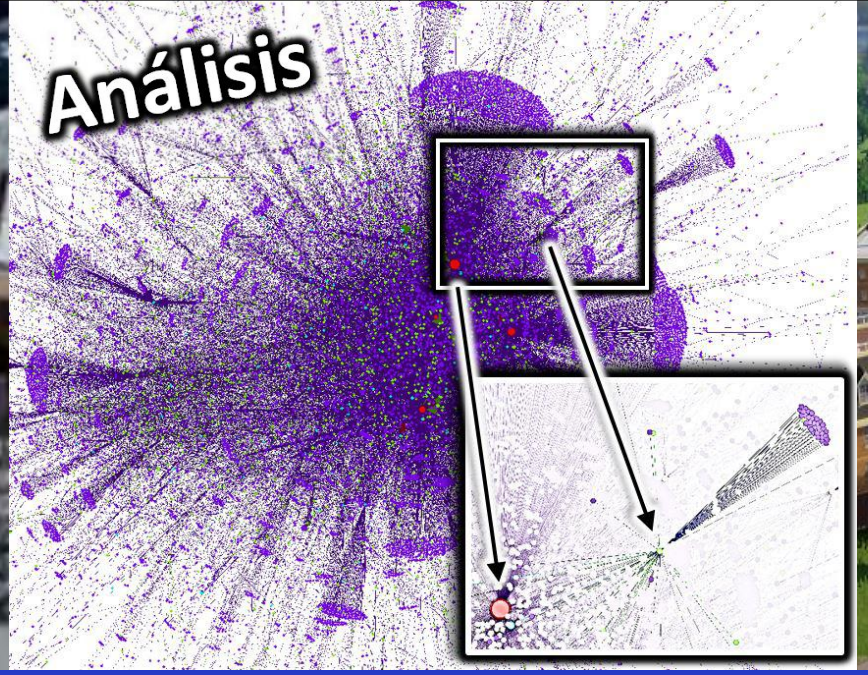

Entendiendo el Comportamiento Humano al Nivel de "una Ciencia"

Ciencia Social Computacional

UCDAVIS
UNIVERSITY OF CALIFORNIA

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FORTUNE 500 1955-2005 ▼

A database of 50 years of FORTUNE's list of America's largest corporations

View by year: 1955 ▼ View by company: A ▼

Full List | Companies | Profits | Assets | Current FORTUNE 500

1955 Full list

Current View: 1-100 ▼

FORTUNE 500 1955-2005 ▼

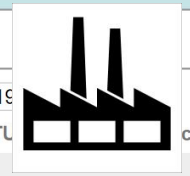
A database of 50 years of FORTUNE's list of Am…porations

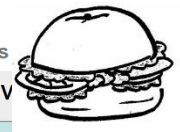
View by year: 1975 ▼ …pany: A ▼

Full List | Companies | Profits | Assets | Current FORTUNE 500

1975 Full list

Current View: 1-100 ▼





FORTUNE 500 19…

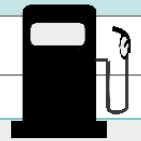
A database of 50 years of FORTU…ca's …ns

View by year: 1995 ▼ V… A ▼

Full List | Companies | Profits | Assets | Current FORTUNE 500

1995 Full list

Current View: 1-100 ▼



Rank	Company	Revenues ($ millions)	Profits ($ millions)
1	General Motors	154,951.2	4,900.6
2	Ford Motor	128,439.0	5,308.0
3	Exxon Mobil	101,459.0	5,100.0
4	Wal-Mart Stores	83,412.4	2,681.0
5	AT&T	75,094.0	4,676.0
6	General Electric	64,687.0	4,726.0
7	Intl. Business Machines	64,052.0	3,021.0
8	Mobil	59,621.0	1,079.0
9	Sears Roebuck	54,559.0	1,454.0
10	Altria Group	53,776.0	4,725.0

The 10 Most Valuable Companies on the Fortune 500

While Walmart is king on the Fortune 500, which ranks by revenue, investors see more promise in tech firms—bestowing Silicon Valley with some of the highest market values out there.

Value Rank ▼	Company	Market Value	Sector	Revenues (Bil)	F500 Rank
1	Apple	$921 bil.	Technology	$229 bil.	4
2	Amazon.com	$765 bil.	Retailing	$178 bil.	8
3	Alphabet	$750 bil.	Technology	$111 bil.	22
4	Microsoft	$746 bil.	Technology	$90 bil.	30
5	Facebook	$531 bil.	Technology	$41 bil.	76
6	Berkshire Hathaway	$492 bil.	Financials	$242 bil.	3
7	JPMorgan Chase & Co.	$388 bil.	Financials	$114 bil.	20
8	Exxon Mobil	$349 bil.	Energy	$244 bil.	2
9	Johnson & Johnson	$332 bil.	Health Care	$77 bil.	37
10	Bank of America Corp.	$315 bil.	Financials	$100 bil.	24

As of 5/21/2018

SOURCE: Fortune 500

FORTUNE

…aren't we all social scientists…?

