Preserving Digital Images and Data: Methods, Policy, and Privacy Issues

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Preserving Digital Images and Data: Methods, Policy, and Privacy Issues

- · Privacy can be an issue
- Police BodyCam Videos
- Memory Institutions
 - Why archiving Digital works is different from archiving Analog works
- How Archives need to become pro-active at building individual collections from multiple sources
- Lessons from collecting records from the Occupy Movement

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Caveats

- This is just the early stage of a more refined Talk (& I'd appreciate comments)
- You may have seen some of these slides before
- I have a bias towards discussing visual works/ records alongside textual ones
- I have a bias towards using social protest content for my examples

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Archivists want comprehensive collections

- The more you collect, the better picture you have of the individual, group, event, movement, · · ·
- But the more you collect, the greater the likelihood that you'll scoop up information that violates someone's privacy
- · Private information needs to be redacted-

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Reasons for Redaction

- · 3rd Party Info
- email addresses
- passwords
- Federal Privacy Law (FERPA, HIPAA)
- · Legal jeopardy-

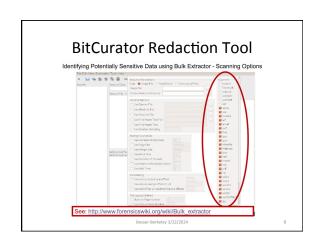
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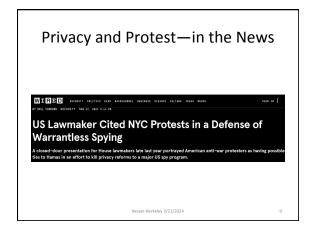
Palestine Protest, SF Bay Bridge

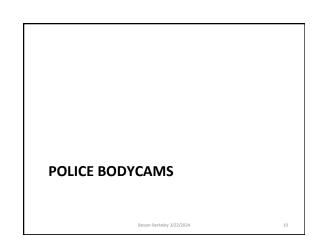


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Responsible Use of Technology

NYU Law School Policing Project Evaluative Framework

- Legal: Does the technology violate constitutional and other legal principles, such as free exercise of First Amendment liberties, equal protection of the law, and other rights guaranteed by law?
- Ethical: Can the technology be designed and operated in ways that minimize social harms, including overcriminalization and threats to privacy and autonomy?
- Democratically accountable: Has the policing agency been transparent about its use of the technology? Were communities consulted before the technology was adopted?

https://www.policingproject.org/policing-tech-landing

Arguments in favor of releasing BodyCam videos to public

Policing Project LAPD Body Worn Camera Video Release

- Show that the department is open and transparent to the public;
- Increase public trust in the police department and its use of force investigations:
- Help the public understand how and when force is used by the police, and what the department's policies do and do not permit officers to do;
- Ensure that officers are held accountable if they use force inappropriately;
- Provide more complete context, particularly if other video (such as from a cell phone camera) has been released publicly;
- Correct any rumors or misperceptions that the public may have about what occurred.

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Arguments against releasing BodyCam videos to public

Policing Project LAPD Body Worn Camera Video Release

- Make it more difficult for the department to investigate the incident. Witnesses may report what they see on the video instead of what they actually remember, or be less likely to come forward if they think the video tells the whole story;
- Cause distress to family members of either the officer or the civilian involved, particularly if the video is very graphic and is shared widely by mainstream or social media;
- Bias potential jurors in a criminal case against the officer or civilian involved;
- Create public confusion about what occurred, particularly if the
- video only captures part of the incident; Violate the privacy of the individuals captured in the recording, particularly if the incident takes place in a private home

Police BodyCam videos: Large Storage needed

- "the average officer equipped with a body camera will produce about 32 files, 7 hours, and 20 gigabytes of video per month at 1280×720 resolution"
- · If every officer in the US used a BodyCam, it would create "29 billion files every month and roughly 1,140 years of footage" (17.4 petabytes/month)

https://endeavors.unc.edu/files for miles body cams cause big data problems/

Police BodyCam Videos: Policy/Procedure Questions

- · When does the camera get turned on/off?
- How long to keep the footage (retention)?
- Does the footage get redacted? (blurring faces, cutting
 - Is it redacted for some groups but not for others? Sensitive situations (interview with rape victim)
- Who can see the footage?
 - General public? Subject/Defendant? Officer involved? FOIA requests (public records laws)?
- · When can they see the footage?
 - Officer before or after they write up incident report?
- Security procedures and costs

Police BodyCam Videos: Keep as much as possible

- The more you keep, the better the representation of what happened
 - Different camera angles (different cameras)
 - Minimal redaction
- · But this conflicts with Privacy concerns-

Police BodyCam Videos: Privacy Issues

- 3rd parties captured (bystanders)
- Intimate locations (bedroom interviews)
- · Sensitive depictions (mutilated bodies)
- Sensitive situations (rape interviews)
- · Lengthy retention times
- · Serious cost of redaction

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Deciding Policy for Police BodyCam Videos

- Stakeholders: law enforcement agencies, advocacy groups, vendors, media [journalists], archivists
- Look at design, deployment, and control of new recording technologies
- Guidance from: legal and social construction of privacy, open access requirements for government records, audiovisual recordings as evidence

https://snowdenbecker.files.wordpress.com/2016/11/syllabus_final.pdf

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On the Record, All the Time, 2016

- · Technical futures and challenges
- · Core competencies, education and training needs
- Curriculum review
- Delivery models for professional and continuing education
- Identification of key resources and literature review

https://web.archive.org/web/20200919031647/https://is.gseis.ucla.edu/bodycams/participants-working-groups/

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BORN-DIGITAL CONTENT IN ARCHIVAL COLLECTIONS

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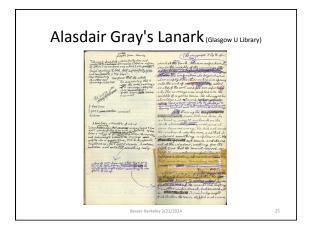
What do we collect in Archives?

