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# PATTERNS OF USE

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Conceptualising the role of web archives in  
online discourse

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4th RESAW Conference - *Mainstream vs marginal content in Web history and Web archives* |

Luxembourg (Virtual) | 18 June 2021



## INTRODUCTION

What's the use? Some background + 'use imaginaries'

01

## THEORISING USE

An argument for theorising how web archives are used

02

# OUTLINE

03

## PATTERNS OF USE

Some categories of use, examples and discussion

04

## CONCLUSIONS

Discussion and proposal for a research agenda on the 'social life' of web archives

# 01

## INTRODUCTION

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Some background on *The Social Life of Web Archives* project and a look at 'use imaginaries'



# 'USE IMAGINARIES' FOR WEB ARCHIVES

## 'Use Cases for Access to Internet Archive' (IIPC, 2006)

### Types of Users

Professionals  
Common citizens  
Lawyers  
Researchers

### Types of Use

Journalistic documentation  
'Digital management'  
Employment documentation  
Civil/Criminal Case Evidence  
Patent Litigation  
Genealogy

### User Journeys

Searching for URL  
Searching on Subject  
Version/links comparison  
Browsing Thematic Collections  
'Personified Features'  
Federated Search  
Searching for Copies  
Updates on Changes to Sites  
Persistent References  
On-demand harvesting  
Data Mining...

# 'High Profile' Examples of Use

## The Joy Reid controversy, from homophobic blog posts to a hacking claim, explained

MSNBC host Joy Reid was accused of writing homophobic blog posts. Reid at first said she was hacked — then apologized.

By German Lopez | @germanlopez | german.lopez@vox.com | Updated Apr 28, 2018, 8:09pm EDT



Bennett Raglin/WireImage via Getty Images

<https://www.vox.com/policy-and-politics/2018/4/27/17286392/joy-reid-msnbc-lgbtq-gay-hack>

## Conservative party deletes archive of speeches from internet

Decade's worth of records is erased, including PM's speech praising internet for making more information available



▲ A speech in which David Cameron said the internet would help people hold politicians to account was among those deleted. Photograph: Barcroft Media

<https://www.theguardian.com/politics/2013/nov/13/conservative-party-archive-speeches-internet>

- Bush 'Mission Accomplished' (2003)
- UK Conservative Party speech deletions (Ballard, 2013; Ramesh and Hern, 2013)
- MH17 (Dewey, 2014; Taylor, 2014)
- Joy Ann Reid Blog (Nelson, 2018)

# What's the Use?

## 'SCHOLARLY USE'

**Overviews:** (e.g.) Thomas et al., 2010; Stirling, Chevallier and Illien, 2012; Dougherty and Meyer, 2014; Hockx-Yu, 2014; Maemura, 2018

**Community/Tool/Collection Development:**  
(e.g.) Lin et al., 2014; Jackson et al., 2016; Ruest et al. 2020

**Surveys & Qualitative Research:** (e.g.) Riley and Crookston, 2015; Costea, 2018; Vlassenroot et al., 2019;

## BEYOND THE ACADEMY

**User Needs & Behaviours:** Costa and Silva, 2012; AlNoamany, Weigle and Nelson, 2013; AlNoamany et al., 2014

**Legal/Copyright & IP:**  
Fagan, 2007; Eltgroth, 2009; Knutson, 2009; Quarles III and Crudo, 2014; McCarthy, 2018

**Activist, Journalistic Fact-checking:**  
*(Examples of use plenty, lacking analysis)*

**Social Media 'Misuse':** (Acker & Chaiet, 2020; Donovan, 2020; Littman, 2018; Zannettou et al., 2018)





# 02

## THEORISING USE

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Motivations for theorising how web archives are used



