

## 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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## 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

- 3<sup>rd</sup> Party Info
- email addresses
- passwords
- Federal Privacy Law (FERPA, HIPAA)
- Legal jeopardy-

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## Palestine Protest, SF Bay Bridge

(Nov 16, 2023)



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## Jan 6 Protests



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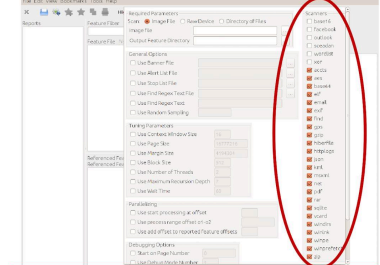
### Tweets used to prosecute



<https://www.firstpost.com/tech/news-analysis/judge-says-occupy-protesters-tweets-must-be-handed-over-3602591.html>  
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### BitCurator Redaction Tool

Identifying Potentially Sensitive Data using Bulk Extractor - Scanning Options



See: [http://www.forensicswiki.org/wiki/Bulk\\_extractor](http://www.forensicswiki.org/wiki/Bulk_extractor)

### Privacy and Protest—in the News



### POLICE BODYCAMS

### Police Body-Worn Cameras (BWC)



### BWC



## 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>

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## 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

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## 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 1280x720 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/](https://endeavors.unc.edu/files_for_miles_body_cams_cause_big_data_problems/)

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## 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 footage)
  - 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

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## 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-

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### Police BodyCam Videos: Privacy Issues

- 3<sup>rd</sup> 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](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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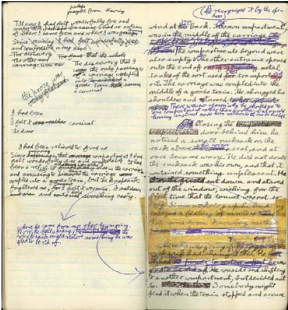
### In the analog world

- 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?

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### Alasdair Gray's Lanark (Glasgow U Library)



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### Correspondence



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### 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?

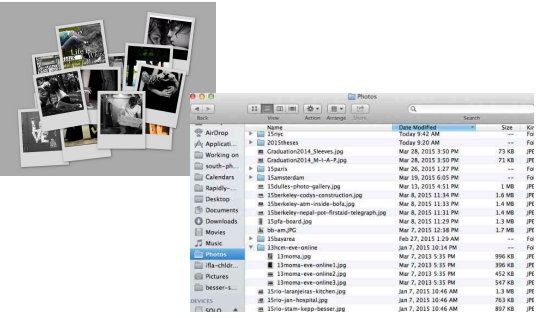
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### Stages of the problem

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



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### Stage #1 Issues-digital replaces analog

- Archives are already adapting to this
- This requires
  - 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

- This remains a challenge for Archives
- Rise of Online Services and Social Media is changing where this content resides (and is imposing TOS restrictions that go beyond the rightsholder)

### 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.
- Most Social Network TOS policies prohibit the owner from giving their password to anyone else (even Library or Archive)

### IMPORTANCE OF AGGREGATED CONTENT

### Archival Collections "by people"

The screenshot shows the OAC website interface. At the top, there's a search bar with the text "Search over 85,000". Below that are navigation tabs: "Contributing Institutions", "Collection Guides", "Browse Map", and "About OAC". The main content area is titled "Browse the Collections" and includes a search box, a "Find a collection" section with a "Go" button, and a list of collections. A blue arrow points to the "Show collection descriptions" link.

### 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

### Increasingly we have Not "already-assembled" Collections

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

### Documenting Protests

-photo from Activists Guide to Archiving Video

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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, ...

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And we know from past work that aggregations create new meanings

- Digital Diaspora
  - 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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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
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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-

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Documenting an Event



**Woodstock - The Definitive 50th Anniversary Archive (38CD + Blu-Ray)**  
XXXXWOOD1

**SOLD OUT**

**Details**

**Package includes:**

- Screen-printed plywood box with canvas insert inspired by the stage set up at Woodstock
- Individually numbered - Limited to 2,500 units worldwide!
- Collects every note of music played at the festival (except for three songs, some of it released for the first time ever. Also includes crowd announcements and other audio memorabilia from the festival).
- 432 tracks (267 unreleased) on 38 CDs
- Remastered audio
- Total running time: 35 hours, 53 minutes (19 hours, 50 minutes unreleased)

Each box contains the following:

- Gallery strip
- Coffee table book "Woodstock: 3 Days of Peace & Music" - The only official 50th anniversary celebration of Woodstock, created in conjunction with Michael Lang. It includes hundreds of photographs and documents accompanied by Lang's fascinating memories and insights into the most

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Documenting a Community Group



City of Bloomington, Indiana  
Mayor John Hamilton

Feedback

Information & Guides City Government News & Events Top Services

**NATIONAL GOLD MEDAL AWARD**  
FOR EXCELLENCE IN THE FIELD OF PARKS AND RECREATION MANAGEMENT

**Bloomington Community Farmers' Market**

Share: [Facebook] [Twitter] [LinkedIn]

401 N Morton St  
Bloomington, IN 47404 812-349-3700 812-349-3705 Connect on Facebook

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## Documenting a Social Movement

GENERATION IDENTITY

CAMPAIGNS | PILLARS | DEMANDS | BLOG | DONATE

**YOU ARE RIGHT HERE!**

We are a patriotic group that actively protects our homelands, freedoms and traditions. Read on to learn what we stand for and what we fight for.

