
The Double Hermeneutic

Robot Aesthetics & Cultural Imperialism

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I. Image Quality and Computational Photography

8×8 input

32×32 samples

ground truth

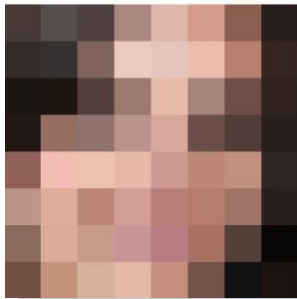
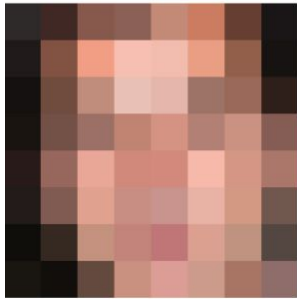
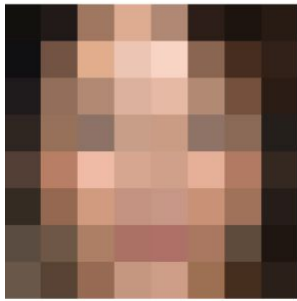


Image: Google Superresolution, Ars Technica




Aesthetic Quality

Studying Aesthetics in Photographic Images Using a Computational Approach.
Datta, Joshi, Li & Wang. ECCV 2006. My emphasis.

“The broad idea is that photographic images that are **pleasing to the eyes** are considered to be higher in terms of their aesthetic beauty.

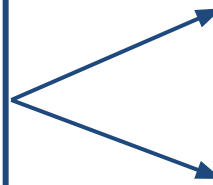
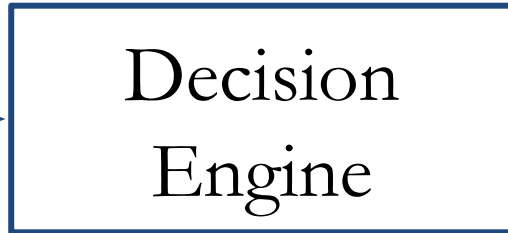
[...]

Potential applications include content-based image retrieval and digital photography”



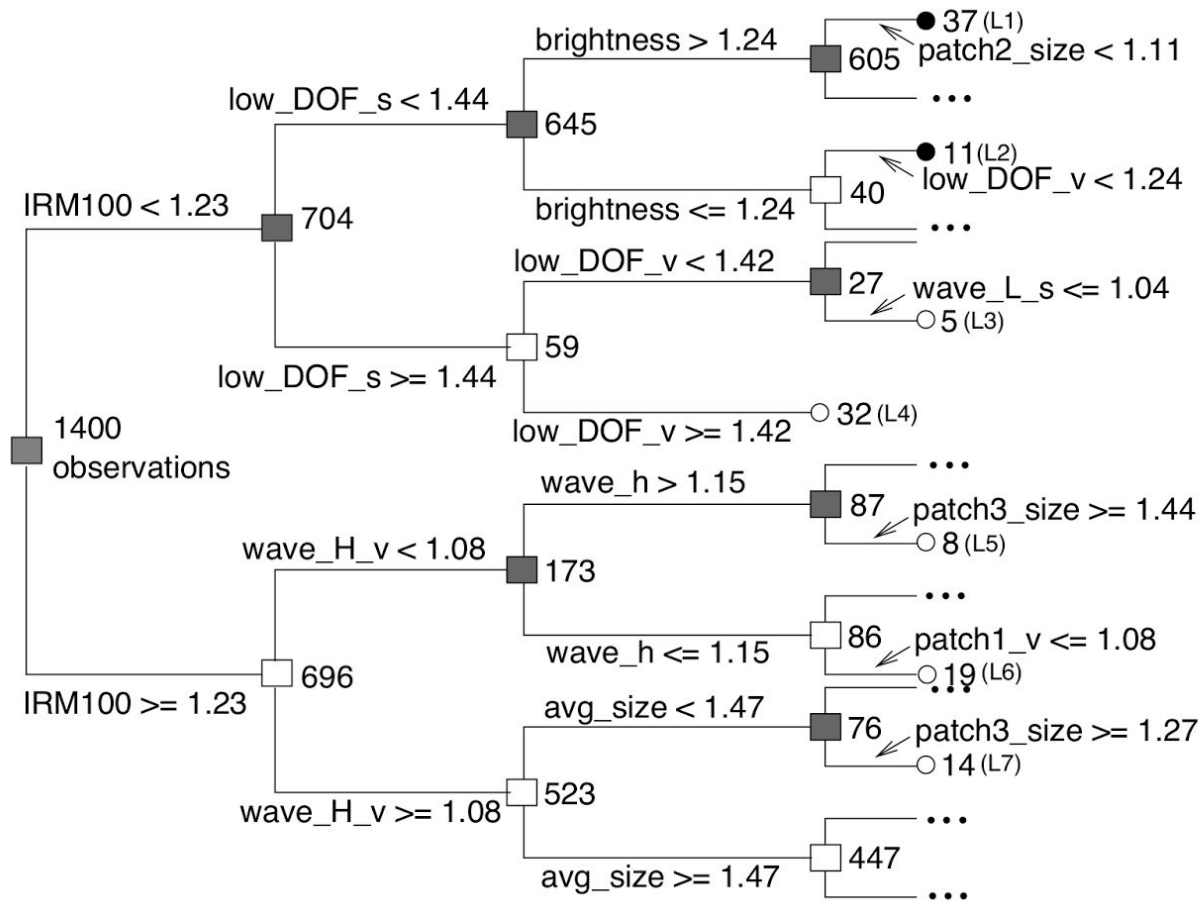
Datta et al. continued

“While the **average individual may simply be interested in how soothing a picture is to the eyes**, a photographic artist may be looking at the composition of the picture, the use of colors and light, and any additional meanings conveyed by the picture”