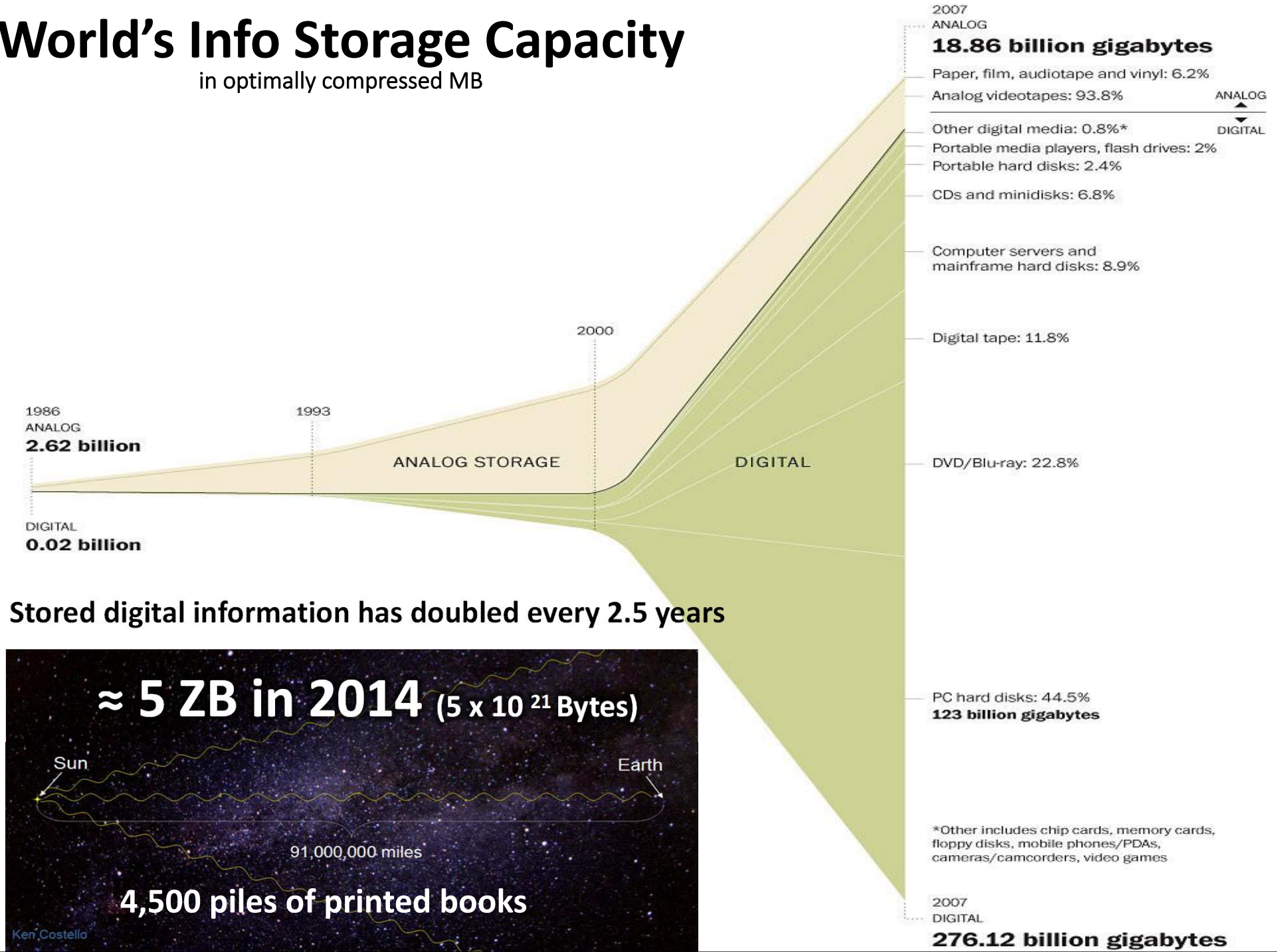
2005 announcement of
Pope Benedict XVI

2013 announcement of
Pope Francis

Source: http://www.businessinsider.com/vatican-square-2005-and-2013-2013-3

World's Info Storage Capacity

in optimally compressed MB



Hilbert & López (2011). The world's technological capacity to store, communicate and compute information. *Science*, 332, 6025, 60-65

www.martinhilbert.net/WorldInfoCapacity.html

Stored digital information has doubled every 2.5 years

Source: Stephens-Davidowitz, S. (2015). Searching for Sex. *The New York Times*. 2015, January 24. Rudder, C. Dataclysm: Who We Are. (Crown, 2014).

social *science*

a woman's age vs. the age of the men who look best to her

20	23
21	23
22	24
23	25
24	25
25	26
26	27
27	28
28	29
29	29
30	30
31	31
32	31
33	32
34	32
35	34
36	35
37	36
38	37
39	38
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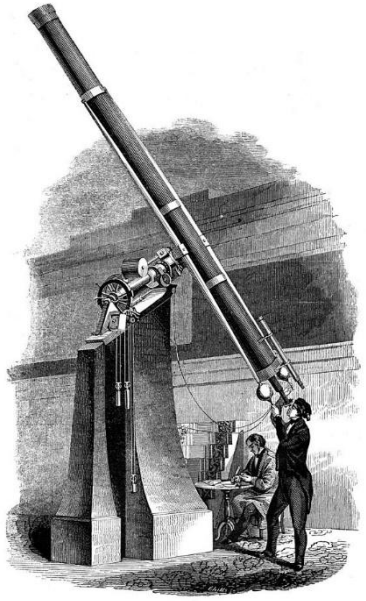
46	38
47	39
48	40
49	45
50	46



a man's age vs. the age of the women who look best to him

20	20
21	20
22	21
23	21
24	21
25	21
26	22
27	21
28	20
29	20
30	20
31	20
32	20
33	20
34	20
35	20
36	20
37	22
38	20
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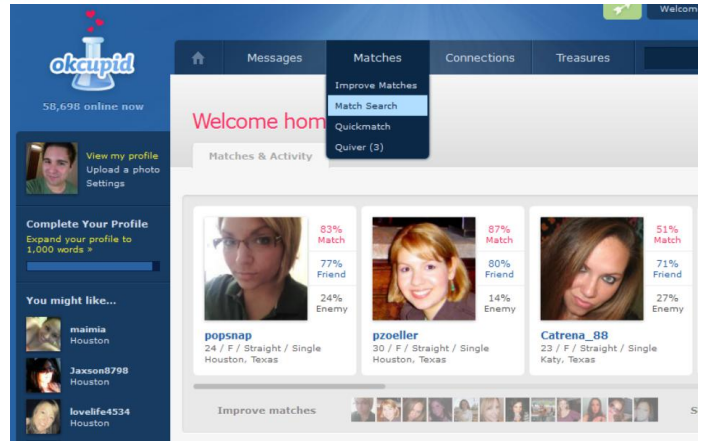
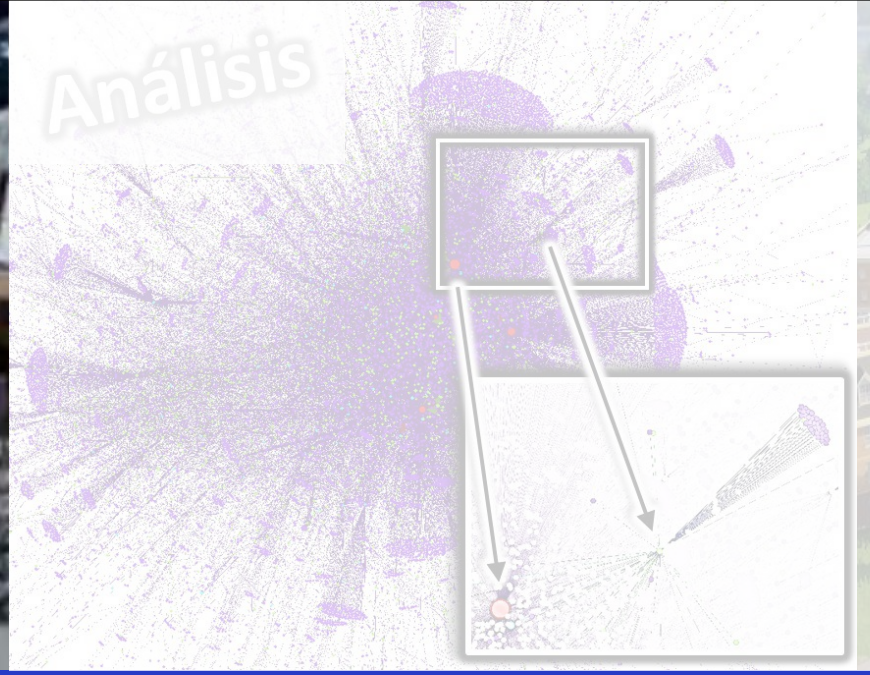
50	22





