

The Unreasonable Effectiveness of Empathy

the killer skill needed for a successful technical career

James (JD) Long
jdlong@gmail.com
@cmastication

The views shared here are mine and mine alone. They do not represent my employer or the nervous head of HR.

Data Scientists at Facebook Tried This One Crazy Trick...

you won't believe what happens next..

James (JD) Long
jdlong@gmail.com
@cmastication

Empathy



[show] Screenshot

Original author(s)	Xavier Claessens
Developer(s)	Guillaume Desmottes, Xavier Claessens
Stable release	3.12.12 ^[1] (May 13, 2016; 10 months ago) [±]
Repository	git.gnome.org/browse /empathy/tree/ 
Written in	C
Operating system	BSD, Linux, Other Unix- like
Available in	Multilingual
Type	Instant messaging client
License	GNU GPL
Website	wiki.gnome.org/Apps /Empathy 

Empathy



[show] Screenshots

Original author Clément Claeys, Clément Claessens

Developer(s) Clément Claeys, Clément Claessens, Clément Desmottes, Clément Claessens

Stable release 3.16.0 (2016; 10 months)

Repository git.gnome.org/projects/gnome-empathy/tree

Written in C

Operating system(s) BSD, Linux, Other Unix-like

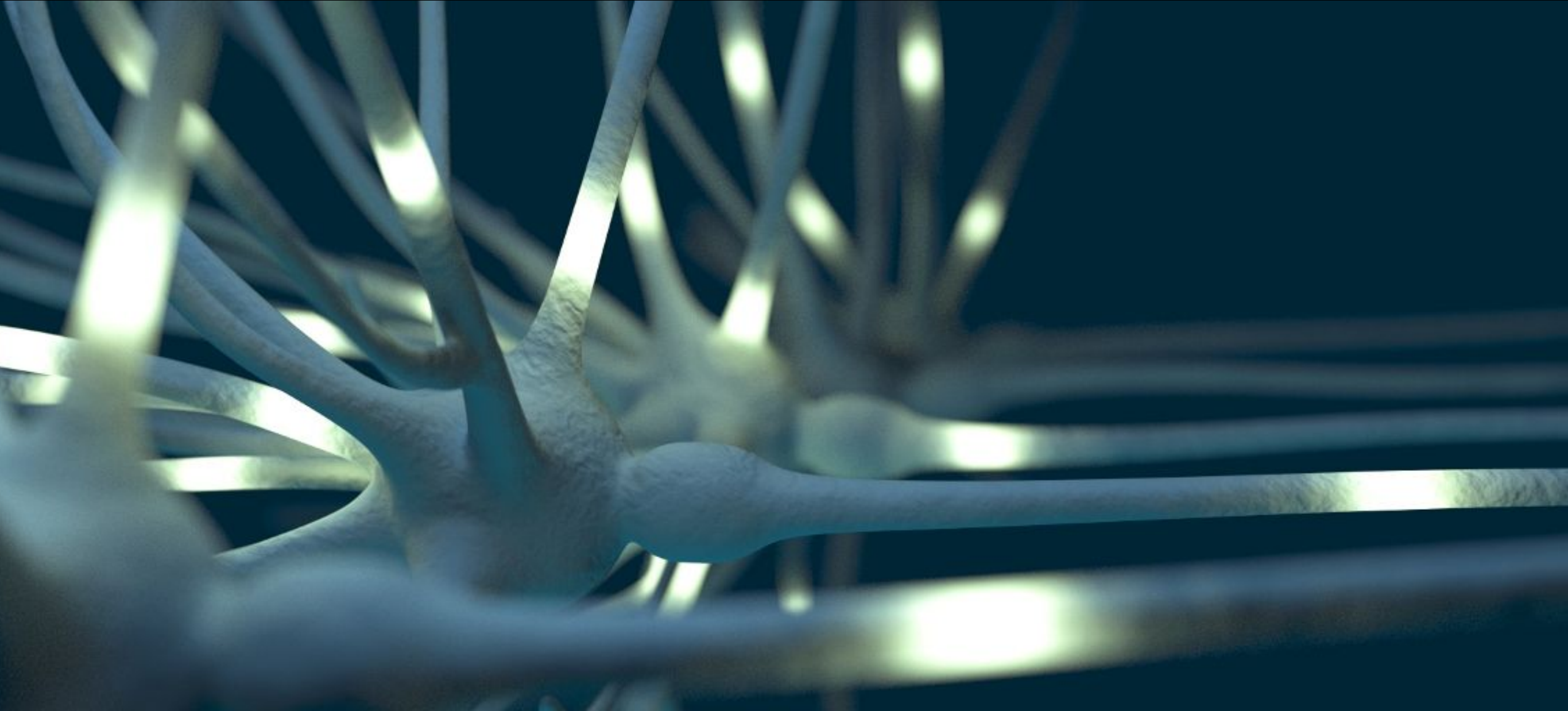
Available in

Type

License GNU GPL

Website wiki.gnome.org/Apps/Empathy

Deep Neural Networks...

