Understanding Youtube popularity dynamics

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Motivation

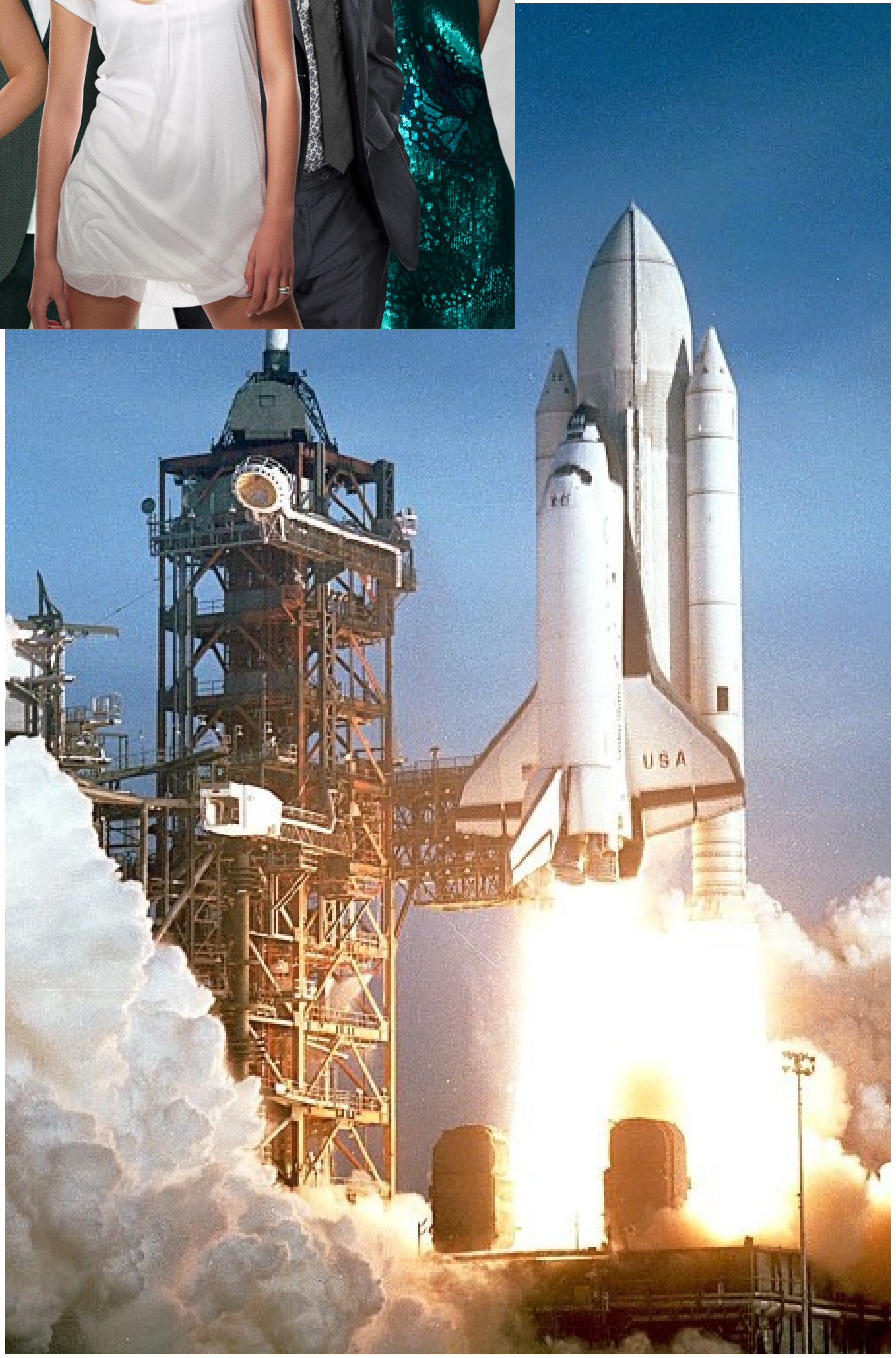


Exhibit A:

6:59 / 59:07
V DE VEGETTA: ESPECIAL CUMPLEAÑOS: MI REGALITO (LINK DE DESCARGA)
VEGETTA777
Abonează-te
17 mil.
5.104.539 de vizionări
Adaugă la
Trimite
Mai multe
108.954
2.596
Statistici pentru videoclip
Până pe 13 mai 2017 (inclusiv)
AFIȘĂRI
5.103.749
DURATA VIZIONĂRII
71 de ani
PE BAZĂ DE ABONAMENTE
3.982
NUMĂR DE DISTRIBUIRI
2.704
Cumulative
Zilnice
75.000
60.000
45.000
30.000
15.000
0
iul. 2013
ian. 2014
iul. 2014
ian. 2015
iul. 2015
ian. 2016
iul. 2016
ian. 2017

Exhibit B:

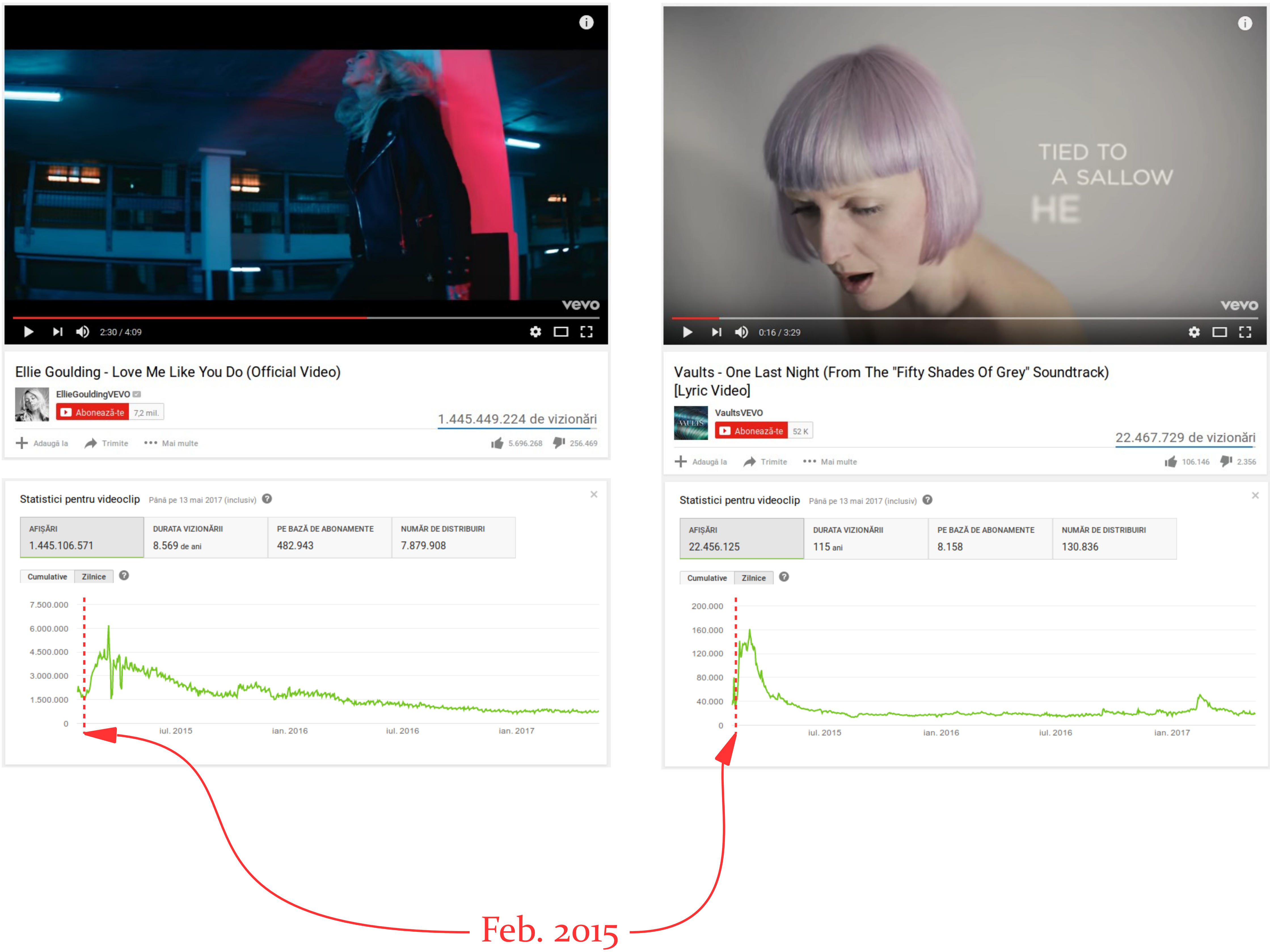

vevo
2:30 / 4:09
Ellie Goulding - Love Me Like You Do (Official Video)
EllieGouldingVEVO
Abonează-te 7,2 mil.
1.445.449.224 de vizionări
Adaugă la
Trimite
Mai multe
5.696.268
256.469
Statistici pentru videoclip
Până pe 13 mai 2017 (inclusiv)
AFIȘĂRI 1.445.106.571
DURATA VIZIONĂRII 8.569 de ani
PE BAZĂ DE ABONAMENTE 482.943
NUMĂR DE DISTRIBUIRI 7.879.908
Cumulative
Zilnice
7.500.000
6.000.000
4.500.000
3.000.000
1.500.000
0
iul. 2015
ian. 2016
iul. 2016
ian. 2017
TIED TO
A SALLOW
HE
vevo
0:16 / 3:29
Vaults - One Last Night (From The "Fifty Shades Of Grey" Soundtrack) [Lyric Video]
VaultsVEVO
Abonează-te 52 K
22.467.729 de vizionări
Adaugă la
Trimite
Mai multe
106.146
2.356
Statistici pentru videoclip
Până pe 13 mai 2017 (inclusiv)
AFIȘĂRI 22.456.125
DURATA VIZIONĂRII 115 ani
PE BAZĂ DE ABONAMENTE 8.158
NUMĂR DE DISTRIBUIRI 130.836
Cumulative
Zilnice
200.000
160.000
120.000
80.000
40.000
0
iul. 2015
ian. 2016
iul. 2016
ian. 2017
Feb. 2015

Exhibit B:

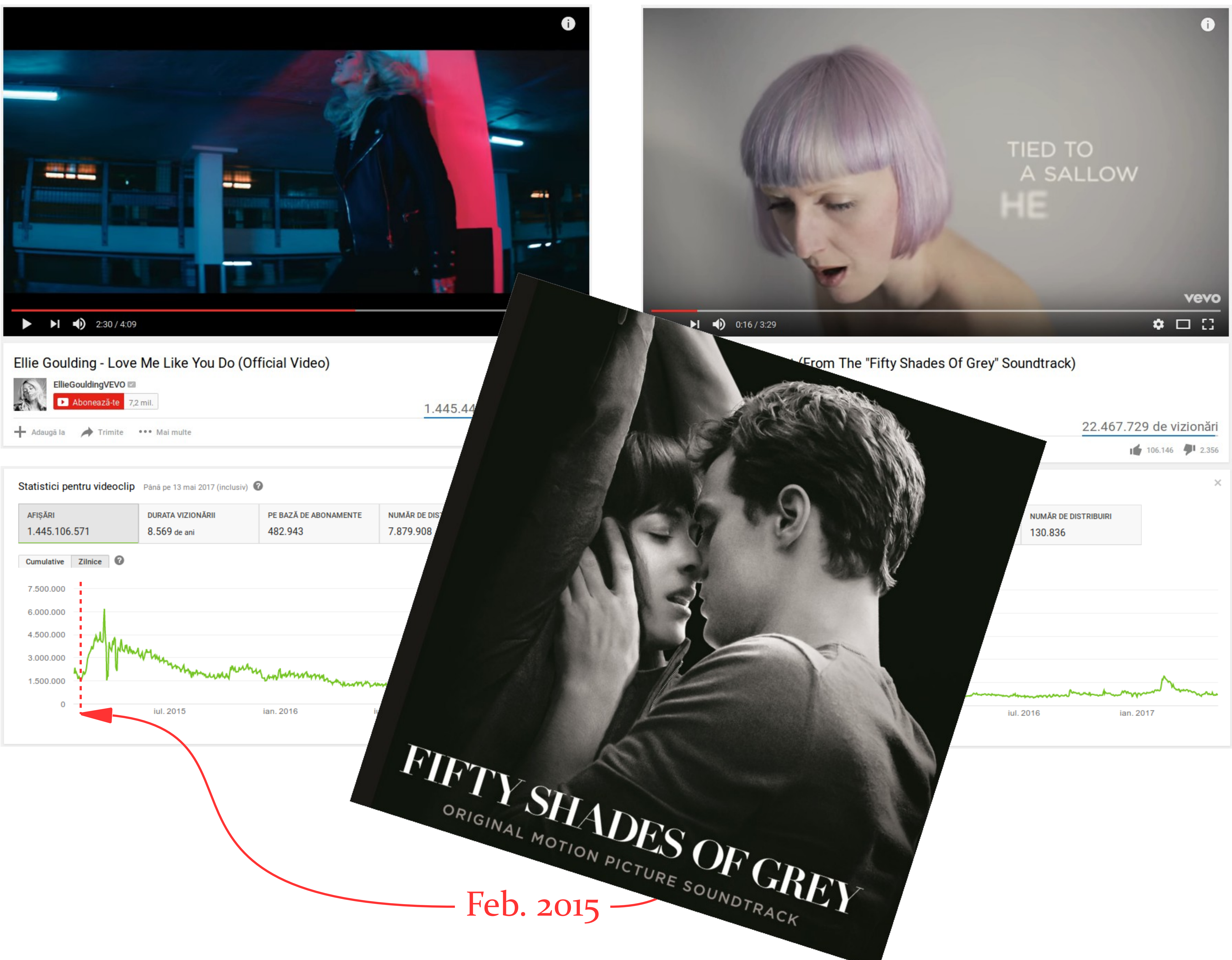
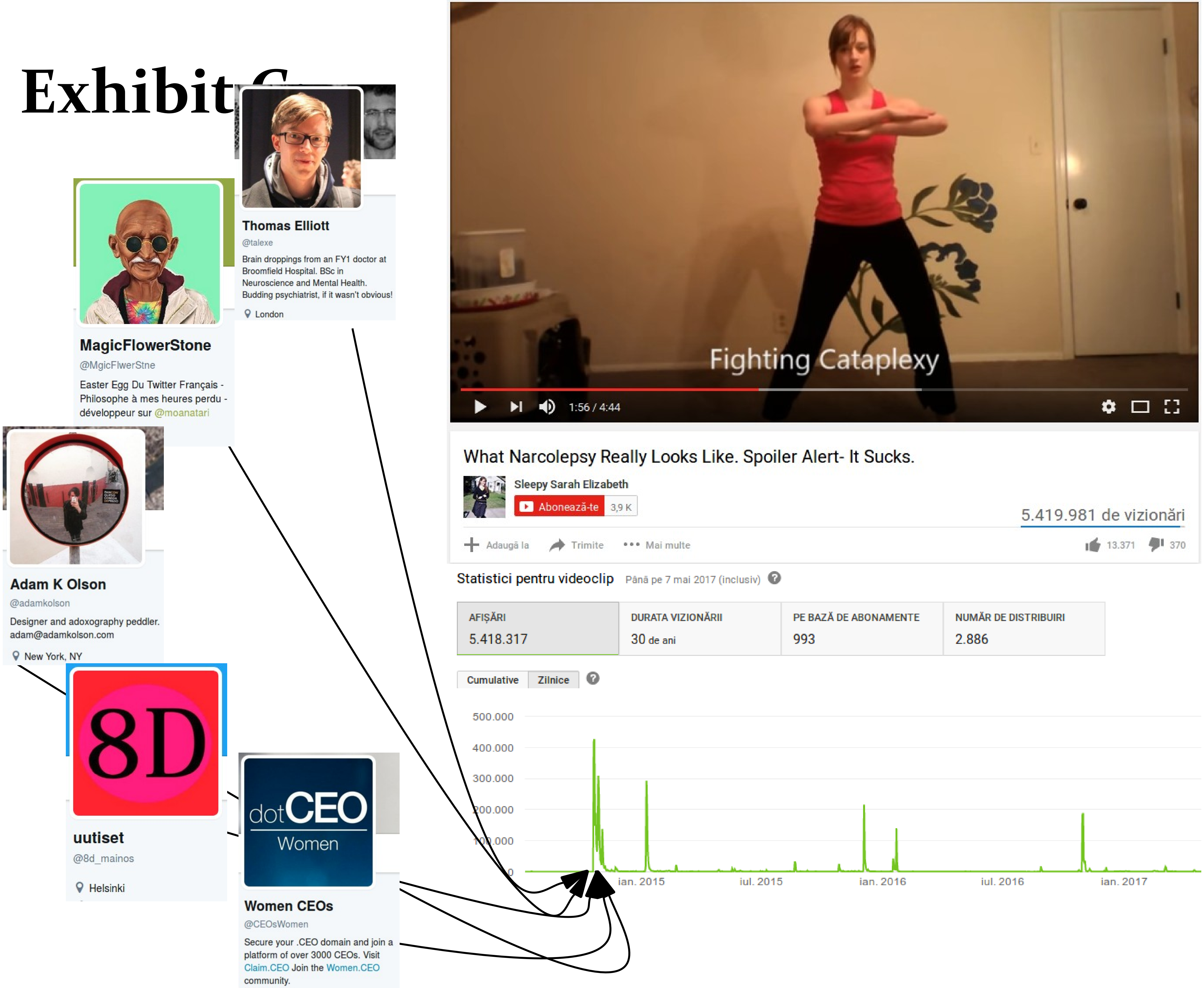

