

# Piracy Is the Future of Culture

## Speculating about Media Preservation after Collapse

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In the 2009 documentary *Collapse*, directed by Chris Smith, investigative journalist Michael Ruppert warns that a large-scale collapse of industrialised human civilisation has begun due to a number of factors, including the imminent exhaustion of fossil fuels. Ruppert argues that, because modern societies were made possible by, and depend heavily on, hydro-carbon fuels, the end of oil may mean the end of modern societies. Here is Ruppert's description of the impending Collapse:

Things don't break up, they break down... Mail stops getting delivered. Air traffic controllers don't get paid so... planes don't fly. Bridge and highway inspections don't get made. Food and drug inspections don't get made. Maintenance is going to be [deferred]. Law enforcement stops working.<sup>1</sup>

Ruppert, who died by apparent suicide in 2014, was often called a conspiracy theorist and a paranoid crank. But as I write this in November 2018, the multiplication in number and scale of climate disasters; the large-scale refugee crises caused by war and ongoing violence in Syria, Guatemala, Honduras and other regions; the ascendancy of white ethnocentric and nationalistic (anti-immigrant) governments in numerous countries, including the US and the UK; the drug cartel wars in Mexico; and the financial precarity and poverty adversely impacting billions of people in both the Global South and North, seem collectively to indicate that the current world order, or 'paradigm', as Ruppert would say, is shifting. As writer and critic Ziauddin Sardar states in a 2010 paper, 'Welcome to postnormal times. It's a time when little out there can be trusted or gives us confidence. The *espíritu del tiempo*, the spirit of our age, is characterised by uncertainty, rapid change, realignment of power, upheaval and chaotic behavior.'<sup>2</sup>

1 Michael Ruppert quoted from *Collapse*, directed by Chris Smith, 82 minutes, released 12 September, and premiered at the Toronto International Film Festival in September 2009.

2 Ziauddin Sardar, 'Welcome to Postnormal Times', *Futures*, vol 42, issue 5, 2010, p 435

In this article, I will speculate on what Collapse might mean for one of my primary areas of research: media archiving. What will happen to digital media – books and other forms of published text, sound recordings, films, television programmes, video games, social media content and so on, that were either born digital or were born analogue and later digitised – during and after Collapse? And how might amateur archivists play a part in preserving digital culture during Collapse?

I will begin by asserting that Collapse is not necessarily apocalyptic. No Collapse theorist posits that Collapse is the end of human existence, or that it will mean unending misery for humans. Ruppert, for example, characterised Collapse as a transition period, and emphasised the need for optimism and courage during that period. In the documentary he expresses hope for a fast Collapse rather than a slow one, as a fast Collapse will leave infrastructure – sewers, bridges, roads and so on – intact, and humans will be able to use that infrastructure to build a new form of human society. Ruppert says,

We have to survive the transition phase... which I anticipate could last anywhere between twenty years... to fifty or one hundred years, before some kind of stable civilisation starts to emerge... So don't panic... Community is what will save us... You will survive as a member of a tribe or a family.<sup>3</sup>

Another Collapse theorist is Jim Dator, Professor of Political Science at University of Hawai'i at Manoa and Director of the Hawai'i Research Center for Futures Studies. In 1979, Dator published his concept that 'Four Futures' are possible for any society: Continuation, Collapse, Discipline, or Transformation.<sup>4</sup> The first future, Continuation, is the future desired by capitalism: constant growth and gradual improvement of existing markets, systems and technologies. The third future, Discipline, is the future desired by the environmental movement and by socialists: resources should be managed and distributed in a manner that aligns with a society's values and priorities. The fourth future, Transformation, is the future desired by the tech industry and fans of techno-utopian sci-fi universes such as *Star Trek*: human society will be radically changed for the better once it designs superior technologies for tremendous genetic advancements and long-range space exploration. It is only the second future, Collapse, that seems to be desirous to no one, or at least, not any readily identifiable contingent that currently exists. However, Dator argues that Collapse, though it may cause great anxiety, will not be negative in all respects: 'the "collapse" future is not and should not be portrayed as a "worst case scenario". Many people welcome the end of the "economic rat race" and yearn for a simpler lifestyle. Moreover, in every "disaster" there are "winners" as well as "losers".'<sup>5</sup> Capitalism may be so entrenched and dominant at present that, as critic and theorist Fredric Jameson claims, 'it is easier to imagine the end of the world than the end of capitalism',<sup>6</sup> but Dator points to the opportunity that Collapse presents: Collapse may end the 'economic rat race', or the imperative to labour constantly for wages that seem forever insufficient, which is how the majority of workers experience capitalism today.