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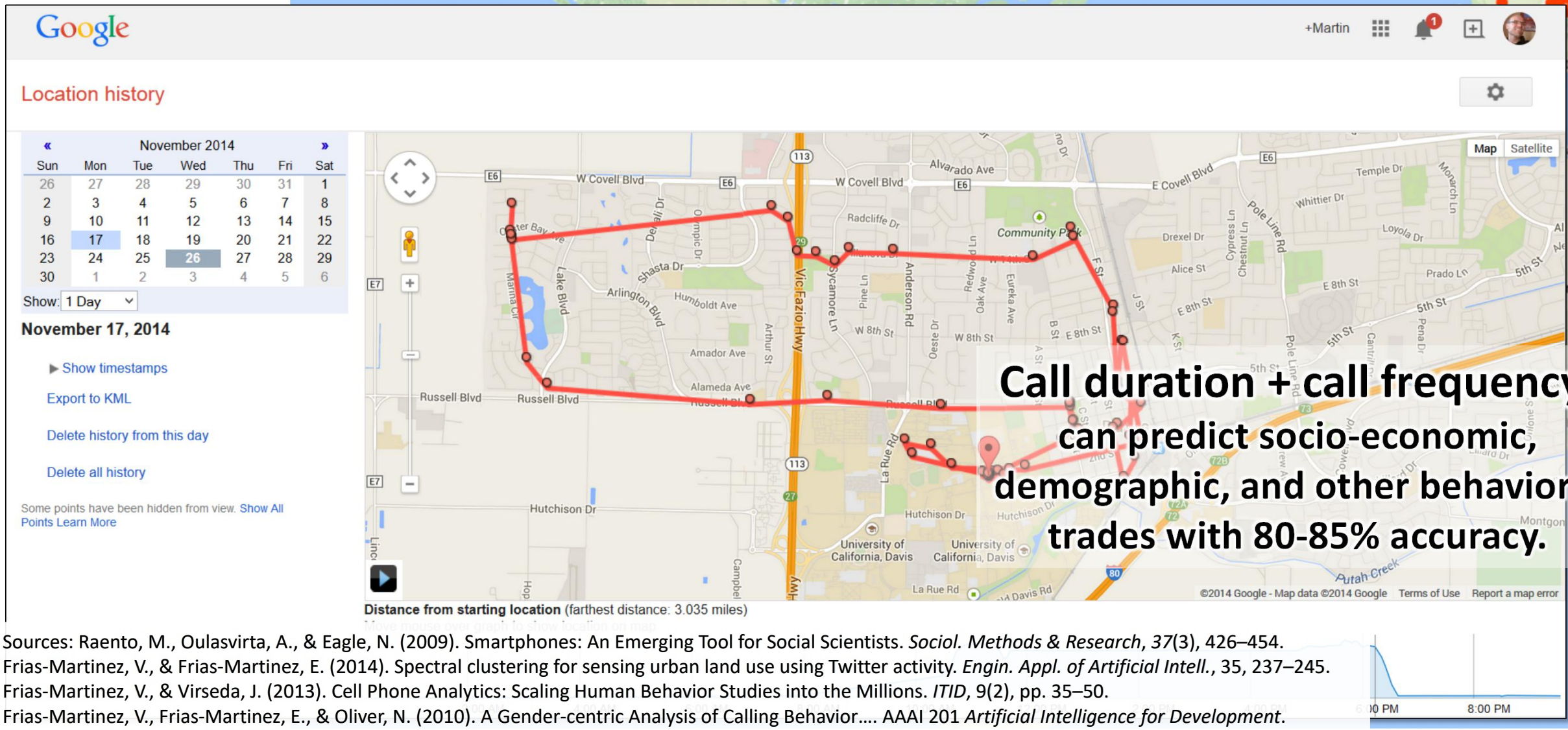
A.I. knows us

https://maps.google.com/locationhistory



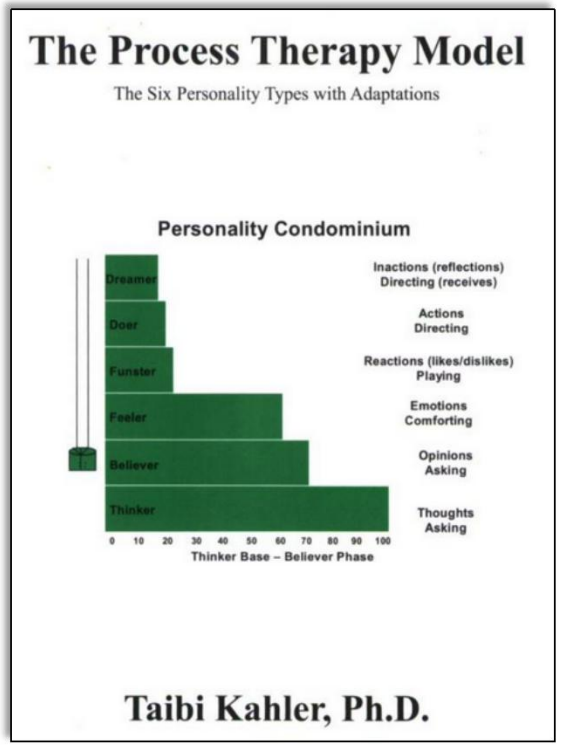
Call duration + call frequency:
can predict socio-economic, demographic, and other behavioral trades with 80-85% accuracy.

Sources: Raento, M., Oulasvirta, A., & Eagle, N. (2009). Smartphones: An Emerging Tool for Social Scientists. *Sociol. Methods & Research*, *37*(3), 426–454.
Frias-Martinez, V., & Frias-Martinez, E. (2014). Spectral clustering for sensing urban land use using Twitter activity. *Engin. Appl. of Artificial Intell.*, 35, 237–245.
Frias-Martinez, V., & Virseda, J. (2013). Cell Phone Analytics: Scaling Human Behavior Studies into the Millions. *ITID*, 9(2), pp. 35–50.
Frias-Martinez, V., Frias-Martinez, E., & Oliver, N. (2010). A Gender-centric Analysis of Calling Behavior…. AAAI 201 *Artificial Intelligence for Development*.
Blumenstock, J. E., Gillick, D., & Eagle, N. (2010). Who's Calling? Demographics of Mobile Phone Use in Rwanda. AAAI 201 *Artificial Intelligence for Development.*

A.I. knows us *in real-time*

Population driven by:

- **EMOTIONS (30%)**
- **THOUGHTS (25%)**
- **REACTIONS (20%)**
- **OPINIONS (10%)**
- **REFLECTIONS (10%)**
- **ACTIONS (5%)**



"This call might be recorded for quality and training purposes."

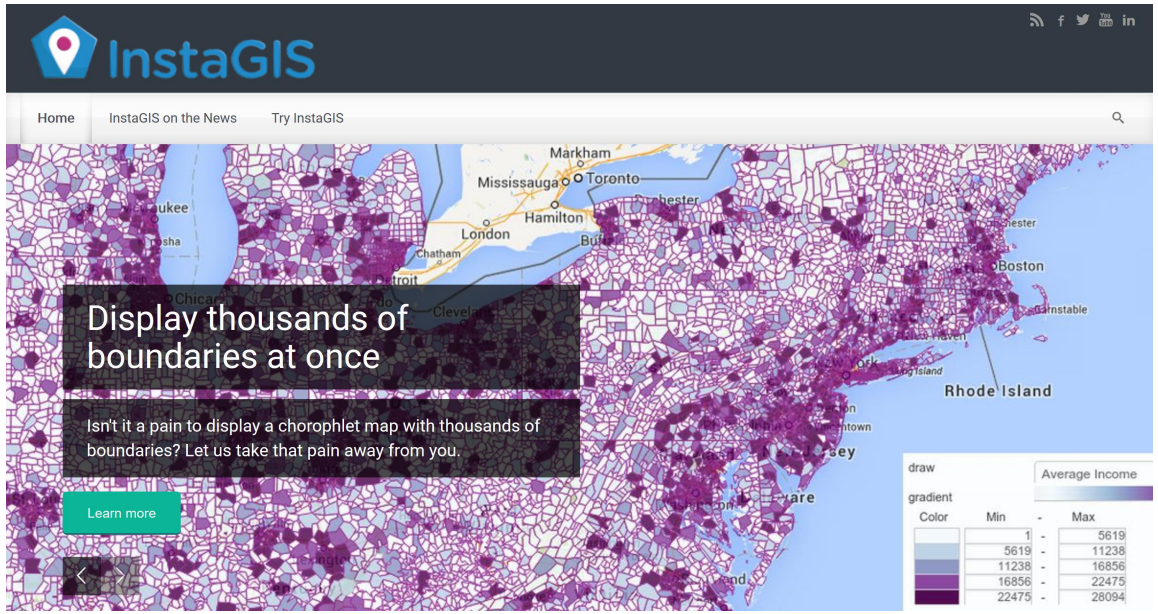
Matching Personality Types:

✓ Call average from 10 min to 5 min

✓ Customer Satisfaction from 47 % to 92%

http://www.eloyalty.com ; http://www.mattersight.com/ ; http://www.fastcompany.com/1706766/how-personality-test-designed-pick-astronauts-taking-pain-out-customer-support ; http://www.ssca.com/resources/articles/104-the-history-of-the-process-communication-model-in-astronaut-selection ; http://www.forbes.com/forbes/2011/0214/entrepreneurs-kelly-conway-software-eloyalty-your-pain.html
Cook, Scott (October 2013). "Personality Matters: Behavioral analytics is now a reality in contact centres". Direct Marketing Magazine 26 (3): 5.

