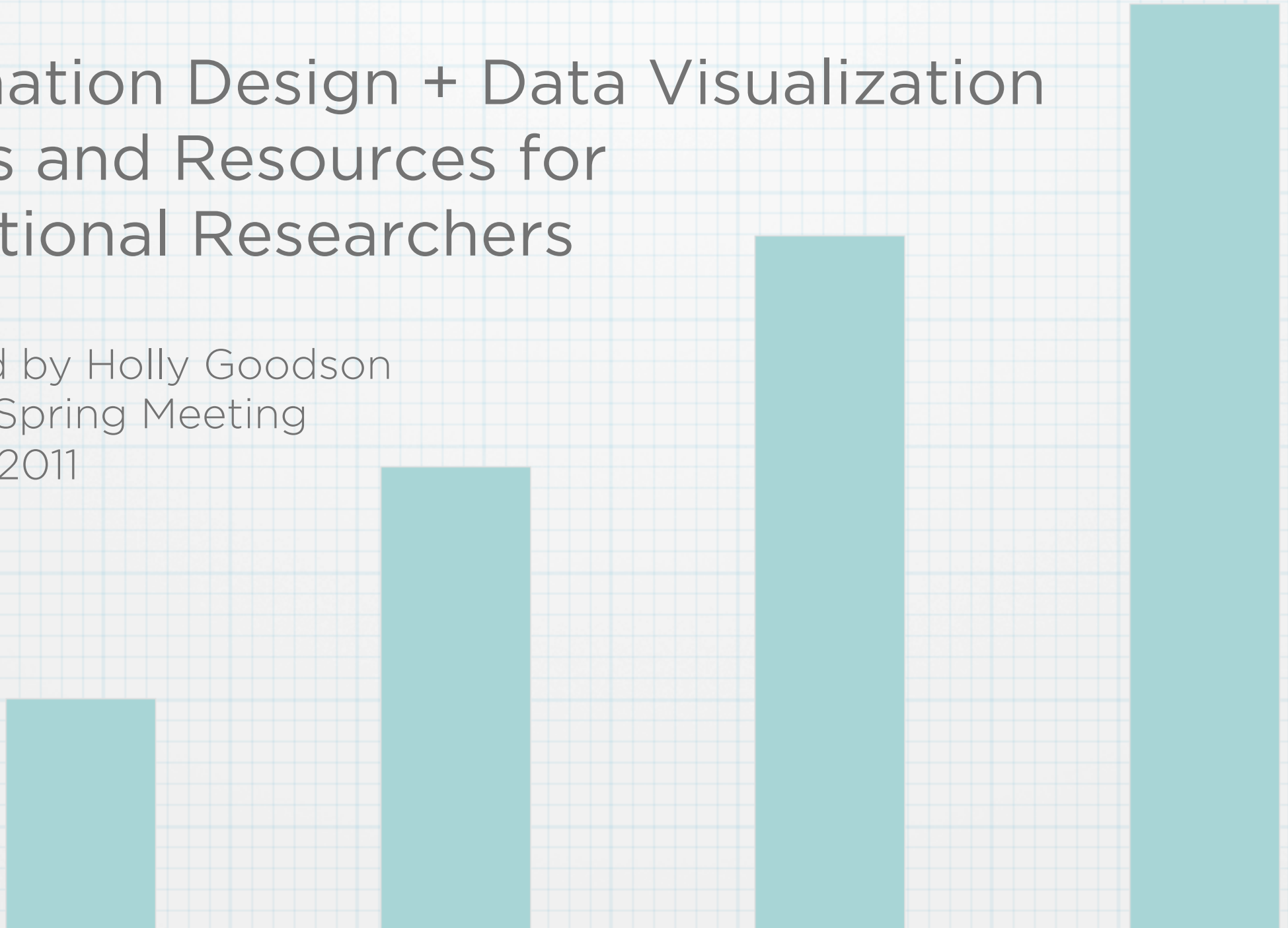


The Art and Science of Communicating Data

Information Design + Data Visualization
Trends and Resources for
Institutional Researchers

Presented by Holly Goodson
USG-IRP Spring Meeting
March 17, 2011



What is this talk about?

- Impact of information age
- What is information design?
- Basic design principles and considerations
- Lessons from the greats
- Data visualization trends

Impact of Information Age

Information overload is not just **hype**.

- 3,000+ books are published daily across the globe
- 540,000 words in the English language, more than 5 times as many as in Shakespeare's time

Impact of Information Age

Americans have access to:

- 1,000,000,000,000** web pages
- 65,000** iPhone apps
- 10,500** radio stations
- 5,500** magazines
- 200+** cable tv networks

Video player controls: 0:30 / 4:46, 360p, Like, Dislike.

Did You Know 4.0
From: xplanevisualthinking | Sep 14, 2009 | 2,335,966 views
This is another official update to the original "Shit Happens" video. This completely new Fall 2009 version includes facts and stats focusing on the changing media landscape, including convergence and technology, and was developed in partnership with The Economist. For more information, or to join the conversation, please visit: <http://mediaconvergence.economist.com> and <http://shitthappens.wikispaces.com>. (more info)

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<http://www.youtube.com/user/xplanevisualthinking#p/u/2/6ILQrUrEWe8>

Why we need to think about information design

“What we need is not more information but the ability to present the right information to the right people at the right time, in the most effective and efficient form.”

-- Robert E. Horn
from *Information Design*

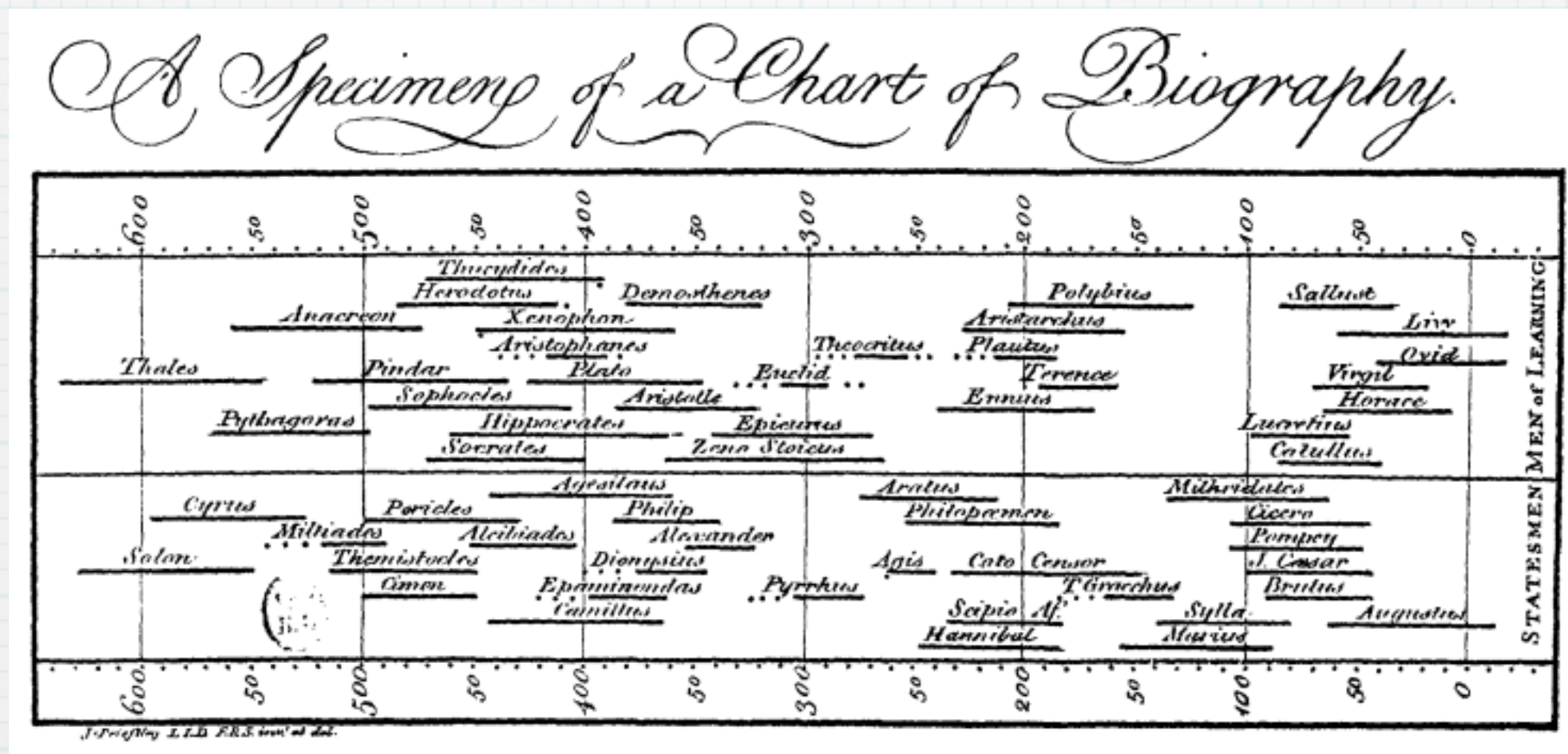
What is information design?

“Information design is defined as the art and science of preparing information so that it can be used by human beings with efficiency and effectiveness. Information design’s primary products appear as documents and as presentations on computer screens.”

-- Robert E. Horn
from *Information Design*

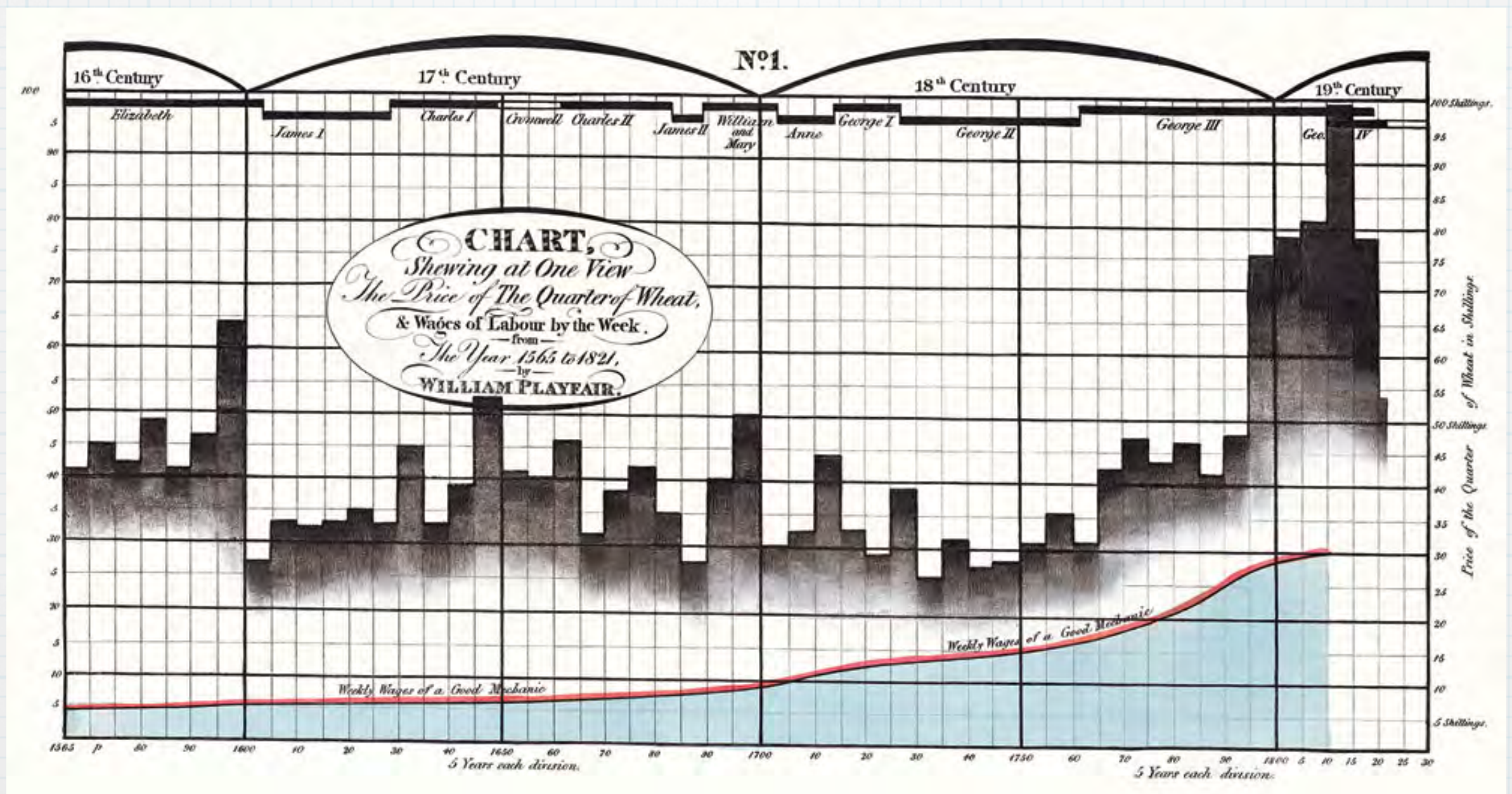
History of Information Design

Joseph Priestley (1733-1804), England, natural philosopher, theologian, political theorist, and educator. He designed a timeline chart (1765), with bars to indicate longevity of famous people.



