Narrative Visualization

Guest Lecturer: Aparna Ghosh

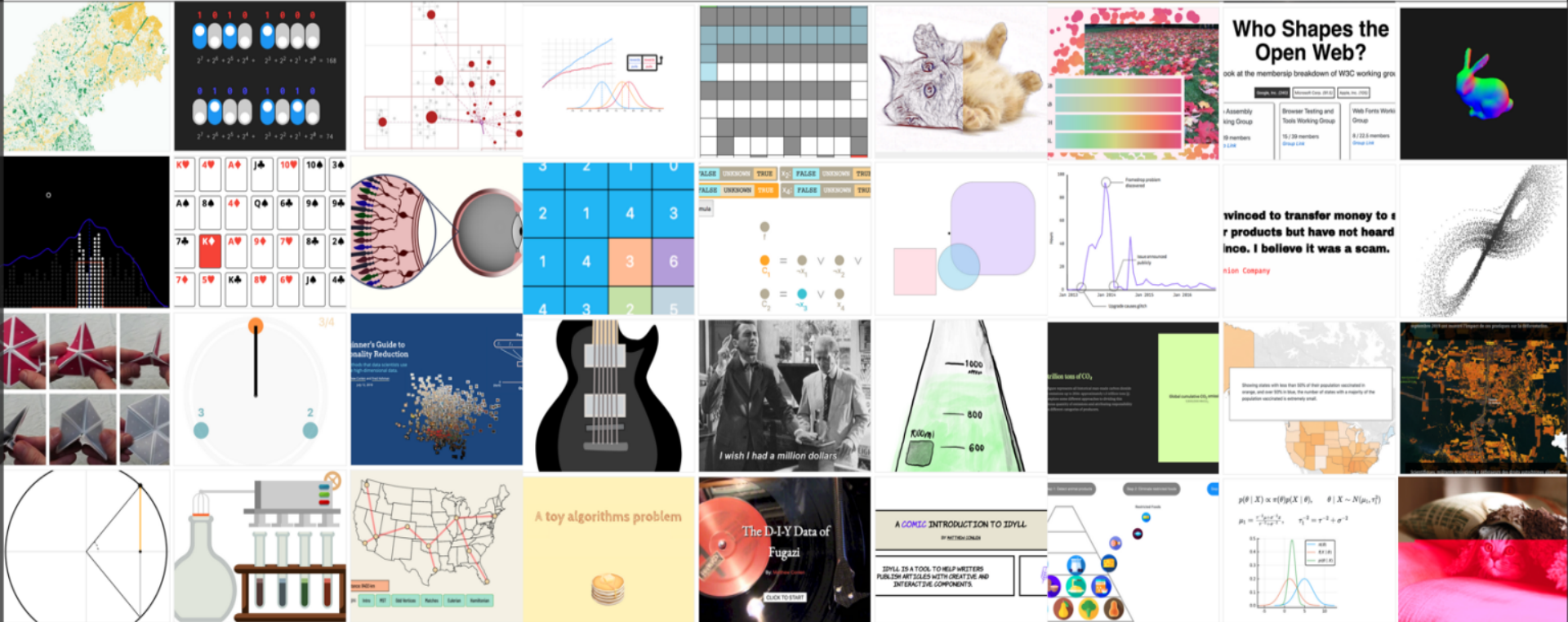## About me:

- ➢ **PhD Candidate at UW Communication Dept**

- ➢ **Undergrad in Computer Science Engineering**
  - ○ **Anna University, Chennai, India, 2009**

- ➢ **Master's in Journalism**
  - ○ **Columbia University, New York City, 2013**

- ➢ **Worked as startups and technology journalist for Mint-WSJ at Bengaluru, India.**

- ➢ **Current research: Redefining journalism through the eyes of interactive journalists.**

- ➢ **Teach: Intro to Data Viz, Strategic Comm, Media Ethics @ Seattle U and UW**

Disclaimer

Lecture will be biased toward data journalism but the material is more generally relevant to how to write data stories and create narratives.

Narrative Visualization

TODAY'S TOPICS:

- ❏ Narrative visualization

- ❏ Types of Narrative visualizations

- ❏ How to report and write a story

- ❏ Newsvalues in journalism

- ❏ Structure of a news story

- ❏ How to create a data story

- ❏ Interactivity in narrative visualizations
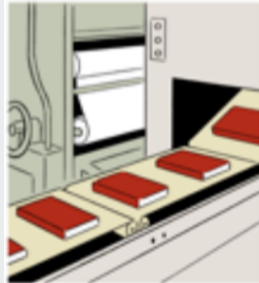
Narrative Storytelling

narrative (n): An account of a series of events, facts, etc., given in order and with the establishing of connections between them.