From North to South



3 grupos: Piñeristas, Indecisos y Perdidos

Mostraban los errores del otro candidato (Guillier), como cuando dijo que "*hay que meterles la mano al bolsillo a los empresarios*", o profundizar en el concepto de una posible "Chilezuela" si salía electo.

Proyecto apoyado por

CORFO

Gobierno de Chile
gob.cl

Pesos 1,400 million = 2,304,148 US Dollar

LT LATERCERA Menú

Estás leyendo:

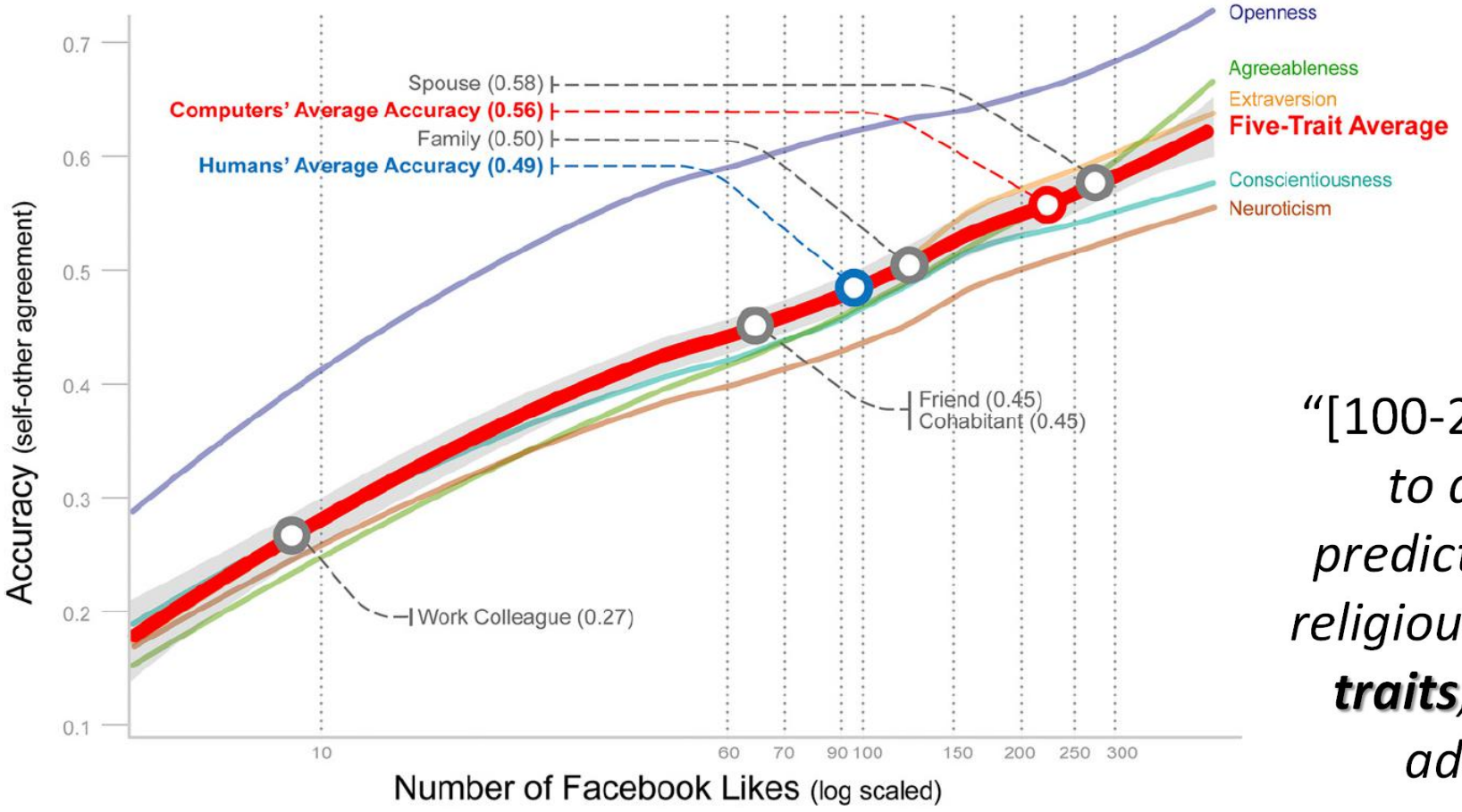
Piñera: viaje al corazón de su triunfo

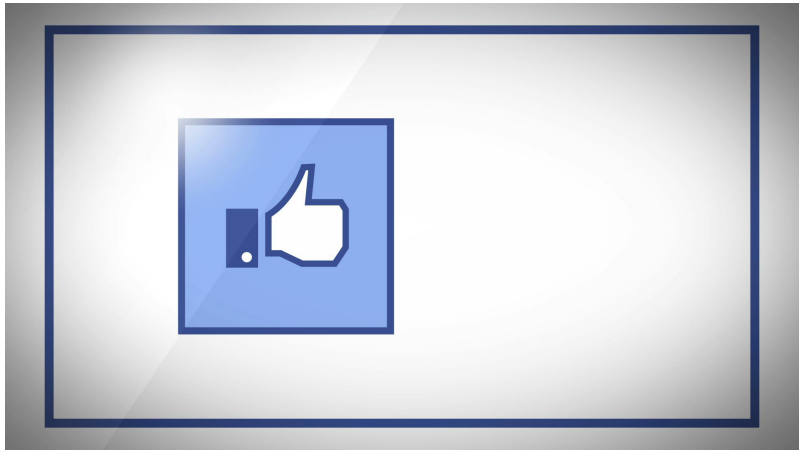
Sebastián Piñera la noche del 17 de diciembre, tras conocerse los resultados de la segunda vuelta presidencial.

