

HOW GOES THE DIGITAL AT THE ARCHIVES

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The history of a people including their culture and its development can be found in archival records and publications through the ages. The form that these archives and publications take and the quantity that is created have changed dramatically over time. The most significant recent development has been the inexorable rise of digital content.

The Ancient

Ancient records on Singapore are relatively scarce. Javanese epic poems written on palm-leaf from 1365 point to a settlement called Temasik (Kwa et al. 2009, 25). There are also brief references in 14th century Vietnamese textual records that refer to the visit of an ambassador from “Sach Ma Tich (likely Temasik) with presents but no interpreter could be found” (Miksic 2013, 181).

A rare eye-witness account comes from the work of Chinese trader Wang Dayuan in 1349 called *Daoyi Zhibiue* (Description of the Barbarians of the Isles). Literal translations of his experiences include a variety of observations such as: “customs are pillage and plunder”, “Men and women (probably the local inhabitants) reside beside Chinese

people”, “Trading goods are satin cloths ... red gold, pottery...”, “By custom and disposition [the inhabitants] are honest” and “The customary practice is to keep short hair, wear false gold-patterned satin wrapped around the head and a red-oiled crude/coarse cloth tied around the body” (translated by Geoffrey Wade and Goh Geok Yian, quoted in Miksic 2013, 174-178).

We also have the fascinating accounts of Southeast Asia from the memoirs of Flemish trader, Jacques de Coutre. He described his experiences in 1594 of *orang laut* living around the Straits of Singapore: “They brought us many parasols made from palm leaf; they call them *payones*”, “They lived in sloops (a sea vessel) ... and on them they have their houses with wives and children, dogs, cats [and] even hens with their chicks”, “When they go fishing, the man sits on the *perabu* with a harpoon and the wife and children paddle very fast and very skillfully”, and “They are armed with poisoned daggers, which they call krisses...” (Borschberg 2014, 77).

The early 19th century saw the arrival of the East India Company when its official, Sir Stamford Raffles, signed a treaty with the

local rulers to set up a British trading post in Singapore in 1819. Records of the development of modern Singapore since the conclusion of this treaty are far more extensive. These records cast light on the lives of the local population and the National Archives of Singapore (NAS) holds an estimated one million pages of what has come to be referred to as the Straits Settlement Records, which date to 1800.

The Big Bang of Information

Using print as a proxy for the store of information, it has been estimated that about 30,000 manuscripts used to contain “the world’s store of recorded information” before the mid-15th century; and by the time of Shakespeare in the 17th century, the wealth of information had grown to 1.25 million titles (Bawden and Robinson 2000, 52).

A little further on in 1852, the Secretary of the Smithsonian Institution opined that “literature and science will be overwhelmed by their own unwieldy bulk” as “about twenty thousand volumes ... purporting to be additions to the sum of human knowledge, are published annually” (Bawden and Robinson 2008, 4). By 2007, the Library of Congress was receiving in the region of 6,500 new books a day (Weinberger 2007, 15).

In 2007, we were also well into the digital age. In that year alone, “161 billion gigabytes of digital content was created, stored and replicated around the world ... that’s three million times the amount of information in all the books ever written (at that time)” (Palfrey and Gasser 2008, 185). It has been predicted that by 2020, about 1.7 megabytes will be created every second for every person on the planet (Marr, 2015).

The changing landscape briefly painted above has had a major impact on archival paradigms (Cook 2013, 106-116).

