Make or break?
Concerning the value of redundancy as a creative strategy

There is a contradiction at the heart of digital art making, regarding its temporal mediality and relationship with a mainstream visual arts practice that values permanence. Why do we wish to preserve something temporal and fleeting? Will the preservation of digital works contribute to a process of commodification that many media artists have sought to avoid by embracing the ephemeral nature of digital media? Are there reasons that would justify preserving digital works of art when, for some artists, redundancy is a key principle in their practice?

A cultural determinacy?

Art is generally valued according to a set of established criteria that include authenticity, originality, craft skill, uniqueness, rarity, provenance and its state of preservation. Modernist artists, as early as Dada but more often since, have sought to question or overturn these criteria and establish alternate value systems, where mass production, appropriation, temporality, decay and transience are fore-grounded. Established artists, as diverse as Tristan Tzara, Kurt Schwitters, Andy Warhol, Judy Chicago, Donald Judd, Robert Smithson, Joseph Beuys, Carolee Schneeman and Nam June Paik have, through various strategies of production, contextualisation and mediation, proffered alternate models of artistic value.

Smithson's Spiral Jetty stands as an emblematic work in this regard - unownable, more or less impossible to preserve, being subject to the vagaries of its environment, produced emploing heavy earth moving equipment and regularly transformed through natural weathering and chemical processes, perhaps the only conventional criteria of value such a work sustains is its singularity and thus rarity value. Spiral Jetty stands as one of the iconic post-war American art works, a touchstone for generations of artists since, probably because it breaches so many of the established values we conventionally associate with art objects.

The digital arts share many characteristics with work like Smithson's. The digital and media arts have their roots in 1970's post-modern culture - the first generation of media artists, including Robert Breer (recently deceased), Pauline Oliveros, Stan van der Beek, the Whitney's, Paik and many others, often members of Fluxus, emerged

during the 1960's and were central to an artistic culture that would prove influential beyond its domain, feeding into conventional visual art practices as well as other disciplines, such as music, literature and performance, and facilitating the emergence of novel art forms. These artists focused on process and action, not craft and the final artifact. They were, admittedly, often obsessive in their use of materials, but they generally avoided fetishistic strategies, often choosing the abject and quotidian over the rare and rarified. Many of these artists used materials that, by their nature, could not be preserved. Their rationale for such choices were not just aesthetic but often socio-economic.

A second generation of digital artists can trace their origins to this same cultural milieu. Larry Cuba, Jeffrey Shaw, Roy Ascott and others have produced works that employ media platforms that are by their nature unstable and unfixed, focusing value on transience and momentary experience. For these artists the attraction of digital media was not just the potential of such systems and tools, or how these systems allowed reflection upon what was rapidly becoming a mediatised culture, but also the innately fleeting character of the art works and experiences that could be produced. Their artistic rationale was to circumvent the traditional values of the visual arts and, especially, the art market. This was, in many cases, a political imperative.

Today we have a fourth generation of digital arts practitioners, in an established domain in the creative arts with a 50 year history. At risk of generalising, this generation of artists is arguably more pragmatic than their forebears. However, it is the case that much digital arts activity remains focused on unstable media and is undertaken at either the margins of the mainstream visual arts world or out-with it altogether. Why is this? Could it be that the ideals of generations of experimental artists have had limited impact and the traditional values we earlier identified, as underpinning the commodification of art, sustain the determination of the canon? It seems that few collectors are willing to invest in art works that might survive for only a few years - or even minutes or seconds. Few private collectors are keen to get involved in the expense of developing novel preservation techniques for those digital art works that may have the potential to be conserved. The art market and thus, to a considerable degree, mainstream visual arts practice, is driven by private collector's cheque books. You have to "follow the money" to find "where the action is", and it is not in digital art. This was publicly affirmed, by Ekow Eshun, when he announced the closure of London's Institute of Contemporary Arts' Live and Media Arts department, citing its "lack of cultural urgency" (Gardner 2008), by which he meant mainstream

(nee, market determined) interest. Eshun's subsequent departure from the ICA was possibly not unconnected with the political fallout of that decision but was mainly due to the parlous state of the ICA's finances. In this there is a comforting irony for artists engaged in the media arts.

