Dead media: Obsolescence and redundancy in media history
by Tara Brabazon

Abstract
Adjectives attend the new: fresh, clean, exciting, dynamic, innovative and productive. Oppositional binaries cling to the old: tired, worn, redundant, sick, slow and useless. While anti-discrimination policies can address these connotations when applied to people, the consequences of such ideologies on “old media” are under-researched. While media and cultural studies departments teach “New Media” courses, “Old Media” courses remain invisible and unpopular. This paper extends these adjectives and narratives by following a challenge Bruce Sterling posed to researchers: to understand “Dead Media.” I explore the origins of this term and how and why an interest in Dead Media has — in itself — died.

I smell death.

No, it is not the rotting vegetables from an over-eager online order from a supermarket. It is not the permanent fog of ageing that comes from living in towns and cities that are the equivalent of an urban retirement village. Actually, it is the waste of redundant software and hardware, obsolete at the point of release, that lingers around our home and office. Like people, media have a life cycle. Therefore, it is necessary to recognize the economic and social consequences of increasing the speed of obsolescence via marketing imperatives, rather than necessity. It is also important to log the distraction of waste.

All media have a suicide pact. The pattern repeats. Ownership. Oblivion. Decline. Denial. Decay. Disposal. Death. At the moment of release, media are dying. This death is masked by patches, updates and versions. It is hidden by the enthusiastic commitment to the new, rather than a backward glance at the objects, processes and services it is replacing. Yet occasionally, this celebration of the new is displaced by recognition that the useful may already be owned and in use. Radio is the great media survivor [1]. It is the vampire of the media world. It changes and shifts, becoming secondary to television, but gaining new life through Internet streaming and podcasting. It fits into our lives, whispering its presence but never shouting its importance.

So much of the study of media and technology revels in the new and exciting. We work in an accelerated academy. Yet for every new media, there are multiple old media. Adjectives attend the new: fresh, clean, exciting, dynamic, innovative and productive. Oppositional binaries cling to the old: tired, worn, redundant, sick, slow and useless. While anti-discrimination policies can address these connotations when applied to people, the consequences of such ideologies on “old media” are under-researched. Yet the few studies produced over the last two decades have been important and influential. Indeed, there are considerably more old media than new media and fine scholarship from writers such as Carolyn Marvin [2], Charles Acland [3], Siegfried Zielinski [4], Jay Bolter and Richard Grusin [5] have taken this topic as their focus. In this paper, I am not only interested in the old and the redundant. I want to take this decline a step further. When the old is forgotten and slips out of footnotes, quirky anecdotes and obscure references, it becomes dead media.

One — of many — examples of consumers clinging onto the life of dying software is Windows XP. Vista was a failure and so destructive to work patterns that old hardware was patched and repaired until the software was improved and eventually superseded [6]. It was such a poor operating system that vast numbers of PC diehards finally jumped to Macintosh [7]. Computer shops — to ensure consumer sales through the failures of Vista — continued selling computers with either XP pre-installed, rather than its newer rival, or gave consumers the option of running either operating system. Similarly forgotten is the training cost of moving to new hardware and software. Plug in and play is rarely plug in and use. Put another way, Clyde Christofferson and Sarah Palmer at the Old Dominion Bar Association (ODBA) Conference asked in response to new technological developments, “Do I have time for this?” [8] They recognized the cost is not only hardware or software but wheater, the time humans spend in training and evaluation [9].

The phrase “dead media” holds a high quality Internet provenance. Science fiction writer Bruce Sterling first used it in 1995, in a speech delivered at the Sixth International Symposium on Electronic Art in Montreal [10]. The term captured lost, marginalized and obsolete media. It was part archive, part nostalgia, part require. He was interested in what he described as “the nervous system of the information society” [11] and the
"marketplace of the information economy" [12]. His motivation in tracking these terms was similar to the imperatives of James Carey [13] and Harold Innis [14], to provide a wider context for the communication 'revolutions' of his time, which was 1995. This was the blissful era (easily) excited by virtual reality and CD-ROMs, I was teaching (with) media during that era and he was right to offer a critique. The seminars I attended where CD-ROMs were "the answer" to information storage problems are very similar to the current evangelical commitments to cloud computing and Drop Box. Sterling asked listeners and readers to investigate the "aspects of media that corporate public relations people are *afraid to look at* and deeply afraid to tell us about." [13] This challenge for Internet scholars holds as much currency and relevance now as it did two decades ago.

