and a symbol of postmodern experience, a marker of the state we currently live in, where it is possible to challenge and subvert linear progressive thinking about technology and expectations of audio ‘quality’. Our experience of listening to the ‘crackle’ of the past reminds us that we are self-consciously reconstructing something (both in terms of the object and its playback mechanism). (Goodall, 2019, p. 79).

The memory of simple domestic pleasures is what's at stake. Swept away by the stream of “progress”, analogue video risks being forsaken to the annals of history, like some sort of dead language. However, media archaeologists can interfere with this “decay” through subversion. The mere act of selecting, modifying, and displaying obsolete materials subverts their prescribed flow of obsolescence. Finding use and value in these devices, even through art and nostalgia, keeps them around against the grain of media history. Thus, electronic waste can become an object of contemplation, and not just of formal use. This act of artistic preservation resonates well with my interest in subverting the obsolescence of CRT televisions.

2.3 Subversion

A central theme of media archaeology is “Going against the grain” (Goddard, 2015) like a counterculture. This idea is commonly referred to as subversion. Plainly put, subversion consists of appropriating an object or practice and creating something unexpected with it. It is a form of critique – the challenging of expectations and the status quo (Riout, 2000). These aforementioned “expectations” vary depending on the object of study. In a media-archaeological context, subversion can manifest itself through the reimagining of media narratives and timelines. Parikka sees media history as “sedimented and layered, a fold of time and materiality where the past might be suddenly discovered anew, and the new

technologies grow obsolete increasingly fast.” (Parikka, 2013, p. 3). Even Kittler, with his progressivist approach to media, acknowledges the importance of viewing media history outside narratives. Instead, he posits the idea of thinking about media history in terms of “the recursive” (Parikka, 2012, p. 67). By appropriating parts of media history, media archaeologists can subvert the traditional narratives of progress, encouraging a rereading of the cultural, political, and technological implications of past media. For instance, the cultural implications of analog video media have dramatically shifted since their inception, to such an extent that video artist Nam June Paik’s use of CRT televisions bears renewed political and cultural significance. His trademark accumulation of CRT televisions can be read as a critique of consumerism and over-abundance, which is in line with a media-archaeological perspective of materiality and culture.

As it was touched on in the chapter about obsolescence, the environmental context of media plays an important role in media-archaeological studies. The obsolescence of analog video has resulted in a new category of trash, composed of objects which are totally functional, but readily discarded. Essentially, the excavation of “junk” and past media is a form of subversion by appropriation. Likewise, said junk has its own important role in contemporary art practices. Junk art, Arte Povera, and Nouveau Realism are just a few contemporary art movements that have found success in appropriating and subverting refuse and mundane material (Causey, 1998). Avant-garde artists subverted traditional modes of representation by way of appropriation. In fact, critics largely attribute the success of contemporary art with the growing importance of appropriation.

La contribution artistique majeure de cette décennie est, selon moi, l’émergence de l’appropriation d’images – le fait pour un artiste de reprendre à son compte des

images possédant déjà une signification et une identité établie, et de les doter d'une signification et d'une identité nouvelle. (Danto, 2000, p. 44)

Marcel Duchamp's "Ready-Mades" are popularly known as early examples of appropriation and found art. As the name suggests, "Ready-Mades" are unmodified (or sometimes lightly modified) found objects displayed as works of art. In other words, they are found (often in the streets) as "Ready-Made" works of art. Junk and destitute materials were used in order to subvert the elitism of art institutions and drum up an aesthetic unbound by formal principles. For Duchamp, found objects carried enough aesthetic value to support themselves without relying on formal qualities. Indeed, subversion by appropriation has a well-established history in the realm of contemporary arts – as it does in media archaeology.

As described, materiality, obsolescence and subversion are important notions in the field of both arts and media archaeology. Taken together, these concepts are not only useful for understanding the relations between the materiality of an oeuvre its technological processes, but also how to subvert them. I've shown that, within the context of media archaeology, subversion is often used to broach the topic of materiality and obsolescence. In the next chapter, I will be detailing how I applied these concepts in my practice and study of media materiality. These media-archaeological methods are based on a synthesis of Jussi Parikka, Erkki Huhtamo and Siegfried Zielinski's works, relying largely on subversion by appropriation.

CHAPTER 3

Methodology – A Media-Archaeological Approach

In my introduction, I gave a general overview of my installation, *Compartment_Complex*, of which was a key facet of my research. In this chapter, I'll take a close look at my process and the decisions I made along the way. To quickly sum up, my methodology is based on the proposed approaches put forth by several key researchers such as Jussi Parikka, Erkki Huhtamo, and Siegfried Zielinski. Generally speaking, I approached my research as a “tinkerer” (which I will explain in more detail in chapter 3.2) focusing on the subjects of materiality, subversion, and obsolescence. We'll be exploring these concepts through a study of alternative histories, hardware hacking, and art from obsolescence. Through the practical approach of materiality, my investigation aims to reveal the significance of obsolete analog technology in the present.

As I've mentioned before, the study of media archaeology is far from united, as are its methods – the use of the term has seen major divergences between several key authors (Goddard, 2015). Some theorists, like Siegfried Zielinski, have explicitly renounced the term (Zielinski, 2006). Huhtamo and Parikka have proposed calling it a “traveling discipline”, a collection of loosely related methods and practices not bound by a particular essence: “No effort will be made to nail down ‘correct’ principles or methodological guidelines or to mark fixed boundaries for a new discipline” (Parikka & Huhtamo, 2011, p. 2). Media-archaeological approaches often consist of a blend of different ideas from various fields. With the growing importance of digital and electronic media in media studies, the vast systems of exchange between the fields of art and science is becoming increasingly difficult to ignore.

There is a long history of science, technology and art collaborations which is the focus of, for instance, media art histories conferences and publications [...] media archaeology has historically resided in between academic departments (media studies, media arts, film studies, history) and arts institutions and practices. (Parikka, 2012, p. 14-15)

I began my research with that notion in mind – Like Parikka, I didn't set out to neatly define my practice or discipline. I was interested in creating something that pulled together the fields of art and technology in a novel way. At the beginning of this endeavour (about two years ago, in 2020), my knowledge of tech was relatively limited. Without formal education on the subject, I turned to the internet and Do-it-yourself (DIY) communities. I found that these communities exemplified the plasticity of media-archaeological practices – they are filled with tech-savvy folks whose interest in art, science, and technology parallel my own. It perfectly encapsulated the convergence of art and technology at the heart of media archaeology. Additionally, this sort of community-driven sharing of knowledge highlights the collaborative and multidisciplinary nature of art and technology; a good portion of art practices nowadays are the product of collaborative efforts between various disciplines and enterprises. Large-scale outdoor installations like those of Moment Factory require significant planning and preparation that involves people like city managers, programmers, gaffers, and more.

In line with this spirit of collaboration, I decided to host a roundtable discussion with professors and artists from Concordia University, UQAM, and UQAC¹. The goal was to gather people from various backgrounds to discuss certain issues regarding the treatment of technology, progress, obsolescence, and nostalgia in the realm of arts and sciences. Seven

¹ A recording of this event was posted online - <https://hexagram.ca/en/demo3-ke-medley-compartment-complex/>

people accepted my invitation: Samuel Meech, Ayam Sabah, Dimo Ivanov, Sonya Stoeva, Oli Sorenson, and Louis-Philippe Rondeau. What followed was an intriguing three hours of conversation, broaching topics such as digital looming machines, copyright infringement, and DIY practices. Samuel Meech, a teacher at Concordia University, experimented with analog looming machines. During our conversation, Meech contended that in many cases labeling these disused devices as “obsolete” wasn’t quite right – so long as these devices are used to create, they remain relevant. This sentiment is echoed in media-archaeological practices, where it is common to pluck objects from the brink of disuse and reuse or repurpose them. Each participant at this roundtable had such wildly differing approaches, demonstrating the multitude of ways in which artists approach the question of technology in their artistic practices. I found that, while my practice may have been pretty distinct from the other roundtable participants, we still shared strong commonalities. For instance, all participants were very keen on the notion of knowledge-sharing and open access to information; despite some minor disagreements regarding copyright issues, we were all very much in favor of increased exchanges between various artistic and technological disciplines. This really goes to show how important the wide dissemination of knowledge is to technological arts and media-archaeological research. In addition, simply by recoding this discussion about old technologies and the memories we associate with them, we did our part in preserving them – in our minds, and on tape.

