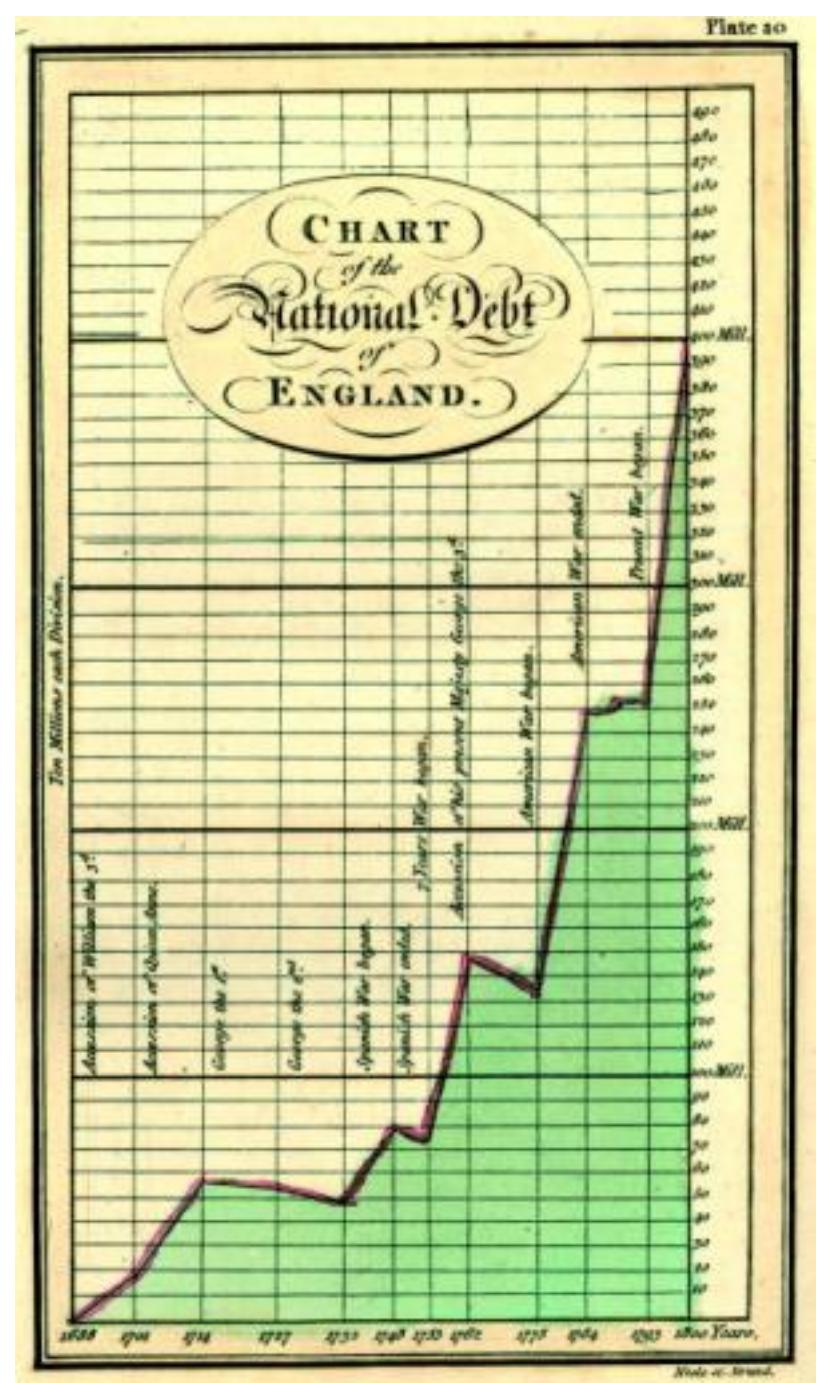
