

Offline Libraries: potentials, threats, and possibilities.
By Henry Warwick, Ph.D., 2015.

Offline libraries consist of digital storage media – hard drives, USB sticks, Solid State Drives (SSD), etc. – filled with digital files, often eBooks, that are organized or curated in some manner. With contemporary storage devices Offline Libraries have evolved into a variety of systems with a new panoply of uses, motives, and needs, ranging from scholarly indexed systems that are research libraries on a disk, to the simpler archival curations of items, to the non-expert local and pedestrian transportation of collections of digital “stuff”. This essay will examine some of these uses by analyzing the potentials and possibilities inherent to Offline Libraries as well as an examination of the threats to their existence.

Introduction: What are we talking about?

“File sharing is the greatest thing since punk rock”
- Steve Albini, 2014

Before we can discuss Offline Libraries and their present potentials and possible futures, it is important to address some issues inherent to them. Firstly, there is precious little scholarship about them. There’s a plethora of writing about “file sharing” and “piracy” and the rest of that, but to the actual use of Offline Libraries there is very little discussion. This becomes especially complex when one wishes to discuss large collections of eBooks and similar text based ephemera. As a consequence, other than my book (Warwick A, 2014) and video (Warwick B, 2014) there’s not much to go on except for the odd indirect article here and there about “eBook Piracy” and the occasional art exhibit.

Offline Libraries are not, by necessity, in the category of illegally obtained information. It is perfectly possible that someone with an arbitrarily large amount of money could spend it all on eBooks and devise their own Offline Library. This is why a discussion of Offline Libraries operates as a liminal discourse – these libraries are not necessarily illegal or even sub rosa, and thus fall outside the discussion of file sharing. Offline Libraries that are dependent on shared materials do operate in a more clandestine manner, however, they are not commonly employed by public entities due to the power and interests of vectoral capitalists (Wark) and their thrall over government through their capture of public officials.

As a consequence, the Offline Library sits in a very uncomfortable place, one that is not easily theorized and often completely unacknowledged, poorly documented, and generally ignored. This is not necessarily a bad thing. Insofar as these libraries are dependent on file sharing systems, their sub rosa development, transport, and distribution is an effective method of survival. However, this liminal status does little to illuminate the value of these things to the general public who would benefit from these systems, to say nothing of the millions of scholars and students who would benefit the most from them. From this outsider space, we shall proceed.

Offline / Online: not opposites: partners.

Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.

- United Nations *Universal Declaration of Human Rights*, article 27 (1948)

Offline Libraries are *Offline* and *Libraries*. This distinguishes them from Online Libraries and other archives. While they technically operate at a distance, they actually share an interdependence. The structure and relations of the various Online Libraries is complex and ever changing. What the Offline Library brings to the Online is first and foremost: resilience. An Online Library occupies a singularity – it is in one place: online. It can be shut down. If a commercial online entity continues to bleed money, eventually it will disappear, and its contents along with it. If a sub rosa fill sharing entity is caught, their website can be deleted, and, depending on how virulent the vectoralists involved are, can face jail time. And they all face hacking and DDOS attacks.

This flips the internet from a robust Deleuzian “rhizomatic web” as championed in the 1990s, to an increasingly vulnerable arboretic system subject to intervention from actors public and private. The Offline Library provides resilience for these systems, as the building of an Online Library requires eBooks – the same eBooks found in Offline Libraries. Thus, Online and Offline Libraries exist in a kind of symbiosis; the Online provides content for the Offline, and the Offline provides resilience for the Online. That said, there are a number of exciting Online Libraries that deserve some mention.

(*SL1*) is the largest downloadable online library. Based in Russia, it is largely immune to the incursions of western vectoral interference. It has acquired some new features as it has forked into a number of different projects, e.g., allowing uploads of items. While (*SL1*) is a highly secretive organization, its base library system is available for download via Tor. Implementation is non-trivial - it requires many terabytes of storage (in 2014, it was well over 14TB) and programming skills in Python and PHP. Due to its size and complexity, it is unlikely to be ubiquitous in distribution, making it vulnerable.