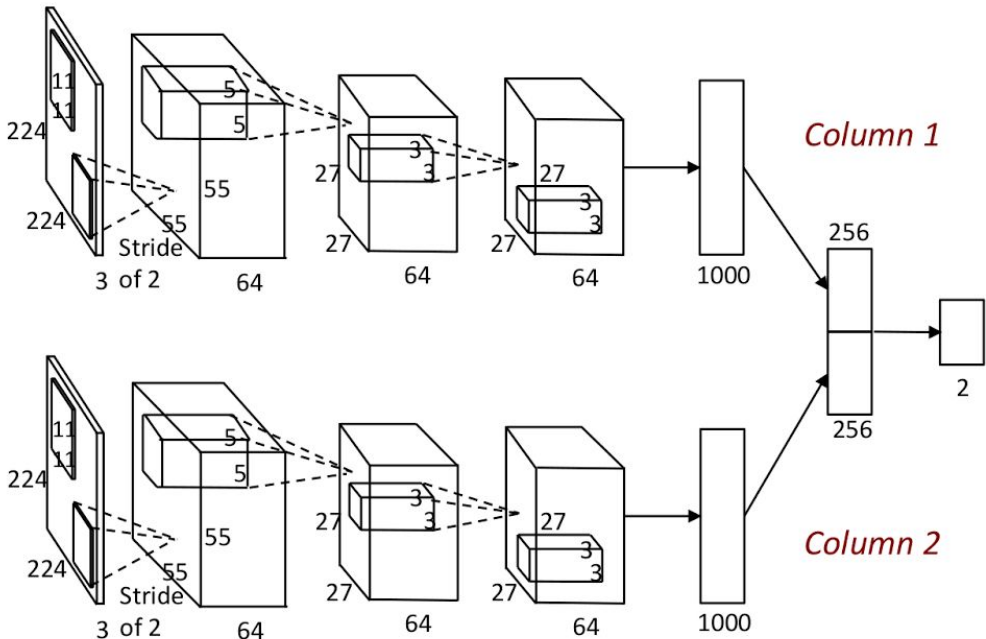
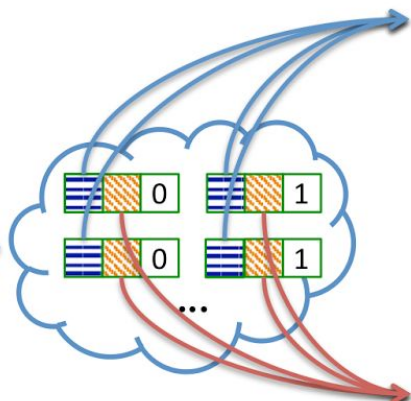
Good

Bad





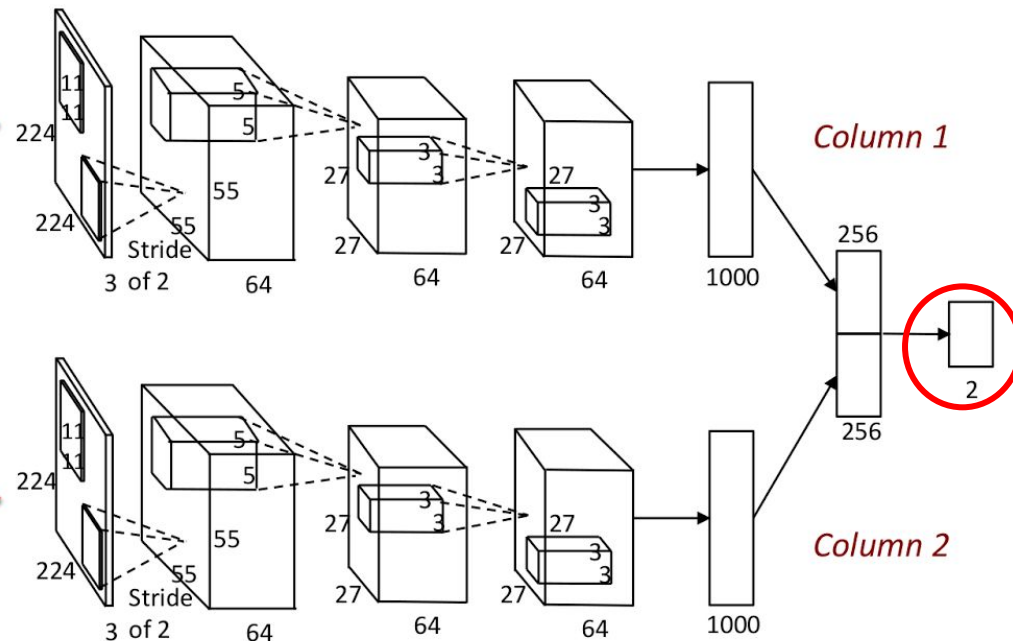
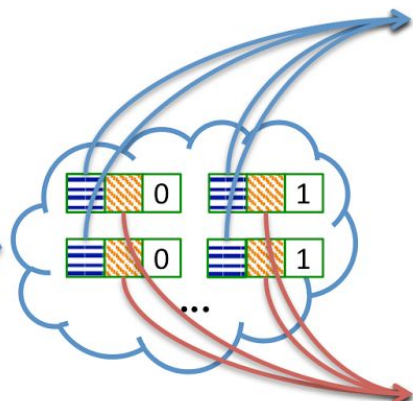
Rating image aesthetics using deep learning, Lu et al., *IEEE Multimedia* 2015