2:30 / 4:09
Ellie Goulding - Love Me Like You Do (Official Video)
EllieGouldingVEVO
Abonează-te
7,2 mil.
1.445.44
Adaugă la
Trimite
Mai multe
Statistici pentru videoclip
Până pe 13 mai 2017 (inclusiv)
AFIȘĂRI
1.445.106.571
DURATA VIZIONĂRII
8.569 de ani
PE BAZĂ DE ABONAMENTE
482.943
NUMĂR DE DIS
7.879.908
Cumulative
Zilnice
7.500.000
6.000.000
4.500.000
3.000.000
1.500.000
0
iul. 2015
ian. 2016
TIED TO
A SALLOW
HE
vevo
0:16 / 3:29
(From The "Fifty Shades Of Grey" Soundtrack)
22.467.729 de vizionări
106.146
2.356
NUMĂR DE DISTRIBUIRI
130.836
iul. 2016
ian. 2017
FIFTY SHADES OF GREY
ORIGINAL MOTION PICTURE SOUNDTRACK
Feb. 2015

Exhibit C:


Fighting Cataplexy
1:56 / 4:44
What Narcolepsy Really Looks Like. Spoiler Alert- It Sucks.
Sleepy Sarah Elizabeth
Abonează-te
3,9 K
5.419.981 de vizionări
Adaugă la
Trimite
Mai multe
13.371
370
Statistici pentru videoclip
Până pe 7 mai 2017 (inclusiv)
AFIȘĂRI
5.418.317
DURATA VIZIONĂRII
30 de ani
PE BAZĂ DE ABONAMENTE
993
NUMĂR DE DISTRIBUIRI
2.886
Cumulative
Zilnice
500.000
400.000
300.000
200.000
100.000
0
ian. 2015
iul. 2015
ian. 2016
iul. 2016
ian. 2017

