Archiving the Non-Organizational Born-Digital: The Challenges Posed by Material from Individuals, Communities, & Events

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Archiving the Non-Organizational Born-Digital: The Challenges Posed by Material from Individuals, Communities, & Events

- Background & The Problem of Personal, Community, & Event-based Digital Archiving (for both text and image)
- The particular problem of Messaging
- The PDA Conferences
- My Projects that provided key concepts & Challenges
  - InterPARES
  - Preserving Digital Public Television
  - Activist Archivists & the Occupy Movement
- Important Lessons & Approaches Learned (From Activist Archivists & Other projects)
- Other projects to Monitor
- Further Applied Research needed

Personal born-digital (from PDA Conferences)

- Correspondence/email
- Personal photos/movies and group collections
- Manuscript drafts, camera original footage, rough cuts
- Personal documents
- Diaries
- Home movies

And has been extended to encompass:

- Family history
- Community/Ethnic history & Movements
- Genealogy
- Digital humanities

In what environments do we find this type of material?

- Archives and Library Special Collections
- Collections documenting a community
- Collections documenting an ethnic group
- Collections documenting a social movement
- Collections documenting the work of any other type of group (a group of Architects, a set of law-makers, etc.)

Documenting an Event

- Woodstock: The Definitive 50th Anniversary Archive (SD/D • Blu-Ray)

Other projects to Monitor

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- Further Applied Research needed
Well-funded “anti-racist” activists, with backing from billionaire Jews and government institutions, prevent racially-aware White people from engaging in online commerce. The National Alliance and Cosmotheist Church, for example, have been effectively banned from online commerce for nearly two years. Now the Jews and their pawns are trying to extend this censorship to totally non-political venues like this Bloomington, Indiana farmers’ market.

https://nationalvanguard.org/2019/06/indiana-pro-white-farmers-threatened-persecuted-by-jewish-funded-leftists/
Home Video Day—NYC Chinatown

Center for Asian American Media
CAAMchannel “Memories to Light”

• “Home movies occupy a unique place in American culture. Though generally dismissed for their amateur qualities, home movies provide us with exceedingly authentic and honest moving images. Premised on the historic, cultural, and artistic value of the home movie, Memories to Light: Asian American Home Movies is a national participatory arts project that collectively and aesthetically constructs shared social, cultural, and political representations of Asian America directly from the community itself. Since the mainstream media has given us so few authentic images of the Asian American experience, home videos become the most real way to see how our grandparents, mothers, fathers, aunts and uncles lived their lives.”
In the analog world

- Traditionally, we have come to understand the work of writers, scientists, filmmakers by scholars studying their papers and rough-cuts in Special Collections and Archives
- Their correspondence and progressively different drafts of papers and rough-cuts reveal their changing thoughts and craft
- But how do we gather these in the Digital Age?

Correspondence

Where can we find these today?

- Do people write letters on paper? Can we see the iterations of changes on manuscripts? Do people save their EDLs?
- Where can we find today’s equivalent of these?
Stages of the problem

• Stage #1: People record on digital media instead of analog
  – Email services (gmail, yahoo)
  – Cloud storage for documents (google docs)
  – Social network services (Vimeo, YouTube, Instagram)

• Stage #2: People no longer store their digital works in places over which they have absolute control

  – Email services (gmail, yahoo)
  – Cloud storage for documents (google docs)
  – Social network services (Vimeo, YouTube, Instagram)

Stage #1 Issues—digital replaces analog

• This will require
  – new interventions (like changing creators’ workflow, saving EDLs, or intervening in email handling software)
  – New tools (like for analyzing email)
  – new approaches like digital archeology, forensics

Stage #2 Issues—content no longer on hard disk

• Rise of Online Services and Social Media is changing where this content resides (and is imposing TOS restrictions that go beyond the rightsholder)

Much Content is on Facebook

Identitarian Platform only on Web
Core Multi-location Problems

- It's difficult enough when someone's photos or movies are spread throughout their hard disk. But today some images there, but others on their phone(s), YouTube, Vimeo, Instagram, Flickr, Facebook, in Tweets, etc.
- Similar problems plague email
- Most Social Network TOS policies prohibit the owner from giving their password to anyone else (even Library)

And how do we handle donations after an important person dies?