Nevertheless, the ICA aside, there are a number of public museums investing in developing media arts (including digital) conservation programmes. Tate, MoMA, the Stedlijk, SFMoMA, the Pompidou and a few others are leading on this work. A smaller number of specialist institutions, such as ZKM, the Daniel Langlois Foundation (which has today announced it is donating its entire collection to the Quebecois Film Council as its founder departs engagement with the sector), Nederlands Media Arts Institute and the BFI, are also doing important work in this area, as are a number of academic research programmes. The work of Jon Ippolito on the Variable Media Initiative, is notable, previously curator at the Guggenheim, responsible for media arts, and now Professor at the University of Maine (Depocas et al, 2003), as is that of Steve Partridge, with the Video Rewind project at Dundee University and Scott Rettberg at the University of Bergen with the European Electronic Literature Knowledge Base. This is all important work but it largely focuses, quite reasonably, on developing conservational techniques for works that the institutions involved have in their collections. By definition, most of these works are by artists who are part of the canon of contemporary art, if only because these institutions have collected their work. As we have observed, much of the activity in the digital arts remains at the margins, or outside, of the mainstream art world and very few digital works are in such collections.

Most digital art work produced is never likely to be collected, privately or institutionally. Many of the most important works in the field will escape their clutches, often because, as previously noted, artists choose to employ creative strategies to ensure this will be the case. What will happen to this work? If it is lost then it will never be part of the documented history of the domain and, as we know, history consists of what we document. Does it matter if this work is lost? If it does matter then will it fall to future archeologists, those whose job it is to reveal what has been lost to history, to recover what they can of such works? If so, then what will they recover?

Errki Huhtamo's and Jussi Parikka's recently released book, Media Archeology (Huhtamo & Parikka 2011), indicates that this is not a problem of the future but of the

present and, even, the recent past. Many digital art works have already been lost as the media platforms and other dependencies they rely on are superseded by new operating systems, chip-sets and entirely new kinds of media. Some artists speculated that the internet would function as an eternal proxy preservation medium but many works that have network software or hardware dependencies or employ network protocols have been lost as the technology of the internet has evolved. Many net art projects are no longer accessible, often poorly documented and references to them might only exist in third party media. Igor Stromajer, for example, has just completed deleting most of his online work from his server, removing it from the internet (Stromajer 2011). Works such as Stromajer's would seem to present a class of art that now requires the attention of archeologists rather than historians.

There are some who are suggesting that we are witnessing the demise of the home computer and the evolution of a new platform that offers an experience that, whilst highly interactive, does not possess the profoundly adaptable and interactive characteristics of a fully programmable computer. These new devices are typified by the smart phones, tablets and iPads that proliferate in consumer culture. Core to the design of these devices is the separation of reading and writing. By this, I do not mean conventional writing, as it is possible to undertake word processing on these devices - although that may involve purchasing add on hardware, such as keyboards, to render the writing experience tolerable. I am using the word "writing" here in the profound sense of being able to "write the machine" and make the medium. This is one understanding of what media art can be - not art that employs media but art that fashions media.

A technological interdependency.

Alan Turing's original conception of the computer was of a symbolic machine - a machine that exists as a symbolic description operating on those symbols according to the descriptions, thus operating on itself and the symbols and descriptions that compose it. Turing's machine is a writing machine that can write and re-write itself. In this sense it is a machine with inherent agency. All computers, to a greater or lesser extent, are instances of Turing's original vision. Some programming languages have been developed in order to render these symbolic ontology's explicit, as they are "written" (for example, Prolog). Most computer operating systems are designed to be highly configurable and re-programmable, either by easy to use drag and drop or clickable preference panes or through the re-writing of the "boot" algorithms that run

during the start-up of the computer. These "preferences" are symbolic descriptions of what the computer is - its capabilities, processes, dependencies and properties. Within the scope of the hardware it is possible to create many different types of computer by manipulating these algorithms. It is also possible to automate this process, so that symbolic systems (for example, computer programs) are able to create their own descriptions of what a computer might be. Many computer viruses are designed to do this.