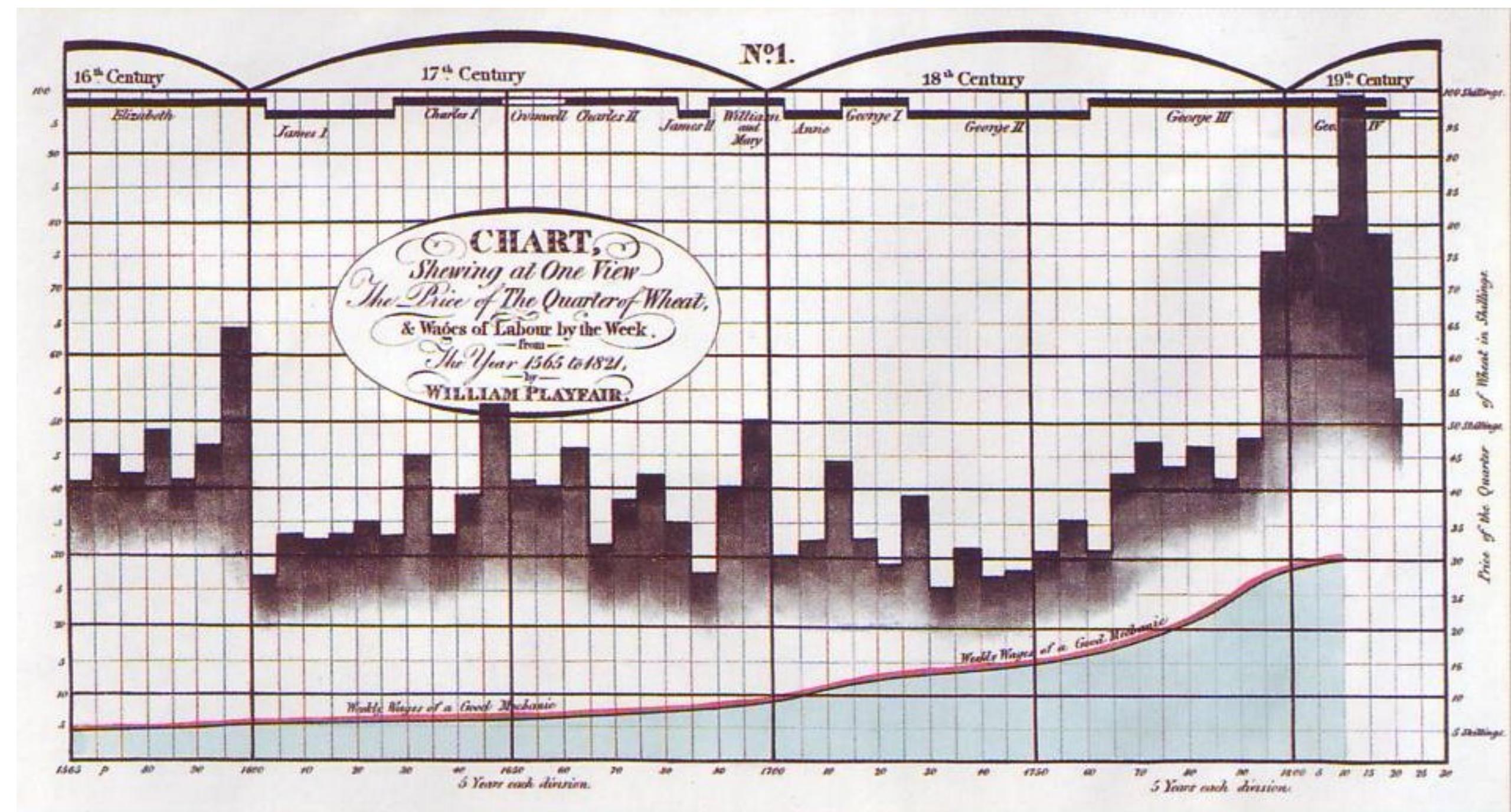