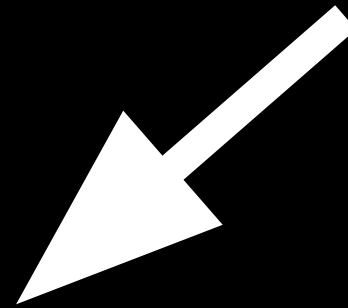


	0	1	2	3
0	-0.274140	-2.544060	0.724327	1.344088
1	-0.560160	-1.019910	0.064280	0.002082
2	-1.119521	0.232990	-0.412569	1.295295
3	-0.090736	-1.556869	0.841812	-0.681560
4	-0.100407	-0.503683	-1.934268	-0.837495
5	-0.990312	-0.225124	0.140069	0.206859
6	-1.578600	0.979408	0.015439	-0.792552
7	0.555492	-0.427072	-0.427773	1.584727
8	0.122361	-2.348358	0.826647	-0.773280
9	0.453645	-0.067191	-2.086703	-0.520003
10	-2.654659	-1.137903	-0.265756	-0.268110
11	1.516900	0.521458	1.057861	-0.045171
12	-1.290155	0.166724	0.609786	0.411334
13	-0.376624	1.002287	-0.619147	1.753124
14	-1.096279	0.380609	0.317506	0.625451
15	-0.413306	-1.169322	-1.282923	1.126386
16	-0.263531	-0.322976	0.391444	-1.571013
17	-0.561142	-0.171507	-0.468457	-1.331300
18	-0.421069	1.713836	0.468582	-0.307107
19	-0.464433	0.515312	-0.301114	0.536334
20	0.385844	-0.231449	-0.024336	2.715544

Our Internal
Algo Gathers
Info and Trains
a Model

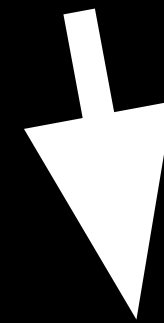
	0	1	2	3
0	-0.274140	-2.544060	0.724327	1.344088
1	-0.560160	-1.019910	0.064280	0.002082
2	-1.119521	0.232990	-0.412569	1.295295
3	-0.090736	-1.556869	0.841812	-0.681560
4	-0.100407	-0.503683	-1.934268	-0.837495
5	-0.990312	-0.225124	0.140069	0.206859
6	-1.578600	0.979408	0.015439	-0.792552
7	0.555492	-0.427072	-0.427773	1.584727
8	0.122361	-2.348358	0.826647	-0.773280
9	0.453645	-0.067191	-2.086703	-0.520003
10	-2.654659	-1.137903	-0.265756	-0.268110
11	1.516900	0.521458	1.057861	-0.045171
12	-1.290155	0.166724	0.609786	0.411334
13	-0.376624	1.002287	-0.619147	1.753124
14	-1.096279	0.380609	0.317506	0.625451
15	-0.413306	-1.169322	-1.282923	1.126386
16	-0.263531	-0.322976	0.391444	-1.571013
17	-0.561142	-0.171507	-0.468457	-1.331300
18	-0.421069	1.713836	0.468582	-0.307107
19	-0.464433	0.515312	-0.301114	0.536334
20	0.385844	-0.231449	-0.024336	2.715544

Me Data



Training Data!

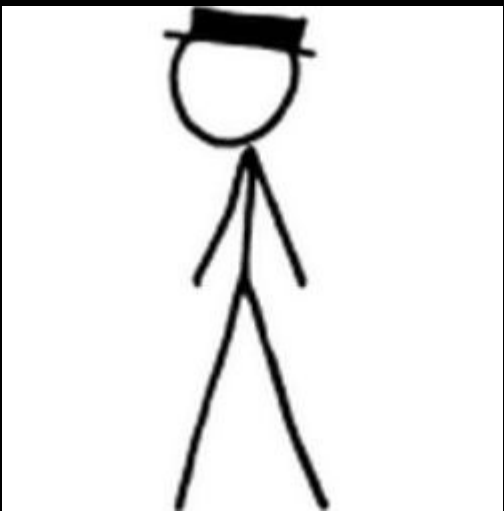
!Me Data



	0	1	2	3
0	-2.303799	-0.929505	-0.723082	1.405933
1	1.938848	-0.524810	-0.383100	1.099538
2	-0.693374	-1.026092	1.465070	-1.353929
3	-1.233262	0.836841	0.535766	1.282437
4	-1.767505	-0.528953	-0.389684	1.308448
5	1.434770	0.524330	-0.548548	-1.456220
6	-0.218290	-1.061372	0.691469	-0.087185
7	0.361373	-2.252403	-0.416959	-1.664783
8	1.441355	-1.032558	0.293488	1.452771
9	0.726479	-0.315725	0.292736	-0.150164
10	-1.380026	-1.484267	-0.064388	1.190564
11	0.564623	-0.355560	-1.823240	0.943612
12	-0.376665	-0.721492	-0.618199	-1.041164
13	1.210844	0.629881	-1.519779	-1.537754
14	-0.380405	1.609424	-0.909199	-1.150412
15	-0.004258	0.175987	0.509400	-1.202809
16	0.378975	0.036067	-0.023365	-0.963832