Effective storytelling "require[s] skills like those familiar to movie directors, beyond a technical expert's knowledge of computer engineering and science." - Gershon & Page '01
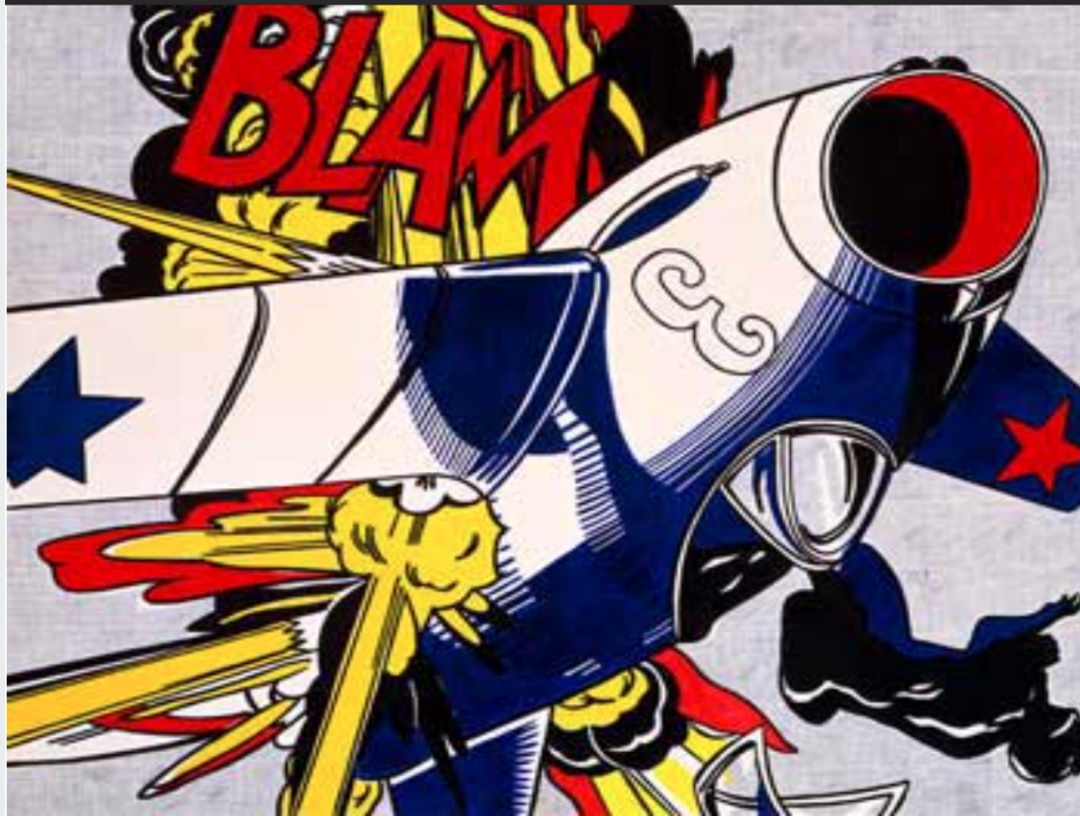
Narrative Storytelling
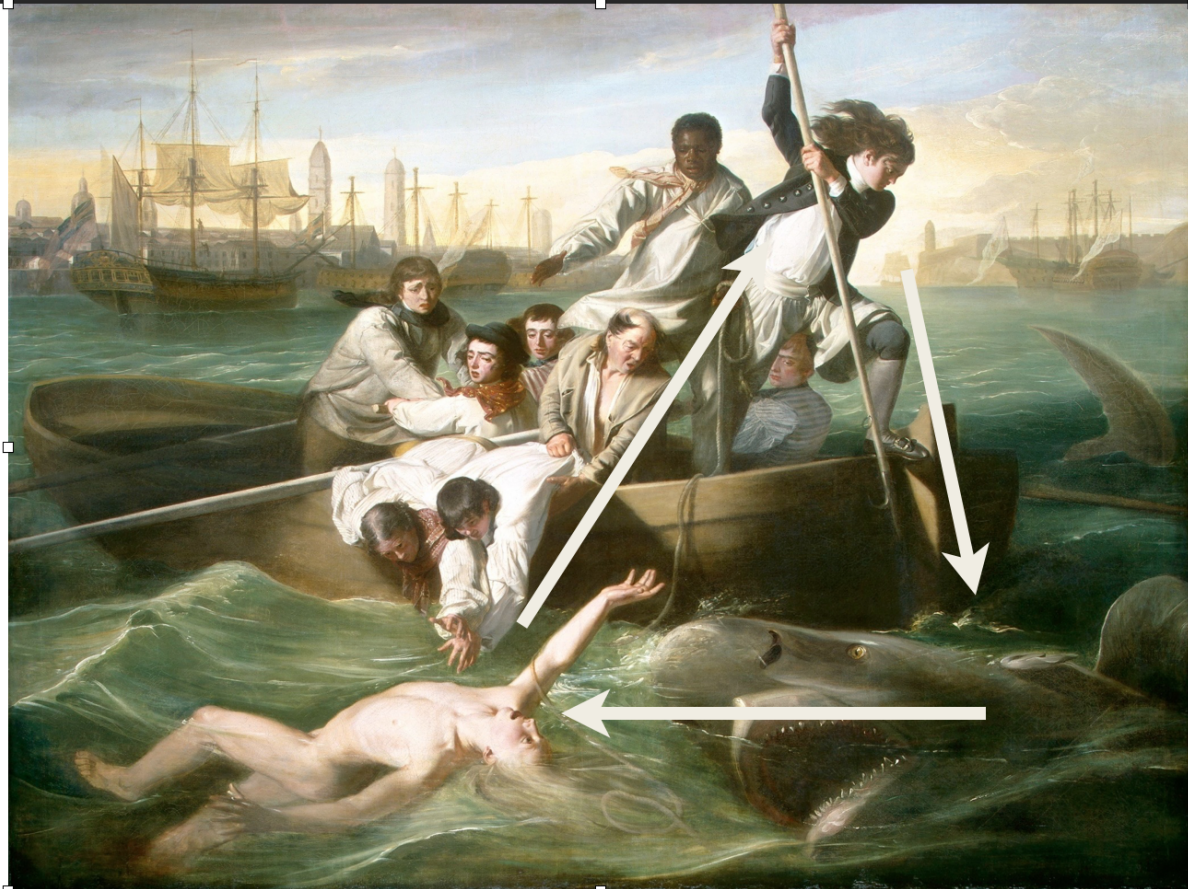
Narrative Storytelling