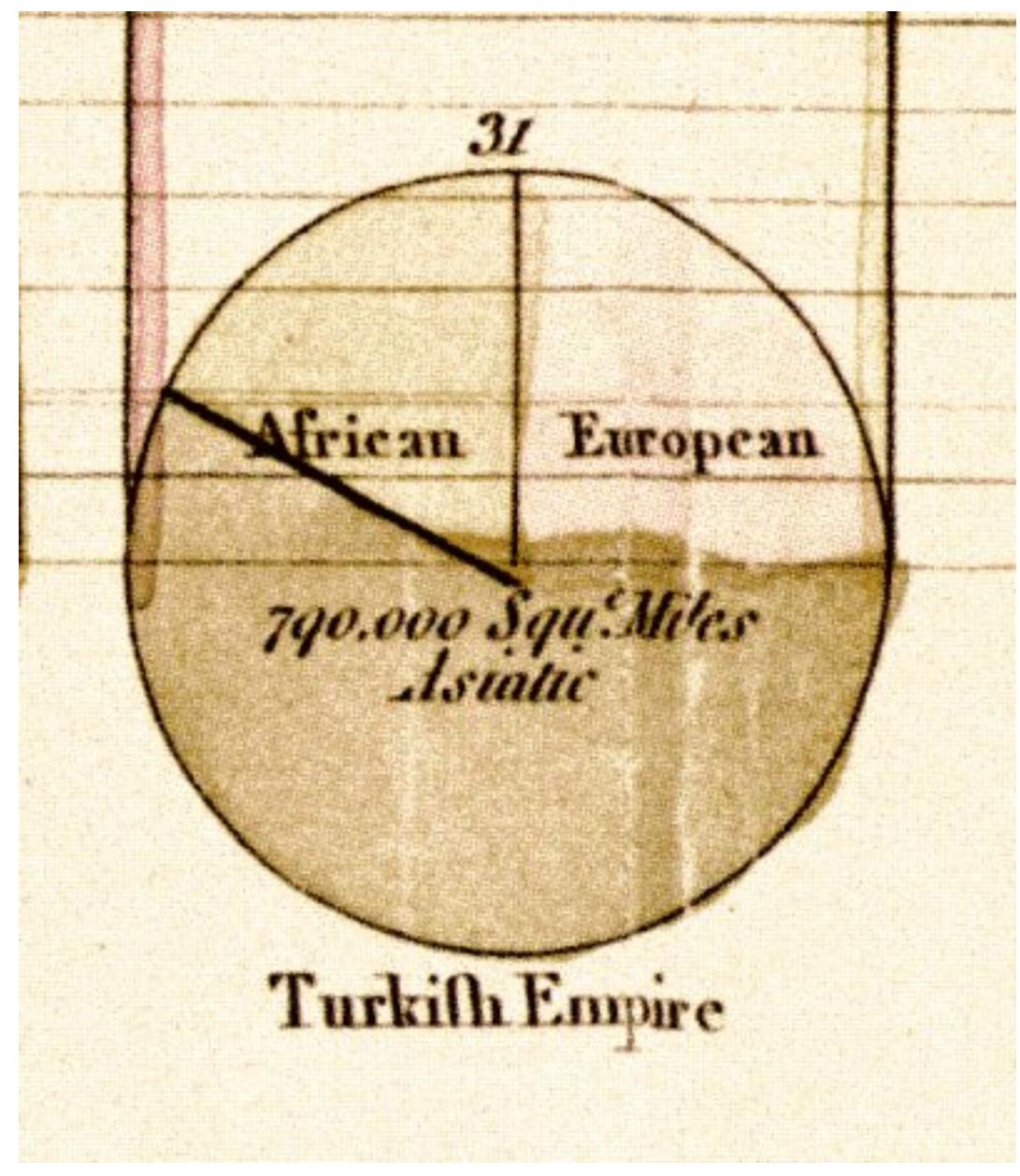