	0	1	2	3
0	0.409038	-0.380021	-1.083321	-1.014022
1	-0.325973	1.751651	0.227471	-0.073955
2	-0.072524	0.388818	0.295530	-0.091638
3	-0.709652	1.227295	0.998319	0.888674
4	0.077007	0.823324	-0.256518	0.530027
5	-0.732075	0.670809	-0.899167	0.745414
6	1.744336	-0.373895	-0.982754	0.248618
7	0.022975	0.832387	0.442073	-0.936345
8	-0.626248	-1.966379	-0.258376	0.241548
9	-0.648017	-0.665207	-0.698013	-1.613079
10	0.001042	-0.604098	0.391011	0.113501
11	-0.281338	0.670211	-1.180110	-1.024846
12	0.895976	0.763549	1.778971	0.621748
13	-0.581119	-0.553769	-0.340923	-0.174087
14	-0.175013	-1.377382	0.717876	-0.311445
15	0.005764	1.030009	0.065055	-1.561768
16	0.288413	-0.233440	-1.161134	-0.231161
17	-2.276491	-0.132164	0.983491	-0.728060
18	0.451354	0.028431	-0.427490	-1.640335
19	1.581267	-0.276198	1.039390	-0.067338
20	0.577786	-0.075583	1.201995	0.689265
21	-0.432265	-0.234994	-0.688241	0.201476
22	1.102193	2.184400	-1.478130	-0.718942
23	0.286928	0.064965	0.106911	0.026982

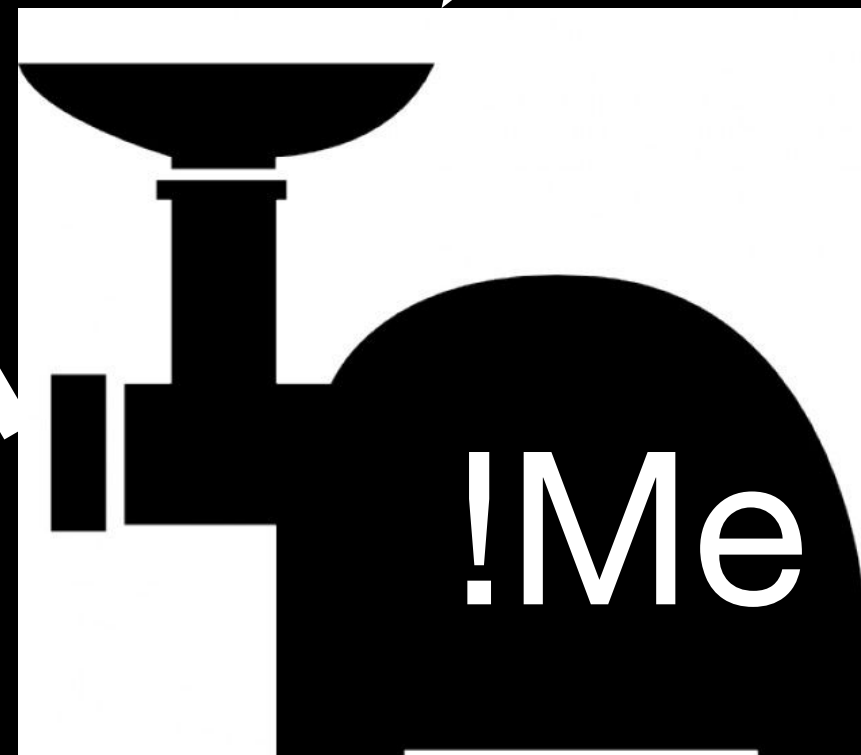
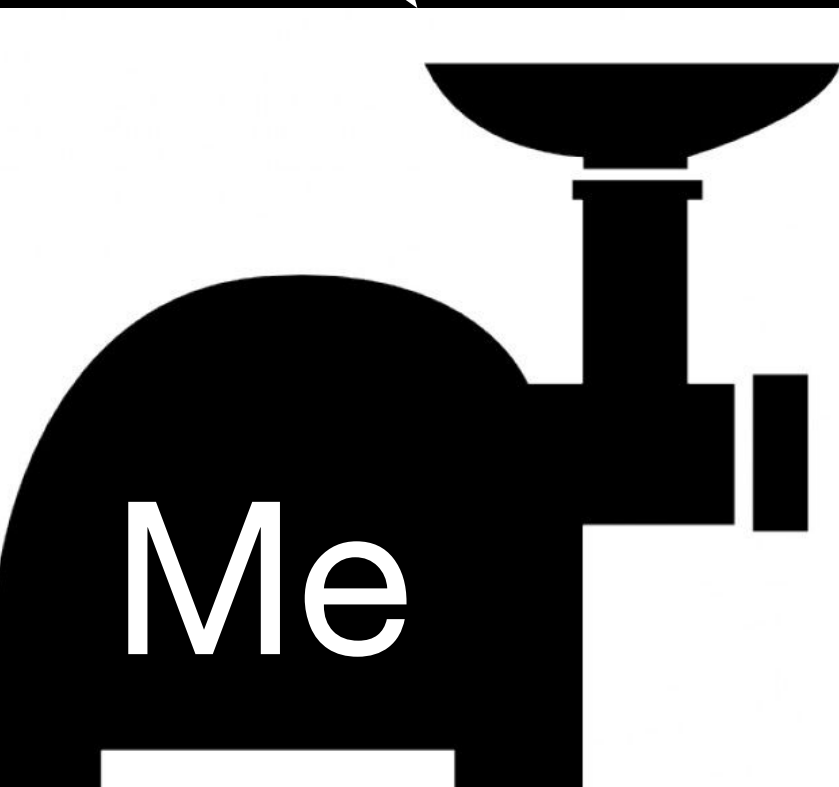
Normal mode...



