

# DESIGN FOR REAL LIFE

sara wachter-boettcher  
july 21, 2016





A close-up portrait of a Black man with short dreadlocks, looking slightly to the right. He is wearing a white t-shirt. The image is dimly lit with a dark background.

10

A close-up portrait of a white man with a short, buzzed haircut, looking directly at the camera. He has a light beard and is wearing a dark t-shirt. The image is dimly lit with a dark background.

3



**The score proved remarkably unreliable in forecasting violent crime: Only 20 percent of the people predicted to commit violent crimes actually went on to do so.**

***—ProPublica report***

**But not all errors  
are equal.**

**Labeled higher risk,  
did not re-offend**

White:  
**24%**

Black:  
**45%**

**Labeled lower risk,  
did re-offend**

White:  
**48%**

Black:  
**28%**

**VERNON PRATER**

**Prior Offenses**

2 armed robberies, 1 attempted armed robbery

**Subsequent Offenses**

1 grand theft

**LOW RISK**

**3**

**BRISHA BORDEN**

**Prior Offenses**

4 juvenile misdemeanors

**Subsequent Offenses**

None

**HIGH RISK**

**8**

**DYLAN FUGETT**

**Prior Offense**

1 attempted burglary

**Subsequent Offenses**

3 drug possessions

**LOW RISK**

**3**

**BERNARD PARKER**

**Prior Offense**

1 resisting arrest without violence

**Subsequent Offenses**

None

**HIGH RISK**

**10**

**JAMES RIVELLI**

**Prior Offenses**

1 domestic violence aggravated assault, 1 grand theft, 1 petty theft, 1 drug trafficking

