

Redundant Technology: Disrupting Lineal Narratives

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Abstract

The cathode ray tube (CRT) found in television sets, radar, oscilloscopes and legacy computer monitors, like many redundant technologies have been integral to Installation and Video Art since their first documented use in galleries in the early 1960s. Despite a steady decline in their production since 2005, the recent use of CRT's by video and installation artists continues in the work of artists such as Justene Williams (*Crutch Dance*, 2011), Pia Van Gelder (*Apparition Apparatus*, 2012) and Tivon Rice (*Burn-In Portrait # 1*, 2007-2010). Most of the literature in the field of CRT's in contemporary art, such as Miller (2013), Ratti (2013), Stumm (2004) and Laurenson (2005) focuses either on the material logistics of the use of CRT's and future curatorial implications, or their utilization as 'electronic canvases' - conduits for pre-recorded/transmitted images. This paper explores the use of the CRT in video installation art in an attempt to distinguish, categorize and define modes of disruption to the mainstream lineal narrative of media consumption caused by artists using what are commonly deemed obsolete or redundant technologies.

Keywords

Cathode Ray Tube, Materiality, Recycle, Remediated Technology, Waste Cycles, Disrupted Technological Development, Redundant Technology

Introduction

Artists have utilized CRT's either in their contained 'shell', or television encasing or as "tubes" removed from their cases, as in the works of Gary Hill. On the flip side many artists have used retro fit-outs, where new tubes or flat screen plasma or LCD technologies have replaced faulty CRT's, as in many of Nam June Paik's works. [1] Regardless of how they have been utilized, the actual physical form of the CRT remains crucial to the functioning of many works that rely on them as core components, particularly in a historical and sculptural sense, incorporated into the apparatus of modern art works.¹ This is the case with Gary Hill's installation *Between Cinema and a Hard Place* (1991), where upon instruction from the artist, the Tate Modern in London purchased a stock supply of the exact

¹ Increasingly as physical (real) vintage items themselves - material manifestations based on virtual fetishization of the old/antique - remediated forms.

same models of CRT monitors used by Hill in the original work for conservation purposes.

The work consists of twenty three monitors of varying sizes, the outer shells of which have been removed...Hill indicated that the cathode-ray-tube monitors are fundamental to the meaning and aesthetics of the work, and therefore replaceable with others of the same type and dimensions, but not different format....[2]

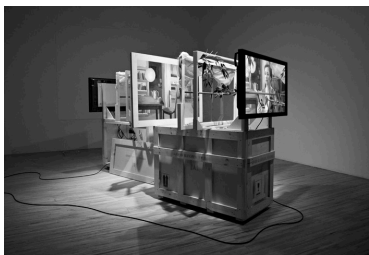
The fact that the CRT is replaceable at all in the works of prominent artists alludes to the primacy of content in many, if not most moving image based works. More importantly, it highlights the impermanence of technology, it's movement through cycles of redundancy, development and renewal.[3] Hill, in allowing for the replacement of the core elements (the CRT) in *Between Cinema and a Hard Place* (1991), would initially seem a kind of purist preservationist of the historical and material importance of the work, yet in many ways it serves as a reminder of how that very historicity is bound by restrictive conditions dictated by its material economy and production system.[4][5] It is calling for a degree of precision and historical accuracy in the preservation of art, but simultaneously admitting the failure of technology to allow this to happen without ostensibly reproducing retro technology for the sake of future preservation. The physicality of the work becomes a secondary consideration. From a media artists' point of view, this may well be an unavoidable restriction. The materiality of the artists' toolset is cast aside when the machine begins to fail or break-down, the specter of failure becomes a natural extension of the media artist's ritual when making new work. [6]

Video art differs from video installation art in this regard, making the use of CRTs for displaying video art works more of a novelty. A cursory survey of most video art based archives indicates that moving image based works made when CRTs were the prominent, most readily available technology for display, can be viewed on other formats without interfering or disrupting some form of reference, homage or direct link to the CRT or even television itself. In other words, most video art could be displayed via a projector, LCD or plasma screen, or digitally on the net, without objection from the artist.[7]

High-Res Futures: The CRT in the modern world

We are entering an era of vastly improved moving image capture and playback formats. Video resolutions of up to 8k and extremely high frame rates, are the consequences of an ever expanding market place for cheaper and more accessible video technology and vast amounts of funding for materials and military research underpinning this growth. Their development was originally a response to the inaccessibility of film, and its associated costs, but also the proliferation of television and the electronic image. Video and media installation artists are embracing new technology, developing new works that utilize the immersive capacity of higher resolutions with an enthusiasm comparable to that of film makers and artists riding the “Electronic Superhighway” and embracing the CRT and video in the 1960s and 1970s.