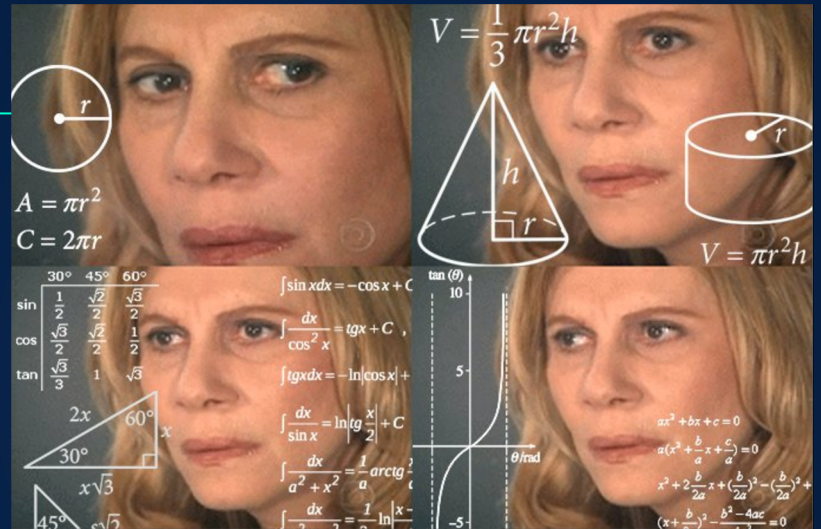
# MOTIVATIONS

## Some Questions

What are web archives **used for**?

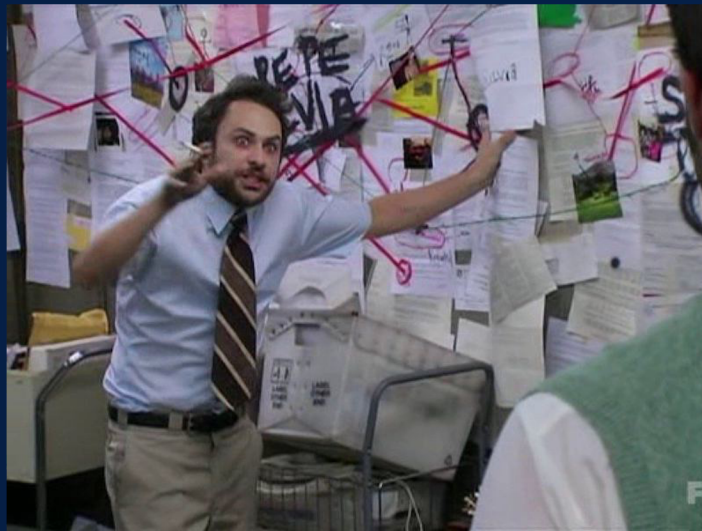
How might we **problematise** current boundaries and framings of web archival use?

What's the **significance** and **implications** of use for **a)** web archives themselves and **b)** our understanding of their role on the Web?



# CONTRIBUTION OF THEORISING USE

- 1) **Explore** what constitutes use in the context of the archived Web + examine *situated* notions of 'misuse', disuse, non-use
- 2) Organise, consolidate and **mobilise** existing research on how web archives are used ("in the wild")
- 3) **Expand** and broaden notions of comes to count as a 'web archive'
- 4) **Connect** this research and the field to other relevant interdisciplinary internet studies work



## IMPLICATIONS

For how archiving is done, terms and conditions of use

# 03

## PATTERNS OF USE

Some categories of use, examples and discussion



# PATTERNS OF USE (1)

## Attribution

Ways that web archives provide mechanisms for users to **evidence, cite and attribute** online resources to particular actors/points in time


- **Linking** to and **embedding** content from a web archive snapshot
- Claims of **authenticity** and positioning of web archives as authoritative sources

## Examples

**Perma.cc** 

**Websites change.  
Perma Links don't.**

Perma.cc helps scholars, journals, courts, and others create permanent records of the web sources they cite.

Perma.cc is supported by  **Cite safely.**



44. Susan Kammerweh, *Boasting News is Always Happening*, <http://allthishalpans.org> last visited July 8, 2015, archived at <https://perma.cc/7CNS-NLWV>


45. See Herbert Van de Sompel, Martin Klein, Robert Sandhuken & Michael Lesk, *Linking Authors' IDs: An Interactive Long-Term Archival Model*, archived at <https://www.elsevier.com/locate/jas>

46. See Andrew B. Lee, *Linking Authors' IDs: An Interactive Long-Term Archival Model*, archived at <https://www.elsevier.com/locate/jas>

**This is a Perma.cc record**

<https://perma.cc/7CNS-NLWV>

**Breaking News**  
Breaking news is always happening.



**Carl Zimmer** @carlzimmer

Hard to believe it, but the @nytimes coronavirus vaccine tracker turns one year old today. Then: [web.archive.org/web/2020061009...](http://web.archive.org/web/2020061009...) Now: [nytimes.com/interactive/2021-06-10](https://nytimes.com/interactive/2021-06-10)... Some thoughts on looking back at its debut... 1/13

