Design for Data Journalism

WHAT TO DO & WHAT NOT TO DO
ANNA FLAGG
Al Jazeera+
@annaflagg

LENA GROEGER
Propublica
@lenagroeger

MOIZ SYED
Wikimedia Foundation
@moizsyed
Why does design matter to you?
1

Don’t design for likes
Advertisers manipulate, journalists inform
3

When good design goes bad: your power as a designer
A lot of examples
1

Don’t design for likes
Don’t design for likes/Unnecessary 3D
Anatomy of a Winning TED Talk

1% Sophisticated Visual Aids
We're not sure who puts the 3D in TED—most of the best presentations favor topical PowerPoint slide shows (sorry, Brené Brown, Pictionary-quality drawings (a la Simon Sinek), or no props at all.

5% Opening Joke
Remember the one about the shoe salesmen who went to Africa in the 1960s? That's how Benjamin Zander opened his talk—which turned out to be about classical music.

5% Spontaneous Moment
Don't overprepare. Tease the guy in the front row. (“You could light up a village with this guy's eyes”). Commend the stagehand who handles the human brain you brought.

5% Statement of Utter Certainty
People come for answers—give 'em what they want, as Sharm Ashor did. “By training your brain... we can reverse the formula for happiness and success.”

12% Snappy Refrain
The TED equivalent of “I have a dream.” Example: “People don't buy what you do; they buy why you do it.” Repeal 7x.

23% Personal Failure
Be relatable. We want to know about that nervous breakdown. Or at least the time you didn't fit in at summer camp.

49% Contrarian Thesis
Wait a sec—we should be playing more videogames? The more choices we have, the worse off we are? TED is where conventional wisdom goes to die.

Source: Wired Magazine
DON'T DESIGN FOR LIKES

Unnecessary 3D

Anatomy of a Winning TED Talk

1% Sophisticated Visual Aids
We're not sure who puts the 3 in TED—most of the best presentations favor tidy PowerPoint slide shows (sorry, Brené Brown). Pictionary-quality drawings (really, Simon Sinek?), or no props at all.

5% Opening Joke
Remember the one about the shoe salesmen who went to Africa in the 1980s? That's how Benjamin Tippett opened his talk, which turned out to be

12% Snappy Refrain
The TED equivalent of "I have a dream." Example: "People don't buy what you do; they buy why you do it." Repeat 7x.

23% Personal Failure
Be relatable. We want to know about that nervous breakdown. Or at least the time you didn't fit in at summer camp.

49% Contrarian Thesis
Wait a sec—we should be playing more videogames? The more choices we have, the worse off we are! TED is where conventional wisdom goes to die.

Source: Wired Magazine
1

Don’t design for likes/Breaking rules of perception
DON’T DESIGN FOR LIKES

Breaking rules of perception

Source: Gallup
DON’T DESIGN FOR LIKES

Breaking rules of perception

Should have been a bar chart

Source: Gallup
DON'T DESIGN FOR LIKES

Breaking rules of perception

Why Does a Salad Cost More Than a Big Mac?

Federal Subsidies for Food Production, 1995-2005:

- Vegetables, Fruits: 0.37%
- Sugar, Oil, Starch, Alcohol: 10.69%
- Nuts and Legumes: 1.91%
- Grains: 13.23%

Federal Nutrition Recommendations:

- Sugar, Oil, Salt (use sparingly)
- Protein: includes meat, dairy, nuts, and legumes (6 servings)
- Vegetables, Fruits (9 servings)
- Grains (11 servings)

Source: Physicians Committee for Responsible Medicine
DON’T DESIGN FOR LIKES

Breaking rules of perception

Why Does a Salad Cost More Than a Big Mac?

Federal Subsidies for Food Production, 1995-2005

- Vegetables, Fruits: 0.37%
- Sugar, Oil, Starch, Alcohol: 10.69%
- Grains: 13.23%
- Nuts and Legumes: 1.91%

Federal Nutrition Recommendations

- Sugar, Oil, Salt (use sparingly)
- Protein: includes meat, dairy, nuts, and legumes (6 servings)
- Vegetables, Fruits (9 servings)
- Grains (11 servings)

Meat, Dairy: 73.80%

Source: Physicians Committee for Responsible Medicine
Don’t design for likes/A good example
An Outlier for Arrest Warrants

Data from municipal courts across Missouri show that in 2013, the city of Ferguson had the highest number of warrants issued in the state relative to its size. Arrest warrants are often served by municipal courts when someone fails to appear in court to pay fines for a traffic or other violation, like shoplifting, assault or disturbance of peace.