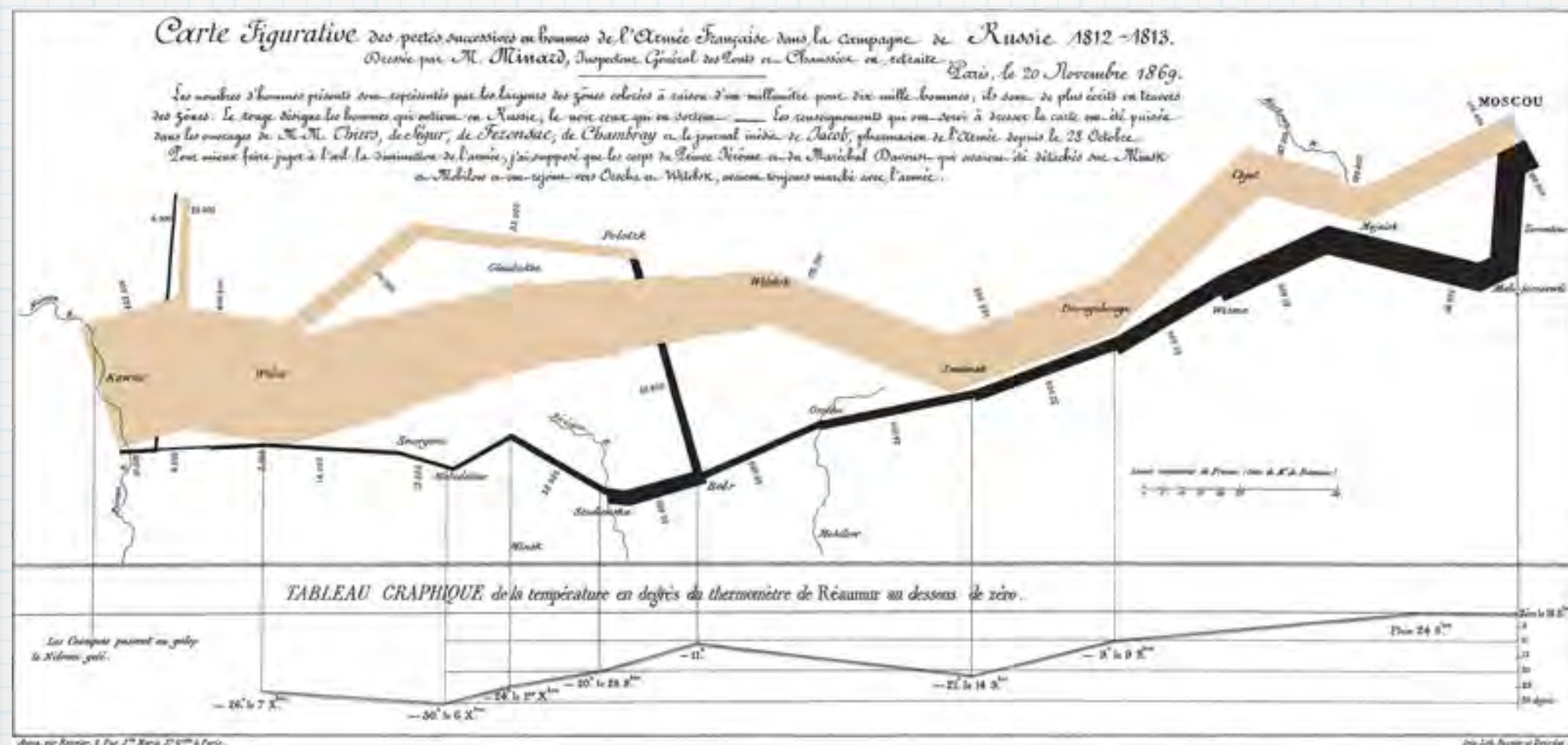
History of Information Design

William Playfair (1759-1823), engineer and economist, is credited with inventing data graphics (time series 1786, pie chart 1801, and bar charts).

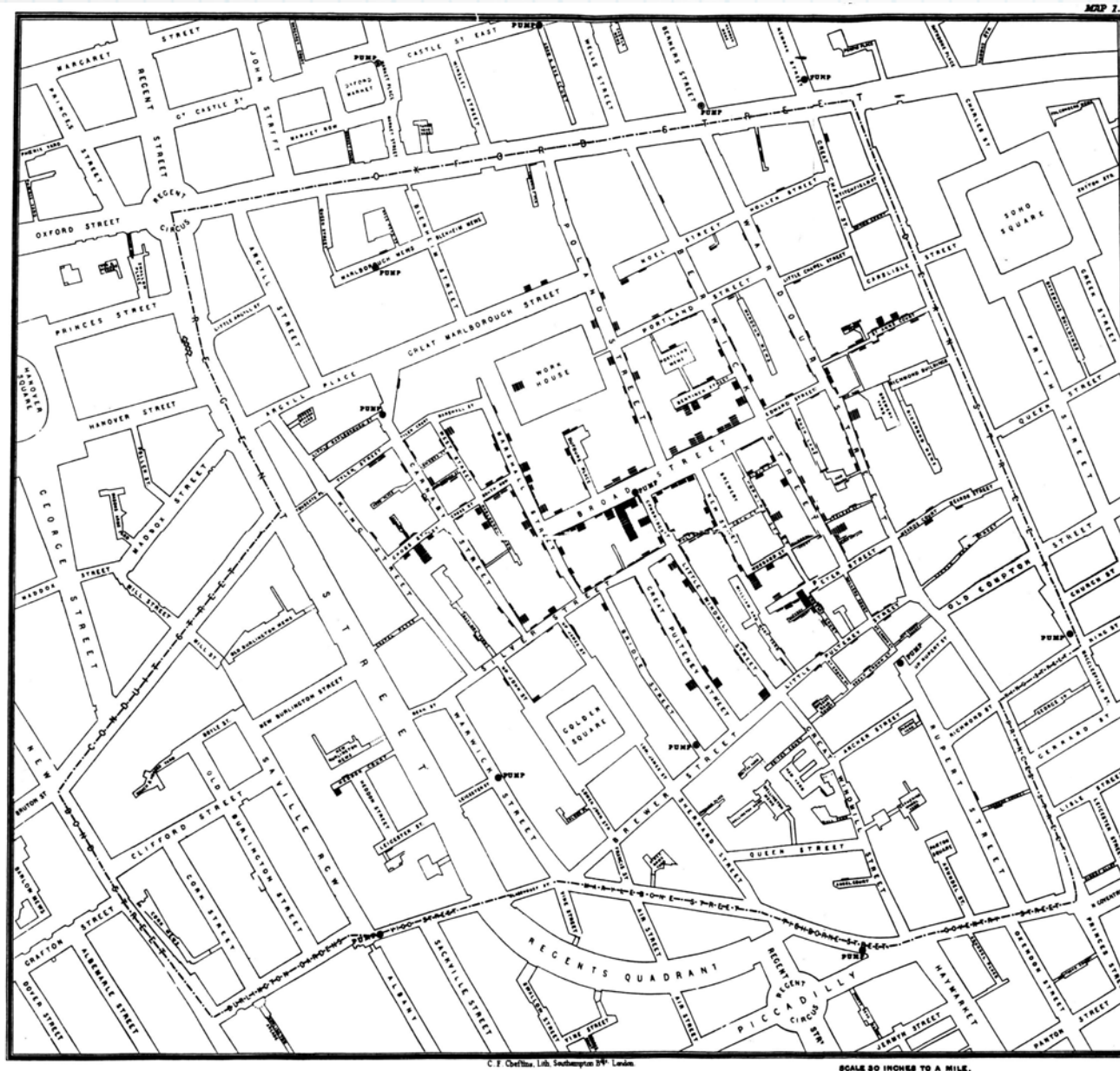


History of Information Design

Charles-Joseph Minard (1781-1870), inspecteur général des Ponts et Chaussées, is credited with inventing the flowchart to depict Napoleon's retreat from Russia (1861).



History of Information Design



John Snow (1813-1858), physician specialist in epidemiology, used simple mapping to display statistical evidence from cholera outbreaks to point out the role of water sources (1854).

Information Design Artifacts

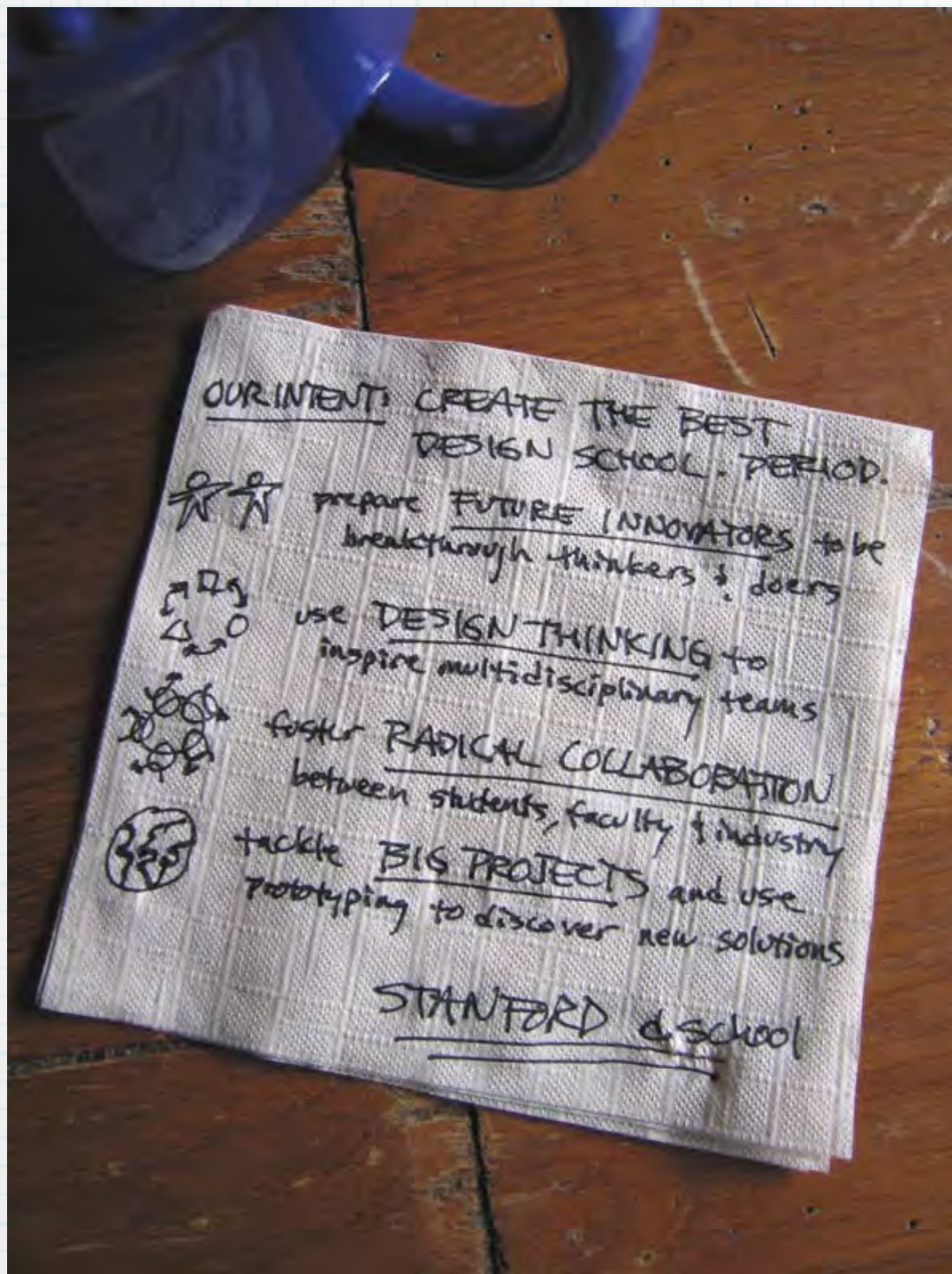
Information designers consider which artifacts and communication channels will relay their message effectively. Examples include:

- Tables
- Charts and graphs
- Maps
- Diagrams and schematics
- Timelines
- Interfaces like dashboards or forms

Design Thinking

“Nobody wants to run an organization on feeling, intuition, and inspiration, but an over-reliance on the rational and the analytical can be just as risky. Design thinking provides an integrated third way.”

