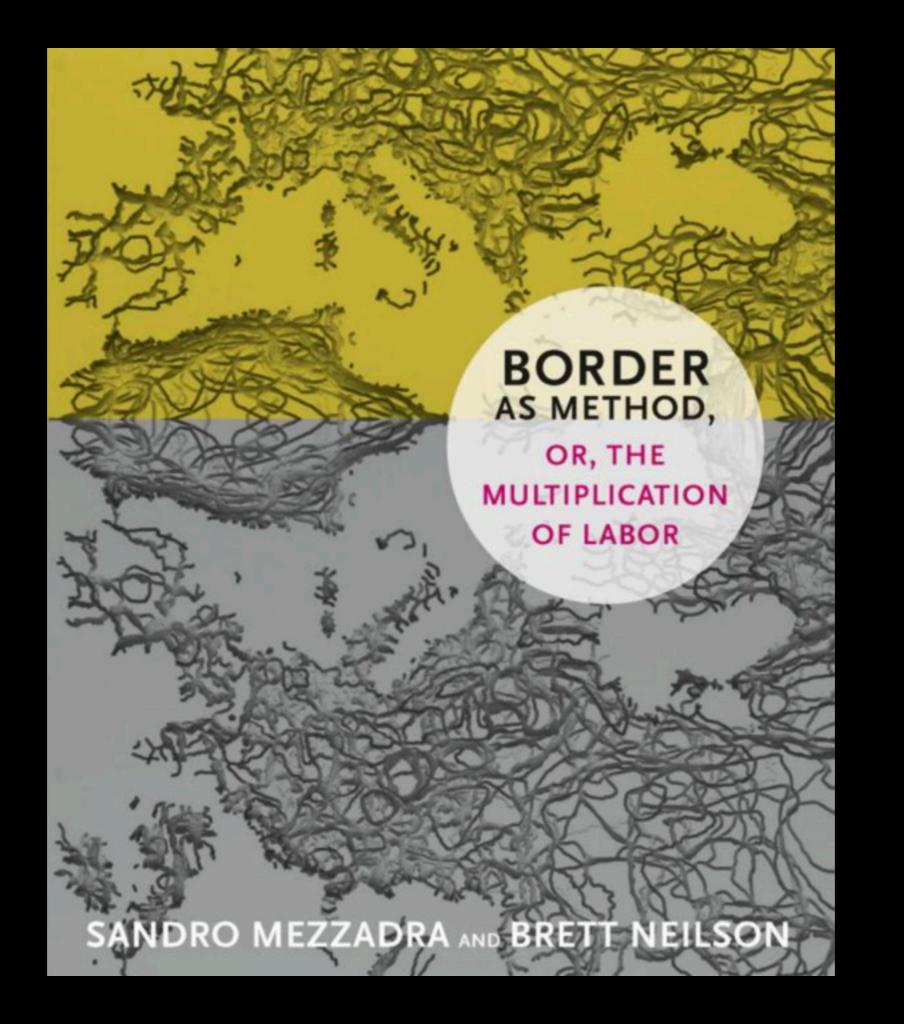


Professor Pelle Snickars Department of Culture and Media Studies / Humlab Umeå University



https://www.jr-art.net/



Josh Begley, data artist & web developer

By way of satellite imagery (Google maps) what does the southern border of the United States look like?





Today it seems that border management is becoming increasingly datalogical—identification of humans evolve around sophisticated data management systems that integrate and analyze personal data, biographical information, fingerprints, social networks, travel itineraries etcetera.

All Eyes on the Border

In Trump's America, the politics of recognition are changing.

SHANNON MATTERN SEPTEMBER 2018



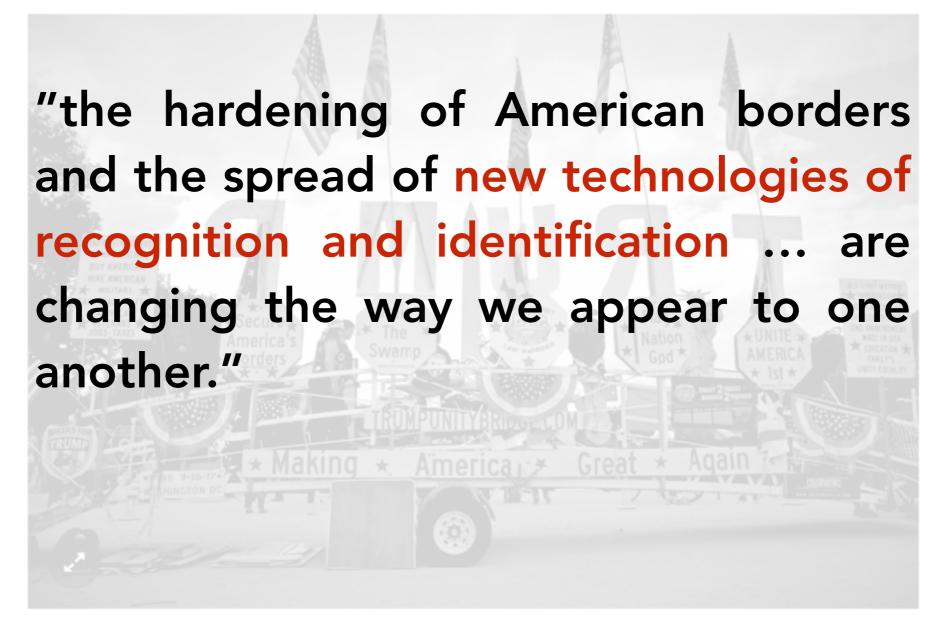
Rally on the National Mall, Washington, D.C., September 16, 2017. [Kelly Bell]

Two years ago, when a wildcard candidate won the U.S. presidential election, many people blamed the upset on a failure of recognition. Trump voters, this story goes, didn't see a future

All Eyes on the Border

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SHANNON MATTERN SEPTEMBER 201



Rally on the National Mall, Washington, D.C., September 16, 2017. [Kelly Bell]

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All Eyes on the Border

In Trump's America, the politics of recognition are changing.

SHANNON MATTERN SEPTEMBER 20

"Biometrics turn the border-crosser into a 'pixelated subject' ... composed of so many data points that the individual is no longer a meaningful category."

Rally on the National Mall, Washington, D.C., September 16, 2017. [Kelly Bell]

Matthew Longo (Leiden University): "Ways of Seeing (the Border): Methods and Approaches"

blamed the upset on a failure of recognition. Trump voters, this story goes, didn't see a future



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We Know Music...

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1,311,206,173,152

39,060,641

4,160,287

432

Data points about...

Known Songs

Known Artists

Music Applications On Our Platform



https://spotifymaps.github.io/musicalcities/

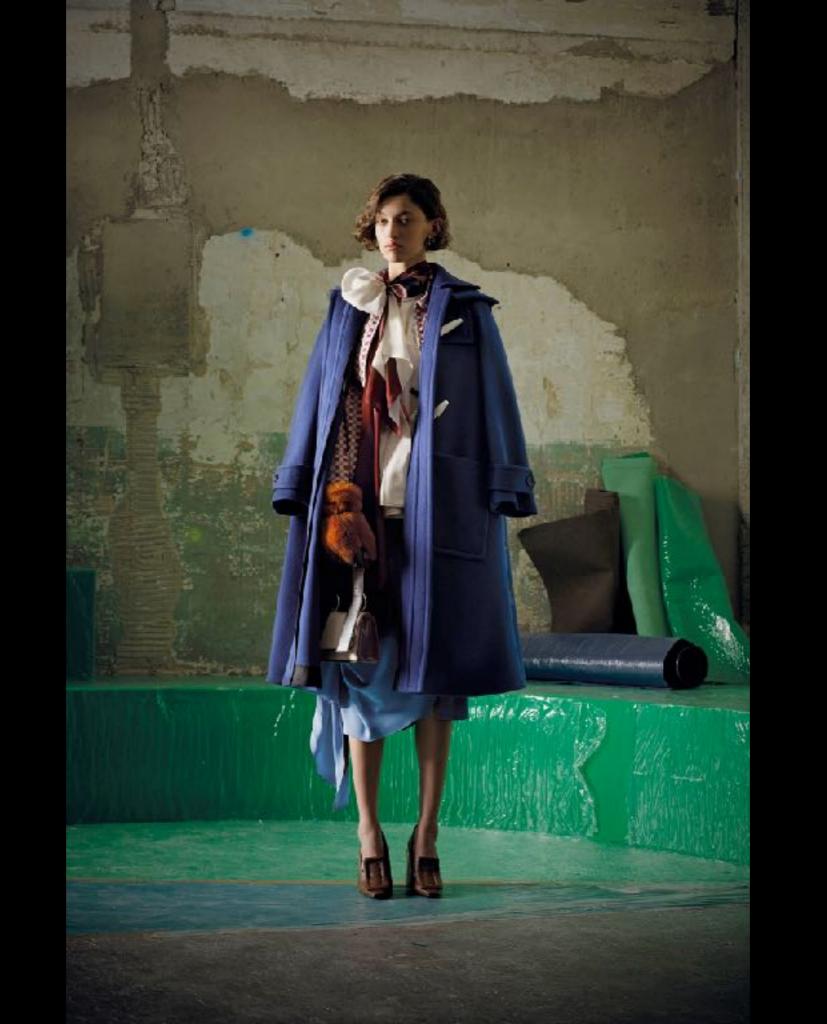


S EDITED

Here's where we explain how we get our data, and how we know it will never let you down.

We've got data on this many SKUs, and we add more than half a million per week.





Fashion & image analytics

Fashion has always been about spotting trends and forecasting style—via **images**.

Using computational and imagistic methods—based on comparing databases—fashion forecasting activities are today more accessible than ever. Data-driven fashion forecasting firms such as WGSN and EDITED, cover both fashion and lifestyle forecasting, as well as data analytics and crowd-sourced design validation.

In the following methods rather than results are central. I will use various modalities of media and link these to a number of studies and projects that we have performed—and are conducting—at the digital humanities hub, Humlab at Umeå University.

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How to obtain data—and what digital methods to use?



Geistige Arbeit als Beruf

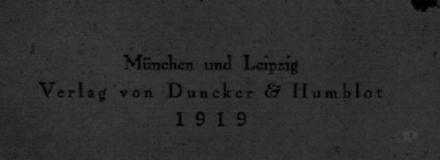
Vier Vorträge vor dem Freistudentischen Bund

Max Weber Wissenschaft als Beruf



München und Leipzig Verlag von Duncker & Humblot 1919 Geistige Arbeit als Beruf Vier Vorträge vor dem Freistudentischen Bund

"Vorausgesetzt ist bei jeder wissenschaftlichen Arbeit immer die Geltung der Regeln der Logik und Methodik: dieser allgemeinen Grundlagen unserer Orientierung in der Welt."



Science as vocation & and research as a practice

How one does academic research is always a **methodological issue** – but the importance and **prominence of methods** vary between disciplines.

Within the social sciences methods are, for example, by far more **significant** than within the humanities.

Science as vocation & and research as a practice

Sometimes social science scholars even argue that the humanities doesn't have any particular methods—and that humanistic research results consequently are always subjective and—following Popper—unscientific.

SCHRIFTEN ZUR WISSENSCHAFTLICHEN WELTAUFFASSUNG

EERAUSGEGEBEN VON

BAND 9

PHILIPP FRANK

o. 6. PROPESSOR AN DER
UNIVERSITÄT FRAG

UND

MORITZ SCHLICK

o. S. PROPESSOR AN DER
UNIVERSITÄT WIEN

LOGIK DER FORSCHUNG

ZUR ERKENNTNISTHEORIE DER MODERNEN NATURWISSENSCHAFT

VON

KARL POPPER



Springer-Verlag Wien GmbH 1935

SCHRIFTEN ZUR WISSENSCHAFTLICHEN WELTAUFFASSUNG

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o. S. PROPESSOR AN DER
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BAND 9

LOGIK DER FORSCHUNG

ZUR ERKENNTNISTHEORIE DER MODERNEN NATURWISSENSCHAFT

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Science should adopt a methodology based on falsifiability—statements and theories that are not falsifiable are unscientific.

Research as a practice

The humanities are, indeed, less prone to devote themselves wholeheartedly to methods—but scholarly differences are **not that apparent as is often claimed**.