Narrative Storytelling

Narrative Storytelling

Justice Stephen G. Breyer to Retire From Supreme Court

Justice Stephen G. Breyer was appointed to the Supreme Court in 1994 by President

WASHINGTON — Justice Stephen G. Breyer, the senior member of the Supreme Court's three-member liberal wing, will retire, two people familiar with the decision said, providing President Biden a chance to make good on his campaign pledge to name a Black woman to the court.

Mr. Biden is expected to formally announce the retirement at the White House on Thursday, according to one person familiar with the planning for the event.

Justice Breyer, 83, the oldest member of the court, was appointed in 1994 by President Bill Clinton. After the death of Justice Ruth Bader Ginsburg in 2020 and the appointment of Justice Amy Coney Barrett by President Donald J. Trump, he became the subject of an energetic campaign by liberals who wanted him to step down to ensure that Mr. Biden could name his successor while Democrats control the Senate.

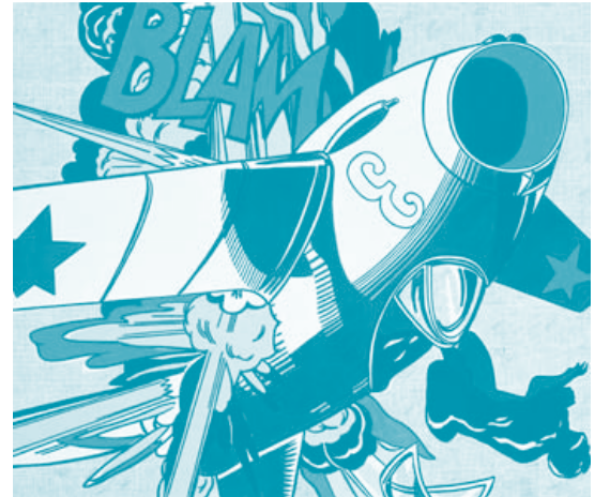# STORYTELLING

across various media

PEOPLE TELL STORIES

WORDS TELL STORIES

IMAGES TELL STORIES

COMICS TELL STORIES

MOVIES TELL STORIES

DATA TELLS STORIES?

Telling Stories With Data

❏ Data as information
❏ Data analysis results (or conclusions)
❏ Data visualizations present information

>>WATCH THIS VIDEO

Telling Stories With Data

★ **An example**

The New York Times

PLAY THE CROSSWORD   Account

The Coronavirus Pandemic ›   **LIVE** Covid-19 Updates   Coronavirus Map and Cases   Omicron: What We Know   Tracking Omicron   World Vaccination Tracker

When Could the United States Reach Herd Immunity? It's Complicated.

By Matthew Conlen and Charlie Smart   Feb. 20, 2021

With the vaccine rollout underway and coronavirus cases declining after a dark winter surge, it may seem as though the end of the pandemic is in sight. In reality, how soon could we get there?

One answer lies in herd immunity, the point when enough people are immune to the virus that it can no longer spread through the population. Getting there, however, depends not just on how quickly we can vaccinate but on other factors, too, like how many people have already been infected and how easily the virus spreads.