The high rate could reflect more crime as well as heavier prosecution, and it could be indicative of a fraught relationship between law enforcement and citizens. Brendan Roediger, an assistant professor at Saint Louis University School of Law and supervisor of the school's Civil Litigation Clinic, said that resentment toward the police in Ferguson “is primarily formed around these interactions and not around investigations of serious crimes.”

Warrants Issued Per 1,000 People in 2013

Each bar represents a Missouri city larger than 10,000 people

- Darker bars are cities in St. Louis County

Source: The New York Times
Bar charts are beautiful.
Don’t design for likes / Design complexity reflects data complexity
Don't design for likes.

Design complexity should reflect data complexity.
DON’T DESIGN FOR LIKES

Design complexity should reflect data complexity

#CPAC2015
Mentions of CPAC or speakers, EST
by Twitter Reverb @TwitterReverb

Why is this happening

Source: Twitter
A good example

Romney's Shift Wasn't Enough

Most of the nation shifted to the right in Tuesday's vote, but not far enough to secure a win for Mitt Romney.

Source: The New York Times
Flashy but cool
DON'T DESIGN FOR LIKES

A good example

Reported killings by police during 2010-2012

21 times as likely for black vs. white teenage men

Source: Propublica
Keep that data-ink in check
Don’t design for likes/Unnecessary animation
DON'T DESIGN FOR LIKES

Unnecessary animation

eBay Give@Checkout
Buyer added a donation to their purchase
Volume 22,274

eBay Community Selling
Seller contributed a percentage of their sale
Volume 900

Donate with PayPal
Customer gave through a PayPal appeal or directly to an organization
Volume 195,423

DONATIONS
$12,499,971

Source: Ebay / Pitch Interactive
DONT DESIGN FOR LIKES

Unnecessary animation

Way too much globe

Source: Ebay / Pitch Interactive
1

Don’t design for likes / A good example
A good example

The Rise of Men Who Don’t Work, and What They Do Instead

Source: NBC Nightly News
Now it’s time for SHOULDN’T HAVE BEEN A BAR CHART
CALLINGS

Proportion of respondents who attribute “very great prestige” to the following professions:

(57%) FIREFIGHTER
(56) SCIENTIST
(53) DOCTOR
(52) NURSE
(52) TEACHER
(46) MILITARY OFFICER
(40) CLERGY
(28) CONGRESSMAN
(24) LAWYER
(20) ATHLETE
(18) JOURNALIST
(16) ACTOR

Source: The Harris Poll, July 2008
Chart by ERIK DE GRAAFF ArtEZ Academy of Visual Arts, the Netherlands
MRS. PRESIDENT
Percentage of respondents who say it is likely that a woman will be president in their lifetime.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 45</td>
<td>79</td>
<td>16</td>
</tr>
<tr>
<td>45–64</td>
<td>69</td>
<td>22</td>
</tr>
<tr>
<td>65+</td>
<td>44</td>
<td>39</td>
</tr>
<tr>
<td>Men</td>
<td>65</td>
<td>25</td>
</tr>
<tr>
<td>Women</td>
<td>72</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: CBS News, June 2008
Snow depth in Boston 18:00 GMT (13:00 EST)

Can you still see your dog?

Snow accumulation in Boston

Forecast up to 30 inches

Last updated: 27 Jan, 1800 GMT

20 inches

Source: National Weather Service

BBC
1

Don’t design for likes/Unnecessary maps
DON’T DESIGN FOR LIKES

Unnecessary maps

TOTAL UNPROVOKED SHARK ATTACKS, 1837-2013

Source: USA Today
DON’T DESIGN FOR LIKES

Unnecessary maps

CHANGING FACE OF AMERICA
Percent of total U.S. population by race and ethnicity, 1960-2060

1960 2010 2060

10% 16% 8%
85% 12% 31%

Source: PEW Research Center

Source: NBC Nightly News
Unnecessary maps

DON’T DESIGN FOR LIKES

Source: NBC Nightly News
1 Don’t design for likes/Two good examples
In 50 years, most of southeastern Louisiana not protected by levees will be part of the Gulf of Mexico. The state is losing a football field of land every 48 minutes — 16 square miles a year — due to climate change, drilling and dredging for oil and gas, and levees on the Mississippi River. At risk: Nearly all of the nation’s offshore oil and gas production, much of its seafood production, and millions of homes.
A good example

Don’t Design for Likes

Louisiana is drowning, quickly.