My interest in collaboration partly stems from what I’ve learned from the avant-gardist sentiment of the 1960’s, where young artists “refused to restrict their work to one specific medium.” (Duguet, 2017, p. 20). My art, for instance, involves more than just my effort; the devices I use, such as my computer, and its software, are the result of countless hours of

research and development. A significant portion of this knowledge comes to us handed down by scientists and engineers. Indeed, many electronic artists such as I stand on the shoulders of giants. Nam June Paik was keenly aware of this while pulling apart television sets, in an effort to truly understand the inner workings of his medium. It's not just the computer code and parameters, but also the material construction of its components and the scientific principles that allow it to react as desired. Media devices are usually designed to serve a specific function, and it used to be that only those with expert knowledge could comfortably bend them to their will. With today's wider access to knowledge, even those on an amateur level can produce interesting results. Understanding the underlying scientific principles of electricity and the functioning of an electron tube allowed Paik to bend the medium in unexpected ways and produce novel visual experiences. Not only was he a video artist, but one could understandably compare him to an electrical engineer, or even a scientist. I fancy myself a tinkerer, and much like a scientist or engineer, I want to know what makes things tick at a granular level. Especially old tech.

Therein lies the starting point of my research – my interests could generally be summed up as the intersections between art, science, history, and technology. I am curious about the technical qualities of old tech – I want to understand how we got to where we are today. Though, this isn't to say that subjective qualities like aesthetics or cultural roles don't matter to me. Indeed, I argue that they matter just as much as formal qualities – there must be a middle ground that acknowledges the technical, cultural and aesthetic aspects of the medium. A marriage between such ideas can be found in media-archaeological approaches, mending the gap between art and science. In this case, I approach media archaeology as an artistic methodology: I investigate media culture and materiality in parallel. But how,

specifically, does one study media archaeology in an artistic fashion? Based on the work of Parikka, Huhtamo, and Zielinski, I have distilled a few approaches for achieving this – alternative histories, hardware hacking and art from obsolescence.

3.1 Alternative Histories

As mentioned in the chapter on subversion, media-archaeological artists can invoke media histories in their practice as a way to subvert institutional norms; “it is also looking for alternative presents and pasts – and futures.” (Parikka, 2012 p. 13). To better illustrate this, Parikka compares it to the treatment of cinema and film studies, where the current mainstream audiovisual culture was only one possible result from the mingling of various schools of thought. The same can be said of several other technologies. The modern cell phone is essentially an assemblage of various technologies that were once totally separate. Equally, video games are also the culmination of the disparate fields of computer sciences and entertainment. This cacophony of ideas is something referred to as “polylogues” (i.e. multiple dialogues) by Huhtamo and Parikka (2011). In my case, I wanted to create a “polylogue” that pulls the fields of art and technology in a way that subverts media history norms.

For Zielinski, the development of media does not progress in a strictly linear fashion. No matter how a given system or device is designed, it only represents a single instance of a possible present.

[T]he history of the media is not the product of a predictable and necessary advance from primitive to complex apparatus. The current state of the art does not necessarily represent the best possible state (Zielinski, 2006, p. 7)

In other words, Zielinski sees media archaeology as a method for deconstructing linear preconceptions of media histories. It serves as an opportunity to reexamine the past through the lens of technology. Think of steampunk for instance – this aesthetic genre was built upon the idea of a world dominated by steam power. From floating cities to gigantic cogwheel machinery, countless works of fiction make use of this premise. They fabricate alternative timelines and fantastical devices that are, in some ways, more advanced than our own contemporary technology. Like media archaeology, it is a reconstruction of the past through a reinterpretation of a bygone technology.

[...] the steam punk style is much more than a quirky bunch of people who wear corsets while building mad scientific experiments [...] It is a bag of mixed interests and hobbyist activities, as well as curiosity for technological knowledge that does not fall in with the usual sublimated way of approaching science and technology through simple linear progress myths that see old technology as just obsolete and uninteresting. (Parikka 2012, p. 1)

All this talk of “deconstructing linear preconceptions of media histories” and “reconstruction of the past” found in Parikka and Zielinski’s work leads me to believe that the notion of alternative media histories is quite strong in the realm of media archaeology. Though often associated with media archaeology, Zielinski isn’t known to be particularly fond of the term. He instead championed the terms “Anarchaeology” and “Variantology” (Parikka & Huhtamo, 2011, p. 10). Picking up on the prefixes “An” and “Variant”, it’s pretty clear that Zielinski was very interested in deviating from media-archaeological norms and finding new forms of expression. In using these terms, he sought to “junk” the theoretical foundations of media archaeology, opting for something closer to anarchy. For him, the idea of systemizing was a total nonstarter. “Siegfried Zielinski’s version of media archaeology is

a practice of resistance, not only against what he perceives as the increasing uniformity of mainstream media culture, but also against media archaeology itself’ (Parikka & Huhtamo, 2011, p. 10). Indeed, Zielinski categorically refused to systematize his approach. He preferred conducting “local” experiments, prioritizing openness above all.

“Discussing Foucault’s concept of an archeology of knowledge, Rudi Visker used the term “anarcheologie” more than ten years ago to describe a method that evades the potential of identifying a “standardized object of an original experience”. A history that entails envisioning, listening, and the art of combining using technical devices, which privileges a sense of their multifarious possibilities over their realities in the form of products.” (Zielinski, 2006, p. 27)

According to Zielinski, there ought to be more “traffic” between disciplines – a widespread curiosity that promotes the sharing of ideas (Parikka, Huhtamo, 2011, p. 12). Zielinski’s point of view echoes Parikka’s sentiment regarding the nomadic appeal of media archaeology.

Regardless of Zielinski’s semantics, I still believe his approach is very media-archaeological in nature – there is a distinct interest in media histories. The same could be said of my practice as well – for me, old media serve as a conduit to the past. More specifically, video games and CRT televisions are iconic figures of my past, my childhood, and growing up. Indeed, my most vivid memories growing up typically involve technology in a major way: sneaking upstairs to the living room to sneak a peek at some late-night Seinfeld or Star Trek while my father dozed on the couch... Early days of social media and cyberbullying... Fighting over the TV remote with my sibling while our parents were out... In a media-archaeological fashion, I dig through my personal media history, connecting with it by playing around with old tech. And like Zielinski, I conduct experiments with old tech as a way to reimagine history. This act of reimagining lets me preserve my past, much in the

same way a folkloric ode or a child's drawing tacked on the fridge does – it's a caricature of past events. The act of reimagining history also assigns renewed relevance to CRT televisions, making them seem a little fresher, which subverts their perceived obsolescence.

Additionally, I believe that CRT televisions have been prematurely tossed aside in favour of newer technologies – there is still a lot we can do with CRT televisions and a lot left to be explored. *Compartment_Complex* inserts itself into the canon of consumer CRT television media history and offers a novel perspective by subverting their typical use. Essentially, I wish to generate alternative media histories by “hacking” the obsolescence of CRT televisions and video games.