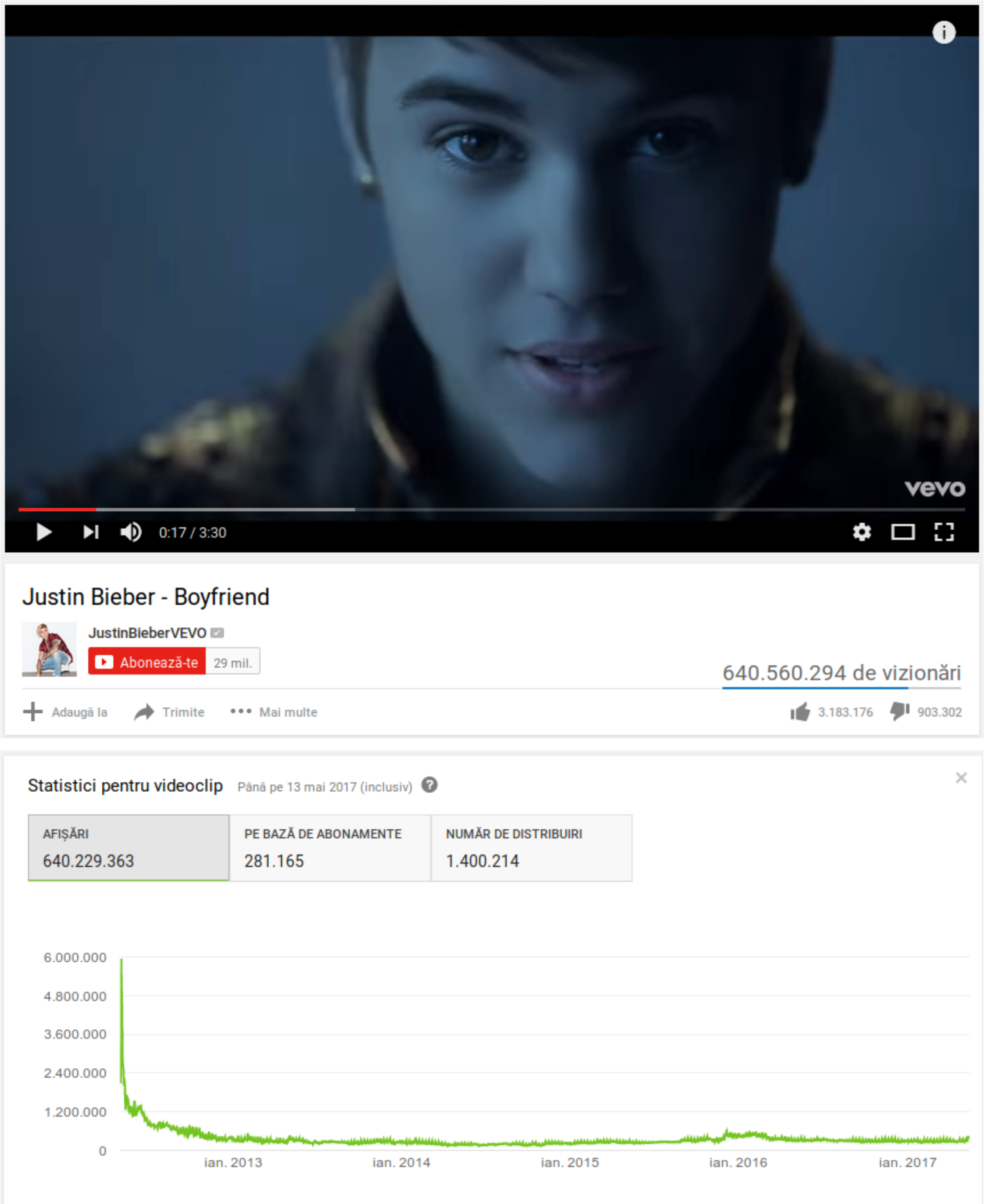
Exhibit C



Thomas Elliott
@talexe
Brain droppings from an FY1 doctor at Broomfield Hospital. BSc in Neuroscience and Mental Health. Budding psychiatrist, if it wasn't obvious!
London
MagicFlowerStone
@MgicFlwerStne
Easter Egg Du Twitter Français - Philosophe à mes heures perdu - développeur sur @moanatari
Adam K Olson
@adamkolson
Designer and adoxography peddler. adam@adamkolson.com
New York, NY
8D
uutiset
@8d_mainos
Helsinki
dotCEO Women
Women CEOs
@CEOsWomen
Secure your .CEO domain and join a platform of over 3000 CEOs. Visit Claim.CEO Join the Women.CEO community.
Fighting Cataplexy
1:56 / 4:44
What Narcolepsy Really Looks Like. Spoiler Alert- It Sucks.
Sleepy Sarah Elizabeth
Abonează-te 3,9 K
5.419.981 de vizionări
Adaugă la
Trimite
Mai multe
13.371
370
Statistici pentru videoclip Până pe 7 mai 2017 (inclusiv)
AFIȘĂRI 5.418.317
DURATA VIZIONĂRII 30 de ani
PE BAZĂ DE ABONAMENTE 993
NUMĂR DE DISTRIBUIRI 2.886
Cumulative
Zilnice
500.000
400.000
300.000
200.000
100.000
0
ian. 2015
iul. 2015
ian. 2016
iul. 2016
ian. 2017

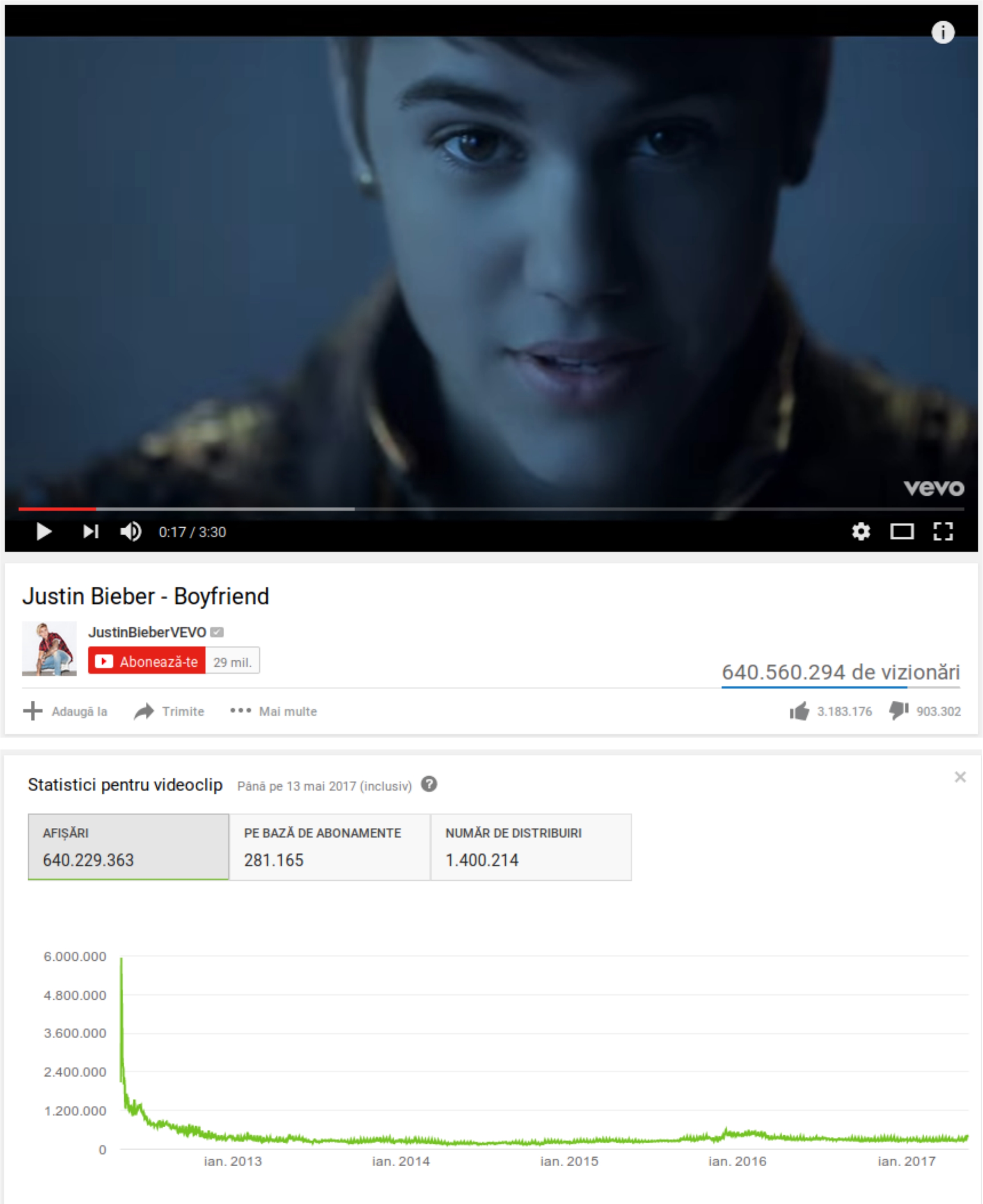
So… external influence and promotion are important for popularity