La Tercera (2017). Piñera: viaje al corazón de su triunfo, http://www2.latercera.com/noticia/pinera-viaje-al-corazon-de-su-triunfo/

CIPER (2018). Instagis: el "gran hermano" de las campañas políticas financiado por Corfo, http://ciperchile.cl/2018/01/03/instagis-el-gran-hermano-de-las-campanas-politicas-financiado-por-corfo/

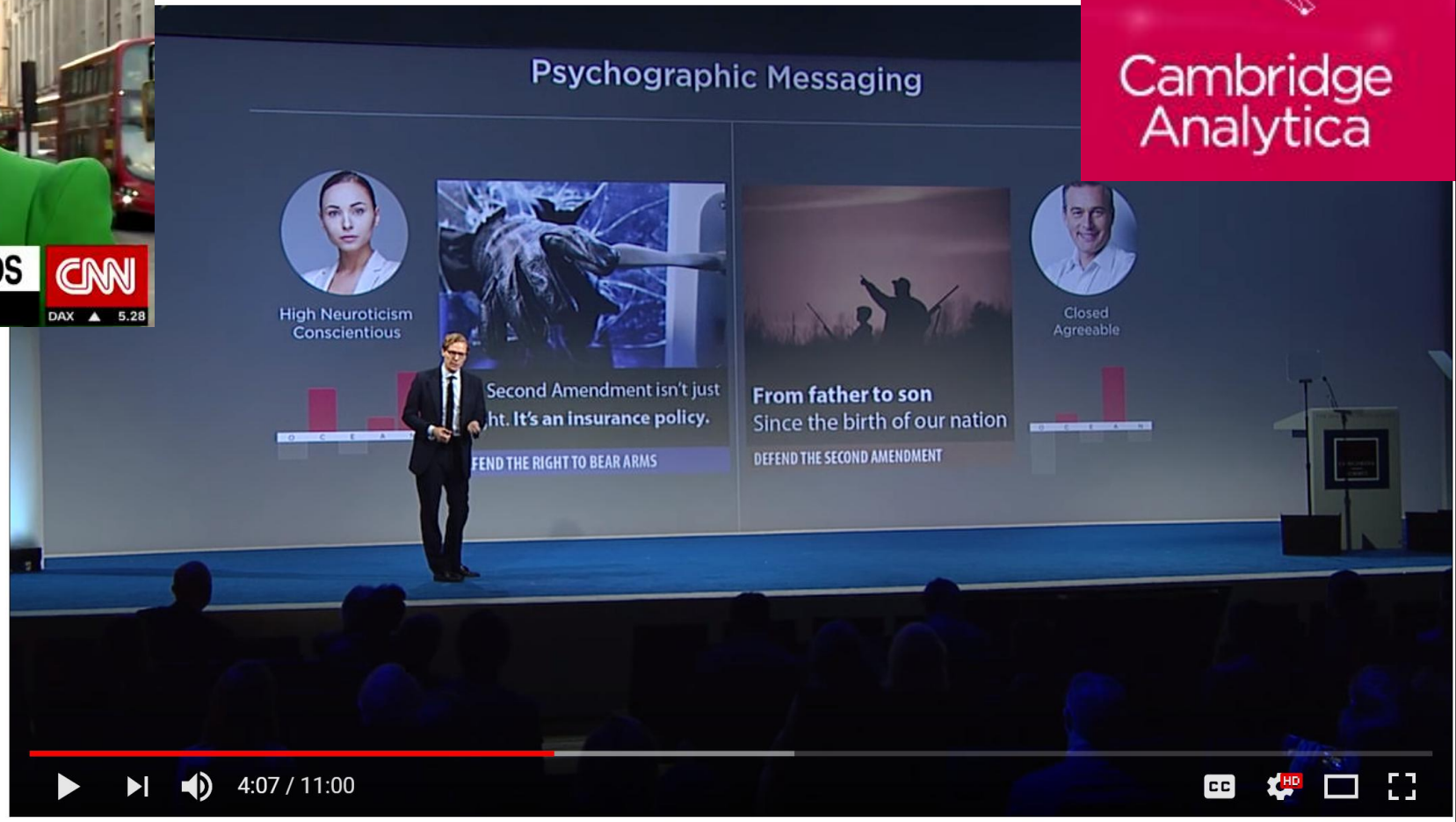
A.I. knows us *in real-time* better than we ourselves





"[100-250] *Facebook Likes, can be used to automatically and accurately predict…: sexual orientation, ethnicity, religious and political views,* ***personality traits****, intelligence, happiness, use of addictive substances, parental separation, age, and gender…*"

Source: Youyou, W., Kosinski, M., & Stillwell, D. (2015). Computer-based personality judgments are more accurate than those made by humans. *PNAS*, 201418680.
Kosinski, M., Stillwell, D., & Graepel, T. (2013). Private traits and attributes are predictable from digital records of human behavior. *PNAS*, *110*(15), 5802–5805.



Cambridge Analytica

The Power of Big Data and Psychographics

3rd TV debate: 175,000 variations of Trump's arguments
...differences in title, subtitle, color, picture, video, etc.

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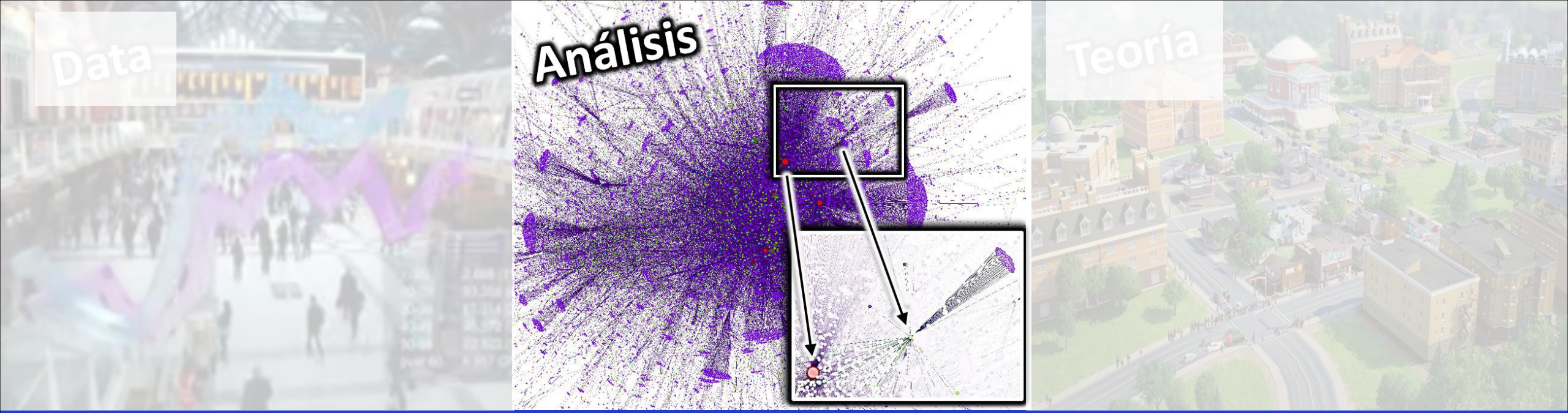
DELETE facebook

*"When you visit a site or app that uses our services, **we receive information even if you're logged out or don't have a Facebook account**. This is because other apps and sites don't know who is using Facebook"*
https://newsroom.fb.com/news/2018/04/data-off-facebook/



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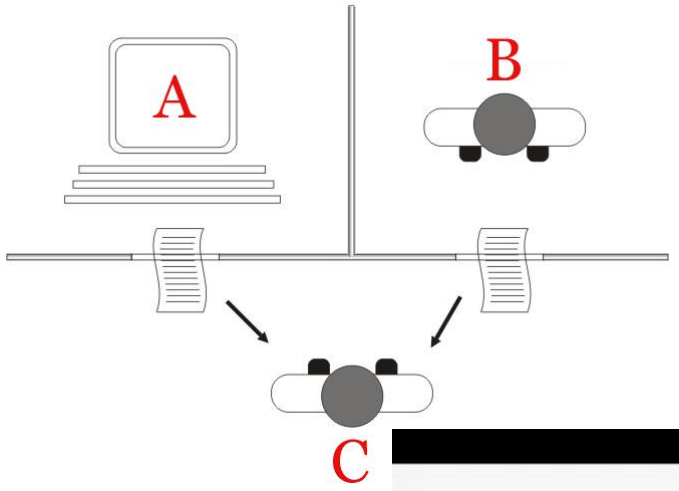


Turing Test

VOL. LIX. No. 236.] [October, 1950

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—COMPUTING MACHINERY AND INTELLIGENCE

BY A. M. TURING

Google DeepMind's
Deep Q-learning

The algorithm will play Atari breakout.