The Archival Paradigms

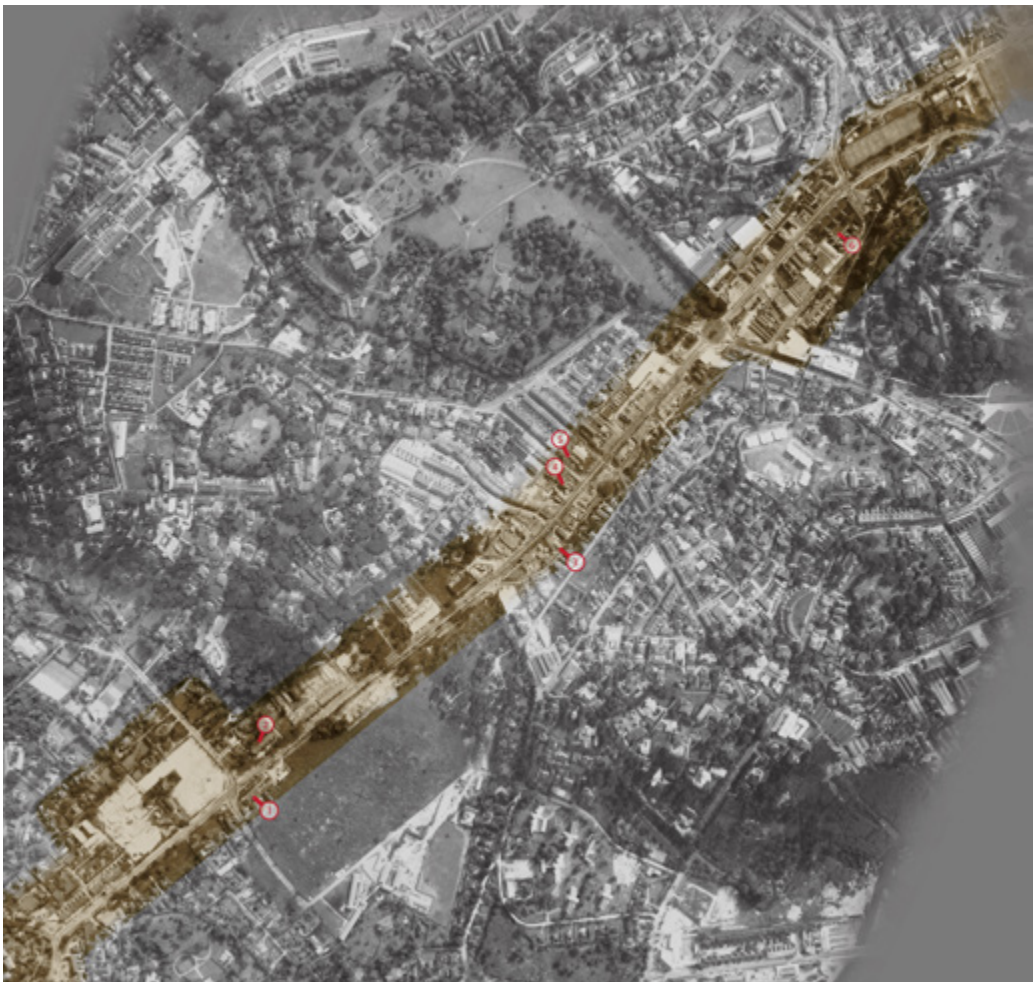
As archiving became understood as a science from the late 1800s, many early professional archivists saw themselves as keepers of records accumulated naturally; with a strict approach not to interfere in the selection or arrangement. For pioneers such as Sir Hilary Jenkinson, the core focus was on archives as “evidence” (Cook 2013, 100). To be efficient and to work without prejudice or afterthought that could impact on the original order or provenance of the archives, the archivist was not thought to need anything but a passing interest in history or culture or other subject matter of the archives.

By the mid-20th century, it was no longer possible to archive natural accumulations without question as vast quantities made it impossible. As highlighted by Cook (2013, 107), only between three to five per cent could realistically be kept. T.R Schellenberg was a key proponent of a historian-archivist who made deliberate decisions on what to keep or destroy. There was a leaning towards academic research patterns, especially those of historians, and what was anticipated to be of interest to them. On the face of things, there could have been a narrowing of what was archived. However, there was also a growing historical interest in the man on the street and in farms and factories as opposed to just the prominent. This served to cast the archival net wider and a greater diversity of stories came to be captured.