Much to the chagrin of those who doubt the importance of studying media [16] — or even media studies [17] — Sterling presented a cyberpunk sermon on the mount about why the media require attention. Whilst acknowledging "that media is a commodity," he realized that "that's not what's interesting." [18] Instead, he gave eight reasons why media require our attention:

- Media is an extension of the senses.
- Media is a mode of consciousness.
- Media is extra-somatic memory. It's a crystallization of human thought that survives the death of the individual.
- Media generates simulacra. The mechanical reproduction of images is media.
- Media is a means of social interaction.
- Media is a means of command and control.
- Media is statistics, knowledge that is gathered and generated by the state. Media is economics, transactions, records, contracts, money and the records of money.
- Media is the means of civil society and public opinion. Media is means of debate and decision and agitpropaganda. [19]

In recognizing the scale of this impact, Sterling granted the Internet a history and ensured that it was part of a wider analysis of media, communication and identity. Sterling issued a challenge to write a *Dead media handbook* that catalogued the waste, failure, losses and errors in the history of technology. Sterling's speech, published as "The Dead Media Project — A modest proposal and a public appeal," did trigger research and commentary. However, perhaps appropriately, the Project dwindled, disappeared and — in the era of Apple product launches being reported as news rather than public relations — itself became obsolete. The Tom Jennings' moderated mailing list died and the widespread interest in it decayed. The Dead Media Project still holds a URL (http://www.deadmedia.org) and has a holding Web site in place with (a) few functional links. But like truly great dead ideas, they can be resurrected. Sterling's handbook has been written, but it took 15 years. Between his 1995 request and the 2009 publication, a series of individuals, organizations and Web sites has continued Sterling's challenge to think about the life cycle of media. Most intriguingly, Garnet Hertz's Concept Lab produced, publicized and housed some fascinating projects in his Dead Media Research Lab. A former doctoral student at the University of California, it was Hertz who realized Sterling's vision. "In memory of the Dead Media Handbook," he published *A collection of many problems*. It was distributed by Lulu and provides what he describes as "a visual introduction to media archaeology." [20]

Such a project could also be renamed Dead Media Studies. Increasingly, the study of a single media — television studies, film studies, photography or Internet studies — creates bunkers, silos and blockages. It prevents a recognition of the reality that sound and vision move through space and time. Indeed, perhaps the most urgent problem to have come to have two major spheres of media studies: sonic media and visual cultures. Such labeling not only recognizes the consequences of convergence, disintermediation and reincarnation, but it also creates a smooth movement between analogue and digital sources and ideas. By bringing Dead Media (Studies) back to a field that too often is hyper-presentist and post/anti historical means that a smoother relationship between old and new, sound and vision, sustainability and obsolescence, can be constructed.

The Dead Media Research Lab is trying to find a way to repurpose dead media, while also using this initiative to rethink the damaging and planned obsolescence of consumer electronics. While Steve Jobs included an environmental section as part of his January 2010 iPad launch, showing the recyclable elements of the product [21], he did not include the key functions that would extend its life and delay the reason for recycling, such as a camera and USB slot [22]. By intentionally leaving out useful and obvious elements from the hardware, Jobs created a demand for the next generation of iPad. This planned obsolescence is outstanding marketing. Whether such a decision can be justified economically, ethically or environmentally is a different — but resolutely potent — question.