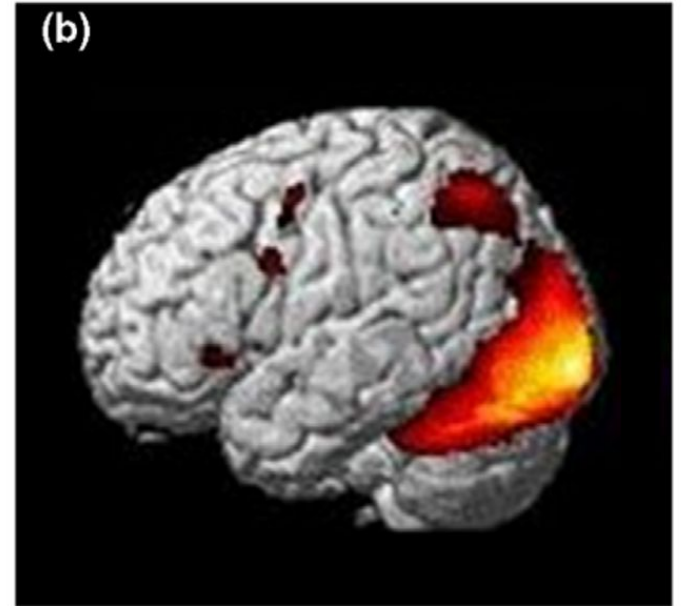
 Global View
 Fine-grained View



Rating image aesthetics using deep learning, Lu et al., *IEEE Multimedia* 2015



 Global View
 Fine-grained View

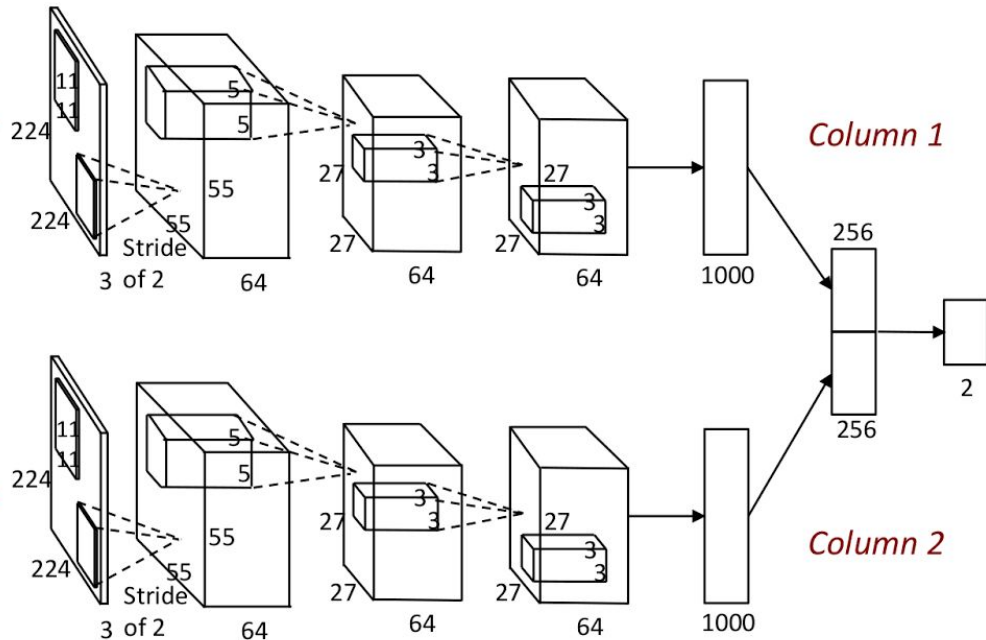
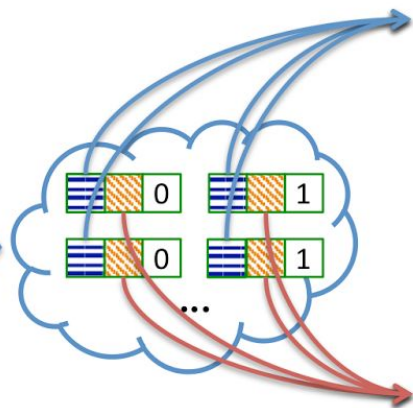
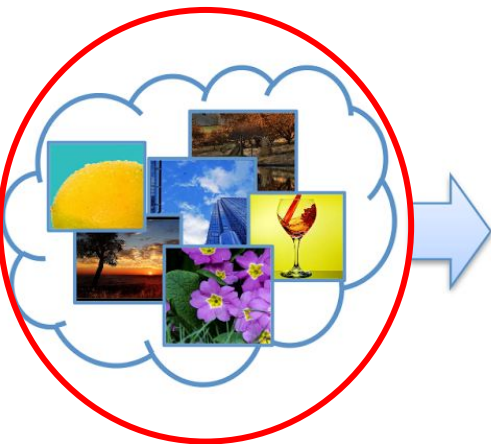




Current Opinion in Neurobiology

Training Dataset

-  Global View
-  Fine-grained View







Aesthetic Visual Analysis

AVA: A Large-Scale Database for Aesthetic Visual Analysis, Murray & Marchesotti, 2012:

“Collecting ground truth data in this manner is advantageous primarily because it is an inexpensive and expedient way to obtain aesthetic judgments from multiple individuals who are **generally “prosumers” of data**: they produce images and they also score them on dedicated social networks.”

www.dpchallenge.com

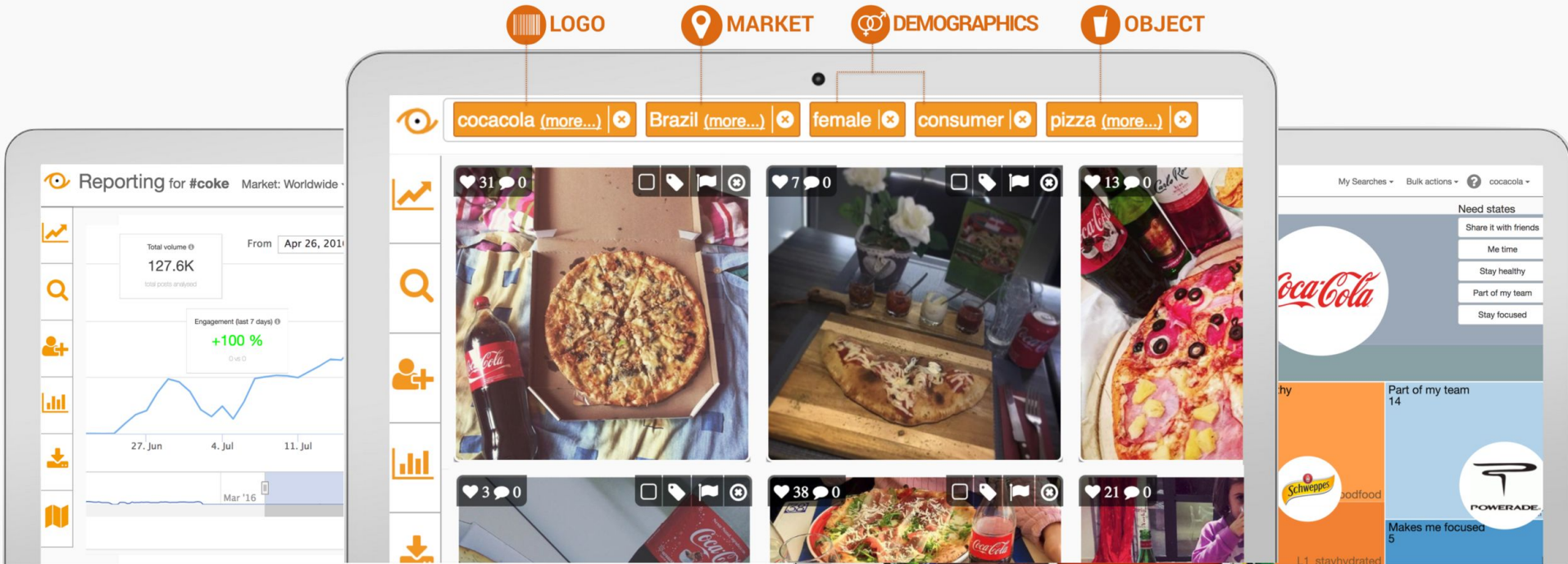


Image: Beautifeye, Online platform for Qualitative Market Research

Prosumer?