**Coronavirus Vaccine Tracker**  
By Jonathan Corum and Sul-lee Wee. Updated June 8, 2021

PRECLINICAL	PHASE 1	PHASE 3	AUTHORIZED	APPROVED	ABANDONED
125+	7	30	7	8	4
Vaccines in development	Testing safety and dosage	Vaccines in large-scale efficacy tests	Vaccines in early or limited use	Vaccines approved for full use	Vaccines abandoned after trials

11:01 PM · Jun 10, 2021 · Twitter Web App

156 Retweets 15 Quote Tweets 612 Likes

<https://twitter.com/carlzimmer/status/1403110178480869379>

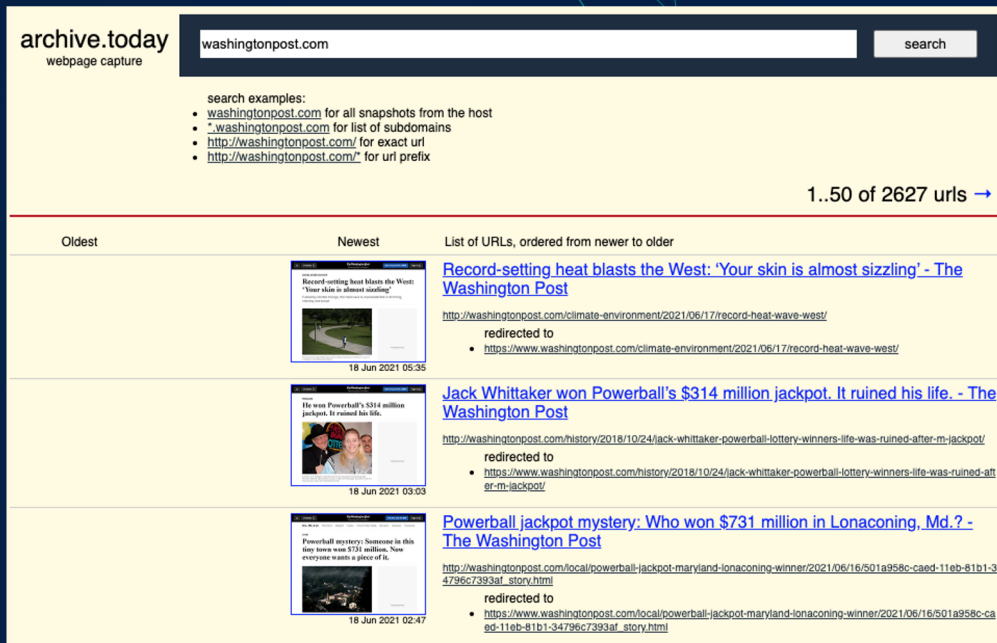
# PATTERNS OF USE (2)

## Circumvention

Where web archives act as **alternative platforms** that enable users to (e.g.) avoid paywalls and/or social media content moderation by providing access to deleted or blocked content

- **Accessing, linking to and embedding** content and/or screenshots of archived content that is otherwise inaccessible
- Both **evasion** and preemptive tactics to enable accessibility of ephemeral content
- *Aside: Is all web archival use some kind of circumvention? (discuss!)*




## Examples



The screenshot shows the archive.today search interface. At the top, there is a search bar containing 'washingtonpost.com' and a 'search' button. Below the search bar, there are search examples:

- [washingtonpost.com](http://washingtonpost.com) for all snapshots from the host
- [\\*.washingtonpost.com](http://*.washingtonpost.com) for list of subdomains
- <http://washingtonpost.com/> for exact url
- [http://washingtonpost.com/\\*](http://washingtonpost.com/*) for url prefix

At the bottom right of the search bar area, it says '1..50 of 2627 urls →'. Below the search bar, there is a table with three columns: 'Oldest', 'Newest', and 'List of URLs, ordered from newer to older'. The table contains three rows of search results, each with a thumbnail image, a date, and a list of URLs.