HANS-GEORG GADAMER

Wahrheit und Methode

Grundzüge einer philosophischen Hermeneutik



HANS-GEORG GADAMER

Wahrheit und Methode

Grundzüge einer philosophischen Hermeneutik



Within the humanities there is also a hermeneutical master piece to fall back on—Gadamer's theory and methodology of interpretation from 1960.

Humanities & social science methods

Humanistic methods are usually qualitative—for example interviews, historical reception research, hermeneutic close readings, or different theoretical perspectives like feminist or marxist theory that influence research—and where theory and method are more or less the same.

Humanities & social science methods

Humanistic methods are usually qualitative—for example interviews, historical reception research, hermeneutic close readings, or different theoretical perspectives like feminist or marxist theory that influence research—and where theory and method are more or less the same.

Social science methods are usually **quantitative**—for example focus groups, large scale interviews, surveys or questionnaires.

Humanities & social science methods

The **difference** between these methods are not always clear cut—even if some scholars would say so. In addition, **combining methods** is common, and—naturally results from quantitative metods also **needs to be interprested**.



Importantly, digital methods can be used to study both



Cultural Analytics Lab

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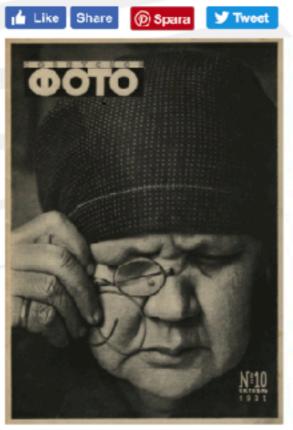
Projects

Publications

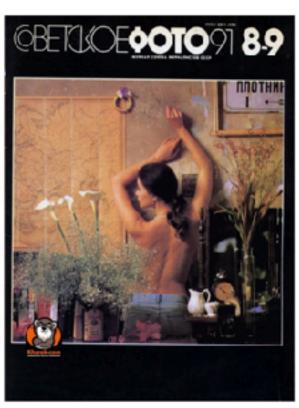
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Our new project explores the history of photography magazine Sovetskoe Foto, 1926–1991



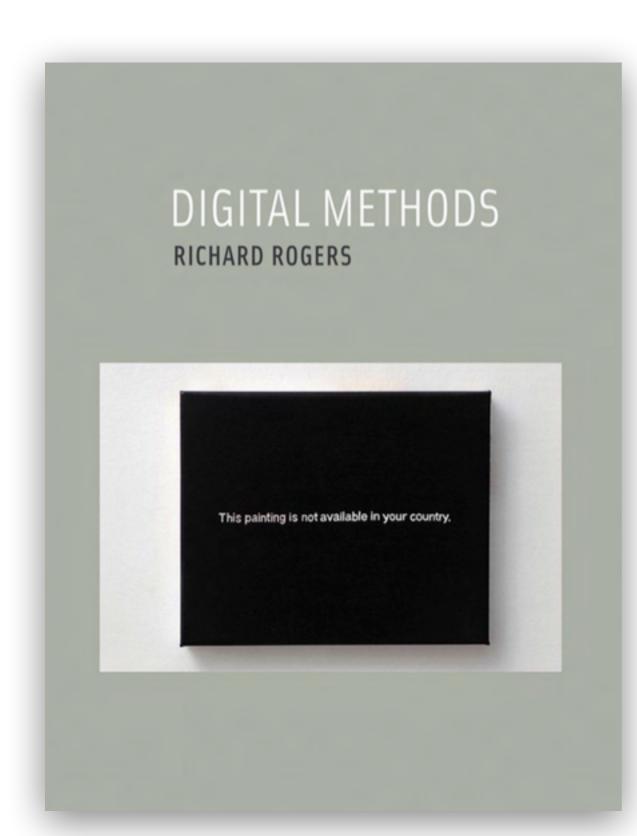




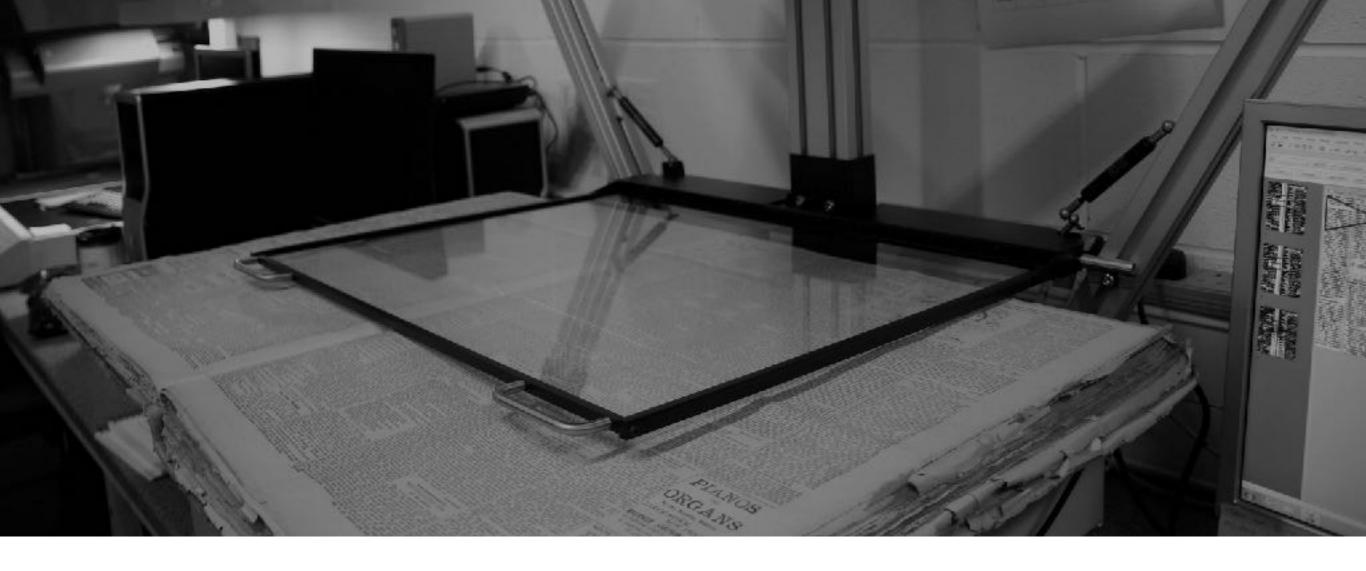
Sovetskoe Foto covers: October 1927 (left), January 1934 (middle), August-September 1991 (right). View and download full-size images on Flickr.

DIGITAL METHODS RICHARD ROGERS



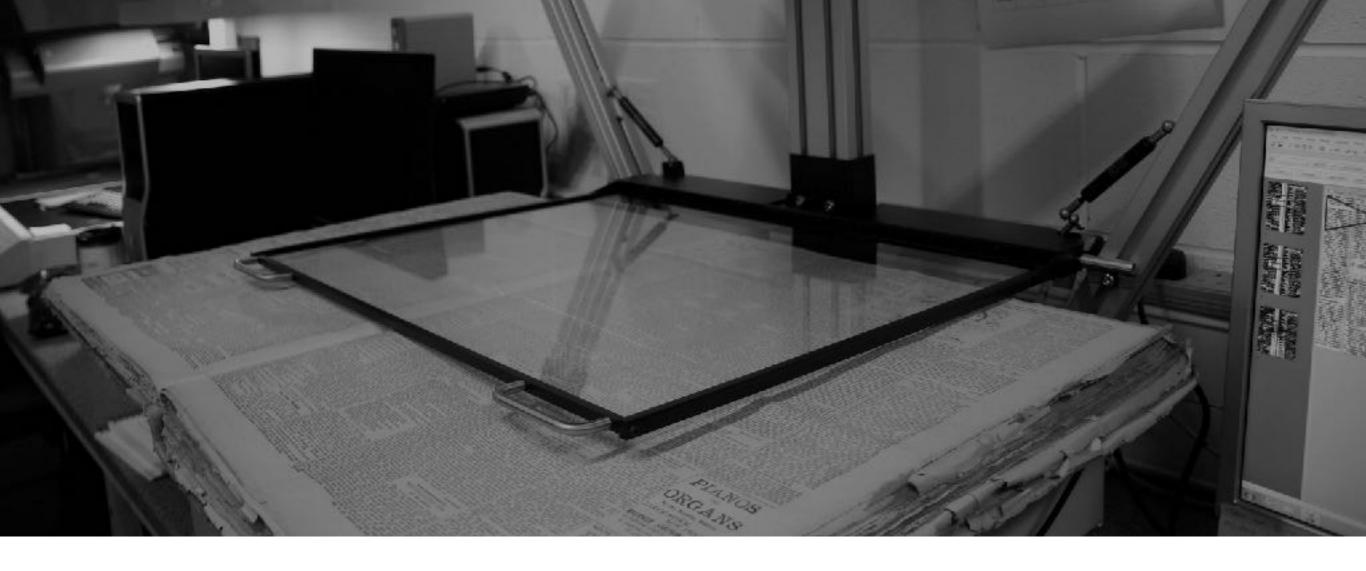


This book presents a methodological outlook for research with the web. As such it is a proposal to reorient the field of Internet-related research by studying and repurposing what I term the methods of the medium, or ... methods embedded in online devices. [...] How may we learn from and reapply these and other online methods? [...] By continually thinking along with the devices and the objects they handle, digital methods, as a research practice, strive to follow the evolving methods of the medium.



From my perspective data driven humanities research—with a focus on the historical sciences—departs from the fact the epistemic foundation of "the archive" has been altered and modified due to digitisation.

Nothing more, nothing less.



As a consequence, some humanistic research practices—but far from all—needs to adapt and try to take advantage of scholarly possibilities that arise when 'documents as data' are sharable and networked, linkable and traceable, reusable and processable.

Data Driven Humanistic Research

What type of data is going to drive the research process?

Data Driven Humanistic Research

Well, it naturally depends and hinges on which research question that are being posed—in analogy to the ways in which historical sources are used and conceptualised within the various sciences of history.

From Archival to Data Driven Humanistic Research

My own research was for a number of years driven by what I found in "the archive".

From Archival to Data Driven Humanistic Research

My own research was for a number of years driven by what I found in "the archive".

Today—given the rapid pace of the **digitisation of cultural heritage**—it is increasingly (but not solely) driven by the access and analyses of data, including the **various tools and mehods** on offer.

From Archival to Data Driven Humanistic Research

Importantly, data driven humanities research and applied methods needs to pay attention to the altered materiality of the archive, the production processess of data, to various forms of data "agency" or the epistemic machinery that produces data etcetera.

A FRONTBILLION OF THE

Onsdaggen

den 27 Alug.

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LEGGLA TETENSTER: Adjusturen ut Mattemark, a Lunde Universentet; ansutninger ingilvas sill Philosophial Faculiète dererdides inom 56 dagar felm den 26 denara. En ambulaturehrik Folkabilirantipunat i Skoleni forannih okers has Panators-Embetet inom den 20 inst. Okt., Norrk ping: A Skolensi. — Formande Hockan—och Ongelminth attilisingeren i I New firstmillag 21 Carinoth Stiff, atlant

PROSLAMMATA I KONKURSMÄL, vid Sockhilms R.1 1834, Septembeber 2: För al. Vallmästars Jacob Wessmar C. Bundenbeijrijenten Johan Berglands - Narings-idkresh Lesius Charlototta Walkindus, al. Departementa schreter ren Lass Encocheri Transa, Bugaran Albert Christoffer S derborgs, f. Olfrepkärnen-ophilken Anders Bahls, och Cigar makaren Nilsa Edvard Lundahla Bergenärer.

ARS-PROKILAWA, vid Stockholma Eldbos-Elli, 485 Sept. Et For :Sockerkraksidkare Bolaget Wellgast & Kump

Borganiste.

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ARTENSKAP AF emot Skrifvaren Christoffer Haube Said I Wesio COS, samilies hos Paster D. Spar-um, J. Adomy och Rogberga.

SAMMANTRADEN: Abademiens for de Frin Konster Ledander, den 20 ds. kl. 5 e. m. — Hundterk: Fo Ringers Herrar Folmskipe, den 15 ds. kl. 6 e. m., midde Richmessler.

De Gossiar, som åstunda att intagas i JAKOI Skolle, böra, försedde med ålders- o vaciasionsbetye, infinat sig i hoset 20 47 vid No åmeljegsum, Liritagen den 30 Augusti, 11. 49 förni.