A key moment in digital dieting — the careful management of data, information and media platforms — requires a recognition of loss, waste and obsolescence [23]. A range of Web sites has provided a memory text, logging the loss of dead media. The same year as Bruce Sterling's speech was delivered, old-computers.com was launched [24]. There are currently 991 computers in the museum. Each artefact features a description and an image, remembering the product's strength and weakness. Instructables.com ran a Dead Computer Contest, to determine the best use of discarded technology. The project dwindled, disappeared and — in the era of Apple product launches being reported as news rather than public relations — itself became obsolete. The Tom Jennings' moderated mailing list died and the widespread interest in it decayed. The Dead Media Project still holds a URL (http://www.deadmedia.org) and has a holding Web site in place with (a) few functional links. But like truly great dead ideas, they can be resurrected. Sterling's handbook has been written, but it took 15 years. Between his 1995 request and the 2009 publication, a series of individuals, organizations and Web sites has continued Sterling's challenge to think about the life cycle of media. Most intriguingly, Garnet Hertz's Concept Lab produced, publicized and housed some fascinating projects in his Dead Media Research Lab. A former doctoral student at the University of California, it was Hertz who realized Sterling's vision. "In memory of the Dead Media Handbook," he published *A collection of many problems*. It was distributed by Lulu and provides what he describes as "a visual introduction to media archaeology." [20]

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The question is how to reuse, recycle and re-purpose electronic materials beyond making MacPlanters or sending waste to Africa as some disturbing form of neo-colonialism. E-waste regulations have emerged, but the scale of this obsolescence — printer cartridges, mobile telephones, computers and televisions — necessitates more than governmental intervention to curb excesses. The seriousness of this problem now...
creates business opportunities that “focus on eliminating the risks surrounding data security and environmental compliance, while maximizing value recovery on IT asset investment for businesses around the country.” [38] In other words, where there is digital muck, there is money.

Sustainable media is catching up with Sterling’s speech [39] and even the science fiction writer is trying to reduce the irony of his argument. The environmental cost and waste of speeches at conferences is becoming clear. John Thackara realized it was not rational “travelling the world in airplanes to speak at sustainability events.” [40] Instead, he now makes a 20-minute talk on film, which is sent to the organizers, shown at the event and followed by a live conversation via Skype [31].

Sterling’s inspiration and thoughtful reconsideration of earlier truths and practices are important. We should continue his interest in old and dead media. I offer an equation for consideration by readers: Old Media + New Media = Now Media. The goal of this slogan is to not only remember the role of history, but to ensure that any discussion of technology commences with its purpose and goal. New Media is a phrase that enables social, cultural and economic amnesia. It perpetuates an assumption that the new is useful. But new media summons an algorithm of waste with deep consequences for personal finances and the global environment. When I completed a qualification in information studies in the late 1990s, the course was split by dual (and indeed duelling) commitments: an earnest desire for preservation alongside an excited and bubbling joy at the new. In that 1995 talk, Sterling captured both these desires: “before leaping in postmodern ecstasy into the black hole of virtuality, we ought to make and store some back-ups of the system first.” [32] Galloping to the new can lead to the loss of the old. At some point, we will need those back-ups.

In the subsequent decade after Sterling’s presentation, the paradox between mobile media and the leaden waste of hardware redundancy trailing behind it has been supposedly resolved by focusing on data (content management) and ignoring the platform onto which it was placed (context management). Celebrations of cloud computing and mobile media are a way to displace the platforms and carriers of that information. With ‘everything’ in the cloud, the objects on which the data is constructed, accessed and transformed, disseminated and uploaded simply drop away. However this migration of digital data requires more attention than Dropbox advocates may suggest.

Sterling was not against the new. Instead, he asked for an understanding of the old. He asked that the evangelical promoters, sellers and hypers “ought to eat what you are killing … Perhaps this realization will free us from the hypotim of our own PR.” [33] That is what made the gluttony and excess of information obesity [34], and the hardware and software that it services, so odd. Indeed, this passage from media birth to media death is hypotim. After the credit crunch and the slow ‘recovery’ in many regions of the world, financial systems that operated so well in a boom seemed exhausted. Information was tired. Like all recoveries, there needed to be a mobilization of experience to ensure that every innovation was tempered by accountability. As James Gleick diagnosed, “we have information fatigue, anxiety, and glut.” [35] Yet in an age that requires a balancing of cost, value and risk, doing more with less, the fast consumption, fast fashion and fast techno-obsolescence has continued.

