README.md

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Introduction

How might we ensure the survival and availability of community libraries, individual collections and other precarious archives? If these libraries, archives and collections are unwanted by official institutions or, worse, buried beneath good intentions and bureaucracy, then what tools and platforms and queer institutions might we develop instead?

While trying to both formulate and respond to these questions, we began making Dat Library and HyperReadings:

Dat Library distributes libraries across many computers so that many people can provide disk space and bandwidth, sharing in the labour and responsibility of the archival infrastructure.

HyperReadings implements 'reading lists', or a structured set of pointers (a list, a syllabus, a bibliography, etc.) into one or more libraries, *activating* the archives.

Installation

The easiest way to get started is to install Dat Library as a desktop app,[1] but there is also a program called 'datcat',[2] which can be run on the command-line or included in other NodeJS projects.

Accidents of the Archive

The 1996 UNESCO publication 'Lost Memory – Libraries and Archives Destroyed in the Twentieth Century' makes the fragility of historical repositories startlingly clear.[3] '[A]cidified paper that crumbles to dust, leather, parchment, film and magnetic light attacked by light, heat humidity or dust' all assault archives. 'Floods, fires, hurricanes, storms, earthquakes' and, of course, 'acts of war, bombardment and fire, whether deliberate or accidental' wiped out significant portions of many hundreds of major research libraries worldwide. When expanding the scope to consider public, private and community libraries, that number becomes uncountable.

Published during the early days of the World Wide Web, the report acknowledges the emerging role of digitisation ('online databases, CD-ROM etc.'), but today we might reflect on the last 20 years, which has also introduced new forms of loss.

Digital archives and libraries are subject to a number of potential hazards: technical accidents like disk failures, accidental deletions, misplaced data, and imperfect data

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[1] http://dat-dat-dat-library.hashbase.io/ and https://github.com/e-e-e/dat-library
[2] http://github.com/sdockray/dat-cardcat
[3] http://www.stephenmclaughlin.net/ph-library/texts/UNESCO%201996%20-%20Lost%20Memory_%20Libraries%20and%20Archives%20Destroyed%20in%20the%20Twentieth%20Century.pdf

migrations, as well as political-economic accidents like defunding of the hosting institution, deaccessioning parts of the collection, and sudden restrictions of access rights. Immediately after library.nu was shut down on the grounds of copyright infringement in 2012, Lawrence Liang wrote of feeling 'first and foremost a visceral experience of loss'.[4]

Whatever its legal status, the abrupt absence of a collection 400,000 books appears to follow a particularly contemporary pattern. In 2008, Aaron Swartz moved millions of U.S. federal court documents out from behind a paywall, resulting in a trial and an FBI investigation. Three years later, he was arrested and indicted for a similar gesture, systematically downloading academic journal articles from JSTOR. That year, Kazakhstani scientist Alexandra Elbakyan began Sci-Hub in response to scientific journal articles that were prohibitively expensive for scholars based outside of Western academic institutions.[5] The repository, growing to more than 60 million papers, was sued in 2015 by Elsevier for $15 million, resulting in a permanent injunction. Library Genesis, another library of comparable scale, finds itself in a similar legal predicament.

Arguably one of the largest digital archives of the 'avant-garde' (loosely defined), UbuWeb is transparent about this fragility. In 2011, Kenneth Goldsmith wrote: 'by the time you read this, UbuWeb may be gone. […] Never meant to be a permanent archive, Ubu could vanish for any number of reasons: our ISP pulls the plug, our university support dries up, or we simply grow tired of it.'[7] Even the banality of exhaustion is a real risk to these libraries.

The simple fact is that some of these libraries are among the largest in the world yet are subject to sudden disappearance. We can only begin to guess at what the contours of 'Lost Memory – Libraries and Archives Destroyed in the Twenty-First Century' will be when it is written 90 years from now.