Statistics

Place: 1 out of 60

Avg (all users): 6.7857

Avg (commenters): 8.2857

Avg (participants): 6.6667

Avg (non-participants): 6.9565


Views since voting: 498

Views during voting: 99

Votes: 56

Comments: 27

Favorites: 2



20171105_160200_DPC

I didn't expect to win a blue with this score but I will take it!
Thank you all :)

This is our new beagle Daisy and Mr. Kitty. The cat always tries to dodge the camera but this time he looked at me for some reason. And it was perfect.

How I took it. I used my cell phone. Placed it against the door, camera side down. I need it to balance myself because I basically stepped back and leaned forward to get my feet out of the shot :)



Age: 49

Location: Ohio

Cameras:

Olympus OM-D E-M1

Olympus E-500 EVOLT

Olympus E-520

Olympus OM-D E-M5

Panasonic Lumix DMC-FH1

Samsung Galaxy S4

Lenses:

Olympus 45mm f1.8 M.Zuiko Digital Micro Four Thirds

Lensbaby Composer

Olympus 12-40mm f/2.8 Pro

Olympus 12-60mm f/2.8-4.0 Zuiko

Olympus 14-42mm f3.5-5.6 M.Zuiko Digital

Olympus 14-45mm f/3.5-5.6 Zuiko Digital ED

Olympus 14-54mm f/2.8-3.5 Zuiko Digital Zoom

Olympus 40-150mm f/3.5-4.5 Zuiko Digital

Olympus 50-200mm f/2.8-3.5 ED Zuiko Digital

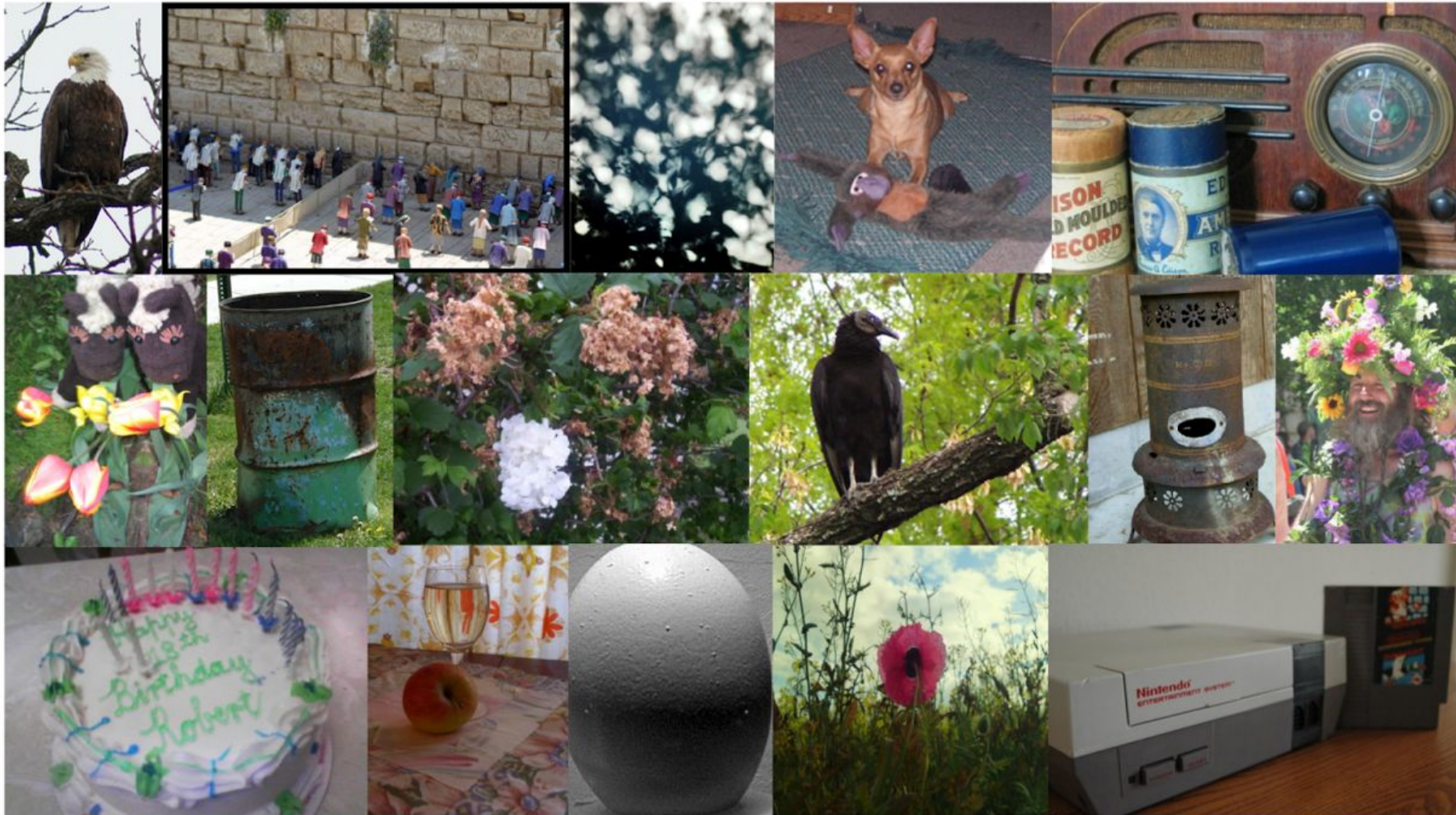
Olympus 50mm f/1.8 MF Normal Zuiko

Olympus 70-300mm F/4.0-5.6

Olympus 75-300mm f/4.8-6.7 M.Zuiko

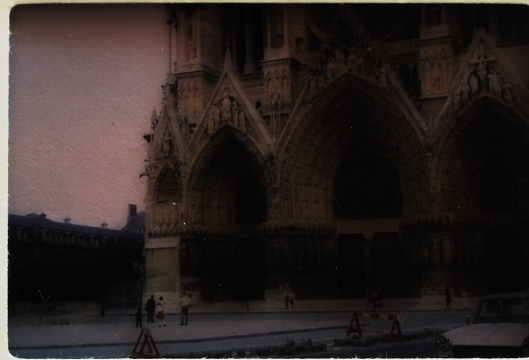


(a) Images ranked the highest in aesthetics by DCNN



(b) Images ranked the lowest in aesthetics by DCNN

Kodachrome
DIAPOSITIV



ENTWICKELT
VON KODAK





II. Current Applications of Computational Aesthetic Estimation

Photo selection: album covers