—Tim Brown, president and CEO of IDEO



Design Considerations

- Audience Analysis
- Format / Output
- Color
- Typography
- Usability / Feedback

“The commonality between science and art is in trying to see profoundly - to develop strategies of seeing and showing.”

-Edward Tufte

Information Design Giant

Edward Tufte

Professor, author, lecturer; key ideas:

- Information density
- Sparklines
- Chartjunk
- Problem with PowerPoint

Tufte: Information Density

“To clarify, add more detail.”

While it is only possible to retain 7 +/- 2 thoughts in short-term memory, visual perception is vast

Absolute cleanliness is Godliness! Who else but God gave man Love that can spark mere dust to life! Poetry, uniting All-One! All brave! All life! Who else but God! "Listen Children Eternal Father Eternally One!"

Einstein, 1939, after Nazis & Commies united, proposed spacebombs that destroy all, unless we finally teach the Moral ABC's the real Rabbi Hillel taught Jesus to unite all in All-One-God-Faith. As teach astronomers Abraham-Israel-Moses-Buddha-Hillel-Jesus-Spinoza-Paine-Sagan & Mohammed, inspired every 76 years, 6000 years by the Messenger of God's Law, the Messiah, Halley's Comet: "WE'RE ALL ONE OR NONE!" "THERE IS NO GOD BUT GOD!" "TEACH LOVE THY ENEMY!" "LISTEN CHILDREN ETERNAL FATHER ETERNALLY ONE!" Israel-Moses-Buddha-Jesus-Mohammed: ONE! ALL-ONE!

1st: If I'm not for me, who am I? Nobody! 2nd: Yet, if I'm only for me, what am I? Nothing! 3rd: If not now, when? Once More: Unless constructive-selfish I work hard, like Mark Spitz, perfecting first me, absolute nothing can help me! 4th: Only hard work-God's Law can save us, but if we teach only our clan? So, we must teach friend & enemy, the whole Human race, the full-truth, hard-work, free speech, press-&-profitsharing Moral ABC's All-One-God-Faith, lighting-like, 6-billion strong, for we're All-One or none! All-One-God-Faith, as teach the African shepherd-astronomers Abraham & Israel, for 6000-years, since the year 1: "LISTEN CHILDREN ETERNAL FATHER ETERNALLY ONE!" - WE'RE ONE! ALL-ONE! EXCEPTIONS ETERNALLY? NONE! ABSOLUTE NONE!

5th: Whatever unites mankind is better than whatever divides us! Yet, if absolute-unselfish I am not for me, I'm not but classless, raceless, starving masses, never free nor brave! Only if constructive-selfish I work hard perfecting first me, like Mark Spitz-arctic owls-penguin-pilot-cat-swallow-beaver, bee, can I teach the MORAL ABC's ALL-ONE-GOD-FAITH, that lightning-like unites the Human race! For we're ALL-ONE OR NONE! ALL-ONE! "listen children eternal father eternally one!" EXCEPTIONS ETERNALLY? ABSOLUTE NONE!

6th: Absolute cleanliness is Godliness! Balanced food for body-mind-soul-spirit is our medicine! Full-truth our God, half-truth our enemy, hard work our salvation, unity our goal, free speech our weapon. All-One our soul, self-discipline the key to love, uniting All-One above! Above! So, when your fellow man you measure, take him at his best, with that lever, lift him higher, overlook the rest! For we're All-One or none! As teach for 6000 years astronomers Abraham & Israel: "LISTEN CHILDREN ETERNAL FATHER ETERNALLY ONE!"

7th: Each swallow works hard to be perfect pilot-provider-builder-trainer-teacher-lover-mate, no half-true hate! So, each day like a bird, perfect thyself first! Have courage and smile my friend. Think and act 10 years ahead! And the man without fault? He's dead! Do one thing at a time, work hard! Get done! Then teach friend & enemy the Moral ABC that unites all mankind free! Uniting One! All-One! Face the world with a smile, life is always worthwhile! To the fearless are given crowns, keep out the past, disappointments won't last! Help unite mankind, or we're wandering clowns! Diligent preparation, precede . . . spectacular restoration!! So, help teach the whole Human race, the Moral ABC's All-One-God-Faith, lightning-like, for we're All-One or none! All-One!!

8th: More good is caused by evil than by good, do what's right! Enlarge the positive! Replace the negative with the Moral ABC's ALL-ONE-GOD-FAITH, that lightning-like unites the Human race! FOR WE'RE ALL ONE OR NONE! "LISTEN CHILDREN ETERNAL FATHER ETERNALLY ONE!" WE'RE ALL ONE OR NONE! EXCEPTIONS ETERNALLY? NONE!!

9th: Free Speech is man's only weapon against half-truth, that denies free speech to smear-slay-slander-tax-enslave. Full-truth, our only God, unites all mankind brave, if 10 men guard free speech, brave! "If ever one religion unites all mankind, it will be by omitting all irrelevancies & redundancies, added unto the Faith in One-Almighty, all-embracing, ever-loving, ever-evolving, ever-recreating Eternal God, and by ABSOLUTE NOTHING ELSE!" America's founding father, Thomas Paine, 8 books suppressed since 1799!

10th: Thank God we don't descend down from perfect Adam & Eve to sinful sinner, brother's keeper, divided slave! Thank God! United, hard-working trained brave, from dust we ascend up! Thank God for that! Our brother's teacher of the Moral ABC, mason-tent-&-sandalmaker Hillel, taught Carpenter Jesus to unite all mankind free! With it, every Human being created on God's Spaceship Earth, can evolve united, inspired-raised-trained-skilled-disciplined, guided lightning-like by a new birth! Without it . . . we destroy God's Spaceship Earth!

11th: Essene, Chinese and other birth control methods must reduce birth or Easter Isle type overpopulation destroys God's Spaceship Earth!

12th: A great teacher, must first, a self-supporting hardworker be, like Alesen-Baack-Carnegie-Cousteau-Hammer-Liebman-Paine-Pike-Sanger-Spinoza-Strauss-Szasz-Wilke-Yadin-Zamenhof, or he'll turn our greatest teaching into spades, to bury our people! "All people!", added Carpenter Jesus entering manhood! Manhood! but, for 2000 years, we Rabbis never teach the Moral ABC the real Rabbi Hillel taught Jesus, to unite the Human race in our Eternal Father's great ALL-ONE-GOD-FAITH! For we're ALL-ONE OR NONE! ALL-ONE! For example: Einstein's Rabbi Levey evicted us from his University Princeton "Hillel Foundation", when we asked? "You agree, of course, that Hillel's hard work-speech-press-&-profitsharing Moral ABC, unites the Human race, in our Eternal Father's great ALL-ONE-GOD-FAITH! The exact opposite to Marxist-Socialism, that does demoralize-divide-decay the whole human race today!

13th: "Knowing the full truth that unites the human race & not teaching all is deathly guilt!", learned carpenter Jesus from Mason Rabbi Hillel! But Marx, innocent grandson of 2 Rabbis, learned only half-truth! Ashamed, Marx wrote 1844: "One World Without Jews", to kill all Jews, 1848. "The Communist Manifest", to kill the rich, causing Nazi-Psycho-Communism, 66 million murders! As Mao wrote in Redbook 51 : "Marxist-Communism, once in power, is utterly unworkable, has less value than cowardly. Its power is the gun!" What an apology we Rabbis owe Israel, Marx, Mao, all mankind, for not teaching Astronomy's great All-One-God-Faith, that with just 6 words eternally unites the human race! As teaches African-shepherd Astronomer Israel for 6000 years, "LISTEN CHILDREN ETERNAL FATHER ETERNALLY ONE!" For one God's Spaceship Earth, with Bomb & Gun, we're All-One or none! All-One! All-One! All-One! Exceptions eternally? Absolute none!

Dr. Bronner passed away peacefully on March 7th of 1997! The business continues to be run by the Bronner family with no break in continuity. Over 1000 acres of Dr. Bronner's beloved Rain Forest was donated by his family to the Boys and Girls Clubs of San Diego County, California. Underprivileged children can now camp under the stars within sight of Mt. Palomar which is often mentioned in the Moral ABC. Free articles. Moral ABC Book \$2.

14th: When half-truth is gone & we are dust, the full-truth we print, protect & teach alone lives on! Full-truth is God, it must! Help teach the whole Human race, the Moral ABC of All-One-God-Faith, lightning-like 6 billion strong & in our Eternal Father's Kingdom, we're All-One! "Listen Children Eternal Father Eternally One!"

15th: "Americanism is the knowledge of, the loyalty inspiration or attachment to the 'Army of Principles of All-One-God-Faith', That lightning-like unite the Human race! For we're all-one or none! Exceptions eternally? Absolute None!" Noah Webster.

16th: "We can no longer live half-slave, half-free! We unite the Human race in All-One-God-Faith or perish by half-true hate! For we're All-One or None!" Abraham Lincoln

17th: "Government, like fire, is our most useful servant, if fully controlled by us, its Citizens; and government, exactly like fire, becomes our most destructive master if not fully controlled by the open majority of its productive working Citizens! Only united-armed-vigilant & trained, Swiss 6000 year Peace & Freedom reigned! Exception? None!" from 'The Army of Principles' by George Washington.

18th: "I've never stooped so low as to hate any man! For I've learned that in the long run, all mankind needs-wants-loves whatever good work you've done! Regardless of your race, color, nationality or religion!" Booker T. Washington, born a slave!

19th: "If ever One Religion reunites God's legions, it'll be by omitting all half-truths added onto All-One-God-Faith, that lightning-like unites the Human race for we're All-One or none! Listen Children Eternal Father Eternally One!", as teach since the Year One astronomers Abraham to Mohammed, inspired by the sign of the Messiah, Halley's Comet!"

20th: "An army of principles can penetrate where an army of soldiers cannot! It will succeed where diplomacy may fail! It will always unite the Human race where all else divides All-One-God-Faith!" From American founding father, the world's first steel-bridge builder, Thomas Paine's 8 great books, not taught since 1799!

21st: The trouble is that the wrong people are always the most energetic, united & intense; driving the hard-workers to lose in self-defense! That fact alone brings Hitlers & Stalins to power & that will only change when we rally-raise-train-evolve-unite the whole Human race with the Moral ABC in All-One-God-Faith!

22nd: The intensity of man's emotions is a greater driving force and more decisive than the sum total of his education, his money, plus the size of his brain! Proof: Einstein!

23rd: "The whole World is our country, our Fatherland, because all mankind are born its Citizens! We're all Brother and Sister because One ever-loving Eternal Father is our only God, our only Religion, that Reunites God's Realm! For we're ALL-ONE OR NONE. "LISTEN CHILDREN ETERNAL FATHER ETERNAL ONE!"

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FROM THE ARMY OF PRINCIPLES BY THOS. PAINE, 1799.

1st: A human being works hard to teach love his enemy, to help unite all mankind free, or that being is not yet Human; so, go the second mile, hold the other cheek brave, not meek! For we're All-One or none! All-One! Exceptions eternally none! ABSOLUTE NONE!

22nd: Small minds decay! Average minds delay! Great minds teach All-One today! Wn victory and all stand by you; give up? All deny you! Remember, the only difference between the brave and the coward, the Brave has an ideal to fight for, such as teaching the Moral ABC, that at once unites the human race in All-One-God-Faith! As teach Abraham & Israel, inspired by the Messenger of God's Law, the sign of the Messiah, Halley's Comet, the Blazing Star of Buddha-Bethlehem-Mohammed! "LISTEN CHILDREN ETERNAL FATHER ETERNALLY ONE!"

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99: "An army of principles can penetrate where an army of soldiers cannot! It will succeed where diplomacy may fail! It will always unite the Human race where all else divides All-One-God-Faith!" From American founding father, the world's first steel-bridge builder, Thomas Paine's 8 great books, not taught since 1799!

106: The trouble is that the wrong people are always the most energetic, united & intense; driving the hard-workers to lose in self-defense! That fact alone brings Hitlers & Stalins to power & that will only change when we rally-raise-train-evolve-unite the whole Human race with the Moral ABC in All-One-God-Faith!

107: The intensity of man's emotions is a greater driving force and more decisive than the sum total of his education, his money, plus the size of his brain! Proof: Einstein!