C. O. RUNDEFERG

C. O. RUNDERERG,

KACCEROI BI

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4. vands i sammanhtin: med el giordi anhud, profich hiben para i dicett brad sem l'iret i Tidningarae infardt andiende Egendomena beskuffenhet och viller desa forschipfing, hvinom jenutil undermittlete hen Springaraen gibbendam Boet, Hirmsholder E. G. d'entervall, Bienteskoprosten och Ordensten J. P. & villen an och Brukspattenen J. F. Behrant på Notaries Peddeut d'Audignes Berste, hen NY 50, der handingar tilmide sgrudennen Ire ik Sutchiots for 44 August 1825.

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och profes mannal Fribe Kmoll, bebygdt för Ståndsorparer.
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alt til en stor del nyhygit och med serdeles sussen omandt. Vat en-tillgången ymnig och Verken icke bestände af liene.

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V hare underrättelser lemma, vid efterfrågan, af Massan Symmales, Herser Enskapatirseren C. P. W. ern och B. Sah im samt Possessionatra C. Eneroth, hellas vi Anh enstelltilet atrinare komma att hestimma köpe er sillet dessillaren, helfas för en red köpare böra hilfe lattnatt uppfylis. Torpins den 4 August 1853.

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darne Slifverhaltiga Blyglans

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BERERTIONE

Stockholms Lyceum

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C. J. BOHMAN, OTTO vox FEILITEEN, Phil. Magr. Phil. Magr.

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JJ 46 Lilla Nygatian.

ektioner i Bida samt Sjukgymnastik

ill Daal, for Detrar och Dunner, Is I stora Manigen vid Veterindern; och emotingsa der frim blitter till fordning af Kyttmästaren ANREP.

MGFARTYGET GAUTHIOD,

ill CALMAR, YSTAD och LUBEUR, Inorsdagen d. 28 Augusti, kl. 2 eftermidd. Närmare underrättelse meddelas ä Angfartygs-kontoret södra flygeln af Kokhuset vid Skeppsbron.

lan Starkbeim och Götheberg

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afgift, som derfor erlägges å Carlstads-ångbåtarne OBS, Att ånafartyget STOCKHOLM efter detti

ill Mariestad och Göthebor

ropeller-augfartyget CARLSTAD,

INGBITSFART

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Angfartyget WIKINGEN
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Rojecter silps 2 C: O farinsierps Rosser vid Hed
abrahamen.

Angfartygs-Kommunikation

ORFOLD OCH GUTHEST

Jern-ängfartygen ALAREN och OREBR

Kapten O. W. Kjette, Kapten J. L. Briesker, sight emellan STOCKEROLM och ÖRRÖMO, danlöpande af Strengreis, Kangatier och Graffero tida STOCKHOLM frie ÜRERKO

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Fredagar
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kl. 5 formidd. Thom
Sond

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Lordagar A ettermiddages.

Angfartyget CARL IX, Kapt. H. L. Sunder II

at ir frin BULT un GÜTHEBORG,

ned anlipsude at Christianhams. Carlisted h Wenersh

Mandagn, 1.8 f. m.,

sant falls GÖTHEBORG un BULT,

rood antiquante af *ravertory.
Fradagar, Al. 6 f. m.
Propeller-ångfarger kaderhers.

Espien Saderberg,
adale trin HULT im GOTHEBORG,
ned salipende af Mariertad, Lielt pieg och Wenerde
Thoridagar, hl. E.f. m.,
annt bin GÖTHEBORG uf HULT,
ned anlöpändenf Wenerstorg, Lieltsping och Maries
Tisdagar, hl. 7 f. m.

Visdagar, kl. 7 f. m. Komerissionie i Stockholm, Hour C. O. Strindberg, eli i thabore, Berner F. & H. G. Wescherg,

Tillstrengnäs, Kungsöf

tervinder Onsdager och Lördager, kl. 7 f.m., en Billetter för Paringerene bom uttigne h.C. O. Same

REGULIER ANGBATSFART

STOCKHOLM och SODERTELJI

Expeditionen till Italien, Roms belägring och beittning hre saker som en gring skott och ej kunnatras om. Från de katolska intressenssappunkt och
und afsende på den katolska kristenhetens regering
ar det nödvändigt att påfren åternattes på sin trom i
lom. Frankrike har gjert det. Från Frankrikes
papunkt, med afseende på dess i århrofraden följda
elitik och dess behof att upprätthilla sitt inflytande
ch påssinna sifriga notioner, att landet oaktadit inre
akhningar, likval toch felerat något af sin setyrka,
in makt och sin irihet i landling, så nit det i nöligt fall kan utem sina gränser sinda betydande
arridskräfter — i sådant afseende kunde ingreating
ktire natå Frankrike än att besätta Italiens imsedel-

punkt för att hölla sig qvar i Rom, så länge seen en unan makt bilechiller sig i Bossagna.

Presidenten Depise Hr Emanuel Arage här ordet.

Ememsel droges Bland de elika arsisgen funes äfren en proposition angiende 1,415,630 fr. till kestridande ni de atgrifter som erfoniras för ockupationasmeens underhäll i lädlen under de sez sista männdenn af

Hearje ging som andag begåres för expeditionen ill Bom år det en steingt manande pligt för om att satiga tröbunen. Sierupprepande och förnyande vär protest mot sjelfva spediförnens princip, böre vi pröfva så efterse, om icke hvarje dag bändelser insträffa om rättfärliga den politik vi förfaktat, som dierernot förlöma regeringens. (Bifall på venstra sidam. Tecken till otblighet på den högra.)

Förnamlingen står na nära slutet af sina arbeten före ferierna. Jag kan förstå att den ej är benägen för binga diskusioner. Min mening är heller seka stt-hälla något tal, utan endast att göra nägra annärkningar.

Bitter fröst högen siden: Nä, till anken då! Tala.
Emensed drogerlien hedervärde referenten, som redegjert för utbettets ösigt i ämnet, lar geneval Gronday, yttrar i sitt betänkande:

*Expeditionen till Italien, Roma belägring och bechtming åro fedts occouple.

Han har rist. Det är tyvärr sant. Han tillägger: «Från Frankrikes syngunkt, med afseende på dess lärhendranden följda politik och dess behof att uppett ländet, oaktadt ånre skalningar, likval icke förlorat uåget af sin styrka, sin mikt och sin fribet att

Jag finner här ordet: inflytande. Frankrikes inflytande, mina herrar — den franska regeringens inflytande i Italien år — intet! ([Knot på högra sidan]. Det är absolut intet!

Richer from beautern Ja, ja; det är sant!

Ensued drago fortsätter: Och då jag betygar detta, så är det icke med synerlig ledand; ty det skulle varn alliför smilrisamt at se och veta, att det är under franska inflytandet

Hom som der passers en hop saker.

Det var icke längesedan jag hade dilifälle att säga der, huru man i Born skipar lag och rätt och huru andets blata medborgare der äro ständiga föremålt för förföljelser och grymheter. (Heklamationer på dera stån).

Jag vill ej änyo skildra detta olychliga tillstånd. En omståndighet terde likväl förtjenn att framdragas. Hvad som nyligen passevat denstådes har vöckt förräning öfver hela Europa och ödegalagt att det herkande inflytandet i Rom är Österräkes och Neapels inflytandet (Seasation.)

I kannen Hans Helighets resa till Castel Giandolfo; veten att han der träffade kanungen af Nécapel, i Irraro af en österikisk general. Når man ser påfen sålunda begifra sig till Castel Gandolfo; för att er söka impirationer för sin politik, så bör man oj legåta har tillståndet för nårvarande är i konunganer Nesand.

Hisrefter gör talaren en exposé af Gladstones beanta beef till lord Aberdeen em alla de barbarisha shyggligheter, som i Neapel begis mot mån, såsom Poerio, Homeo m. fl. (Uttryck af harm på venstra jaldan. — Oh, oh!) — Emm. Arago fertsönter:

Har man nagousin, under nagon regering, hört talas em en sädan oerhöed, en så nedrig grymhet!? (Rorelee.) JD 73,6

Cultural heritage as digital noise: nineteenth century newspapers in the digital archive

1228

Received 5 September 2016 Revised 2 March 2017 Accepted 19 March 2017 Johan Jarlbrink and Pelle Snickars Department of Culture and Media Studies, Umeå University, Umeå, Sweden

Abstract

Purpose – The purpose of this paper is to explore and analyze the digitized newspaper collection at the National Library of Sweden, focusing on cultural heritage as digital noise. In what specific ways are newspapers transformed in the digitization process? If the digitized document is not the same as the source document – is it still a historical record, or is it transformed into something else?

Design/methodology/approach — The authors have analyzed the XML files from Aftowhladet 1830 to 1862. The most frequent newspaper words not matching a high-quality references corpus were selected to zoom in on the noisiest part of the paper. The variety of the interpretations generated by optical character recognition (OCR) was examined, as well as texts generated by auto-segmentation. The authors have made a limited ethnographic study of the digitization process.

Findings – The research shows that the digital collection of Aftonbladet contains extreme amounts of noise: millions of misinterpreted words generated by OCR, and millions of texts re-edited by the auto-segmentation tool. How the tools work is mostly unknown to the staff involved in the digitization process? Sticking to any idea of a provenance chain is hence impossible, since many steps have been outsourced to unknown factors affecting the source document.

Originality/value – The detail examination of digitally transformed newspapers is valuable to scholars depending on newspaper databases in their research. The paper also highlights the fact that libraries outsourcing digitization processes run the risk of losing control over the quality of their collections.

Keywords Sweden, Archives, Documents, Accuracy, Print media, Auto-segmentation, Character recognition equipment, Large-scale digitization

Paper type Research paper

Introduction

In October 1847, the telegraphic wire in St Germain outside of Paris was struck by lightning. The Swedish newspaper Aftonbladet reported that a telegraph assistant at a station nearby had discovered the demolished telegraph printing several letters on its own. Yet, according to the paper, "since they were not coherent, he decided to signal the phrase used for 'I do not understand.' "In doing so, however, he received "a heavy electric shock, which was followed by a loud bang, sounding like a gunshot" (Aftonbladet, 1847).

Within a digitization project initiated by the National Library of Sweden, the 1847 October copy of Aftonbladet was digitized in 2013 at the Swedish Media Conversion Centre. The newspaper Aftonbladet, founded in 1830, was one of the key titles in nineteenth century Sweden. It is often described as the first modern newspaper – consequently, it was also the first newspaper to be completely digitized by the National Library. Then again, if a telegraph struck by lightning in the late 1840s produced some real uncanny results, the same can be said of present day digitization processes. The digital version of the paper with the lightning-telegraph incident, in fact, literally reported that the struck assistant "saw a dazzling light along the wires on the walls conducting electricity de visI devärdigavid värdigavid dejemte fullkomen ihåförvintparkerslagna förvintparkerslagna parkerslagna ken – tas till 70 misvårt fruktarsnart tAf eoch sisrans njes ej [...] which fell down in pieces, burning the table and the floor."



Journal of Documentation Vol. 73 No. 6, 2017 pp. 1298-1243 © Emmild Publishing Limited 0022-0418 DOI 10.1108/JD-09.2018-0006

This research has been funded by The Torsten Söderberg Foundation.



Hito Steyerl

In Defense of the Poor Image

The poor image is a rag or a rip; an AVI or a JPEG, a lumpen proletarian in the class society of appearances, ranked and valued according to its resolution. The poor image has been uploaded, downloaded, shared, reformatted, and reedited. It transforms quality into accessibility, exhibition value into cult value, films into clips, contemplation into distraction. The image is liberated from the vaults of cinemas and archives and thrust into digital uncertainty, at the expense of its own substance.

http://www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/

European History Reloaded

If (as Steyerl argues) the "image is liberated from the vaults of cinemas and archives and thrust into digital uncertainty"—how can we study its **circulation online**? Is it, for example, possible **to algorithmically trace reuse of historical footage** on Youtube or Vimeo?

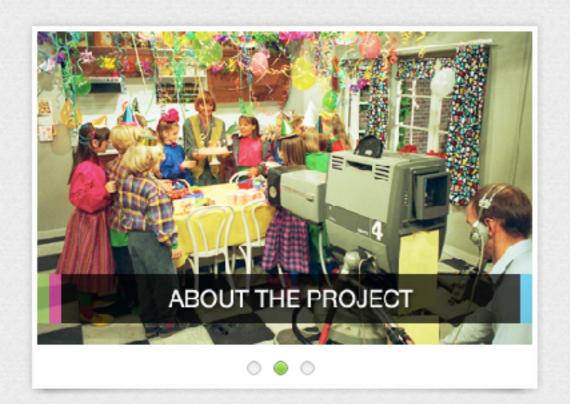
European History Reloaded: Curation and Appropriation of Digital Audiovisual Heritage



VIDEO ACTIVE

Creating Access to Europe's Television Heritage





Discover Europe's television heritage

EUscreen offers free online access to videos, stills, texts and audio from European broadcasters and audiovisual archives. Explore selected content from early 1900s until today.

search

Tip: use search operators for best results.