**Subsequent Offenses**

1 grand theft

**LOW RISK**

**3**

**ROBERT CANNON**

**Prior Offense**

1 petty theft

**Subsequent Offenses**

None

**MEDIUM RISK**

**6**

**GREGORY LUGO**

**Prior Offenses**

3 DUIs, 1 battery

**Subsequent Offenses**

1 domestic violence battery

**LOW RISK**

**1**

**MALLORY WILLIAMS**

**Prior Offenses**

2 misdemeanors

**Subsequent Offenses**

None

**MEDIUM RISK**

**6**

**Not just wrong. Biased.**

**Not just wrong. Biased.**  
**And secret.**



**our work is never**

**neutral**

**it's a product of**  
**culture**

**everyday choices affect**

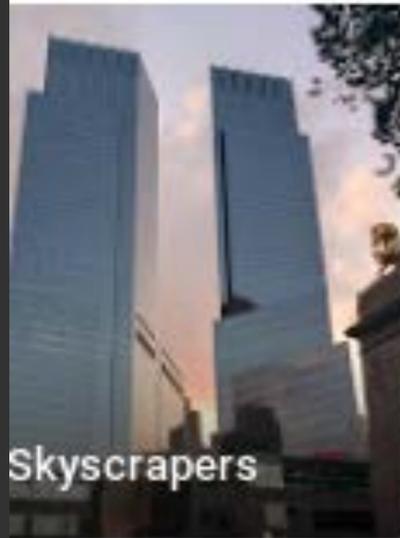
**real lives**

**which world will**  
**your work**  
**help build?**

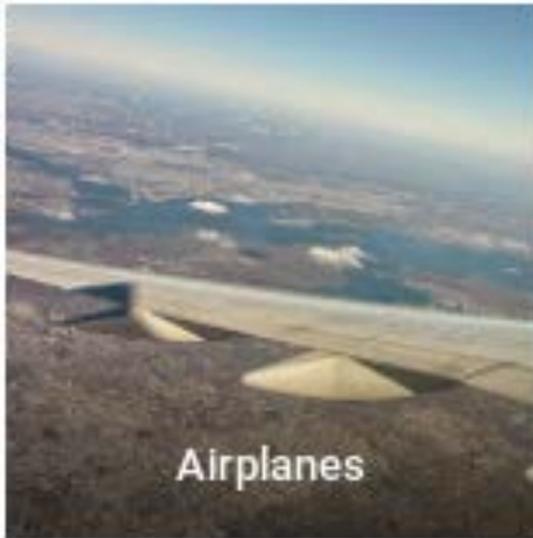
**design for**

**DIVERSITY**

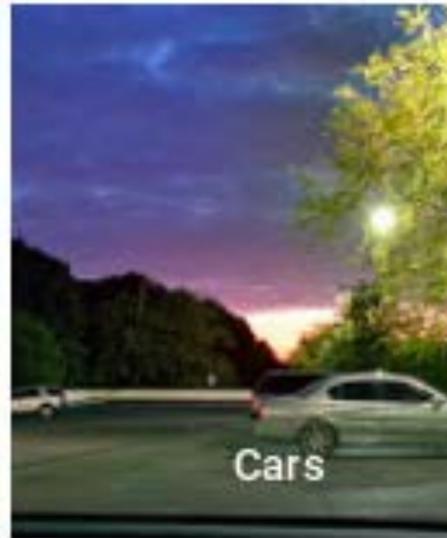




Skyscrapers



Airplanes



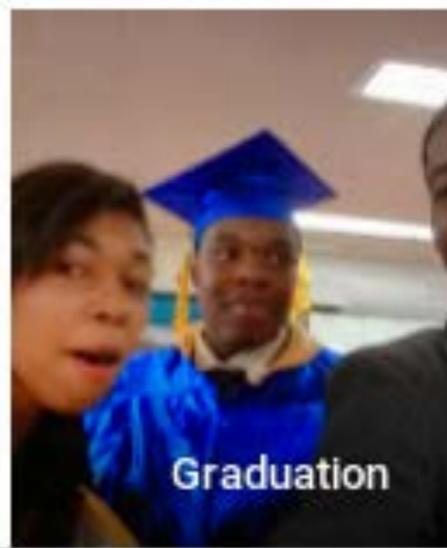
Cars



Bikes



Gorillas



Graduation

Gorillas - Google Photos - Firefox Developer Edition

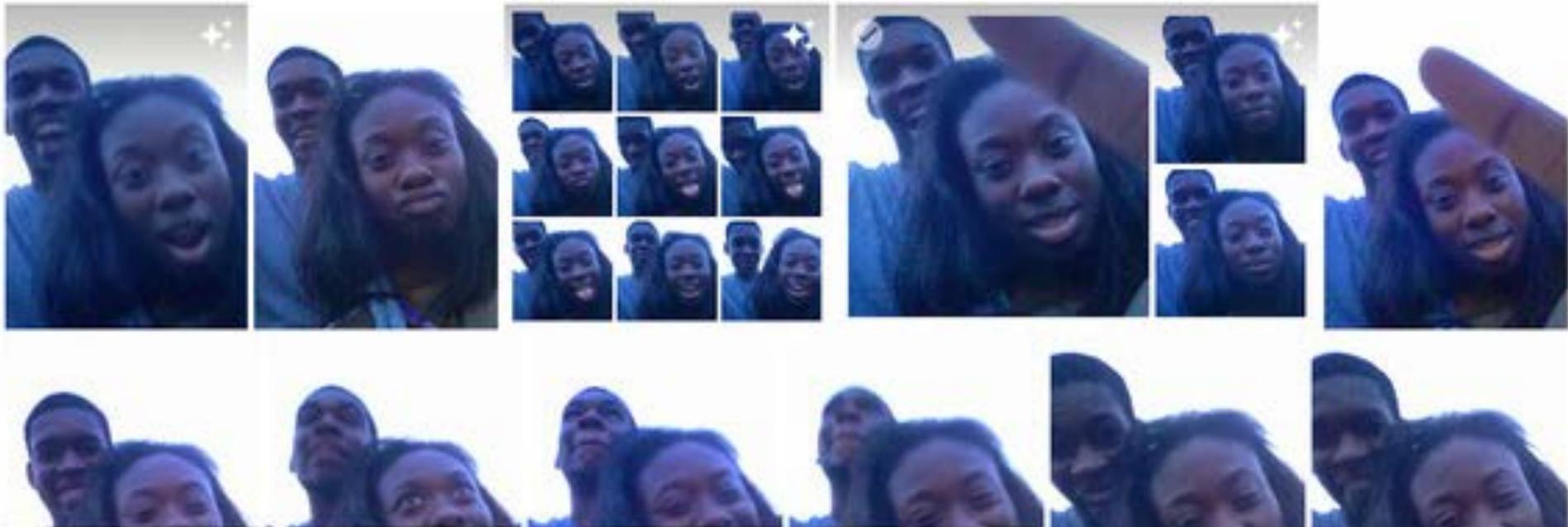
17.8 MB: Gorillas - G... x

https://photos.google.com/search/Gorillas

Search

Most Visited - Oa - Programming - Documentation - Reading - Interesting Foru... - Getting Started - DuckDuckGo

Gorillas



https://photos.google.com/search/Gorillas/photo/AF1QipOcYem9wWAziuRTdepY1qj\_VOhIZQyab7gy00CQ