Exhibit D:

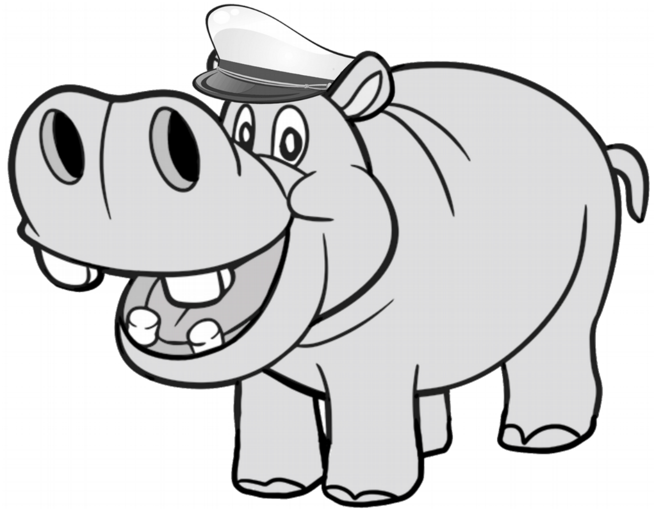

vevo
0:17 / 3:30
Justin Bieber - Boyfriend
JustinBieberVEVO
Abonează-te
29 mil.
640.560.294 de vizionări
Adaugă la
Trimite
Mai multe
3.183.176
903.302
Statistici pentru videoclip
Până pe 13 mai 2017 (inclusiv)
AFIȘĂRI
640.229.363
PE BAZĂ DE ABONAMENTE
281.165
NUMĂR DE DISTRIBUIRI
1.400.214
6.000.000
4.800.000
3.600.000
2.400.000
1.200.000
0
ian. 2013
ian. 2014
ian. 2015
ian. 2016
ian. 2017


vevo
0:55 / 8:09
The Beatles - Hey Jude
TheBeatlesVEVO
Abonează-te
824 K
58.072.863 de vizionări
Adaugă la
Trimite
Mai multe
276.429
9.368
Statistici pentru videoclip
Până pe 13 mai 2017 (inclusiv)
AFIȘĂRI
57.964.625
DURATA VIZIONĂRII
448 de ani
PE BAZĂ DE ABONAMENTE
35.272
NUMĂR DE DISTRIBUIRI
357.685
Cumulative
Zilnice
200.000
160.000
120.000
80.000
40.000
0
ian. 2016
apr. 2016
iul. 2016
oct. 2016
ian. 2017
apr. 2017

Exhibit D:

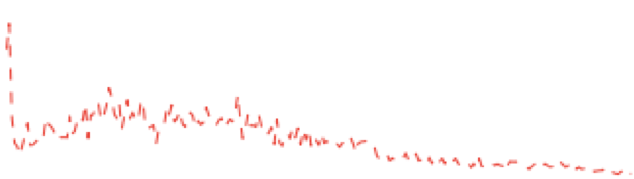


Videos seem to have an intrinsic quality

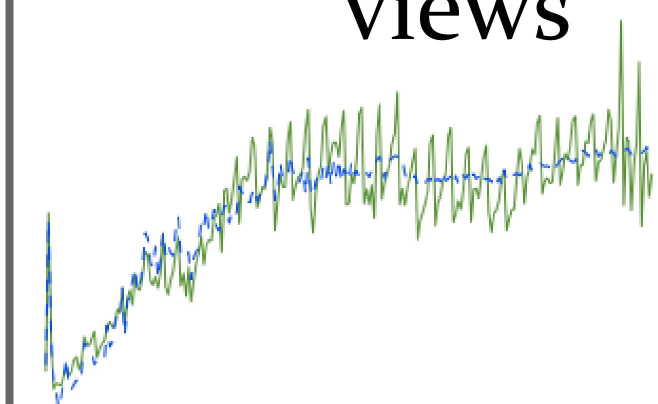


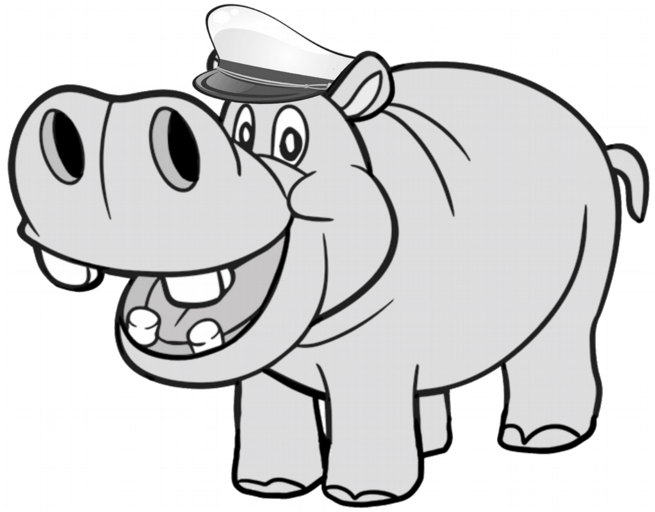
Building HIP:
Modeling and predicting popularity