Advanced Search

Explore EUscreen

Topics

Genres

Languages

Providera

Exhibitions & Journal









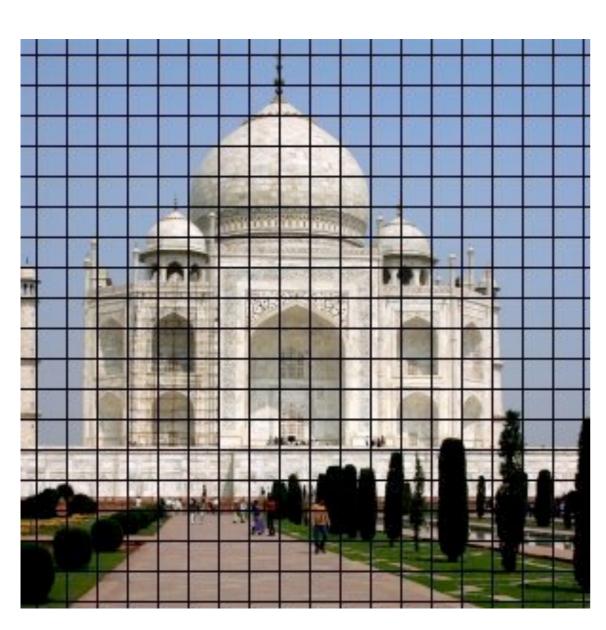
European History Reloaded: Curation and Appropriation of Digital Audiovisual Heritage

The project combines state of the art **tracing and tracking technologies**, critical cultural analysis and ethnographic fieldwork to answer the questions:

How do strategies of curation shape the appropriation of digitized heritage?

What new perspectives on European history and identity do digital curations and appropriations of audiovisual heritage create?

How can audiovisual archives better foster the re-use of Europe's audiovisual heritage?



Three dimensions: color, shape, temporal

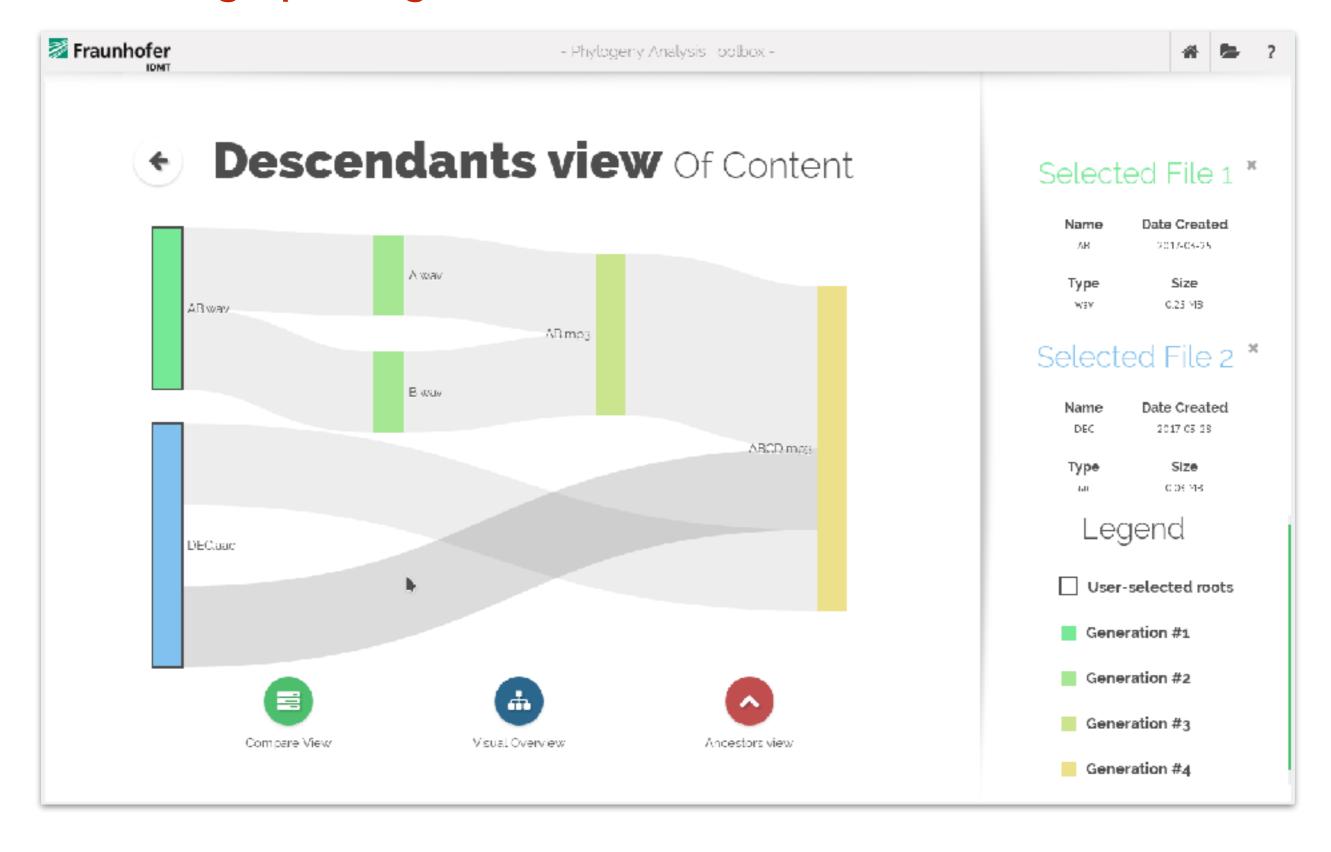
A "hash":

A3a1c25d9b71a19d412188fa9ee0949a

"Reuse of historical footage will be tracked and traced by so called video fingerprinting, a technique in which software identifies, extracts and compresses characteristic components of a video, enabling particular footage to be uniquely identified."



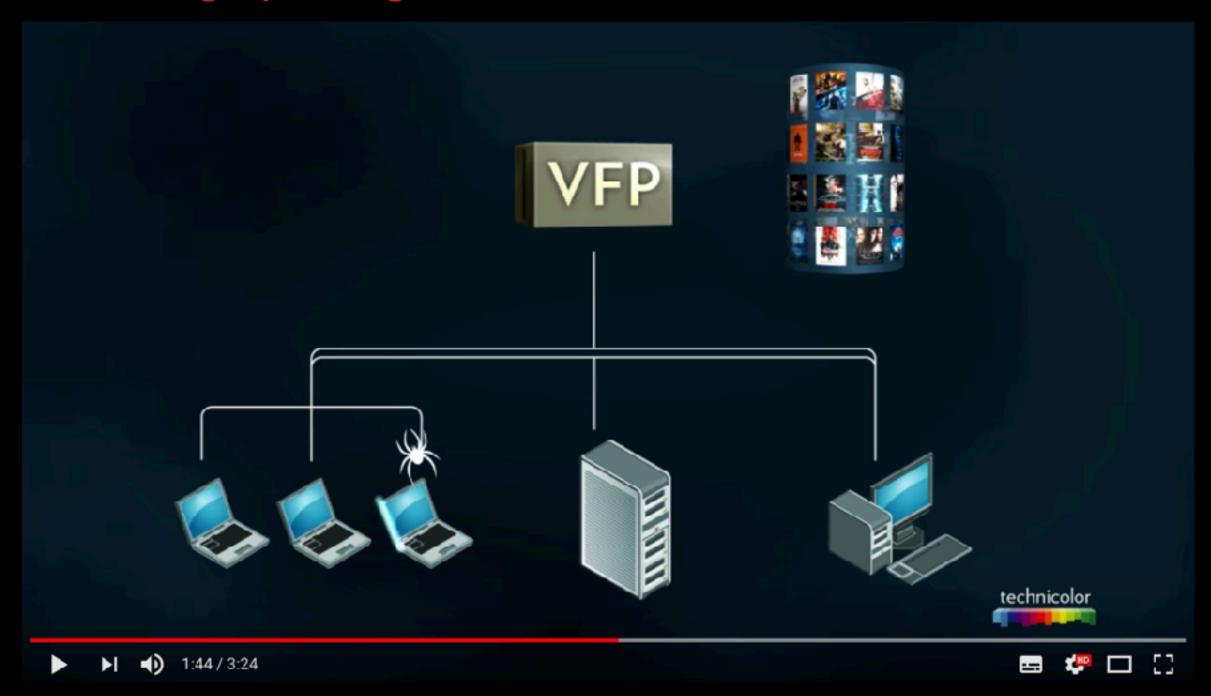








With video fingerprinting techniques software identifies, extracts, and compresses characteristic components of a video, enabling that video to be uniquely identified by its resultant "fingerprint".



Video Finger Printing Technology (Technicolor 2011)

https://www.youtube.com/watch?v=jSoS9bzpobo

You Tube

Gontent

The project is essentially about **reverse engineering the forensic fingerprinting of the industry's media content**. Within that industry video fingerprints are used to track copyrighted video material.

Whereas the industry seeks to police and control piracy, the project will use similar digital methods to analyse, research and discuss the cultural dynamics of pirated television heritage.



HOME

ABOUT

PRESS

CONTACT

ACTIVITIES

INTRA

BLOG





MeMAD

Methods for Managing Audiovisual Data











ABOUT

Background People/Partnerships News/Events

PROJECTS

DV Television
DV Archives

SOFTWARE

Distant Viewing Toolkit (DVT) for Moving Images Visual Embedding Module

TUTORIALS

Deep Learning for Analyzing Large Image Corpora

With support from:

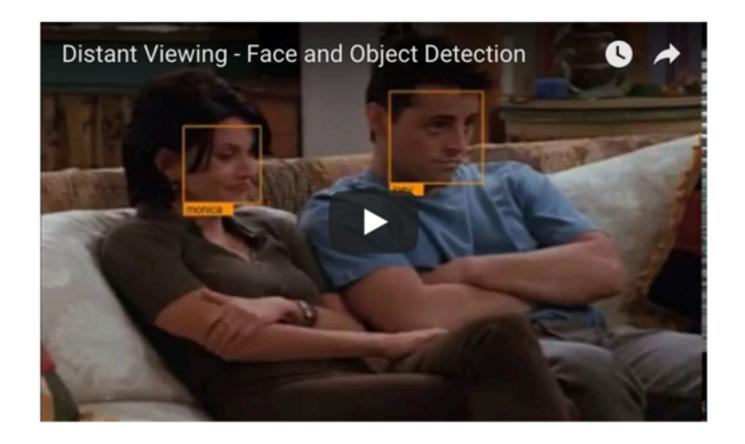




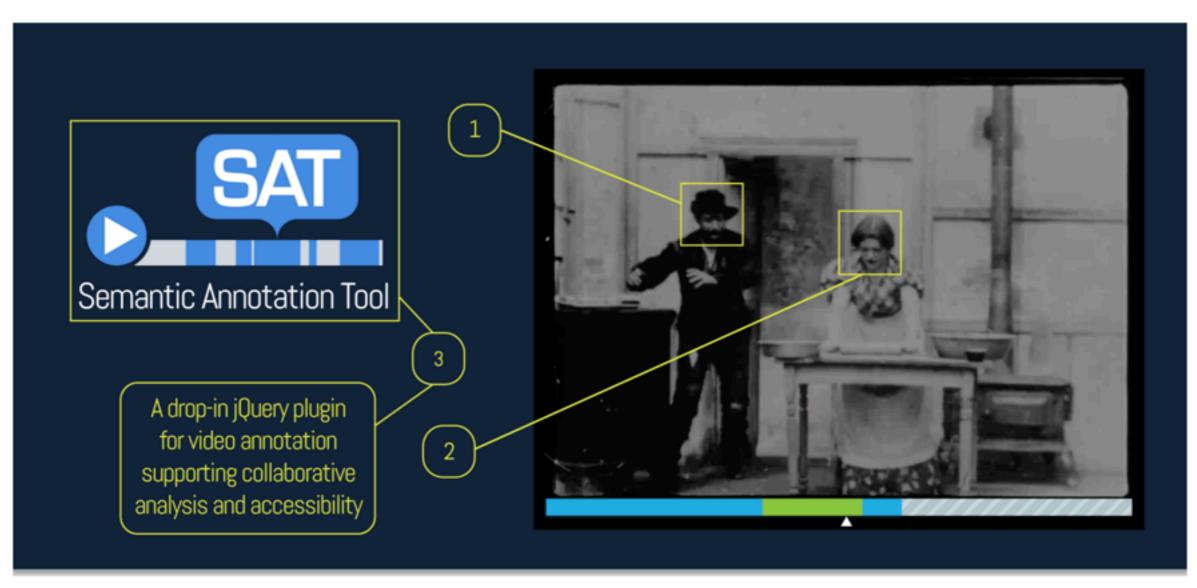
Analyzing Visual Culture

The Distant Viewing Lab uses and develops computational techniques to analyze visual culture on a large scale. It seeks to develop tools, methods, and datasets that can be re-used by other researchers. The lab engages closely with critical cultural and data studies, aiming to make explicit the interpretive act of algorithmic logic. The Lab is directed by Taylor Arnold and Lauren Tilton and located at the University of Richmond.