Oldest	Newest	List of URLs, ordered from newer to older
	 <p>18 Jun 2021 05:35</p>	<a href="http://www.washingtonpost.com/climate-environment/2021/06/17/record-heat-wave-west/">Record-setting heat blasts the West: 'Your skin is almost sizzling' - The Washington Post</a> <a href="http://www.washingtonpost.com/climate-environment/2021/06/17/record-heat-wave-west/">http://www.washingtonpost.com/climate-environment/2021/06/17/record-heat-wave-west/</a> redirected to • <a href="https://www.washingtonpost.com/climate-environment/2021/06/17/record-heat-wave-west/">https://www.washingtonpost.com/climate-environment/2021/06/17/record-heat-wave-west/</a>
	 <p>18 Jun 2021 03:03</p>	<a href="http://www.washingtonpost.com/history/2018/10/24/jack-whittaker-powerball-lottery-winners-life-was-ruined-after-m-jackpot/">Jack Whittaker won Powerball's \$314 million jackpot. It ruined his life. - The Washington Post</a> <a href="http://www.washingtonpost.com/history/2018/10/24/jack-whittaker-powerball-lottery-winners-life-was-ruined-after-m-jackpot/">http://www.washingtonpost.com/history/2018/10/24/jack-whittaker-powerball-lottery-winners-life-was-ruined-after-m-jackpot/</a> redirected to • <a href="https://www.washingtonpost.com/history/2018/10/24/jack-whittaker-powerball-lottery-winners-life-was-ruined-after-m-jackpot/">https://www.washingtonpost.com/history/2018/10/24/jack-whittaker-powerball-lottery-winners-life-was-ruined-after-m-jackpot/</a>
	 <p>18 Jun 2021 02:47</p>	<a href="http://www.washingtonpost.com/local/powerball-jackpot-maryland-lonaconing-winner/2021/06/16/501a958c-caed-11eb-81b1-34796c7393af_story.html">Powerball jackpot mystery: Who won \$731 million in Lonaconing, Md.? - The Washington Post</a> <a href="http://www.washingtonpost.com/local/powerball-jackpot-maryland-lonaconing-winner/2021/06/16/501a958c-caed-11eb-81b1-34796c7393af_story.html">http://www.washingtonpost.com/local/powerball-jackpot-maryland-lonaconing-winner/2021/06/16/501a958c-caed-11eb-81b1-34796c7393af_story.html</a> redirected to • <a href="https://www.washingtonpost.com/local/powerball-jackpot-maryland-lonaconing-winner/2021/06/16/501a958c-caed-11eb-81b1-34796c7393af_story.html">https://www.washingtonpost.com/local/powerball-jackpot-maryland-lonaconing-winner/2021/06/16/501a958c-caed-11eb-81b1-34796c7393af_story.html</a>

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## Examples

Humans and technology

### Covid hoaxes are using a loophole to stay alive— even after content is deleted

Pandemic conspiracy theorists are using the Wayback Machine to promote “zombie content” that evades moderators and fact-checkers.

by **Joan Donovan**

April 30, 2020

<https://www.technologyreview.com/2020/04/30/1000881/covid-hoaxes-zombie-content-wayback-machine-disinformation/>

# PATTERNS OF USE (2)

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## Examples

Humans and technology

### Covid hoaxes are using a

ve—  
is

SEPTEMBER 28, 2020

BY AMELIA ACKER

School of Information, The University of Texas at Austin, USA

MITCH CHAIET

Moody College of Communication, The University of Texas at Austin, USA

PEER REVIEWED

## The weaponization of web archives: Data craft and COVID-19 publics

*An unprecedented volume of harmful health misinformation linked to the coronavirus pandemic has led to the appearance of misinformation tactics that leverage web archives in order to evade content moderation on social media platforms. Here we present newly identified manipulation techniques designed to maximize the value, longevity, and spread of harmful and non-factual content across social media using provenance information from web archives and social media analytics. After identifying conspiracy content that has been archived by human actors with the Wayback Machine, we report on user patterns of “screensampling,” where images of archived misinformation are spread via social platforms. We argue that archived web resources from the Internet Archive’s Wayback Machine and*

<https://misinforeview.hks.harvard.edu/article/the-weaponization-of-web-archives-data-craft-and-covid-19-publics/>

ing the Wayback Machine to  
s moderators and fact-

April 30, 2020

[om/2020/04/30/1000881/  
yback-machine-](https://www.waybackmachine.org/2020/04/30/1000881/wayback-machine-)