THE MORAL ABC, INTRODUCED BY KIPLING'S "IF" & SOAPMAKER BRONNER

If you can talk to crowds & keep your virtue, or walk with kings & not lose that common touch! If neither loving friend nor enemy can hurt you; if all men count with you, but none too much! If you can work hard to teach each unforgiving minute ALL-ONE-GOD-FAITH mason Hillel taught carpenter Jesus to unite the Human race, come hell, hate, ban, you'll enjoy God's spaceship Earth & do great work within it; & which is more my son, you'll be a man! A man! "Sure, East is East and West is West & never the twain shall meet!" But there is neither East nor West, nor border, breed nor birth, once the Moral ABC unites all mankind free on God's spaceship Earth! Then & only then, no matter how rough the trip, how charged with punishment the scroll, you are the captain of thy ship, the master of thy soul!

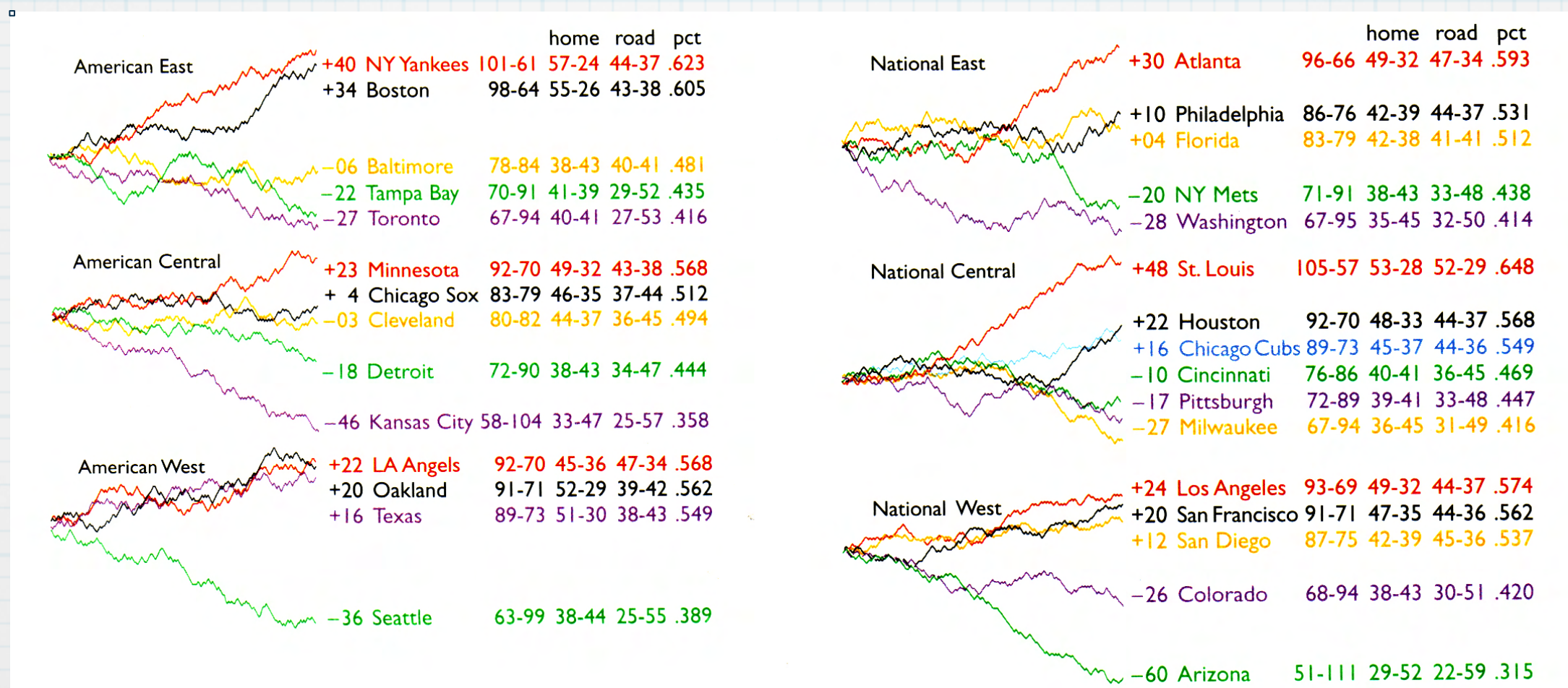
Each day, like a bird, perfect thyself first, to have courage & smile my friend! Think & act 10 years ahead! And the man without fault? He's dead! Do one thing at a time! Work hard! Get done! Then teach friend & enemy 'How to Work & How to Love' for God is Love, uniting All-One above in God's Eternal All-One-God-Faith!

To dream that impossible dream! To reach that unreachable star! 'Til All-One, All-One we are! To fight that unbeatable foe! To go where the brave dare not go! To right the unrightable wrong! To love pure, chaste, from afar! To try 'til your arms are too weary! To reach that unreachable star! 'Til All-One, All-One we are! For this is my goal! To reach that unreachable star! No matter how hopeless, no matter how far! To fight for the right without question or pause, to be willing to march into hell for a heavenly cause! For I know that if I follow this glorious quest, my heart will lie peaceful & calm when I'm laid to my rest! And I know that the world will be better for this, that one man, tortured, blind-ed, covered with scars, still strove with his last ounce of courage, to reach that unreachable star 'til united All-One we are! These are the days my friend, we know they'll never end! We'll work-sing-dance-love, marching on! We live God's Law today! We win Free Speech OK! With 10 men & full-truth, our only God, we rally-raise-unite All-One! All-One!

144: When half-truth is gone & we are dust, the full-truth we print, protect & teach alone lives on! Full-truth is God, it must! Help teach the whole Human race, the Moral ABC of All-One-God-Faith, lightning-like 6 billion strong & in our Eternal Father's Kingdom, we're All-One! "Listen Children Eternal Father Eternally One!"

Tufte: Sparklines

- Little data lines that move over time
- Datawords: data-intensive, design-simple, word-sized graphics
- Aimed at financial and sports pages of newspapers, medical records, historical trends



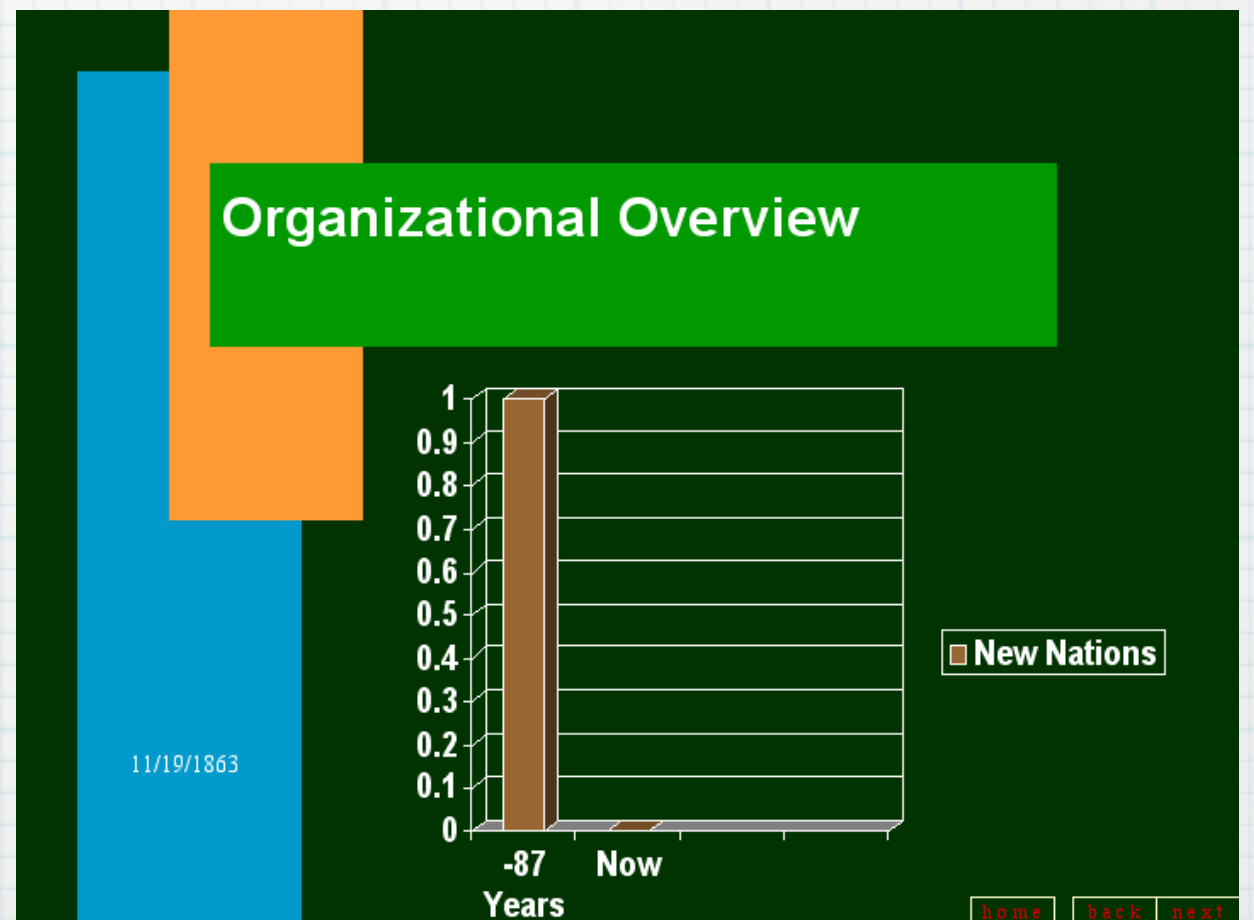
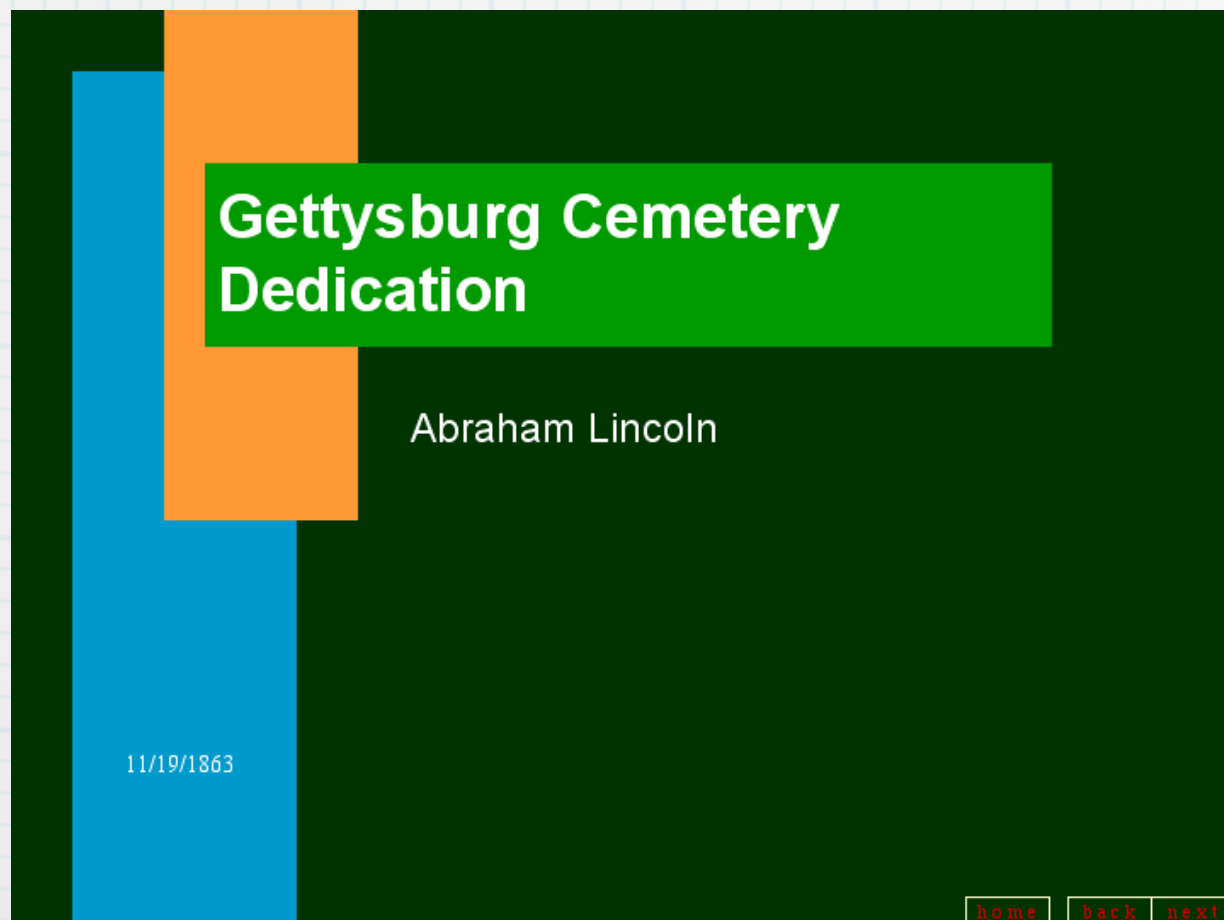
Tufte: Chartjunk

- Garish colors
- Corny clip-art
- Phony dimensionality
- Useless grids with too many borders
- Boxes and frames around graphs
- Redundant representation of data



Tufte: Problems with PowerPoint

- Very loud, very slow, very simple
- Belief that people are capable of comprehending vast amounts of information (examples New York Times, Google and Yahoo)
- Screen size, format, paper version are confining to presentation of evidence, require oversimplification



Analytical Design Master

Stephen Few

Author, professor and lecturer most renowned for analytical design; key ideas:

- Simplicity – strip away excess
- Clean table design
- Thoughtful charts and graphs
- One-screen dashboard

Few: Designing Tables

A table works best when it is used to look up individual values, compare individual values or the values must be expressed precisely.