And these issues are also true for Community Grps & Assns

- w/Social Media, group activity is more important than ever
- But each person in the group is an individual collector. And frequently a set of individual collections forms the group collection.

Documenting Protests

When aggregated, many different personal collections form an important picture of:

- An event
- An ethnic group
- A community
- A social movement
- A set of architects
- A set of law-makers
- What is important to them, how they go about their business, ...

And we know from past works that aggregations create new meanings

- Aggregating all the photos and home movies of the Digital Diaspora is hugely more meaningful than a single photo-
- One tweet says very little, but thousands of tweets can show trends or depict a particular event or day
And we know from past works that aggregations create new meanings

- Aggregating all the photos and home movies of the Digital Diaspora is hugely more meaningful than a single photo
- One tweet says very little, but thousands of tweets can show trends or depict a particular event or day

But aggregating items from disparate sources causes significant problems

- Vast quantity of user-contributed material
- Rights Issues
- No easy way to control for quality, file format, metadata (not even any consistency for any of these)

Every Image Collector has a Different Approach

- Different file-naming conventions
- Different file formats
- Different compression schemes
- Different metadata
- Stored in different arrangements/hierarchies
- Stored in different places (cellphone, personal hard disk, YouTube, Vimeo, Facebook, …)
**Born-Digital Messaging**

- Increasingly, important record sets have moved to emails and text messaging.
- Much of the back-and-forth in collaboration happens through messaging:
  - “let’s try this instead”
  - “increase budget category X by $12K, and decrease category Y by the same amount”
  - “should we insert this photo below paragraph 3?”
  - “review the document I sent you this morning”
- Increasingly this type of messaging is on phone services or Twitter.

**Born-Digital Correspondence**

- Email archiving is bad enough
  - And discussions might shift back and forth btwn work and personal email accounts.
- But what happens when email discussions switch back and forth to text messaging (like when someone is asked to send a photo that resides on their phone)?
- And phone messaging threads can keep jumping around btwn services.

**Phone messaging threads can keep jumping around btwn services**

- Some messages sent to distribution group will be answered one-on-one (so the original question/context is in a completely different thread).
- Might jump from one service to another, then back again:
  - Standard text messaging not working within department store, so switch over to WhatsApp on dept store Wifi, then back to standard text messaging when outside.

**Howard’s Text Messaging**

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- Might jump from one service to another, then back again:
  - Standard text messaging not working within department store, so switch over to WhatsApp on dept store Wifi, then back to standard text messaging when outside.
Phone messaging threads can keep jumping around between services

- Some messages sent to distribution services will be answered one-on-one (so the original question/context is in a completely different thread)
- Might jump from one service to another, then back again
  - Standard text messaging not working within conference hall (or department store), so switch over to WhatsApp on conference center (department store) WiFi, then back to standard text messaging when outside

Phone threads sometimes switch to Email

- For example, retrieving and sending documents or photos that are on computer, not on phone

Issues with Privacy-oriented Messaging Apps—Signal

- Privacy goes beyond end-to-end encryption
- No cloud storage of message copies
- Disables "screen capture" function
- All messages stored in encrypted DB (30 character key?)

Upon receipt, different phone channels are joined together through Alerts

But not threaded together for later viewing

- within phone files
- within message capture utilities
- between phone and email
THE PDA CONFERENCES

PDA: Who Attends & Presents

- Citizen Archivists
  - People who want to step in and rescue content in peril
  - People who like to create software/Apps/Guidelines to help others facing similar problems
- Community or Ethnic groups and activists wanting to save portions of their heritage
- Professional librarians & archivists (and their programming support staff)
- Regular software developers
- Researchers (both academic and computer industry)

PDA Goals—Sharing knowledge

- What worked and what didn’t; what parts turned out to be more difficult than anticipated
- New and different types of content to collect
- Guidelines, procedures, workflows, methodologies
- Software

PDA History

Initially started by Internet Archive with co-sponsorship from Netherlands Sound & Vision, LC/NDIIPP and CNI

- 2010 Internet Archive
- 2011 Internet Archive
- 2012 Internet Archive
- 2013 Univ of Maryland
- 2014 Indiana State Library & ISU
- 2015 New York University
- 2016 University of Michigan
- 2017 Stanford University
- 2018 University of Houston
- 2019 University of Pittsburgh