I must acknowledge that Ruppert and Dator are primarily concerned with the future of 'industrialised society' (Ruppert's phrasing), and not

3 Ruppert, quoted in *Collapse*, op cit

4 James A Dator, 'The Futures of Culture or Cultures of the Future', in Anthony J Marsella, Roland G Tharp, and Thomas J Ciborowski, eds, *Perspectives on Cross-Cultural Psychology*, Academic Press, New York, 1979, pp 369–387

5 James Dator, 'Alternative Futures at the Manoa School', *Journal of Futures Studies*, vol 14, no 2, 2009, p 9

6 Fredric Jameson 'Future City', *New Left Review* 21, May–June 2003, p 76

with the masses of people who have already undergone, or are undergoing, the Collapse of their societies. I am from the Philippines, a twice-colonised archipelago, and I grasp very well that when a foreign people have arrived on your shores, taken over your lands and waters, banned your language or established theirs as the superior and official language, changed your names, killed and injured millions, forced you to convert to their religion, seized control of your economic, political and cultural systems, labelled you subhuman, and imposed colourism and other forms of racial/ethnic and national hierarchies, your society has known Collapse. For those of us who come from a colonised country – or an indigenous people who have suffered genocide and forced relocation, or a formerly enslaved people – Collapse is a significant episode in our personal, familial, community, and ethnic histories. There are also a number of societies that today might be considered to be farther or deeper into Collapse than others: war-torn Syria; Greece with its ongoing economic crisis and its saturation with refugees fleeing Syria, and Puerto Rico in the wake of Hurricane Maria in September 2017, to name only a few.

This list of societies that have already undergone, or are undergoing Collapse, highlights the privilege of populations whose communities have not suffered radical transition or deprivation in recent memory and so who must turn to ‘futures studies’ or prophesying – rather than to actual histories of colonisation, genocide, slavery, war, or environmental disaster – in order to conceive of such suffering. Another way to understand Collapse theory is as the term for designating the Global North’s moment of having to confront the same degree of destabilisation and uncertainty that it has long compelled other peoples to experience. The Collapse that Ruppert and Dator describe will not be confined to either the Global North or Global South; it will be a *global* Collapse, which does not allow any group of people to remain unaware of it, or free of its challenges.

I will turn now more specifically to the question of digital culture surviving Collapse. In my book *Rogue Archives*, I summarised the ‘digital dark age’ discourse circulating among Library and Information Science (LIS) professionals: ‘The current historical moment, [LIS professionals] argue, may be a “digital dark age”, a time of which future generations will have scant records, owing to the short lifespans of our current digital platforms, devices, and applications (as compared to the lifespans of older technologies, such as paper).’<sup>7</sup> The archiving of digital media has always been problematic and much digital and digitised culture has already been lost with losses occurring every day. If this is the case at a time when digital global infrastructure is robust, then how greatly will the losses of data multiply when it begins to weaken and falter during Collapse?

One prediction we can make about whether, and how, digital data will survive an uncertain future is that the data that *will* survive will most likely *not* be housed in official, institutional archives. A great deal of digital culture that will remain intact and accessible throughout Collapse will be preserved by amateurs, by non-LIS professionals. To be more specific, it will be preserved by users whom the contemporary culture industries call ‘pirates’: users of peer-to-peer file-sharing protocols who upload and download digital files in flagrant disregard of any intellectual property law.

