



UMEÅ UNIVERSITET

Interfaces & Forensics: On Visual Methods

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Umeå University

image analytics

image analytics

More Media, More People—On Social & Multimodal Media Intelligence

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The purpose of this article is to address contemporary challenges facing media intelligence in an altered information landscape. In order to understand the new situation, the article introduces the notion of *social and multimodal media intelligence*. With cases taken primarily from the Swedish media intelligence sector, we argue that data driven media intelligence today needs to pay increasing attention to new forms of (A.) crowd-oriented and (B.) multimedia-saturated information. Media intelligence usually refers to the gathering of publicly available information about an organisation or a company's competitors—using it to gain business advantages. Traditionally such intelligence has implied a set of techniques and tools that transforms numerical or textual data into useful information for business analysis. Today, however, we argue that such techniques need to consider *media alterations* in both a *social* and *multimodal* direction. By presenting some findings from the so called CIBAS-project (as a case study), we describe how Swedish organisations and companies rely on social networking structures and individual decision making as a means to increase response and agile creativity. Yet if media intelligence has witnessed a social transition during recent years, the analyses of other media modalities than text also pose a number of technical hurdles. In this article we use fashion analytics as another case in point, taken from a commercial sector where visual big data is presently in vogue.

image analytics

... if media intelligence has witnessed a social transition during recent years, the analyses of other media modalities than text also pose a number of technical hurdles. In this article we use **fashion analytics** as another case in point, taken from a commercial sector where visual big data is presently in vogue.

Fashion has always been about spotting trends and forecasting style—via **images**. Using computational and imagistic methods (based on comparing databases), **fashion forecasting activities** have today become 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.

image as data

[PRODUCT](#)[DATA](#)[CUSTOMERS](#)[BLOG](#)[GET A DEMO](#)[LOG IN](#)

More Data. With More Data Science Behind It.

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

585,440,652

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

<https://edited.com/data/>

culture as data



Customers
Company

Solutions
Showcase

Blog
Jobs

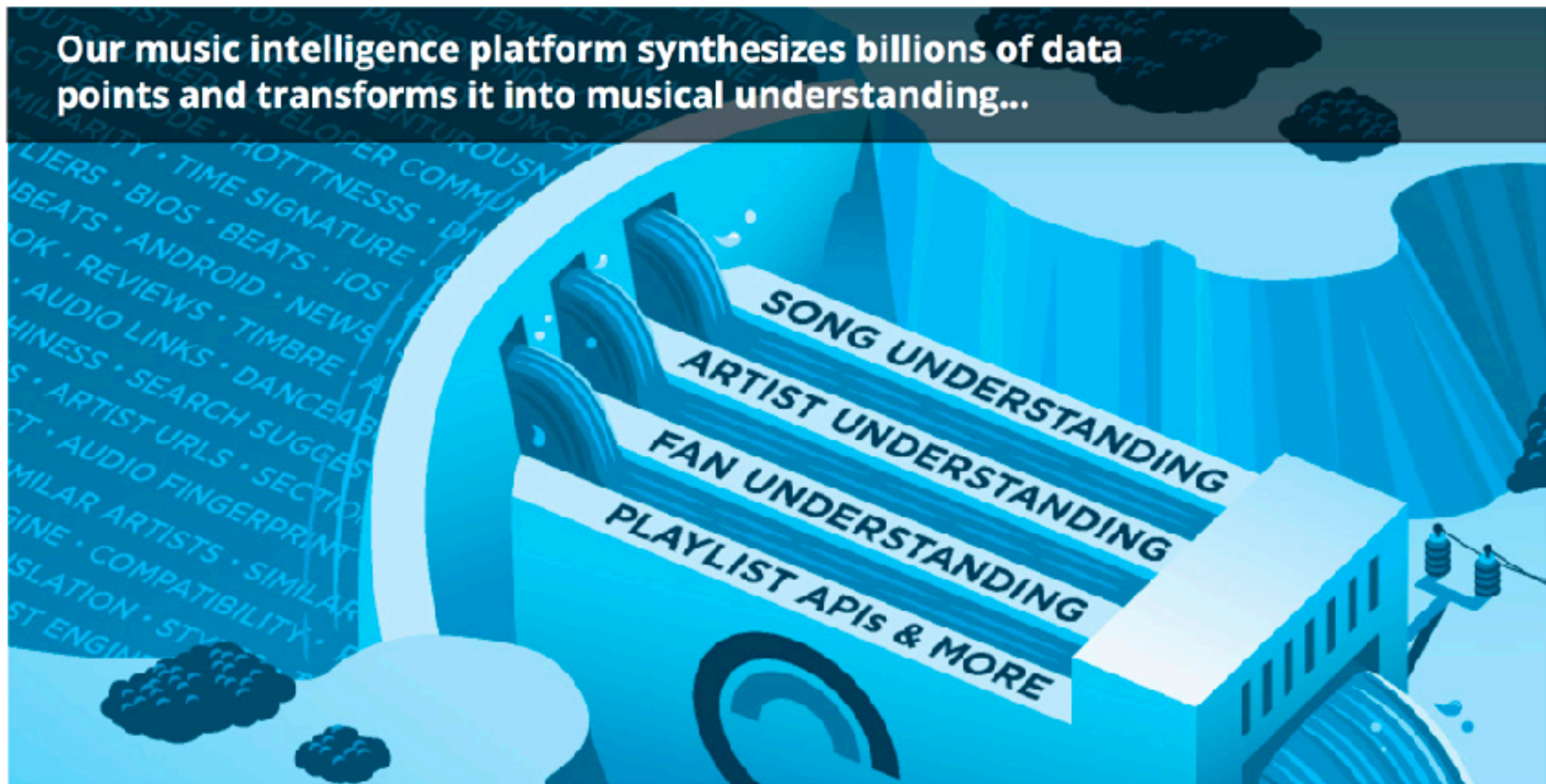
Developers
News

We Know Music...

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Our music intelligence platform synthesizes billions of data points and transforms it into musical understanding...



1,268,388,200,682

Data points about...

37,970,729

Known Songs

3,717,136

Known Artists

432

Music Applications On Our Platform

image analytics





<http://www.kb.se/Bilder/Aktuellt/publikationer/Bildarkivetstor.jpg>

lossy compression

<http://whatis.techtarget.com/definition/lossless-and-lossy-compression>

PUBLISHED IN:

Photography After Photography. Exhibition catalog.
Germany, 1995.

Lev Manovich

THE PARADOXES OF DIGITAL PHOTOGRAPHY

1. Digital Revolution?

Computerized design systems that flawlessly combine real photographed objects and objects synthesized by the computer. Satellites that can photograph the license plate of your car and read the time on your watch. "Smart" weapons that recognize and follow their targets in effortless pursuit -- the kind of new, post-modern, post-industrial dance to which we were all exposed during the televised Gulf war. New medical imaging technologies that map every organ and function of the body. On-line electronic libraries that enable any designer to acquire not only millions of photographs digitally stored but also dozens of styles which can be automatically applied by a computer to any image.

All of these and many other recently emerged technologies of image-making, image manipulation, and vision depend on digital computers. All of them, as a whole, allow photographs to perform new, unprecedented, and still poorly understood functions. All of them radically change what a photograph is.

Indeed, digital photographs function in a entirely different way from traditional -- lens and film based -- photographs. For instance, images are obtained and displayed by sequential scanning; they exist as mathematical data which can be displayed in a variety of modes -- sacrificing color, spatial or temporal resolution. Image processing techniques make us realize that any photograph contains more information than can be seen with the human eye. Techniques of 3D computer graphics make possible the synthesis of photo realistic images -- yet, this realism is always partial, since these techniques do not permit the synthesis of any arbitrary scene.[1]

Digital photographs function in an entirely different way from traditional photographs. Or do they? Shall we accept that digital imaging represents a radical rupture with photography? Is an image, mediated by computer and electronic technology, radically different from an image obtained through a photographic lens and embodied in film? If we describe film-based images using such categories as depth of field, zoom, a shot or montage, what categories should be used to describe digital images? Shall the phenomenon of digital imaging force us to rethink such fundamental concepts as realism or representation?

In this essay I will refrain from taking an extreme position of either fully accepting or fully denying the idea of a digital imaging revolution. Rather, I will present the logic of the digital image as paradoxical; radically breaking with older modes of visual representation while at the same time reinforcing these modes. I will demonstrate this paradoxical logic by examining two questions: alleged physical differences between digital and film-based representation of photographs and the notion of realism in computer generated synthetic photography.

The logic of the digital photograph is one of historical continuity and discontinuity. The digital image tears apart the net of semiotic codes, modes of display, and patterns of spectatorship in modern visual culture -- and, at the same

The first alleged difference concerns the relationship between the original and the copy in analog and in digital cultures. Mitchell writes: "The continuous spatial and tonal variation of analog pictures is not exactly replicable, so such images cannot be transmitted or copied without degradation... But discrete states can be replicated precisely, so a digital image that is a thousand generations away from the original is indistinguishable in quality from any one of its progenitors." Therefore, in digital visual culture, "an image file can be copied endlessly, and the copy is distinguishable from the original by its date since there is no loss of quality."

This is all true – in principle. However, in reality, there is actually much more degradation and loss of information between copies of digital images than between copies of traditional photographs. A single digital image consists of millions of pixels. ... Because of this, the current software and hardware used to acquire, store, manipulate, and transmit digital images uniformly rely on lossy compression – the technique of making image files smaller by deleting some information. The technique involves a compromise between image quality and file size – the smaller the size of a compressed file, the more visible are the visual artifacts introduced in deleting information.