99%
weight

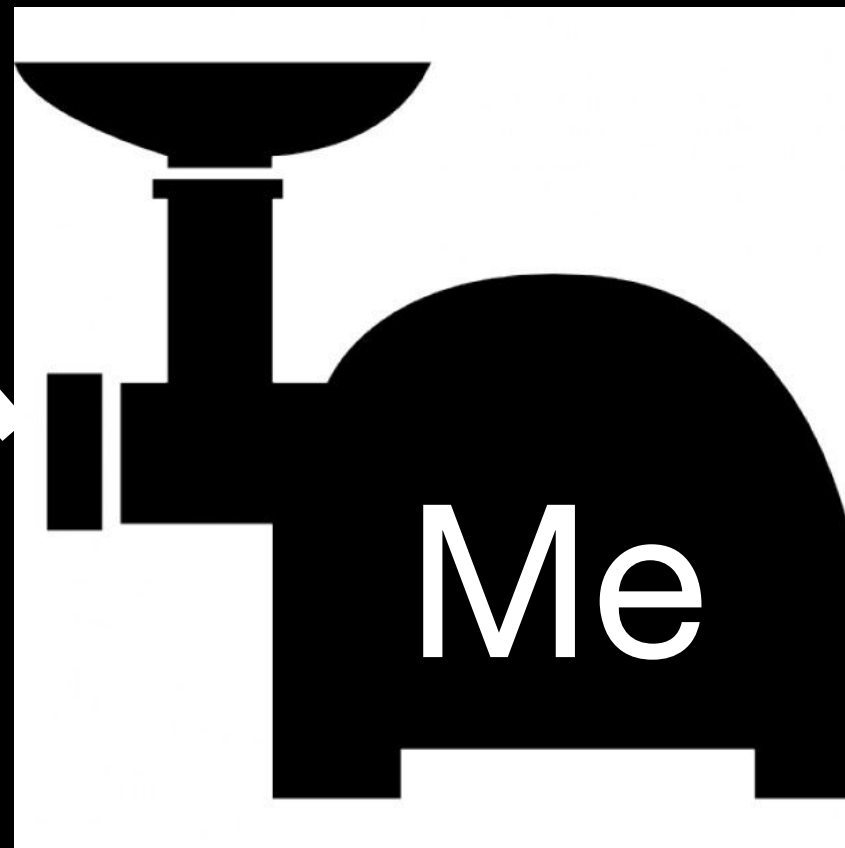
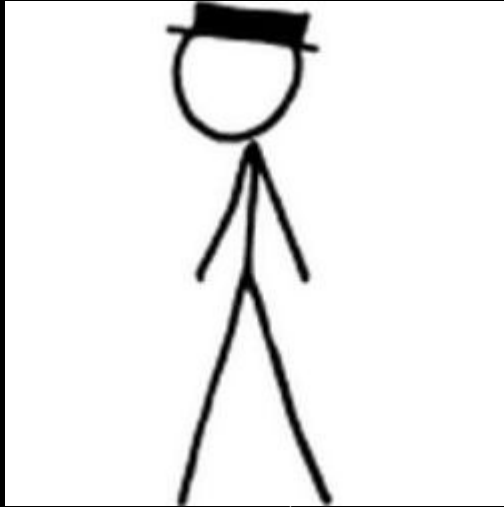
1%
weight

	0	1	2	3
0	-0.942562	1.009725	2.563306	0.825731
1	-2.112490	-1.387905	0.380646	-1.049354
2	-2.233049	-0.843648	0.110161	0.558419
3	0.415714	-1.089286	-0.586691	-1.214135
4	0.422923	-0.522521	-0.505306	-0.079256
5	0.587675	-0.432354	-0.149244	1.129608
6	-0.720405	1.149723	0.034445	-0.056747
7	-0.213389	1.549468	0.989165	0.464195
8	0.145219	1.981654	-0.956496	-1.072690
9	-0.584418	-0.915101	0.098983	0.251443
10	-0.387050	-1.344903	0.149340	-1.665425
11	-2.129398	0.548712	1.135134	-0.003573
12	0.357994	0.113779	0.820774	-0.312832
13	-0.348780	0.678138	1.571331	-2.236877
14	0.123628	0.109117	0.012558	0.983626
15	-1.607956	1.023163	-0.426445	-0.295197
16	-0.557096	-0.445361	0.055580	-1.664608
17	0.616357	-0.588226	-0.343397	0.710988
18	0.295098	0.819777	-1.060843	-0.068769
19	-1.186651	-0.574391	0.053815	-0.778515
20	-0.754778	1.421411	-0.250869	0.001430
21	-0.552170	-1.826260	1.012588	0.088674
22	1.487742	0.609623	0.162368	-0.664537
23	2.448082	0.778849	0.729712	0.833234



Empathy...