Question 3: Which of these two tables is easier to read?

☒ Top Table

Sales Summary by Region					
1st Quarter, 2007					
Regions are Sorted by Revenue					
Region	Revenue	% of Total Revenue	Expenses	Profit	% of Total Profit
Europe	\$75,904,604.00	31.06%	\$40,988,486.16	\$34,916,117.04	22.31%
Canada	\$51,572,694.00	21.10%	\$17,534,715.96	\$34,037,978.04	21.75%
Western U.S.	\$42,860,178.00	17.16%	\$11,944,849.84	\$30,715,328.16	19.63%
Eastern U.S.	\$33,977,385.00	13.90%	\$7,135,250.85	\$26,842,134.15	17.15%
Central U.S.	\$26,139,598.00	10.70%	\$3,920,939.70	\$22,218,658.30	14.20%
Asia	\$14,135,278.00	5.78%	\$6,360,875.10	\$7,774,402.90	4.97%
Total (or Avg)	\$244,369,737.00	100.00%	\$87,885,117.61	\$156,504,619.39	100.00%

Sales Summary by Region (USD)

1st Quarter, 2007

Regions are Sorted by Revenue

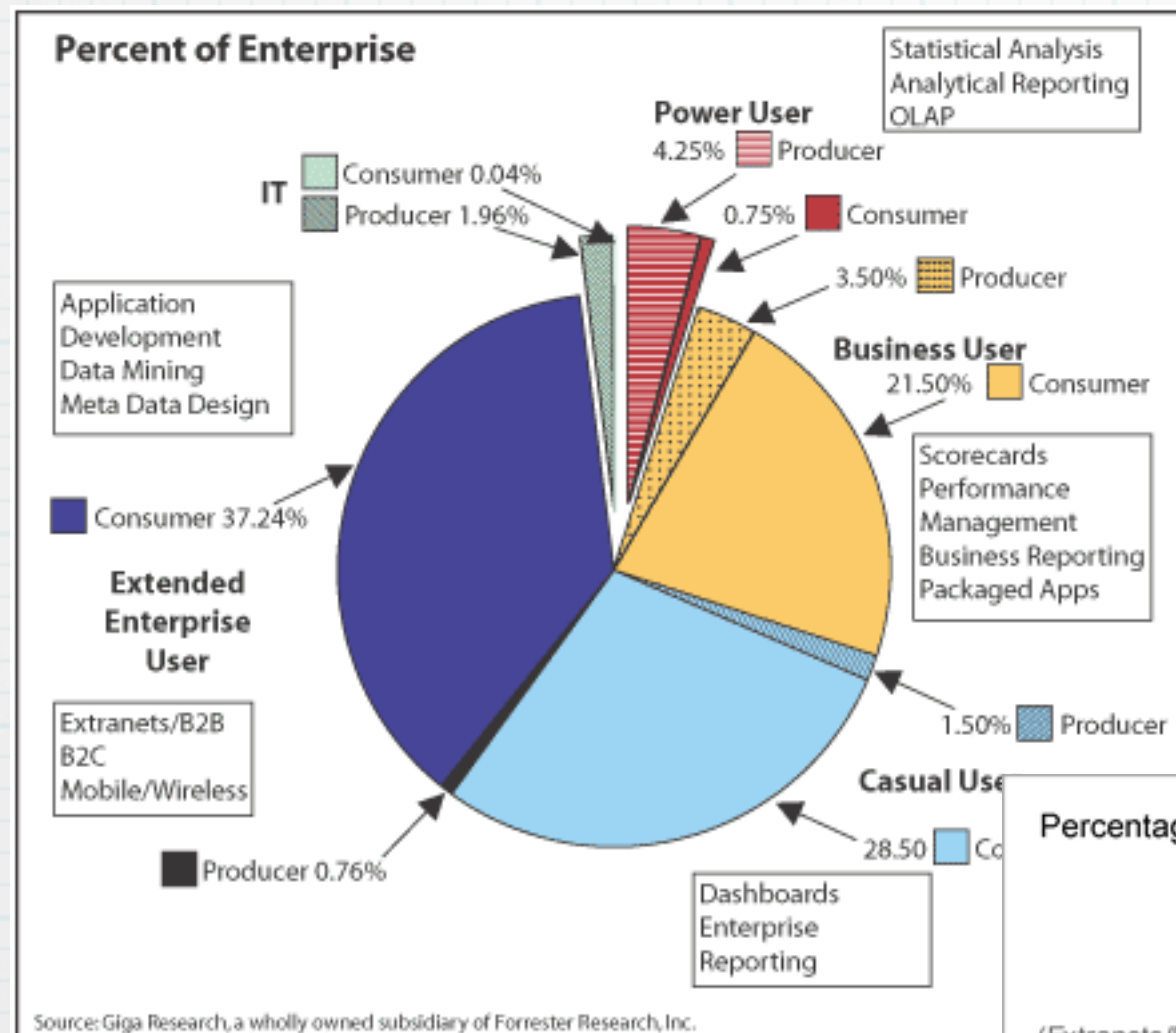
Region	Revenue	% of Total Revenue	Expenses	Profit	% of Total Profit
Europe	75,904,604	31.1%	40,988,486	34,916,118	22.3%
Canada	51,572,694	21.1%	17,534,716	34,037,978	21.7%
Western U.S.	42,860,178	17.5%	11,944,850	30,715,328	19.6%
Eastern U.S.	33,977,385	13.9%	7,135,251	26,842,134	17.2%
Central U.S.	26,139,598	10.7%	3,920,940	22,218,658	14.2%
Asia	14,135,278	5.8%	6,360,875	7,774,403	5.0%
Total (or Avg)	\$244,389,737	100.0%	\$87,885,118	\$156,504,619	100.0%

☐ Bottom Table

Back

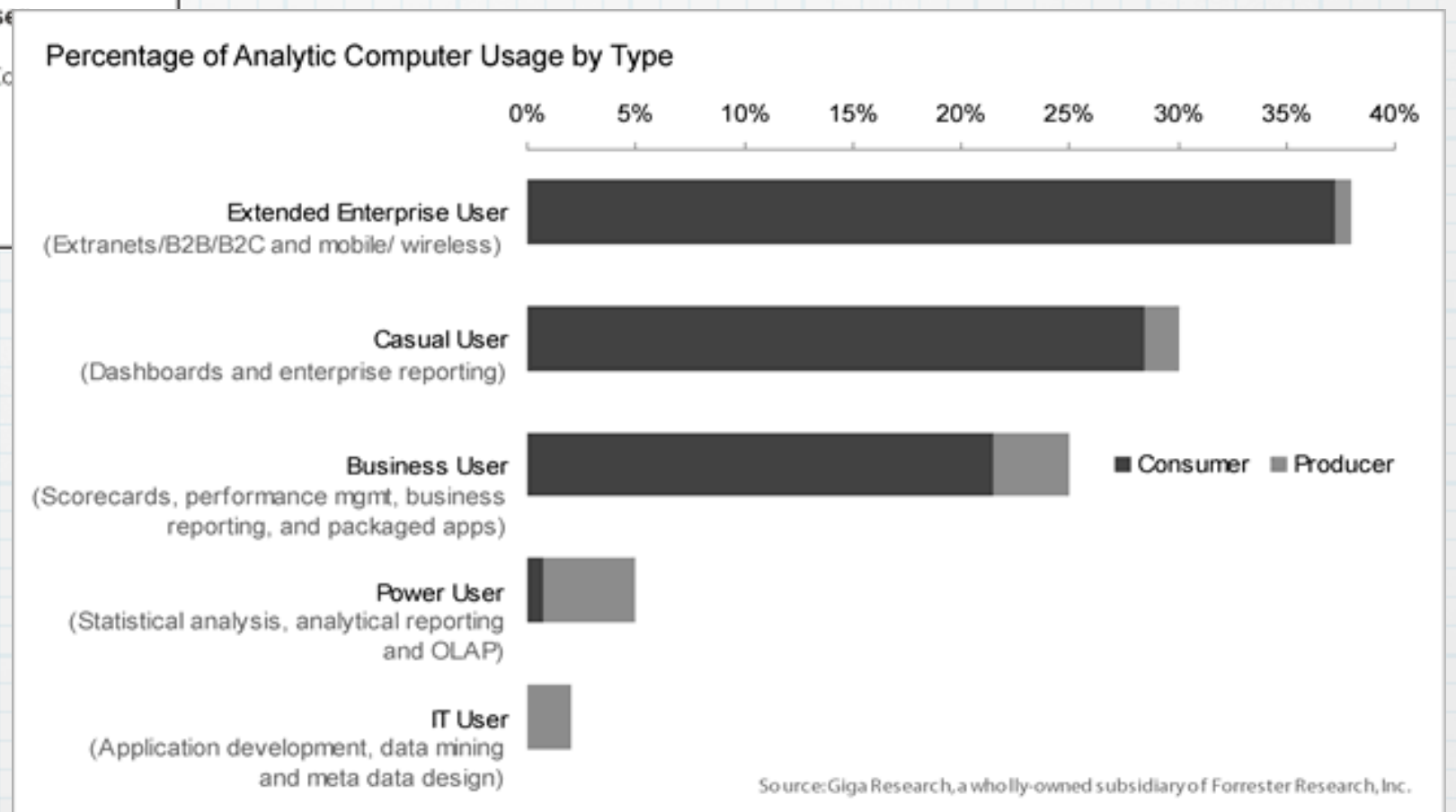
Next

Few: Designing Charts



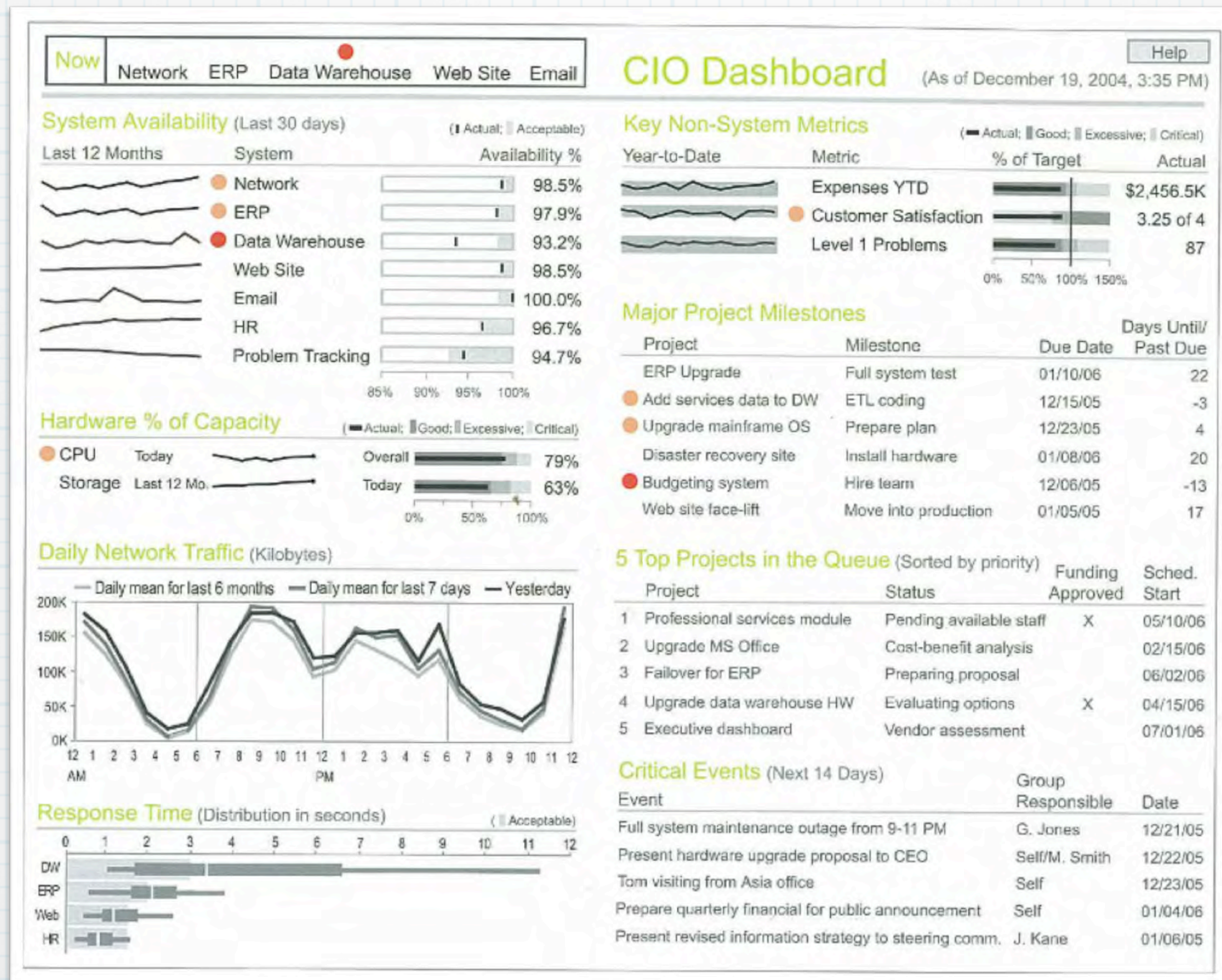
A graph works best when the message is contained in the shape of the data, such as patterns, trends, co-relationships, and exceptions to the norm.