At any rate, each time a compressed file is saved, more information is lost, leading to more degradation.

computer exercise 1.

lossy compression

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MT .SYS 12P 20-11-83 VM .SYS 3P 13-Aug-86
DL .SYS 4P 20-Dec-85 DL .SYS 5P 13-Aug-86
SP .SYS 6P 13-Aug-86 DU .SYS 8P 13-Aug-86
RT11SJ.SYS 78P 13-Aug-86 TT .SYS 2P 13-Aug-86
NL .SYS 2P 13-Aug-86 M.02DG.SYS 71P 21-Nov-84
SD .SYS 5P 31-May-85 UNCON.SAV 24 20-Dec-85
DATE.H.SAV 4 20-Dec-85 47 20-Dec-85
DUMP .SAV 9 20-Dec-85 FORTRA.SAV 206 21-May-85
TSXMOD.SAV 78 27-Nov-82 LET .SAV 5 20-Dec-85
HARRIS.SAV 41 12-Jun-85 RETRO .OBJ 1519P 16-May-88
START .P36 2 21-Dec-81 TSXUCL.TSX 22 07-Mar-82
EM1A .STM 19P 02-Feb-83 TSXV6 .MSG 1P 04-Sep-85
STAND .LIN 12P 15-Aug-83 JKFLIP.SAV 30 08-Mar-86
EM1B .STM 19 11-Feb-83 RT11FB.SYS 93P 20-Dec-85
JKFLIP.FOR 3 08-Mar-86 TSXP23.NEW 1200P 27-Nov-82
ANNOI .SAV 38 18-Apr-83 NL .DIR 7 16-Jul-86
DUO .DIR 18 16-Jul-86 DEMOFC.OBJ 1 -BAD-
DIR .DIF 26 16-Jul-86 EVAN .ID 1
DEMOFC.OBJ 1 -BAD-
114 Files, 5949 Blocks
14433 Free blocks
.01
```

BC-BS 20788
digital VT100

Hito Steyerl

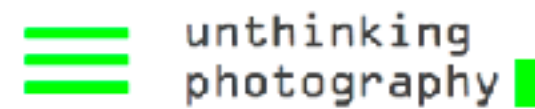
In Defense of the Poor Image

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/>

... indeed plenty of theoretical speculations around the status of the digital image.

<https://unthinking.photography/>



Unthinking Photography is a new online resource from [The Photographers' Gallery](#) digital programme that explores, maps and responds to photography's increasingly automated, networked life.

READ MORE

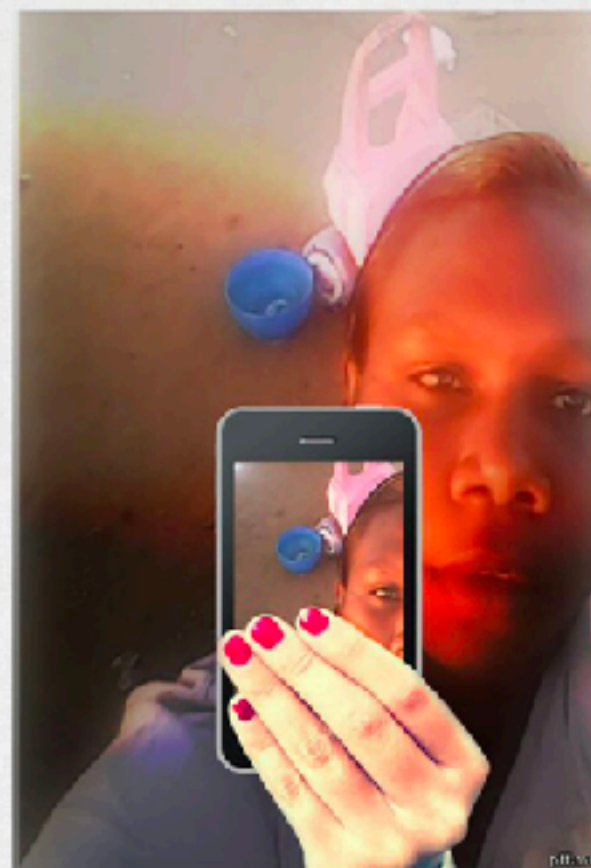
THE PROBLEM, THE SOLUTION, THE PAST AND THE FUTURE

The politics of image
search - A
conversation with
Sebastian Schmieg
[Part I]

Nicolas Malevé

May 2017

Nicolas Malevé interviews the artist
Sebastian Schmieg on image
annotation, immaterial labour and his
TDC commission 'Decision Screen'



Manifest Destiny in
the Digital Age



Domestic (in)security

Nye Thompson

May 2017

These (in)security cameras are all
around us. In our streets, shops,
buses, restaurants, homes. They are
looking, listening and recording. Their
omnipresent gaze pierces, protects us,
keeps us safe. Through them we are
delivered from unknown evils, from



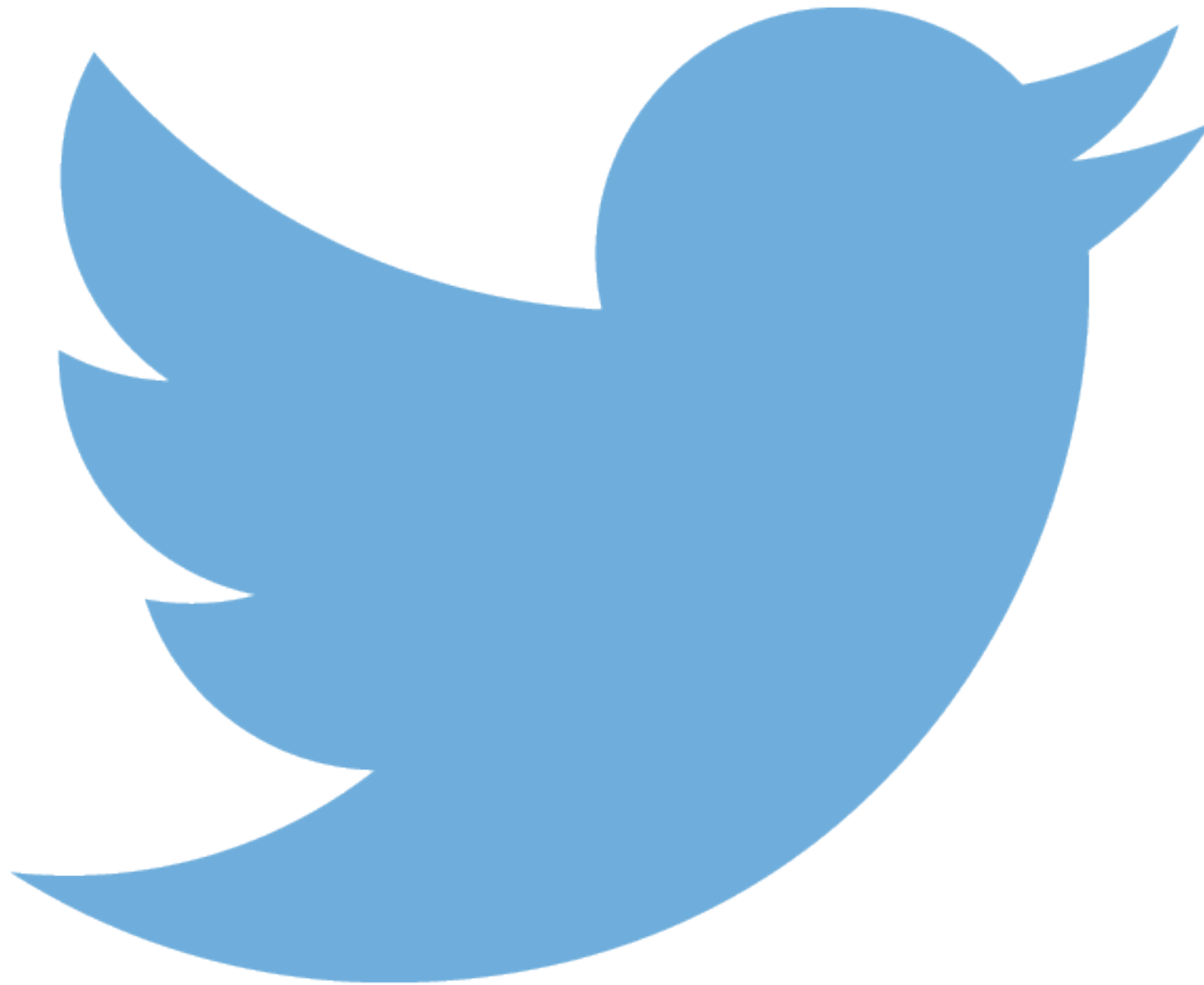
Nyktopolitics

EFTD

May 2017

When does the human need to leave
the image? And what takes his/her
place? How can one attempt to image
a life severed by representation, and
who has the ethical right to attempt

**citing, using, publishing 'poor images'
scholarly sources ...**

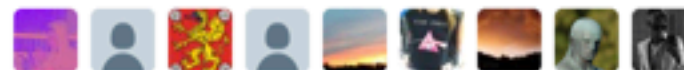


#backaspotify



RETWEETS
41

LIKES
46



11:20 AM - 12 Apr 2016

#backaspotify

@StihlChamber



#backspotify

internet memes?



Tiny Trump @TinyTrump_ · 17 feb.

What if we got so many followers @realDonaldTrump would see our daily #TinyTrump Tweets? Let's make it happen. #Retweet & spread the word!

pic.twitter.com/Bk0pBqEmIQ



58



70

screen shots as 'poor images'



ALBUM

Election Music

By Heinz Duthel

2014 • 13 songs, 11 min

[PLAY](#) [SAVE](#) [...](#)

#	TITLE		
1	+ Riket	0:46	
2	+ Biskopsgården N	1:10	
3	+ Täby	0:44	
4	+ Spökparken	0:46	
5	+ Rinkeby	1:12	
6	+ Hörken	0:50	
7	+ Knäred	0:48	
8	+ Mullsjö	0:44	

digital transfers I



UNCREATIVE WRITING

Uncreative Writing

Kenneth Goldsmith

"You can easily create these textual ruptures on your computer. Take any MP3 file—we'll use the prelude from Bach's "Cello Suite No. 1"—and change the filename extension from .mp3 to .txt. Open the document in a text editor, you'll see gobs of nonsensical alphanumeric code/language. Now, take any text—let's say for the sake of consistency, we take Bach's whole Wikipedia entry—and paste it into the middle of that code. Then save it and rename the file with the .mp3 extension. If you double click it and open it your MP3 player, it'll play the file as usual, but when it hits the Wikipedia text, it coughs, glitches, and spits for the duration of time it takes for the player to decode that bit of language before going back to the prelude. With these sorts of manipulations, we find ourselves in new territory: While many types of analog mashups were created in the predigital age—such as the cutting up and gluing together of two separate LP halves or splicing magnetic tapes into collages—there was no language acting upon other language to form such ruptures. With digital media, we're squarely in the world of textual manipulation,"