3.2 Hardware Hacking

“Hacking” is an interesting term. According to Oxford Languages (2021), the word “hack” derives from the old English word “haccian”, meaning – cut in pieces. In a “techie” context, the term “hacking” was popularized in the 1950s and 60s by the Massachusetts Institute of Technology (MIT) Tech Model Railroad Club (Raymond, 1999). It was used to refer to the modifications of their rail system with the use of computer equipment. In the modern vernacular, hacking generally refers to the gaining of unauthorized access to data, systems, or computers (Oxford Languages, 2021). Many people today associate the term with hacker collectives such as “Anonymous” and cybersecurity. Over the last recent years, there's been an increase in hacker attacks and data breaches, with Facebook and Equifax compromising the personal data of a combined 700 million people (FTC.gov, 2019). In mainstream culture, hackers are becoming a veritable archetype, with many TV shows – like *Mr. Robot* (2015) – centered around them. In essence, “hacking” consists of prying open a

system and investigating its inner processes, usually with the goal of producing data or some unexpected result. As such, hacking has a lot in common with the practice of subversion – though in our media-archaeological case, the focus is more on materiality.

Media archaeology goes *under the hood*, so to speak, and extends the idea of an archive into actual machines and circuits. Perhaps still hardware enthusiasts, and definitely materialists, but continuing their archaeological methodologies by hardware hacking and circuit bending, this new kind of media archaeologist moves from historical time to machine time such as network routing and channelling, Ethernet traffic rhythms, and processor patterns. (Parikka, 2012 p. 84)

In the context of media archaeology, hacking can otherwise be seen as a “bending of the rules” – going *under the hood* and finding new or unintended applications for certain devices, perhaps even rethinking their roles in society. This means subverting their intended use by going beyond the typical use-case. Media archaeologists often express this by practicing “circuit bending” (Hertz, Parikka, 2012). Circuit bending largely consists of “hacking” consumer electronics for the purposes of creating novel sounds or visual outputs – “The process of circuit bending typically involves going to a second-hand store or garage sale to obtain an inexpensive battery-powered device, taking the back cover of the device off and probing the mechanism’s circuit board.” (Hertz, Parikka, 2012, p. 426). The term “circuit bending” pops up regularly in media-archaeological work and tends to promote a sort of pedagogical “tinkering” that is often favoured by those without formal training. This type of practice is very “hands-on”, finding a lot of popularity in DIY communities and other artistic media-archaeological methodologies.

However, to bend the rules there must be rules in the first place. In other words, there needs to be a basic framework in place; and like Jacques Derrida says, you can’t “Jazz” if you don't clearly understand the rules of music in the first place (Goodall, 2011, p. 75). With

the popularization of DIY open-source endeavours and the internet, once-complex tools have become accessible enough for media-archaeological tinkerers and artists to learn the “rules” and bend them. Owing to this, a media archaeologist can be an experimental electrician, mathematician, performer, physicist, musician – all rolled up into one. In fact, Canadian artist Garnet Hertz likens media archaeology to an artistic practice closely related to DIY culture. To boot, he states that circuit bending and other exercises are “closely related to the political economy of information technology” (Hertz, Parikka, 2012, p. 425).

Furthermore, "circuit bending" is an amusingly literal description of a major portion of my process. The way Parikka and Hertz describe it, circuit bending is a very pedagogical activity that pairs well with informal DIY practices, which resonated nicely with what I was trying to achieve. In fact, it felt more like playing than anything else – wires sticking out everywhere, “doodads” connected to “thingamajigs”, buttons and joysticks... My studio truly seemed like a playroom with toys strewn wildly about (fig. 4).

It can also be akin to the aesthetics of ‘outsider art’, where the aim is to interpret and create outside of the conventional values of training and instruction – a truly free form of expression. (Goodall, 2015, p. 76)

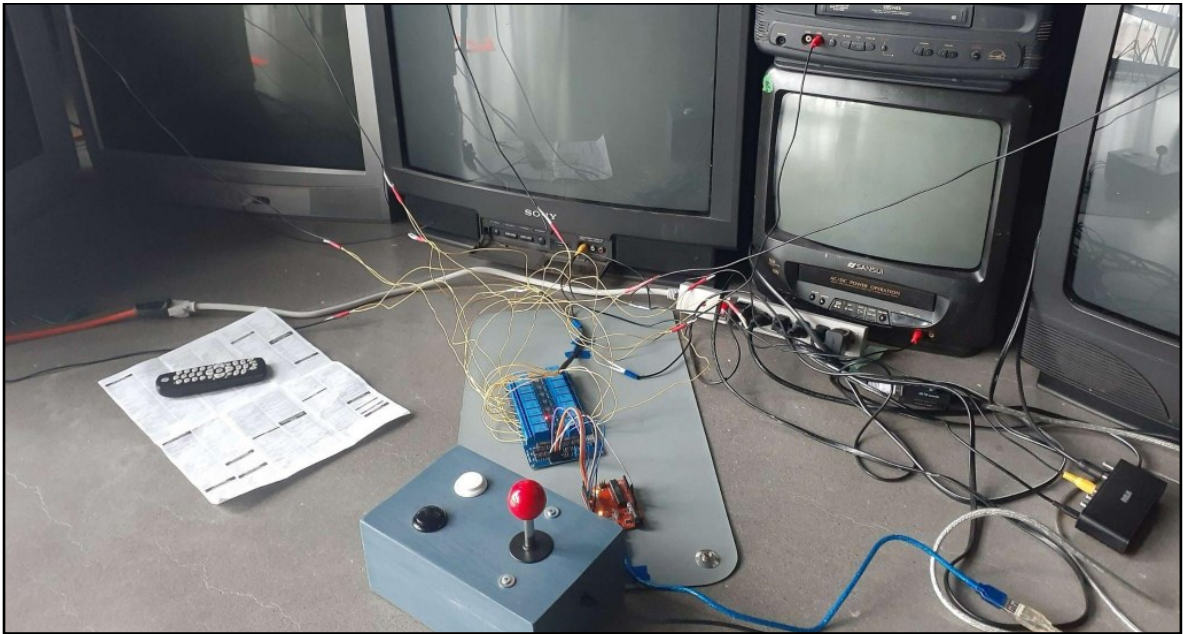


Fig.4 - *Compartment_complex*. Early prototypes 2020. © Ke Medley, 2021.

As a tinkerer, I often feel like a bit of an outsider. With my level of knowledge being around the same as a hobbyist, I sometimes feel like a barbarian storming ancient Rome.

From the start, I've had a very "hands-on" approach to the whole process; instead of drawing up detailed plans, I just went ahead and tested the media directly. Hacking the material processes of CRT televisions allowed me to subvert their obsolescence in a tangible way, which resonated well with my hands-on approach. To me, this felt a lot like playing around. This isn't a necessarily negative thing – my creativity really shines during play. In my case, it brings forth spontaneity, which is essential when jazzing and experimenting with new ideas.. Moreover, my purpose in practicing media archaeology is to produce something new, something that subverts the traditional use-case. Though spontaneity can naturally lead to the occasional error, it can also lead to new and unexpected solutions. A personal example: at the start of my research, I experimented with coaxial wiring. This type of connection seemed ideal since it carries both audio and visual signals. The problem was that the video

signal passed through the relay despite it being turned off. Upon closer examination, I discovered that the issue was due to something called “crosstalk”. Unlike low-voltage electrical signals in circuits, video signals can sometimes leap over small gaps – they can pass through the air, much like a radio signal. To fix this, I tried replacing the coaxial wiring with a composite cable (they are smaller, threaded cables popularly known as RCA wires), which did handle the signal correctly. Thus, a solution was found (fig. 5). By producing this unintended behavior, I was able to learn something new about coaxial signals I may have overlooked otherwise – an error ended up enriching my experience.