The screenshot displays the OneDrive web interface. At the top, there is a blue navigation bar with the OneDrive logo, a search icon, and buttons for 'Create' and 'Upload'. Below this is a search bar labeled 'Search OneDrive' and a breadcrumb path 'Files > John's OneDrive'. On the left side, there is a sidebar menu with options: 'Files', 'Recent docs', 'All photos', 'Shared', 'Groups', and 'LiveSide Test'. The main content area shows three album covers:

- Documents**: A solid blue cover with the text 'Documents' and the number '1' in the bottom right corner.
- LiveSide**: A cover featuring a photograph of orange paper bags. The text 'LiveSide' and 'Shared (co-owned)' is overlaid in white, with the number '3' in the bottom right corner.
- Pictures**: A cover featuring a photograph of a sunset over a body of water. The text 'Pictures' and the number '2' is overlaid in white in the bottom right corner.

Image: Windows Central

Social Albums

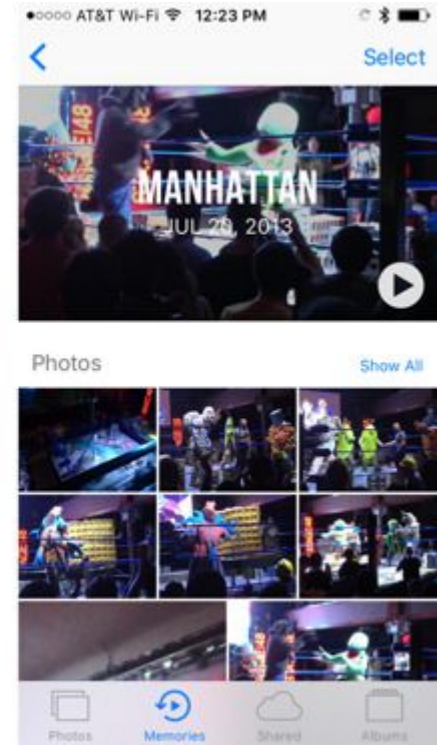
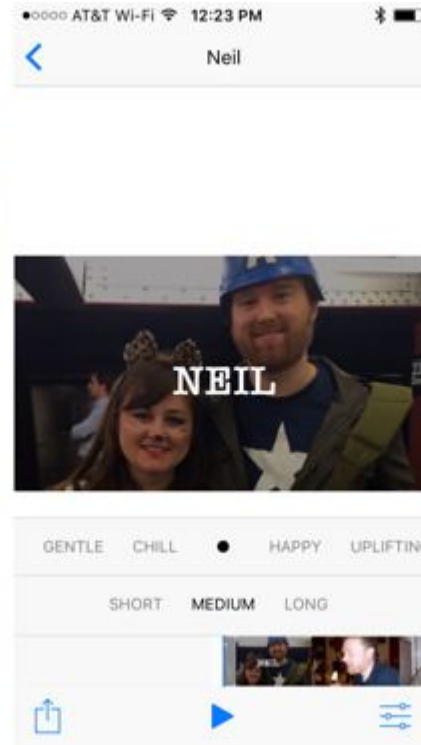
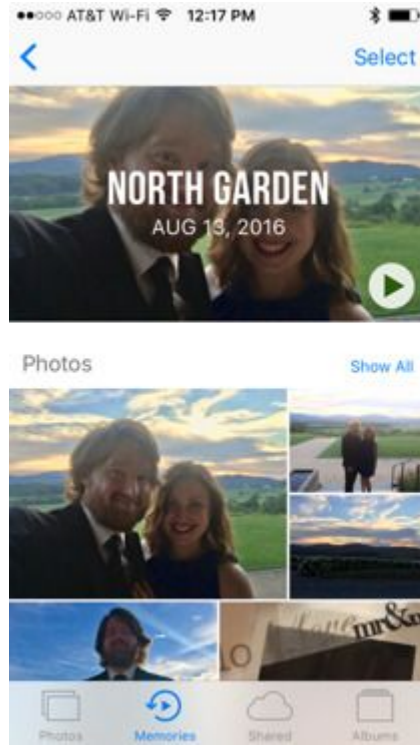


Image: Apple Insider

- during
- manager
- facebook
- groups
- bono
- tap
- iphoto
- import
- itunes
- google
- app
- apple
- android
- mac
- u2 a

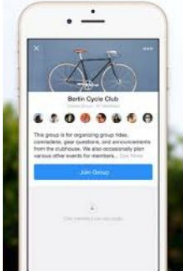
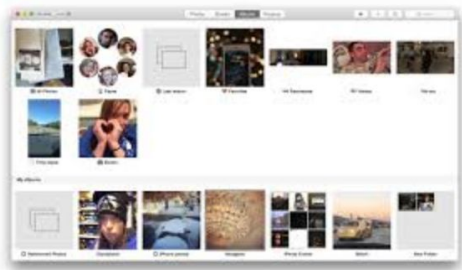
 **Daye Jack** @dayejack

holy sh... im crying thank you @Apple



9/12/17, 1:57 PM

Discover and join new groups.

Stay connected to your groups, wherever you are.



Cancel Facebook Post

Come to this event with me!

<http://www.eventbrite.com/e/haw-area-brew-feet->

Album

Location None

Audience Public



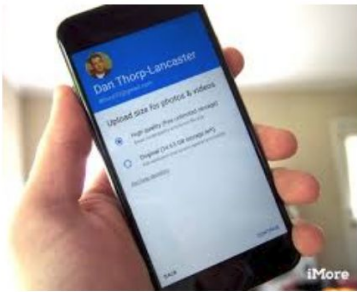
THEME
Choose colors you prefer.