Sample PDA Talks-Indianapolis 2014

http://visions.indstate.edu/pda2014/conference-program.html

- The Social Life of Personal Information
- Defining the Personal in Digital Archiving and Communities
- Personal Archiving as a Gateway to Data Literacy
- Finding Roots, Genealogy, and Inspiration: Understanding the Ultimate Uses of Digital Materials
- Opportunities and Challenges in Accessing Personal Digital Archives
- Public Libraries and Personal Digital Archiving: Outreach Lessons Learned
- Clear as Glass: Controlling the Data Generated by Wearable Technology
- Personal Archiving Within the Scholarly Workflow: Zotero as Connector for Collecting Faculty Work
- Preserving Your Digital Photos Using Free or Low-Cost Software
- Collaborative Data Management and Provenance as Core Pillars of Personal Digital Curation
- Family Archive as a Narrative Organization
- Designing a Personal & Family Archive for the 21st Century
PDA 2015


PDA 2015 Topics

• Preserving Digital Photos
• Digital Preservation of Art
• Creative use of Open Source tools-
• College Library sponsored Personal Digital Archiving Days
• Community Engagement
• Video Preservation
• Digital Humanities & Social Science
• Workshops-

Workshop on Do-It-Yourself Personal Digital Archiving

Creative use of Open Source tools

• Jason Scott, “When the Emulators Broke Free.” Scott’s basic message was that the Internet Archive has made significant advances with simulation of old games online.
• Justin McKinney, Mark Simpson Hailey and Ashley Brewer, “Open Source Emulation on the Internet Archive.” McKinney said BitTorrent is not inherently evil, it’s just a tool, and people—especially professional archivists and librarians—should be more open-minded about using BitTorrent as a tested, effective tool to transfer large (legal) files quickly.
• Wendy Hagenmaier, “PDA as an Opportunity for Collaborative Advocacy and Murder Mystery Intrigue” (PDF) and “Examining the Implementation of Interactivity in Archival Collections” (PDF)
• Cheyenne Lindstrom, “Building Digital Collections in Omeka For The Layperson” (PDF)
• Ashley Brewer, “Don’t know about you, but I’m feeling the tick!”
• Peter Chan, “5.25 inch floppy disks” (PDF).
Key Concepts & Challenges from my prior work with other types of Digital Content

- **InterPARES**—If we hope to preserve electronic records, archivists need to be involved early in the life-cycle of that record, long before the record enters the archive
- Preserving Digital Public Television—Pushing metadata gathering upstream into the production cycle

Pushing Metadata Gathering Upstream: The Problem

TRADITIONALLY...
- Very little metadata required for preservation accompanies an object to a repository.
- Archives, libraries and other repositories must create (or re-create) most of the necessary metadata.
- This requires many manual hours, and significant resources - both time and money.

IN THE DIGITAL WORLD...
- This doesn’t scale up. Repositories will be unable to continue in this manner, as more metadata than ever is required.

Preserving Digital Public Television Workflow in Production Process

- Site Visits to productions
- Interview Production staff
- Diagrams of Workflow

But much of the necessary metadata has already been gathered during production

- For each element/dip, production team usually notes source, date, place, people, and other descriptive info
- But this is treated as internal information, and often various parts of the info are distributed among the personal notebooks of different production assistants
- There is seldom a central location for this info, and the info is seldom turned over to the archive (which later tries to recreate much of it)
When the Archive tries to re-create this info, it is seldom successful

Producers know much more about the content of their productions than the archivists do. Archivists wanting accurate info must go back to the production staff (often years later) to start brainstorming over the info. Once the (television) program is finished, it is passed on to the archive or library for safekeeping. Librarians will catalog and classify the content, possibly using a proxy copy, and enter the resulting informative metadata in their database so they can retrieve it in the future. However, rarely if ever is the metadata from the rest of the process passed onto them, except, perhaps, for the title, tape number, and basic technical information about recording formats. It has to be re-created, with all the associated risk of errors and lack of accuracy—not to mention the work and time involved.


We need to find ways to push metadata access upstream

• Digital requires even more metadata than Analog
  − As the workflow becomes file-based, the need for robust and accurate metadata will become critical. File relationships, video codecs, bit rates, and rights information must be explicit, accurate, and immediately accessible. This will require a much deeper level of metadata than is currently captured in tape-based archives.
  − We can’t continue to supply this metadata at ingest; that won’t scale
    • Obtaining the necessary metadata at the end of production and broadcast life cycle is not feasible. Metadata will need to be systematically gathered during the production lifecycle and submitted with the programs to the preservation repository.