There is a reason for loving media in its youth, rather than the aging products and platforms about to tumble into the dustbin. It is a similar reason why fashion boutiques continue to stock size six and eight, knowing that the size fourteen will sell. It is why intelligent women continue to spend $80 on a face cream. It gives them hope in a jar. Every new media offers the promise that they will make us smarter, more beautiful, more efficient and productive, more popular and richer like a woman believes that one day if she can just stay off the Mars bars, she will fit into skinny jeans. It will not happen, but it is an aspiration that a new purchase will construct a best self rather than the tired, sagging, puffy, poor hard in the mirror.

Sterling asks us to be honest: “if you want to think seriously about the future, you have to think historically.” [36] Speed of change does not signify improvement. Instead, it confirms dissatisfaction with the present and a desire to forget the past. Sterling termed this “the Whig version of technological history.” [32] Information obesity, and the researchers, marketers and scientists that enable it, are the ‘product’ of history, the result of centuries of scholars, inventors, scientists and programmers believing that the new is better. Such an argument flatters us, but demeans those who preceded us. All great media are based on dead media. The reason for that death, like the reason for a human death, need to be understood. Sterling realized that there are many causes for media extinction: “some forms of media are rendered obsolete, but others are murdered. Some innovations are pushed very hard by clever and powerful people with lots of money, and yet they still fail.” [38] Researching such failures is productive. Death is what gives meaning to life and the reasons for death can define conditions of living.

Certain religions contend that only our physical bodies die, rot and decay. They offer the promise of an after life, heaven or reincarnation. All these words displace the sharp, devastating reality that we will die. Calling obsolete technology dead media is honest. But what is intriguing, post–credit crunch, is that there is increasing interest in what is called the ‘life cycle of technology.’ Instead of dead media, the life cycle offers a re-surfacing of the dead skin of technology with youth serum. It is heaven for hardware. Intriguingly, the first use of ‘lifecycle’ in relation to technology dates back to 1957 and Iowa State College [39]. The phrase was used to monitor the purchasing patterns of seed corn by farmers [40]. This report found that the well-educated and wealthy farmers on larger than average farms were the technological innovators. The laggards were the least educated and the oldest. From this early use in agricultural innovation, this modelling has been used to understand technological innovation and particularly the lifecycle of hardware and software.

Firms like GTSI Corporation describe itself as an “information technology solutions provider offering a Technology Lifecycle Management (TLM) approach to IT infrastructure solutions.” [41] That is a new series of initials to throw into meetings what is your position on TLM? GTSI can help businesses because they have a “strategic methodology” to reach “government–mandated performance metrics.” [42] GTSI recommends planning, design, acquisition and implementation and management [43]. Intriguingly ‘lifecycle management’ masks decline, obsolescence, replacement and death. The goal is a “technology acquisition strategy” [44] rather than technology obsolescence strategy to manage dead media. The closest GTSI gets to death is a “retirement strategy” [45] and an “asset disposal strategy.” [36]

This lifecycle modelling of technology perpetuates the ageism that confronts people. It continues the ageism of that early study of agricultural innovation in Iowa. Jim Hertzfeld captured it best: “a lifecycle describes the progression of something from its very conception until it no longer has any value.” [46] So as a product (or person) ages, it loses value. A positive reading of ‘technology lifecycle management’ is that it increases the consciousness of users, so that decision making has evidence behind it, rather than moving to the next big thing based on public relations or Wired magazine.
Software has its own software development lifecycle and another acronym: SDLC. Death of software is called — quite poetically — “sunsetting.” [48] For such consultants and their acronyms, the lifecycle of software products and specific corporate projects is often tethered. When the project is over, so is the software. Such a strategy was also used when university managers wanted staff to move their courses online. They were not prepared to invest in staff development and training, so they promoted a software package that un(der)trained academics could use, one that would provide an ‘adequate’ virtual learning environment [49]. Blackboard emerged as a content management system (that is often termed — with some Orwellian resonance — a learning management system) for undetermined online teachers. Numerous updates, upgrades and patches later, it is still a very basic way of conducting online learning. If ‘the project’ was to ‘get materials online’ then Blackboard was a software solution. When staff and students demand better than Blackboard, then a series of new solutions — of which the Moodle suite is an example — will signal sunsetting.