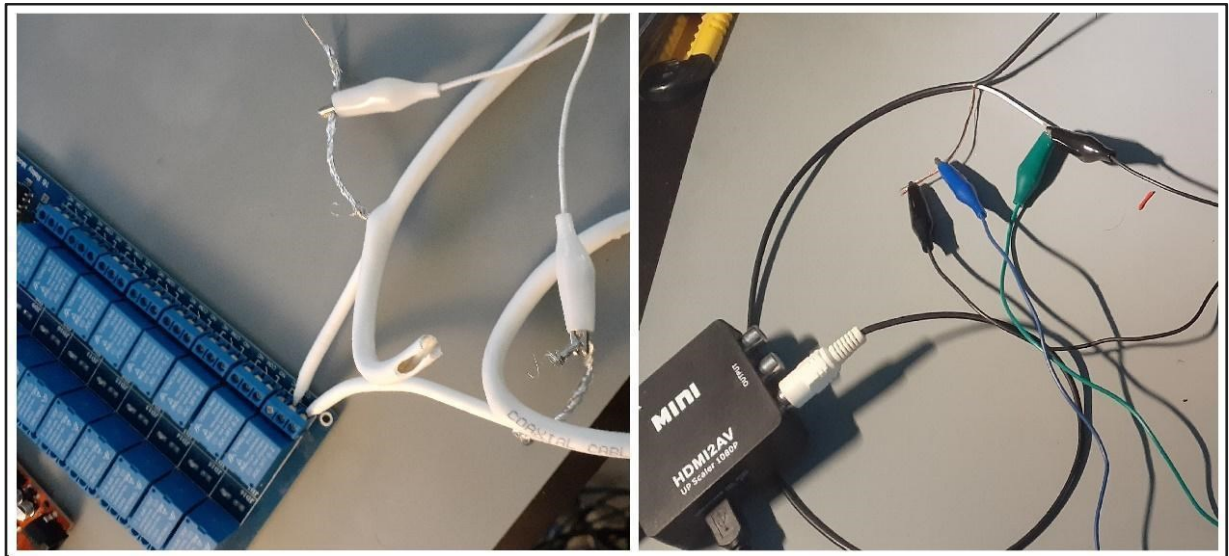


Fig.5 - test with coax cabling and subsequent composite cable fix. © Ke Medley, 2021.

For me, making mistakes is part of the fun, and it teaches me things I might have missed otherwise. Errors are an interesting way to highlight particularities and explore the fringes of certain devices, which, as Goodall puts it: “has exciting possibilities for media archaeologists where the ‘faults’ and ‘errors’ become part of the interpretive experience and the critical reading.” (Goodall, 2011, p. 79). I think that's a lovely way of looking at media history – through the interest in certain media’s peculiarities, rather than whether or not it was deemed successful.

3.3 Art from Obsolescence

Media history is replete with media objects, formats, and technologies that have left the sphere of common use, which typically occurs when newer alternatives arise (DeMarinis, 2011). Therefore, media history is heavily driven by the flow of obsolescence. Like history in general, it is the fluctuation from one state to another. As such, examining the various reasons why certain technologies fall into obsolescence is a solid way of studying media history, which is why obsolescence occupies a significant role in media-archaeological practices (Parikka, 2013). Indeed, a significant portion of media-archaeological research focuses specifically on objects and artefacts of past media cultures.

Media archaeology is introduced as a way to investigate the new media cultures through insights from past new media, often with an emphasis on the forgotten, the quirky, the non-obvious apparatuses, practices and inventions. (Parikka, 2013).

Like Parikka, I argue that past media artefacts don't automatically lose their value once they leave the sphere of common use. As mentioned in chapter 2, artefacts from past media cultures are imbued with a qualitative aura that makes them interesting as political, cultural, and even aesthetic objects. Think about visiting a history museum – all those ancient artefacts on display evoke something within us: curiosity, nostalgia, wonderment, and inspiration. There's always something to love in old objects and media. In my case, I love CRT televisions because of their particular glow and electric aura. However, one must be careful to not fall prey to “novelty”. As entertaining and interesting as some historical objects may be, a researcher should always be looking out for how and why they've ended up as they are. This means paying close attention to how past media devices operate and understanding why they are being replaced or obsoleted.

Media archaeology is always in danger of veering towards excavations of curious instruments and odd gadgets just for their own sake and hence losing the wider political contexts in which technology takes part. (Parikka, 2013, p. 144)

Engaging with and learning from past media cultures is meant to help us understand our current media culture. Indeed, practicing media archaeology often consists of consolidating the past and the present (and sometimes potential future!) (Huhtamo, Parikka, 2011). Like the popular adage states – the past repeats itself. Huhtamo’s concept of *topoi* dictates that media culture is a cyclical phenomenon, and that certain topics are recursive. What’s more, even Kittler agreed that media history ought to be thought of in terms of “the recursive” (Parikka, 2012). What is old is new again.

Similarly, Contemporary art historians, critics and artists like René Payant and Arthur Danto have consistently underlined the importance of citing and dialoguing with history; to them, the past acts as a basin of inspiration and references that can either complement their artwork or serve to critique it (Payant, 1987; Danto, 2000). This pedagogical reexamination of the past complements media-archaeological approaches very well, like Zielinski’s anarchy and his stated interest in non-linear history – “one that is as, if not more, interested in the ‘losers’” (Goddard, 2015, p. 14). I am similarly interested in the “losers” – the technologies and media that have fallen out of favor, such as CRT televisions. In my case with *Compartment_Complex*, my use of multiple CRT monitors isn't an attempt at superseding or improving upon single-monitor setups as if it was some sort of competition. Rather, I am simply offering an alternative perspective of the possibilities.

In summation, the concepts of alternative history, hardware hacking and art from obsolescence resonate strongly with media archaeology’s interest in addressing materiality,

obsolescence and subversion. Electronic media – in terms of materiality, history, and art – is a bountiful well of inspiration that can be re-examined and recontextualized at any given moment through the lens of alternative history. Furthermore, the eroding tide of obsolescence eats away at the vast kingdom of imaginable uses and applications of old media – it leaves many avenues and possibilities unexplored. Though, subverting materiality through hardware hacking allows us to interfere with the exacerbated flow of obsolescence. By creating art from obsolescence, we can uncover new ways to experience materiality, preventing the loss of media histories. This again not only pairs well with media archaeology’s interest in obsolescence, but also subversion. In the next chapter, I will be detailing how I achieved this with the construction of my installation – *Compartment_Complex*.

CHAPTER 4

Analysis – Art through the lens of Media Archaeology

The below graph may appear daunting, but it is not meant to be taken as a hard piece of concrete data (fig. 6). Rather, it is a graphical rendering of my impressions of the flow of obsolescence as I have observed it personally over the years.

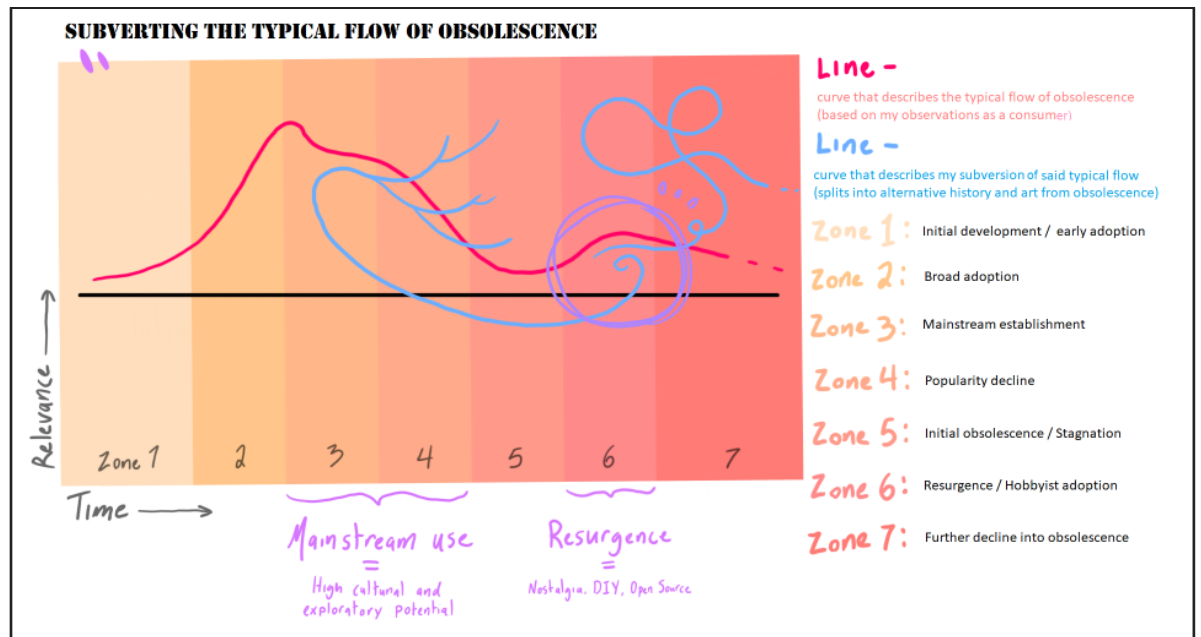


Fig.6 - Graph representing my personal impressions of the flow of obsolescence. © Ke Medley, 2022.