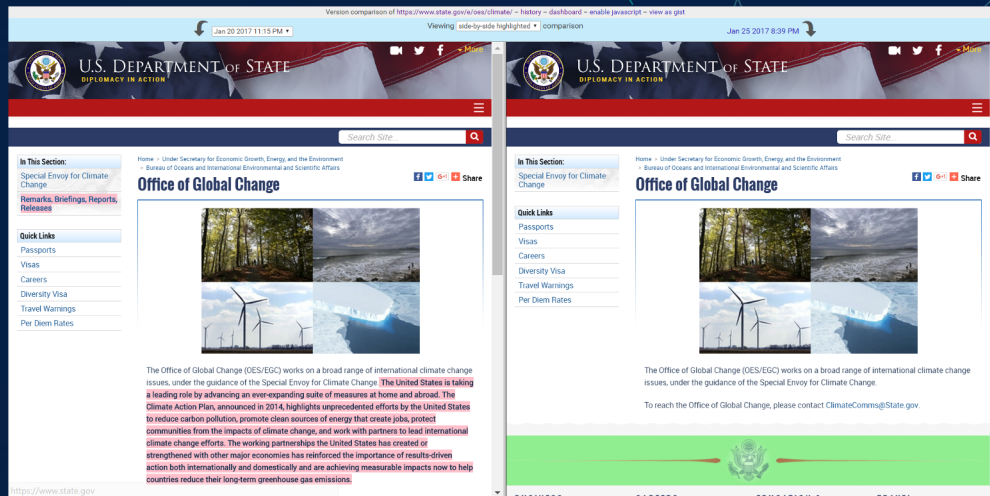
# PATTERNS OF USE (3)

## Monitoring

How web archives provide the data and tools for **observing online actors and change** over time, and the potential role that preservation plays in mechanising different forms of 'watching'

- **Snapshot** collection approach provides data over time
- Standard 'diffing' tools enable semi-automated **change detection** in source code
- **Change, addition or removal** of links, navigation, content, language

## Examples



Environmental Data & Governance Initiative Web Monitoring

Further info: *Access Denied: Federal Web Governance Under the Trump Administration* (Gehrke et al., 2021)



# PATTERNS OF USE (3)

## Monitoring 📡📡

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## Examples



Platform Governance Archive 1.0 : <https://pga.hiig.de/>

# PATTERNS OF USE (4)

## “Computation”/Data Mining

How web archives are **consumed by one-way computational processes** that rely on the extraction and transformation of archived content

- Training **language models** for text generation, summarization, translation.
- Training **neural network models** for image/video recognition, recommendation, classification and segmentation.
- **Automation, simulation, surveillance, prediction.**

## Examples

OpenAI

spaCy

amazon Rekognition



EleutherAI

IMAGENET



Common Crawl



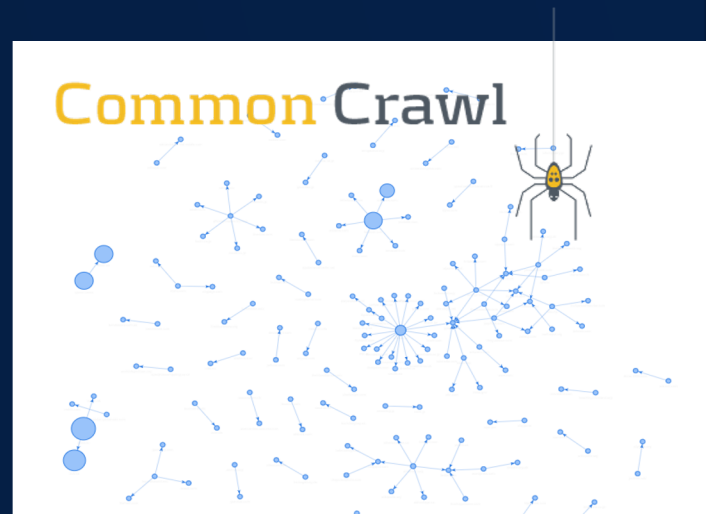
# 04

## CONCLUSIONS

Discussion, conclusions and an agenda for future work

# DISCUSSION, CONCLUSIONS & FUTURE WORK

- Web archival use remains **under-examined** and **under-theorised**
- We began collating, **mapping patterns** and categories of web archival use through a conceptual framework
- Brief examples highlight how web archives become **embedded in everyday practice** online, but there are more
- **Complicates** the role(s) and broader significance of web archives (beyond *just* tools for research into the Web's past) - implications, risks
- **Much more to be done!** Creative methods and interdisciplinary perspectives required



**Work in progress:** Using web archives to study web archives!

# THANKS. Questions?

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Economic  
and Social  
Research Council

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