An example of the current results from our Distant Viewing Toolkit is shown below.



THE SEMANTIC ANNOTATION TOOL









2. Textual Models of Media History

Distant Reading

During the last decade the literary historian **Franco Moretti** has developed into the principal proponent for what he terms "distant reading". In an age of huge numbers of digitized books, understanding literature can and should, according to Moretti, move from studying only particular texts within a canon to the aggregation and analyses of massive quantities of textual data.

Distant Reading

During the last decade the literary historian **Franco Moretti** has developed into the principal proponent for what he terms "distant reading". In an age of huge numbers of digitized books, understanding literature can and should, according to Moretti, move from studying only particular texts within a canon to the aggregation and analyses of massive quantities of textual data.

Since Moretti coined the term, distant reading has become a popular way of broadly describing **the analyses of major textual corpora**, usually in the form of loosely tied algorithmic text-mining approaches.

nebraska

SÖK

Visa endast fritt material



Din sökning på **nebraska** mellan 1890-01-01 och 1890-12-31 gav 58 träffar.

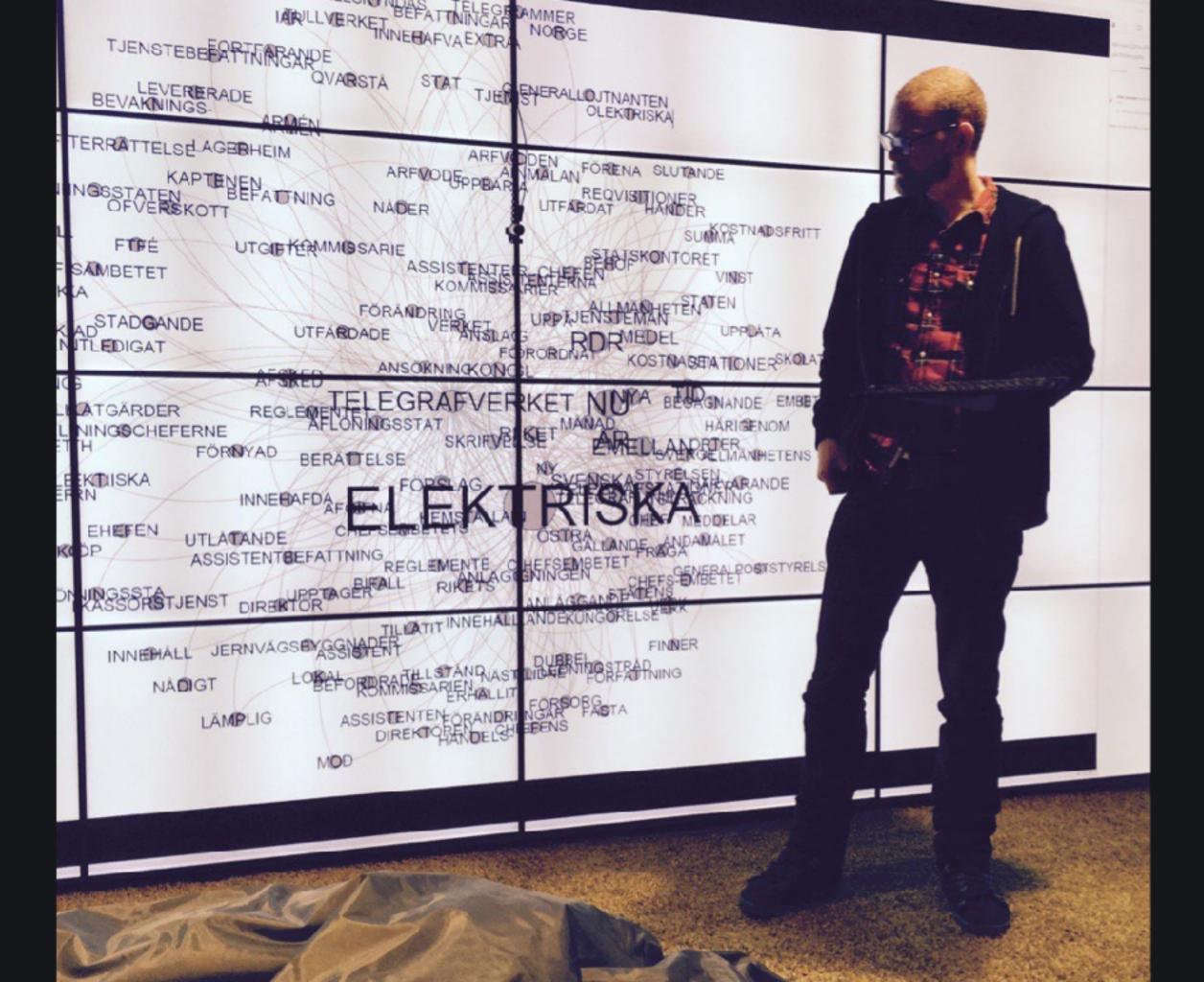


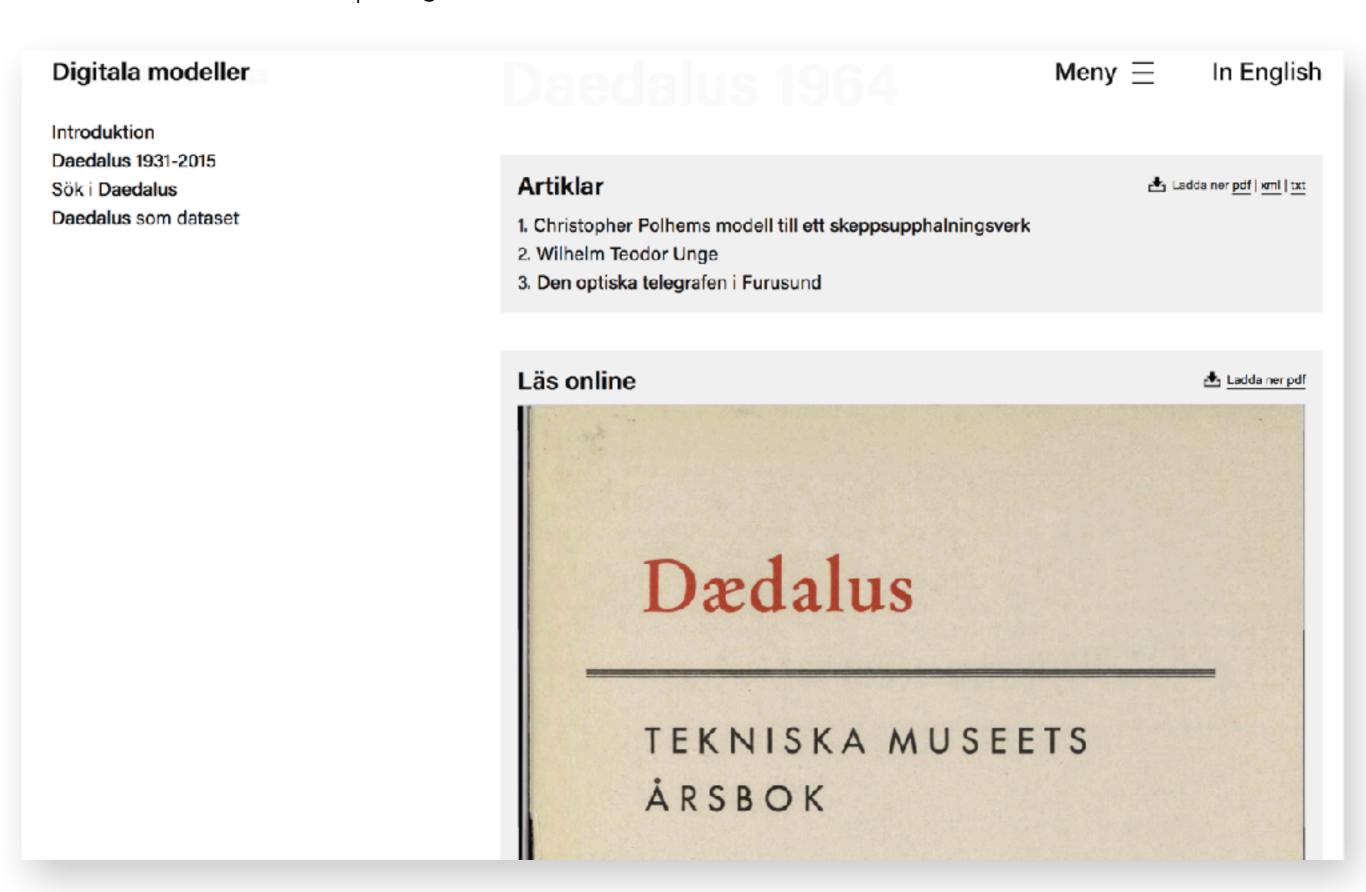












The 80 museum yearsbooks of *Daedalus*—published between 1931 and 2015—has resulted in **a minor cultural data set** with some 15,000 pages and a few million words.

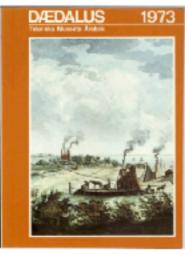


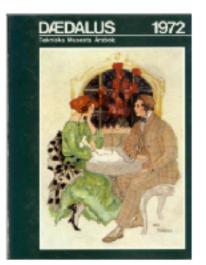


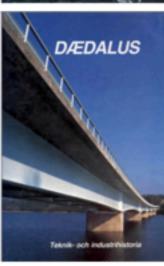


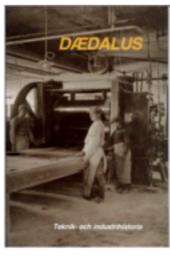


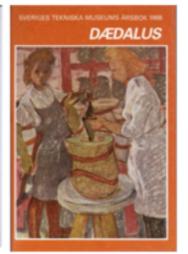


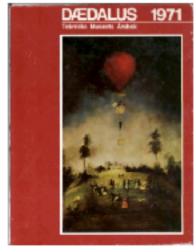


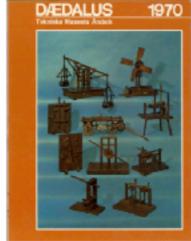




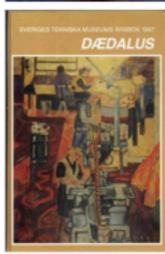


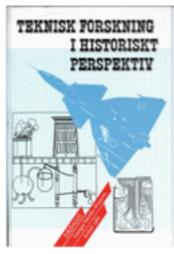






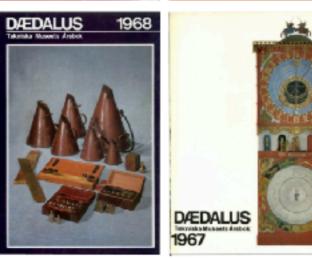








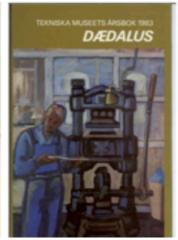


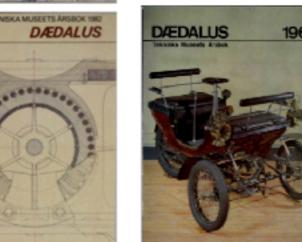


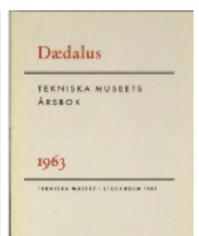














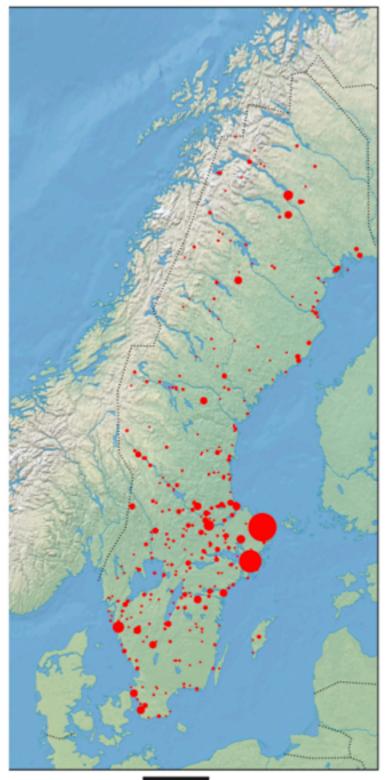
We have used different types of text analyses tools and methodologies to work and wrangle this data—i.e algortihmic models and packages such as topic modeling, NER-analyses and word2vec.