An estimate for the path to herd immunity

100% of population immune

80%

Telling Stories With Data

★ **Motivations**

Transparency in journalism
"A sense of the tentativeness of truth."
- *Philip Meyer, Precision Journalism, 2002*

More engaged audience
Greussing & Boomgaarden, *Digital Journalism 2019*

Better learning outcomes
Mayer's Multimedia Principles, 2005

Promote active reading
Victor's "Explorable Explanations", 2011

...also many challenges!

Telling Stories With Data
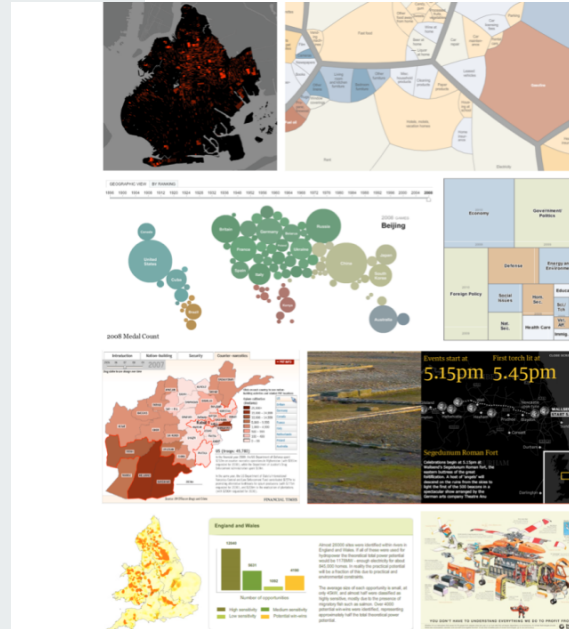
★ **Data journalism**

Works of journalism based on findings of data as a result of independent research, mining and analysis of that data by journalists

How it's different from academic studies is that it incorporates (or should) real-life people and examines the impact and implications of the data's findings

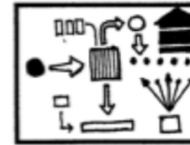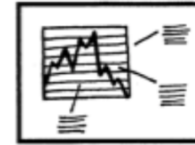# Telling Stories With Data
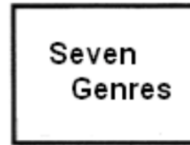
Types of Narrative Visualizations:

58
CASE STUDIES

70% Journalism
20% Business
10% Research

Segel & Heer, 2010

Telling Stories With Data

Types of Narrative Visualizations:

Genres for Narrative Visualization (2010)

Telling Stories With Data

Types of Narrative Visualizations:
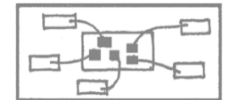
Telling Stories With Data

EXAMPLES

❏ Full text stories using data (traditional)

   Example: Quartz story on childcare

❏ Text stories accompanied by infographics/data visualizations

   Example: Seattle Times rent story

❏ Standalone data stories with explanatory cut lines

   Example: The Guardian Story on police killings

Process Of Writing A Story

Process Of Reporting And Writing A Story

Researching or pre-reporting.

Gathering information (3 source rule).

- o   Personal sources

- o   Interviewing

- o   Observation

- o   Stored sources of information

Writing the story.

Process Of Reporting And Writing A Story

Researching or pre-reporting.

Gathering information (3 source rule).

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- o   Observation

- o   Stored sources of information

Writing the story.

Writing the story.

- o   Pick a story angle

- o   Inverted pyramid

- o   5Ws & H

- o   News structure

How to Create a Data Story

- McCormick's Flowchart

- Inputs or data

- Processes

- **Analysis**

- Output

What is a story angle?

❏ The story angle is the specific viewpoint or perspective from which a writer tells his or her story – and often the same story can be told from a different viewpoint.

❏ Example: A press release about Richmond Capital Partners acquiring Smartlabs Inc. reported in different ways is a clear example of how different perspectives can shape the story angle.

How to Create a Data Story

STORY ANGLE 1:

https://www.bizjournals.com/seattle/news/2017/06/13/seattle-tech-veteran-buys-first-iot-company-with.html

STORY ANGLE 2:

https://www.spokesman.com/stories/2017/jun/14/smartlabs-to-open-seattle-office-after-its-acquire/

Process Of Reporting And Writing A Story

Researching or pre-reporting.

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Writing the story.

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- News structure

FIRST DETERMINE IF STORY IS NEWSWORTHY!!!

News Values

- **Impact**

- **Timeliness**

- **Prominence**

- **Proximity**

- **Conflict**

- **Bizarre/unusual**

- **Trends**

Immigration and Customs Enforcement organization in the US passes EO to send 1 million international students back to their home countries due to online schooling.