7 Abigail De Kosnik, *Rogue Archives: Digital Cultural Memory and Media Fandom*, MIT Press, Cambridge, Massachusetts, 2016, p 46

In *Rogue Archives*, I argue that because digital culture is produced in high volume at rapid speeds, and the majority of it consists of amateur productions (especially commentaries on, and remixes of, mainstream commercial cultural texts), internet archives founded and run by ‘volunteers/amateurs/hackers/pirates/fans’ have proliferated.<sup>8</sup> In other words people without LIS degrees, who are not employed by official cultural heritage or preservation institutions, have taken on the responsibility of creating and operating free and open online archives of digital artefacts – usually, the output of the online communities to which they belong – in the hope of preserving as much of their subcultures, their collective creativity, history and lifeworlds as they can, and making such preserved material accessible to as many future users as possible. Amateur archivists are donating their free labour to preserve amateur productions. Here I will build on my earlier argument by asserting: amateur archivists are also donating their free labour to preserve *official*, industrially made, commercial productions. The former set of amateur archivists, the ones who maintain repositories of amateur productions, we can call *fan-archivists*. The latter set of amateur archivists, those who download copies of industrial mass media productions, we can call *pirate-archivists*.

Online fan archives are centralised, meaning that a set of digital files (containing text, image, sound, or video) is housed on one server or server array: users access the works they want by calling them up from the server (by clicking on titles they desire to see, which are typically formatted as hyperlinks). The vast majority of online pirate archives, in contrast, are decentralised: pirated content is stored primarily on individual users’ hard drives or servers, and is then transmitted from user-to-user, or peer-to-peer, rather than being delivered from a central repository. The private, highly personalised, self-curated archives run and maintained by individual users, or by small collectives of users, are the only content archives that exist in internet pirate cultures. ‘Trackers’, which are the websites that list files available for acquisition, allow users to download ‘torrent’ files, which are small files that can then be used to indicate a desire to download video, audio, text, or software files to fellow users. The technological protocol that allows torrent files to signal interest in a file to peers and to initiate downloads of that file from peers who already have it, and uploads to other peers who are requesting it, is called the BitTorrent protocol.<sup>9</sup> However, these torrent trackers do not in themselves lead directly to the desired content.

The decentralisation of pirate archives, the fact that the entire system of file-sharing depends on numerous copies being stored in multiple sites, means that redundancy and mirroring – measures against content disappearance and loss – are built into internet pirate cultures. Centralised archives, even online archives that maintain mirror sites, are more vulnerable to emergency events than decentralised archives, whose contents are always already copied and dispersed. Pirate archives have not always been decentralised; for example, a popular archive of pirated e-books, LNU (Library.nu, formerly Ebooksclub and Gigapedia), which opened in 2004 and was closed by court order in 2012, was housed on a single set of servers and centrally administered. Dennis Tenen and Maxwell Foxman use the case to underscore the precarity of centralised repositories relative to decentralised ones. They write,

8 Ibid, p 65

9 See Mark Scanlon, Alan Hannaway and Mohand-Tahar Kechadi, ‘A Week in the Life of the Most Popular BitTorrent Swarms’, in *5th Annual Symposium on Information Assurance (ASIA '10): Conference Proceedings*, Academic Track of 13th Annual 2009 NYS Cyber Security Conference, (Empire State Plaza, Albany New York, 16–17 June 2010), 2010, pp 32–36

The relatively brief, by library standards, existence of LNU/Gigapedia underscores a weakness in the federated library model. The site flourished as long as it did not attract the ire of the publishing industry. A lack of redundancy in the site's administrative structure paralleled its lack on the server level. Once the authorities were able to establish the identity of the site's operators... the project was forced to shut down irrevocably. The system's single point of origin proved also to be its single point of failure.<sup>10</sup>

Tenen and Foxman compare the short lifespan of centralised LNU/Gigapedia to the persistence of another 'shadow library' called Aleph, which enables users to share files using the BitTorrent peer-to-peer protocol rather than by serving up content from a centralised archive. Tenen and Foxman claim,