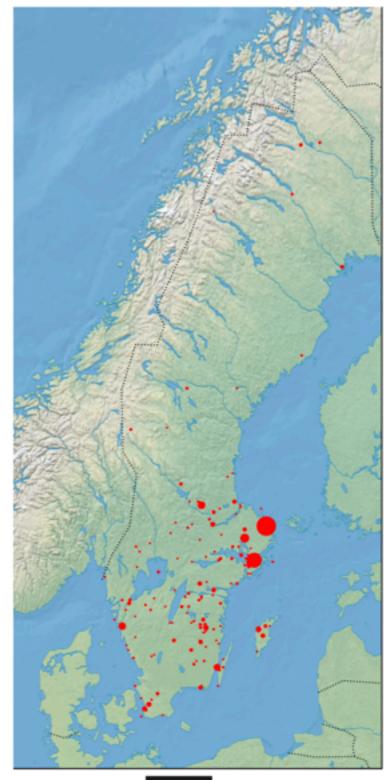
For example: precisely where is the national history of technology located geographically when presented by Daedalus? And how does this historiographical geography change over time?

We extracted the texts from the alto-xml files and cleaned the texts manually in order to get rid of place names in bibliographies, advertisements etcetera.

A named-entity recognition (NER) implementation for Swedish was used to extract place names from the cleaned texts. Unique hits were checked, false hits deleted and the place names assigned GIS coordinates (using Google Maps Geocoding API).







1930s 1980s 2010s





Journal of Scandinavian Cinema Volume 7 Number 2 © 2017 Intellect Ltd Article. English language. doi: 10.1386/jsca.7.2.155_1

10. 11.

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12. 13. 14.

feature article

FREDRIK NORÉN AND PELLE SNICKARS Umeå University

Distant reading the history of Swedish film politics in 4500 governmental SOU reports

Using computational methods, digitized collections and archives can today be scrutinized in their entirety. By distant reading and topic modeling one particular collection - 4500 digitized Swedish Governmental Official Reports (SOU) from 1922 to 1991 - this article gives a new archival perspective of the history of Swedish film politics and policy-making. We examine different probabilistic topics related to film (and media) that the algorithm within the topic modeling software 42. Mallet extracted from the immense text corpora of all these Official Reports. The article methodologically recounts and analyses novel ways to understand the history of Swedish film politics and policy-making through topic modeling the massive text corpora of SOU publications. Topic modeling is a computational method to study themes in texts by accentuating words that tend to co-occur and together create different topics. Basically, it is a research tool for the discovery of hidden semantic structures, exploring a collection through the underlying topics 49. that run through it. Hence, our article captures a number of film discourses and 50. trends within the SOU material. In conclusion, we argue that topic modeling 51. should be recognized as a method and research aid for gathering an overview of a 52. major material; as a way to pose new and unforeseen research questions; and as a

KEYWORDS

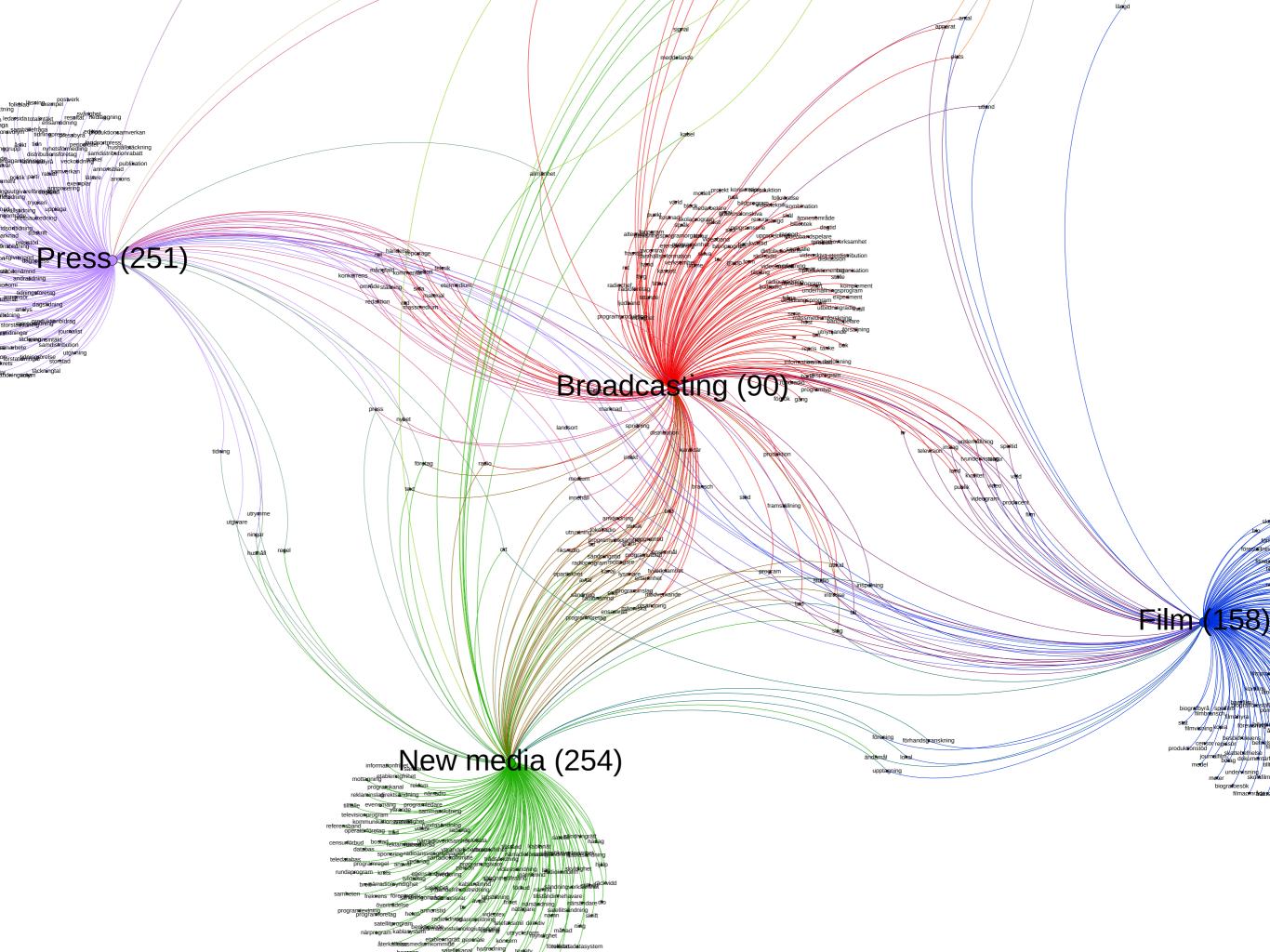
digital methods digitized collections and archives history of Swedish film politics distant reading topic modeling Swedish Governmental Official Reports (SOU) computational film

By distant reading and topic modeling one particular collection—4,500 digitised Swedish Governmental Official Reports (from 1922 to 1991)—we claim to give a new archival perspective of the history of Swedish film politics and policy making.

We have examined different probabilistic topics related to film (and media) that the algorithm within the topic modeling software Mallet extracted from the massive text corpora of all these Official Reports.

- 154 0,00416 stipendium stipendiat husmor bidrag resa studielån studie semesterhem folkhögskola form koloni <u>stipendiumbelopp statstipendium</u> studiehjälp inackordering nämnd hem förmån understöd
- 155 0,00712 ort ortsgrupp socialstyrelse levnadskostnad dyrortsgruppering dyrortsgrupp budget indextal gruppering grupp bränsle dyrort post undersökning landsbygd landsdel stad spännvidd skillnad
- 156 0,00473 förteckning utredning stat rapport kn justitiedepartement socialdepartement jordbruksdepartement utbildningsdepartement siffra försvarsdepartement anm barn barnmiljöutredningens handelsdepartement kommunikationsdepartement finansdepartement sammanfattning utkommerhösten
- 157 0,0056 arrendator jordägare arrende arrendetid fastighet arrendelag jord arrendeavtal upplåtelse tid avtal syn optionsrätt utarrendering fall jordbruk bestämmelse kontrakt arrendeställ
- 158 0,00383 film biograf visning producent produktion nöjeskatt filmproduktion kortfilm videogram biografbyrå år stöd barnfilm föreställning <u>filmainstitut</u> censur framställning spelfilm filmbransch
- 159 0,00856 avdrag beskattning år intäkt inkomst regel vinst rörelse avyttring belopp beskattningsår fastighet fall realisationsvinst förvärvskälla anvisning försäljning taxering värde
- 160 0,0022 fartyg gods sjölag <u>bortfraktaren konossement</u> skada befälhavare redare <u>befraktare</u> resa ansvarighet passagerare last avtal <u>avlastare</u> utkast förlust <u>bortfraktarens</u> frakt
- 161 0,00517 ved skal lov etter hvor krav <u>selkap</u> text ann <u>annen</u> hensyn tid anvendelse ande stk forhold erstatning bestemmelser kun
- 163 0,01569 myndighet verksamhet organisation resurs uppgift ansvar nivå kompetens regering tjänst funktion behov handläggare administration uppföljning statkontor uppdrag förändring styrning
- 164 0,02425 avgift taxa kostnad system arbetsgivaravgift belopp finansiering storlek avgiftsystem princip inkomst beräkning uppbörd stat höjning avgiftunderlag medel avgiftuttag nedsättning
- 165 0,17879 fråga fall möjlighet skäl hänsyn synpunkt regel förhållande princip sida mening sammanhang form svårighet samband anledning betydelse utsträckning förutsättning 166 0,00565 kassa medlem sjukkassa försäkring arbetslöshetkassa
- arbetslöshetsförsäkring tillsynsmyndighet avgift sjukförsäkring understöd sjukpenning arbetslöshet statsbidrag bestämmelse år centralsjukkassa understödsförening daghjälp sjukahjälp
- 167 0,00532 teknik dator system utveckling datateknik användning utrustning tillämpning användare styrsystem programvara data område styrning program produktion datorisering spridning datautbildning
- 168 0,01179 ma mo mn am un nm cm omm mmm mamma aa nn mc sm to no lt ax ao
- 169 0,01325 beredning mening uppfattning genomförande förbehåll ställningstagande ställning ämne reglering övervägande remissyttrande beteckning erinring <u>beredningarbete</u> redning tion alternativ detaljredovisning åsikt
- 170 0,0053 fakultet universitet högskola forskarutbildning sektion professor konsistorium docent läroanstalt kansler förslag rektor lärare doktorand ämne professur