News Values

- **Impact**

- **Timeliness**

- **Prominence**

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- **Trends**

Shooting in Seattle CHOP/CHAZ premises.

News Values

- **Impact**

- **Timeliness**

- **Prominence**

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Anything that Trump does. Including his misspelling of coverage on Twitter as covfefe.

News Values

- **Impact**

- **Timeliness**

- **Prominence**

- **Proximity**

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- **Trends**

Seattle Times will prioritize Seattle/Washington news over national/international news.

News Values

- **Impact**

- **Timeliness**

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Wars, bombings, shootings, and crimes always get front page.

News Values

- **Impact**

- **Timeliness**

- **Prominence**

- **Proximity**

- **Conflict**

- **Bizarre/unusual**

- **Trends**

NPR has a whole section online called strange news.
"Tractor Day Offers A (Slow) Dose Of The Freedom Every Teenager Longs For"

News Values

- Impact

- Timeliness

- Prominence

- Proximity

- Conflict

- Bizarre/unusual

- Trends

Coronavirus - pandemic reporting in various industries, everyday updates etc.

The 5ws & H Of News Writing

◆ Who?
◆ What?
◆ When?
◆ Where?
◆ Why?
◆ How?

News Structure

Inverted Pyramid Structure

"The Lead": The most important info
Who? What? Where? When? Why? How?
Approximately 30 words (1-2 thin paragraphs)
May include a "hook" (provocative quote or question)

"The Body": The crucial info
Argument, Controversy, Story, Issue
Evidence, background, details, logic, etc.
Quotes, photos, video, and audio that
support, dispute, expand the topic

"The Tail": extra info
Interesting/Related items.
May include extra context
In blogs, columns, and
other editorials: the
assessment of the
journalist

Lede

Nut graf

Body

Tail or kicker

The Lede

1. An introduction to the story is a lede.

1. It called lede and is used to lead the reader into the story.

1. It mainly answers the 5W&H questions about the story.

Types of Ledes

Straight news lede

"The United States announced it is suspending efforts to revive a cease-fire in Syria, blaming Russia's support for a new round of airstrikes in the city of Aleppo."

Anecdotal lede

"At the dilapidated morgue in the northern Brazilian city of Natal, Director Marcos Brandao walks over the blood-smeared floor to where the corpses are kept. He points out the labels attached to the bright metal doors, counting out loud. It has not been a particularly bad night, yet there are nine shooting victims in cold storage."

Scene-setting lede

"On the second floor of an old Bavarian palace in Munich, Germany, there's a library with high ceilings, a distinctly bookish smell and one of the world's most extensive collections of Latin texts. About 20 researchers from all over the world work in small offices around the room."

Types of Ledes

Analysis lede

"The suspension of US sanctions in Myanmar in response to political reforms gives a green light to US firms looking for business opportunities."

Zinger lede

"His last meal was worth $30,000 and it killed him." (A man died while trying to smuggle cocaine-filled condoms in his gut.)

"Bad things happen to the husbands of Widow Elkin." (Ms. Elkin, as you might surmise, was suspected of bumping off her spouses.)

The Nut Graf

The nut graf has several purposes:

1. It justifies the story by telling readers why they should care.
2. It provides a transition from the lead and explains the lead and its connection to the rest of the story.
3. It often tells readers why the story is timely and important.
4. It often includes supporting material that helps readers see why the story is important.

The Kicker

A kicker is a paragraph that closes up the entire article, summarizing the important parts and closing the piece up. It is a conclusive summary of the whole story.

Example for today's class

A Nike executive seeks a family's forgiveness for a 1965 murder

Headlines

Headlines

- The most important words a journalist writes!

- Five to 10 abstracted words that convey the whole message

- They must contain subject and verb

- Better yet, they must contain subject, verb, and object.

- Examples:

  President Threatens veto of new tax bill

  Midville man charged with larceny

Headlines

A Nike executive seeks a family's forgiveness for a 1965 murder

Headlines

A Nike executive seeks a family's forgiveness for a 1965 murder

- ➤ 11 words
- ➤ Subject, verb, and object
- ➤ Fact

Timestamp

Timestamp

Jan. 18, 2022 at 5:11 pm | Updated Jan. 19, 2022 at 9:38 am

Photographs + Captions or Cutlines

Photographs + Captions or Cutlines

➢ Three photographs
  ○ Long shot
  ○ Medium shot
  ○ Portrait or close up

➢ Two sentence captions or cutlines
  ○ Information about the picture
  ○ Information about the story. It is the same for all photos.

"In two recent meetings, the family of Edward White, who, unarmed and without a police record, was shot at age 18 and left to die in the street, met in person for the first time with his killer, who was himself a teenager at the time and is now an executive at Nike: Larry Miller. (Kriston Jae Bethel / The New York Times)

Byline

Byline

Jere Longman and Kevin Draper

Dateline

Dateline

The dateline of a news story has important information -- it indicates the city the journalist was in when he or she reported on the story. It also indicates the date the story was filed.