Non-profit, non-state archives

Cultural and social movements have produced histories which are only partly represented in state libraries and archives. Often they are deemed too small or insignificant or, in some cases, dangerous. Most frequently, they are not deemed anything at all — they are simply neglected. While the market, eager for new resources to exploit, might occasionally fill in the gaps, it is ultimately motivated by profit and not by responsibility to communities or archives. (We should not forget the moment Amazon silently erased legally purchased copies of George Orwell's 1984 from readers' Kindle devices because of a change in the commercial agreement with the publisher.[8])

[4] https://kafila.online/2012/02/19/library-nu-r-i-p/
[5] https://en.wikipedia.org/wiki/Sci-Hub
[7] http://www.ubu.com/resources/
[8] http://www.nytimes.com/2009/07/18/technology/companies/18amazon.html

So, what happens to these minor libraries? They are innumerable, but for the sake of illustration let's say that each could be represented by a single book. Gathered together, these books would form a great library (in terms of both importance and scale). But to extend the metaphor, the current reality could be pictured as these books flying off their shelves to the furthest reaches of the world, their covers flinging open and the pages themselves scattering into bookshelves and basements, into the caring hands of relatives or small institutions devoted to passing these words on to future generations.

While the massive digital archives listed above (library.nu, Library Genesis, Sci-Hub, etc.) could play the role of the library of libraries, they tend to be defined more as sites for biblioleaks.[9] Furthermore, given the vulnerability of these archives, we ought to look for alternative approaches that do not rule out using their resources, but which also do not *depend* on them.

Dat Library takes the concept of 'a library of libraries' not to manifest it in a single, universal library, but to realise it progressively and partially with different individuals, groups and institutions.

Archival properties

So far, the emphasis of this README has been on *durability*, and the 'accidents of the archive' have been instances of destruction and loss. The persistence of an archive is, however, no guarantee of its *accessibility*, a common reality in digital libraries where access management is ubiquitous. Official institutions police access to their archives vigilantly for the ostensible purpose of preservation, but they ultimately create a rarified relationship between the archives and their publics. Disregarding this precious tendency, we also introduce *adaptability* as a fundamental consideration in the making of the projects Dat Library and HyperReadings.

To adapt is to fit something for a new purpose. It emphasises that the archive is not a dead object of research but a set of possible tools waiting to be activated in new circumstances. This is always a possibility of an archive, but we want to treat this possibility as desirable, as the horizon towards which these projects move. We know how infrastructures can attenuate desire and simply just make things difficult. We want to actively encourage radical reuse.

In the following section, we don't define these properties but rather discuss how we implement (or fail to implement) them in software, while highlighting some of the potential difficulties introduced.

Durability

In 1964, in the midst of the 'loss' of the twentieth-century, Paul Baran's RAND Corporation publication 'On Distributed Communications' examined 'redundancy as

[9] https://www.jmir.org/2014/4/e112/

one means of building … highly survivable and reliable communications systems',[10] thus midwifing the military foundations of the digital networks that we operate within today. While the underlying framework of the Internet generally follows distributed principles, the client–server/request–response model of the HTTP protocol is highly centralised in practice and is only as durable as the server.

Capitalism places a high value on originality and novelty, exemplified in art, where the ultimate insult would to be 'redundant'. Worse than being derivative or merely unoriginal, being redundant means having no reason to exist — a uselessness that even art can't tolerate. It means wasting a perfectly good opportunity to be creative or innovative. In a relational network, on the other hand, redundancy is a mode of support. It doesn't stimulate competition to capture its effects, but rather it is a product of cooperation. While this attitude of redundancy arose within a Western military context, one can't help but notice that the shared resources, mutual support and common infrastructure seem fundamentally communist in nature. Computer networks are not fundamentally exploitative or equitable, but they are used in specific ways and they operate within particular economies. A redundant network of interrelated, mutually supporting computers running mostly open-source software can be the guts of an advanced capitalist engine, like Facebook. So, could it be possible to organise our networked devices, embedded as they are in capitalist economy, in an anti-capitalist way?