THE SMART WAY TO TRACK YOUR BIG DAYS.



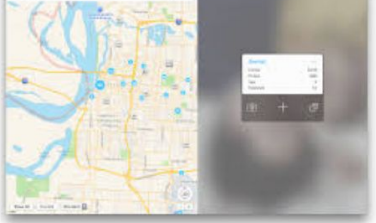
WIDGET
Just pull down from the top.

SETTINGS
Set a big day from your photos.



Exploring Martin

Find new things to do right now, this weekend or for an upcoming trip

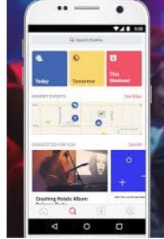
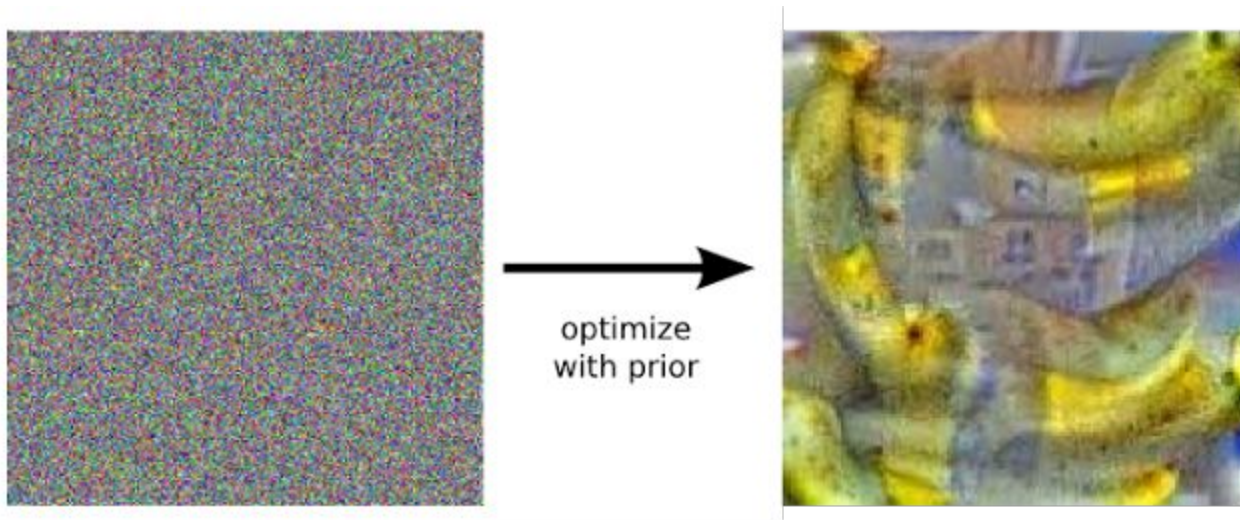



Image Modification





8-08













III. *IRL*

Conventional Publishing

BBC Sign in Home News Sport Weather Shop Earth

NEWS

Home Video World UK Business Tech Science Stories Entertainment & Arts Health W

Mugabe 'resisting calls to stand down'

The military says it is "engaging" with the president and had made progress in targeting "criminals".

1h | Africa



- Any change will do for Zimbabwe
- 'Enormous sense of anticipation'
- Debunking false rumours



Russia vetoes Syria chemical attacks probe

Moscow uses its 10th UN veto since the Syria conflict began to block investigative body.

3h | Middle East



Tesla unveils first electric truck

The launch of the new vehicle was accompanied by a surprise - a fast new Roadster.

29m | Technology | 18



Serena Williams marries Alexis Ohanian

Beyonce, Kim Kardashian and Eva Longoria were among the A-list guests in New Orleans.

1h | Newsbeat

theguardian

UK world sport football opinion culture business lifestyle fashion environment tech travel [browse all sections](#)


home

headlines

Friday
17 November 2017

Zimbabwe / Amid relief over Mugabe downfall, doubts over his likely successor

After so long under one man's rule, even limited reform introduced by Emmerson Mnangagwa would be welcomed by many




Vast wealth Robert Mugabe's decadent ways

Analysis Was Mugabe's fall linked to China?


Grace Mugabe Where is Zimbabwe's first lady?

'Where do his hands go?' / Trump tweets about Al Franken sexual harassment




Jacinda Arden to Trump 'No one marched when I was elected'

Middle East Israeli military chief wants closer Saudi ties as Iran tensions rise



Germany Questions over ministerial hopeful's 'links to Russian pipeline'