Examined Potential Points for Metadata Capture

• Much of the necessary metadata for preservation is already generated by the production unit, but discarded after their internal use. This needs to be captured throughout the workflow.
  • “Those in the production unit are the creators and have first hand knowledge of who, what, where, when, and why the content was created.” — Mary Ide and Leah Weisse, WGBH Archivists.

Proposed Solutions…?

• Preservation becoming a shared responsibility between content creators, distributors, curators, and preservationists.
• Partnerships are needed to come to unified solutions.
• Preservationists seek reliable metadata back upstream in the production workflow...

WorldFocus

• Nightly news program begun Oct 2008
• We began working with Workflows six months before program began
• Had ability to engineer metadata gathering into the creation/production process
Activist Archivists

http://activist-archivists.org (use Wayback Machine)
https://www.facebook.com/ActivistArchivists/

- NYU MIAP students and grads originally working on archiving media from the Occupy movement
- Guidelines both activist creators and archives
- Developed newer low-impact methods

How Occupy material resembles what we’ll be facing in the future

- Vast quantity of user-contributed material
- No easy way to control for quality, file format, metadata
  - no enforcing guidelines as with organizational records
  - no semi-consistency as in a single individual’s personal records
- Much of the material can most easily be found on Social Networks
- ...we need to find smart ways to harvest metadata and analyze files, as well as to influence behavior of potential contributors

Activist Archivist Website

Activist Archivists Projects-

- “Why Archive” postcard & video
- 7 Tips to Ensure Your Video Is Usable in the Long Term
- Study of metadata loss through uploading to services
- Best Practices for Creators/Collectors
- “Toolkit” for Occupy archiving
- Coordinating discussions among various groups archiving different parts of Occupy
- Exploring methods for obscuring identities

Lessons Learned for Archivists-

- Communicate well with your future Contributors
- Develop Cooperative Relationships
- Make it easy for future contributors to create “archival-friendly” works
- For Cooperative Projects, allow for instructions not being followed
- Find smart ways to deal with Scale
- Handle Privacy & Security responsibly

IMPORTANT LESSONS FROM ACTIVIST ARCHIVISTS (& OTHERS)
Communicate well with your future Contributors:
• Learn to speak their language
• Help them to realize the importance of archiving

“Why Archive” postcard
• ACCOUNTABILITY. Archives collect evidence that can hold those in power accountable.
• SELF-DETERMINATION. We define our own movement. We need to create and maintain our own historical record.
• SHARE. Archives are a point of entry to our movement’s rich record. We can use them to ensure transparency, generate discussion, and enable direct action.
• EDUCATE. Today’s videos, flyers, web-pages, and signs are material for tomorrow’s skill-shares, classes, and mobilizations.
• CONTINUITY. Just as past movements inspire us, new activists will learn from the experiences we document.
• RECORD & COLLECT what’s happening around you.
• PRESERVE the record.

Develop Cooperative Relationships:
• Try to better understand what their aims are; get involved in their activities
• Develop partnering relationships

participated in Self-help activities:
Skill-shares for Occupiers
Workshop: OWS Archive Share Day

Self-help activities:
Other Archive Share-Day and Hackathon activities
• Batch download from FLICKR with selected attributes (#OWS, Creative Commons, EXIF metadata, tagged-text metadata)
• Re-mixing of older footage
• Creating a visual timeline
• Mining material for data (eg. number of co-locations of an officer’s name with “pepper spray”)
Make it easy for future contributors to create “archival-friendly” works-

• Low-hanging fruit
• Easy instructional material that appeals to what they think is important
• Instructions for redundant metadata collection (to make sure that it is captured)

Low-Hanging fruit

• Turn GPS on
• Develop strategies for automating a profile and uploads (our ideal App)

7 Tips to Ensure Your Video Is Usable in the Long Term

• Collect details while filming
• Keep your original raw footage, unaltered
• Make your video discoverable
• Contextualize it
• Make it verifiable
• Allow others to collect and archive
• Or archive it yourself