!Me Data

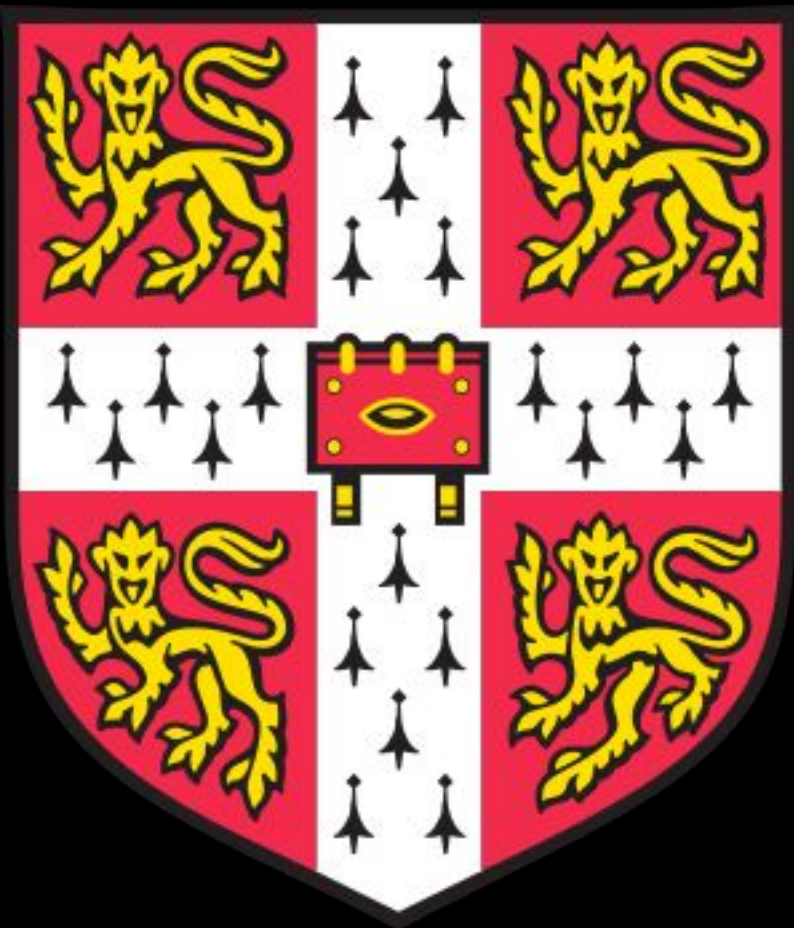


	0	1	2	3
0	-0.942562	1.009725	2.563306	0.825731
1	-2.112490	-1.387905	0.380646	-1.049354
2	-2.233049	-0.843648	0.110161	0.558419
3	0.415714	-1.089286	-0.586691	-1.214135
4	0.422923	-0.522521	-0.505306	-0.079256
5	0.587675	-0.432354	-0.149244	1.129608
6	-0.720405	1.149723	0.034445	-0.056747
7	-0.213389	1.549468	0.989165	0.464195
8	0.145219	1.981654	-0.956496	-1.072690
9	-0.584418	-0.915101	0.098983	0.251443
10	-0.387050	-1.344903	0.149340	-1.665425
11	-2.129398	0.548712	1.135134	-0.003573
12	0.357994	0.113779	0.820774	-0.312832
13	-0.348780	0.678138	1.571331	-2.236877
14	0.123628	0.109117	0.012558	0.983626
15	-1.607956	1.023163	-0.426445	-0.295197
16	-0.557096	-0.445361	0.055580	-1.664608
17	0.616357	-0.588226	-0.343397	0.710988
18	0.295098	0.819777	-1.060843	-0.068769
19	-1.186651	-0.574391	0.053815	-0.778515
20	-0.754778	1.421411	-0.250869	0.001430
21	-0.552170	-1.826260	1.012588	0.088674
22	1.487742	0.609623	0.162368	-0.664537
23	2.448082	0.778849	0.729712	0.833234

How do these mental
models get built?



Sacha Baron Cohen



Simon Baron-Cohen
University of Cambridge

A Story About Sally and Anne

This is Sally



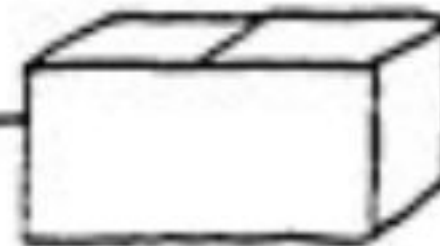
Sally has a basket.