Whether consciously or not, a preference for higher resolution displays and projections has prevailed, helping to explain the proliferation of projection based work in the 1990s and the widespread use of plasma and LCD screens from the late 1990s onwards. Recent works such as Adad Hannah's *Two Views*, 2011, indicate a continuing sensibility with regard to the types of screens video installation artists choose. The work consists of two plasma screens, two window frames, two painted renditions of a scene, two taxidermied birds and a set of props, neatly packaged into a crate which is unfolded and installed as a small pseudo-film set in a gallery. A scene from Hannah's teenage years was re-enacted and shot on HD video and then replayed via a HD media player on the Plasma screens themselves. Aside from the simplicity of the work and the possibility of the box or packing crate as a metaphor for how our memories are stored, the materiality and technicality of the piece seem integral to the artist's vision.[8] Works such as Hannah's indicate that the use of higher resolution LCD, LED and Plasma monitors carry as much concern for materiality as the deliberate use of CRT's in early 21st century media art practice, re-iterating a concern with materiality, or object as integral to the overarching aesthetic of a work. It is this concern with materiality, meaning and aesthetic considerations that we can apply to developing a paradigm for viewing the CRT in contemporary work.



Figure(2 (photo courtesy of the Artist 2015)

There are many modes of CRT usage in video installation art, yet there are three basic ones that could be classified as modes of *disruption*. They can be applied to most legacy or outmoded electronic objects used in artworks as well. They are; 1) *Sculptural*: where the work utilizes the CRT as a deliberate sculptural form which is crucial or central to the works overall *raison d'etre* and aesthetic, either as a functioning electronic device or as an unpowered physical object, taken out of its habitat and hence disrupting narratives about technology which profess a linearity, or specific trajectory as normal; 2) *Time Based*: where the CRT is utilized for some form of moving image portrayal or playback, be that through live broadcast or playback as its sole function, replacing more modern technologies, which are more efficient and streamlined, hence disrupting our expectation of how an image is to be viewed in the present – decontextualizing the viewing experience and 3) *Spatio-Temporal*; the dynamics between 1 and 2, but also where the CRT(s) used in the art work evoke(s) an awareness and acknowledgement of the spatiality afforded to it (them) with regard to the degree of immersion experienced by the spectator in a given space. This is where the artist utilizes the CRT as a deliberate strategy of disruption, where the CRT stands out as a statement against (or for) waste, and the apparatus or systemic complacency that allows this waste to occur. These descriptions are not intended as complete, unequivocal modes of CRT usage, but rather, as explorative guides in helping us to develop a better understanding of their usage in contemporary art. But more importantly, as ways in which the use of the outmoded can be disruptive. Each of these classifications could be broken down further into sub-categories, in media archeological exploration, specifying age, cultural significance, size, or shape, screen dimensions, fragility, and a plethora of other criteria. For the purposes of this paper, as an exploration of the CRT as redundant technology in contemporary art disrupting mainstream lineal narratives of media consumption, I will briefly focus on and develop the three basic modes mentioned above; *Sculptural*, *Time Based* and *Spatio-temporal*.

The cathode ray tube; sculptural and spatio-temporal

The history of the CRT spans back to long before artists began using them in art works and before the Television first started mass production in the 1940s. Its physical origins emanate from scientific experimentation in the 1870s. It is composed of two main elements, a glass blown tube with a phosphor coated larger end, and an electron gun at the narrower end. The cathode ray is named after the negative electrode from which it is discharged, *the cathode*. The cathode rays (e-beams or streams of electrons) are fired from a cathode metal electrode to an anode one, illuminating a phosphor coating on the face of the larger end, which lights red, green or blue on impact in the case of color, or a monochrome surface for black and white. The invention of

the CRT paved the way for television. The exact origins of the television are contentious in that the original patent taken out for the concept in 1923 by Vladimir Sworykin was never brought to fruition. It took the curiosity and experimentation of a 14-year old North American teenager Philo Farnsworth, to initially devise the idea of transmitting images over the same airwaves utilized by radio, using John Logie Baird's mechanical television, first demonstrated it in the United Kingdom in 1926 as a template. In 1928, in a Lab funded by investors in San Francisco, Farnsworth demonstrated the first fully electronic image replication device utilizing a CRT. In its purest form, projecting from the idealistic intentions of Farnsworth the television could be said to be as close as we have ever come to time travel. The invention of radio and telecommunications in the 19th century allowed for information to travel vast distances immediately, creating a new degree of mediated experience. Visual literacy was being reinvented and translated simultaneously. If film allowed a moment of time to be captured, to be held still and grasped, re-evaluated and re-contextualized, then television allowed time to be shared across vast spaces in real time, and questioned space itself in a way not previously possible. According to Fredric Jameson "...visual media are challenging the dominance of older linguistic media. The most powerful form of this 'critical and disruptive challenge' is video whose 'total flow' threatens the physical and temporal differences that constitute linguistic meaning..." [9] Linguistic meaning was being redefined through the development of a new visual language.