Dateline

PHILADELPHIA

Lede

Lede

Barbara Mack lives a block from the corner where her teenage brother was shot to death while on his way home from work on Sept. 30, 1965. Hasan Adams was only 8 months old when the bullet took his father. Azizah Arline was months from being born and never met her dad. More than a half-century later, they have finally received an apology from and discussed restitution with the man who committed the murder.

Lede

What kind of lede is this?

Lede

What kind of lede is this?

- ➢ **Straight news lede**
- ➢ **Anecdotal lede**
- ➢ **Scene setting lede**
- ➢ **Analysis lede**
- ➢ **Zinger lede**

Lede

What kind of lede is this?

➢ **Anecdotal!**

Lede

What kind of lede is this?

➢ **Anecdotal!**

AND

➢ **Scene setting!**

Lede

What kind of lede is this?

- ➤ **Anecdotal!**

  AND

- ➤ **Scene setting!**

  BONUS!!

- ➤ **Information/facts!**

Nut graf

Nut graf

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Nut graf

In two recent meetings, the family of Edward David White, who, unarmed and without a police record, was shot at age 18 and left to die in the street, met in person for the first time with his killer, who was himself a teenager at the time and is now an executive at Nike.

He is Larry Miller, who pleaded guilty to second-degree murder as a 16-year-old gang member and has said he was drunk and out to kill the first person he saw that night. He served 4 1/2 years in prison for that crime and five more years for a series of armed robberies before rehabilitating his life and building a prosperous, high-profile career as a sports and marketing executive.

Nut graf

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Information in nut graf:

➢ What was the current event?
➢ Who participated in the event?
➢ Who is the main character?
➢ What was the news back then?
➢ Why is this so important or newsworthy today?

The body

Everything from…

Miller, now 72, is chair of the Michael Jordan brand at Nike and a former president of the Portland Trail Blazers. He kept his criminal past hidden for decades, until he wrote a book with his daughter, published Tuesday, called "Jump: My Secret Journey From the Streets to the Boardroom."

…to

In the end, White's family said, they did not consider Miller an enemy or a friend, but a man who has been forgiven and who has to make peace with himself.

The body - contents

- ➤ Narrative
  - ○ People
    - ■ Edward David White
    - ■ Larry Miller
  - ○ Voices
    - ■ Larry Miller, murderer
    - ■ Barbara Mack, sister
    - ■ Aziza Arline, daughter
    - ■ Hasan Adams, son

The body - contents

- ➢ Informative
  - ○ Sources
    - ■ The book
    - ■ NYT story
    - ■ An email interview with Larry Miller
    - ■ Ronald Marrero - Miller's lawyer
    - ■ Letter to Miller, from Arline

The end

The end

In the end, White's family said, they did not consider Miller an enemy or a friend, but a man who has been forgiven and who has to make peace with himself.

"You can apologize again and again, but you have to be right with yourself at the end of the day," Arline said. "He has to make peace that he took a man's life."

The end

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"You can apologize again and again, but you have to be right with yourself at the end of the day," Arline said. "He has to make peace that he took a man's life."

➢ Summary

  OR

➢ Kicker?

The end

In the end, White's family said, they did not consider Miller an enemy or a friend, but a man who has been forgiven and who has to make peace with himself.

"You can apologize again and again, but you have to be right with yourself at the end of the day," Arline said. "He has to make peace that he took a man's life."

➢ Summary!

   AND!

➢ Kicker!

Interactivity in data stories

Interactivity in data stories

Interactive Articles - Design

Five affordances of the format

Connecting People and Data.
Make data pleasant to work with. Happy readers are engaged readers.

Personalizing Reading.
Let readers choose the content that is relevant to their own experience.

Making Systems Playful.
Run interactive simulations directly in the browser. No setup required.

Prompting Self-Reflection.
Help readers learn by asking them to reflect in a low pressure environment.

Reducing Cognitive Load.
Use effective representations to make complex topics more intuitive.