Like the zones indicate, the typical flow of obsolescence (depicted with a reddish-pink curve) begins with an upward curve that illustrates the initial adoption of a device/media into the mainstream. This upwards trajectory is interrupted by a brief period of stagnation, followed by a steep drop in relevance (perhaps brought on by the rising popularity of some sort of competing tech). After this decline, something interesting occurs – some time after leaving mainstream use, there comes a sort of curious resurgence (circled in violet). Hobbyists, DIY enthusiasts, and tinkerers (perhaps fueled, like myself, by nostalgia) come together and bring new relevance to obsolete tech.

The blue line illustrates how my artistic methodology applies to this typical flow of obsolescence – nested firmly in the “resurgence” period, it splits into two parts:

The first one, which curves back into the “mainstream establishment” phase, demonstrates my interest in alternative histories. It curves back into the past, like I do when I reflect on how CRT televisions have affected me. It ultimately branches into various imaginary possibilities – one new idea inspiring the next. I look at these old devices as both windows into the past, and windows into other possible – alternative – histories. For that, it is important to consider the significance they held during their broad adoption: what they meant to us when they were a bigger part of our daily lives.

“Media” are not only related to the established institutions of modernity. They are also manifested in the narratives of madmen, religious visions, theories about the psyche and the body, and other recurring issues associated with technological modernity. But the term imaginary media does not refer only to the human imagination as a site for fantastic modes of communication. It can also mean extensions of the notion of “media” in theories of the mind and the brain. (Parikka, Huhtamo, 2011, p. 24)

The second split, which moves forward, demonstrates my interest in subverting the eventual decline of obsolete tech into the forgotten annals of history – giving them new meaning or importance, but not in a necessarily progressive fashion.

The above graph represents the first step in my analysis. This analysis is very self-reflective, and often relies on comparisons with similar practices. As mentioned in the previous chapter, art historians, artists, and critics alike have consistently underlined the importance of crosstalk between various disciplines and practitioners. Indeed, we often situate ourselves and our practice by drawing comparisons with existing models, such as other artists and movements – political or artistic. Movements throughout art history and

media studies are essentially collectives of like-minded people, rallying those still wading in the dark waters of the art world – those who adhere to particular movements often present certain similarities, like their philosophy, practice, style, or approach. Conversely, artists and researchers also cite each other in order to establish opposition to certain ideas. Regardless, positioning oneself in relation to another (either in accordance or opposition) is situating. As such, my analysis heavily features comparative analysis. As Zielinski puts it, the idea here is not necessarily to systemize, but rather to situate my installation – *Compartment_Complex* – in relation to bodies of work that already exist (Zielinski, 2006).

4.1 The Materiality of *Compartment_Complex*

Throughout this thesis, the subject of materiality has been brought up repeatedly. When discussing media archaeology, the subject of materiality is inevitable – from Kittler to Zielinski, several key theorists and artists in this field have explored the concept in some fashion. As claimed by Parikka (2013), materiality is especially important when discussing the issue of obsolescence. It's no wonder then that it is a fundamental aspect of my research; [...] a brief glimpse into various activist contexts of addressing obsolescence, demonstrates, the importance of the 'material' is very central to media-archaeological artists (Parikka, 2013, p. 150)

Specifically, my research engages with the materiality and obsolescence of analog video and CRTs through a technical and cultural lens. While theorists like Kittler would have you believe that technological progress is autonomous (Barlow, Leston, 2012), I, like Foucault, don't believe that is entirely true. Rather, it is an exchange – technological progress both influences and is influenced by culture. Yes, the advent of television, video games, and

the internet can be traced back to scientific inventions like the oscilloscope (see Tennis-for-Two) and ARPANET (Wolf, 2012; Quillan, Riche, Rosen, 1980), but once a device makes the leap from scientific endeavour to consumer product, their development is profoundly influenced by culture. Let's take the 1980's "format wars", for example – despite being the technically superior format (better sound, higher image resolution and stability), Betamax tapes ended up succumbing to the rival VHS format (Brookey, 2007). Surely, this was largely due to the cost and recording time, which suited consumers more, and perhaps also because of Sony's refusal to allow pornography on their platforms (Brown, 2008). As such, I believe it's a little unwarranted to value scientific over cultural influences as Kittler did.

Back on the topic of CRTs – undeniably, they've had a significant impact on our consumer culture. It's more than simple nostalgia – CRTs had been the standard for video entertainment for nearly 60 years, and they were ubiquitous. CRTs were found plentifully everywhere from office buildings to high school computer labs to the homes of millions. Moreover, they've had a profound impact on me personally – growing up, video games were played on CRTs. Same thing could be said for Saturday morning cartoons and movie nights. Today, however, it's a bit difficult to find any such thing at a school or office. Some CRT monitors still lurk around in the deep recesses of government offices (who are known to be slow to change) or gather dust in old homes and garages. I feel a pang of melancholy whenever I spot a junked CRT tossed over on the side of the road, waiting to be carried off by waste management. This is another reason why Kittler's approach to materiality seems cold to me – there's a whole lot of life to be found in forgotten and junked media. One cannot ignore the humanity associated with certain materialities.

Moreover, CRT televisions are also interesting from a technical point of view. With a bit of know-how, CRTs can produce fascinating effects, unique to their medium. Nam June Paik likely never considered himself a media archaeologist, but due to the changing role of analog media and television in the face of digital tech, it's clear to see how his work could be construed as media-archaeological experiments. His work was special in the sense that it engaged with both the technical and cultural aspects of the medium – from *Magnet TV* (1965) to *Electronic Superhighway: Continental U.S., Alaska, Hawaii* (1995), Paik touched on materiality as well as politics. Another example, the “*Wobbulator*” invites viewers to mess around with certain parameters to produce effects derived from analog media. With the twist of a few knobs and dials, you can directly interact with the materiality of media pasts. Indeed, interacting with or exploring media history by creating new uses and applications is a very popular approach within media archaeology. So, I did exactly that with *Compartment_Complex*.