Figure 1.2. Inserting Shakespeare's 93d sonnet three times into the source code of an image.

When we reopen it as an image, the effect that language had upon the image is clear:



Figure 1.3. The Droeshout Engraving before.



Figure 1.4. The Droeshout Engraving, after inserting text.

What we're experiencing for the first time is the ability of language to alter all media, be it images, video, music, or text, something that represents a break with tradition and charts the path for new uses of language. Words are active and affective in concrete ways. You could say that this isn't writing, and, in the traditional sense, you'd be right. But this is where things get interesting: we aren't ham-

computer exercise 2.

copy & paste

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MT .SYS 12P 20-11-83 VM .SYS 3P 13-Aug-86
L .SYS 4P 20-Dec-85 DL .SYS 5P 13-Aug-86
SP .SYS 6P 13-Aug-86 DU .SYS 8P 13-Aug-86
RT11SJ.SYS 78P 13-Aug-86 TT .SYS 2P 13-Aug-86
NL .SYS 2P 13-Aug-86 RL02DG.SYS 71P 21-Nov-84
SD .SYS 5P 31-May-85 BINCOM.SAV 24 20-Dec-85
BASIC.SYS 24 20-Dec-85 DIR .SAV 19 20-Dec-85
DUP .SAV 9 20-Dec-85 DUP .SAV 47 20-Dec-85
DUP .SAV 9 20-Dec-85 FORTRA.SAV 206 21-May-85
TSXMOD.SAV 78 27-Nov-82 LET .SAV 5 20-Dec-85
HARRIS.SAV 41 12-Jun-85 RETRO .OBJ 1519P 16-May-88
START .P36 2 21-Dec-81 TSXUCL.TSX 22 07-Mar-82
EM1A .STM 19P 02-Feb-83 TSXV6 .MSG 1P 04-Sep-85
STAND .LIN 12P 15-Aug-83 JKFLIP.SAV 30 08-Mar-86
EM1B .STM 19 11-Feb-83 RT11FB.SYS 93P 20-Dec-85
JKFLIP.FOR 3 08-Mar-86 TSXP23.NEW 1200P 27-Nov-82
ANNO .SAV 38 18-Apr-83 NL .DIR 7 16-Jul-86
DUO .DIR 18 16-Jul-86 DEMOFC.OBJ 1 -BAD-
DIR .DIF 26 16-Jul-86 EVAN .ID 1
DEMOFC.OBJ 1 -BAD-
114 Files, 5949 Blocks
14433 Free blocks
.01
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digital VT100

24

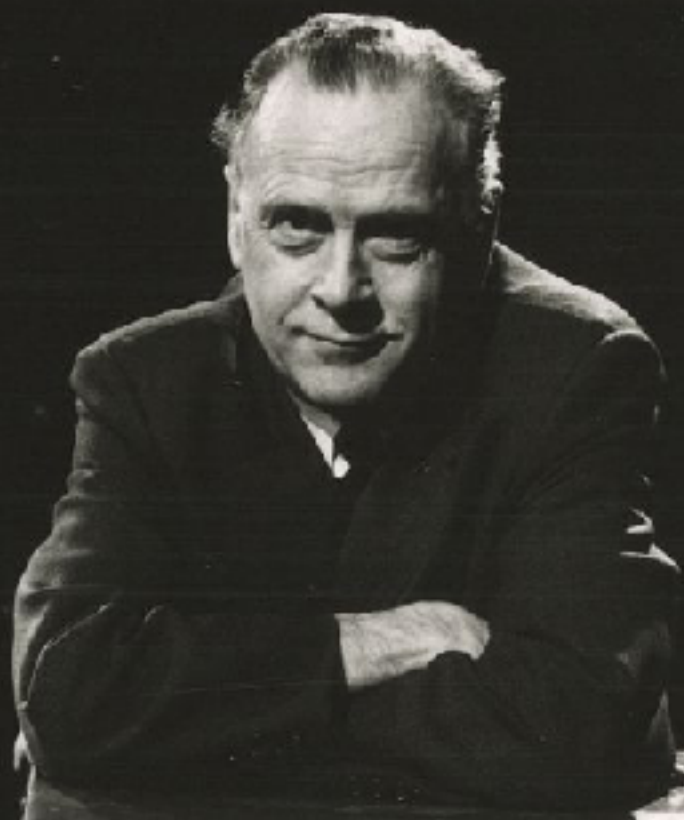
H

J

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24

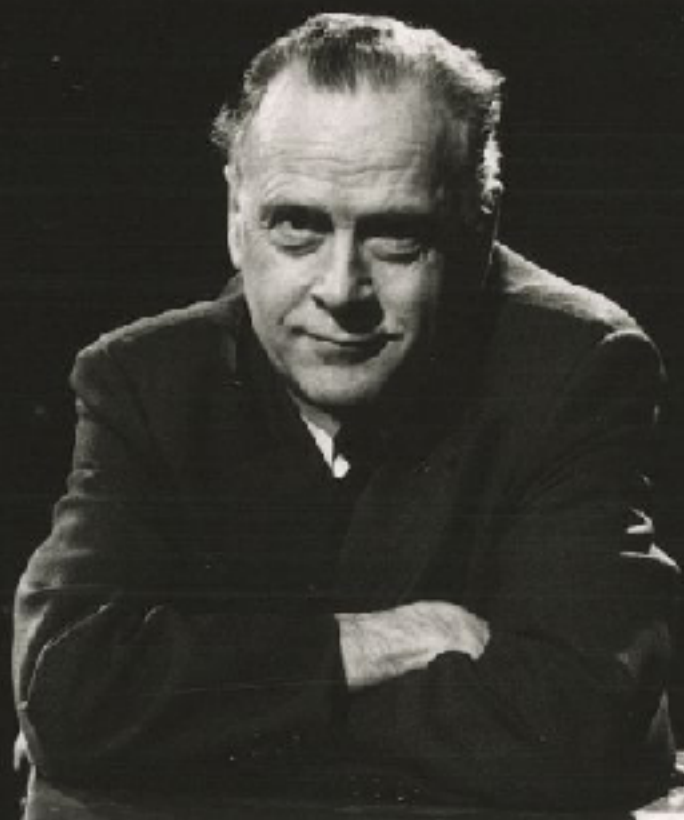
H

J

J

W

2



google image search: "marshall mcluhan"

https://en.wikipedia.org/wiki/Marshall_McLuhan

digital transfers II





ANNA DAHLGREN & PELLE SNICKARS [RED.]

I BILDARKIVET

OM FOTOGRAFI OCH
DIGITALISERINGENS EFFEKTER

MEDIHISTORIK  ARKIV 11



Blogg / [Böcker](#) / Redaktionsråd
/ Om bokserien / Manus /
Kontakt / English

Om bokserien

Mediehistoriskt arkiv publicerar forskare från hela Sverige och rymmer antologier, monografier – inklusive avhandlingar – och källsamlingar. Serien ges ut av ämnet mediehistoria vid Institutionen för kommunikation och medier vid Lunds universitet. Alla böcker är CC-licensierade – erkännande, icke-kommersiell, inga bearbetningar 3.0. Vi ser gärna att böckerna sprids och används så mycket som möjligt. Fysiska böcker kan köpas i nätbokhandeln.



MEDIEHISTORISKT ARKIV 36

Drömmar om det minsta. Mikrofilm, överflöd och brist 1900-1970

Matts Lindström, 2017

Boken, *Drömmar om det minsta. Mikrofilm, överflöd och brist 1900-1970*, berättar om mikrofilmens plats i 1900-talets mediehistoria. Studien följer mediets konfiguration från det förra sekelskiftets informationsutopiska drömmar till åren kring 1970 då datorn trädde in i samhället. Den visar hur mikrofilm återkommande upplevdes som ett nytt medium som omstöpte villkoren för samhällets cirkulation och utbyte av... [Läs mer](#)



MEDIEHISTORISKT ARKIV 35

Celebritetsskapande från Strindberg till Asllani

Torbjörn Forslid, Patrik Lundell, Anders Ohlsson & Tobias Olsson (red.), 2017