shares & tweets



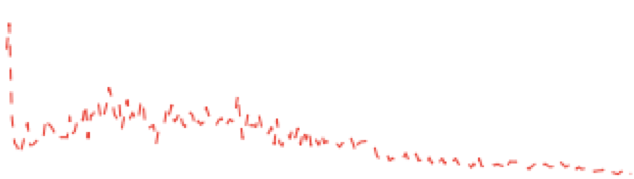
daily views

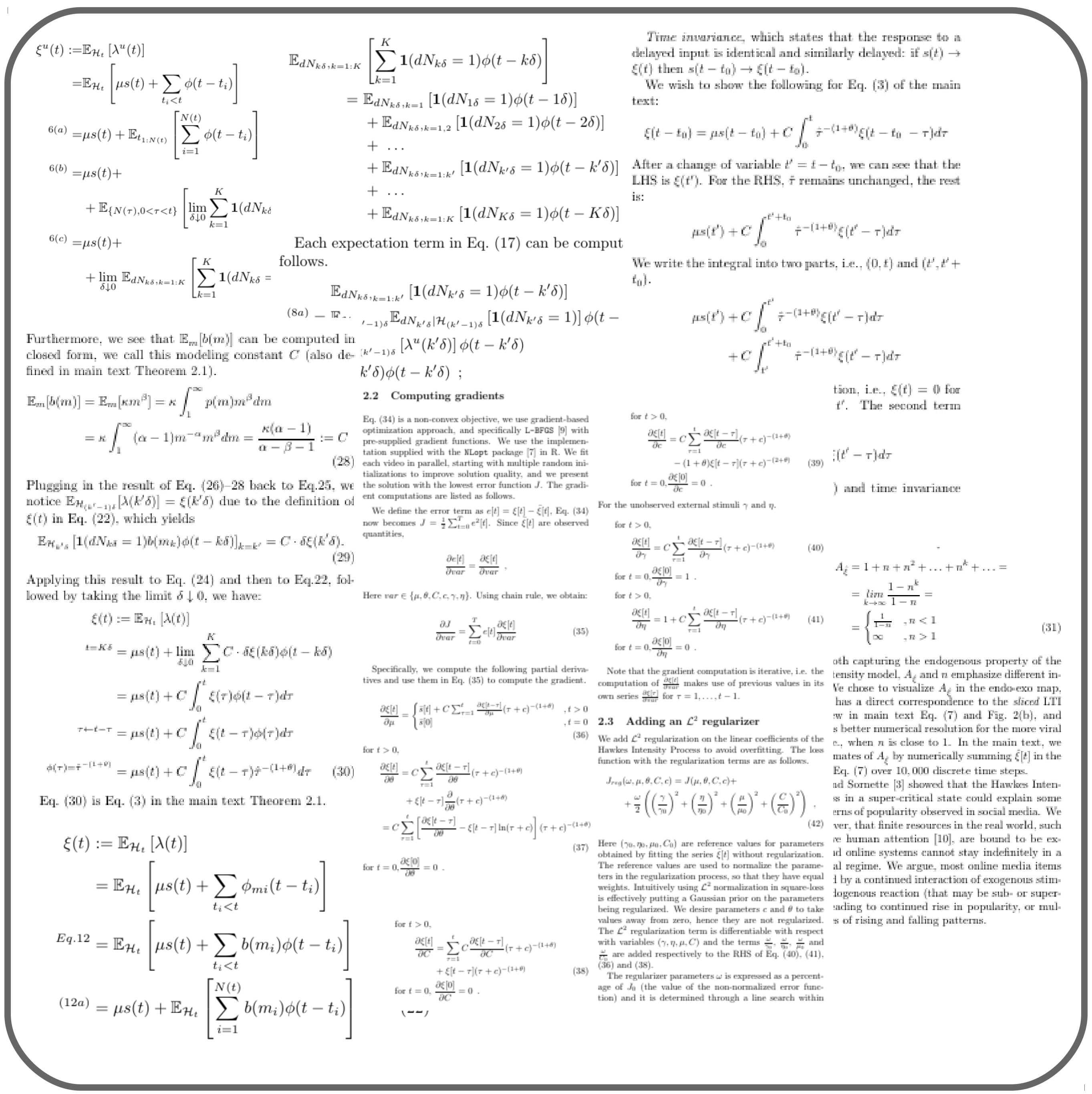




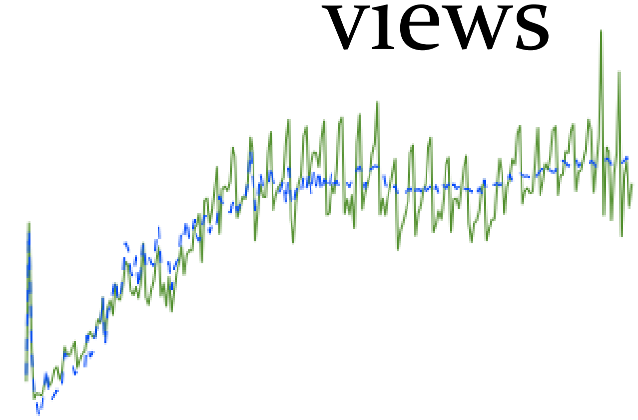
Building HIP:
Modeling and predicting popularity