The increasing pluralism in archival holdings would help to give rise to a professional mediator-archivist from the 1970s as archives moved to become more of a universal resource and was not just for academics; underpinning deep questions such as the individual search for identity or for justice in some societies. This paradigm continues to be the mainstay to this day.

Important digital milestones occurred in the third archival era. Computers and databases allowed archivists to better manage large holdings; professionalism grew as shared international standards took root in all areas of work from description to preservation (including digital preservation standards); and archives in paper and print formats could be digitised thus paving the way for websites such as the NAS's "Access to Archives Online" (a2o).

a2o would break new ground for a local website – winning an international award under the Stockholm Challenge Award in 2004 for the e-culture category. A major part of a2o's popularity was the largest offering of maps, photographs, postcards, and posters relating to Singapore; anywhere in the world. This was a real boon for curators, publishers, and history buffs looking for the visual that would enrich their exhibitions, books, and websites. The treasure trove had been unlocked.



The image is a composite of three aerial photographs taken by the Royal Air Force on 14 February 1957. Marked out are the then: 1. Orchard Road Police Station, 2. C. K. Tang, 3. Pavilion, 4. Cold Storage, 5. Koek Road hawkers, 6. Amber Mansions. Used in NAS's irememberOrchard exhibition in 2014.

Image courtesy of National Archives of Singapore.



The image of the Sounds of Yesteryear (1903-1941) banner on the audio-visual and sound recordings page on Archives Online, 2017.

Image courtesy of National Archives of Singapore.

Given the immense popularity of the visual today, it may be surprising to note the existence of a traditional bias towards textual records and a lingering suspicion over visual materials. Some archivists saw the visual as a product of mass popular culture that was not to be taken seriously. It has been suggested that as we move into the early 21st century, there is a “visual turn” to bring a more widespread realisation that much can be learnt, remembered, and properly contextualised using visual records (Schwartz 2004, 109).

The New NAS Archives Online

To this current day, many local researchers fondly recall the a2o website and continue to call the new website by the same acronym. The new NAS research website is now simply called Archives Online (www.nas.gov.sg/archivesonline/) and it has made significant digital strides in the last few years.

It continues to power on with the visual. Maps that used to be presented in low resolution that got frustratingly blurry are now rendered in high resolution such that even the small text can be read. An extremely popular new offering since 2015 are over 55,000 high resolution aerial photographs of Singapore from the 1940s to the 1970s. I have seen how both serious researchers as well as intrepid amateurs have used them

to trace detailed information relating to topics such as World War II battle sites, Orchard Road landmarks as well as identifying and mapping burial grounds.

The capacity to stream the audio-visual has risen exponentially. Over 3,500 oral history interviews are now fully online when they used to be available only on cassette tapes at the Archives Reading Room as recently as 2013. The memories of personalities such as David Marshall, S. Rajaratnam, Liu Kang, Georgette Chen, Zubir Said, Patricia Chan, Dollah Kassim, and Jack Neo can now be heard anytime and anywhere alongside the voices of civil servants, tradesmen, businessmen, and others who helped make Singapore what it is today. Where manual transcripts are available, optical character recognition has been applied to allow for keyword searches; and where manual transcriptions are not available, digital voice to text transcriptions can be made to enable researchers to find the information they need.

Hundreds of *Berita Singapura* news magazine films from the 1960s have been painstakingly digitised (after long days of cleaning and repairing obsolete 16 millimetre and 32 millimetre films; and U-matic tapes) and are now progressively uploaded. The National Day Rally speeches of our Prime Ministers dating back to 1966 are now online, some of

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PRIME MINISTER,
SINGAPORE.

PM-11-1111



20th April, 1967.

Minister for Culture,

I understand from my children that during school holidays the Junior Library is crowded to overflowing. Can you confirm if this is so? If it is, it is a development to be welcomed and encouraged and the facilities must be expanded to take in our ever growing educated youths.

You will find Cabinet ready to support expansion of library projects.