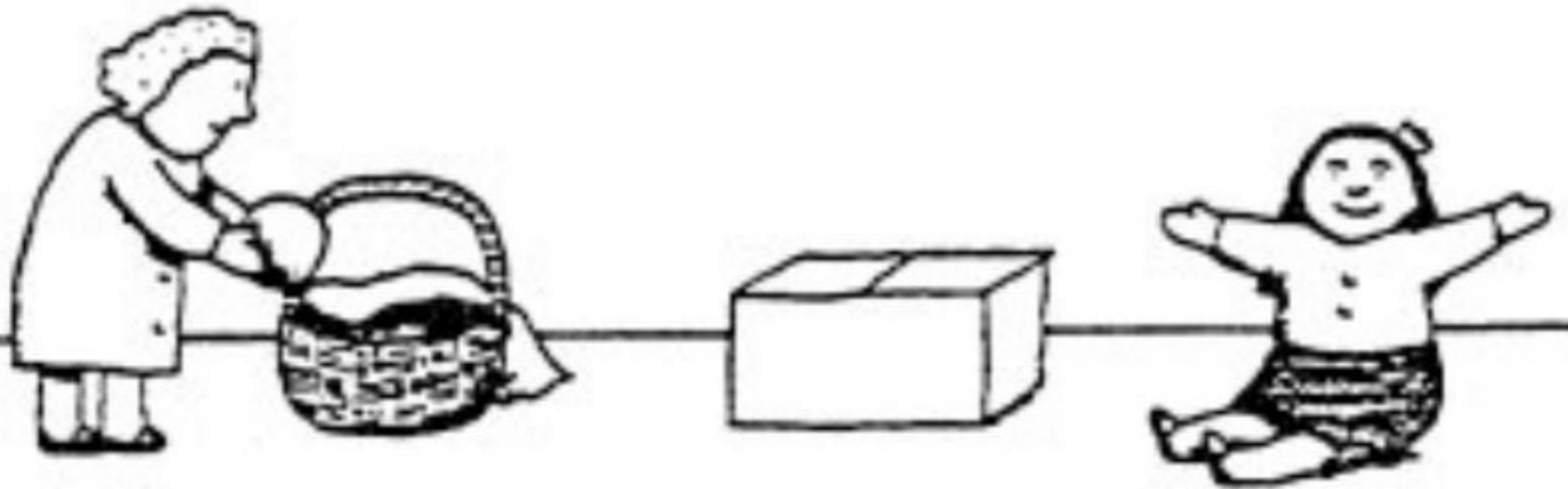


This is Anne

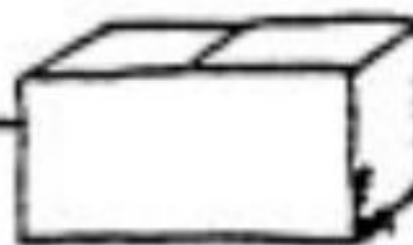


Anne has a box.





Sally has a marble. She puts the marble into her basket.



Sally goes out for a walk.



Anne moves the marble from the basket to the box.

Sally comes
back.



Sally wants to play
with her marble.

Where will Sally look first for her marble?

That time I looked for my marbles in the
box...

Empathy in Software Analysis Development

Pain Suit...



Agile has an empathy hack

AS A **PLAYER**

I WANT **AUTOMATED INVITES**

SO THAT I CAN **INVITE FRIENDS**

**1M
PLAYERS**

— **WHO? — HOW? — WHAT?**

Empathy in our data products...

What if our data is actually... people?

-Jake Harris, NYT

Homicide Watch DC:

Data on every homicide in DC, including location.

Lead with a map?



HOMICIDE WATCH D.C.

Mark every death. Remember every victim. Follow every case.

Latest News

Victims

Suspects

Map

Photos

Documents

Calendar

Comments Policy

About



We Remember: Four Years of Homicide Watch DC

Posted May 7, 2015, 8:07 a.m. by Laura Amico | [8 Comments](#)

For more than four years, the faces of those killed in the District have circled through the top of Homicide Watch DC. Children, teenagers, adults, the elderly. In photos they smile, or scowl. They're pictured laughing, looking cool, or sometimes angry.

Special Coverage: 2014 Year in Review

What is Homicide Watch D.C.?

Homicide Watch is a community-driven reporting project covering every murder in the District of Columbia. Using original reporting, court documents, social media, and the help of victims'



“The death of one man is a tragedy, the death of millions is a statistic.”

–Probably not Stalin

<http://guns.periscopic.com>

U.S. GUN DEATHS IN

2013 2010

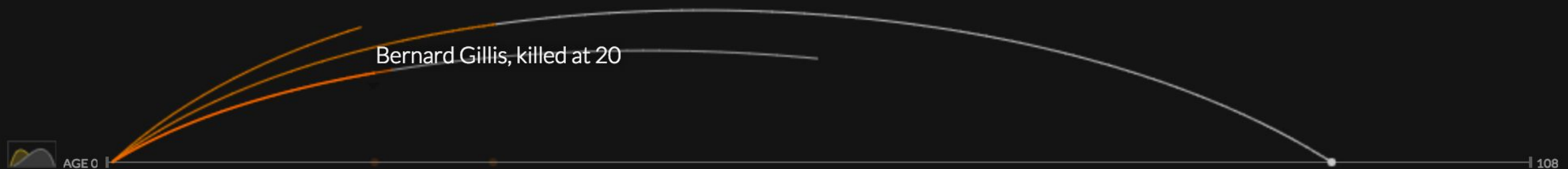
JANUARY

2

PEOPLE KILLED

64

STOLEN YEARS



U.S. GUN DEATHS IN

2013 2010

11,419

PEOPLE KILLED

DECEMBER

502,025

STOLEN YEARS

Bruce Cameron, a 38 year-old man, was killed on Sunday, March 17th in Bakersfield, California.