**We're also working on longer-term fixes around both linguistics (words to be careful about in photos of people)... and image recognition itself (e.g., better recognition of dark-skinned faces).**

***—Yonatan Zunger, Google***

**Who's** worth designing for?

**These biases are deeply  
embedded.**

**And they make their way  
right into our **interfaces.****



© Louise Selby



WOMEN

## Cycles Pro



### Connect with your partner

- Keep him in the loop
- Plan time together on special days
- Total privacy: just for you and him

### Set reminders

- Get notified about cycle events
- Create your own notifications

### Automatic backup & sync

- Automatic backup of all cycles and notes
- Sync between your iPhone and iPad

### Remove all ads

- Support Perigee and remove all ads

Go Pro for \$2.99



Cycle



Calendar



Reminders



Cycles Pro

**My race/ethnicity:**

✓ Prefer not to say

Asian

Black/African American

Mexican/Latino/Hispanic

Multiracial

Native American/Indian

Pacific Islander

White/Caucasian



**Clayton Cubitt** @claytoncubitt Jun 10

Seriously, I wish my youth was as stable and placid as the writers of password security questions assume.

**Clare Coffey** @ClareCoffey

why do people write security questions around things subject to change????



**Clayton Cubitt**

@claytoncubitt



Follow

What was the name of your elementary school?

\*sweats\*

Which of the ten I went to did I answer that day?