DATA VISUALIZATION:

past, present, future

THE
NEW
SCHOOL

PARSONS



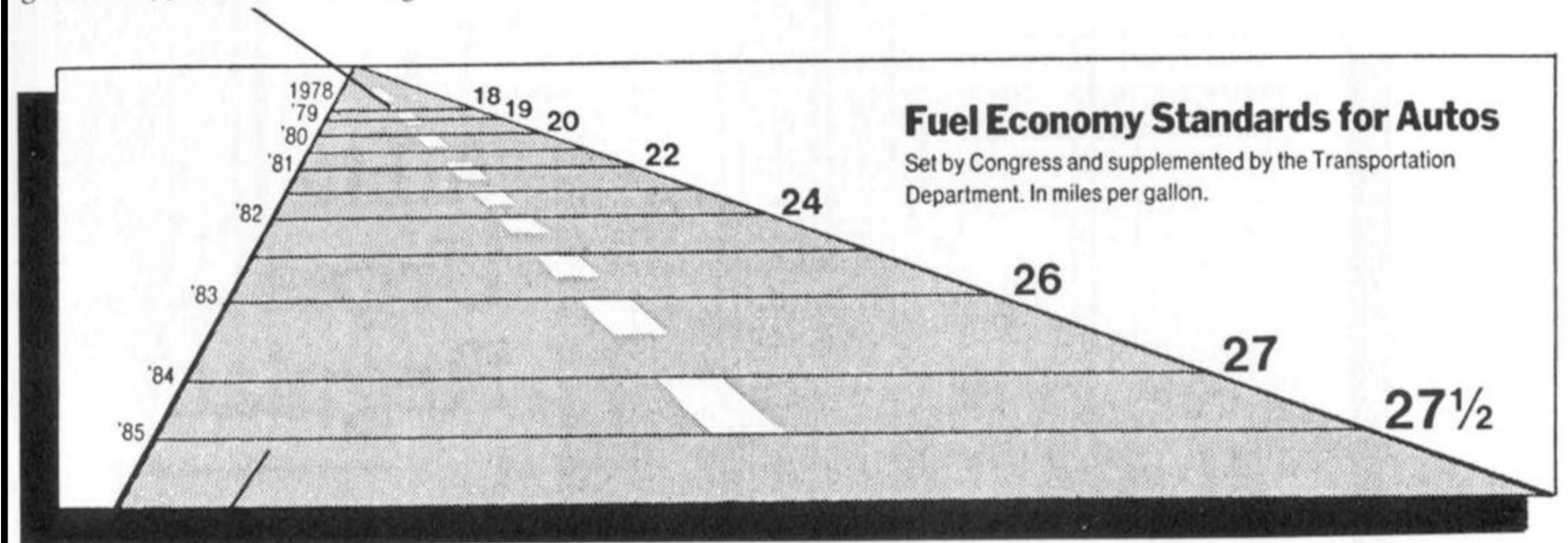
William Playfair, 1786 - 1801



John Tukey, 1969

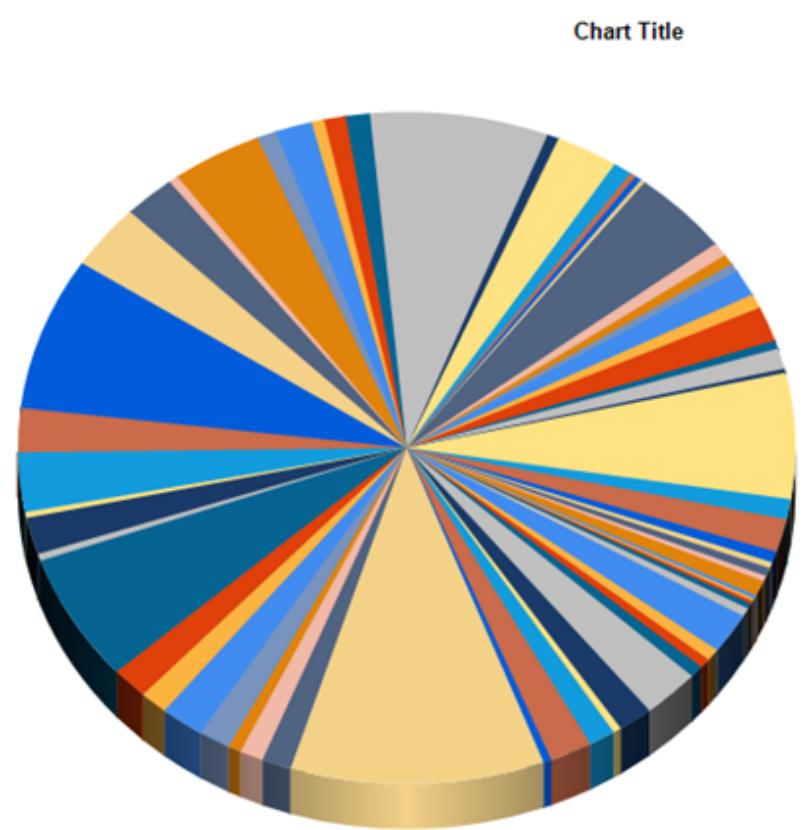
<http://stat-graphics.org/movies/prim9.html>

This line, representing 18 miles per gallon in 1978, is 0.6 inches long.