"Damerna gå i Jenny Lind-lockar, herrarna röka Jenny Lind-sigarren." På 1840-talet anklagades medieföretag och entreprenörer för att ligga bakom hysterin kring den svenska sångerskan. Och publiken uppmanades att sansa sig. Präglar kändisarna våra liv och institutioner mer idag än tidigare i historien? Lever vi i den accelererande medialiseringens tidevarv? Den här boken granskar hur celebriteter... [Läs mer](#)

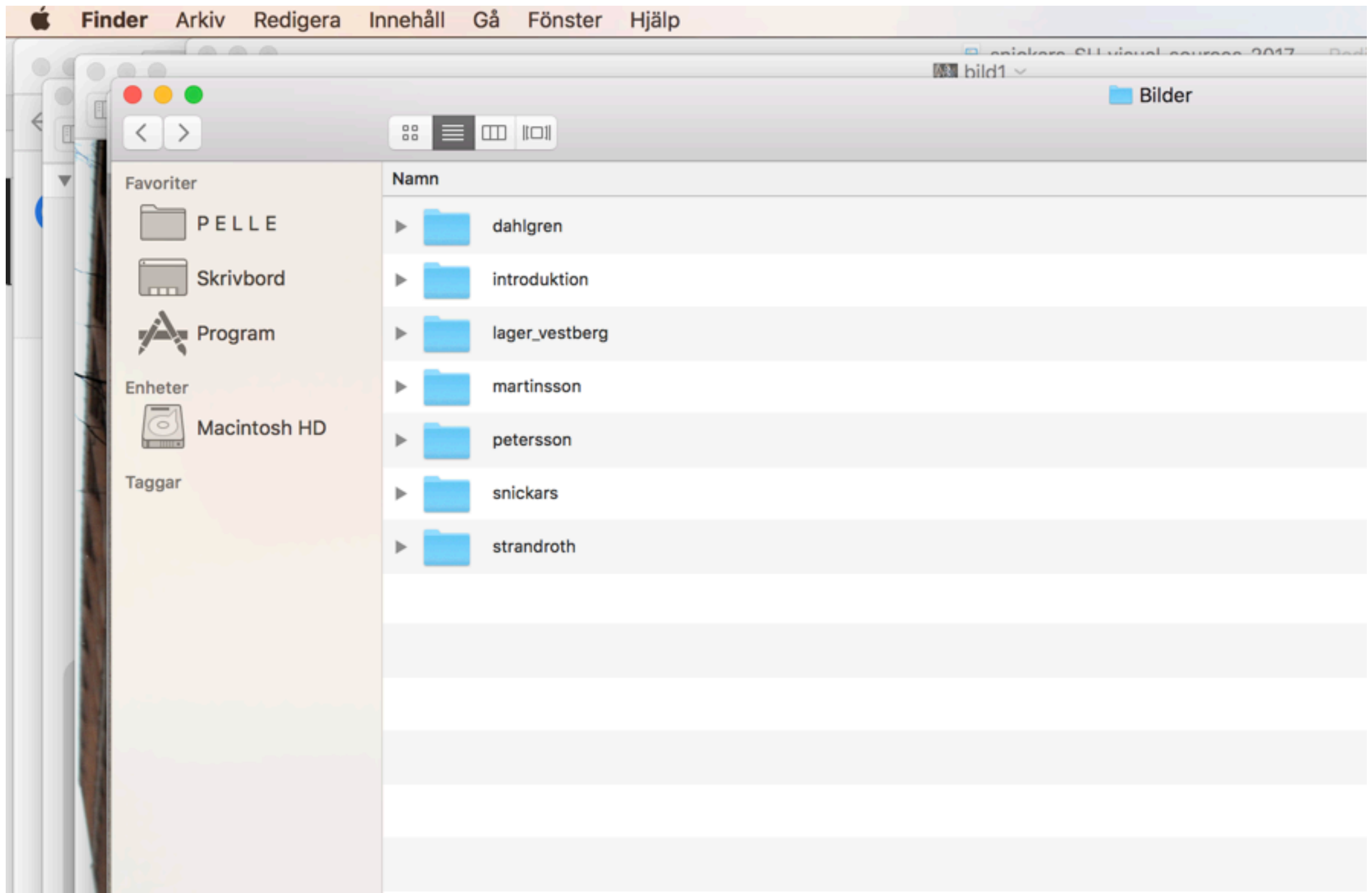


MEDIEHISTORISKT ARKIV 34

Pappersarbete. Formandet av och föreställningar om kontorspapper som medium

Charlie Järpwall, 2016

Pappersarbete. Formandet av och föreställningar om kontorspapper som medium är en mediehistorisk avhandling om kontorspapper. Samtidigt är det en bok om maskinskrivningens hastighet, drömmen om ordning och om arbetet med att få allting att passa ihop. *Pappersarbete* handlar om hur kontorspapperet i Sverige omformades genom en rad standarder årtiondena före mitten av förra seklet. Boken handlar också om de idéer som knöts till papperet som medieform, om hur A4-formatet skulle skapa ordning och reda... [Läs mer](#)





constant photoshoping



strict archival regulations





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SALLE DES FÊTES, Avenue de la République (SQUARE)

Samedi 24, Dimanche 25 et Lundi 26 Juin à 8 h. 1/2, SOIRÉE

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CINEMATOGAPHE "PATHÉ"

Grand Prix — PARIS 1900

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PROGRAMME DES 24 & 26 JUIN

RAMONEUR & PATISSIER

L'épopée Napoléonienne

Dispute de Joueurs

Chasse au Sanglier

LE NÈGRE GOURMAND

Nuit Epouvantable

GUERRE RUSSO-JAPONAISE

Au large — Attaque d'un Village

MARIE - ANTOINETTE

Les Devaliseurs nocturnes

Le premier Cigare du Collégien

Le Singe "August"

Drame dans les Airs

Indiens et Cow-Boys

Coup d'œil par étage

EN COULEURS

LA FÉE AUX FLEURS

La Ruche merveilleuse

LE RÊVE A LA LUNE

(Dernière création)

PROGRAMME DU 25 JUIN

Le Mitron

Barcelone au Crépuscule

COURSE DE TAUREAUX

Fumeurtrop petit, Paravent Mystérieux

Guerre Russo-Japonaise

Combats sur le Yalou — Combat naval devant

Port-Arthur

La Statue et l'ivrogne

Roman d'Amour

L'AMOUREUX ENSORCELE

Les Dénicheurs d'Oiseaux

ALPHONSE XIII A BARCELONE — (SON ARRIVÉE A PARIS)

La Purgé

Baignade impossible

Fée Printemps

LA VALISE DE BARNUM

LA GRÈVE

L'Anc Lutteur

Statuettes vivantes

Les Cambricoleurs modernes

La Fée aux Fleurs, La Ruche Merveilleuse

Le Rêve à la Lune

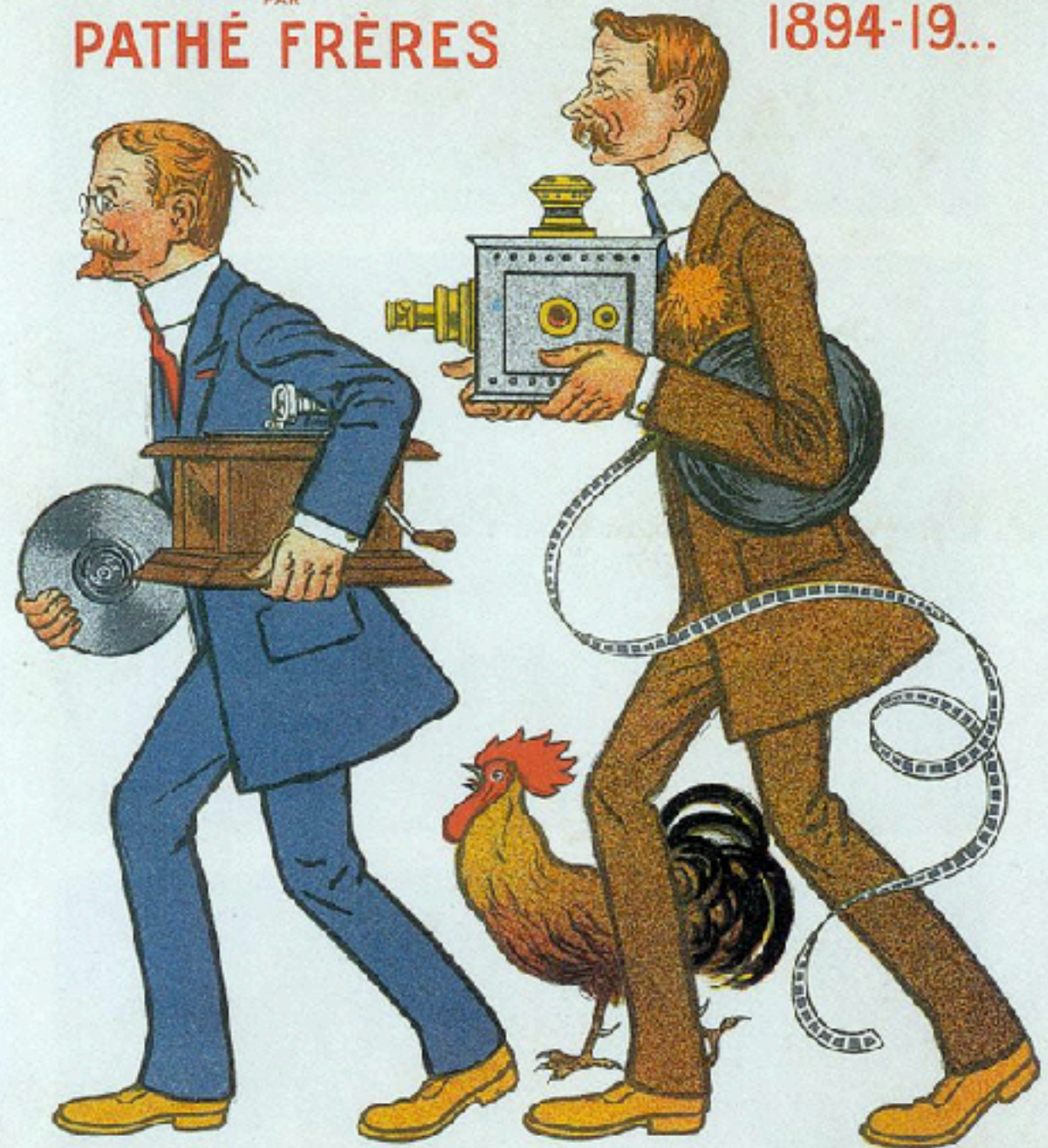
A LA CONQUÊTE DU MONDE

scène vécue

PAR

PATHÉ FRÈRES

1894-19...



indexicality

BURGER KING WHOPPER

ADVERTISEMENTS



ACTUAL WHOPPER

- ROTATED TO MOST ATTRACTIVE ANGLE
- WITH CHEESE
- SLIGHTLY FLUFFED UP, FOR PICTURE



“picture and reality”



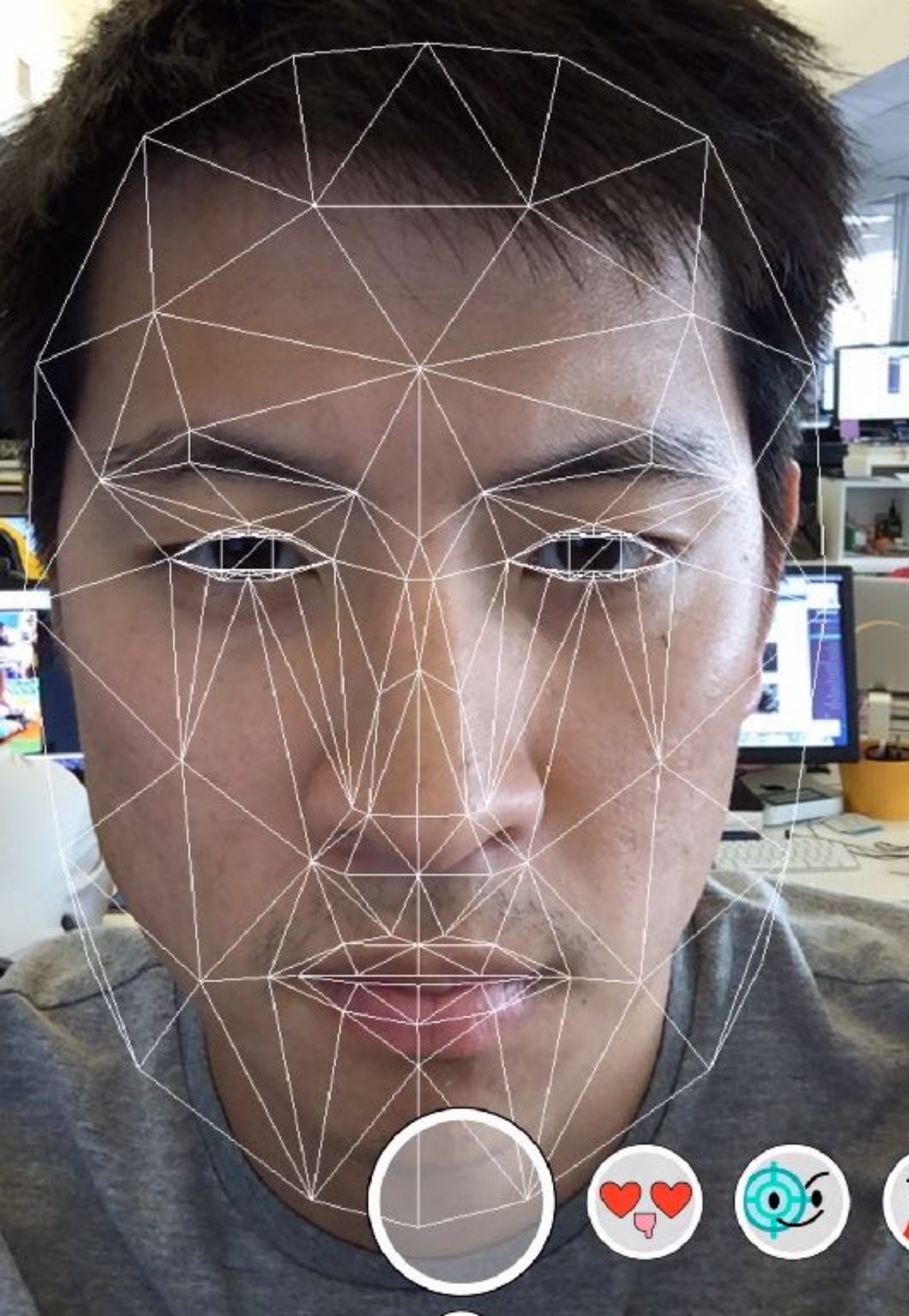
photo retouch

Hito Steyerl

In Defense of the Poor Image

The poor image is no longer about the real thing—the originary original. Instead, it is about its own real conditions of existence: about swarm circulation, digital dispersion, fractured and flexible temporalities.







How Snapchat's filters work



Vox

Prenumerera 2,2 mn

1 766 510 visningar

Lägg till i Dela Mer

22 345 654

<https://www.youtube.com/watch?v=Pc2aJxnmzh0>



computer exercise 3.

snapchat filter

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MT .SYS 12P 20-11-83 VM .SYS 3P 13-Aug-86
DL .SYS 4P 20-Dec-85 DL .SYS 5P 13-Aug-86
SP .SYS 6P 13-Aug-86 DU .SYS 8P 13-Aug-86
RT11SJ.SYS 78P 13-Aug-86 TT .SYS 2P 13-Aug-86
NL .SYS 2P 13-Aug-86 RL02DG.SYS 71P 21-Nov-84
SP .SYS 5P 13-Aug-86 BINCOM.SAV 24 20-Dec-85
DIR .SAV 19 20-Dec-85
DUP .SAV 47 20-Dec-85
DIR .SAV 206 21-May-85
FOTRA.SAV 5 20-Dec-85
LET .SAV 1519P 16-May-88
RETRD .OBJ 22 07-Mar-82
TSXUCL.TSX 1P 04-Sep-85
TSXV6 .MSG 30 08-Mar-86
JKFLIP.SAV 93P 20-Dec-85
RT11FB.SYS 1200P 27-Nov-82
TSXP23.NEW 7 16-Jul-86
ML .DIR 1 -BAD-
MEMOFC.OBJ 1
EVAN .ID 1
114 Files, 5949 Blocks
14433 Free blocks
.OH
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BC-BS 20788