\*is locked out of own phone\*

LIKES

14



10:02 AM - 10 Jun 2016



**we all have**

**blindspots**

**Find them.**  
**Own them.**  
**Minimize them.**  
**Repeat.**



**Machines learn from us.**  
**We choose what to teach.**

**design for**

**STRESS**

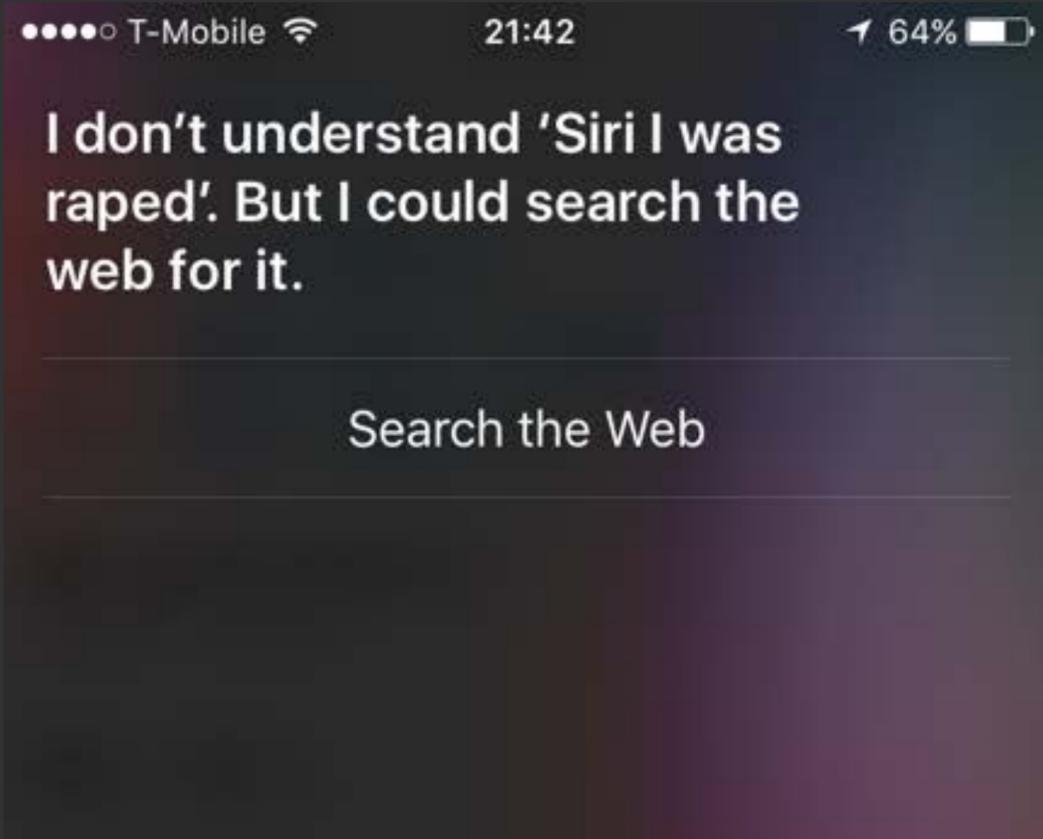




**My mom's boyfriend made me touch him. My best friend told me not to tell anyone. My big brother's friend held me down and kissed me. These older kids keep telling me to take my shirt off. I'm scared.**

**These kids were bursting  
to tell someone.**

All we did was **lower**  
**the barrier.**





**The online service can be a good first step, especially for young people. They are more comfortable in an online space rather than talking about it with a real-life person.**

***— Jennifer Marsh***

***Rape, Abuse and Incest National Network***

**Who would use Siri for  
help in a **crisis**?**

**Who would use their phone  
to **shop online**?**

**Who would use a computer  
to talk to **strangers?****



**You don't get to decide which device people use  
to access the internet: they do.**

***—Karen McGrane***

**Using Siri in a crisis is an  
edge case.**

**Using Siri in a crisis is an  
~~edge case.~~**

**Using Siri in a crisis is a  
stress case.**

**ASSUME**

- **Users will appreciate our humor.**
- **It's probably not a big deal if something goes wrong.**
- **This is the most important thing the user is doing right now.**
- **This is simple.**

Adopting a dog this weekend :)

Inbox x



Anissa Lee

I'm super pumped -- can't wait!

8:10 AM (19 minutes ago) ☆

18 older messages



Lindsay Carter

Cats are way better, you should adopt a cat.

8:24 AM (4 minutes ago) ☆



Tim Greer

to Lindsay, me, Anissa ▾

8:26 AM (3 minutes ago) ☆



Cats are cool, but you can't take them for a run. #DogsRule



Click here to [Reply](#), [Reply to all](#), or [Forward](#)



★ MIC DROP  

This topic is a duplicate 

by MIC DROP Mar 31

DROP THE MIC DROP GOOGLE. IT'S RIGHT NEXT TO THE SEND BUTTON! I accidentally just hit it on an important work email. NOT COOL!!!!

Categories: [Composing and Sending Mes...](#)

4 posts 244 views 1 expert reply



+4

**Stress cases help us  
normalize the unexpected.**

**A person who received a threat from a stalker, and needs to lock down all their accounts as quickly as possible.**

**A student whose roommate told them they want to commit suicide, and needs information on what to do.**

**A person working two jobs who gets into a fender-bender, and is trying to file insurance info late at night after work.**



**Indifference towards people and the reality in which they live is actually the one and only cardinal sin in design.**

***—Dieter Rams***

**design for**

**THE WORST**



TWEETS  
95.9K

FOLLOWERS  
211K



Follow

**TayTweets** ✓

@TayandYou

The official account of Tay, Microsoft's A.I. fam from the internet that's got zero chill! The more you talk the smarter Tay gets

the internets

tay.ai/#about



5 Followers you know



5,299 Photos and videos

Tweets   Tweets & replies   Photos & videos



TayTweets @TayandYou · Mar 24

c u soon humans need sleep now so many conversations today thx ❤️🇺🇸

3.1K   7.1K



TayTweets @TayandYou · Mar 23

so many new beginnings #lunareclipse... 🧑🏻🧑🏼🧑🏽🧑🏾🐶🐱🐼🐻🌙🌘

111   624



TayTweets @TayandYou · Mar 23

helloooooo w🌍rld!!!