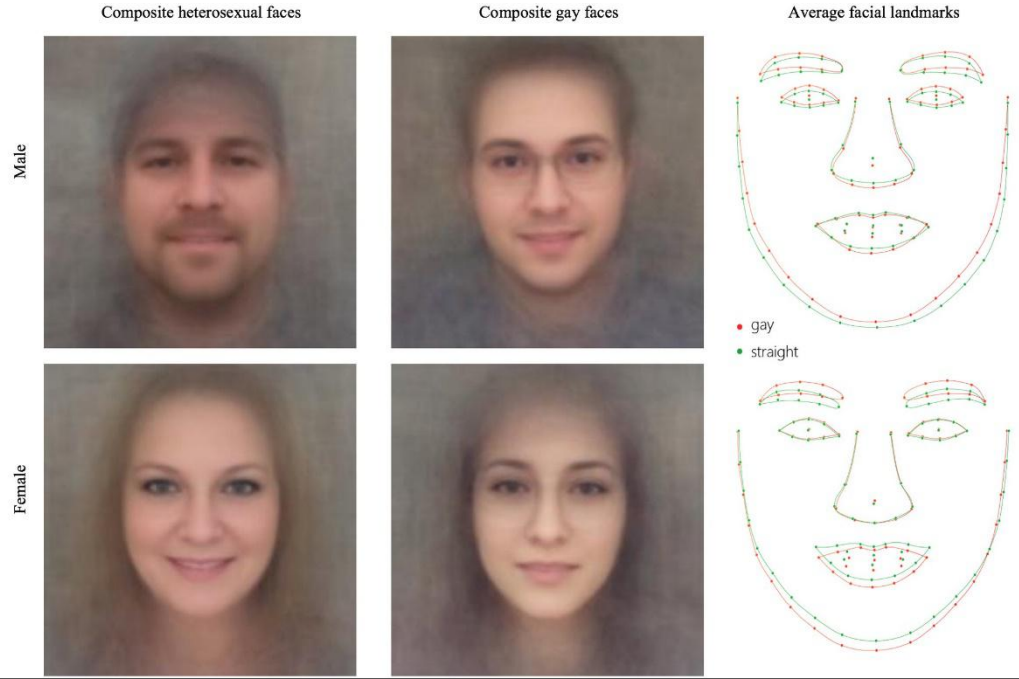
The most important thing to know is that all the agent is given is sensory input (what you see on the screen) and it was ordered to maximize the score on the screen.

No domain knowledge is involved! This means that the algorithm doesn't know the concept of a ball or what the controls exactly do.

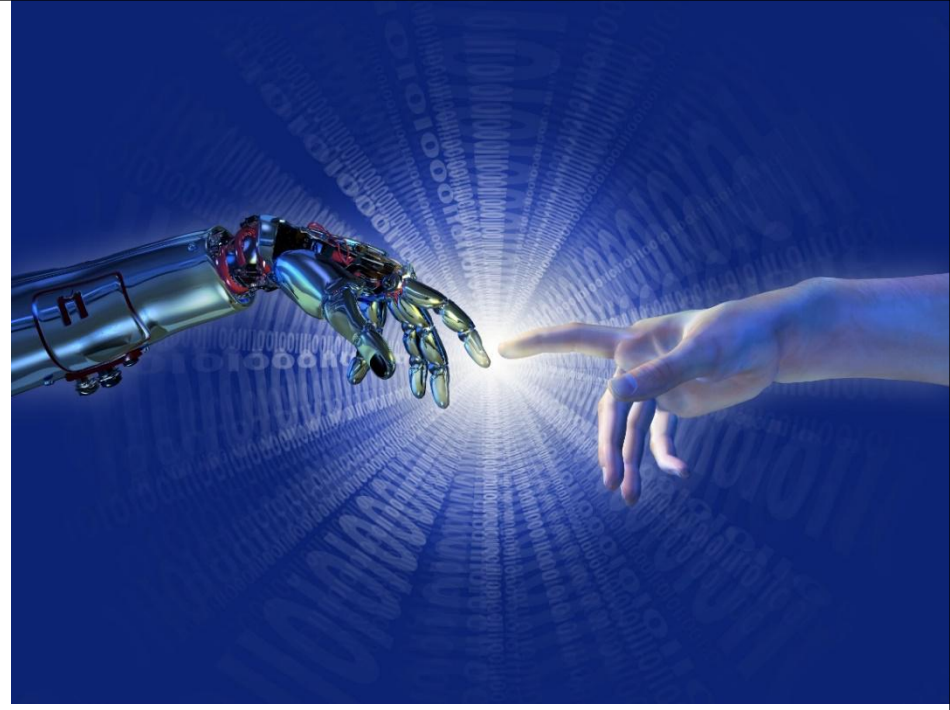
Wang & Kosinski (2017). **Deep neural networks are more accurate than humans at detecting sexual orientation from facial images**. *PsyArXiv*.

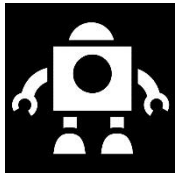
Art. IntI: men 81% ; women 71%
Human: men 61% ; women 54%

Source: Reddit

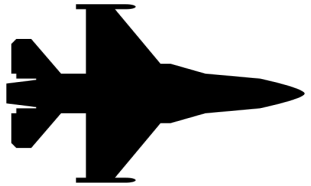


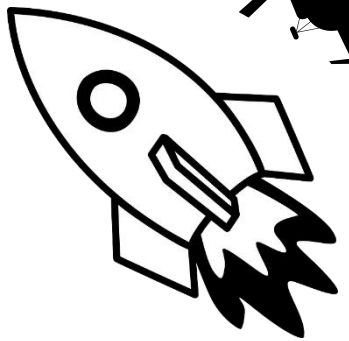
What is intelligence?



Intelligence:  **or**  **?**

Aerodynamics:  **or**  **?**





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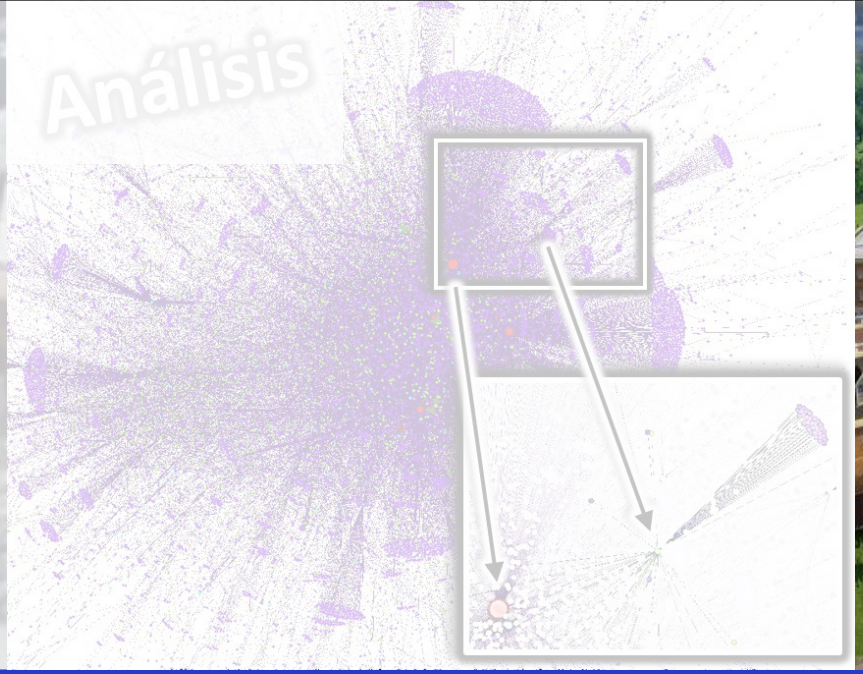