Distributed architecture gives Aleph significant advantages over its federated predecessors [like LNU/Gigapedia]. Were Aleph servers to go offline the archive would survive 'in the cloud' of the BitTorrent network... And were [the] Aleph library portal itself [to] go dark, other mirrors would (and usually do) quickly take its place.<sup>11</sup>

In other words, a multiply-sited archive – an archive that is not really a 'site' at all, but a facilitator for encounters between users so that they can share content files, making each user, individually, the possessor and archivist of copies of those files – cannot be taken down as easily as a singly-sited archive. A building that houses a server can be destroyed fairly easily, but a network cannot. This comparison is just as true in the case of Collapse conditions as in the case of legal actions (which forced LNU/Gigapedia to cease operations). In Collapse, sudden and severe climate-related disasters, power shortages and failure of telecommunications and other types of infrastructure can radically endanger a centralised digital archive. Again, even if that archive is mirrored in three separate locations, a global Collapse may mean that all three servers are subject to rapid degradation or deletion. In the case of a pirate archive, which is not one site but consists of many individual archives networked together, Collapse conditions may adversely affect thousands or millions of users' servers, but some privately owned servers and drives will likely survive. Even if these individual pirate-archivists' hardware units, filled up with films, TV series, books and articles, videogames and other media texts in the form of data files, simply sit inert for many years they will survive as cultural archives – provided they exist in dry, relatively cool environments. Every torrent tracker site may cease to function, but as long as there are humans living who understand how to write software code, they will be able to build new trackers and launch them on whatever digital networks are operational through Collapse, enabling users who have stores of digital content to connect with one another and share files once again. In this way, digital culture *will* survive. This prediction assumes that the knowledge and materials necessary for assembling and operating networked computing systems will persist in Collapse, but below, I will posit scenarios in which such capabilities do not endure.

One inspiration for these speculations about the future of digital culture in the event of Collapse is the fact that Collapse discourse has

10 Dennis Tenen and Maxwell Foxman, 'Book Piracy as Peer Preservation', *Computational Culture* 4, 2014, <http://computationalculture.net/book-piracy-as-peer-preservation/>

11 Ibid

already pervaded both the worlds of media consumption and media production. Tenen and Foxman report that, when the book pirate archive LNU/Gigapedia went dark, a number of users on internet forums compared ‘the demise of LNU/Gigapedia to the burning of the ancient Library of Alexandria’. They quote one user commenting on what the closure means to people living in the Balkans, where salaries are low, libraries are impoverished, and scholarly literature published within the last thirty years is scarce: ‘For a country like Macedonia and the Balkans region generally THIS IS APOCALYPTIC SCALE DISASTER! I really feel like the dark age is just around the corner these days.’<sup>12</sup> Tenen and Foxman quote several other similar posts and argue that ‘Gigapedia and analogous sites fulfilled an unmet need in the international market, redressing global inequities of access to information;’<sup>13</sup> therefore, the disappearance of pirate archives can feel like an ‘apocalyptic disaster’, that is, like a collapse of the information economy, in areas that rely on unofficial access to firewall-protected content. These comments emphasise my earlier point that conditions of Collapse have been and are being felt in many regions of the world *already*.

Collapse discourse can also be found in the mainstream media, which has for decades announced their fears of total devastation at the hands of content pirates. In his book *Free Culture*, Lawrence Lessig traces the history of the oft-repeated claim that piracy will kill Hollywood, noting that Jack Valenti, former long-time president of the Motion Picture Association of America (MPAA), likened every copying technology from VCRs to the internet to viral diseases, mass murderers and terrorists.<sup>14</sup> Valenti, and subsequently many creative workers and corporate executives, along with politicians whom Valenti successfully lobbied, propagated the idea that the unauthorised copying and storing of films, and by extension all recorded media, will lead to a collapse of the creative industries. However, while physical record sales and home video rentals and sales declined substantially with the rise of digital technologies, media makers developed new revenue streams based on digital distribution, such as: advertising and subscriptions for music and video streaming services; on-demand, single-title purchasing and rental methods for music and video; and online merchandise sales and crowdfunding for artists. Older revenue streams, such as movie box office receipts and music concert ticket sales, have achieved new historical records in the past two years – though this is probably attributable to rising prices rather than increases in the number of tickets sold.<sup>15</sup> The world of academic publishing has similarly posited Collapse scenarios when discussing piracy, as in the work of Stuart Lawson, who warns that ‘a total sudden collapse of the publishing industry’ could result from high usage of pirate sites, such as Sci-Hub, that distribute scholarly publications.<sup>16</sup> Although industrial business models have been disrupted by the advent of digital technologies, so far no category of media content, from films to academic journal articles, has ceased to be manufactured or sold because of piracy.