Generally the more configurable a machine is, especially at a low-level approaching hardware dependencies, the less easy it is use, requiring, as you would expect, a significant knowledge of computational theory and technology. However, as computers have become pervasive in our society and used for a wider range of activities they have also become easier to use. This is, generally, a good thing, enhancing our productivity, experience of things and even facilitating novel forms of expression and experience. However, computers become progressively easier to use at the risk of denying the user the capability to reprogram or reconfigure the machine. This is the case with many consumer-oriented devices, such as consoles, smart phones and tablets. These machines remain computers in so far as they can run software, perform calculations and interact with external phenomena, like the user's touch. However, they are not "writing machines" in the sense of Turing's vision. It is true that software can be written to be used on these devices - but such software is not written on the device. Rather, it is written on a computer and installed on the client device. Thus it becomes difficult to describe a smart phone or tablet as a "writing machine", in the sense Turing conceived the computer, and thus equally difficult to consider such devices as computers. Their precise status is somewhat unclear.

Is this a problem? It can be argued it is. As smart mobile devices replace computers, as current sales projections suggest they will, those who exclusively use such devices will be unable to "write" their own machines. On many levels this may not appear a significant issue. Most current computer-users do not seek to build their own computers or learn computer programming. However, this emerging scenario evokes the classic dichotomy between production and consumption, the chasm between user and producer. Karl Marx, and numerous other socio-economic thinkers, have written on what happens when people have no access to or power over the means of production. Ted Nelson (Nelson 1974), has argued that the computer is an inherently revolutionary device as it offers the user access to the

means of production, allowing them to redefine those means by reconfiguring the machine itself. For such apostles of computer liberation the arrival of the smart device popularises the technology they helped develop whilst sounding the beginning of the end for their utopian vision.

What has this to do the preservation of digital art?

A reading and a writing.

The issue here is literacy and being able to read *and* write; where it is important to be enabled to create something - a text, a machine, a world. This is what artists do. They are people who, through high levels of literacy, are able to create shared experiences, both imaginary and real, symbolic and material. To my mind interesting art works are those that enable the reader to participate in this process of making and becoming, whether by the exercise of their imagination, through the process of interpretation, or by materially or symbolically changing the work itself in some manner. In the case of digital art this interplay of reading and writing has been enabled at the level of the symbolic codes that describe the machine, the medium, that materialises the work. In these works the explicit processes of "writing" are as dynamic and motile as their potential "readings".

It could be argued that to appreciate writing one needs to know not only how to read but also be a writer - if only for the quotidian task of composing an email or school essay. Like the book, the computer is a platform that is as good for writing as it is for reading, that invites a two way engagement with its potential, such that the reader/writer is able to intervene in and determine what that might be. What would our culture be like if most of us could only read and gaining access to the instruments for making texts was the preserve of professional "writers"? If we lose the ability to write we will, as non-writers, lose the ability to read, becoming illiterate. Denied the ability to operate in the symbolic universe our capacity to imagine alternate worlds or selves and, ultimately, to make ourselves, will be compromised. We would be "written" by, and become the property of, others. There is deep meaning in the claim that literacy liberates and transforms. In this context digital literacy is also transformational.

Does it matter if many of us lose the capacity to read and write with computers? Arguably it does, if we accept that we live in a progressively mediatised world, a

society where our relationships with knowledge, information, work, play and one another are mediated by digital systems at every level. If we wish to be active participants in this culture, rather than passive consumers, then we do need to retain literacy with the dominant media, computers. In this respect the proliferation of consumer smart devices is a threat to our literacy and capacity for creative engagement. Those who are, for whatever reason, excluded from the "digerati" will be confined to the role of consumers of digital culture.