He might have lived to be 76 and died of mental or behavioral disorder.



AGE 0

108

But JD, I'm just
showing business
data...

Your business data is
somebody's paycheck.

Empathy in how we communicate...

Why does the “near” matter?

The “near” story is the narrative
of a person...

An illustration in a comic book style showing a group of people in a meeting. In the center, a man with dark hair is seen from behind, looking towards a woman on the right who is holding a book titled 'ADVENTURES IN ECONOMICS'. To the left, an older man with glasses is looking towards the center. In the background, another man with a beard is visible. The floor is a checkered tile pattern.

Economics and the human instinct for storytelling

Credit: Guy Shield



ROBERT SHILLER | MAY 08, 2017

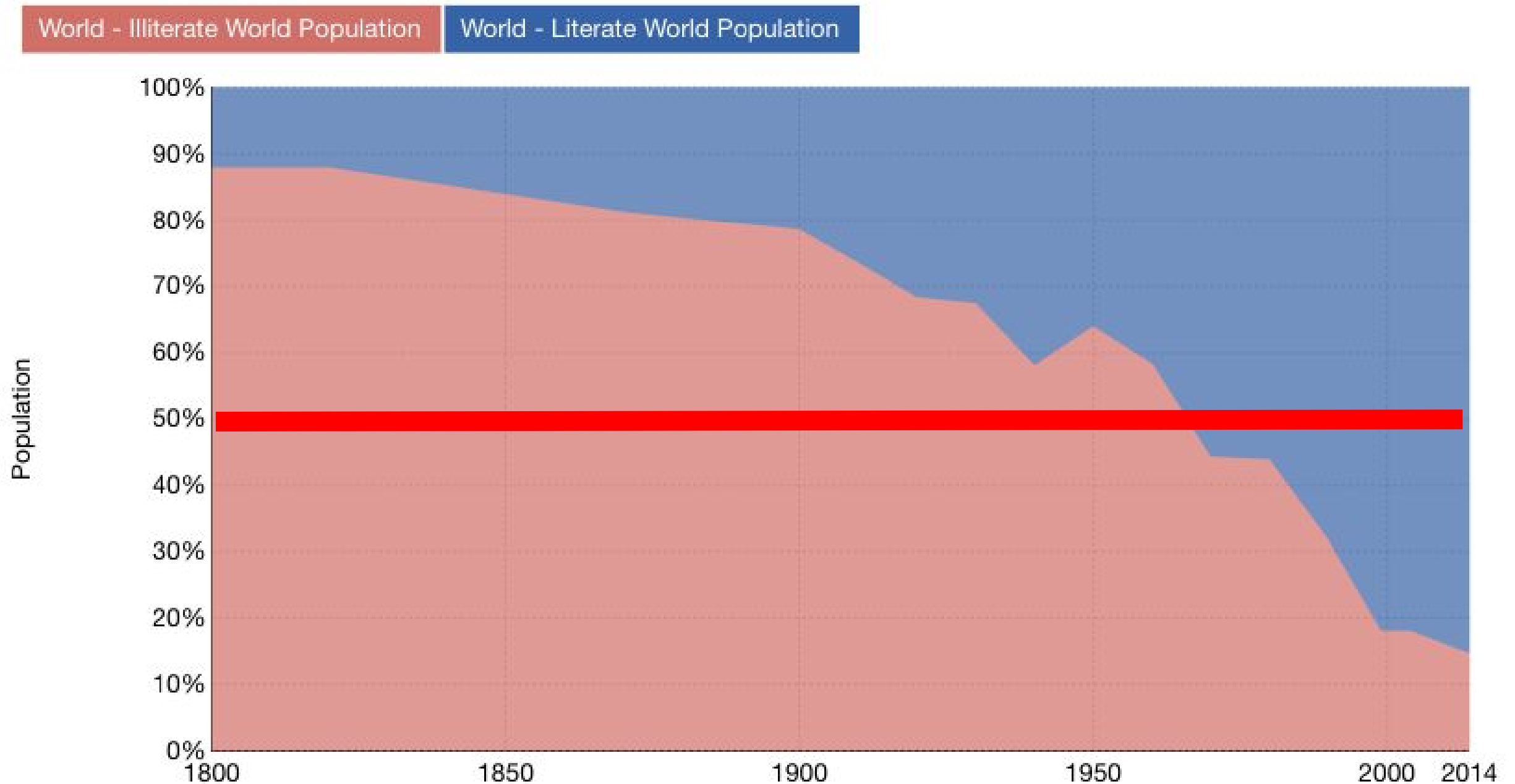
SECTIONS [ECONOMICS](#)

“The evolutionary biologist Stephen Jay Gould said we should be called Homo narrator. Your mind is really built for narratives, and especially narratives about other humans.”