Archive.org is a massive collection of media over ten petabytes in size. It has hundreds of thousands of books and text based items available for download. It is also part of the 250,000 book Open Library initiative, allowing users of *Archive.org* to digitally “borrow” eBooks. This is suboptimal for scholars who need information *when they need it*, and it compounds the weakness of paper libraries (arbitrary availability of texts) with weaknesses of eBooks (glowing screens, difficult reading, etc.) *Archive.org* is somewhat precarious – they can’t go far over the line, or the vectoralist wealth extraction machine will sue them into oblivion. At the same time, they need to push limits or they will end up like the Gutenberg Project – a small collection of ancient texts of limited value and interest.

(*SL5*) With well over 100,000 items, (*SL5*) continues to evolve. As it self curates items of more “scholarly” interest, it continues to provide research items for its members. It is also under attack. Starting as v. it added an A every few years. Recently its DNS was confiscated, and it moved to (*SL2*). How much longer (*SL5*) can continue to evade capture and shut down is an open question.

(SL3) is a site based on Aaron Swartz's JSTOR efforts. (Kapperberger) (SL3) is now, as of June 2015, facing the full brunt of vectoral persecution by Elsevier, a billion dollar academic publishing behemoth. Site founder, Alexandra Elbakyan is defiant, "I think Elsevier's business model is itself illegal..." She declared:

"If Elsevier manages to shut down our projects or force them into the darknet, that will demonstrate an important idea: that the public does not have the right to knowledge. We have to win over Elsevier and other publishers and show that what these commercial companies are doing is fundamentally wrong." (*Torrentfreak*)

A site similar to (SL3) is (SL4). It also allows one to search through millions of scientific papers.

As the situation with sci-hub.org illustrates, the Online is no longer rhizomatic or resilient. It can be shut down. With unremitting greed at the source of Elsevier's wealth extraction model and its capture of the contemporary legal system by vectoral capitalists, (SL3) resolves into an "immoveable object meets irresistible force" condition. However, since the immoveable object (Elsevier) has millions of dollars at its disposal and a panoply of international agreements between nations that support its proprietary claims, the likelihood of sci-hub's success is not a forgone conclusion. As noted earlier, ubiquity creates resilience, and Elbakyan has moved about half of her 41 million files into the Libgen system. To insure the continued safety of the (SL3) library, it would be wise if dozens of Offline Libraries were made of its files, forming a backbone that would provide some resilience.

While huge systems like (SL2) or (SL3) or smaller ones like (SL5) are profoundly useful to their publics, there are micropublics that can and do use even smaller systems, and these are often in the form of Offline Libraries, using devices like the PirateBox and the LibraryBox which don't care where the files come from and don't supply much beyond those files. These systems, while profoundly useful, have their limitations, as PirateBox is based in an immediacy of file exchange within a given wifi region, and LibraryBox is more of an open source miniature version of a Network Attached Storage device (NAS). The LibraryBox can hold as much as 128GB – whatever can fit on a USB stick. Commercial NAS devices can hold terabytes of data, and a battery powered Seagate NAS was used as the basis of DATAFIELD-2 at Transmediale 2015. (Transmediale)

The model of Offline Library this analysis looks at is The Alexandria Project. Developed by the author in 2012, it initially was comprised of 20,000 items, grew to 30,000, and is now up to nearly 50,000. The Alexandria Project is a functioning test bed for Offline Library research, and reflecting on its development will show a valuable path of not only development but the considerations and theory inherent to the Alexandria Project.