China Anger as bike sharing firm shuts up office with riders' deposits



Japan Rail company apologises after train leaves 20 seconds early

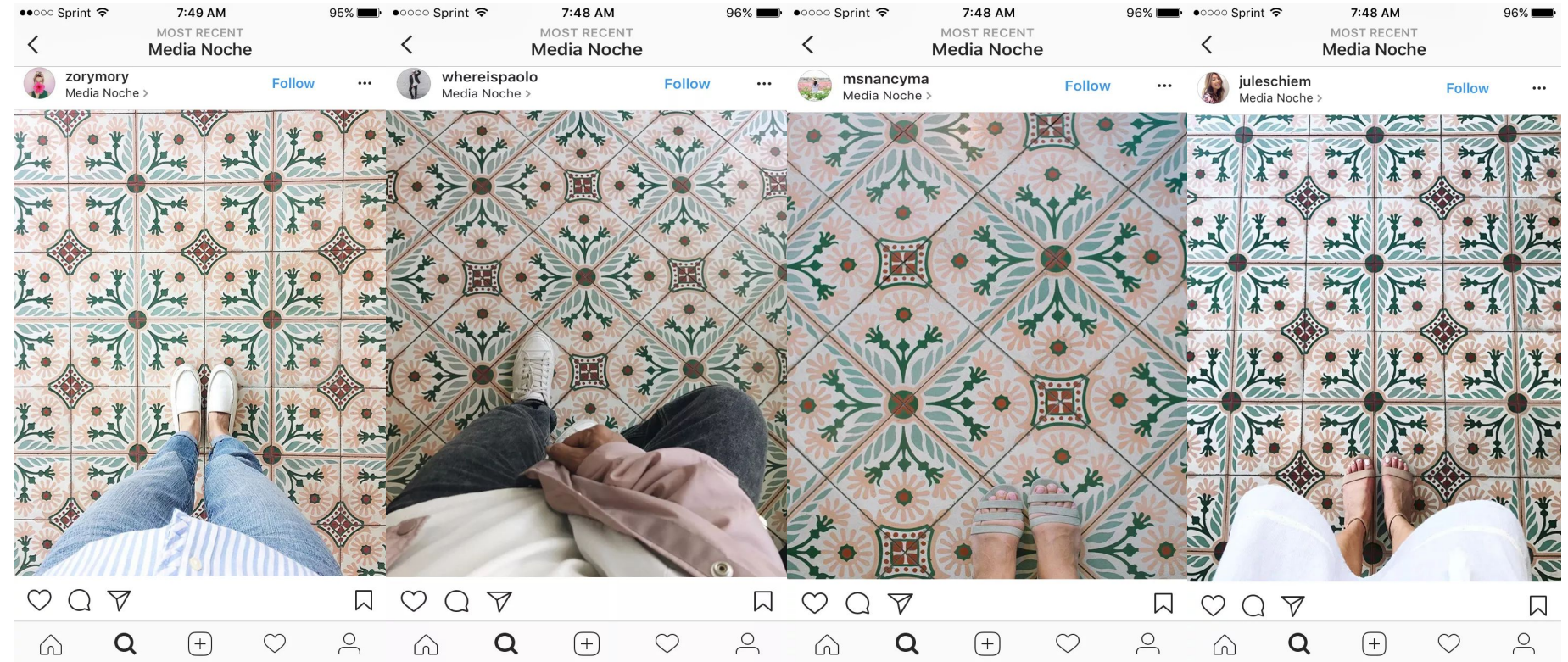
Indonesia Politician who disappeared in corruption scandal found in hospital

Toxic air chokes Pakistan and India 'Maybe the smog can bring us together'

16

Jared Kushner / Trump son-in-law failed to disclose emails about WikiLeaks and

Instagram is pushing restaurants to be kitchy, Casey Newton, The Verge, 20/07/17





IV. Double Hermeneutic

BETA

READERS RECOMMEND is a beta test, in cooperation with EPFL Artificial Intelligence Laboratory (LIA).



LAND OF CONTRASTS

Tourism in Albania: a building site with potential



How a Swiss invention hooked the world




The Edelweiss – Switzerland's national flower?



Ten years on from Needle Park

Online Machine Learning

Offline and Online Evaluation of News Recommender Systems at swissinfo.ch, Garcim et al, ACM Recommender Systems 2014




**New Rules of Sociological
Method:
A Positive Critique of
Interpretative Sociologies**


Anthony Giddens

Fellow of King's College
and Lecturer in Sociology,
University of Cambridge


Double Hermeneutic




“~~Sociology~~ **Machine Learning** is not about a 'pre-given' universe of objects, the universe is being constituted — or produced by — the active doings of subjects.”



“The realm of human agency is bounded.
Individuals produce society, but they do so as
~~historically~~ **algorithmically** located actors,
and not under conditions of their own
choosing.”