What *has* collapsed because of media piracy – or, more accurately, what never had a chance to develop in the first place – is the ability to build robust archives of digital culture by official cultural institutions. In a 2002 report commissioned by the Library of Congress, audio archivist Samuel Brylawski warns that because ‘Record companies today feel

12 Quoted in *ibid*, emphasis in the original

13 *Ibid*

14 Lawrence Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*, New York, Penguin, 2004, p 10, p 76

15 See Brent Lang, ‘North American Box Office Hits Record \$11.4 Billion’, *Variety*, 1 January 2017, <https://variety.com/2017/film/news/box-office-record-finding-dory-1201950948/>; Nancy Tartaglione, ‘Worldwide Box Office Hits Record \$39.92 Billion in 2017: ComScore’, *Deadline*, 31 December 2017, <https://deadline.com/2017/12/worldwide-box-office-record-2017-39-92-billion-comscore-1202234008/>; Aventus Protocol Foundation, ‘Concert Sales Hit a Record Global High in the First Half of 2018’, *Aventus*, 18 July 2018, <https://blog.ventus.io/concert-sales-hit-a-record-global-high-in-the-first-half-of-2018-34d52063e161>

16 Stuart Lawson, ‘Access, Ethics and Piracy’, *Insights: USKG*, vol 30, no 1, 2017, p 28



bruised by the rampant swapping of music files propagated by programs such as Napster,' they refuse to collaborate on preservation projects with institutional archives. 'In fact, copyright laws, particularly those enacted to reduce digital piracy, now can prohibit legitimate and necessary preservation functions,' Brylawski writes.<sup>17</sup> In the same report, Mary Ide, et al, describe the complexity of digital rights management (DRM) that makes the legal digital archiving of television by archival institutions extraordinarily challenging.<sup>18</sup> Jerome P McDonough, et al, point out that 'The Digital Millennium Copyright Act's prohibition on defeating technological protection measures makes it impossible for a library to create a preservation copy of games employing digital rights management (DRM) and anti-copying measures.'<sup>19</sup> To summarise, one result of the media industries' dread that piracy may lead to their collapse is that museums, libraries and archives have not been able to adequately conserve digital or digitised works, which has put these productions at a high risk of disappearing in the event of a global Collapse. While professional archivists have been stymied in their efforts to legally digitally copy and migrate cultural texts, pirate archivists have built up personal collections of digital cultural files and are sharing them freely online, allowing numerous exact copies of these files to be stored all over the world. Thus, pirate archivists have constructed what is essentially an alternative cultural preservation system that will hopefully function as an additional safeguard for digital texts in the event of large-scale disintegration of social norms and infrastructure.

Capitalism tends to work against digital preservation. James Newman writes, 'The games industry is essentially founded upon business models and discursive practices that effectively "wear out" its past and present in order to sell the innovations and revolutions of the future.'<sup>20</sup> Among the strongest imperatives of the culture industries are planned obsolescence and even deletion of commodities, and the continual replacement of old commodities with newer ones, which stand in opposition to the preservationist imperatives of cultural heritage systems. Lessig makes a similar argument when he writes about the importance of the 'second life' granted to books by used bookstores and libraries:

That second life [of books] is extremely important to the spread and stability of culture. Yet increasingly, any assumption about a stable second life for creative property does not hold true with the most important components of popular culture in the twentieth and twenty-first centuries. For these – television, movies, music, radio, the Internet – there is no guarantee of a second life... With this culture, what's accessible is nothing but what a certain limited market demands.<sup>21</sup>

Lessig emphasises that, while a printed book can circulate and continue to reach new users long after its first sale, there are no parallel mechanisms in place for electronic media productions, because media production companies do not receive significant profits from the sales of older titles and because their insistence on preventing these works from being digitally copied prevents libraries from building comprehensive collections of these works and making them accessible for free after they have ceased to become sellable.