- Choose lighter or darker colors, not primary
- Use a single color and vary intensity for distribution



Few: Designing Dashboards

Dashboard design: single screens of information that people monitor to maintain the situation awareness that enables them to do their jobs effectively.

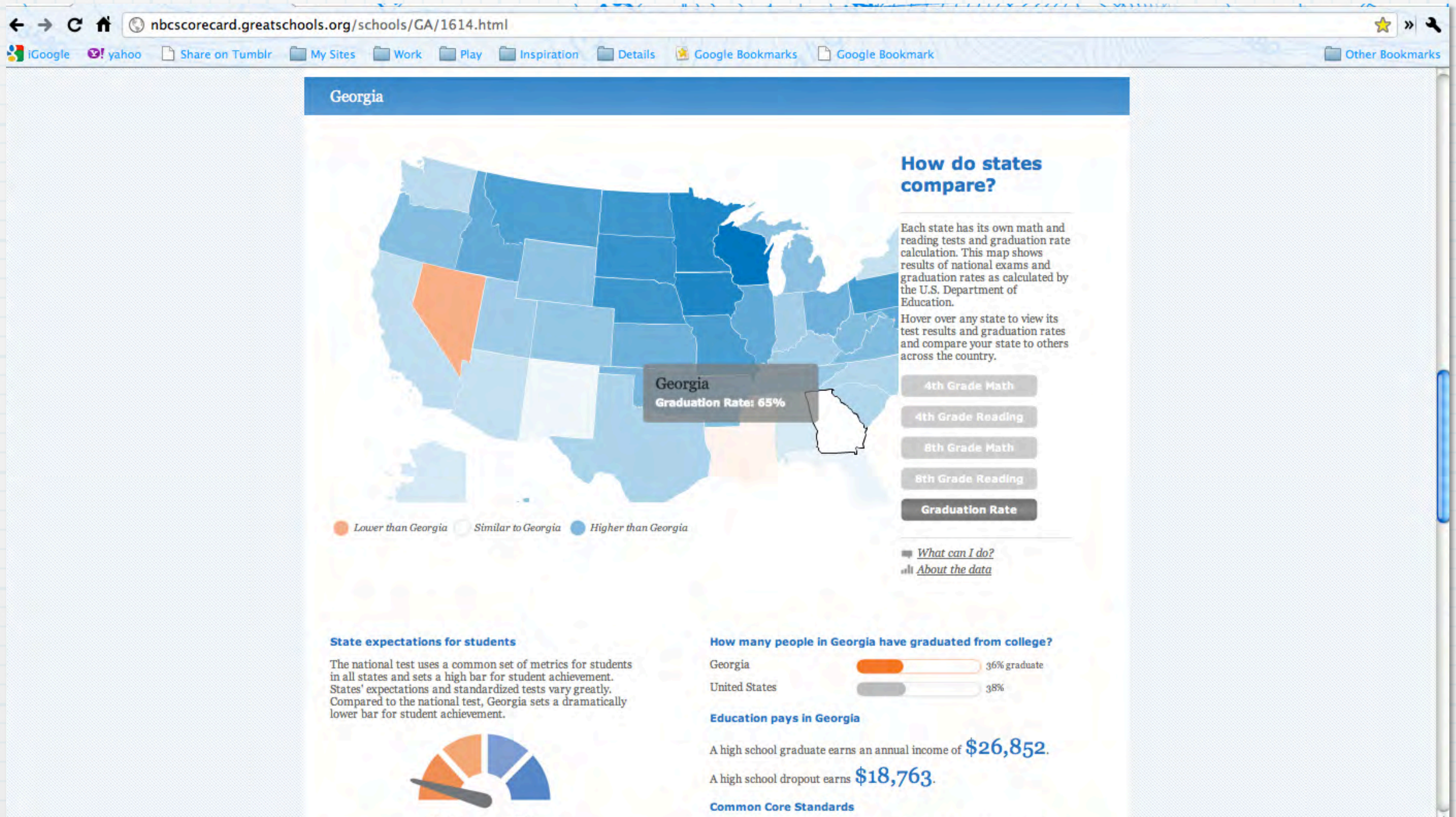


Data Visualization Trends

- Data Journalism / Infographics
- Social Network Analytics
- Open Data
- Visualization Community
- Data Visualization Studios
- Data Visualization Blogs
- Personal Data Collection

Data Journalism

Education Nation Scorecard www.nbcscorecard.greatschools.org/



Data Journalism

The Guardian Data Store
www.guardian.co.uk/data/

The screenshot shows the Guardian Data Store website. At the top, there's a browser window with the address bar showing 'www.guardian.co.uk/data'. Below the browser window, there's a navigation bar with links like 'Mobile site', 'Sign in', 'Register', 'Text larger', 'smaller', 'About us', 'Today's paper', and 'Zeitgeist'. A large banner for DIRECTV is visible, offering a 'LOCK in your price \$29.99 for one full YEAR'. Below the banner, the Guardian logo and 'guardian.co.uk' are displayed. A search bar is present with the text 'Your search terms...'. A horizontal menu lists various sections: News, Sport, Comment, Culture, Business, Money, Life & style, Travel, Environment, TV, Blogs, Data, Mobile, Offers, and Jobs. Below this, there's a 'DATA STORE' section with the tagline 'Facts are sacred'. The main content area is divided into three columns. The left column is titled 'Latest from the Datablog' and features an article about 'Unemployment benefit claimants constituency by constituency: full data' with a large infographic showing data for 833,000 claimants. The middle column is titled 'Editor's picks' and features an article about 'Nuclear power plant accidents: listed and ranked since 1952' with a small image of a nuclear power plant. The right column is titled 'AMAZING CRUISE DEALS' and features a large image of a cruise ship with text about various cruise packages. At the bottom, there's a 'Highlights' section with links to 'Interactive guides' and 'Twitter Follow us!'.

guardian.co.uk

News | Sport | Comment | Culture | Business | Money | Life & style | Travel | Environment | TV | Blogs | Data | Mobile | Offers | Jobs

News | Datablog | A-Z of data | World data search | Aid data | US | Open Platform | Developer blog | Twitter | Flickr | Facebook

DATA STORE

Facts are sacred

Latest from the Datablog

Unemployment benefit claimants constituency by constituency: full data

Unemployment has risen once again. These are the unemployment benefit claimant numbers in each of the parliamentary constituencies. Get them where you live

15 comments

Editor's picks

Nuclear power plant accidents: listed and ranked since 1952

How many nuclear power plants have had accidents and incidents? Get the full list and find out how they're ranked

29 comments

See every quake, updated live

AMAZING CRUISE DEALS

7 NIGHT SOUTHERN CARIBBEAN CRUISE
STARTING AT \$579

4 NIGHT WESTERN CARIBBEAN CRUISE
STARTING AT \$299

7 NIGHT BAHAMAS CRUISE
STARTING AT \$599

FIND MORE HOT DEALS

Highlights

Interactive guides
See the world

Twitter
Follow us!