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## Copwatch (DA?)

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## 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."

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## CAAMchannel "Memories to Light"

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## International Digital Ephemera Project

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## SOME KEY CONCEPTS FROM ACTIVIST ARCHIVISTS AND OTHERS

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## If we want to save digital works, contributors need good archival practice

- 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 alumni 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

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## Activist Archivist Website

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## 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” video



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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

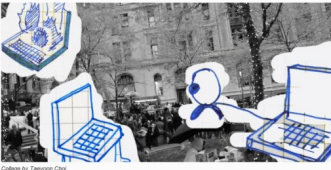
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participated in Self-help activities:

### Skill-shares for Occupiers Workshop: OWS Archive Share Day

View | Reports

Event Type: Misc  
Start Date: Mar 31, 2012  
Hours: 3:00-6:00  
Cost: Free  
Venue: Eyebeam



Organized by Teyssou Choi

At this free event, the public will be invited to explore and archive the many views of democracy. Anyone wishing to present their work in art and activism can sign up for a short time slot. Email [teysson\[at\]eyebeam\[dot\]org](mailto:teysson[at]eyebeam[dot]org) to reserve your slot now.

OWS Archive Share Day is presented in collaboration with [OWS Archives](#) members Anna Perrico and Christine O'Heron, in conjunction with ["Speakers' Corners"](#), an exhibition by [Teyssou Choi](#) [zarnetiv on view at Eyebeam](#). Besser-Good Systems 4/3/2024 64

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”)

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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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## WITNESS: Activists' Guide to Archiving Video, Yvonne Ng

<http://archiveguide.witness.org/>

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## Collecting – Think Tank-

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## Think Tank metadata redundancies

- Set time and date on recording device (mostly didn't happen)
- Read script at beginning of recording with date, time, proposed subject, etc.
  - Future voice recognition software
  - Script also stated that all participants agreed to Creative Commons licensing of the recording
- date/time embedded in the applied file-name

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## Find smart ways to deal with Scale-

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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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## Handle Privacy & Security responsibly-

MELVILLE HOUSE BOOKS GIFTS ABOUT SUBSCRIBE

May 22, 2018

### Police in Berlin have raided an anarchist library

by Ian Dreihlatt

Unpleasant news from Berlin, where, in the culturally simmering neighborhood of Kreuzberg, the *Kalabalk* anarchist library has been raided by police. The library is part of *Reiche 63a*, a left-wing housing collective run by the *Self-Governing Communes of East Berlin*.

Constance Nauhaus reports for *Der Tagespiegel* that the raid on *Kalabalk* was one of a wave of searches executed across the city last Wednesday morning, leading to the seizure of some illegal weapons, the confiscation of an unspecified number of flash drives, and two arrests for defamation, stemming

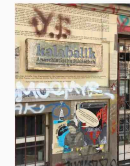



Photo by Daniel Jiffery. Used with permission and thanks.

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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/sci/rights-toolkit](http://library.ucla.edu/service/sci/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-

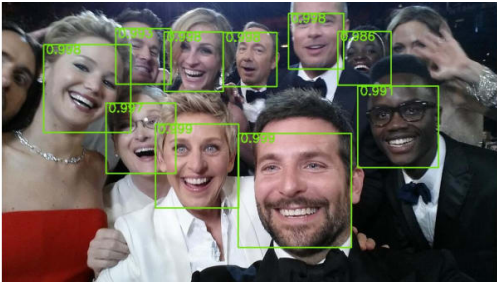
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### ObscuraCam



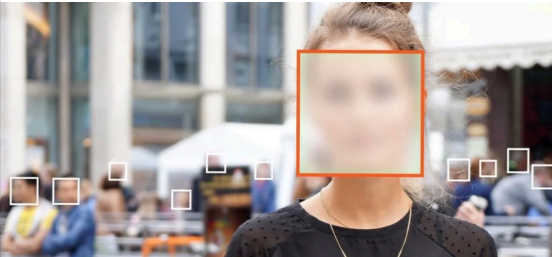
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### Face Detection to Redact



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### Blur Redaction



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



- <http://besser.tsoa.nyu.edu/howard/Talks>
- <https://www.archive.org/web/20120315015254/https://www.specc.org.uk/body-camera/>
- <https://www.policingreport.org/>
- <https://www.brooklyncenter.org/our-work/research-reports/police-body-camera-policies-retention-and-privacy>
- <http://long.library.tulane.edu/>
- <http://activist-archivists.org/> (use Wayback)
- <https://www.facebook.com/ActivistArchivists/>



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