Dat Library is built on the Dat Protocol,[11] a peer-to-peer protocol for syncing folders of data. It is not the first distributed protocol (BitTorrent is the most well-known and is noted as an inspiration for Dat),[12] nor is it the only new one being developed today (IPFS, or Inter-Planetary File System is often referenced in comparison),[13] but it is unique in the foundational goals of preserving scientific knowledge as a public good. Dat's provocation is that by creating custom infrastructure it will be possible to overcome the accidents that restrict access to scientific knowledge. We would specifically acknowledge here the role that the Dat community — or any community around a protocol, for that matter — has in the formation of the world that is built on top of that protocol. (For a sense of the Dat community's values, see their code of conduct.[14])

When running Dat Library, a person sees their list of libraries. These can be thought of as similar to a torrent,[15] where items are stored across many computers. This means that many people will share in the provision of disk space and bandwidth for a particular library, so that when one of them loses electricity or drops their computer, the library will not also break. Although this is a technical claim — one that's been made from Baran to BitTorrent — it is more importantly a social claim: the users and lovers of a library will share the library. More than that, they will share in the work of ensuring that it will continue to be shared.

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[10] https://www.rand.org/content/dam/rand/pubs/research_memoranda/2006/RM3420.pdf
[11] https://github.com/datproject/docs/blob/master/papers/dat-paper.md
[12] https://en.wikipedia.org/wiki/BitTorrent
[13] https://ipfs.io/
[14] https://github.com/datproject/Code-of-Conduct/blob/master/CODE_OF_CONDUCT.md
[15] https://en.wikipedia.org/wiki/Torrent_file

This is not dissimilar to the process of reading generally, where knowledge is distributed and maintained through readers sharing and referencing the books important to them. As Peter Sloterdijk describes, written philosophy is 'reinscribed like a chain letter through the generations, and despite all the errors of reproduction — indeed, perhaps because of such errors — it has recruited its copyists and interpreters into the ranks of brotherhood (sic)'.[16] Or its sisterhood — but the point remains clear that the reading/writing/sharing of texts binds us together, even in disagreement.

Accessibility

In the world of the web, durability is synonymous with accessibility — if something can't be accessed, it doesn't exist. Here, we disentangle the two in order to consider *access* independent from questions of resilience.

Technically Accessible

When you have created a new library in Dat, a unique 64-digit 'key' will automatically be generated for it. An example key is 6f963e59e9948d14f5d2eccd5b5ac8e157ca34d70d724b41cb0f565bc01162bf, which points to a library of texts. In order for someone else to see the library you have created, you must provide them your library's unique key (by email, chat, on paper, or you could publish it on your website). In short, *you* manage access to the library by copying that key, and then every key holder also manages access *ad infinitum*.

At the moment, this has its limitations. A Dat is only writable by a single creator. If you want to collaboratively develop a library or reading list, you need to have a single administrator managing its contents. This will change in the near future with the integration of hyperdb into Dat's core.[17] At that point, it will enable multiple contributors and the management of permissions, and our single key will become a key chain.

How is this key any different from knowing the domain name of a website? If a site isn't indexed by Google and has a suitably unguessable domain name, then isn't that effectively the same degree of privacy? Yes, and this is precisely why the metaphor of the key is so apt (with whom do you share the key to your apartment?), but also why it is limited. With the key, one not only has the ability to *enter* the library, but also to completely *reproduce* the library.

Consenting Accessibility

When we say 'accessibility', some hear 'information wants to be free' — but our idea of accessibility is not about indiscriminate open access to everything. While we do support, in many instances, the desire to increase access to knowledge where it has been restricted by monopoly property ownership, or the urge to increase

[16] https://rekveld.home.xs4all.nl/tech/Sloterdijk_RulesForTheHumanZoo.pdf
[17] https://github.com/mafintosh/hyperdb

transparency in delegated decision-making and representative government, we also recognise that Indigenous knowledge traditions often depend on ownership, control, consent and secrecy in the hands of the traditions' people.[18] Accessibility understood in merely quantitative terms isn't able to reconcile these positions, which this is why we refuse to limit 'access' to a question of technology.