Inspired by my childhood and my experiences with video games and analog video, I hacked together a system of composite cables and relay switches to visually distribute a video game across an array of CRT televisions from a single video output. Like Zielinski, my approach wasn't systematic, but more experimental and “jazzy” (Zielinski, 2006). During my experimentations, I found that video games presented a new and effective way of experiencing materiality. A few decades ago (from the 70s to late 90s) video games used to have quite a strong connection to materiality – especially during the height of arcade popularity, as they basked in the sights and sounds of the dazzling array of arcade lights, the smell of cigarettes and stale popcorn. Who could forget the eponymous “console wars” waged between Sega and Nintendo? That whole era was dominated by the question “Who

had the best hardware?”. Some old game cartridges even tried to dazzle consumers with colored or bedazzled shells, making them appear as ornate objects perfect for shelf display. What’s more, gaming magazines and physical print were a thriving ecosystem where rumours, speculation, cheat codes, and the like were gathered and shared. People collected those magazines, as did I. But today, a significant portion of video games and their surrounding culture has migrated towards a state of immateriality – most games are now purchased digitally (Statista, 2021), and game disks are mostly vestigial. Usually, most of a modern game’s content is downloaded from the internet during installation. The internet, too, has quashed physical print. On the other hand, there’s also been a growing interest in preserving gaming artefacts from the past – “retro gaming” has been on the rise for a while now. While some aficionados are content with emulating retro experiences on modern computing devices, others are more attracted to the original artefacts; some original copies of *Tetris* (1984) go for several thousand dollars in today’s market – not because it is technologically relevant, but because it is an important part of history in some sense.

Video game historians, collectors, conservators, etc. are not just interested in the formal qualities of ancient games – they see them as a new way of experiencing the past. Indeed, not only are video games a major facet of media history, but also have a fundamental interactive component. As opposed to static objects, the relationship between a video game and its player(s) is far more dynamic – there is a perpetual feedback loop of action and reaction between the audience (player) and the game. The fact is the “experience” only occurs so long as the audience participates – without their input, there is no art. Therefore, it avoids being a passive decorative commodity. It’s not something that can be hung on a wall and

passively gazed at. Video games require interaction, which makes them great tools for experiencing materiality. You get to literally “play” with history.

4.2 Subverting Obsolescence

As its name implies, media archaeology is particularly concerned with artefacts of bygone eras. Like an archaeologist dusting some clay pot fragments at a dig site somewhere in Egypt, I explore media technologies that have been buried by the sands of obsolescence and are no longer part of the mainstream. Moreover, I preserve these media artefacts by reimagining their use and perpetuating their relevance. This gives people that experience my work the opportunity to interact directly with the past in novel ways.

Parikka describes media archaeology as a practice that assigns new significance to obsolete technology, independent of its use value (Parikka, 2013). This recycling, as such, acts as a form of retention, and stands in complete contrast with models projected by tech industries: “[...] this idea points towards the need to look at media too in terms of their long-term relations that radically steps out of the short-term use value that is promoted by capitalist media industries.” (Parikka, 2013). For instance, my installation *poument_Complex* consists of a network of hacked CRT televisions which offers a new take on media history – a history that promotes CRTs as a creative medium, rather than its eclipse through obsolescence. The way I see it, this serves as a method for subverting the conventional “old replaces new” narrative of mainstream media histories. This sort of subversion is something that I’ve linked to media-archaeological practices several times throughout this paper.

Picking up on Derrida’s notion of jazz again, a collective of musically spirited circuit benders known as *ELECTRONICOS FANTASTICOS!* have widely experimented with

electronic waste, producing full-blown musical instruments with junk tech. Band members use anything from old barcode scanners to CRT televisions to produce musical tones. These experiments are a great example of junked and obsolete media being repurposed in highly imaginative ways which radically step out of their typical use-case. Hertz and Parikka refer to this obsolete junk as “Zombie Media” – artefacts that are commercially and culturally dead, but still artistically or politically viable (Hertz, Parikka, 2012).

Assembled into new constructions, such materials and ideas become zombies that carry with them histories but are also reminders of the non-human temporalities involved in technical media. (Hertz, Parikka, 2012, p. 429).

I find that the term “Zombie Media” is a pleasantly colorful way of describing this technology, and is quite apt as well. Like Frankenstein’s monster, the primordial zombie, dead media is assembled into imaginative constructions, imbued with something distinctly human. “Reviving” old media gives us a chance to study our relationship with tech and helps us evaluate whether that relationship is healthy or not.

In parallel, the exploration, manipulation, and subversion of consumer goods are fairly common in contemporary art practice. Take junk Art, Dadaism, Nouveau Réalisme and Pop Art for instance; all those avant-garde movements were trying to make their own point about capitalism and industrialism (Causey, 1995). While each movement shared the belief that mundane commercial and industrial objects are charged with artistic value, they clearly did not agree on where it came from – some argued it came from abundance, others from retention. A good deal of avant-garde artists wished to circumvent the commodification of their art – nouveau réalisme artists like Arman gathered mundane objects of everyday life into arrangements of refuse. Other artists like Yves Klein even got away with selling empty

space for gold coins (which he promptly tossed into the Seine River). As such, found objects, junk, performance, and conceptual work (including empty space) became increasingly popular methods of subverting institutional norms.

The focus on consumption within Pop Art was predicated on ideas of abundance and replacement: however many cans of soup are consumed, there will always be more. Nouveau Realism – particularly the work of Arman and Spoerri – was concerned more with retention, as if the basic motivation was a fear of loss. The critic Françoise Choay pointed out in 1962 that the present becomes the past so fast that unless in some way preserved it disappears without a trace. (Causey 1998, p. 89)

That last line – “the present becomes the past so fast that unless in some way preserved it disappears without a trace” – closely resembles the effect obsolescence has on media technology. Nowadays, planned obsolescence has become an institutional norm – one that is ripe for criticism and subversion. For example, Oli Sorenson’s *Video Pistoletto* (2014), critiques the prescribed flows of planned obsolescence by smashing LCD screens and morphing them into performance artifacts. By doing this, Sorenson heightens their intrinsic values – they become objects of contemplation rather than vehicles of representation.

Faithful to the principles of Arte Povera, I work with a technological material destined to be impoverished, following the effects of planned obsolescence. Once damaged, these are transformed into concrete objects, like Heidegger’s tools which only manifests themselves to our consciousness once rendered dysfunctional. (Sorenson, 2015)

In addition, Sorenson deflects any question about technical functionality to instead discuss how electronic media can address contemporary issues. In other words, what does it mean? Again, the screens aren’t simple containers of art – they are the art in and of itself. This reminds me of Duchamp’s *Fresh Window* (1920); By rendering the window panes opaque with leather, Duchamp sought to bring attention to the window itself rather than whatever

lies behind it. Though, since Duchamp's "Ready-Made" work, our relationship to media has changed significantly. For one, a significant portion of American household goods are either electronic or computerized. More than ever, screens and virtual images have become abundant, disposable, and mundane. No longer are ads confined to the eponymous "commercial break" since modern screens and televisions are used ubiquitously as advertisement displays at the mall and even billboards on the side of the highway.

With that in mind, video artists can certainly use the materiality of video media to question their abundance and commercialization. In the case of Nam June Paik, this abundance is criticized through his accumulations of CRT displays. The practice of accumulating material is astonishingly prominent in contemporary art practices – a quick Google search of "Arte Povera" or "Nouveau Réalisme" produces an extensive array of examples, ranging from piles of clothes (Michelangelo Pistoletto, *Venus of the Rags*, 1967) to heaps of rubbish (Arman, *Petits Déchets Bourgeois*, 1959). For my part, my approach to accumulation relates closely to Arman's work – it presents a distinct interest in the preservation of our industrial past. Like Arman, my appropriation of junked CRT televisions is also an act of retention, rather than consumption (Causey, 1998). CRT televisions aren't being manufactured anymore, at least not at a consumer scale. Now that analogue media is subject to the ravenous tide of progress, a portion of our media and industrial history risks vanishing into the annals of history. Just a blip in history that will eventually be forgotten, despite the importance they once held. This "fear of loss" (Causey 1998) is what motivates me to preserve what's left.