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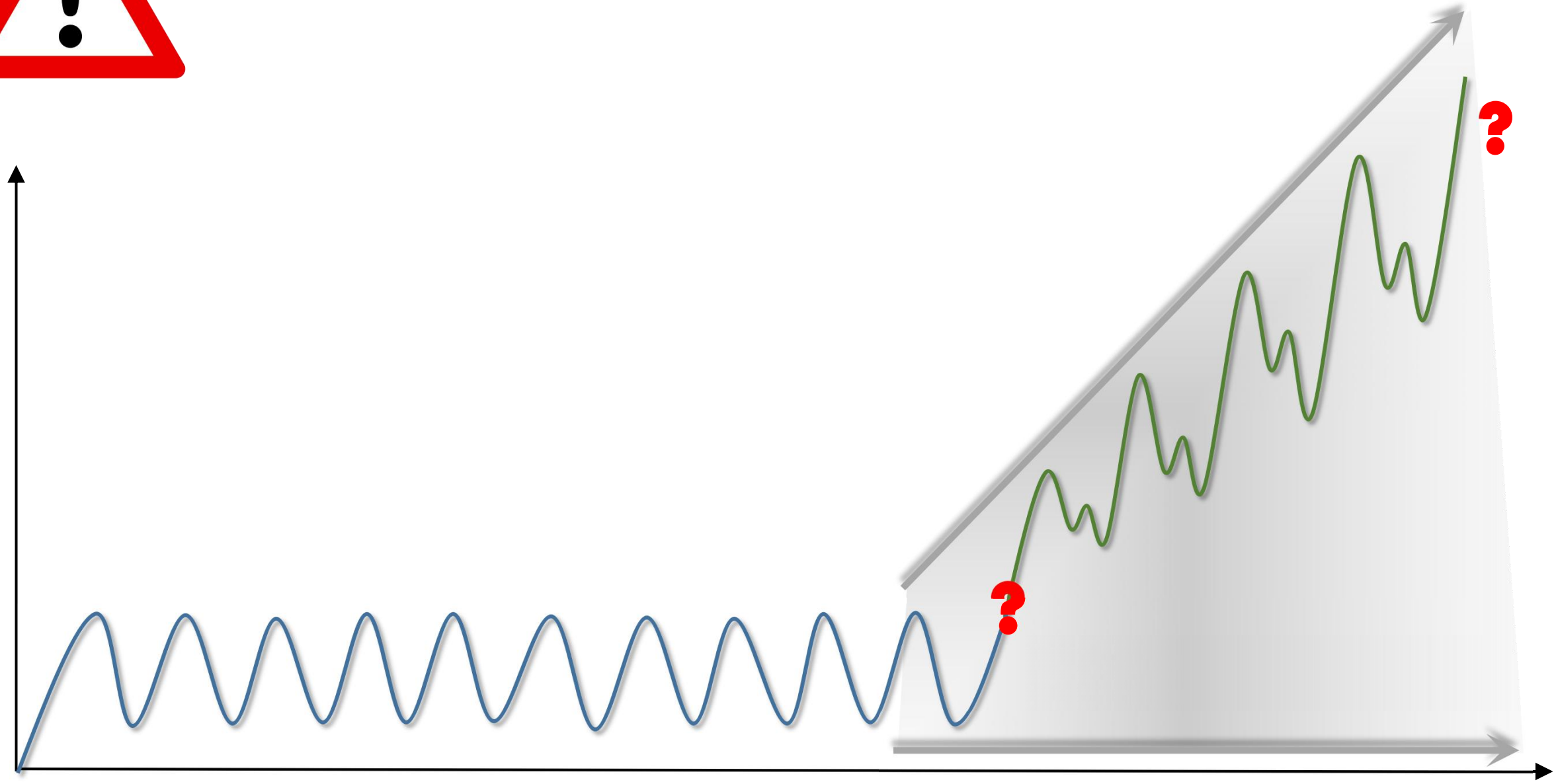
Past ≠ Future