digital VT100



Med utgångspunkt i Tekniska museets samlingar utforskar vi den digitala teknikens möjligheter att omgestalta industrialiseringens berättelser om samhälle, människor och miljöer.



Modell 1: Sahlins arkiv

Vår bild av industrialismen är fast cementerad i berättelser om framsteg, materiell utveckling och manliga bedrifter. Hur kan digital teknik hjälpa till att finna nya ingångar till befintliga samlingar, samt att nyansera och problematisera bilden av industrialismen?



Modell 2: Dædalus

Dædalus är en årsbok som alltsedan 1931 har publicerats av Tekniska museet. Projektmodell 2 handlar om att massdigitalisera denna tidskrift och studera dess totala textmängder i jakt efter lingvistiska och teknik-, miljö-, medie- och genushistoriskt signifikanta mönster.



Modell 3: Polhems alfabet

Kan man utvinna ny historisk kunskap ur Christopher Polhems mekaniska alfabet som digital modell – och samtidigt använda artefakterna för pedagogiska ändamål som svarar mot samtidens behov?



Theorizing Digital Cultural Heritage

A Critical Discourse

edited by Fiona Cameron and Sarah Kenderdine

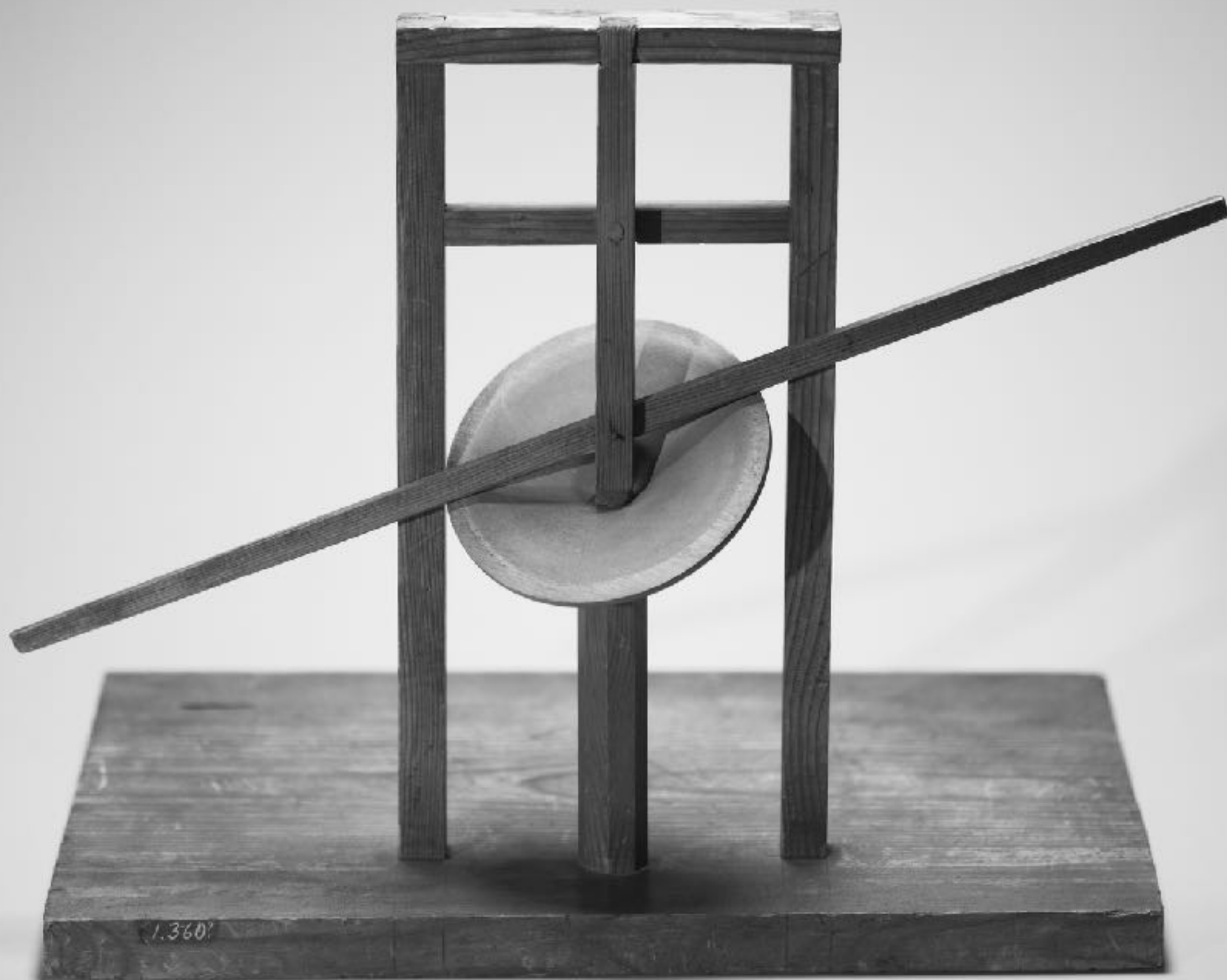


Traditionally, museum culture have underscored the difference in classification between originals and reproductions—with digitisation *by nature* belonging to the latter.

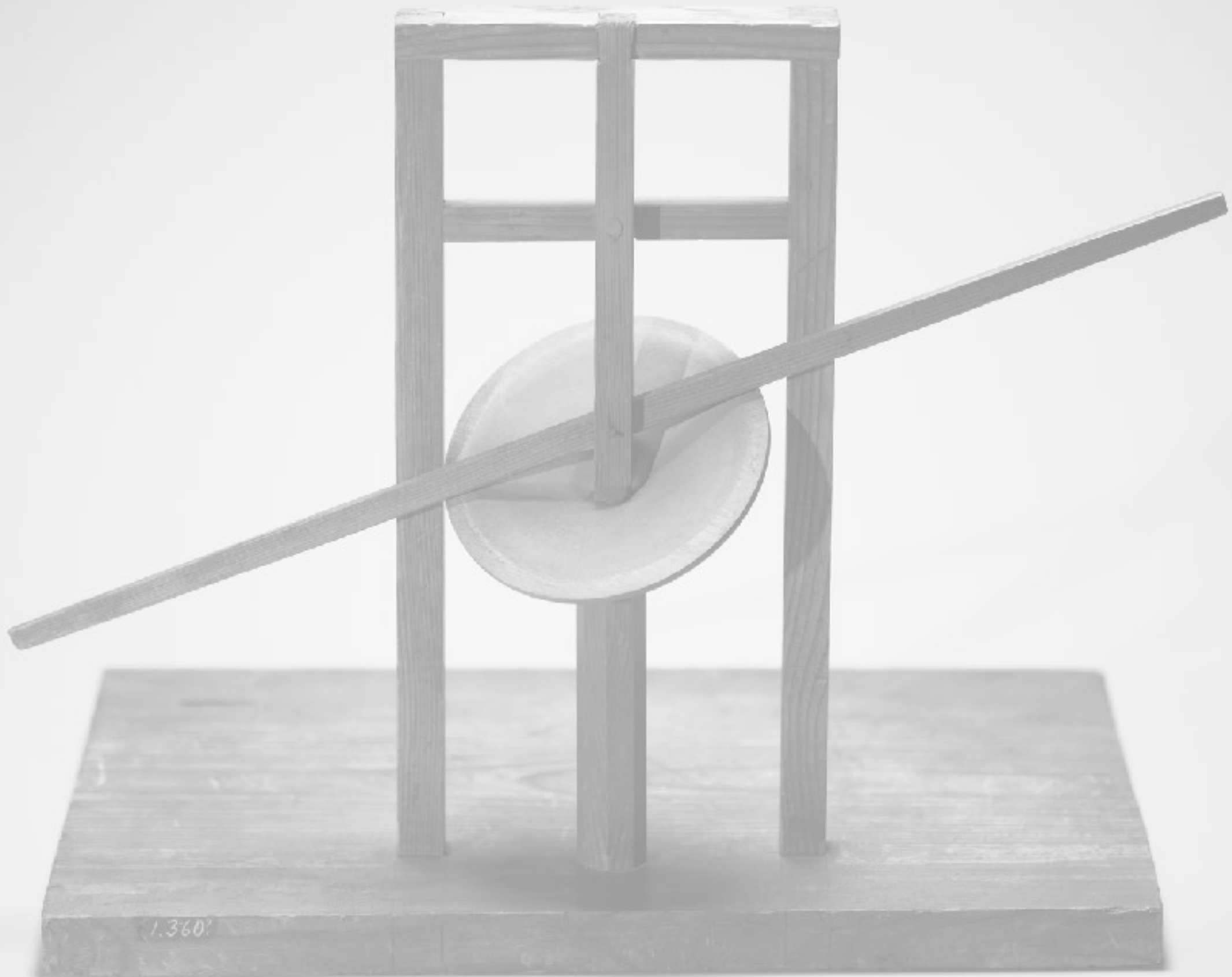
If, as Fiona Cameron once argued, museum culture is perceived as series of practices for defining “object value and meaning”, and particularly so regarding the concepts of “material authenticity, originality, and aura”, then digitisation is (and has always) been a threat—the digital object as a “terrorist”, as Cameron alluringly put it.

Such an “apocalyptic view of the material/immaterial relationship” was according the her (writing some ten years ago) based on the fear “that as 3D simulations become more convincing, surrogates will merge in ‘form’ ... with the physical object, and viewers will be unable to perceptually distinguish the replica from the real. Collections could then become obsolete, thus undermining museum culture and practice.”





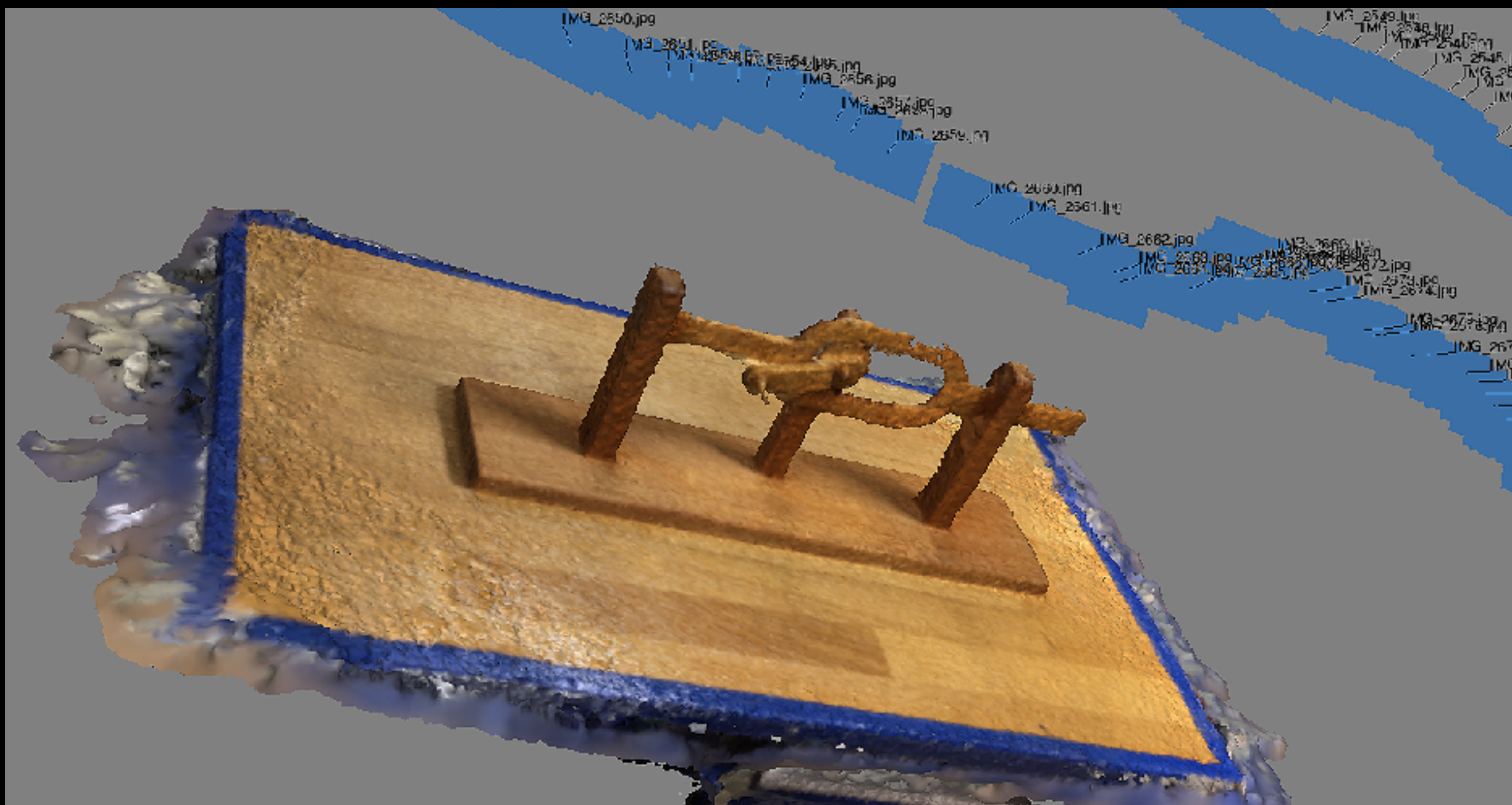
authentic & auratic visual reproductions?



Senaste import

150 bilder





[polhem_modell.psz](#)

polhem

3D models tagged polhem

POPULAR POLHEM MODELS

View all >



121 7 10



Christopher Polhem, ...
by Tekniskamuseet



26 6 5



Christopher Polhem ...
by Fredrik Olsson



14 3



Christopher Polhem ...
by Fredrik Olsson



31 3 1



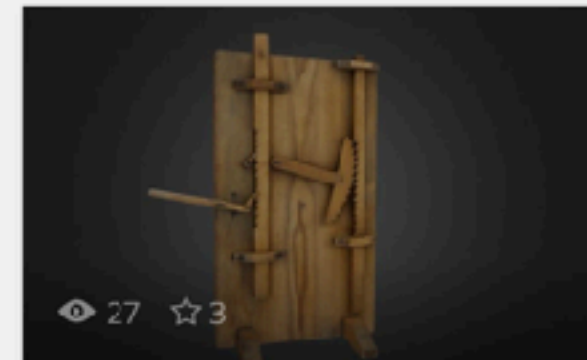
Christopher Polhem, ...
by Tekniskamuseet



67 3 5



Christopher Polhem, ...
by Tekniskamuseet



27 3



Christopher Polhem, ...
by Tekniskamuseet

<https://sketchfab.com/tags/polhem>

Within the contemporary heritage domain one might argue that the relation between *data and object* is currently being negotiated ... At least the claim can be made as far as 3D visualisations are deployed and explored. One of the major concerns, however, regarding 3D within the heritage sector, is that without knowledge of the three dimensional scanning and/or modeling process, and not knowing enough about the process of building both the 3D visualisation and its interpretation, the public's only choice is to trust the authority of the cultural institution.

Authority and material authenticity are trademarks of the heritage domain. Yet, as this book chapter has shown, 3D visualisations will *always* cater (in one way or the other) to interpretation of museological objects selected for representation—even if institutions are totally explicit and open about their digital practises.

Images as massive cultural data sets

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SLMIN .SYS 12P 20-Dec-85  VM .SYS 3P 13-Aug-86
XL .SYS 4P 20-Dec-85  LD .SYS 8P 23-Aug-86
SP .SYS 6P 13-Aug-86  DL .SYS 5P 13-Aug-86
RT11SJ.SYS 78P 13-Aug-86  DU .SYS 8P 13-Aug-86
NL .SYS 2P 13-Aug-86  TT .SYS 2P 13-Aug-86
SO .SYS 5P 31-May-85  RL02DG.SYS 71P 21-Nov-84