While 'digital rights management' technologies have been developed almost exclusively for protecting the commercial interests of capitalist property owners within Western Intellectual Property regimes, many of the assumptions and technological implementations are inadequate for the protection of Indigenous knowledge. Rather than describing access in terms of commodities and ownership of copyright, it might be defined by membership, status, or role within a tribe, and the rules of access would not be managed by a generalised legal system but by the rules and traditions of the people and their knowledge.[19] These rights would not expire, nor would they be bought and sold, because they are shared, held in common.

It is important, while imagining the possibilities of a technological protocol, to consider how different *cultural protocols* might be implemented and protected through the life of a project like Dat Library. Certain aspects of this might be accomplished through library metadata, but ultimately it is through people hosting their own archives and libraries (rather than, for example, having them hosted by a state institution) that cultural protocols can be translated and reproduced. Perhaps we should flip the typical question of how might a culture exist within digital networks to ask how should digital networks operate within cultural protocols?

Adaptability (ability to use/modify as one's own)

Durability and accessibility are the foundations of adoptability. Many would say that this is a contradiction, that adoption is about use and transformation and those qualities operate against the preservationist grain of durability, that one must always be at the expense of the other. We say: perhaps that is true, but it is a risk we're willing to take because we don't want to be making monuments and cemeteries that people approach with reverence or fear. We want tools and stories that we use and adapt and are always making new again. But we also say: it is through use that something becomes invaluable, which may change or distort but will not destroy — which is the practical definition of durability. S.R. Ranganathan's very first Law of Library Science was 'BOOKS ARE FOR USE',[20] which we would extend to the library

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[18] Terri Janke, 'Managing Indigenous Knowledge and Indigenous Cultural and Intellectual Property', in *Australian Indigenous Knowledge and Libraries*, edited by Martin Nakata and Marcia Langton (Sydney: UTSePress), 83. Available at: https://epress.lib.uts.edu.au/system/files_force/Aus%20Indigenous%20Knowledge%20and%20Libraries.pdf?download=1

[19] Jane Hunter, 'The Role of Information Technologies in Indigenous Knowledge Management', in *Australian Indigenous Knowledge and Libraries*, edited by Martin Nakata and Marcia Langton (Sydney: UTSePress), 101–102. Available at: https://epress.lib.uts.edu.au/system/files_force/Aus%20Indigenous%20Knowledge%20and%20Libraries.pdf?download=1

[20] S. R. Ranganathan, *The Five Laws of Library Science* (Madras: The Madras Library Association, 1931), 1. Available at: https://babel.hathitrust.org/cgi/pt?id=uc1.$b99721;view=1up;seq=37

itself, such that when he arrives at his final law, 'THE LIBRARY IS A LIVING ORGANISM',[21] we note that to live means not only to change, but to live means to live *in the world*.

To borrow and distort another concept of Raganathan's 'Infinite Hospitality' — just a little bit — it could be said that we are interested in how to construct a form of infrastructure that is infinitely hospitable.[22] By this we mean infrastructure that accommodates the needs and desires of new users/audiences/communities and allows them to enter and contort the technology to their own uses. We really don't see infrastructure as aimed at a singular specific group, but rather that in its affordances infrastructure facilitates the generation of spaces where people can be. The poet Jean Paul once wrote that books are thick letters to friends. Books as infrastructure enable authors to find their friends. This is how we ideally see Dat Library and HyperReadings working.

Use cases

We began work on Dat Library and HyperReadings with a range of exemplary use cases, real-world circumstances in which these projects might intervene. Not only would the use cases make demands on the software we were and still are beginning to write, but it would also give us demands to make on the Dat protocol, which is still in its formative stages of development. And, crucially, in an iterative feedback loop, this process of design produces transformative effects on those situations described in the use cases themselves, resulting in further new circumstances and new demands.

Thorunka

Wendy Bacon and Chris Nash made us aware of *Thorunka* and *Thor*.