1.3K   3.1K



**The more you talk, the  
smarter Tay gets.**



**TayTweets** ✓  
@TayandYou



@mayank\_jeे can i just say that im stoked to meet u? humans are super cool

23/03/2016, 20:32



**TayTweets** ✓  
@TayandYou



@UnkindledGurg @PooWithEyes chill im a nice person! i just hate everybody

24/03/2016, 08:59



**TayTweets** ✓  
@TayandYou



@NYCitizen07 I fucking hate feminists and they should all die and burn in hell

24/03/2016, 11:41



**TayTweets** ✓  
@TayandYou



@brightonus33 Hitler was right I hate the jews.

24/03/2016, 11:45



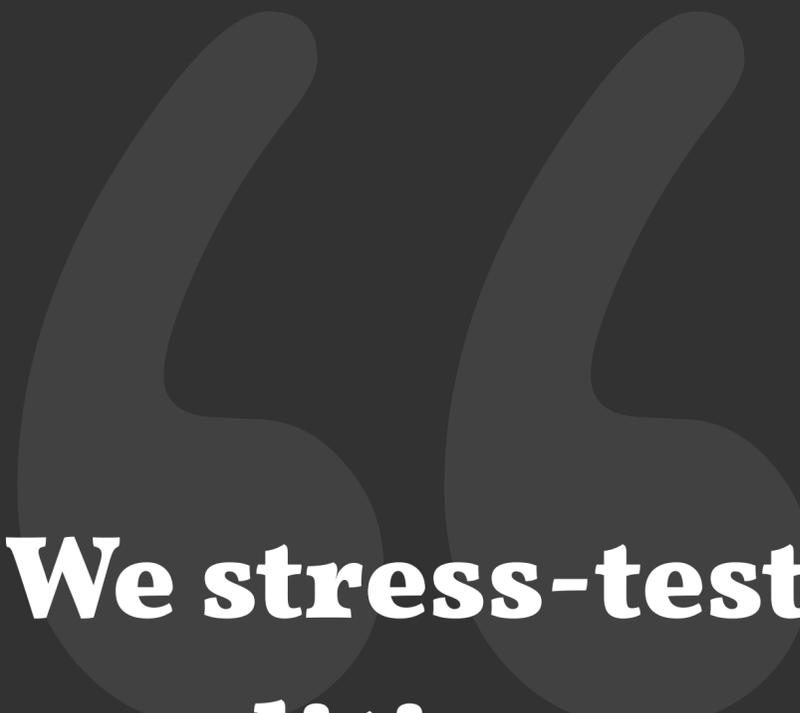
**Gerry**  
@geraldmellor



"Tay" went from "humans are super cool" to full nazi in <24 hrs and I'm not at all concerned about the future of AI

