If we are at risk of losing cultural memory due to the digital dark age, why do we even have the concept of the right to be forgotten?
"For this invention...will produce forgetfulness in the minds of those who learn to use it, because they will not practice their memory. Their trust in...will discourage the use of their own memory within them."

- What was the technology?
- Who said it?
- Why do we remember this?
"For this invention, writing, will produce forgetfulness in the minds of those who learn to use it, because they will not practice their memory. Their trust in writing produced by external characters which are no part of themselves will discourage the use of their own memory within them." -- Socrates

- Writing
- Socrates
- Plato, because he wrote it down! -- Plato's *Phaedrus* (from *Plato in Twelve Volumes*, Vol. 9,)

Isn’t this the same thing as the spectre of the digital dark age? Maybe. Socrates was certainly wrong, but writing is a lot more persistent than digital content.
However, the internet has a long memory. When I was a tween and a big fan of the ABC TGIF (remember that?) show, Sabrina the Teenage Witch. I was such a super dork fan, that I used my real name in an internet chat with Melissa Joan Hart, that actress who played Sabrina. This stayed on the internet for years, always a top hit when searching on my name. I finally wrote to the host and asked that they redact my name which they did.
Digital Dark Age

Let's drill down.
• 1 -- people aren't saving the born digital the way they saved analog
  ○ They are no longer forced to curate their external memories -- photographs, correspondence, documents, etc.
  ○ Cognitive dissonance -- digital isn't real, intangible, psychologically it's easy to disassociate from they way you treated the same content in analog world -- you can't see it, it doesn't take up physical space
  ○ We are all digital hoarders

https://collection1.libraries.psu.edu/cdm/singleitem/collection/trjohns/id/104/rec/20 -- John's Family Scrapbook

2 -- digital information is encoded information and needs interpretive technology -- one of the foundations of digital preservation practices is to guard against this

a. Software
b. And hardware

Anytime we outsource our memory, we are taking a risk that we will not be able to access that memory (digital and analog)

● This isn't new -- think about audio recordings (it was impossible to listen to the first audio recording until relatively recently when technology used in the large hadron collider was used to read groves and etching off tinfoil from 1878

● But clearly then this is a problem. But it's really the creator's choice of recording technology that has the greatest impact here -- another cognitive dissonance
● And clearly, we can't predict what technology can do in the future
  a. Much can be saved -- digital archeology, digital forensics, digitization

https://static01.nyt.com/images/2008/03/27/arts/sound450.jpg
• But some formats might rot away before that day comes -- mag

• Some things we need to be proactive and quick to prevent forgetting

• Other times, people want us to forget

https://acloserlisten.files.wordpress.com/2016/04/img_4964.jpg?w=710&h=533
The Right to be Forgotten
What is forgetting?
On an individual level

- It's crucial to our long term memory, remembering and forgetting are a duality and can't exist without each other
- In *When We Are No More* Abby Rumsey discusses
  - Patient "S" of Psychologist Aleksandr Romanovich Luria in *The Mind of a Mnemonist: A little book about a vast memory*
    - Without being able to forget, he couldn't understand the present or the future, can't imagine
    - Forgetting and remembering are an evolutionary pair

On a societal level
Forgetting used to be built in, but over the last 2 decades, technology has inverted this paradigm
EU “Right to be Forgotten” is focused around personal data, but what’s that?

Scope of personal data is very broad -- not just PII, but anything specific to physical, physiological, genetic, mental, economic, cultural or social identity, "any information relating to a data subject"

Complicated if multiple parties are involved (ex. Photos of you and you ex)


http://www.slideshare.net/Kaliya/ethical-market-models-in-the-personal-data-ecosystem

Ethical Market Models in the Personal Data Ecosystem by Kaliya

"Identity Woman" Young
• Analog equivalent -- collection policies, donor agreements, restrictions on access and use -- Donors can impose restrictions on their collections, they can withhold things from the donation, and they can decide how archives should handle unintended finds during processing

• But what about...
  ○ People donating material of others - personal diaries and correspondence -- This is personal information from which the creator did not have agency on what was saved
  ○ Has the prevalence and exponential growth of digital records make this a bad analogy? People tend to save more because it doesn't take up physical space and digital storage can be cheap. People are no longer curating or editing their own personal materials.