BASIC .SAV 56 24-May-79  BINCOM.SAV 24 20-Dec-85
DATEIME.SAV 4 20-Dec-85  DIR .SAV 19 20-Dec-85
DUMP .SAV 9 20-Dec-85  DUP .SAV 47 20-Dec-85
TSXMOD.SAV 78 27-Nov-82  FORTRA.SAV 206 21-May-85
HARRIS.SAV 41 12-Jun-85  LET .SAV 5 20-Dec-85
START .P36 2 21-Dec-81  RETRO .OBJ 1519P 16-May-88
EM1A .STM 19P 02-Feb-83  TSXUCL.TSX 22 07-Mar-82
STAND .LIN 12P 15-Aug-83  TSXV6 .MSG 1P 04-Sep-85
EM1B .STM 19 11-Feb-83  JKFLIP.SAV 30 08-Mar-86
JKFLIP.FOR 3 08-Mar-86  RT11FB.SYS 93P 20-Dec-85
ANMOT .SAV 38 18-Apr-83  TSXP23.NEW 1200P 27-Nov-82
DUO .DIR 18 16-Jul-86  NL .DIR 7 16-Jul-86
DIR .DIF 26 16-Jul-86  DEMOFC.OBJ 1 -BAD-
DEMOFC.OBJ 1 -BAD-  EVAN .ID 1

114 Files, 5949 Blocks
14433 Free blocks

.08
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SLMIN .SYS	12P	20-Dec-85	VM .SYS	3P	13-Aug-86
XL .SYS	4P	20-Dec-85	LD .SYS	8P	23-Aug-86
SP .SYS	6P	13-Aug-86	DL .SYS	5P	13-Aug-86
RT11SJ.SYS	78P	13-Aug-86	DU .SYS	8P	13-Aug-86
NL .SYS	2P	13-Aug-86	TT .SYS	2P	13-Aug-86
SO .SYS	5P	31-May-85	RL02DG.SYS	71P	21-Nov-84
BASIC .SAV	56	24-May-79	BINCOM.SAV	24	20-Dec-85
DATIME.SAV	4	20-Dec-85	DIR .SAV	19	20-Dec-85
DUMP .SAV	9	20-Dec-85	DUP .SAV	47	20-Dec-85
TSXMOD.SAV	78	27-Nov-82	FORTRA.SAV	206	21-May-85
HARRIS.SAV	41	12-Jun-85	LET .SAV	5	20-Dec-85
START .P36	2	21-Dec-81	RETRD .OBJ	1519P	16-May-88
EM1A .STM	19P	02-Feb-93	TSXUCL.TSX	22	07-Mar-82
STAND .LIN	12P	15-Aug-83	TSXV6 .MSG	1P	04-Sep-85
EM1B .STM	19	11-Feb-93	JKFLIP.SAV	30	08-Mar-96
JKFLIP.FOR	3	08-Mar-96	RT11FB.SYS	93P	20-Dec-85
ANNOT .SAV	38	18-Apr-93	TSXP23.NEW	1200P	27-Nov-82
DUO .DIR	18	16-Jul-96	ML .DIR	7	16-Jul-96
DIR .DIF	26	16-Jul-96	MEMOFC.OBJ	1	-BAD-
DEMOBC.OBJ	1	-BAD-	EVAN .ID	1	

114 Files, 5949 Blocks
14433 Free blocks

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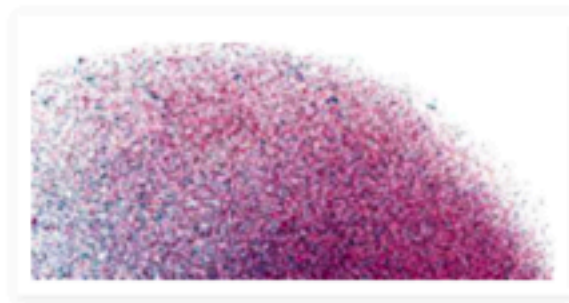
no computer exercise.

ImagePlot

ImagePlot visualization software: explore patterns in large image collections

ImagePlot

[Overview](#) | [Download](#) | [New Features in v1.1](#) | [Documentation](#) | [Gallery](#) | [Video](#)



What is ImagePlot?

Explore images and video in new ways.



How does it work?

Create high-res visualizations and animations and customize everything.



Will it work with my stuff?

Works with any media, on any platform (almost).

What is ImagePlot?

ImagePlot is a free software tool that visualizes collections of images and video of any size. It is implemented as a macro which works with the open source image processing program [ImageJ](#).

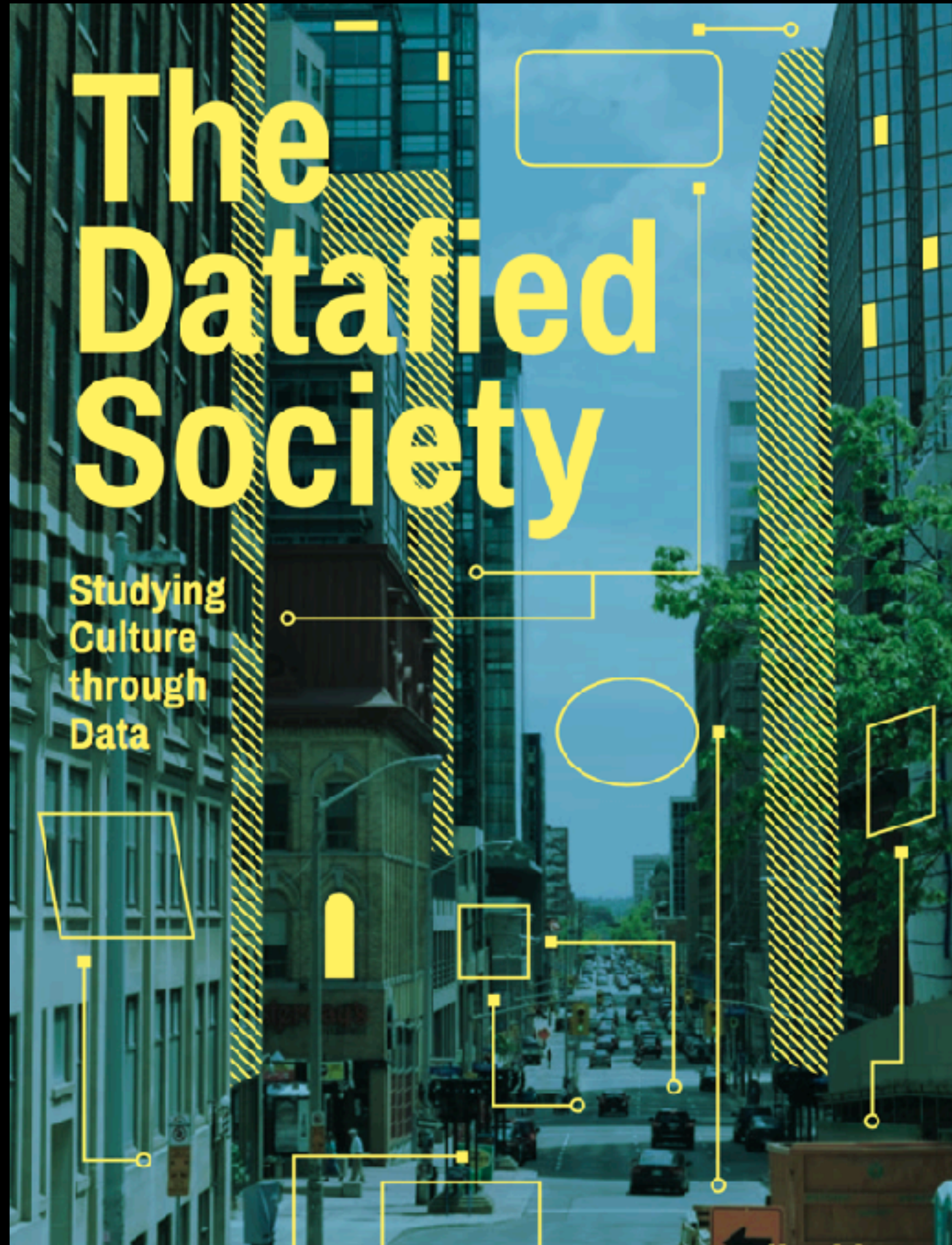


Lev Manovich

Professor, Visual Arts - UC San Diego

The Datafied Society

Studying
Culture
through
Data



In the very influential 1869 definition by British cultural critic Matthew Arnold (1869), culture is 'the best that has been thought and said in the world'. The academic institution of humanities has largely followed this definition. And when they started to revolt against their canons and to include the works of previously excluded people (women, non-whites, non-Western authors, queer, etc.), they often included only 'the best' created by those who were previously excluded.

Cultural Analytics is interested in *everything created by everybody*. In this, we are approaching culture the way linguists study languages or biologists study life on earth. Ideally, we want to look at every cultural manifestation, rather than selective samples, in a systematic perspective not dissimilar to that of cultural anthropology. This larger inclusive scope combining the professional and the vernacular, the historical and the contemporary, is exemplified by the range of projects we have worked on in our lab since 2008. We have analysed historical, professionally created cultural content in all *Time* magazine covers (1923-2009); paintings by Vincent van Gogh, Piet Mondrian and Mark Rothko; 20,000 photographs from the collection of the Museum of Modern Art in New York (MoMA); and one million manga pages from 883 manga series published in the last 30 years.