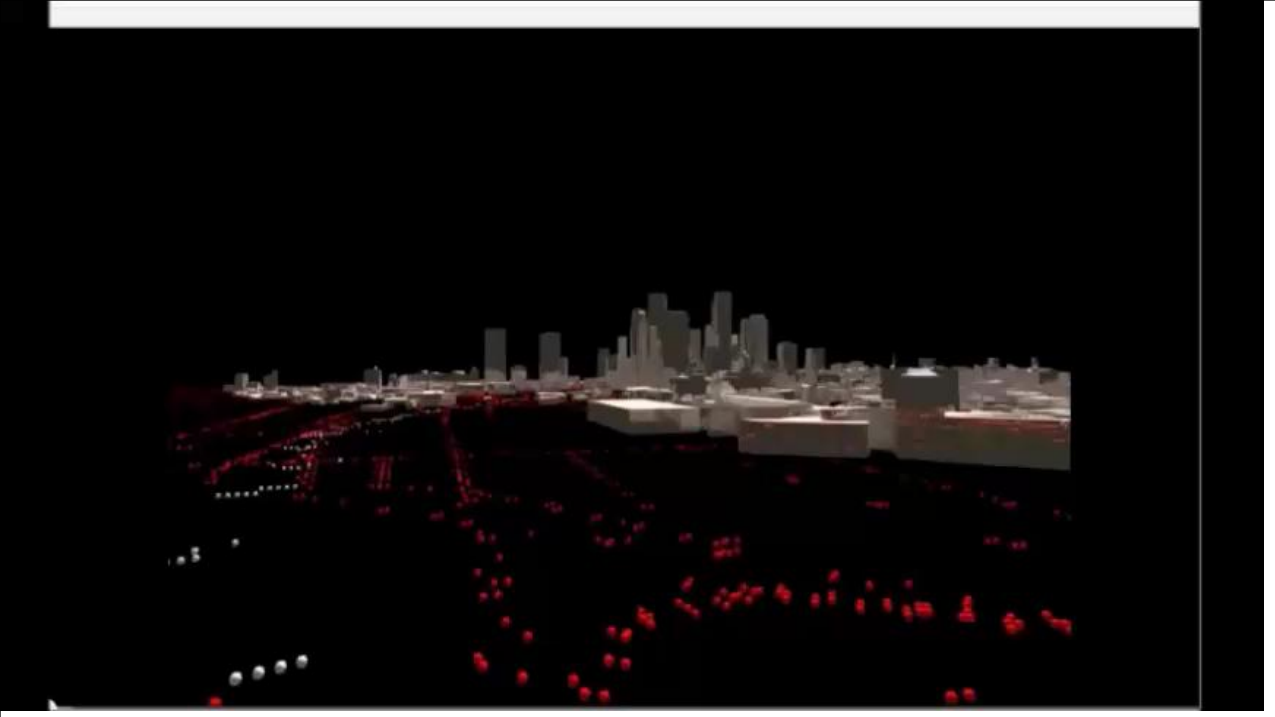
Past ≠ Future

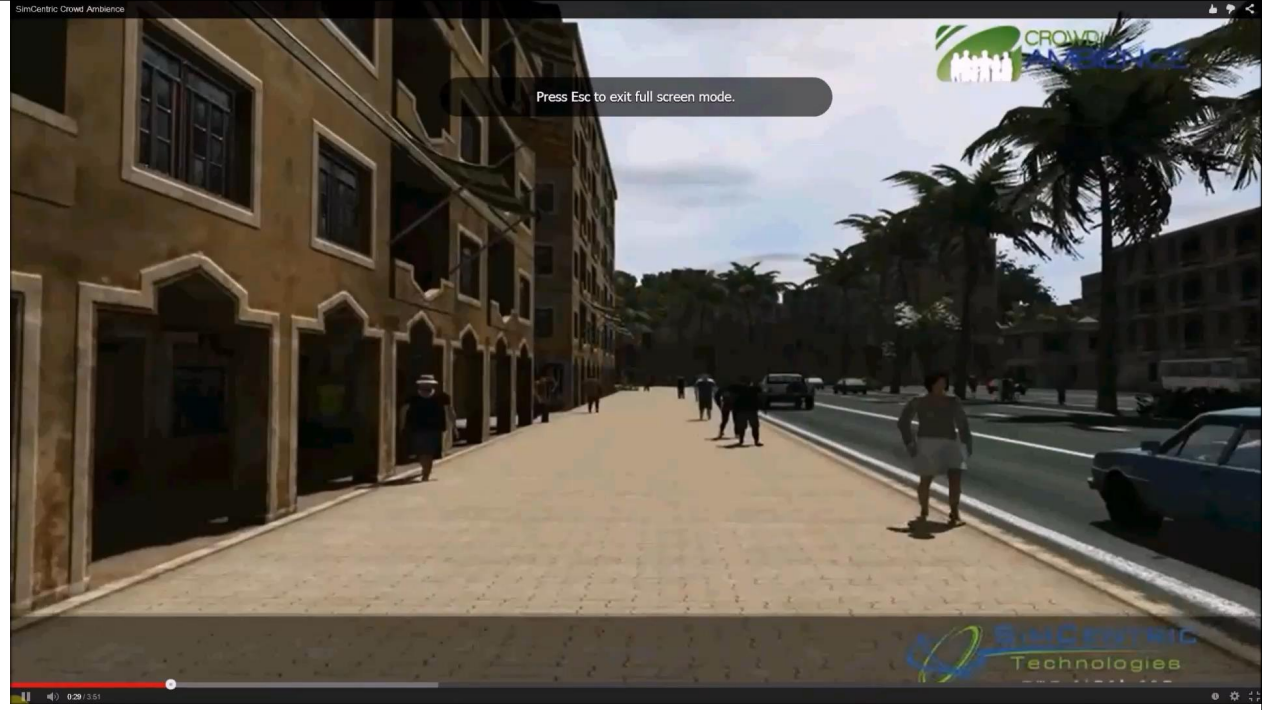
1989

2013

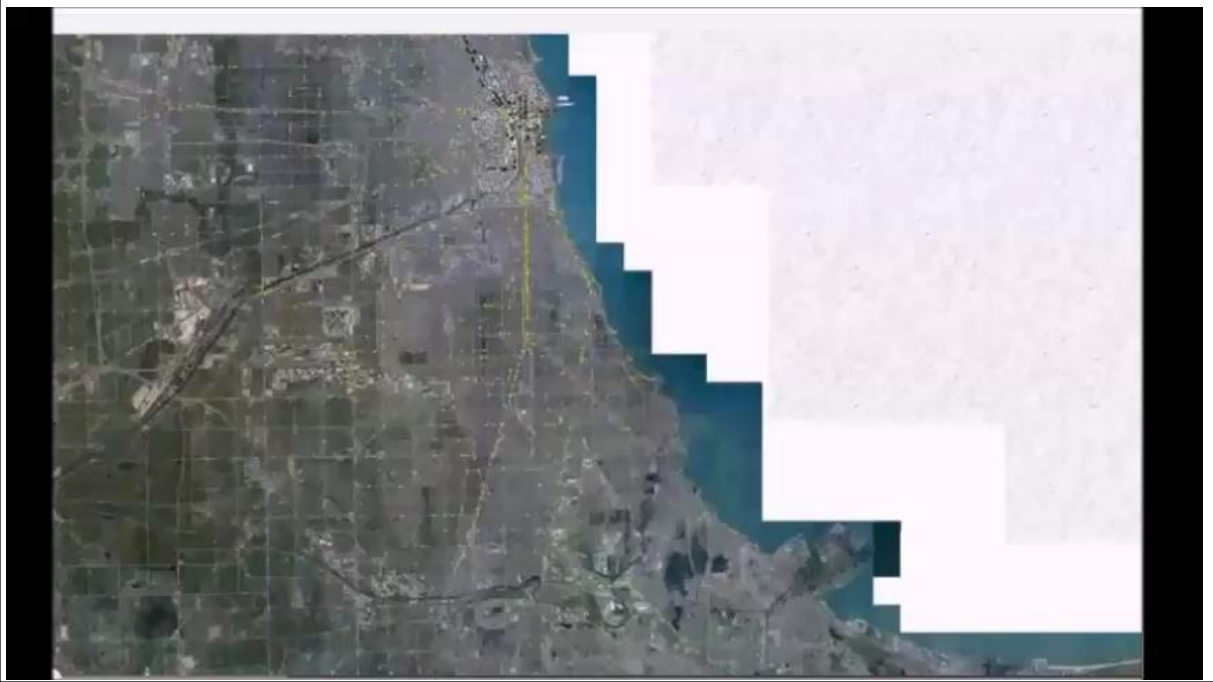
Wikipedia Commons

SIMCITY edu





Sources: Bohemia Interactive Simulations, http://youtu.be/G9P9bUTCdpA ; TRANSIMS: http://www.youtube.com/watch?v=mN7kq0ITAys ; Epstein, http://www.youtube.com/watch?v=wZZJCIGtVkw



Computational Social Science

ECONOMETRIC POLICY EVALUATION: A CRITIQUE

Robert E. Lucas, Jr.

"…any change in policy will systematically alter the structure of econometric models"
(1976)

Main References:

> Hilbert (2016). Big Data for Development: A Review of Promises and Challenges. ***Development Policy Review***, 34(1), 135–174. www.**MartinHilbert.net**/big-data-for-development/

> Hilbert, M. (2015). ICT4ICTD: Computational Social Science for Digital Development. 48th (HICSS) (pp. 2145–2157). ***IEEE Computer Society***. www.**MartinHilbert.net**/e-science-for-digital-development-ict4ict4d/

> Gillings, Hilbert & Kemp (2016). Information in the Biosphere: Biological and Digital Worlds. ***Trends in Ecology & Evolution***, *31(3), 180–189* www.**MartinHilbert.net**/information-in-the-biosphere/

> Hilbert & López (2011). The world's technological capacity to store, communicate and compute information. ***Science***, 332, 6025, 60-65 www.**MartinHilbert.net**/WorldInfoCapacity.html

> Hilbert (2016). The bad news is that the digital access divide is here to stay: Domestically installed bandwidths among 172 countries for 1986–2014. ***Telecommunications Policy***. www.**MartinHilbert.net**/the-bad-news-is-that-the-digital-access-divide-is-here-to-stay

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