Data Journalism

The Guardian SOU address wordle
www.guardian.co.uk/datablog/2010/jan/27

Obama, 2010



Bush, 2002



Kennedy, 1961



Lincoln, 1861



Roosevelt, 1934

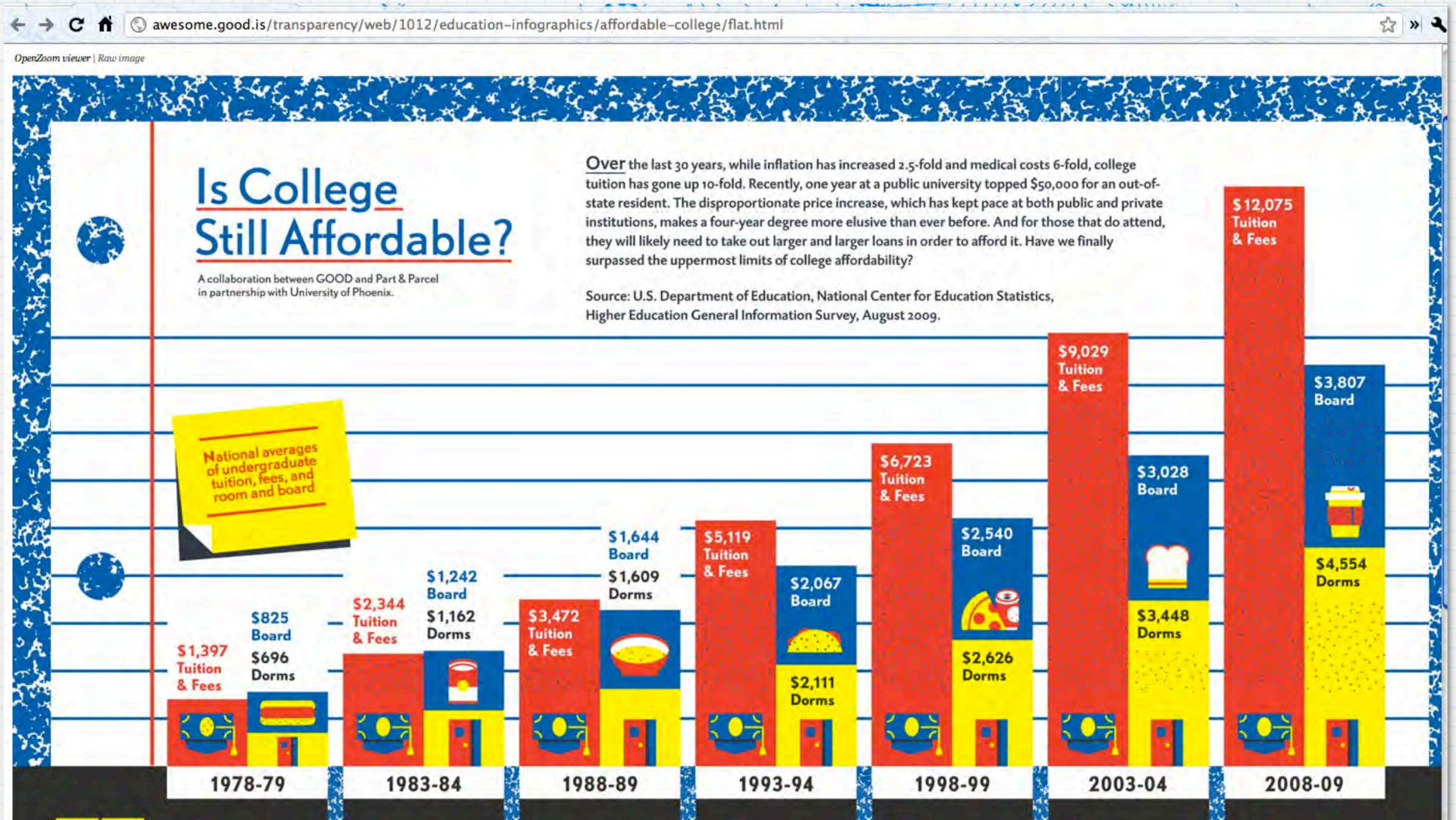


Washington, 1790



Infographics

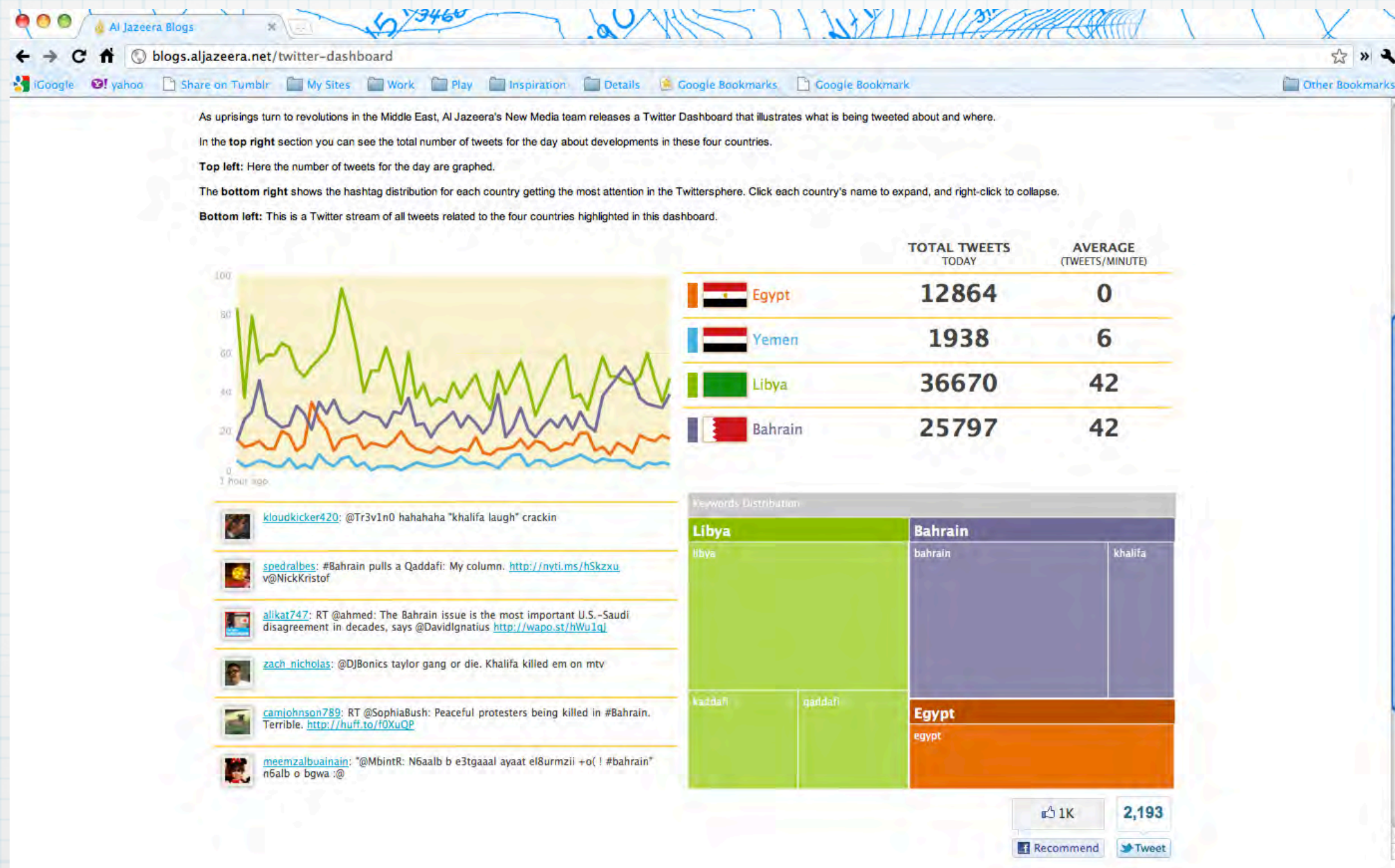
GOOD magazine infographics
www.good.is/infographics



Social Network Analytics

AlJazeera

blogs.aljazeera.net/twitter-dashboard



Open Data: data.gov

Data.gov

The data.gov site stores public data for consumption

The screenshot shows the data.gov website in a web browser. The browser's address bar displays 'www.data.gov'. The website's header includes the 'DATA.GOV' logo with the tagline 'EMPOWERING PEOPLE'. A navigation menu contains links for HOME, DATA, TOOLS, COMMUNITY, METRICS, OPEN DATA SITES, GALLERY, and WHAT'S NEW (UPDATED). The main content area features a large banner for 'WORLDWIDE M1+ EARTHQUAKES, PAST 7 DAYS' with a real-time earthquake list. To the right, a sidebar titled 'Earthquake and Tsunami Datasets and Information' lists several resources, including a worldwide M1+ earthquake list, search options, an interactive map demo, and links to USA.gov and FEMA. Below the main banner, there are three sections: 'DATA AND APPS' listing 379,830 raw and geospatial datasets, 909 government apps, 236 citizen-developed apps, and 172 agencies and subagencies; 'COMMUNITIES' encouraging exploration and discussion; and 'OPEN GOVERNMENT' featuring 'National Sunshine Week' (March 13-19, 2011) and the introduction of the 'Law.data.gov' community and 'Data.gov in the Classroom'.

DATA.GOV
EMPOWERING PEOPLE

HOME DATA TOOLS COMMUNITY METRICS OPEN DATA SITES GALLERY WHAT'S NEW (UPDATED)

Earthquake and Tsunami Datasets and Information

- Worldwide M1+ Earthquakes, Past 7 Days
- Search other related datasets
- World Earthquake Interactive Map Demo
- Visit USA.gov for more information
- Federal Emergency Management Agency

SEARCH OUR CATALOGS

Search our catalogs.. SEARCH

WORLDWIDE M1+ EARTHQUAKES, PAST 7 DAYS
Real-time, worldwide earthquake list for the past 7 days

DATA AND APPS

- 379,830 raw and geospatial datasets
- 909 government apps
- 236 citizen-developed apps
- 172 agencies and subagencies

COMMUNITIES

Come explore, discuss, meet others in the same field, and develop the data and apps in the community that you care about. Join in the discussions by going to communities below that interest you.

OPEN GOVERNMENT

National Sunshine Week
March 13-19
TRANSPARENCY • PARTICIPATION • COLLABORATION

March 13-19, 2011, Sunshine Week, focuses on open government and freedom of information.

Data.gov introduces the **Law.data.gov** community and **Data.gov in the Classroom**.

Open Data: Hans Rosling

Gapminder.org documentary *The Joy of Stats*
www.gapminder.org/videos/the-joy-of-stats/

The screenshot shows a web browser window with the URL www.gapminder.org/videos/the-joy-of-stats/. The browser's address bar and tabs are visible at the top. The website's header features the Gapminder logo with the tagline "for a fact-based world view" and navigation links: News, FAQ, About, Contact, and Donate. A search bar is also present. Below the header is a navigation menu with links to HOME, GAPMINDER WORLD, DATA, VIDEOS, DOWNLOADS, FOR TEACHERS, and LABS.

The main content area is titled "The Joy of Stats" and features a video player. The video player shows a title card with the text "THE JOY OF STATS" in pink and blue, and "with Professor Hans Rosling" below it. The video player has a play button and a progress bar showing 59:13.

Below the video player is a section titled "About the video" with the following text: "Hans Rosling says there's nothing boring about stats, and then goes on to prove it. A one-hour long documentary produced by Wingspan Productions and broadcast by BBC, 2010. A DVD is available to order from Wingspan Productions. Director & Producer; Dan Hillman, Executive Producer: Archie Baron. ©Wingspan Productions for BBC, 2010". Below this text is a link labeled "More videos".

To the right of the video player is a section titled "Help us cross the river of myths" featuring a photo of Hans Rosling in a river. Below the photo is the text "Please read Hans Rosling's personal appeal." and a "Read" button. Below this is a social media sharing section with buttons for "Like" (2K), "Tweet" (547), and a "Subscribe" button. Below the social media section is a section titled "TEDTalks" with the text "Hans Rosling's TEDTalks have been seen by millions. Tune in and see the talks from 2006 onwards:".

A vertical "Feedback" button is located on the right side of the page.

Visualization Community: Many Eyes

IBM Research Many Eyes

www-958.ibm.com/software/data/cognos/manyeyes

The screenshot displays the IBM Many Eyes website interface. At the top, there's a browser window showing the URL www-958.ibm.com/software/data/cognos/manyeyes/. Below the browser window, the website header includes the "Many Eyes" logo, a "Log in" button, and the IBM logo. A search bar with a "Visualization" dropdown and a "Search" button is also present.

The main content area is divided into several sections:

- Explore**: Includes links for Visualizations, Data sets, Comments, and Topic centers.
- Participate**: Includes links for Create a visualization, Upload a data set, Create a topic center, and Register.
- Learn more**: Includes links for Quick start, Visualization types, About Many Eyes, Privacy, and Blog.

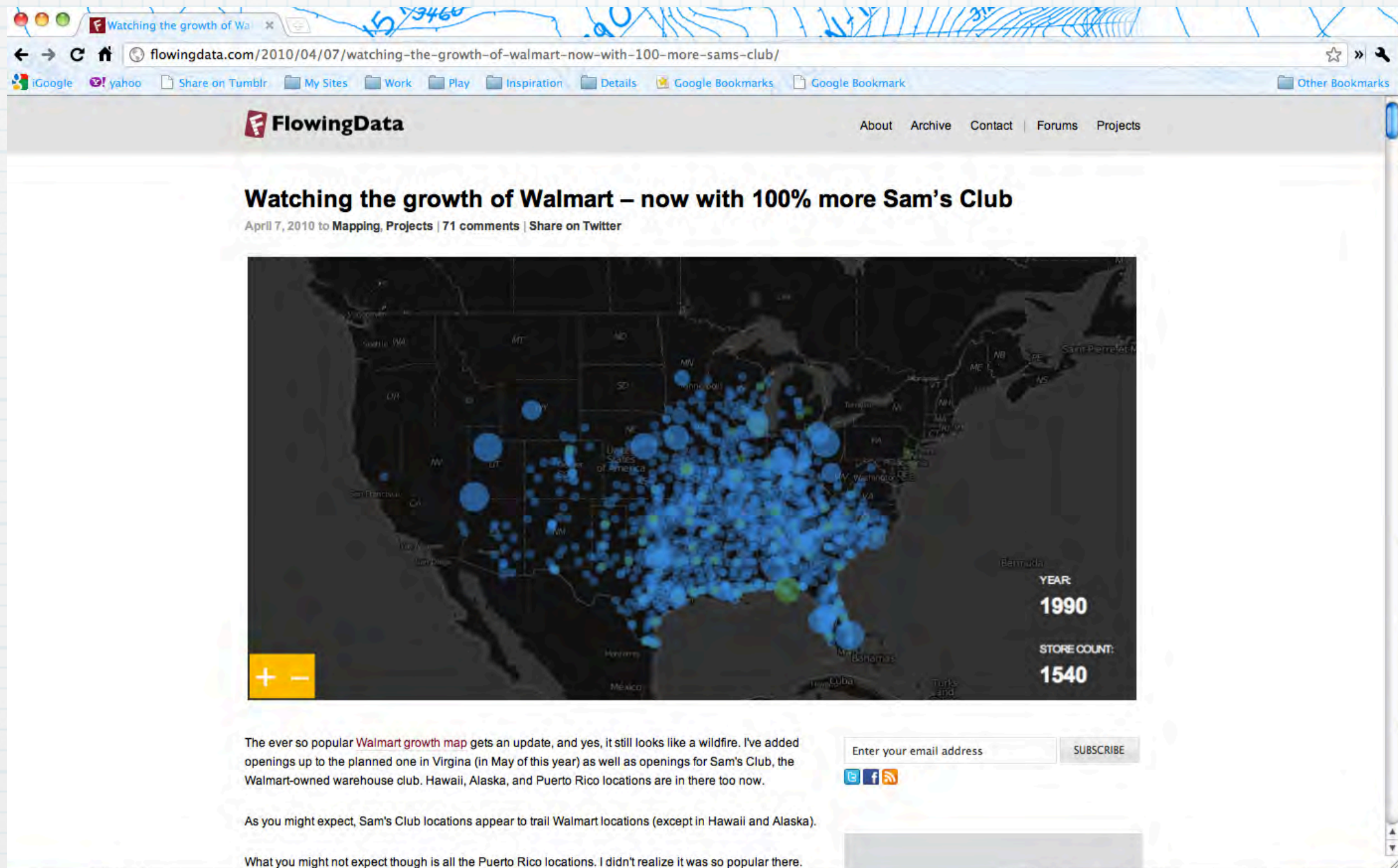
The "Try our featured visualizations" section showcases six different data visualizations:

- Renewable Water Resources in theWorld**: A bubble chart showing water resources by country, based on FAO statistics from 2000. Created by Anonymous.
- Oil Sands Progress Report**: A treemap visualization showing the progress of oil sands, based on data from the Canadian Association of Petroleum Producers. Created by water pollution research.
- World's 100 Largest Newspapers**: A treemap visualization showing the circulation of the world's 100 largest newspapers. Created by 1rick.
- Perchlorate in Food, 2005-2006**: A bubble chart showing perchlorate levels in food, based on data from the FDA. Created by Watchmen.
- Cancer Rates Compared To Smoking Rates by World Region**: A map visualization comparing cancer rates and smoking rates by world region. Created by Belarius.
- Speech on climate change**: A text-based visualization showing speech on climate change, based on data from 2010. Created by pierrekatarr.