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ImageJ

Image Processing and Analysis in Java

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to wsr@nih.gov. [Disclaimer](#)

What is ImagePlot?

ImagePlot is a free software tool that visualizes collections of images and video of any size. It is implemented as a macro which works with the open source image processing program [ImageJ](#).

ImagePlot was developed by the [Software Studies Initiative](#) with support from the National Endowment for Humanities (NEH), the California Institute for Telecommunications and Information Technology (Calit2), and the Center for Research in Computing and the Arts (CRCA).

See your whole image collection in a single visualization.

Existing visualization tools show data as points, lines, and bars. ImagePlot's visualizations shows the actual images in your collection. The images can be scaled to any size and organized in any order - according to their dates, content, visual characteristics, etc. Because digital video is just a set of individual still images, you can also use ImagePlot to explore patterns in films, animations, video games, and any other moving image data.

Better understand media collections and make new discoveries.





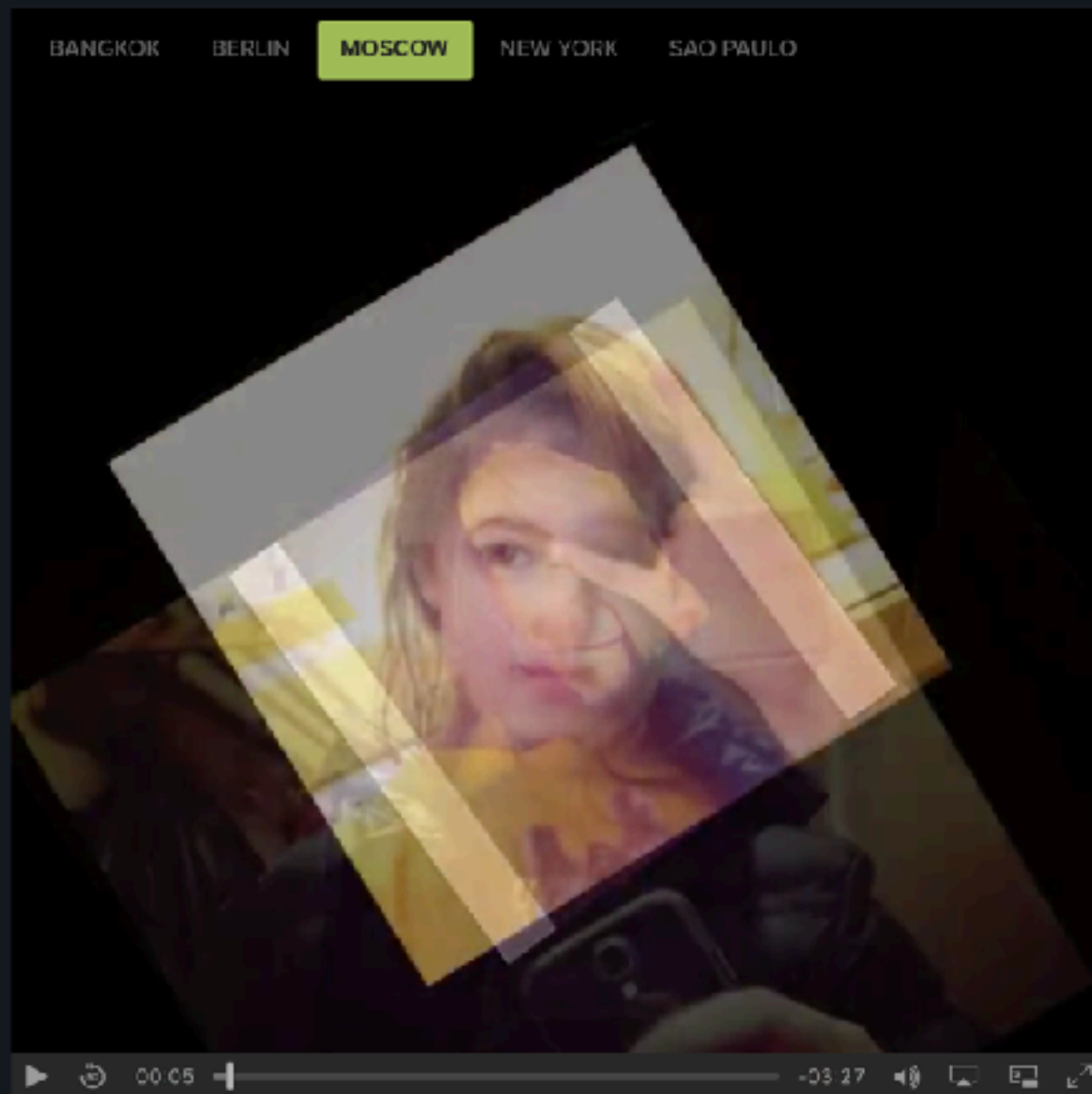
PAST VISIONS

penned by Frederick William IV

»Unbelievable is his genius for drawing. Every idle moment [...] he draws on paper; sketches for great historic pieces, [...] persons and things that he has seen while travelling, mythical beings and allegorical matters. He even paints heaven and hell; and quite often biblical things.«

Johann Friedrich Herbart (1810)

<https://uclab.fh-potsdam.de/fw4/en/>



SELFIECITY

Investigating the style of **self-portraits** (*selfies*) in five cities across the world.

Selfiecity investigates *selfies* using a mix of theoretic, artistic and quantitative methods:

We present our **findings** about the demographics of people taking selfies, their poses and expressions.

Rich media visualizations (**imageplots**) assemble thousands of photos to reveal interesting patterns.

The interactive **selfexploratory** allows you to navigate the whole set of 3200 photos.

Finally, theoretical **essays** discuss selfies in the history of photography, the functions of images in social media, and methods and dataset.

<http://selfiecity.net>

Pirate Philosophy

For a Digital Posthumanities

Gary Hall

... there is a temptation to agree with those who have insisted that Manovich's Cultural Analytics is "unconvincing." But could we go further? Could we say his data-driven cultural research functions as an alibi for an unthought-out and rather shallow form of humanities scholarship that has itself been colonized by, and "passionately" imitates, the concerns of scientists, businesses, and government agencies?

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Neoliberal Tools (and Archives): A Political History of Digital Humanities

By Daniel Allington, Sarah Brouillette, David Golumbia

computer exercise 4.

image forensics

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MT .SYS 12P 20-11-83 VM .SYS 3P 13-Aug-86
DL .SYS 4P 20-Dec-85 LD .SYS 8P 13-Aug-86
SP .SYS 6P 13-Aug-86 DL .SYS 8P 13-Aug-86
RT11SJ.SYS 78P 13-Aug-86 DU .SYS 2P 13-Aug-86
L .SYS 2P 13-Aug-86 TT .SYS 71P 21-Nov-84
SD .SYS 5P 31-May-85 RL02DG.SYS 24 20-Dec-85
BST .SYS 5P 31-May-85 BINCON.SAV 19 20-Dec-85
DATE.SAV 9 20-Dec-85 DIR .SAV 47 20-Dec-85
DUMP .SAV 78 27-Nov-82 DUF .SAV 206 21-May-85
TSXMOD.SAV 41 12-Jun-85 LET .SAV 5 20-Dec-85
HARRIS.SAV 2 21-Dec-81 RETRO .OBJ 1519P 16-May-88
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EM1B .STM 3 08-Mar-86 RT11FB.SYS 93P 20-Dec-85
JKFLIP.FOR 38 18-Apr-83 TSXP23.NEW 1200P 27-Nov-82
ANOT .SAV 18 16-Jul-86 M .DIR 7 16-Jul-86
DUO .DIR 26 16-Jul-86 DEMOFC.OBJ 1 -BAD-
DIR .DIF 1 -BAD- EVAN .ID 1
DEMOFC.OBJ 1 -BAD-
114 Files, 5949 Blocks
14433 Free blocks
.00
```