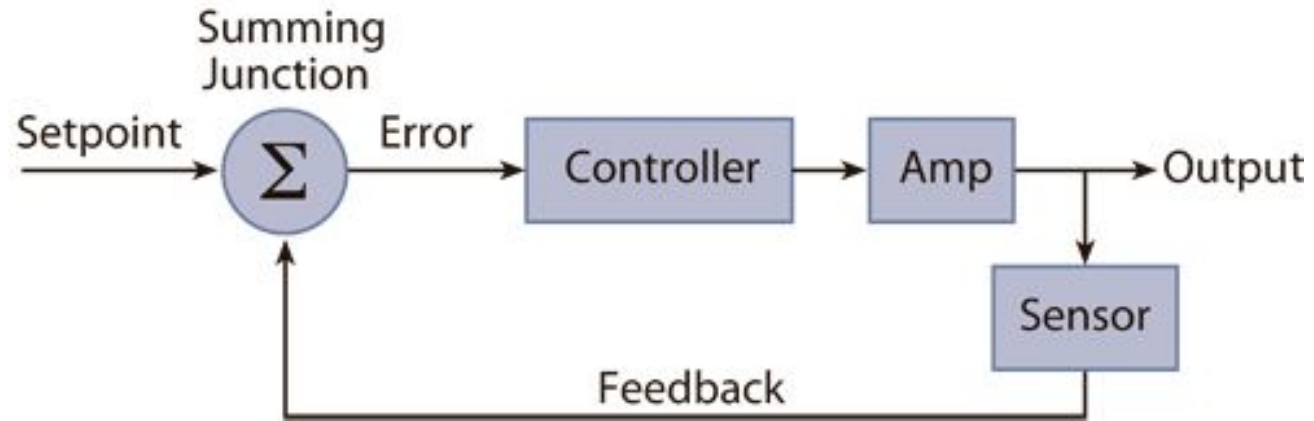


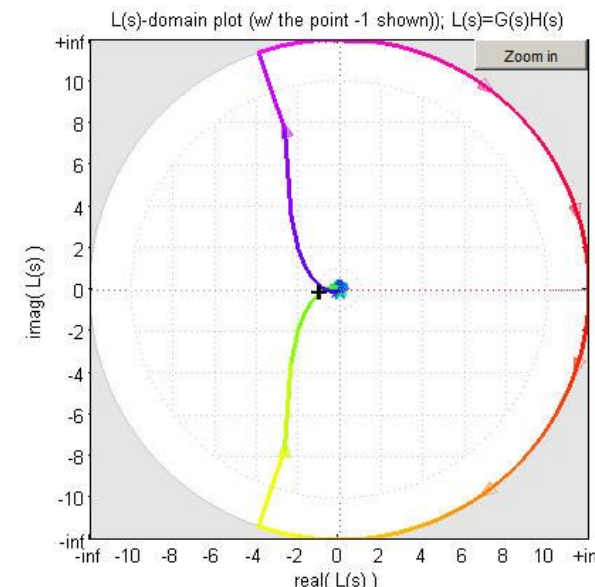
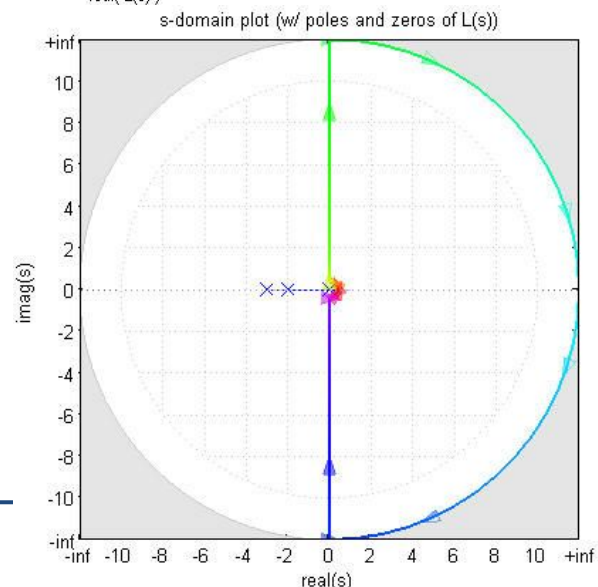
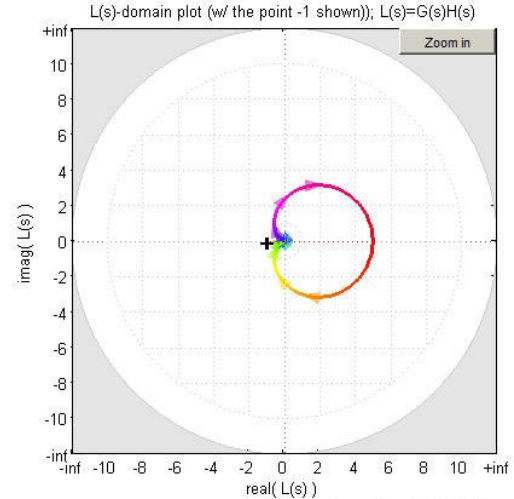
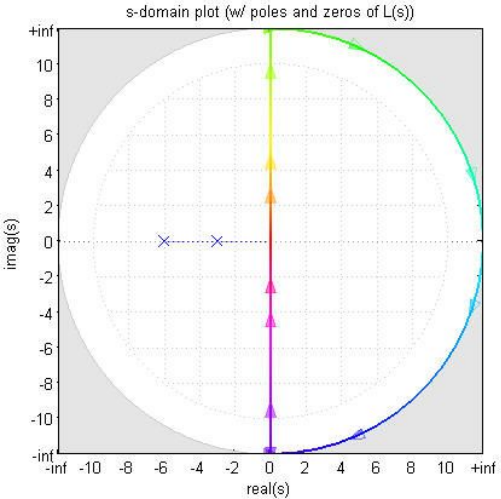
“Immersion in a form of life is the ~~necessary~~
~~and only~~ **most profitable** means whereby an
~~observer~~ **algorithm** is able to generate such
characterisations”



~~“Sociological concepts~~ **online machine learning systems** thus obey a double hermeneutic”

Feedback







V. Questions for the Future

THE

ITALIAN

COMMUNISTS

AND THE

CHALLENGE

OF MASS

CULTURE,

1943

1991

**BETWEEN
HOLLYWOOD**



AND MOSCOW

STEPHEN GUNDLE

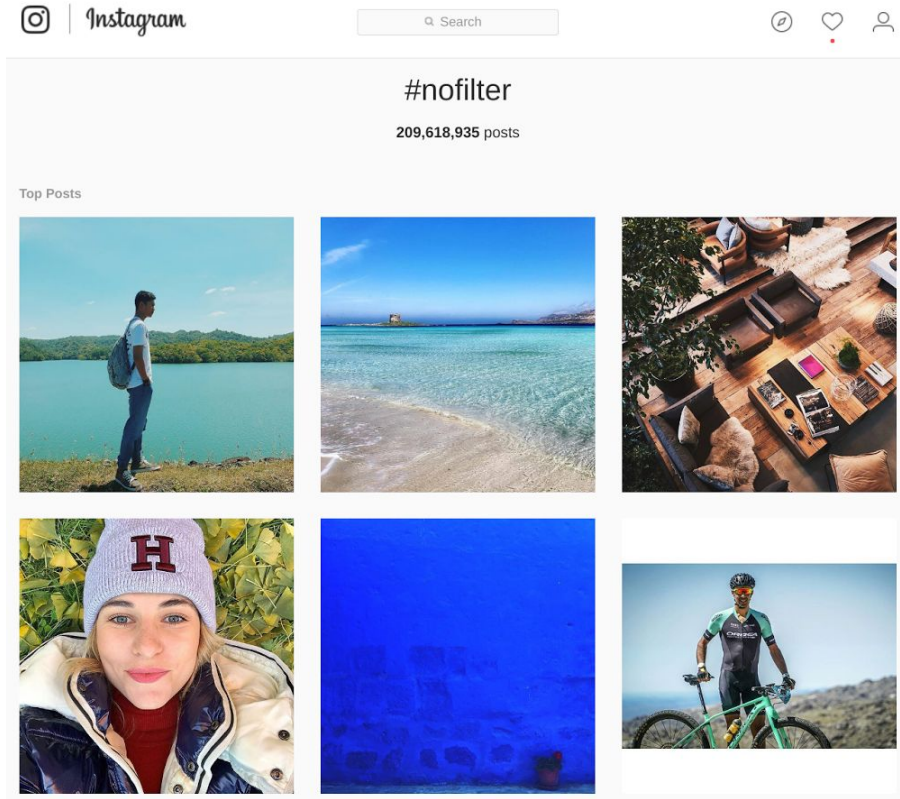
Visual-Aesthetic Hegemony

Platform Divergence?

NETFLIX

amazon

Popular Reaction?



Search 'New York'

Create new



Personalisation?

Personalise Google Photos by choosing your face

Which face is yours?

leoimpett@googlemail.com



NONE OF THESE

By continuing, your face will be used for:

- Personalised search, creations & more
- Faster sharing by allowing your contacts' Google Photos apps to recognise your face in photos [Learn more](#)

Search 'New York'

Create new



Album



Movie



Animation



Collage

You're missing out

Get personalised features and help friends share faster with you

[KEEP OFF](#) [TURN ON](#)



Save



The end

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leonardo.impett@epfl.ch