17 Samuel Brylawski, 'Preservation of Digitally Recorded Sound', in *Building a National Strategy for Digital Preservation: Issues in Digital Media Archiving – Commissioned for and sponsored by the National Digital Information Infrastructure and Preservation Program*, Library of Congress, Council on Library and Information Resources and Library of Congress, Washington DC, April 2002, p 64

18 Mary Ide, et al, 'Understanding the Preservation Challenge of Digital Television', in *Building a National Strategy*, op cit, pp 67–79

19 Jerome P McDonough, et al, 'Preserving Virtual Worlds Final Report', Ideals: Illinois Digital Environment for Access to Learning and Scholarship, University of Illinois, 2010, <http://hdl.handle.net/2142/17097>, p 6

20 James Newman, 'Illegal Deposit: Game Preservation and/as Software Piracy' [20 September 2012], *Convergence: The International Journal of Research into New Media Technologies*, vol 19, no 1, 2013, p 49

21 Lessig, *Free Culture*, op cit, p 113

In *Rogue Archives*, I described a distinction between ‘media time’ and ‘fan time’, arguing that corporations may conceive of media consumption as constantly in-the-now, concerned only with the most recently released titles, but fans, especially fan archivists, use media texts on a different timescale, enjoying prolonged and repetitious engagement long after a media production has fallen off the sales charts, left cinemas, or ceased to be broadcast or streamed.<sup>22</sup> Pirate archives (archives of official media works), like fan archives (archives of fan works), serve to extend the lifespan of media commodities far beyond what markets dictate. Pirate archiving departs from capitalism in its efforts to collect and share digital and digitised culture from multiple time periods. Since capitalism works against not only cultural preservation but against sustainability efforts of all kinds, we might think of pirate archiving, along with ecological conservation efforts and the recent revival of handicrafts, as all part of a loosely connected movement of heritage initiatives that may provide a bulwark against capitalism’s eventual culmination in catastrophic deletions and disappearances.

What these speculations about the future of media in a time of Collapse have yielded is a confidence in the long-range potentials of peer-to-peer amateurism. Geert Lovink argues that peer-to-peer distribution makes it difficult for legions of amateur creators who make videos, art, music, games, and books for no pay, and then share them online, ever to professionalise. Lovink writes, ‘The more peer-to-peer networks there are, the less likely it will be for “precarious” creative workers to get out of the amateurization trap.’<sup>23</sup> But what makes amateurisation a trap are the tightly-drawn boundaries around the professional class, the rampant exploitation of free labour, especially by social media platforms, and the narrow definitions of intellectual property imposed by contemporary capitalism on digital culture.

Collapse will bring disaster to many people, communities, spaces and systems, but it may also bring an end to capitalism, and that end may result in a valorisation of a wide array of present-day pre-Collapse (or early-Collapse) amateur practices, such as fan creative productions, fan archiving and pirate archiving. Yiannis Mylonas writes about how file-sharing networks are ‘spaces... produced by the passionate, cooperative, and voluntary work of different people, form[ing] a particular sort of craft that is closer to artistic than technical production. The open and moldable nature of cyberspace helps imagination to develop and amateur production to flourish.’<sup>24</sup> This work ethos, developed and practised daily by millions of internet fans and pirates, which privileges passion, cooperation, volunteerism and imagination above financial rewards, will surely be valuable during Collapse and will likely be among the traditions inherited from the pre- (or early-)Collapse world that helps the human species survive Collapse and construct a new form of society. In fact, while specialisation will be necessary post-Collapse, professionalisation – that is, work for monetary compensation – may be relegated to history, a dimly remembered aspect of the hydrocarbon age. During and after Collapse, the groups that can most easily surrender the idea that labour should be motivated mostly, or only, by pay will be able to find new systems of work most rapidly.