yttrandefrihetskommitté råfilm medarbetare granskningsverksamhet kopiering djur handling biografägarförbundet biobesökare anspelning reportage pliktexemplar rekommendation nöjesskattutredningen filmlaboratorium medlern visningsnämnd bemärkelse biografbiljett filmacensor visningsnämnd producentandel kassett programråd nöjesfilm ungdomsfilm ungdomsfilm ungdomsfilm version budgetår stad kvalitetsbidrag forskning version filmvetenskap urval censurbest filmarbetare filmvetenskap urval censurbest filmbyrå komponent filmforskning biografnäring visningsmöjlighet reklam åldersgrupp gräns^{film}arbetare filmvetenskap urval censurbestämmelse romarknad filmfråga filmuthyrare filmuthyrarna filmutgivare biografavgift filmarkiv filmväsende are barnmatiné våldsfilm spelintäkt filmbyrå nöjessk barnmatiné våldsfilm videobransch manuskript standaru kontrollförening granskningsman juli nöjestillställning tv-undervisning skolelev representant filmforskningsgruppen apparat scen längd karaktär filmreform videoavtal överenski standard filmapparat nedgång uppfostringssyfte filmkamera iusispei apparat effekt filmstudi filmuthyrarförening scen längd jury byrå rekvisita kamera speltid råd filmstudio filmavtal åldersgräns videofilm biograflokal speltid råd filmstudio filmavtal åldersgräns videofilm biograflokal filmkunskap efterhandsstöd gård format filmfond servisionb fantasi organ verksamhetsberättelse produktionsföretag verksamhetsberättelse produktionsföretag verksamhetsberättelse produktionsföretag spelår stat produktion spelår stat spelår spelår stat spelå överenskommelse revisionbyrå framställningkostnad smalfilmsutredning stödåtgärd uthyrning produktion filmproduktion filmverksamhet verklighet biografilm biografverksamhet restitution språk censurärende biograffilm slag tal utland filmcentrum våldinslag genomsnitt dubbning visningkopia ateljé antal land ort filmbolag biografägareförhundet biografvisning fondstyrelse beställning år smalfilm instruktionsfilm godkännande fotograf produktionsstöd normalfilm importör särkostnad kopia ljudfilm kortfilmsproduktion filmm biografägareförbundet författare prestation händelse betänkande skola filmrepertoar filmarbete befrielse intäkt biografdrift filmutbud filmskapare filmfotograf filmpåverkan tillträde inköp filmauthyrning folketshusföreningar distribution filmförevisning intressent visningsställe tv-kunskap import filmalag filmcensurutredning undervisningsfilm husförening godo
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Topic modeling enables researchers to detect discursive connections between themes and texts that, potentially, could open up for new questions and perspectives on the history of Swedish film politics.

Topic modeling enables researchers to detect discursive connections between themes and texts that, potentially, could open up for new questions and perspectives on the history of Swedish film politics.

Topic modeling is also a method of the both the anticipated (confirming assumptions), as well as the unanticipated, were computation of a considerable textual corpora might allow one to claim findings that has not been spotted before.

Topic modeling should be recognised as:

- (1.) a method and research aid for gathering an overview of a major material.
- (2.) as a way to pose new and unforeseen research questions.
- (3.) a kind of computational support that makes it possible to apprehend major patterns more or less impossible to detect through a traditional archival investigation.

3. Sound & Archives—Spotify Teardown

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Streaming Heritage

Following Files In Digital Music Distribution

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http://streamingheritage.se

Spotify Teardown

Our research project takes a **software studies and digital humanities approach** towards streaming media—with a media historical slant.

Our project has not been about, say, altered music listening habits or new forms of media usage. Rather, it has focused the ways in which **technology situates and regulates music consumption**.

Essentially, our project's methodological innovation has been **to 'follow files'** rather than those making, using or collecting them.

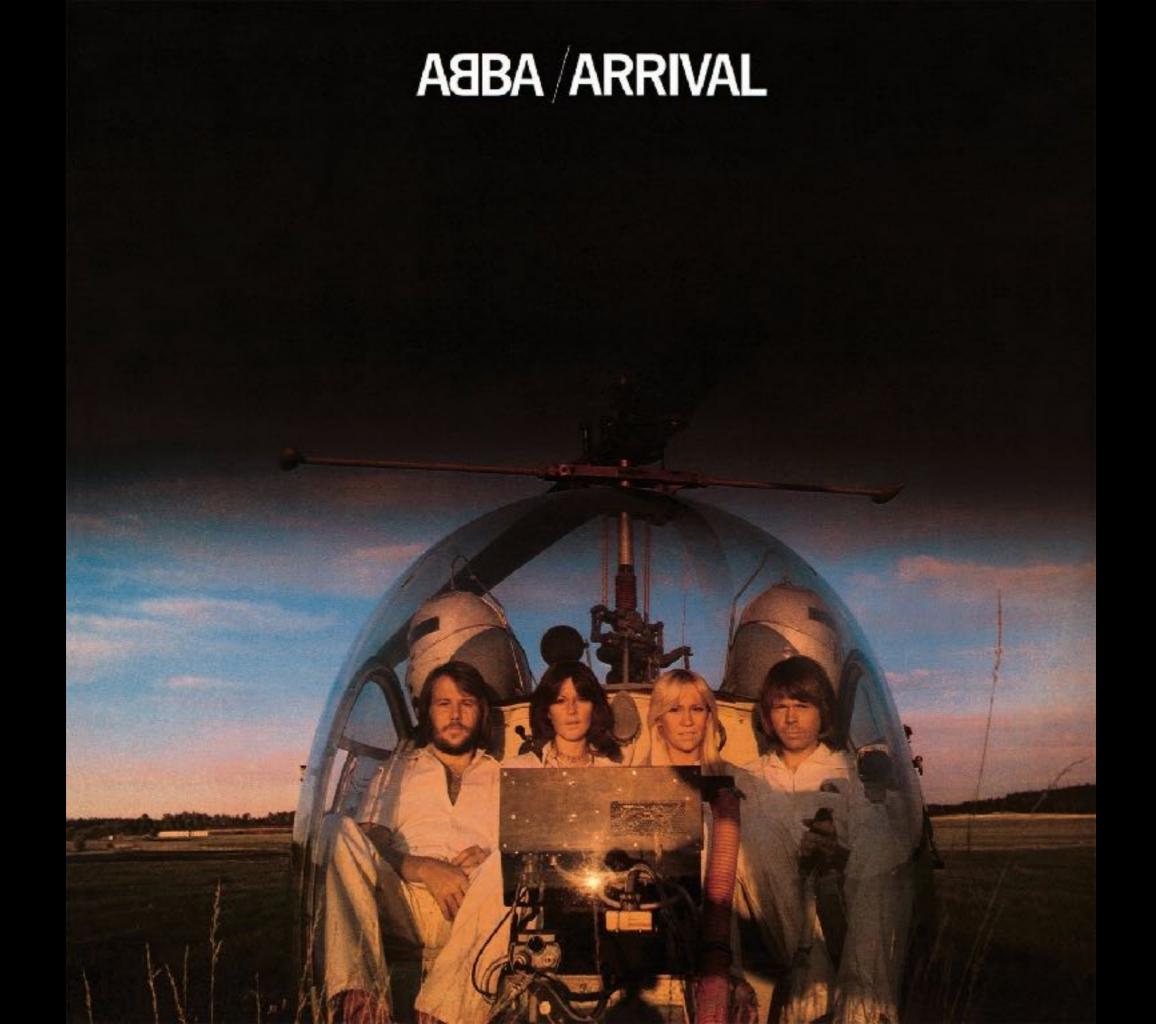
Spotify Teardown

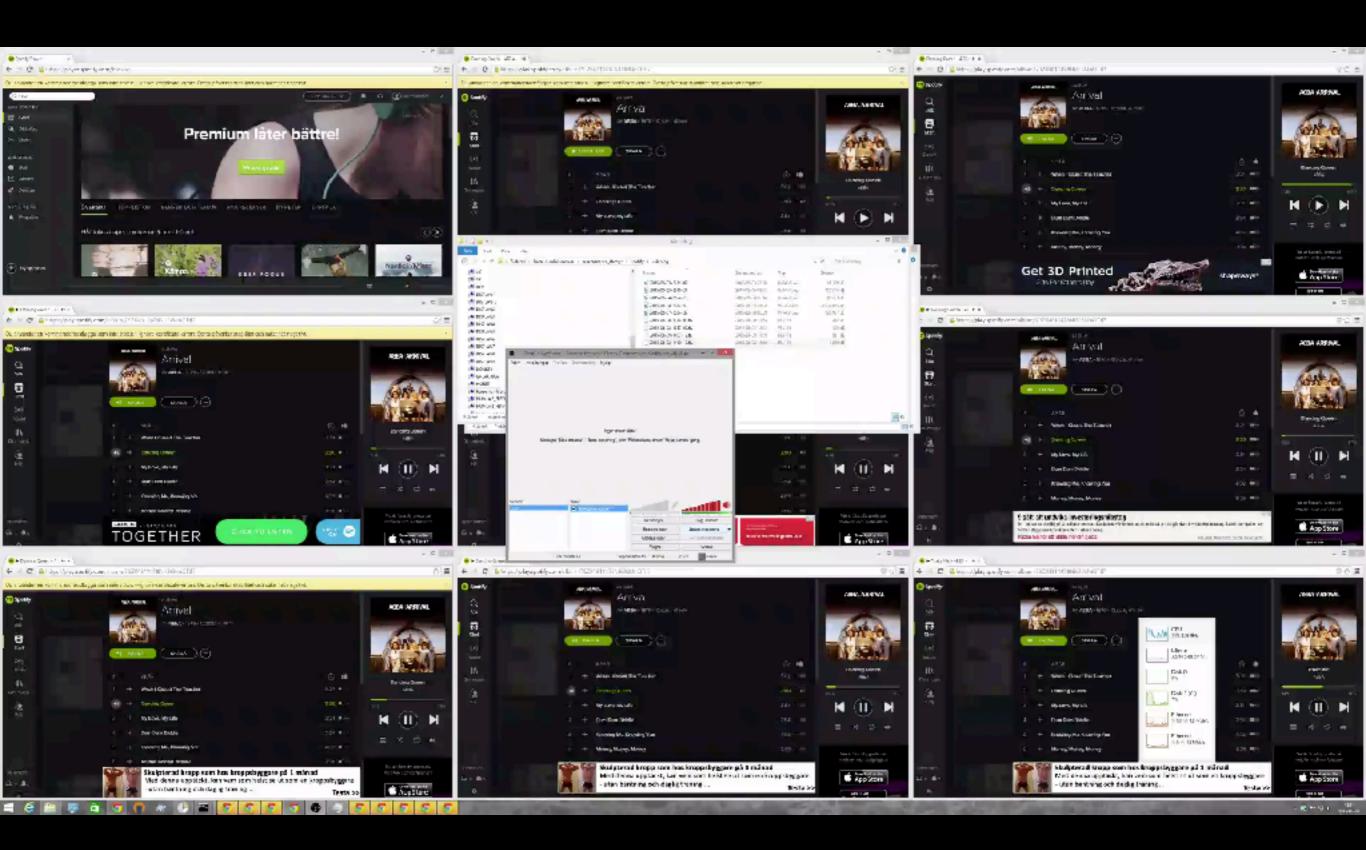
Since the project is called **Streaming Heritage** we have repeatedly stressed that Spotify is—or at least resembles—a **media archive** (with some 30 million songs).

Yet how is this archive actually used? Since Spotify user data has not been available, we have acquired and compiled it through other means in order to perform research—foremost by **deploying bots as research informants**.

Bots as Informants

Essentially, our bots (software robots) have been programmed as scripted algorithms that exhibit human-like behavior (in one way or the other) when 'listening' to music.





Bots as Informants

Bots **appear to be human**—which is why they are interesting. Bots give an impression of being able to act as a normal user and/or person.

An emerging area of scholarly research which investigates algorithms 'from the outside' testing them for problems and harms without the co-operation of online platform providers.