The use of the CRT as a core component in many contemporary works in terms of its *spatio-temporal* qualities, historicity, and materiality, in many ways embodies an homage to its historical development and experimental technological roots. To some this may be described as retro-appeal, to the artist however, it may be a deeper search for meaning in the history underlying their practice, what Jussi Parikka(2012) refers to as "Media-Archeological Time Machines".[10] For example, North American artist Tivon Rice's works *Burn-in Portrait #1* and *Burn-in Portrait #2* (2007-2010) where CRTs, removed from their cases, have self portraits "burnt" into the phosphor via a three year long exposure process. Rice exposes the CRT screen by playing a looped still of a portrait on a DVD player repeatedly over a three year period until the image is 'saved' or etched onto the phosphor on the screen. Once the image is burned into the CRT, Rice removes the DVD player and the monitor stands alone as a portrait piece independent of its transmission source.[11] The CRT is essential to this work, a case where an attempt to weigh the historical significance of the materials used against a "more elastic approach, which accepts the substitution of certain elements, and allows for the work to be brought "up-to-date"[12] as advocated by Pip Laurenson, becomes almost impossible,

at least without replicating the artists process and hence remaking the work altogether.



Figure(4) Tivon Rice, *Burn-in Portrait #1* (2007-2010)

Works such as Rice's *Burn-in Portrait #1* are exemplary versions of new work utilizing outmoded technology. [13] The re-assigning of use value or degree of re-purposing, and the possible re-ignition of demand for what are becoming increasingly items of nostalgic pastiche to some, yet historical homage to others, seem representative of a shift in cultural values assigned to items of historical value in general. By freezing an image on a CRT, Rice is freezing the television, burning into and destroying its reason for being by damaging it, in many ways disrupting a flow of technological development. Yet he is simultaneously reaffirming its function as the bearer of images, regardless of the type or mode of image, he is at once rejecting the moving image and announcing the primacy of any image or more specifically the portrait, on what Kaminer terms the "insignificant", the obsolete, redundant, (discarded) object.[14] Drawing on an "object as memory repository" use of the CRT and other obsolete technology maybe inadvertently developing new cultural meanings and associations with the re-used objects.[15] The dominance and scope of digital technologies has rendered most analog technology seemingly redundant and cast to the care of enthusiasts and collectors, for whom these items acquire a new value. The proliferation of faux-vintage apps on mobile devices has surpassed the vintage technology market in the west in terms of scale and reach, but also alludes to a wider trend "...to create a sort of "nostalgia for the present," an attempt to make our photos seem more important, substantial and real" [16] In fact to give all media, audio, written, video, a nostalgic appeal so as to ground it in some form of remediated historical legitimacy. [17]



Figure(5) Electronics factory in Shenzhen 2005

We are primarily concerned here with how the use of CRT's in contemporary art affect what seems to trend as lineal narratives of consumption as espoused by mainstream media consumption and neo-capitalist production cycles. By *lineal narrative* I mean the monumental shift away from the CRT. It's phase out in the West as it's production remains constant in the developing world, creating a dual system of significance - a parallel meaning, based on emerging and declining technologies.[18] By placing the CRT in a historical context and continuum of technological development we begin to reveal a deeper significance behind their use in contemporary art.

Time based Low-Res Futures

For many artists' life itself is the frame. Song Dong's *Waste Not* (2009-2013), is an installation piece where the artist places ten thousand items ranging from plastic buckets and kitchen utensils to electronic goods, which belonged to his parents, spanning decades, categorically on the floor of the gallery. Each item used and collected by his parents, to be passed on to their children in times of need. Placed near the center of the installation are five old (CRT) television sets. For Song Dong the significance of all of the objects lay in the memories they contain and represent. For him they are very definitely historical objects. The televisions themselves represent our ability to interpret, relay or even to propagandize our lives back to one another. We implicitly accept their role, or function by switching them on. Switched off, they are things collected by Dong's parents, before, during and after the Cultural Revolution in China. They are suddenly integral and significant, a very pertinent part of a broader social story, of hardship, repression, fear, escapism and entertainment. Yet they are simultaneously a part of the insignificant materials that surround them. There is an eerie quality of beauty in the way these once treasured items are arranged and displayed. A proud yet disturbing presence of hoarded goods, things we have come to see as waste rather than functional objects with a value, but more importantly a use value which formed part of a human being's very existence, one which contradicts and disrupts a lineal narrative of technological development, where the human cost of production is conveniently subsumed into the apparatus.[19] As the CRT is slowly phased out of production it will become increasingly difficult to view as merely a functional object in contemporary art. It's obsolescence will either heighten the degree to which a referential materiality becomes essential to the art, as in the work of Rice and Hill, or signal it's non-essential nature and hence the primacy of immateriality in any given work. Whether by choice, intention or accident, the use of redundant technology in early 21st century art practice remains a disruptive and important practice, jilting/glitching the inevitability of technological progress, with questions about the ways humans value and categorize waste and propositions about ways to re-value and reconsider what is outmoded, obsolete or redundant.

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