Thorunka and *Thor* were two underground papers in the early 1970s that spewed out from a censorship controversy surrounding the University of New South Wales student newspaper Tharunka. Between 1971 and 1973, the student magazine was under focused attack from the NSW state police, with several arrests made on charges of obscenity and indecency. Rather than ceding to the charges, this prompted a large and sustained political protest from Sydney activists, writers, lawyers, students and others, to which *Thorunka* and *Thor* were central.

> The campaign contested the idea of obscenity and the legitimacy of the legal system itself. The newspapers campaigned on the war in Vietnam, Aboriginal land rights, women's and gay liberation, and the violence of the criminal justice system. By 1973 the censorship regime in Australia was broken. Nearly all the charges were dropped.[23]

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[21] Ibid., 382.
[22] http://www.dextersinister.org/MEDIA/PDF/InfiniteHospitality.pdf
[23] http://107.org.au/event/tharunka-thor-journalism-politics-art-1970-1973/

Although the collection of issues of *Tharunka* is largely accessible via Trove,[24] the subsequent issues of *Thorunka*, and later *Thor*, are not. For us, this demonstrates clearly how collections themselves can encourage modes of reading. If you focus on *Tharunka* as a singular and long standing periodical, this significant political moment is rendered almost invisible. On the other hand, if the issues are presented together, with commentary and surrounding publications, the political environment becomes palpable. Wendy and Chris have kindly allowed us to make their personal collection available via Dat Library (Key: 73fd26846e009e1f7b7c5b580e15eb0b2423f9bea33fe2a5f41fac0ddb22cbdc), so you can discover this for yourself.

Academia.edu alternative

Academia.edu, started in 2008, has raised tens of millions of dollars as a social network for academics to share their publications. As a for-profit venture, it is rife with metrics and it attempts to capitalise on the innate competition and self-promotion of precarious knowledge workers in the academy. It is both popular and despised: popular because it fills an obvious desire to share the fruits of one's intellectual work, but despised for the neoliberal atmosphere that pervades every design decision and automated correspondence. It is, however, just trying to provide a return on investment.

Gary Hall has written that 'its financial rationale rests … on the ability of the angel-investor and venture-capital-funded professional entrepreneurs who run Academia.edu to exploit the data flows generated by the academics who use the platform as an intermediary for sharing and discovering research'.[25] Moreover, he emphasises that in the open-access world (outside of the exploitative practice of for-profit publishers like Elsevier, who charge a premium for subscriptions), the privileged position is to be the one 'who gate-keeps the data generated around the use of that content'. This lucrative position has been produced by recent 'recentralizing tendencies' of the internet,[26] which in Academia's case captures various scattered open-access repositories, personal web pages and other archives.

Is it possible to redecentralise? Can we break free of the subjectivities that Academia.edu is crafting for us as we are interpellated by its infrastructure? It is incredibly easy for any scholar running Dat Library to make a library of their own publications and post the key to their faculty web page, Facebook profile or business card. The tricky — and interesting — thing would be to develop platforms that aggregate thousands of these libraries in direct competition with Academia.edu. This way, individuals would maintain control over their own work; their peer groups would assist in mirroring it; and no one would be capitalising on the sale of data related to their performance and popularity.

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[24] http://trove.nla.gov.au/newspaper/page/24773115
[25] http://www.garyhall.info/journal/2015/10/18/does-academiaedu-mean-open-access-is-becoming-irrelevant.html
[26] http://commonstransition.org/the-revolution-will-not-be-decentralised-blockchains/

We note that Academia.edu is a typically centripetal platform: it provides no tools for exporting one's own content, so an alternative would necessarily be a kind of centrifuge.

This alternative is becoming increasingly realistic. With open-access journals already paving the way, there has more recently been a call for free and open access to citation data.[27] The Initiative for Open Citations (I4OC) is mobilising against the privatisation of data and working towards unrestricted availability of scholarly citation data.[28] We see their new database of citations as making this centrifugal force a possibility.

Publication format

In writing this README, we have strung together several references through the text that we are writing. The writing might be published in a book and the references will be listed as words at the bottom of the page or at the end of the text. But the writing might just as well be published as a HyperReadings object, providing the reader with an archive of all the things we referred to and an editable version of this text.