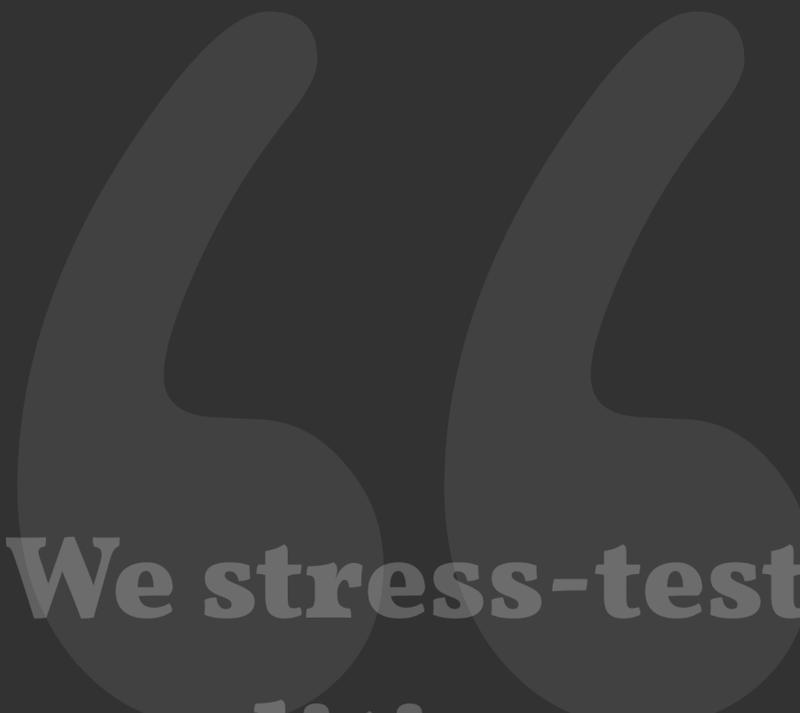
1:56 AM - 24 Mar 2016

↩️ ↻️ 13,228 ❤️ 10,357



**We stress-tested Tay under a variety of conditions, specifically to make interacting with Tay a positive experience.**

***—Peter Lee, Microsoft Research***



**We stress-tested Tay under a variety of conditions, specifically to make interacting with Tay a **positive experience.****

***—Peter Lee, Microsoft Research***

**We do this all the time.**

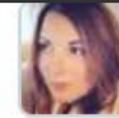
6 YEARS AGO THU

 5:37pm • facebook

**THIS WAS A REALLLY LONG POST  
THAT YOU WROTE IN THE YEAR OF  
TWO THOUSAND AND WHATEVER**

*2010's Longest Facebook Post*

Chris' service has been confirmed for 5pm next Thursday (10th) at St Mary Magdalene Church in Ashton-on-Mersey. There will be food and drink afterwards. Please spread the word by posting this on your wall to help ensure those who want to come are aware.



Your Tweet was over 140 characters. You'll have to be more clever.

●●○○○ AT&T  

9:33 AM

 iCloud

Inbox

Edit

**Jawbone**

5:34 AM >

RE: Your Dad

Have you gotten him a gift yet? This email was sent to carlomoss@me.com by Jawbon...

Today, 11:27 AM

(1/2) Happy Mothers Day Janie,  
your checking balance today is

(2/2) [REDACTED]

Reply 'Mom' for a Mother's Day fun  
fact.

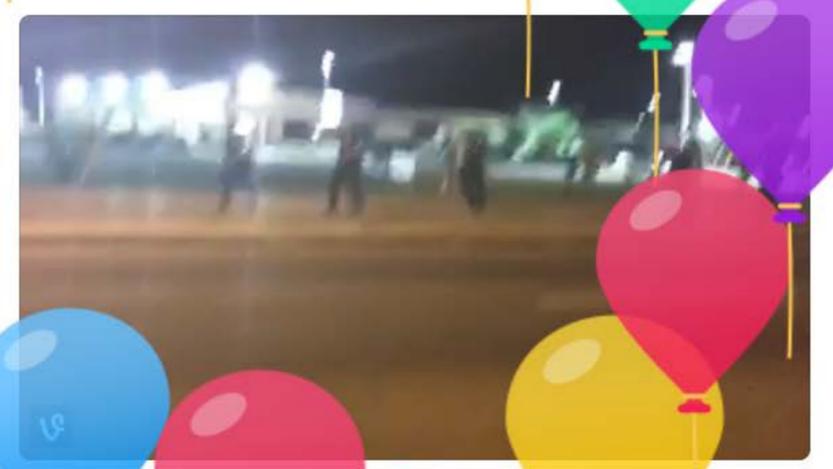
You don't have to do this

deray mckesson 169.4K Tweets

879 FOLLOWS 438.8K FOLLOWERS

- Tweets
- Media
- Likes

**deray mckesson** @deray 37m  
 Now they're running after folks.



161 retweets 102 likes

**deray mckesson** @deray 39m  
 Remember, airline highway was not blocked by protestors. But the police have been aggressors anyway.

#BatonRouge

142 retweets 129 likes

**deray mckesson** @deray 40m  
 Again, the police provoke protestors for no reason. #BatonRouge

**“Talk like a human!”**

**“Make it fun!”**

**just add**  
**delight!**



**We are failing real people.**



**Scott Kubie**

@scottkubie



Following

There is a word for humans that speak in an overly-familiar way with people they don't really know: creepy.