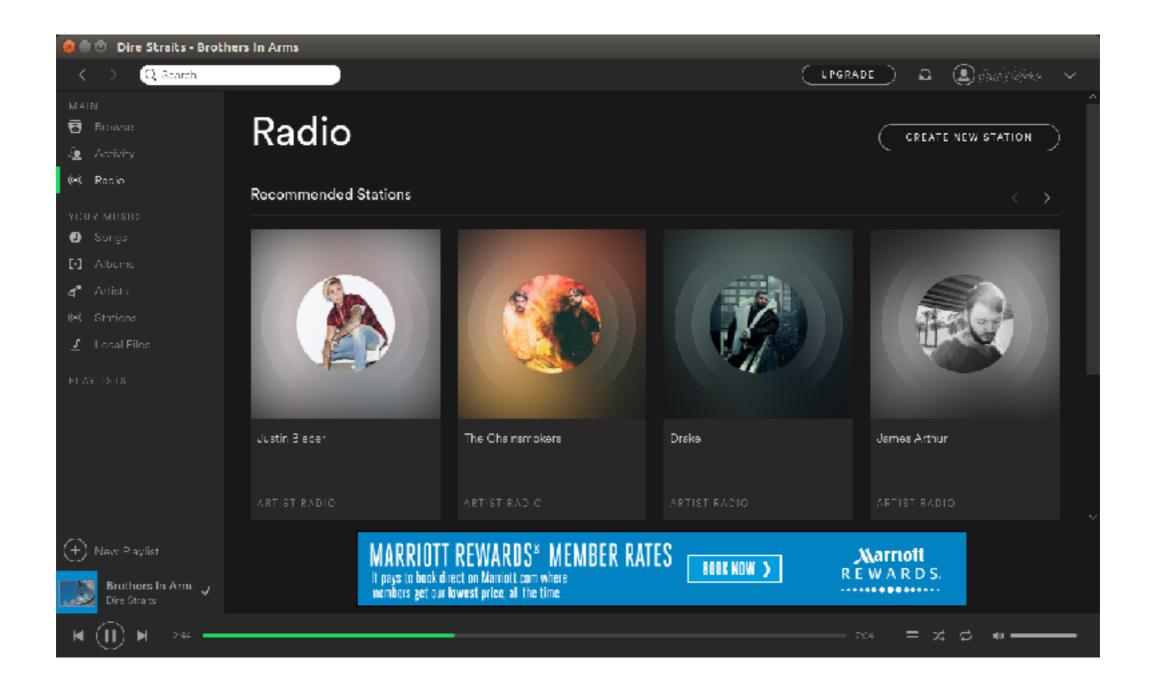
Researchers have, for example, investigated systems that handle recommendations, prices, news, commenting, search—while examining these for **individually and societally undesirable** consequences such as racism or fraud.

Digital methods have, for example, been used to analyse algorithmic biases that require systematic approaches. For example, platform audit research of hotel-rating platform Booking.com revealed an "algorithmic system bias" based on the confluence of inputs and users, resulting in good reviews for bad hotels (Eslami 2017).

Other researchers have **established fake user profiles** as inputs to algorithms as a form of audit. One example of this work employed **simulated users** in order to detect **gender bias** in online advertising (Datta 2015). Another have conducted experiments to analyze the Uber surge pricing algorithm by **emulating Uber accounts** (Chen et. al. 2015)—and yet another created multiple Airbnb accounts in order to identify **racial discrimination** against Black users (Edelman et. al. 2017)

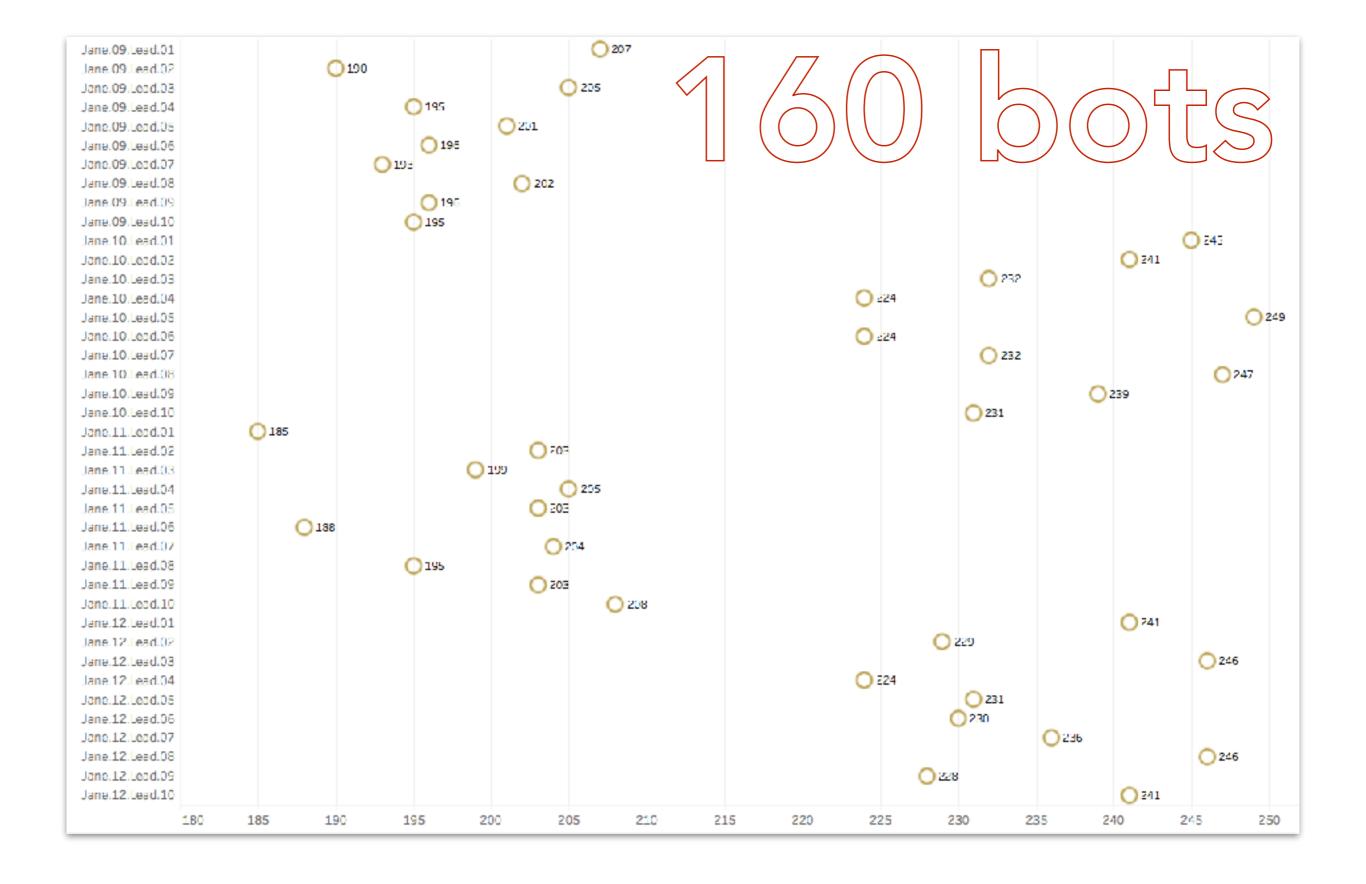
Spotify Radio

The experiment used bots as research informants and seeked to critically investigate the prospective lure of infinite archives via the radio functionality at Spotify.



Spotify Radio

For commercial reasons Spotify Radio claims to be both personalized and never-ending. Our hypothesis, however, was that Spotify Radio did not consist of an infinite series of songs. Rather music seemed to be delivered in limited loop patterns.



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Pet Shop Boys - Se A Vida é (That's Thurway Life Bland Off Permaning 1988/99 - Megamix 1995
                                                                                        Kim Wilde - You'll bever Be So Wrong Bonnie Tyler - All Meleed Is Love - Live
                                                                             Jennifer Rush - Ave Maria (Survivors Of A Different Kind) Alex Mattson: Forget You
                                                                                        Alex Mattsor Forget You
                                                                                                                                 Km Wilde - Wotch Gonna Do - B-Side
                                                                    Paul Young - Love Will Tear Use part - 2008 Re-Master Version
                                                                                                                                         Jennifer Ruse - Surrender
                                                                               Belinda Carlisle - Nobody Owns Me
                                                                                                                                      Belinda Carlisle We Can Change
                                                                    Tony Christie - I Did What I and Fer Maria - Single Version Stars Or 45 - Hooray For Hollawood - Original Single version
                                                                                                                                      Bonnie Tyler - Holding Out for a Hero
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                                                      Santa Esmeralda - The House of the Ruing Sun / Quasimodo Suite - Disco Mix Gloria Gaynor - New Can Say Goodbye
                                                                                                                                         Jennifer Rust Same Heat
                                                                            Phil Colins - You Be In Wy Heart
                                                                                                                                       Belinda Carisi - In Too Deep
                                                                           Belinda Carlisle - Circle in the Sand
                                                                                                                                       T'Pau - Friends Like These
                                                                            Tony Christie - Calypso And Rum
                                                                                                                                           MØ - Firel Song
                                                                                                                                 Simply Red - The Ghost Of Love
                                                                                     Stars O 45 - 45
                                                                                     IKEA - Kocka Härf Stars On 45 - The Greatest Rock'n Roll Band in The World - Original Single Version
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                                                                                                 IKEA - Kacka Halbonnie Tyler - Redel Without a Clue
                                                                                   Paul Young - What Becomes Of The BM er in San 999
                                                                                    Stars On 45 - The Beat
                                                                                                                                                                                        - 2001 Remastered Version
                                                                                                                                                                                                                                 KEA - Rácka Hár!
                                                                                                                                                                                                                     Stars On 45 - The Star Sisters - Megamix 1995
                                                              Stars On 45 - Volume & ($300)
                                                                            Bonnie Tyler
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                                                                                                                                                                                                                                   Belinda Carling - I Feel Free
                                                                                                                                                                                                                                Bryan Adams - DoWhat Ya Gotta Do
                                                                                                                                                                                                                                           IKEA - Kacka Här!
                                                                                                                                                                                                                                       Jennifer Rush Down To You
                                                                Eurythmics - There Must Be an Angel (FIX n) With MY
                                                                                                                                                                                                                            Stars On 45 - The Supremes - Original Album Track
                                                                              Bonrie Tyler - All Jeffed Is Love - Live
                                                                               Stap On 15 Solume 3 (Star Wars And Other Hits) - Drigifuel Russich Liversteine
                                                                                                                                                                                                                                           F.R. Dave - Words
                                                        Stars On 45 - The Beatles (Mrft 2) - Original Abum Track
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                                                                Jernifer Rust Stronghold
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                                                                                              Belinda Carlist - In Too Deep
                                TPau - Op The Wing
                                                                                 Paul Young - I Close My Eges and Count to Ten - Live
              Belinda Carlisle - Live You Life Be Free (Single Edit)
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                       Jennifer Rush Midnight Mirage
                   Bonnie Tyler - Refel Without a Clue
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                                                                                         ABBA - Honey, Honey
                     Paul Young - #O-V-E (Love)
                                                                                  Jennifer Rush & Come Undone
                Kim Wilde - Wotch Gonna Do - B-Side
                                                                                  Tom Jones Hit Or Miss
             Stars On 45 - The Star Sisters - Megamix 1995
                                                                          Belinda Carlisle - Nobody Owns Me
Santa Esmeralda - The House of the Ring Sun / Quasimodo Suite - Disco Mix
                                                                                MØ - Fjed Song
                                                                         T'Pau - Brine Of Spies
                             Jennifer Russ 25 5995 - The Greatest Rock'n Roll Band In The World - Original Single Version
                             Belinda Carlista - Vision of You Kim Wilde - Love & The Natural Way
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Spotify Radio

The logs the bots produced made it possible to empirically sustain claims of repetitiveness within Spotify Radio, and prove that artist iterance was quite striking. Music loops were definitively not endless. On the contrary, if a 'radio loop' started with "Dancing Queen", after some 50 tracks (or so) it was played again by the Spotify Radio algorithm(s).



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Spotify Teardown

Inside the Black Box of Streaming Music

By Maria Eriksson, Rasmus Fleischer, Anna Johansson, Pelle Snickars and Patrick Vonderau

An innovative investigation of the inner workings of Spotify that traces the transformation of audio files into streamed experience.

towards new forms of digital scholarship

During the last decade different forms of **digital scholarship** has emerged within the academy. Since distinct **digital scholarly practices and methods** have gradually become more common, digital scholarship has evolved into a rather miscellaneous field of knowledge.

This type of research is conducted by scholars in totally different academic disciplines and thus vary in scope—as **data science**, **digital humanities** or **computational social science**—but digital scholarship also shares some features.

Digital scholarship is, for example, often **embedded** in **digital methods** that depart from digital evidence in the form of data or datasets.

Since such data is often **scalable**, research often undergoes a fundamental change—or as Franco Moretti has stated: "when we work on 200,000 novels instead of 200, we are not doing the same thing ... The new scale changes our relationship to our object, and in fact it changes the object itself."

Digital scholarship can thus be defined as a scholarly activity that explicitly applies the new possibilities opened up by the **affordances of 'the digital'**, as for example new methods for analysing and visualising data.

Digital scholarship should take advantage of these new ways to examine data—if data can be obtained—but it should also be designated to critically examine sources in digital form.