From that first study of how farmers implemented change in their farms, a series of famous research projects emerged. Everett Rogers created his bell curve that represented the take up of new products, spanning from innovators to laggards [50]. G.A. Moore provided the explanation as to why Apple’s products and marketing were successful in the last decade. Moore argued that early and late adopters — innovators and laggards — require very different marketing techniques [51]. The aim, so successfully shown by Apple, was to move from promoting a change in technology to offering a change in culture.

Every life cycle — every movement of maturation — ends in death. Cracked.com used this inevitability as the basis of its humour about technology’s life cycle.

1. Technology is what separates us from the Amish.
2. Technology is not much for the power of the dark side.
3. Technology will eventually kill us. [52]

While not (as) humorous, Gartner cut through the marketing of ‘life cycle’ to describe the “Hype Cycle.” They locate five key phases.

- Technology trigger
- Peak of inflated expectations
- Trough of disillusionment
- Plateau of enlightenment
- Slope of enlightenment [53]

Only if a product can survive the brilliantly named ‘trough of disillusionment,’ where the technology does not deliver on the promise marketed to the buyer, can it move to the ‘slope of enlightenment’ where the second and third generation products emerge.

Just as disillusionment leads to enlightenment, so did dead media lead to new ideas, innovations and trajectories. Bruce Sterling went on to found the Viridan Design Movement, offering new combinations of globalization, citizenship, environmentalism, technology and progress [54]. From cyberpunk to futurist, he is currently Professor of Internet Studies and Science Fiction (a tremendous combination) at the European Graduate School in Saas–Fee, Switzerland. He has left researchers with so many progressively disruptive ideas to ponder and develop. And yet … Bruce Sterling made a commitment that the Dead Media Project would be public source knowledge, with scholars completing their research pro bono and all the information would be freely available. This was 1995, 15 years before Chris Anderson wrote Free: the future of a radical price (New York: Hyperion).

But sadly, the Web site — www.deadmedia.org — is not functional. In its current state, the links and research completed by the community on the mailing list are unavailable. If there is anything sadder than dead media, then it is dead links from a Web site on dead media. [54]

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Notes

9. Ibid., slide 7.
11. Ibid.
12. Ibid.
15. Sterling, op. cit.
18. Ibid.
19. Ibid.
22. It is important to note that C.M. Christensen disagrees with my argument here. In The innovator’s dilemma: When new technologies cause great firms to fail (Boston: Harvard Business School Press, 1997), Christensen argues that disruptive technologies are always labelled as overpriced and underpowered. In other words ‘toys’ make the successful technology.
31. Ibid.
33. Ibid.
37. Ibid.
42. Ibid.
43. Ibid., p. 2.
44. Ibid.
45. Ibid., p. 3.
46. Ibid., p. 4.
48. Hertzfeld, op. cit.
54. Like most futurists, their predictions were not always accurate. Written before Google, Google Ads and the Murdoch Press closing their newspapers behind credit cards, he stated in 1997, "commercial websites are failing everywhere. Nobody pays to see anything on a website. No one will ever pay to see anything on a website. Ever, ever ever. Sure, you could spool ads in front of people’s eyeballs, and hope that it picks up some sales. But at best, all you have is a niche market,” B. Sterling, in T. Myer, "Chatting with Bruce Sterling at LoneStarCon” (29 August 1997), at http://www.sfsite.com/09a/bru16.htm, accessed 22 June 2013.

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