Best Practices for Content Creators

• Security
  – Hidden camera laws, parties’ consent laws
• Capturing Content
  – Highest quality, set date and time-stamps, note location
• Offloading Content
  – Raw files directly onto computer, keep material organized
• Uploading Content
  – Importance of tagging, review of diff services
• Depositing with an Archive
• Copyright

Occupy Archiving Kit

• Why Archive?
• What is an “archive”? How do I create an archive?
• Creating archival-friendly content
• How can I collect materials for the archive?
• What should I save?
• How should I organize my materials? How do I get it into the archive?
• Description/Metadata
• Media Management
• Storage & Preservation
• Access
• Exhibition and Presentation/Outreach
• Rights and Re-Use

WITNESS: Activists’ Guide to Archiving Video, Yvonne Ng
http://archivewatch.witness.org/
Collecting – Think Tank

Think Tank metadata redundancies

- Guidelines stipulate that person holding recording device will check to see that time and date stamp are correct before beginning recording (mostly didn’t happen)
- Guidelines stipulate that a script be read verbatim at the beginning of the recording, with date, time, proposed subject, etc. (and would eventually allow voice-recognition software to create appropriate metadata). Script also stated that all participants agreed to Creative Commons licensing of the recording
- Guidelines requested that date/time be embedded in the applied file-name

Find smart ways to deal with Scale-

Collecting Streaming Media

The NYU Mellon Composers Project

- Traditional Web Crawlers (Heritrix) follow links and capture most web content. But they are less successful with streaming video and dynamic content executed in the browser (like JavaScript).
- NYU collaborated with IA to create a combined crawler and browser-

“browser” | “crawler” = BROZZLER

Logo: Noah Levitt
Stream capture relies on Youtube-dl

https://rg3.github.io/youtube-dl/supportedsites.html

Tamimt YouTube collecting

- Tamiment Archive was selectively browsing through YouTube Occupy videos, trying to choose which ones to keep, then cataloging them with
  - Title, Creator, Creation Date, Upload Date,
  - Description, URL, Youtube Username, License,
  - Format, Codec, Source Media, On Internet Archive, CC License type

- But they didn’t realize that this wouldn’t scale!

March 24, 2012 YouTube stats
(just 6 months after start of movement)

- “#Occupy” 169,000
- “Occupy Wall Street” 98,400
- “Occupy Protest” 70,500
- “Occupy Movement” 54,800
- “#OWS” 50,300
- “Occupy Oakland” 13,400
- “Zucotti Park” 6,690

Alternative approach to YouTube Selection process

- Develop categories of important YouTube videos
  - Celebrity visits, Internal workings (library, kitchen, media), Confrontations with police, Labor, Housing, etc.
  - Have Occupiers fill in an online form listing the 5 most important videos in each category

Advantages of YouTube Collaborative Filtering Selection Process

- Scalable and manageable
- Consistent with Occupy ideas of inclusiveness and of managing own story
- Tamiment can still choose to be selective in collecting only a portion of what is voted in, but the total set for review is a manageable scale

Handle Privacy & Security responsibly

Police in Berlin have raided an anarchist library

by Les Debrin

Veglievall, next to the Berlin University, sits in the newly renovated neighborhood of Kreuzberg. In Kreuzberg & around the library was part of the last 40s, a thriving housing collective run by the Hafengover Gemeinde of East Berlin.

Constitutional Court (die publikum) said the raid on the library was illegal, the court found that the the individuals were engaged in illegal activities.

Berliners, residents of the neighborhood welcomed the raid, and two groups for declarations, meaning.
**UCLA Deed of Gift template**

“In an effort to protect the privacy and personal safety of contributors to the Iranian Green Movement Collection, DONOR and UCLA Library agree to work together to develop methodology and an approach and will redact the email addresses or other personally identifiable information from broad public presentation.”

For more see library.ucla.edu/service/scl/rights-toolkit

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**Promoting Privacy Protection**

**Example from WITNESS**

- “ObscuraCam is a visual privacy app for photo and video, that gives you the power to better protect the identity of those captures in your photos, before you post them online”
- Developed by Guardian Project in conjunction w/Human Rights group WITNESS-

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**ObscuraCam**

- Developed by Guardian Project in conjunction w/Human Rights group WITNESS-

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**Discuss issues around commercial services with Creators/Recorders**

- Disappearance of embedded metadata from YouTube & Vimeo
- More general Rights issues
- Give archives the IP right to download

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**Study of metadata loss through uploading to services**

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**Even with good records, Rights Issues remain**

1999 WTO Seattle Protest 20th anniversary Video Preservation
Even with good records, Rights Issues remain

YouTube User Agreement

• 5B “You shall not download any Content unless you see a ‘download’ or similar link displayed by YouTube on the Service for that Content.”