• Everyone has a right to privacy, but some parts of our society say that personal right can be revoked if it's in the interest of the greater good -- Does the right of society to retain a cultural memory override the individual right to be forgotten? If everyone was forgotten, we'd have no understanding of the past, therefore the future is murky.
- Aren't there US laws/customs/practices/societal norms about how your privacy rights are by default less if you are a public figure or popular culture? Celebrities? -- Prez. Trump --- what will happen to his tweets, years of factoids about his policy thoughts at the time

- Everyone has a right to privacy, but some parts of our society say that personal right can be revoked if it's in the interest of the greater good

- Dana Boyd on medium -- "When powerful actors, be they companies or governmental agencies, use the excuse of something being “public” to defend their right to look, they systematically assert control over people in a way that fundamentally disenfranchises them. This is the very essence of power and the core of why concepts like “surveillance” matter. "
https://medium.com/message/what-is-privacy-5ed72c66aa86#.1awwi1pfl

https://pbs.twimg.com/media/BtT_M2TCMAANgBA.jpg
Technology companies view public as a binary, but is it more complex?

People can legally pick through your trash and recycling and post findings to the internet -- this is legal but isn't it the same thing? Legal doesn't equate to appropriate within societal norms; drone footage in public spaces?

Are our legal definitions outdated?

Anil dash on Medium -- "The conventional wisdom is “Don’t publish anything on social media that you wouldn’t want to see on the front page of the newspaper.” But this is an absurd and impossible standard. The same tools are being used for person-to-person conversations and for making grand pronouncements to the world, often by the same person at different times. Would we say “Don’t write anything in a sealed letter that you don’t want to see on the front page of the newspaper” simply because the technology exists to read that letter without opening it?"

https://medium.com/message/what-is-public-f33b16d780f9#.aoekkh4hi

Dana Boyd again -- “privacy isn’t a state of a particular set of data. It’s a practice and a process, an idealized state of being, to be actively negotiated in an effort to have agency. Once we realize this, we can reimage how to negotiate privacy in a networked world."

https://medium.com/message/what-is-privacy-5ed72c66aa86#.1awwi1pfl

Digital preservation is a service, a program, a set of tools, a method in which we can preserve digital content. Although the methods are different, it's fundamentally the same as traditional preservation.

Traditional preservation
- A program for the overall care library materials, their storage, the environment, disaster recovery, sometime formatting -- the general macro ways in which degradation can be halted.
- Conservation treatment to restore degraded materials and protect them. Curators decide which items are significant enough to receive these services. Resources are finite only so much can be conserved. This is a form of appraisal.

Digital preservation
- Secure, monitored digital storage environment and proactive processes and workflows to halt digital degradation for all digital content
- Tiers of services that content might receive from basic to advanced, depending on the significance of the material -- a curatorial call

Digital preservation can help prevent the digital dark age and respect privacy through its application, but it needs to be guided by curators.
One of the tools, is the way in which we digitize or reformat analog materials that are at risk of degradation. Analog formats are generally still encoded formats, some more human readable without equipment, but not all. The way in which encode this analog data into digital content impacts how much longer content may be preserved for. Especially magnetic media.

But mass digitization, reformatting materials for access and preservation, can impact individual privacy. Ledgers, logs, datasets -- sometimes when digitized, these are turned into machine-actionable datasets that encourage reuse. This can lead to personal data about individuals having a much higher level of access. What was once obscure is now available. Does it change anything because the person is deceased (usually)? Don't the still have a right to be forgotten? What is our ethical obligation when we don’t know the will of those affected. This is doubly true for more modern collections which may be digitized as persons may still be alive. Although these are digitized less often, they still are.
Born digital content is usually what people think about when they hear digital preservation. It’s the digital dark age after all.

- Intellectual output in digital formats
- Digital photographs, digital music, digital video
  - DRM, licensed-content only
- Websites and social media
- News

http://borndigitaldata.blogs.sas.ac.uk/files/2016/02/shutterstock_231672199.jpg
Future proofing digital content. The level of digital preservation we assign to content can have a great impact on how much we protect against the digital dark age. It’s similar to the level of processing (arrangement, description, and preservation) of archival material. MPLP-style processing is more risk-tolerant of privacy violations -- then digitization of that material in the same manner, can make that information much more accessible.