Interactivity in data stories

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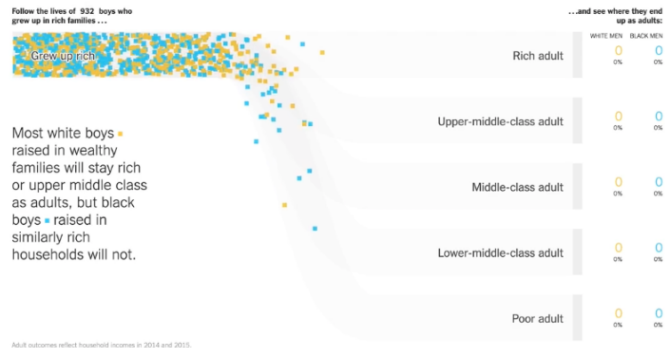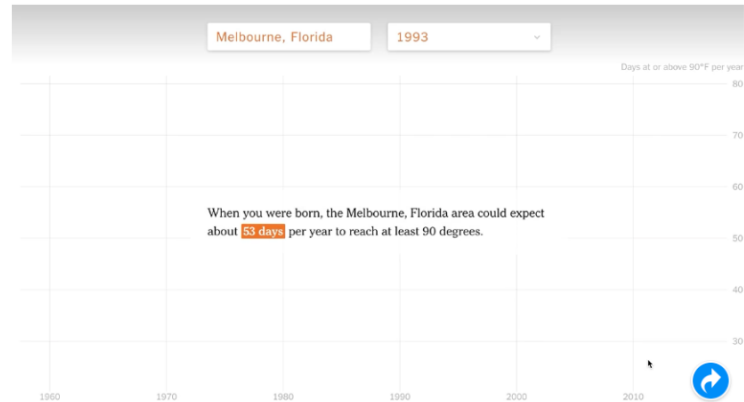
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Follow the lives of 932 boys who grew up in rich families …

Grew up rich

Most white boys raised in wealthy families will stay rich or upper middle class as adults, but black boys raised in similarly rich households will not.

Adult outcomes reflect household incomes in 2014 and 2015.

…and see where they end up as adults:

WHITE MEN   BLACK MEN

Rich adult   0   0
                   0% 0%

Upper-middle-class adult   0   0
                   0% 0%

Middle-class adult   0   0
                   0% 0%

Lower-middle-class adult   0   0
                   0% 0%

Poor adult   0   0
                   0% 0%

Even when children grow up next to each other with parents who earn similar incomes, black boys fare worse than white

Badger, Miller, Pearce, Quealy, *NYTimes*, 2018

Interactivity in data stories

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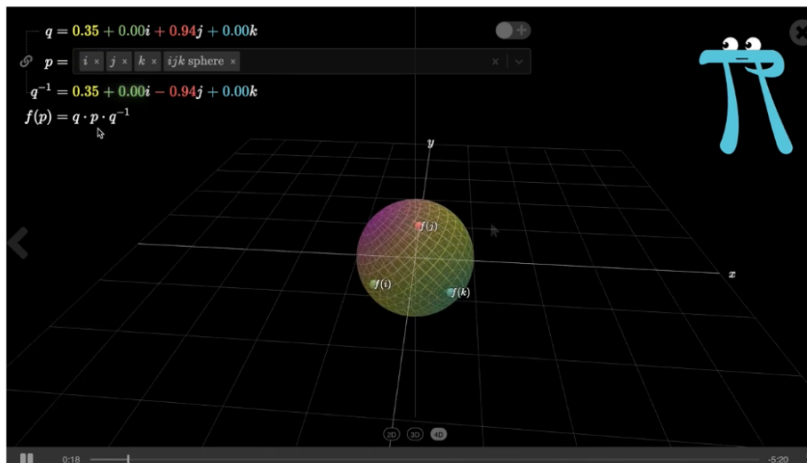
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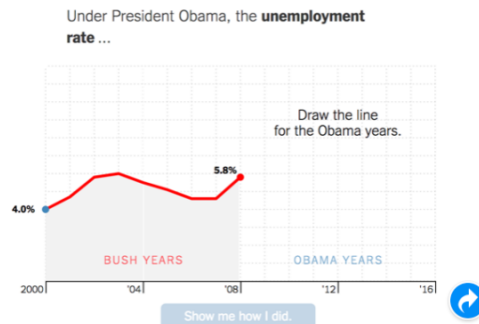Run interactive simulations directly in the browser. No setup required.

Prompting Self-Reflection.
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Reducing Cognitive Load.
Use effective representations to make complex topics more intuitive.

Melbourne, Florida — 1993

Days at or above 90°F per year

When you were born, the Melbourne, Florida area could expect about 53 days per year to reach at least 90 degrees.

1960 1970 1980 1990 2000 2010

Popovich, Migliozzi, Taylor, Williams, Watkins
NYTimes, 2018

Interactivity in data stories

Sanderson and Eater, 2018

Interactivity in data stories

Interactive Articles - Design

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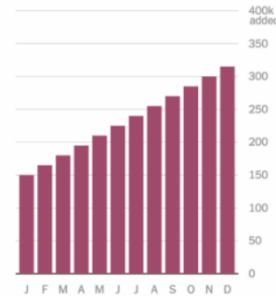Run interactive simulations directly in the browser. No setup required.