In just 80 years, some 2,000 square miles of its coastal landscape have turned to open water, wiping places off maps, bringing the Gulf of Mexico to the back door of New Orleans and posing a lethal threat to an energy and shipping corridor vital to the nation’s economy.

And it’s going to get worse, even quicker.

Scientists now say one of the greatest environmental and economic disasters in the nation’s history is rushing toward a catastrophic conclusion over the next 50 years, so far unabated and largely unnoticed.

At the current rates that the sea is rising and land is sinking, National Oceanic and Atmospheric Administration scientists say by 2100 the Gulf of Mexico could rise as much as 43 feet across this landscape, which has an average elevation of about 3 feet. If that happens, everything outside the protective levees — most of Southeast Louisiana — would be

Source: Propublica
DON’T DESIGN FOR LIKES

A good example

Losing Ground
by Bob Marshall, The Lens, Brian Jacobs and Al Shaw, Propublica, Aug 26, 2014

In 50 years, most of southeastern Louisiana not protected by levees will be part of the Gulf of Mexico. The state is losing a football field of land every 48 minutes — 16 square miles a year — due to climate change, drilling and dredging for oil and gas, and levees on the Mississippi River. At risk: Nearly all of the nation’s offshore oil and gas production, much of its seafood production, and millions of homes.

EXPLORE THE COAST

Source: Propublica
DON’T DESIGN FOR LIKES

A good example

MONDAY, NOVEMBER 17, 2008

THE BLACK BELT: HOW SOIL TYPES DETERMINED THE 2008 ELECTION IN THE DEEP SOUTH

Source: The Vigorous North
A good example

THE BLACK BELT: HOW SOIL TYPES DETERMINED THE 2008 ELECTION IN THE DEEP SOUTH

Source: The Vigorous North
We love maps
Don’t design for likes /
Unnecessary 3d / Breaking rules of perception / Design complexity reflects data complexity / Unnecessary animation / Unnecessary maps
Don’t design for likes/

Unnecessary 3d / Breaking rules of perception / Design complexity reflects data complexity / Unnecessary animation / Unnecessary maps
Don’t design for likes/
Unnecessary 3d/Breaking rules of perception/Design complexity reflects data complexity/Unnecessary animation/Unnecessary maps
Don’t design for likes/
Unnecessary 3d/
Breaking rules of perception/
Design complexity reflects data complexity/
Unnecessary animation/
Unnecessary maps
Don’t design for likes/
Unnecessary 3d/
Breaking rules of perception/
Design complexity reflects data complexity/
Unnecessary animation/
Unnecessary maps
Don’t design for likes/
Unnecessary 3d/Breaking rules of perception/Design complexity reflects data complexity/Unnecessary animation/Unnecessary maps
Advertisers manipulate, journalists inform
Advertisers manipulate, journalists inform / Emotional design
Emotional design

Source: Los Angeles Times
Emotional Design

U.S. GUN DEATHS IN DECEMBER

11,419 PEOPLE KILLED

502,025 STOLEN YEARS

Source: Periscopic
Emotional Design

Art ≠ Journalism

Source: Periscopic
Emotional design

Gun deaths in Florida

Number of murders committed using firearms

2005 Florida enacted its ‘Stand Your Ground’ law

Source: Florida Department of Law Enforcement

Source: Reuters
Advertisers manipulate, journalists inform / A good example
A good example

Source: South China Morning Post
Advertisers manipulate, journalists inform / Causation vs. correlation
Causation vs. correlation

Figure 5–10. Incidence of Endangerment Standard Abuse by Family Structure and Living Arrangement.

Causation vs. correlation

Figure 5–10. Incidence of Endangerment Standard Abuse by Family Structure and Living Arrangement.