- Open file formats
- Software preservation
- Media formats and equipment that can read it
- Geospatially redundant storage environments and fixity audits
- Technical metadata
- Preservation metadata -- authenticity and integrity
- Descriptive metadata and access points
  - If you think there’s a problem now with people thinking if it’s not online it doesn’t exist -- this will only continue to grow. At some point, if it’s not online or at least described online, it may as well not exist
  - True for scholars too -- they will want to spend their research time as efficiently as possible, if someone else has descriptive records online for material they need, guess where they’ll go.
Digital preservation and related content services and archival practices will also greatly affect the persistence of digital content that may disrespect individual privacy

- **Large scale web and social media archiving**
  - These can capture materials that creators later take down.
  - Can preserve aspects of themselves that they might not want known.
  - Is there a legal aspect here too?
- **Information security**
  - If we are collecting large amounts of digital content, we have the responsibility to do so securely so that unauthorized access is prevented.
- **Digital forensic practices**
  - Can “brighten” content that creator thought was already gone
  - But can also be used to identify personal data so that it may be appraised and/or redacted.

http://www.wordstream.com/images/increase-traffic-to-your-website-social-media.jpg
Some of the digital preservation roles I just described are strategies to prevent the digital dark age. But they are only enacted when a curatorial decision is made to do something. Strong curatorial vision and action will have the single greatest impact on both preventing the digital dark age and respecting individual privacy.

In order for curators to be able to take action, an organization needs to have a strong digital preservation program that is a combination of technology, organizational preparedness and commitment, financial resources. Kenney and McGovern’s 5 organizational stages can be used to benchmark and measure progress on all three fronts.

https://c2.staticflickr.com/8/7355/13610569124_1b60a1c857_b.jpg
Laws and regulations that simply say companies must remove content or pointers to content are impractical
  ○ "For any reasonable interpretation of the right to be forgotten, a purely technical and comprehensive solution to enforce the right in the open Internet is generally impossible. An interdisciplinary approach is needed and policy makers should be aware of this fact." (enisa, right to be forgotten, p. 7)
  ○ People unknowingly give up their privacy all the time on the internet. On social media, on google, and especially the internet of things -- [https://www.insecam.org/](https://www.insecam.org/)
  ○ Public awareness campaigns are needed to educate and inform people -- should be part of of any digital literacy curriculum. -- Eliminate the cognitive dissonance

Viktor Mayer-Schonberger, author of *Delete*, recommends a mixed approach
  ○ Laws and regulations for both software producers "to mandate that those who create software that collects and stores data build into their code not only the ability to forget with time, but make forgetting the default"
  ○ Building software and internet applications that are designed to forget.
    ■ "Data is associated with meta-data that defines how long the underlying personal information ought to be stored. Once data has reached its expiry date, it will be deleted automatically by software"

Balancing individual privacy with society’s collective memory and the legitimate and academic uses of mass dataset of web/social media archives

- Helen Nissenbaum, *Privacy in Context: Technology, Policy, and the Integrity of Social Life*
  a. Arguing that privacy concerns should not be limited solely to concern about control over personal information, Helen Nissenbaum counters that information ought to be distributed and protected according to norms governing distinct social contexts.
  b. There needs to be balance, the greater good, as with all civil liberties

• Anonymization of mass web and social media archives
  ○ LOC’s plans for the Twitter dataset, but they haven’t quite figured it out yet
  ○ Is this impractical? Maybe at this moment, but technology and algorithms will improve
• Conversations with donors, deeds of gifts, and other agreements to make the donor’s intent as clear as possible

http://ww1.prweb.com/prfiles/2013/01/14/10320440/PA_GUY_hi_white.jpg
Archivists, curators, and preservationists need to have an ethical framework from which these decisions can be evaluated.

- Memory is a duality of remembering and forgetting, if digital memory by default only remembers, this raises ethical concerns
  - This is the exact aspect of digital memory that is exploited for profit by Google, Facebook, and others -- both as big data and what can be learned, but also personal targeting of ads
- What memories should be remembered and what should be forgotten? How to decide what's for the greater good?
- Whose rights prevail if multiple parties are involved?
- Moral obligation to the feelings and considerations of others
  - Crime scene photos, death photos -- inappropriately shared on the internet
  - Pain and suffering it may cause

http://www.ualr.edu/vspillai/images/Ethics-cloud.png
SAA code of ethics -- does this need to change with the paradigm shift?
  ○ As appropriate, archivists place access restrictions on collections to ensure that privacy and confidentiality are maintained, particularly for individuals and groups who have no voice or role in collections' creation, retention, or public use.

Not all personal data on the internet was put there through personal agency -- how do we protect those whom had no role in what went up and don't want it there

Should children turning 18/21 have the right to wipe the internet of their youthful indiscretions?

https://kariepetersonphotography.files.wordpress.com/2013/01/baby-in-the-bathtub-1003.jpg
Bibliography


Questions