Pirate archivists operating today should take seriously the notion that their hard drives may contain a significant quantity of what future cultural

22 De Kosnik, *Rogue Archives*, op cit, p 158

23 Geert Lovink, ‘Out-Cooperating the Empire? – Exchange with Christoph Spehr’, July 2006, Institute of Network Cultures, Blog: netcritique; <http://networkcultures.org/geert/out-cooperating-the-empire-exchange-with-christoph-spehr/>

24 Yiannis Mylonas, ‘Piracy Culture in Greece: Local Realities and Civic Potentials’, *International Journal of Communication* 6, 2012, p 719



users can access of the productions of pre- and early-Collapse periods. This means that pirate archivists should avoid recency syndrome, which, John D Martin III warns, can characterise pirate networks as much as any group of consumers, and should download not only contemporary media but historical media as well.<sup>25</sup> Pirate archivists should also understand that their computing knowledge and skills may be highly valuable in Collapse: for example, we are learning from Greece that, in times of severe austerity and little income, hackers have been able to build a meshnet – a user-controlled, autonomous, free network that solves the ‘last-mile’ problem of how to connect underserved communities to the physical infrastructure of the internet, such as fibre-optic and telephone and television cables that carry data – which serves thousands of households in Athens. Clive Thompson of *Mother Jones* reports that users of this meshnet, the Athens Wireless Metropolitan Network (AWMN), have ‘held movie nights where one member streams a flick and hundreds tune in to watch’, which is predicated on one member having assembled a cache of films to share, and models how pirate archivists will be able to serve their neighbours during Collapse.<sup>26</sup>

The internet may not survive Collapse, however, in which case pirate archivists will not be able to upload or stream video for others to access. But they might be able to play their media files on the few computers that survive and broadcast the sound over radio, as radio technologies will probably be more durable, and easier to construct, maintain and repair, than computing technologies in Collapse conditions. Pirate archivists’ collections of music, films, television programmes and videogames may constitute part of the programming of a new age of pirate radio. Perhaps future radio presenters will narrate the physical action and visual fields of old audio-visual texts, in order for their audiences to be able to have an idea of what Westerns or sci-fi or historical dramas *looked* like. Maybe what survives of the old world’s creativity will be played and projected at large community gatherings and celebrations, and digital media files will be only one element of events that centre on more embodied, performative forms of entertainment and art. According to Arno van der Hoeven, this is already the case for Dutch pirate radio stations, which no longer broadcast daily or weekly, but plan marathon broadcasts, often lasting a few consecutive days, to coincide with local festivals. ‘Besides a social event,’ writes van der Hoeven,

this is also a form of techno-stalgia, because of the feelings that broadcasting over the air evokes. Remarkably, a lot of these pirates are younger than 25 and have learned the tricks of the trade from their parents. Despite new technologies such as internet radio, they are still interested in this local heritage of illegal radio.<sup>27</sup>

What amateur pirate archivists are downloading and safeguarding today may be an important part of a future society, one that will have to confront the worst consequences of global capitalism, industrialisation and resource extractions of the nineteenth, twentieth and twenty-first centuries, but will still be able to have a techno-stalgalic relationship to the cultural productions of those times.

25 John D Martin III, ‘Piracy, Public Access, and Preservation: An Exploration of Sustainable Accessibility in a Public Torrent Index’, *Proceedings of the Association for Information Science and Technology*, ASIS&T Annual Meeting Proceedings, vol 53, issue 1, December 2016, pp 1–6

26 Clive Thompson, ‘How to Keep the NSA Out of Your Computer: Sick of Government Spying, Corporate Monitoring and Overpriced ISPs? There’s a Cure for That’, *Mother Jones: Politics*, September/October 2013, <https://www.motherjones.com/politics/2013/08/mesh-internet-privacy-nsa-isp/>

27 Arno van der Hoeven, ‘The Popular Music Heritage of the Dutch Pirates: Illegal Radio and Cultural Identity’, *Media, Culture & Society*, vol 34, issue 8, 2012, pp 938–939