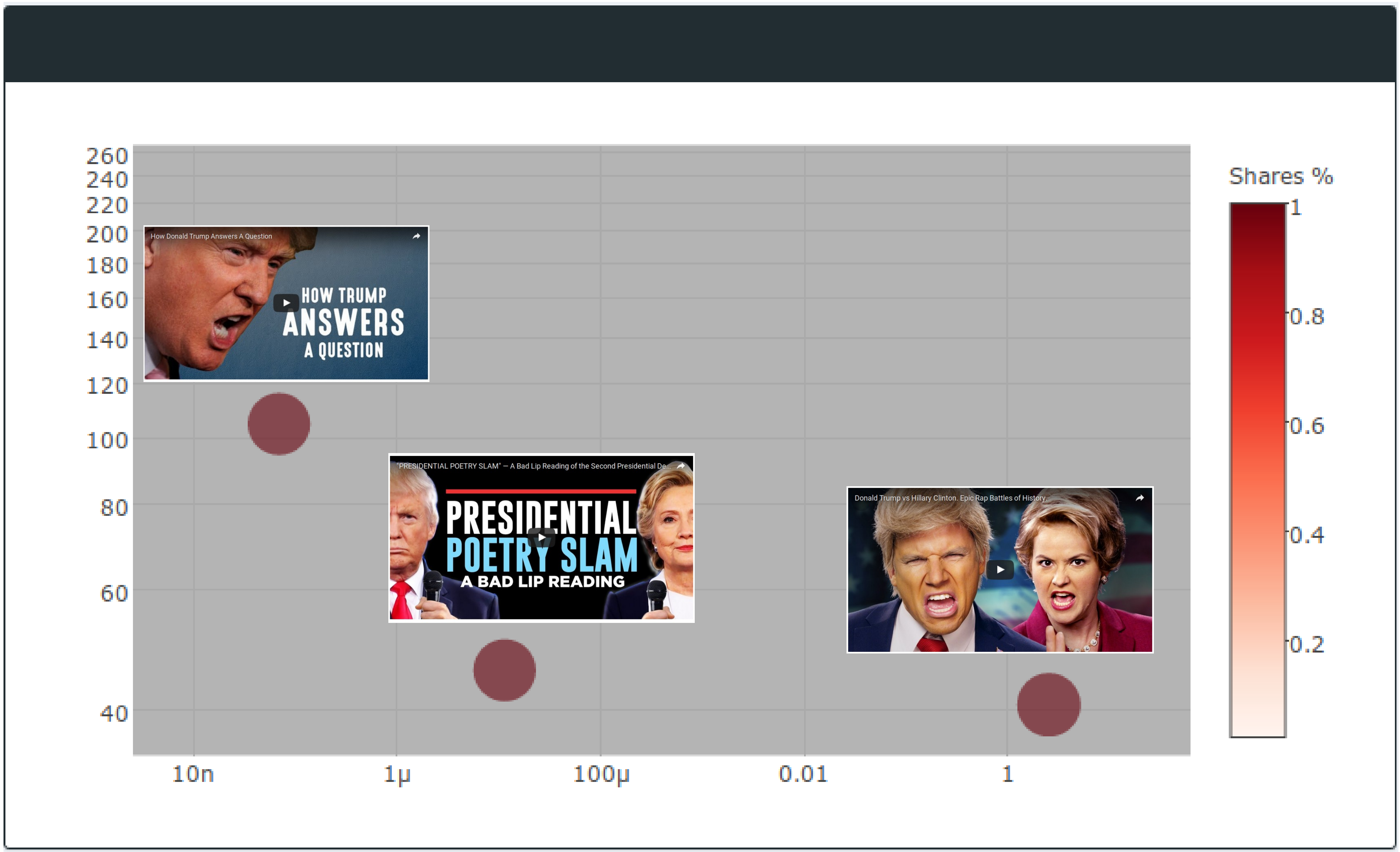
shares & tweets





daily views

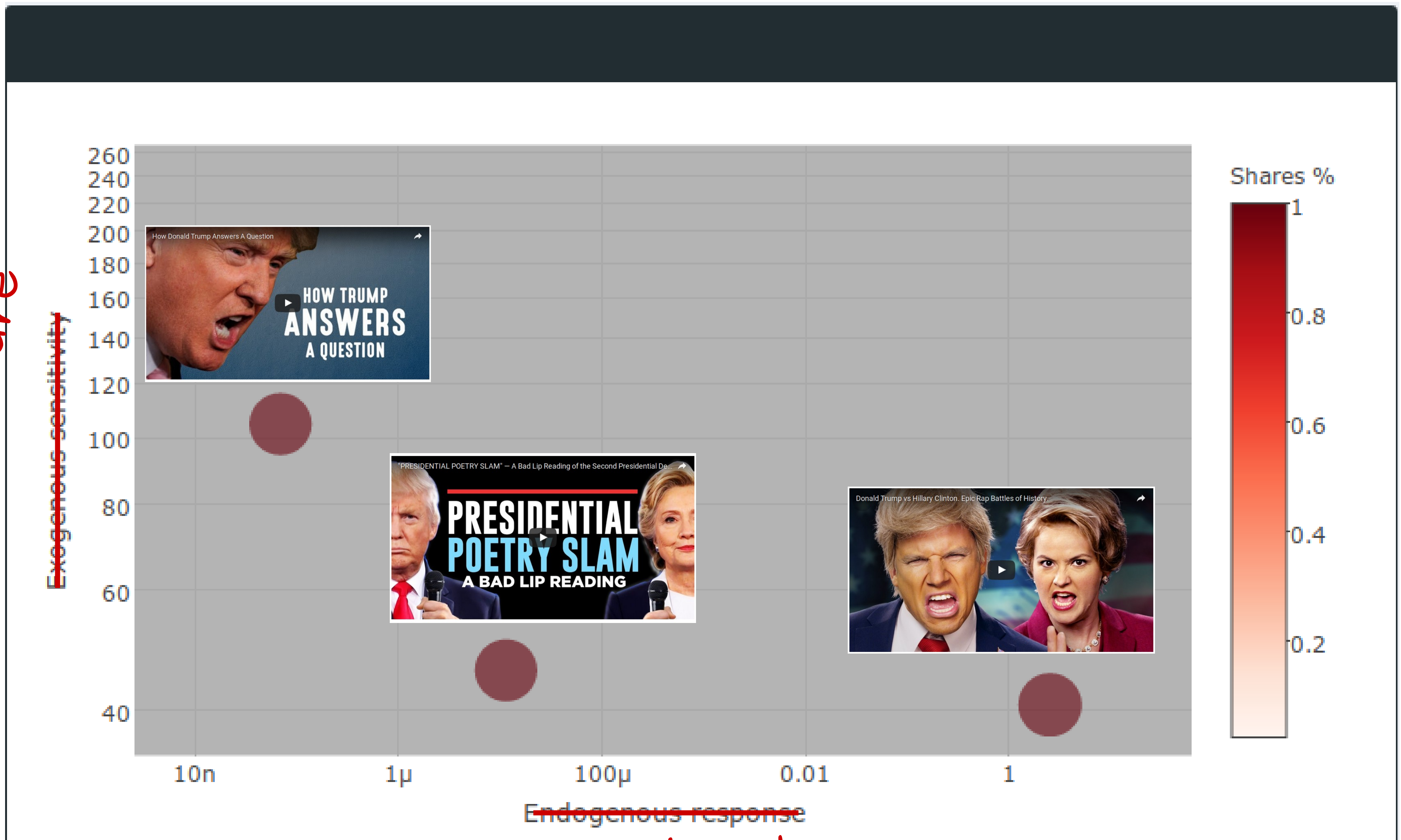




260
240
220
200
180
160
140
120
100
80
60
40
10n
1μ
100μ
0.01
1
Shares %
1
0.8
0.6
0.4
0.2
HOW TRUMP ANSWERS A QUESTION
PRESIDENTIAL POETRY SLAM
A BAD LIP READING

"what do people care about"