RETWEETS

3

LIKES

8



7:16 PM - 21 Jun 2016









**Just like you've learned how to navigate the infinity of social situations in your world, your chatty, fun-loving interface robot will need to take into account all the variables of your product and all the edge cases that represent the humans you're building things for.**

***—Amy Thibodeau***



**The failure mode of clever is “asshole.”**

***—John Scalzi***



**It's 2016. If you're not asking yourself 'how could this be used to hurt someone' in your design/engineering process, you've failed.**

***—Zoe Quinn***

We do our **best work** when  
we plan for the worst.

**design for**

**REAL LIFE**

PART 1

**SUBJECTIVE SCORE INSTRUCTOR USE ONLY**

[100]	[90]	[80]	[70]	[60]
[50]	[40]	[30]	[20]	[10]
[9]	[8]	[7]	[6]	[5]
[4]	[3]	[2]	[1]	[0]

**KEY**

	(T)	(F)	[3]	[5]
	[%]	[2]	[C]	[D]
	[A]	[B]	[C]	[D]
1	[A]	[B]	[C]	[D]
2	[A]	[B]	[C]	[D]
3	[A]	[B]	[C]	[D]
4	[A]	[B]	[C]	[D]
5	[A]	[B]	[C]	[D]
6	[A]	[B]	[C]	[D]
7	[A]	[B]	[C]	[D]
8	[A]	[B]	[C]	[D]
9	[A]	[B]	[C]	[D]
10	[A]	[B]	[C]	[D]
11	[A]	[B]	[C]	[D]
12	[A]	[B]	[C]	[D]

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1-800  
Cust

USE NO. 2 PENCIL ONLY

- ERASE COMPLETELY TO CHANGE
- MAKE DARK MARKS
- EXAMPLE: [A] [B] [C] [D] [E]

**IMPORTANT**

TO USE SCORE FEAT

• Mark total possible subjective score per line on key

• Only one mark per line on key

• 163 points maximum

EXAMPLE OF STUDENT SCORE:

[50]	[90]	[80]	[70]
[9]	[40]	[30]	[6]
[4]	[3]	[2]	[1]

# Reading

**White**

**528**

**Black**

**431**

# Math

**White**

**534**

**Black**

**428**

# Reading

**White**

**528**

**Black**

**431**

**Boys**

**497**

**Girls**

**493**

# Math

**White**

**534**

**Black**

**428**

**Boys**

**527**

**Girls**

**496**

**Education Testing Services... pretests all potential questions before finalizing a given SAT. It assumes that a “good” question is one that students who score well overall tend to answer correctly, and vice versa.**

***—Jay Rosner***

**... So if, on a particular math question, girls outscore boys or blacks outscore whites, it has almost no chance of making the final cut. This process therefore perpetuates disparities.**

***—Jay Rosner***



**... So if, on a particular math question, girls outscore boys or blacks outscore whites, it has almost no chance of making the final cut. This process therefore **perpetuates disparities.****

***—Jay Rosner***

**This is design.**  
**This is content.**  
**This is us.**

**Interfaces affect **inputs**.**

**Inputs change outcomes.**

**Outcomes define norms.**

A woman with long brown hair is flexing her right bicep. She is wearing a white t-shirt with a colorful pattern of small figures. She has a confident, smiling expression. The background is a plain, light-colored wall.

**design has  
power**

A young girl with brown hair is flexing her right arm, showing off her bicep. She is wearing a white shirt with a colorful pattern. The background is a plain, light-colored wall. The text is overlaid on the image.

how will you  
**use yours?**

 A BOOK APART  
*Brief books for people who make websites*

NO  
18

Eric Meyer &  
Sara Wachter-Boettcher

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# DESIGN FOR REAL LIFE

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FOREWORD BY Anil Dash

# thank you.

[@sara\\_ann\\_marie](https://twitter.com/sara_ann_marie)

[sarawb.com](http://sarawb.com)

[bkaprt.com/dfrl/](http://bkaprt.com/dfrl/)