Advertisers manipulate, journalists inform/
Emotional design/
Causation vs. correlation
Advertisers manipulate, journalists inform/
Emotional design/
Causation vs. correlation
Advertisers manipulate, journalists inform/
Emotional design/
Causation vs. correlation
When good design goes bad: your power as a designer
In Gaza, a Pattern of Conflict

Cumulative rockets fired at Israel from Gaza
2,719 rockets

Cumulative deaths
1,472 dead

Source: The New York Times
Using proximity to suggest false association

Cumulative rockets fired at Israel from Gaza:
- Day 1: 0 rockets
- Day 24: 2,719 rockets

Cumulative deaths:
- Day 1: 0 deaths
- Day 24: 1,472 deaths

Source: The New York Times
Hiding inconvenient data

Cumulative deaths

1,472 dead

Day 1  Day 24

Source: The New York Times
Hiding inconvenient data

Source: The New York Times
Hiding inconvenient data

Cumulative deaths

- 1,472 dead
- 1,408 Palestinians dead
- 64 Israelis dead

Source: The New York Times
Hiding inconvenient data

Cumulative Israeli airstrikes/ground attacks

Cumulative rockets fired at Israel from Gaza

Cumulative deaths

WHERE IS THIS DATA?

Source: The New York Times
Patrick Leddy @LeddyPatrick · Aug 9
@declankenny94 Hamas is 100% of the time the aggressor. Israel has no problem living in peace. nyti.ms/1ofzY43
Hiding inconvenient data

Mohammed Haddad @haddadme · Aug 3
@albertocairo Less impressive @nytgraphics showing Hamas' rockets side-by-side with deaths (killed by Israel's army) nytimes.com/interactive/20...

KAnt @konstantinosant · Aug 3
Hamas rockets fired and deaths side by side on a @nytgraphics graph. Why do I assume the rockets killed those people? nytimes.com/interactive/20...

CPIerre67 @CPIerre67 · Aug 3
@nytimes did it again nyti.ms/1m8Y6Wr. As if #Israel, the "victim" par excellence, did not start the conflict.
After persistent rocket fire from Gaza, Israel launches air campaign and threatens ground invasion.

2008-9  **Day 1** of 23
Airstrikes kill more than 300 Palestinians — the highest one-day toll in decades. Israeli officials say the strikes are the start of an operation to force Hamas to end its rocket barrages and could include ground forces.

2012  **Day 1** of 8
Israel unleashes a ferocious air assault on Gaza, killing a top military commander of Hamas, and warns that a ground invasion could be coming.

2014  **Day 1**

Source: The New York Times
After persistent rocket fire from Gaza, Israel launches air campaign and threatens ground invasion.

2008-9  **Day 1 of 23**
Airstrikes kill more than 300 Palestinians — the highest one-day toll in decades. Israeli officials say the strikes are the start of an operation to force Hamas to end its rocket barrages and could include ground forces.

2012  **Day 1 of 8**
Israel unleashes a ferocious air assault on Gaza, killing a top military commander of Hamas, and warns that a ground invasion could be coming.

2014  **Day 1**

Source: The New York Times
When good design goes bad
Using proximity to suggest false association/
Hiding inconvenient data/
Manipulating data to back up your narrative
When good design goes bad/

Using proximity to suggest false association/

Hiding inconvenient data/

Manipulating data to back up your narrative
When good design goes bad/Using proximity to suggest false association/
Hiding inconvenient data/
Manipulating data to back up your narrative
When good design goes bad
Using proximity to suggest false association
Hiding inconvenient data
Manipulating data to back up your narrative
Thank you

ANNA FLAGG
Al Jazeera+
@annaflagg

LENA GROEGER
Propublica
@lenagroeger

MOIZ SYED
Wikimedia Foundation
@moizsyed
The Non-Designer's Design Book
Fourth Edition

Design and typographic principles for the visual novice

Robin Williams

The Elements of Typographic Style

Robert Bringhurst

Grid Systems
Kimberly Elam

Filled with an expansive range of twentieth-century examples of design, from Jan Tschichold's brochure for Die Neue Typography to Bauhaus graphics to a Nike catalog, Grid Systems provides a rich, easy-to-understand overview of the grid and demonstrates a step-by-step approach to typographic composition. It reveals design strategies that transcend simple function and reductionist recipes to allow grids to become a means of truly dynamic communication.