At the same time, this accumulation and preservation is a form of criticism of abundance. Nam June Paik's CRT arrangements for example – from *Mirage Stage* (1986) to

Electronic Superhighway: Continental U.S., Alaska, Hawaii (1995), the multiplicity of CRT screens reads as a nod to the encroaching prominence of video media in everyday life. Today, flat-panel displays are ubiquitous. Thanks to their abundance, they can be easily replaced for a relatively small sum of money – further encouraging their proliferation and disposability. Playing on this, *Compartment_Complex*'s individual components aren't especially interesting on their own. For the most part, it's a simple collection of garbage – loose RCA wires, thrifted CRTs, and cheap electronic components. The components can be replaced, as can the computer that runs the software. However, their disposability is subverted by exalting them as artistic objects. In addition to being composed of junk and obsolete tech, the game (software) can only be fully experienced in person, with the complete installation. It cannot be distributed online for a wide audience, since much of the experience relies on hardware and materiality – the electrified air that tickles the skin when the screen flickers on, or the particular glow cast by the cathode-ray tube. As such, it avoids commodification. Instead, what's interesting is the experience that emerges from the assembly of said components. All these little qualities come together to form the unique effects produced by the materiality of CRT screens, necessarily experienced in-situ.

I've stated before that video games have migrated towards a state of immateriality – long gone are the days of arcades and elaborately colored game cartridges. Shelves full of game collections are becoming rarer by the day, slowly being eclipsed by digital libraries. Digital media is taking point at the expense of materiality, and our attention is being focused entirely on what is on-screen rather than the world hidden behind it. This explains *Compartment_Complex*'s use of a monochromatic palette – I wanted to draw some attention away from the screen. Video artist Peter Campus achieves this in his works by transforming

observers into both subjects and objects at the same time. With his installation *Negative Crossing* (1974), Campus pulls attention away from the represented image and instead focuses it on the subject, which is materially present. Like Campus, my goal was not to dazzle and distract with flashy colors and effects but to increase focus on the material dimensions of the oeuvre.

At a time when this medium [video] was still being discovered, and when the building of early synthesizers encouraged endless, visually colorful disintegrations, Campus never merely cultivated effect. Just the opposite. It was not a question of effect, but of relevance. (Duguet, 2017, p. 30)

Again, it's to some degree like Duchamp's *Fresh Window* (1920) – the focus isn't what's on the other side of the window, but the window itself. I wanted to create something that was more than just entertainment, something that made people think about the material they were interacting with. So, by bringing attention back to the material aspects of analog video media and subverting their traditional applications, not only does *Compartment_Complex* address the issue of obsolescence, but also critiques video game industry norms.

4.3 Some Self-Reflecting

Before concluding, I wanted to address a few shortcomings. First and foremost, I am unsatisfied with the game's format. While I am generally satisfied with the material components of my oeuvre, the game itself seems lacking to me. This, mainly because the game was developed with Unreal Engine. I sought to align myself more closely to post-consumer tools and materials. Considering media archaeology's relation with circuit bending and DIY practices, using such a powerful commercial tool seemed a little disingenuous. Ideally, to program my game I would have made use of an open-source engine (such as Godot) or even materially interesting devices such as arcade cabinets or chip-based game

formats (For example: Corey Archangel's *Super Mario Clouds*, 2002). To address this shortcoming, my future work will need to rely more heavily on DIY practices and open-source endeavors.

Indeed, using electronic devices in arts can be a bit of a tricky thing, since so much of their mechanisms remain completely out-of-reach to most artists. Computers and programs are designed to be used in a certain way and only those who have truly expert knowledge can bend them to their will. Personally, whenever I use the electronic media, I feel as though I am standing on the shoulders of giants – reaping the rewards of decades of scientific progress in which I did not participate. Furthermore, the fabrication of digital tech requires a sustained and international group effort, from sourcing raw minerals to assembling transistors. These materials and components are often sourced in an unethical fashion, making it difficult for artists to pronounce themselves on certain cultural/political issues without sounding hypocritical. By using recycled materials, I hoped to mitigate some of those concerns so I may discuss these topics without being bogged down by hypocrisy.

The second issue I came across was the game's content. While the gameplay's perpetual nature compliments my criticism of media history's linearity quite well, the game's narrative itself does not address these issues much. It is mainly a reflection of my psyche and has very little to say politically or culturally. While that isn't entirely negative (it does give my work a poetic edge), *Compartment _Complex*'s narrative could have been used to vehicle certain ideas about obsolescence and the like. As it stands, it is nearly entirely self-reflective. As such, I feel as though there's a bit of a rift between the material aspects of the oeuvre and game's content.

Though, what initially motivated me to embark on this research into my practice was some vague feeling of needing to look back. Was it nostalgia? Melancholy? Homesickness? I thought this experiment would help me clarify things. Along the way, my research became more about the academic and formal aspects of my work, and a sort of professional distance began to form between my research and art. In the end, I learned a lot about the technical aspects of my work and process. I learned about the importance of obsolescence and materiality – I forged associations between my work and the artistic concepts of obsolescence and materiality (as presented in the works of Parikka, Huhtamo and Zielinski). I also learned a lot about the process of others, and how I could apply what they discover to my work. But at the end of the day, I never got to explain (to myself and others) who or what those “little computer people” are that inhabit the halls of *Compartment_Complex*. This portion of my work is important to understanding the more personal aspects of my relationship with the technology I make use of. Briefly, they represent aspects of my life, like the mundane day-to-day things like anxieties, routines, and memories.

I also came to think about Little Computer People, a computer game for the Commodore 64 (1987). In its promotional campaign, Activision pretended they had found little people living inside computers. The idea of the product was to persuade one of them to live in a “House-on-a-Cassette,” a software application where the person’s routines could be observed and interacted with. The project must have been influenced by the well-recorded popular beliefs in tiny people living inside radios and TV sets. (Parikka, Huhtamo, 2011, p. 28)

If I had to do it over again, I think I'd dedicate a few more pages about what my work means to me, on a more personal level. Additionally, I would dedicate more effort to finding open-source or crafty alternatives to major commercial solutions (*i.e.* Unreal Engine vs Godot). Despite these issues, I would consider my research generally successful. My stated goal was

to subvert the obsolescence of analog video. By using CRT television to create a novel experience, I believe I did just that.

CONCLUSION

From the outset, my first goal was to find a way to subvert the obsolescence of analog video. Obsolescence threatened a portion of my past that I desperately sought to preserve. I was already aware that the preservation of industrial and cultural objects was a prominent theme in avant-gardist movements of the 1950s and 60. But with the rapid progression of technology since then, our industrial and cultural landscape has dramatically changed – computer and electronic devices are totally ubiquitous, and obsolescence occurs on a nearly daily basis. As stated by Causey – “the present becomes the past so fast that unless in some way preserved it disappears without a trace”(Causey, 1998). Upon further study, I found that media archaeology offered a solid framework for studying and halting the flow of obsolescence through an artistic lens. Based on my reading of several key authors such as Parikka, Foucault, Zielinski, and Kittler, I extracted a few key tenets which I used to lay the groundwork for my research. I found that the focus of media archaeology is divided between the material and cultural facets of past media devices. On one hand, Kittler fosters a progressivist attitude while Foucault views it more as a cultural study. Regardless, materiality is a focal point of many media-archaeological studies. Furthermore, the issue of obsolescence features heavily in media-archaeological studies since it is a vehicle by which media objects fall into history. Yet, with the act of subversion, media archaeologists can fish these objects from the brink of memory and assign them renewed relevance.

Being that media archaeology is often linked to tinkering and DIY practices, I found several useful artistic methodologies well suited to my practice. Alternative histories, hardware/software hacking and art from obsolescence – all these methodologies feature

heavily in the works of Parikka, Huhtamo and Zielinski. My takeaway was – media-archaeological practices often revolve around creative experimentation and reinterpretation of past media objects, the goal being to subvert their obsolescence. Like them, I sought to subvert the obsolescence of analog video by generating new forms of mediated experience. With *Compartment_Complex*, I created a novel experience that allows people to interact with the materiality of media history in a way that subverts the prescribed obsolescence of analog video.