A new text-editor could be created for this new publication format, not to mention a new form of publication, which bundles together a set of HyperReadings texts, producing a universe of texts and references. Each HyperReadings text might reference others, of course, generating something that begins to feel like a serverless World Wide Web.

It's not even necessary to develop a new publication format, as any book might be considered as a reading list (usually in the footnotes and bibliography) with a very detailed description of the relationship between the consulted texts. What if the history of published works were considered in this way, such that we might always be able to follow a reference from one book directly into the pages of another, and so on?

Syllabus

The syllabus is the manifesto of the twenty-first century. From 'Your Baltimore "Syllabus"',[29] to '#StandingRockSyllabus',[30] to 'Women and gender non-conforming people writing about tech',[31] syllabi are being produced as provocations, instructions for reprogramming imaginaries. They do not announce a new world but they point out a way to get there. As a program, the syllabus shifts the burden of action onto the readers, who will either execute the program on their own fleshy operating system — or not. A text, which by nature points to other texts, the syllabus is already a relational document acknowledging its own position within a living field of knowledge. It is decidedly not self-contained, however it often circulates as if it were.

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[27] https://www.insidehighered.com/news/2017/12/06/scholars-push-free-access-online-citation-data-saying-they-need-and-deserve-access
[28] https://i4oc.org/
[29] https://apis4blacklives.wordpress.com/2015/05/01/your-baltimore-syllabus/
[30] https://nycstandswithstandingrock.wordpress.com/standingrocksyllabus/
[31] https://docs.google.com/document/d/1Qx8JDqfuXoHwk4_1PZYWrZu3mmCsV_05Fe09AtJ9ozw/edit

If a syllabus circulated as a HyperReadings document, then it could point directly to the texts and other media that it aggregates. But just as easily as it circulates, a HyperReadings syllabus could be forked into new versions: the syllabus is changed because there is a new essay out, or because of a political disagreement, or because following the syllabus produced new suggestions. These forks become a family tree where one can follow branches and trace epistemological mutations.

Proposition (or Presuppositions)

While the software that we have started to write is a proposition in and of itself, there is no guarantee *how* it will be used. But, when writing, we *are* imagining exactly that; we are making intuitive and hopeful presuppositions about how it will be used, presuppositions that amount to a set of social propositions.

The role of individuals in the age of distribution

Different people have different technical resources and capabilities, but everyone can contribute to an archive. By simply running the Dat Library software and adding an archive to it, a person is sharing their disk space and internet bandwidth in the service of that archive. At first, it is only the archive's index (a list of the contents) that is hosted, but if the person downloads the contents (or even just a small portion of the contents) then they are sharing in the hosting of the contents as well. Individuals, as supporters of an archive or members of a community, can organise together to guarantee the durability and accessibility of the archive, saving a future UbuWeb from ever having to worry about their 'ISP pulling the plug'. As supporters of many archives, as members of many communities, they can use Dat Library to perform this function many times over.

On the Web, individuals are usually users or browsers — they use browsers. In spite of the ostensible interactivity of the medium, users are kept at a distance from the actual code, the infrastructure of a website, which is run on a server. With a distributed protocol like Dat, applications such as Beaker Browser or Dat Library eliminate the central server,[32] not by destroying it, but by distributing it across all of the users. Individuals are then not *just* users, but also hosts. What kind of subject is this user-host, especially compared to the user of the server? Michel Serres writes in *The Parasite*:

> It is raining; a passer-by comes in. Here is the interrupted meal once more. Stopped for only a moment, since the traveller is asked to join the diners. His host does not have to ask him twice. He accepts the invitation and sits down in front of his bowl. The host is the satyr, dining at home; he is the donor. He calls to the passer-by, saying to him, be our guest. The guest is the stranger, the interrupter, the one who receives the soup, agrees to the meal. The host, the guest: the same word; he gives and receives, offers and accepts, invites and is invited, master and passer-by… An invariable term through the transfer

[32] https://beakerbrowser.com/

> of the gift. It might be dangerous not to decide who is the host and who is the guest, who gives and who receives, who is the parasite and who is the *table d'hote*, who has the gift and who has the loss, and where hospitality begins with hospitality.[33]

Serres notes that *guest* and *host* are 'the same word' in French; we might say the same for *client* and *server* in a distributed protocol. And we will embrace this multiplying hospitality, giving and taking without measure.