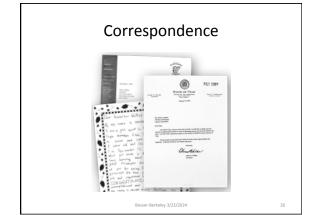
- · Correspondence/email
- Personal photos/movies and group collections
- Manuscript drafts, camera original footage, rough cuts
- · Personal documents
- Diaries

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In the analog world

- Traditionally, we have come to understand the work of writers, scientists, filmmakers by scholars studying their papers and footage 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?





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?

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Stages of the problem

- Stage #1: People record on digital media instead of analog
- 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)

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Stage #1 Issues-digital replaces analog

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 ePADD for analyzing email)
 - new approaches like digital archeology, forensics (BitCurator)

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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)

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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, 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 or Archive)

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IMPORTANCE OF AGGREGATED CONTENT

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Archival Collections "by people" | Contribute Section | Collection |

Community Grps & Assns

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

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Not "already-assembled" Collections

- The Archive needs to actually pro-actively do the collecting
- Ethnic groups
- · Social and political movements
- · Community groups
- · Cultural movements



When aggregated, many different personal contributions 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 work 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

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Digital Diaspora Family Reunion



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Digital Diaspora Family Reunion



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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)-

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Every Image Collector/Contributor 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, ...)

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SAMPLE COLLECTIONS

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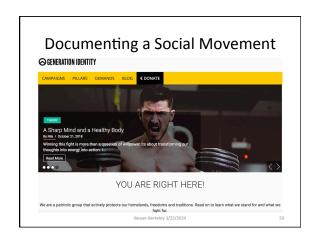
In what environments do we find this type of material?

- · 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.)
- · Collections documenting an event-

Documenting an Event Woodstock - The Definitive 50th Anniversary Archive (38CD + Blu-Ray)







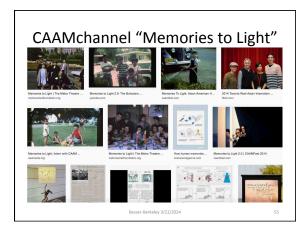




Home Video Day—NYC Chinatown Besser-Berkeley 3/22/2024 53

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."





SOME KEY CONCEPTS FROM ACTIVIST ARCHIVISTS AND OTHERS

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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

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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

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How Occupy material resembles what archives will 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



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

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Communicate well with your future Contributors-

- · Learn to speak their language
- Help them to realize the importance of archiving

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"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.

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Develop Cooperative Relationships-

- Try to better understand what their aims are; get involved in their activities
- Develop partnering relationships

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Self-help activitie

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 colocations of an officer's name with "pepper spray")

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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)

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Low-Hanging fruit

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

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

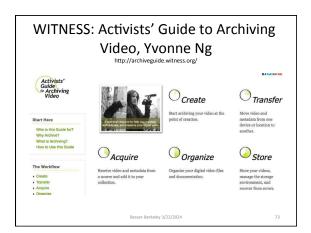
- · Collect details while filming
- Keep your original raw footage, unaltered
- · Make your video discoverable
- Contextualize it
- · Make it verifiable
- Allow others to collect and archive
- · Or archive it yourself

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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

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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

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Find smart ways to deal with Scale-

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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-

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Tamiment 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!

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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

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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

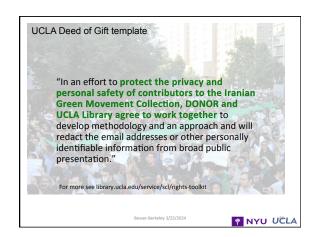
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Advantages of YouTube Collaborative Filtering Selection Process

- · 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

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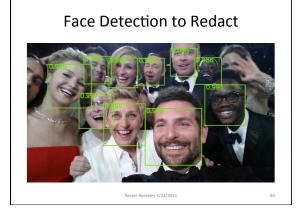


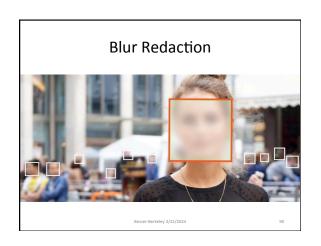


Promoting Privacy Protection Example from WITNESS

- "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-







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 **Man District Visit forms | Man Corp is Novided Karps | Man District Visit forms | Man District Visit

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.
 - <u>No Derivative Works</u>: 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.

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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.

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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 <u>collaboration</u> whenever possible
- Don't only focus on content and metadata, but also <u>rights</u> that can be an impediment to preservation

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Other Projects to monitor-

- Documenting the Now https://www.docnow.io/
- ePADD https://library.stanford.edu/projects/epadd

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Documenting the Now

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

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ePADD

https://library.stanford.edu/projects/epadd

 "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."

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Remaining Applied Research Questions

- How do deal with Scale with the tsunami of borndigital 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 btwn archiving & privacy (& handling massive amounts of redaction)
- Improving public policy and TOS in areas like IP, privacy, and what happens upon death

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Tools to Use

- ePADD
- BitCurator
- ObscuraCam

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- https://web.archive.org/web/20210415015254/https://is.gseis.ucla.edu/bodycams/
- https://www.brennancenter.or
 police body camera policies re
- http://idep.library.ucla.edu/
 http://odep.library.ucla.edu/
 http://odep.library.ucla.edu/
- http://activist-archivists.org/ (use Wayback)
 https://www.facebook.com/ActivistArchivist