PS
Re above it is true my children too told me this. What are the facilities available & what additional would you suggest, if.
OK
24/4/67

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Image of memorandum from PM Lee Kuan Yew to Minister for Culture, Mr Othman Wok in 1967 on reports of overcrowding at the Junior Library.

From the file: "Library Division – General Correspondence"
(Reference: MC 100 Vol 2).

Image courtesy of Ministry of Culture Collection,
National Archives of Singapore

which had to be digitally stitched together as the audio clips and the silent film footages were sometimes in separate containers. The most recent and exciting recordings are an acquired collection of pre-war shellac and vinyl records from 1903 to 1941. They are being progressively conserved and digitised, with at least one released online every week in 2017. They tell a story of a first nascent, and then flourishing recording industry based in Singapore from the 1900s to the 1980s.

The textual is not left behind and from 2015, the NAS started to digitise and upload all the papers ever presented at our legislative assemblies and parliaments from 1955 to date. The digitisation also comes with optical character recognition so that keyword searches can be made. What was once only available through the Parliament Library to a select few will now be at everyone's fingertips by the end of 2017 when the digitisation exercise is expected to be completed. Government files that have been digitised are also now presented under the Singapore Policy History Project microsite launched in 2016 on Archives Online. This charts out the paths taken, as set out in actual records, on different policy themes; from the threat of communist propaganda to the rise of tourism to the spread of learning throughout a young nation with the help of libraries.

These are but a sampling of new digital offerings on NAS's Archives Online since 2013. They have been made possible by new digital technologies as well as enhanced capacity built up since the NAS' content and expertise were synergised with that of the National Library Board (NLB) from 2012, when legislative amendments were passed to make NAS part of NLB.

At its height in 2012, the a2o was attracting an average of about 20,000 page views a month. By 2017, with the digital enhancements and newborn digital or digitised content available, the average page views on Archives Online are now consistently above 500,000 a month.

The New Frontier

There is one new archival paradigm that is edging its way into professional archival discourse – archives as a community-based collaboration that is facilitated by a mentor-archivist (Cook 2013, 113; Ketelaar 2012, 19-33; Pang and Liew 2014, 87-97). These new ideas speak of how archivists can work more closely with communities to shape and document



Image of mock-up of the transcribing page during the design of the Citizen Archivist portal, 2015. Image courtesy of National Archives of Singapore.

archives; as well as come to understand and reveal new layers of meaning behind the archives. A large part of this is made possible by how the digital or digitised archives allow for a convergence with the growing power of social media through which information can be shared and gathered.

NAS recognises that it would be impossible for our archivists to be experts in all things cared for at the archives. It is thus essential to tap the wisdom of the crowds and a promising start has been made particularly through its Citizen Archivist portal where a dedicated band of citizen archivists have been at work to make the archives richer and more findable. These volunteers have steadily transcribed over 20,000 pages of handwritten manuscripts in

the course of two years, and uncovered stories ranging from the need for tiger traps to the first regulations enacted for Singapore in 1823. What was once unreadable even to the latest technology (due to endless variations in writing styles) are now keyword searchable. The citizen archivists have also worked on transcribing oral histories and song lyrics, describing unknown photographs and providing new annotations for a historical publication (Zaccheus, 2017).

If encouragement were needed, the Citizen Archivist portal has been cited by Mr John Hocking, Assistant Secretary General of the United Nations, in his keynote speech delivered at the International Council on Archives Congress in South Korea on 6 September 2016. He cited it as an example of how collaborations with those outside the profession can achieve breakthroughs and excellence.

Conclusion

The surge of the born digital and new digital technologies has left many archival institutions at the crossroads where stacks of paper and analogue archives still await conservation and description but fixed resources face a growing digital tide demanding attention.

There is also one singular problem with digital content. Technology moves on so quickly that the entirety of the digital content needs to be migrated to new formats time and again within short timeframes. However, the value to researchers that has been seen by NAS and the exciting prospects of new ideas and platforms using the digital informs us that the challenges have to be met with determination and enthusiasm as there is no turning back.

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