My second goal, like nearly any other type of research, was to learn – and I very much have. Originally, my research was fueled by nostalgia – I felt a longing for a long-gone period of my life, and I sought to recapture it. However, throughout the course of studying media archaeology and writing this paper, that sentiment slowly evolved into a much deeper concern over media and technology. I came to realize the importance that obsolescence plays in shaping media history, and the impact it has on the world around us. Indeed, obsolescence is deeply implicated in many facets of our lives, such as economics and ecology.

There's a lot more to say about obsolescence and its impact on our world. While this paper focuses more on media, the issue of obsolescence touches nearly every facet of our lives – from automobiles to textiles (Barlow, 2012). Being that obsolescence involves several disparate fields of study, I follow Parikka, Huhtamo and Zielinski's call for increased polylogues. As researchers, artists and tinkerers, there is still so much we can do together.

BIBLIOGRAPHY and REFERENCES

- Barlow, A. J., & Leston, R. (2012). *Beyond the blogosphere: Information and its children*. ABC-CLIO.
- Brookey, R. A. (2007). The format wars: Drawing the battle lines for the next DVD. *Convergence*, 13(2), p. 199-211.
- Brown, D. (2008). *Porn & Pong: How Grand Theft Auto, Tomb Raider and Other Sexy Games Changed Our Culture*. Feral House.
- Bulow, J. (1986). An economic theory of planned obsolescence. *The Quarterly Journal of Economics*, 101(4), p. 729-749.
- Causey, A. (1998). *Sculpture since 1945* (Vol. 25). Oxford University Press.
- Clement, J. (2021, May 5). Digital and physical game sales in the U.S. 2009-2018, by format. *Statista.com*. <https://www.statista.com/statistics/190225/digital-and-physical-game-sales-in-the-us-since-2009/>
- Danesi, M. (2018). *Understanding media semiotics*. Bloomsbury Academic.
- Danto, A. C., & Hary-Schaeffer, C. (2000). *L'art contemporain et la clôture de l'histoire*. Éditions du Seuil.
- DeMarinis, P. (2011). Erased dots and rotten dashes, or how to wire your head for a preservation. In H. Erkki & P. Jussi (Eds.), *Media archaeology: Approaches, applications, and implications* (p. 211-238). University of California Press
- Federal Trade Commission. (2019, July 4). FTC imposes \$5 billion penalty and sweeping new privacy restrictions on Facebook. *FTC.gov*. <https://www.ftc.gov/news-events/press-releases/2019/07/ftc-imposes-5-billion-penalty-sweeping-new-privacy-restrictions>
- Goodall, M. (2019). 3. *The ghosts of media archaeology*. *New media archaeologies*, p. 69.
- Goddard, M. (2015) *Breaking Open the Black Boxes: media archaeology, an archaeology and media materiality*. University of Westminster
- Greenstein, S. (2015). *How the internet became commercial*. Princeton University Press.

- Huhtamo, E., & Parikka, J. (Eds.). (2011). *Media archaeology: Approaches, applications, and implications*. University of California Press.
- Matthews, D. (2014, April 19). Vinyl's great, but it's not better than CDs. *Vox.com*. <https://www.vox.com/2014/4/19/5626058/vinyls-great-but-its-not-better-than-cds>
- Morris, C. (2020, February 7). “Apple hit with \$27 million fine for slowing down french iPhones.” *Fortune*. fortune.com/2020/02/07/apple-iphone-slowdown-update-fine-france/.
- OGC-00-33R Department of Commerce (July 7, 2000): Relationship with the internet corporation for assigned names and numbers (PDF). *Government Accountability Office*. p.6
- O'Regan, G. (2012). *A brief history of computing*. Springer London.
- Parikka, J. (2013). *What is media archaeology?*. John Wiley & Sons.
- Parikka, J. (2015). *A geology of media (Vol. 46)*. University of Minnesota Press.
- Payant, R. (1987). *Bricolage picturale, Vedute. Pièces détachée sur l'art 1976-1987*, Éditions Trois
- Raymond, E. S. (1999). *A brief history of hackerdom*. DiBona, Ockman y Stone, Open Sources, y www.tuxedo.org/~esr/writings/cathedral-bazaar/hacker-history/(primera versión 1992).
- Restany, P. (2003). L'autre face de l'art. *Inter*, (85), p. 14–15.
- Riout, D. (2000). *Qu'est-ce que l'art moderne?*. Gallimard.
- Restany, P. (1990). *60/90 Trente ans de Nouveau Réalisme*.
- Rosa-Aquino, P. (2020, October 23). Fix, or Toss? The “right to repair” movement gains ground. *NyTimes.com*. <https://www.nytimes.com/2020/10/23/climate/right-to-repair.html>
- Sharpe, W. F. (1969). *The economics of computers (Vol. 150)*. Columbia University Press.
- Smith, N. (2014). Quentin Tarantino blasts digital projection at Cannes: “It’s the death of cinema.”. *Indiewire.com*. <https://www.indiewire.com/2014/05/quentin-tarantino-blasts-digital-projection-at-cannes-its-the-death-of-cinema-26176/>
- Sorenson, O. (2015). *VIDEO PISTOLETTO @FILE FESTIVAL*. [Olisorenson.com](http://olisorenson.com). https://www.olisorenson.com/art/pisto_file.html

Wolf, M. J. (2012). *Before the crash: Early video game history*. Wayne State University Press.

Wu, R. (2019, november 4). How Hollywood gets the “film look” using digital cameras. *PremiumBeat.com*. <https://www.premiumbeat.com/blog/how-hollywood-gets-film-look-using-digital-cameras/>

Zielinski, S. (2006). *Deep time of the media: Toward an archaeology of hearing and seeing by technical means*. Mit Press.

ANNEX 1

Tech Sheet – Compartment_Complex installation

Physical characteristics

The installation consists of a computer, a game controller and 11 CRT televisions of various sizes and make. 10 CRTs are stacked together and are placed against a wall (measures approximately 3x1x0.5m). A separate, smaller CRT is placed apart, about 1.5 m away. The controller can be placed either on the ground or on top of the separate, smaller CRT television.

Required Equipment

Provided by the artist:

- A USB key containing the game program
- A Display case containing the console (50 cm x 30 cm)
- A Raspberry Pi 3B+
- A USB game controller
- Component cables and connectors

Provided by the venue:

- A computer (min specs: Windows 10, Intel I7-6700 3.40GHz CPU, 16GB RAM, Nvidia geforce gtx 1060 3gb GPU)
- A pair of speakers (or headphones, alternatively)
- A plinth (approx. one-meter cube) or something to conceal the computer
- Audio cabling (the audio coming out of the computer is the standard 3.5 mm mini jack)
- A black bean-bag chair or other low seating.
- 11 CRT televisions (3:4) of various size and make (range – 12” to 35” across)

Shipping requirements

The CRT televisions (excluding the computer, console, game controller speakers and plinth) fit within a 9'11" x 6'4" x 6'2" (LxWxH) truck. Total weight is approximately 260-300 kilograms. If the venue does not provide a computer, the artist may provide his own

(approximately 15 kg shipping weight). The console is 50 cm x 30 cm and weighs approximately 2 kg. The bean bag chair is approximately 25 pounds.

Space Requirements

- The main television stack measures approximately 3x1x0.5m
- A wall at least 3 meters wide
- The space must be dim enough to use a CRT television
- The space must be quiet enough to hear the output of the speakers

The artist will arrange the CRT televisions himself or with an extra pair of hands.

Electrical requirements

CRT stack – 120v, 60-100Hz, 1200 watts maximum.

Computer – 120-240v, 50-60Hz, 600 watts maximum.

Mediation requirements

The installation requires a periodic reset. The televisions should be turned on and off in the morning and evening, as well as the game program. Any software issue can be handled remotely by the artist via a remote desktop connection.

Other requirements

A reasonable-speed internet connection is required (wired or wireless).