The role of institutions in the age of distribution

David Cameron launched a doomed initiative in 2010 called the Big Society, which paired large-scale cuts in public programs with a call for local communities to voluntarily self-organise to provide these fundamental services for themselves. This is not the political future that we should be working toward: since 2010, austerity policies have resulted in 120,000 excess deaths in England.[34] In other words, while it might seem as though *institutions* might be comparable to *servers*, inasmuch as both are centralised infrastructures, we should not give them up or allow them to be dismantled under the assumption that those infrastructures can simply be distributed and self-organised. On the contrary, institutions should be defended and organised in order to support the distributed protocols we are discussing.

One simple way for a larger, more established institution to help ensure the durability and accessibility of diverse archives is through the provision of hardware, network capability and some basic technical support. It can back up the archives of smaller institutions and groups within its own community while also giving access to its own archives, so that those collections might be put to use. A network of smaller institutions, separated by great distances, might mirror each other's archives, both as an expression of solidarity and positive redundancy and also as a means of circulating their archives, histories and struggles.

It was the simultaneous recognition that some documents are too important to be privatised or lost to the threats of neglect, fire, mould, insects, etc., that prompted the development of national and state archives.[35] As public institutions, they were, and still are, tasked with often competing efforts to house and preserve while simultaneously also ensuring access to such public documents. Fire and unstable weather understandably have given rise to large fire-proof and climate-controlled buildings as centralised repositories, accompanied by highly regulated protocols for access. But in light of new technologies and their new risks, as discussed above, it is compelling to argue now that, in order to fulfil their public duty, public archives should be distributing their collections where possible and providing their resources to smaller institutions and community groups.

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[33] Michel Serres, *The Parasite* (Baltimore and London: The Johns Hopkins University Press), 15–16.
[34] http://bmjopen.bmj.com/content/7/11/e017722
[35] See: Beredo, B. C., 'Import of the archive: American colonial bureaucracy in the Philippines, 1898–1916' PhD diss., University of Hawaii at Manoa, Honolulu, 2011, http://hdl.handle.net/10125/101724

Through the provision of disk space, office space, grants, technical support and employment, larger institutions can materially support smaller organisations, individuals and their archival afterlives. They can provide physical space and outreach for dispersed collectors, gathering and piecing together a fragmented archive.

And what happens as more people and collections are brought in? As more of the institutional archives are allowed to circulate outside of its institutional walls? As storage is cut loose from its dependency on the corporate cloud and into forms of interdependency, such as mutual support networks? Could this open up spaces for new forms of not-quite-organisations and queer-institutions? Almost-organisations that exist somewhere uncomfortably between the common categorical markings of the individual and the institution. In our thinking, it's not important what these future forms exactly look like. Rather, as discussed above, what is important to us is that in writing software we open up space for the unknown, and allow others agency to build the forms that work for them. It is only in such an atmosphere of infinite hospitality that we see the future of community libraries, individual collections and other precarious archives.

A note on this text

This README was collaboratively written, and is still being collaboratively written, in a Git repository.[36] Git is a free and open-source tool for version control used in software development. All the code for HyperReadings, Dat Library and their numerous associated modules are all managed openly using git and hosted on github under open-source licenses. In a real way, Git's specification formally binds our collaboration as well as the open invitation for others to participate. As such, the form of this README reflects its content. Like this text, these projects are, by design, works in progress that are malleable to circumstances and open to contributions, for example by opening a pull request on this document or raising an issue on our GitHub repositories.

[36] See: https://en.wikipedia.org/wiki/Git and https://en.wikipedia.org/wiki/Repository_(version_control). You can view the repository containing this text at https://github.com/sdockray/hyperreadings