Marking Creative Commons licenses

• There are a few ways to mark your video with a Creative Commons license. One way is to include a Creative Commons “bumper” or text card in your video. Creative Commons has created some with graphics that you can download from their website. This method is useful if your video is going to be shared offline (e.g. on DVD, live screenings), as the license information is attached to the video itself.

• Another way to mark your video with a Creative Commons license is to publish your video on platforms that are Creative Commons-enabled, such as YouTube, Vimeo, or Internet Archive. These platforms allow you to easily select a license during the upload process. This method is useful because the license is machine-readable. A search engine, for example, can detect the license.

Creative Commons Guidance

• Creative Commons lets you mix-and-match four different conditions:
  – Attribution: You let others copy, re-use and distribute your video, but they must credit you.
  – Share-Alike: You let others copy, re-use and distribute your video, only if they do the same with the work they create.
  – Non-Commercial: You let others copy, re-use and distribute your video for non-commercial purposes only.
  – No Derivative Works: You let others copy and distribute your video, but not to create new works using it.

• You can use these conditions in different combinations to share your work in a controlled way. Creative Commons licenses are legal tools that depend on pre-existing copyright laws. Having a Creative Commons license on your work may give you legal recourse, but it may not actually prevent people from downloading and re-using your video illegally.

Tips for Archivists on Outreach to Communities

• Build trust
• Speak in their language (not archive-speak)
• Identify ways you can meet needs they already perceive
• Approach projects as collaboration whenever possible
• Don’t only focus on content and metadata, but also rights that can be an impediment to preservation
Other Projects to monitor-

- Documenting the Now
  [https://www.docnow.io/](https://www.docnow.io/)
- International Digital Ephemera Project
  [http://idep.library.ucla.edu/](http://idep.library.ucla.edu/)
- ePADD
  [https://library.stanford.edu/projects/epadd](https://library.stanford.edu/projects/epadd)

Documenting the Now
[https://www.docnow.io/](https://www.docnow.io/)

- Documenting the Now responds to the public's use of social media for chronicling historically significant events as well as demand from scholars, students, and archivists, among others, seeking a user-friendly means of collecting and preserving this type of digital content. Documenting the Now has a strong commitment to prioritizing ethical practices when working with social media content, especially in terms of collection and long-term preservation. This commitment extends to Twitter's notion of honoring user intent and the rights of content creators. The project is a collaborative effort between Shift Design, Inc., the University of Maryland, and the University of Virginia.

International Digital Ephemera Project
[https://idep.library.ucla.edu/](https://idep.library.ucla.edu/)

- "ePADD is free and open source software developed by Stanford University's Special Collections & University Archives that supports the appraisal, processing, preservation, discovery, and delivery of historical email archives. ePADD incorporates techniques from computer science and computational linguistics, including machine learning, natural language processing, and named entity recognition to help users access and search email collections of historical and cultural value."

Remaining Applied Research Questions

- How do deal with Scale with the tsunami of born-digital content (appraisal, description, discovery, workflow, …)
- How to avoid our collections continuing to reflect the world of the rich, well-known, and powerful
- Better methods for collecting social media and threaded phone messages
- Tension b/w preservation & privacy (& handling massive amounts of redaction)
- Improving public policy and TOS in areas like IP, privacy, and what happens upon death

Archiving the Non-Organizational Born-Digital: The Challenges Posed by Material from Individuals, Communities, & Events

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- [https://idep.library.ucla.edu/](https://idep.library.ucla.edu/)
- [https://activist-archivists.org/](https://activist-archivists.org/) (use Wayback)
- [http://www.facebook.com/ActivistArchivists/](http://www.facebook.com/ActivistArchivists/)
- [https://archive.org/details/personaldigitalarchiving](https://archive.org/details/personaldigitalarchiving)
- [https://www.docnow.io/](https://www.docnow.io/)
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