Humans Have Been Speaking for ~200k Years Reading for a Lot Fewer...

Literate and illiterate world population, 1800 to 2014

Our World
in Data



Data source: Literate World Population (Our World In Data based on OECD and UNESCO)

OurWorldInData.org/literacy/ • CC BY-SA



Narrative as a tool to invoke empathy

ANN TAYLOR

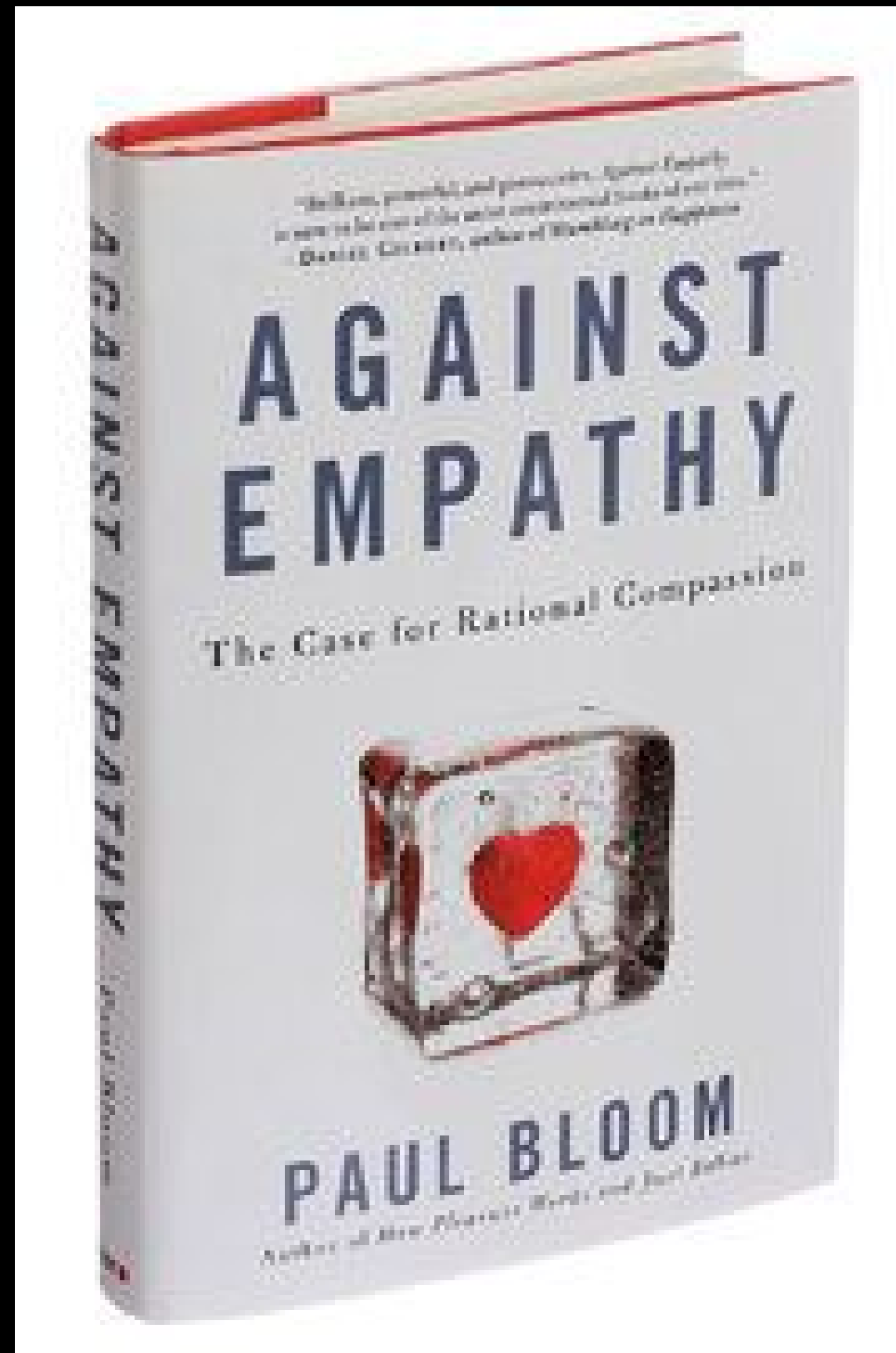




JD, I am NOT going to RTFM. It should just work in a way that's intuitive to ME.



Boundary of Empathy



Not a Moral Guide

Not helpful on “victimless” moral issues

Speeding

Littering

Fleecing MegaCorp

Biased

I have unbounded empathy for middle aged white dudes.

Biased toward the “near” at the sacrifice of the “far”

Crappy way to keep the trains running on time.
Or make tax rules.
Or set boundaries.

Bounded Rationality

Full time constant empathy will wear you flat out.

Empathy...

Cross validate your model with other people's signal.

Ask, "What would it be like to be in their situation?"

Pull out the story of the near.

Keeping the far in check.

Tell a story.

Make reproducible examples on StackOverflow.

“Before you criticize a man, walk a mile in his shoes.

That way, when you do criticize him, you'll be a mile away and have his shoes.”

— Steve Martin