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images & metadata



EXAMPLES

ABOUT



USAGE

CONTACT

Automated **image forensic** analysis.

Photo upload

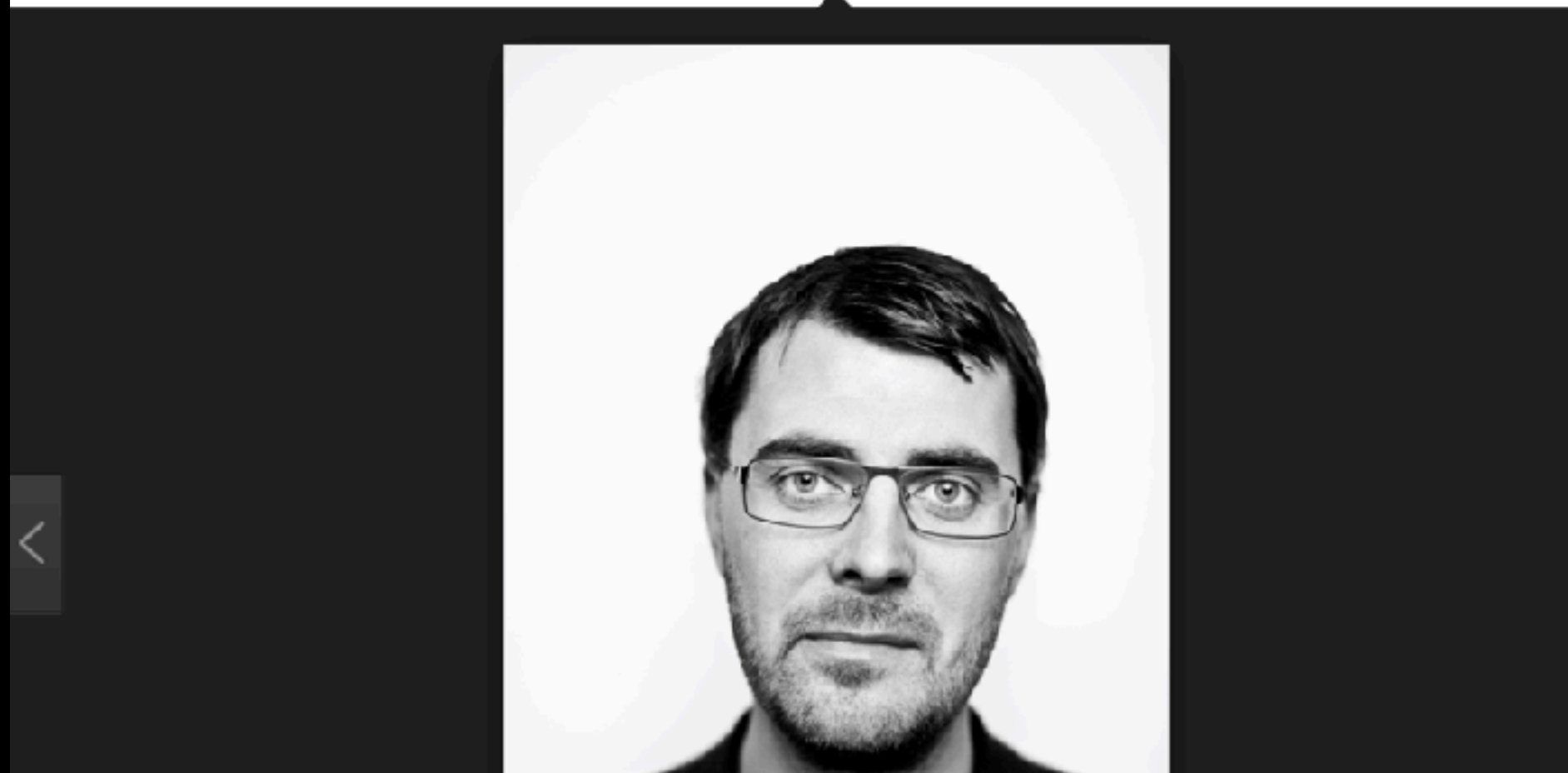
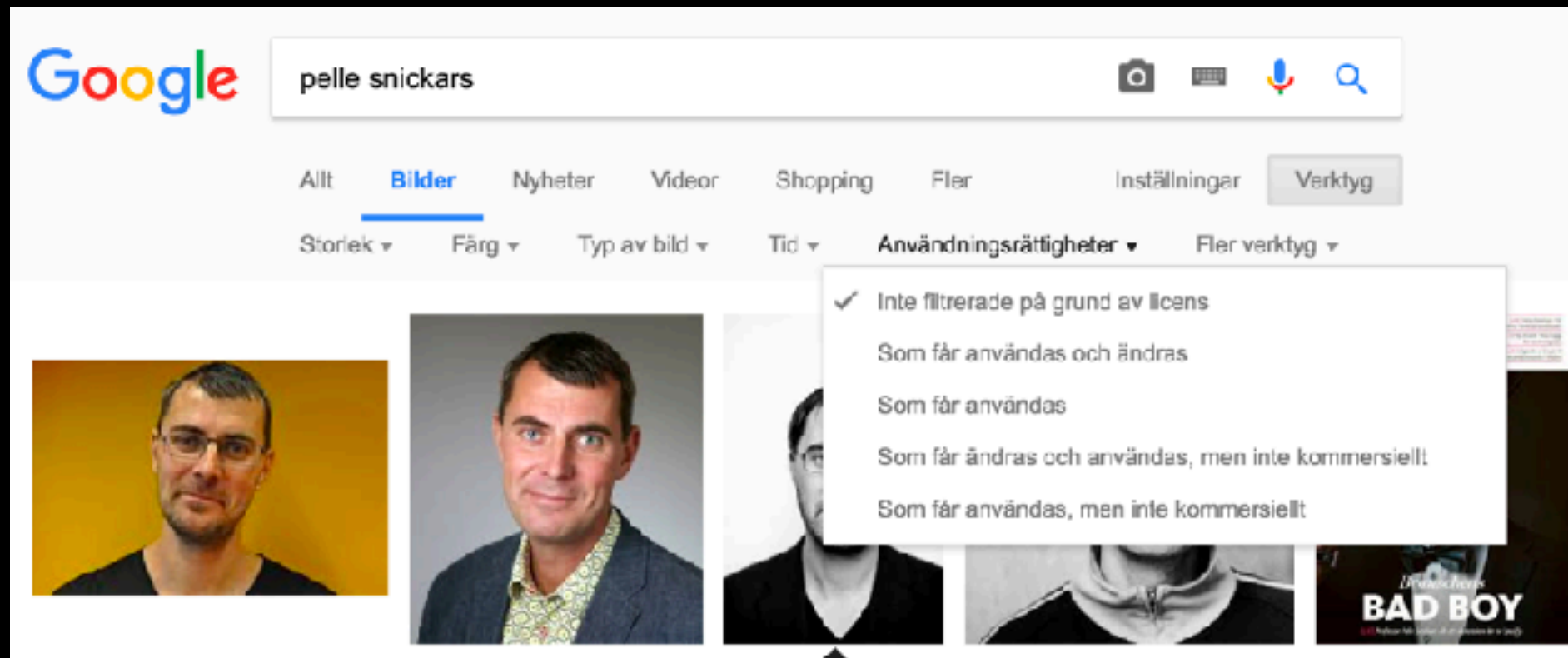
Select your image...

Browse

Analyze

<http://www.imageforensic.org/>

images & copyrights



Tutorial: Error Level Analysis

Error Level Analysis (ELA) permits identifying areas within an image that are at different compression levels. With JPEG images, the entire picture should be at roughly the same level. If a section of the image is at a significantly different error level, then it likely indicates a digital modification.

What To Look For

ELA highlights differences in the JPEG compression rate. Regions with uniform coloring, like a solid blue sky or a white wall, will likely have a lower ELA result (darker color) than high-contrast edges. The things to look for:

Edges	Similar edges should have similar brightness in the ELA result. All high-contrast edges should look similar to each other, and all low-contrast edges should look similar. With an original photo, low-contrast edges should be almost as bright as high-contrast edges.
Textures	Similar textures should have similar coloring under ELA. Areas with more surface detail, such as a close-up of a basketball, will likely have a higher ELA result than a smooth surface.
Surfaces	Regardless of the actual color of the surface, all flat surfaces should have about the same coloring under ELA.

Look around the picture and identify the different high-contrast edges, low-contrast edges, surfaces, and textures. Compare those areas with the ELA results. If there are significant differences, then it identifies suspicious areas that may have been digitally altered.

Resaving a JPEG removes high-frequencies and results in less differences between high-contrast edges, textures, and surfaces. A very low quality JPEG will appear very dark.

Scaling a picture smaller can boost high-contrast edges, making them brighter under ELA. Similarly, saving a JPEG with an Adobe product will automatically sharpen high-contrast edges and textures, making them appear much brighter than low-texture surfaces.

Evaluating ELA

With ELA, every grid that is not optimized for the quality level will show grid squares that change during a resave. For example, digital cameras do not optimize images for the specified camera quality level (high, medium, low, etc.). Original pictures from digital cameras should have a high degree of change during any resave (high ELA values). Each subsequent resave will lower the error level potential, yielding a darker ELA result. With enough resaves, the grid square will eventually reach its minimum error level, where it will not change anymore.

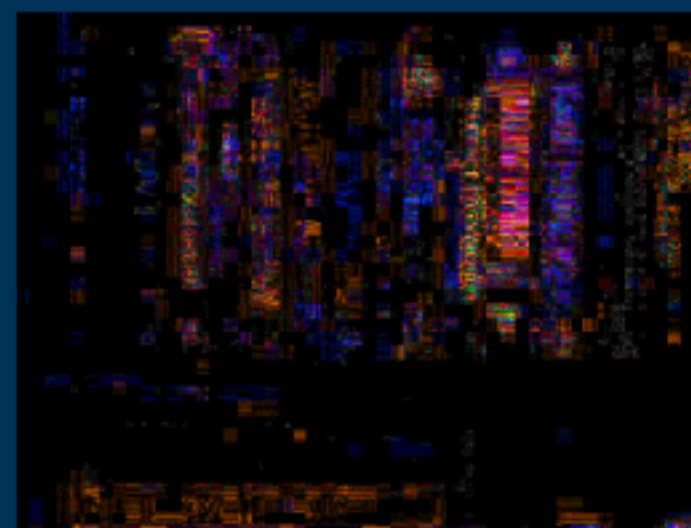
Image



ELA



An original digital photograph (Source: Hacker Factor) has high ELA values, represented by white colors in the ELA. The sections that are black correspond to the solid white book and the black 8x8 squares in the original image. Solid colors compress very well, so these are already at their minimum error levels.



The original image was resaved one time. To the human eye, there is no visible difference between the original and the resave image. However, ELA shows much more black and more dark colors. If this image were resaved again, it will have even lower (darker) ELA values.

– thanks.