The latest developments of the Alexandria Project can be read online, here:
<https://misterwarwick.wordpress.com/2015/06/17/the-alexandria-project-update/>

Simply, the latest version of the Alexandria Project has nearly 50,000 books organized into dozens of directories named for fields of study, ranging from Philosophy and Political Theory to Fiction, Gender Studies, Film Theory, Ecology, etc. All of these directories are indexed in Dropout, a free and transportable (Windows OS only) indexer. Also on the drive is a

transportable version of LibreOffice. Thus, the Alexandria Project becomes a self contained research facility. One can search text inside the documents using Dropout and write documents directly copied from the results. This would be of great use to scholars who don't want to bring their computer with them as they travel. Much of what a laptop can accomplish is now on a cellphone. With an Alexandria Project drive, they can travel and use computers on site.

This version of the Alexandria Project would be of enormous benefit to remote communities that haven't significant libraries. This particular direction is of interest, especially in Canada, which has far flung communities that lack substantial libraries and research facilities. In private correspondence with the Librarian in Iqaluit, we found that the Iqaluit Library in Nunavut has approximately 60,000 items. To ship a 1kg book *or hard drive* to the Library would cost CDN \$21.67. The Alexandria Project would virtually double the size of their library. There is precedence for this kind of action – in 2013, Geert Lovink and his students brought a drive filled with approximately 50,000 books to the Makerere University Business School, (networkcultures.org) where it was welcomed by representatives of the University, *Professors Waswa Balunywa and Samuel Ssejaaka*. (mubs.ac.ug) As Professor *Balunywa noted*, with 80% of the people in rural areas and without electricity, adoption of modern technologies will be difficult. (mubs.ac.ug) Due to the extreme weather in Northern Canada, settlements are electrified so as to provide heat and lighting during the long dark winters. Consequently, Arctic Canada is more amenable to the Alexandria Project. This is likely to be true in Northernmost Europe and Antarctica as well as a variety of settlements in Northern Russia and Siberia. Often, remote places are very poor, and a device like the Alexandria Project when curated for the needs and interests of these locales would be of enormous use value. Grants are presently being pursued in this regard.

The Future

Trying to talk about the future is a bit like having bees live inside your head. But, there they are.

- Firesign Theatre (1971)

The future of Offline Libraries is certain insofar as they will exist as long as there is portable storage media. This isn't as straightforward as one might think and there are many factors that could prevent the development of Offline Libraries. For example, the drives might exist, but they might not work unless they are connected to the internet and subject to inspection by proprietary vectoral interests. That would make private libraries of shared works impossible. However, it would also require massive change in the use and production of storage media. Still, it is not without precedent, as in the early 2000s Western Digital actually built a drive that would periodically "phone home" with a list of the files on it. While it was an epic failure in the marketplace, it showed that such a system was possible.

Digital Rights Management has always been circumvented. However, given sufficient complexity, it could make circumvention not so much impossible as simply difficult enough to discourage. Another method of making Offline Libraries impossible is one we see already happening – where the majority computer devices are not able to see or read external drives. An example of this would be the iPad. With the growth of the "Cloud" and dependent readers (like the iPad) hard drives are not persecuted out of existence - they're simply made irrelevant, with dire consequences.

Like (SL1) on Tor, Online Libraries would be wise to allow users to download them in toto. However, unlike Libgen, it would be best if they were simply available as collections of text that do not require advanced programming skills. Online libraries will continue to feed Offline Libraries, and symbiotically, Offline Libraries will provide resilience to the Online Systems. It is hoped that in the near future Offline Libraries can be more extensively shared and distributed to remote regions where the need for knowledge is great.

Books

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Henry Warwick is an associate professor at Ryerson University in Toronto in the RTA School of Media. He holds a Ph.D. in Communications from the European Graduate School. He is a multi-talented scholar, author, composer, musician, and artist. His book, "The Radical Tactics of the Offline Library" is available from <http://networkcultures.org>. Exhibiting and performing internationally, his works are in a variety of private collections. His music can be heard at <https://soundcloud.com/henry-warwick> (for newer material) and <http://www.kether.com/audio> (for older material). He lives in Toronto with his family and two cats, p'tuñia and LeeLoo.