The ~~“endo-exo”~~ map

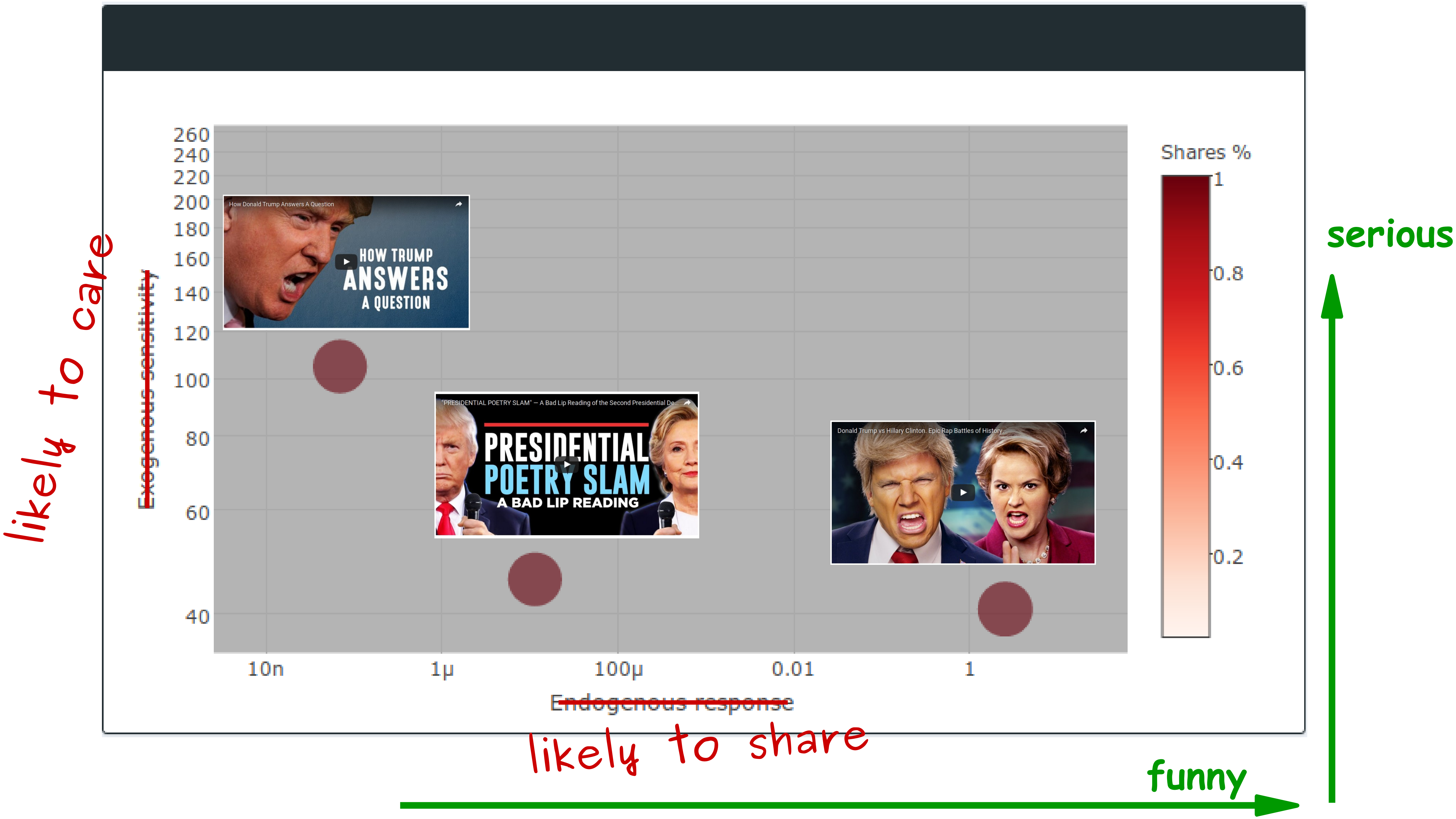


likely to care

likely to share

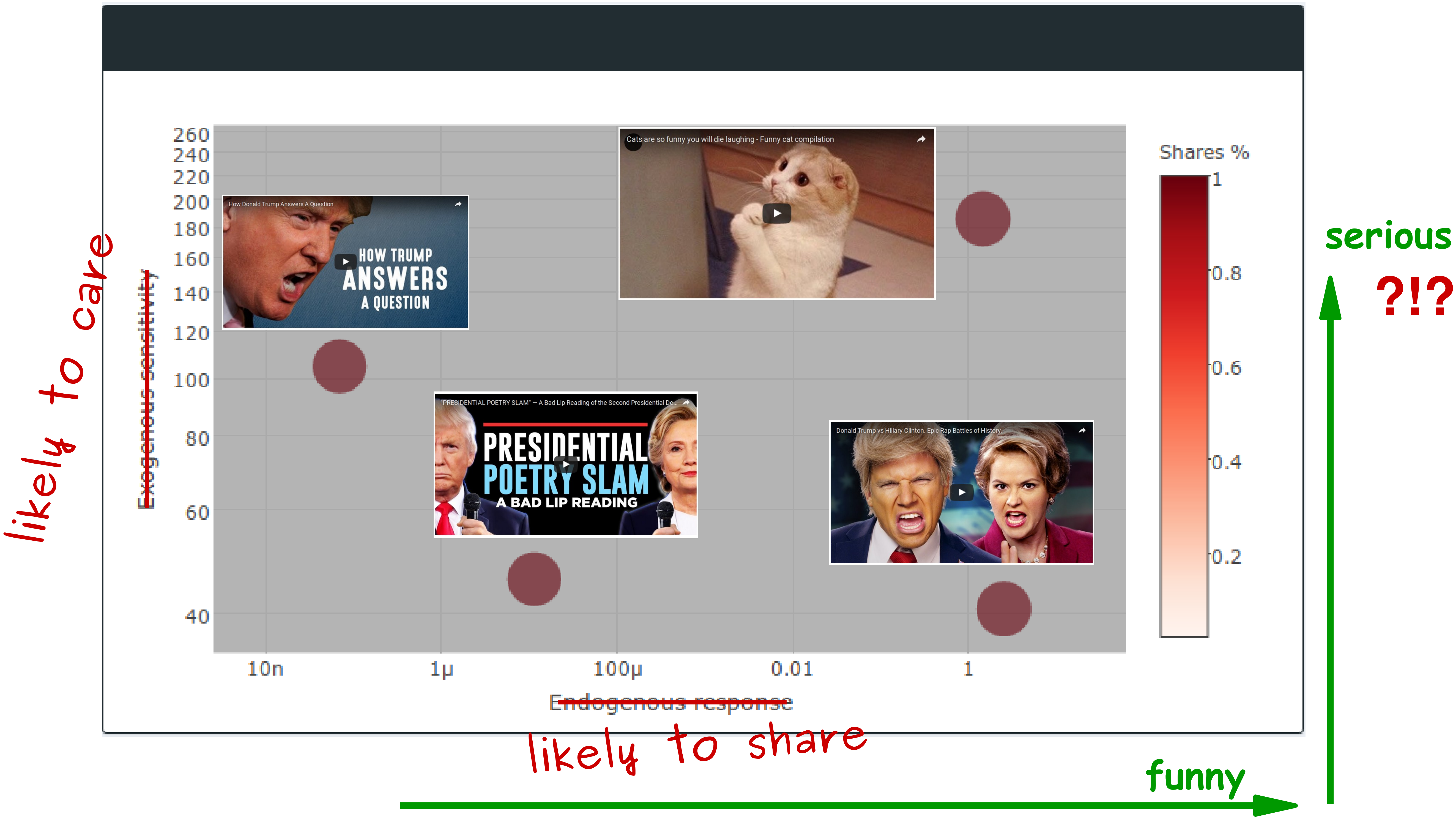
“what do people care about”

The ~~“endo-exo”~~ map



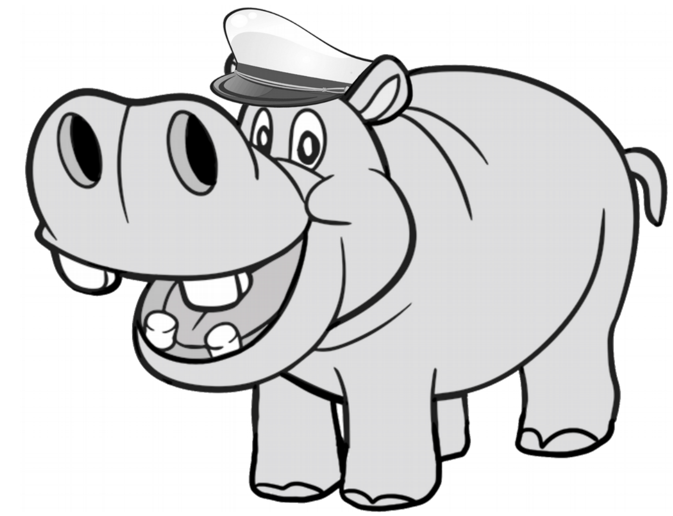
"what do people care about"

The ~~"endo-exo"~~ map



Conclusion:

Principled modeling of popularity



Empirical proof that people care more about …

than

"cat"wars

news & politics

Thank you!

Links:

Papers, code, dataset and interactive visualizer:

https://github.com/andrei-rizoiu/hip-popularity

Referece:

Rizoiu, M.-A., Xie, L., Sanner, S., Cebrian, M., Yu, H., & Van Hentenryck, P. (2017). **Expecting to be HIP: Hawkes Intensity Processes for Social Media Popularity**. In Proceedings of the *International Conference on World Wide Web 2017*, pp. 1-9. Perth, Australia. doi: 10.1145/3038912.3052650

pdf at arxiv with supplementary material

HIP visualization system

This is an *interactive* visualization of the plots in the paper: the endo-exo map, observed and fitted popularity series and video metadata. It has additional visualizations of TED videos and VEVO musicians. Furthermore, it allows users to add and compare their own videos.

(access the visualizer by clicking on the thumbnail below)