At the bottom of the page, there's a footer that reads: "An experiment brought to you by IBM Research and the IBM Cognos software group".

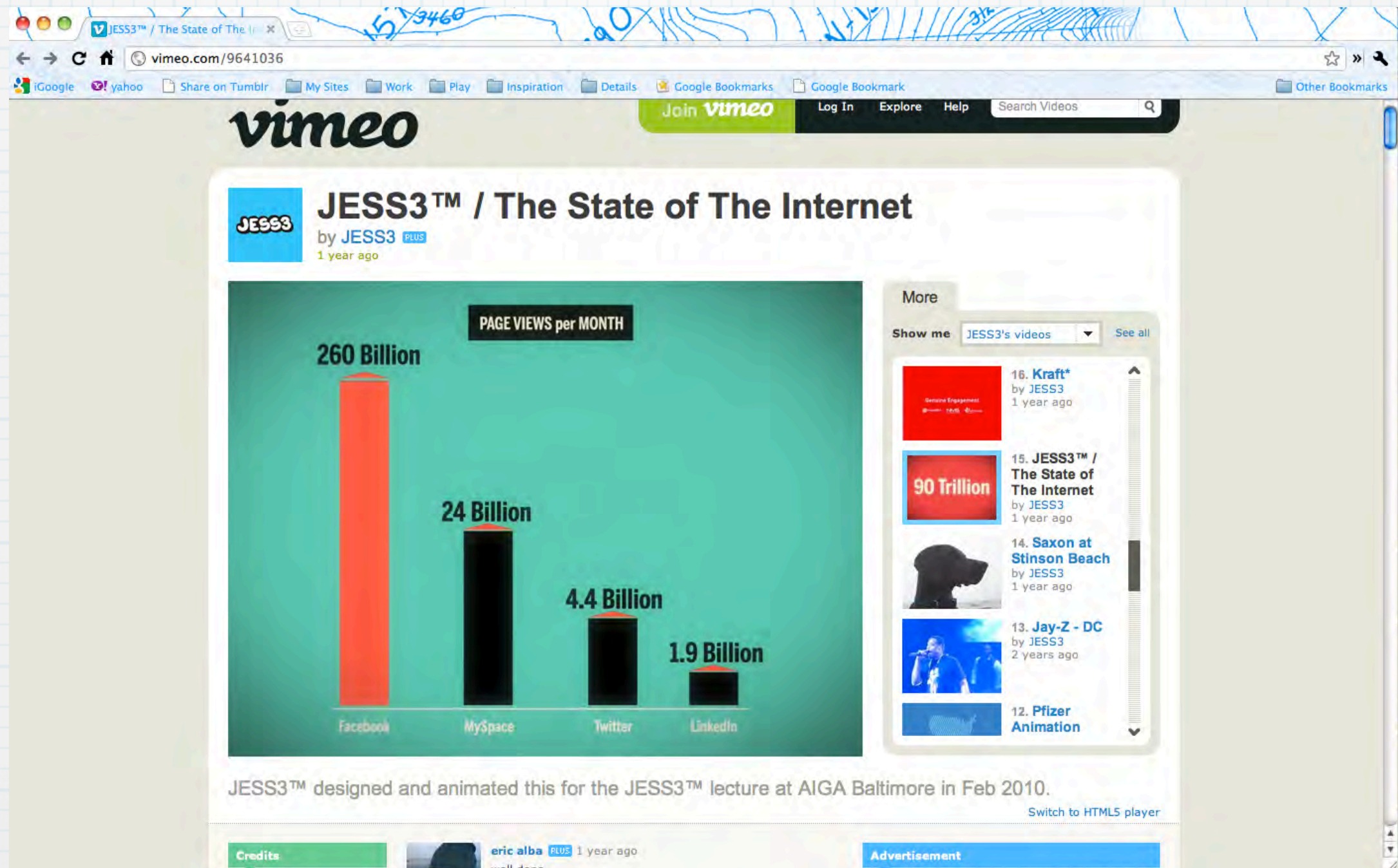
Data Visualization Blogs: Flowing Data

projects.flowingdata.com/walmart/



Data Visualization Studios: JESS3

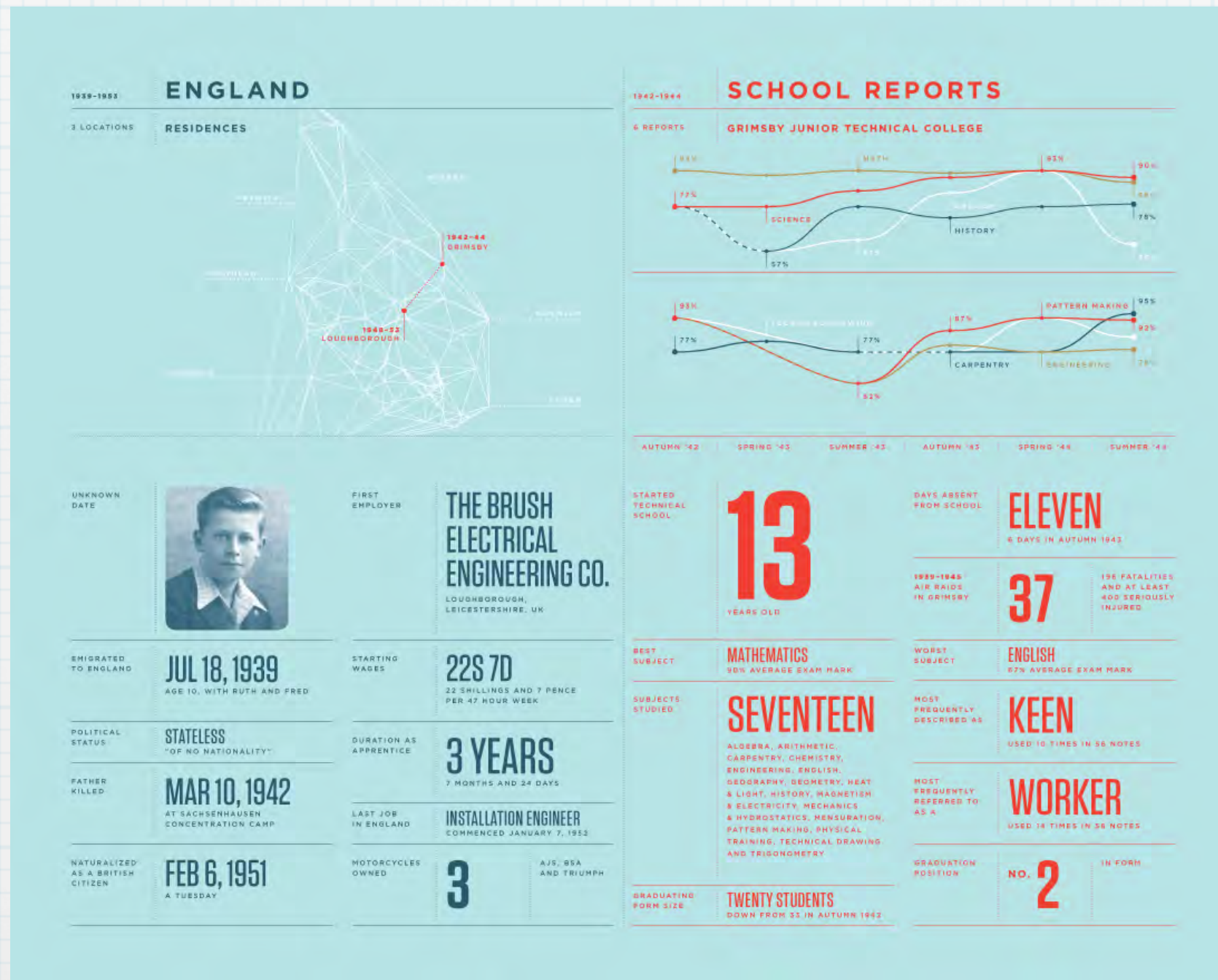
<http://jess3.com/the-state-of-the-internet/>



Personal Data Collection

Feltron – feltron.com

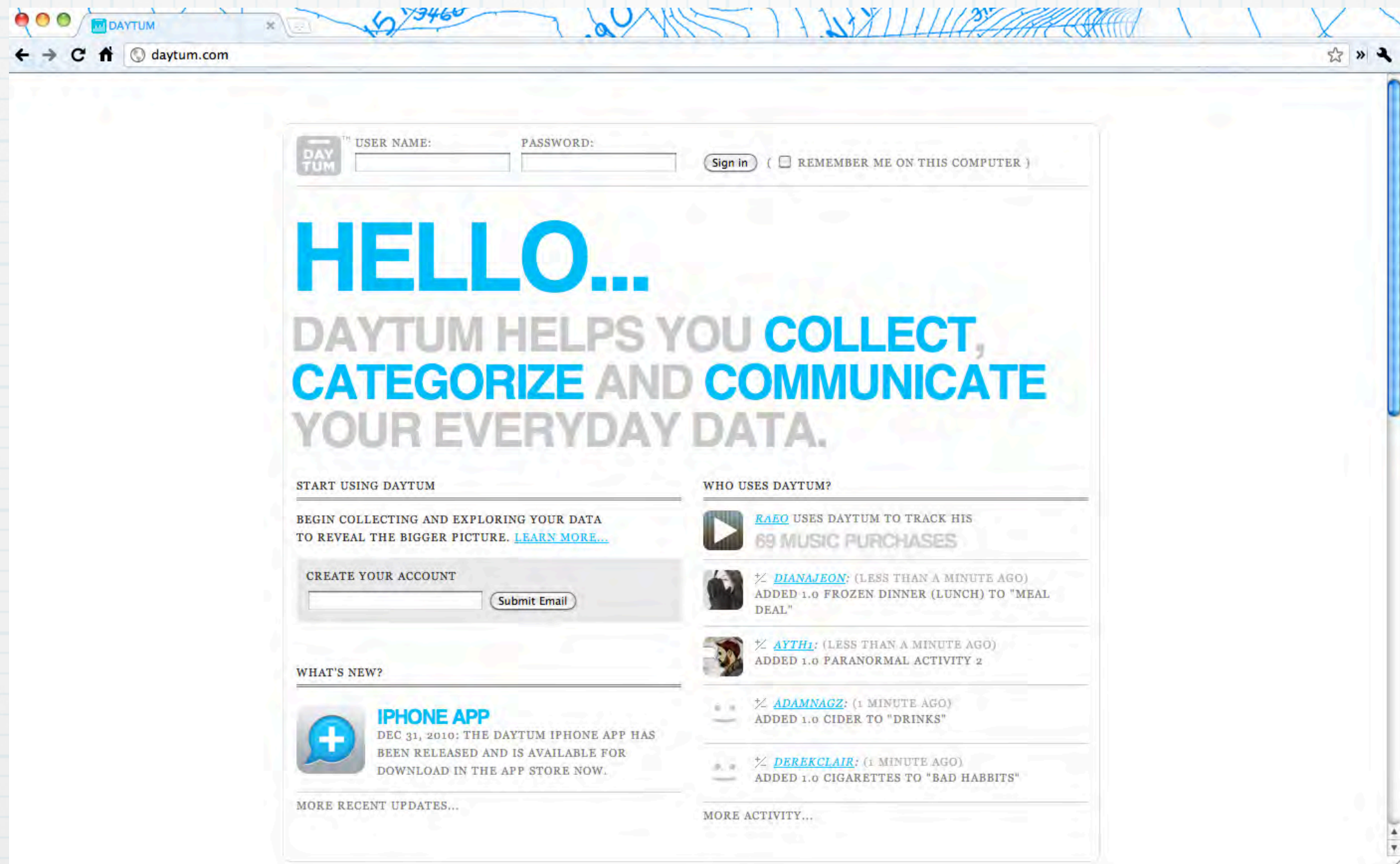
Nicholas Felton's personal annual reports



Personal Data Collection

Daytum – daytum.com

Site allows users to enter personal data – graphical display



Advances in Data Visualization

- The growth of the internet encourages data visualization
- Advances in technology can be harnessed to take full advantage of rich datasets for maximum interactivity
- Live government data system that tracks services on a city map interface
- Public citizen and advocacy groups creating innovative data systems using open data discovery

Thank you!
Input Welcome!

Holly Goodson
Director of Institutional Information
Georgia Health Sciences University

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706-721-7544