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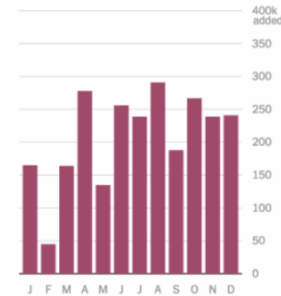Help readers learn by asking them to reflect in a low pressure environment.

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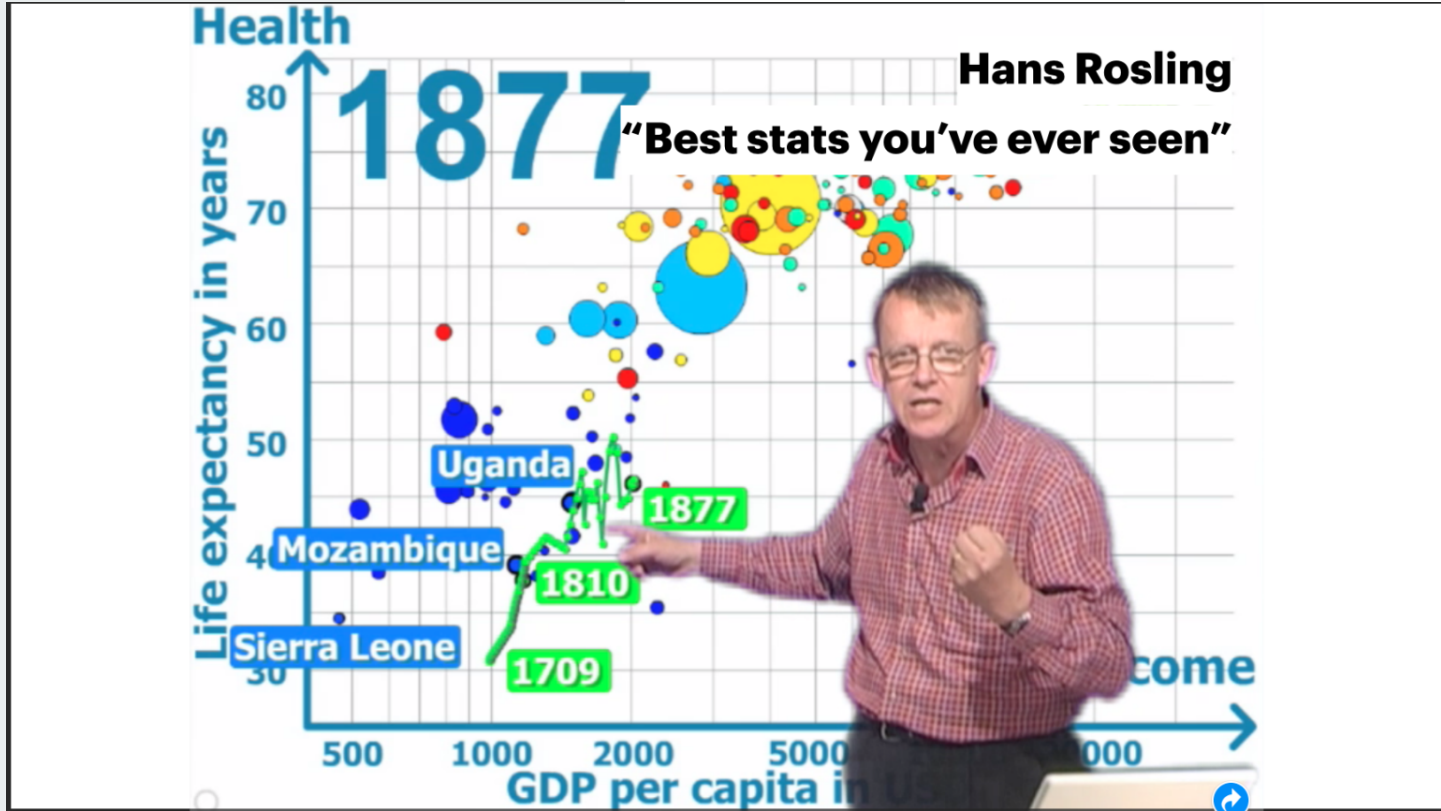Use effective representations to make complex topics more intuitive.

You Draw It: What Got Better or Worse During Obama's Presidency

By LARRY BUCHANAN, HAEYOUN PARK and ADAM PEARCE   JAN. 15, 2017

Draw your guesses on the charts below to see if you're as smart as you think you are.

Under President Obama, the **unemployment rate** ...

Draw the line for the Obama years.

5.8%

4.0%

BUSH YEARS   OBAMA YEARS

2000   '04   '08   '12   '16

Show me how I did.

Buchanan, Park, Pearce, *NYTimes*, 2017

Interactivity in data stories

Irwin, Quealy, *NYTimes*, 2014

Watch this video later!

THANK YOU!