Sherry Turkle has observed, in her recent book Alone Together (Turkle 2010), that we no longer ask what we use computers for but what we do not. The computer has become essential not only in our practical lives but also in our social and emotional lives. Computer literacy is no longer just a requirement for getting the right job but for navigating and understanding our social relations. However, the social media that have enabled this would appear to be part of the same ilk of technologies as the consumer devices we have already been discussing. We have to ask, are social media part of a drift away from digital literacy or are we witnessing a new form of literacy emerge, an "emotional" literacy, digitally mediated, where we "write" ourselves into being within information space? If we are to accept Turkle's argument the answer to this latter question is, a not unproblematic, no. However, if we accept this is a new form of literacy then we can ask whether we are witnessing an evolutionary step in the human-machine interface, where our capacity to create has become both a materially and socially symbolic operation? If so, we can conceive of media being social in a profound sense; of media platforms enabling the making of social relations, cultures and people. Arguably, it is, as yet, too early to know which is the likely outcome, if either.

Tim Ingold notes that creativity is often considered as an imposition of order by an agent of some kind (Ingold 2010) but has argued that we can alternatively view it as "an ongoing generative movement that is at once itinerant, improvisatory and rhythmic", weaving with and through the many agents involved - human, material and technological. This is a participative and inclusive comprehension of creativity and, although Ingold does not cite Mauss, this generous approach could be considered to be related to the notion of creativity as "gift", evoking creativity's key role in social formation. At the heart of Ingold's argument is the principle that creativity is an activity, not a thing, and, quoting Paul Klee, he observes that when embodied in an artifact the living dynamic that is creativity expires. In this vision the work of art

appears as no more than the dead and decaying remains of what was the living creative activity.

This returns us to the original conjecture of this text, that many media (and other contemporary) artists have chosen the path they have in order to maintain their focus on art as something you do, not something you make. Many artists have chosen to produce work that defies conservation and collection, existing only for as long as the work is in "play" amongst all those engaged in its making - the author, the reader and others. For many this has not been an aesthetic strategy but pursued out of a particular apprehension of the role of creativity in the weaving (or "writing") of society. Ingold uses the term "textility", with diligence, suggesting not only the archaic process of weaving but also the process of "writing". It is tempting here to consider one of the earliest examples of automation, and its role in the development of computing, the punch card programmable Jacquard Loom, used extensively, from the 19th century onwards, in the textile industries. In this machine we have "writing" and weaving as functions of one another and a mechanical model for how people are made - as necessary attendants to the machine and subjects of the Industrial Revolution, a metaphor for how we are "written" and "woven" as a social fabric. The question remains - who is being made, by whom and to what purpose? We are reminded why literacy is so important.

The risk inherent in a strategy of artistic redundancy, where art works are made to decay, fail or be lost, as the systems they depend on evolve into other forms, is that of forgetting and subsequent illiteracy. Should we seek to preserve works of digital art not because we wish them, as artifacts, to participate in the socio-economic milieu that is the contemporary art world but because, by allowing these works to die, without trace, we are contributing to a cultural forgetting that may ultimately lead us to risk losing our capacity to "write" and thus to read. "Writing" is something we do, not something we make - but it is also something we read, our capacity to write being directly linked to our ability to read, and vice versa. If we lose the possibility of one we will lose the capacity for the other. If we were to treat all art in this manner, allowing it to decay as soon as its existence as a vital becoming is complete, then we would have nothing to read. This risks ignoring the generative potential in reading that which "remains". In this sense no art work is ever complete or dead. No matter how they are made, or how inert they might appear, art works remain alive and open to new completions. The question is how this is informed by those who are reading?

At the same time we recognise that without forgetting, without decay and death, there is no new life, no new experiences and no new memories.

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