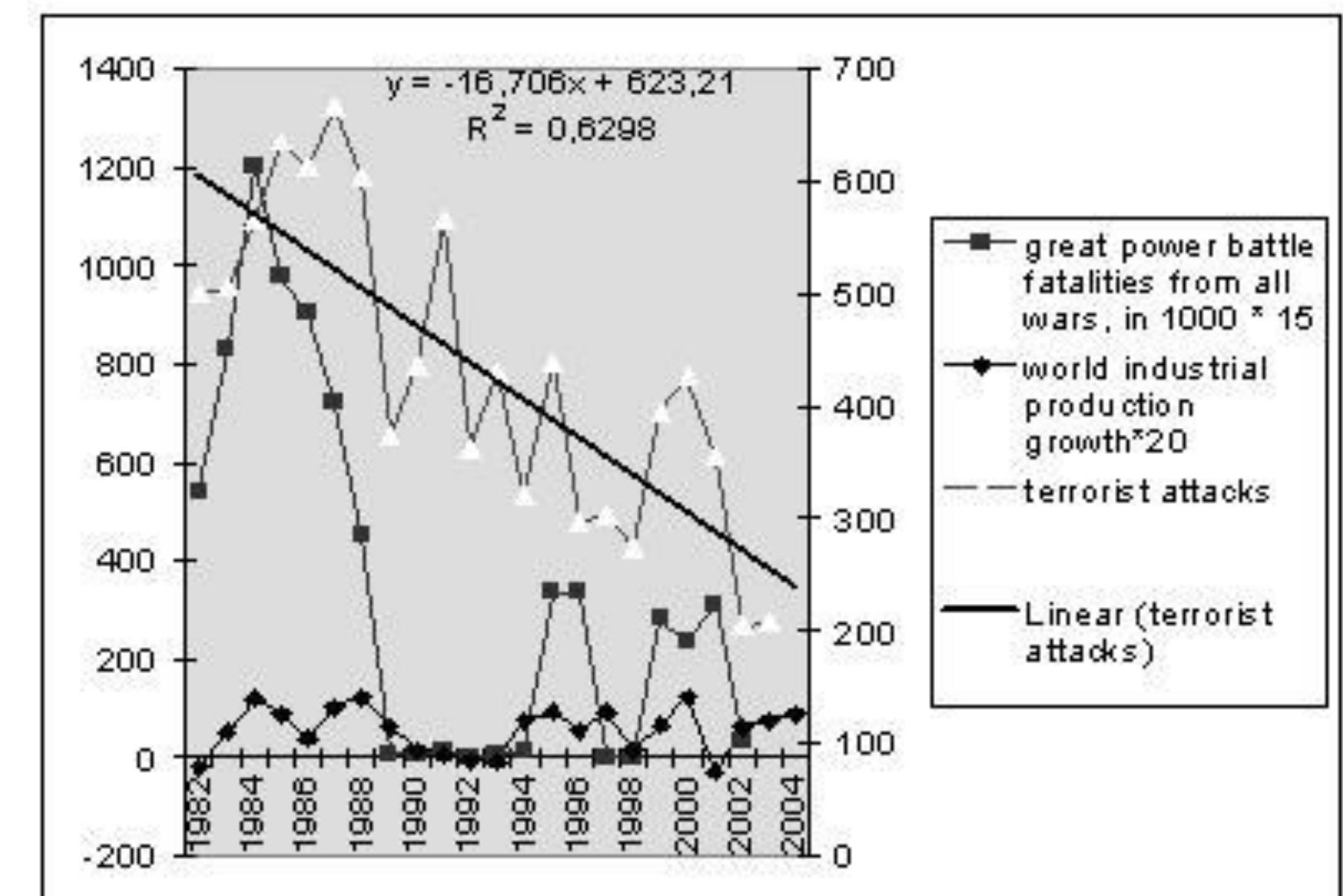
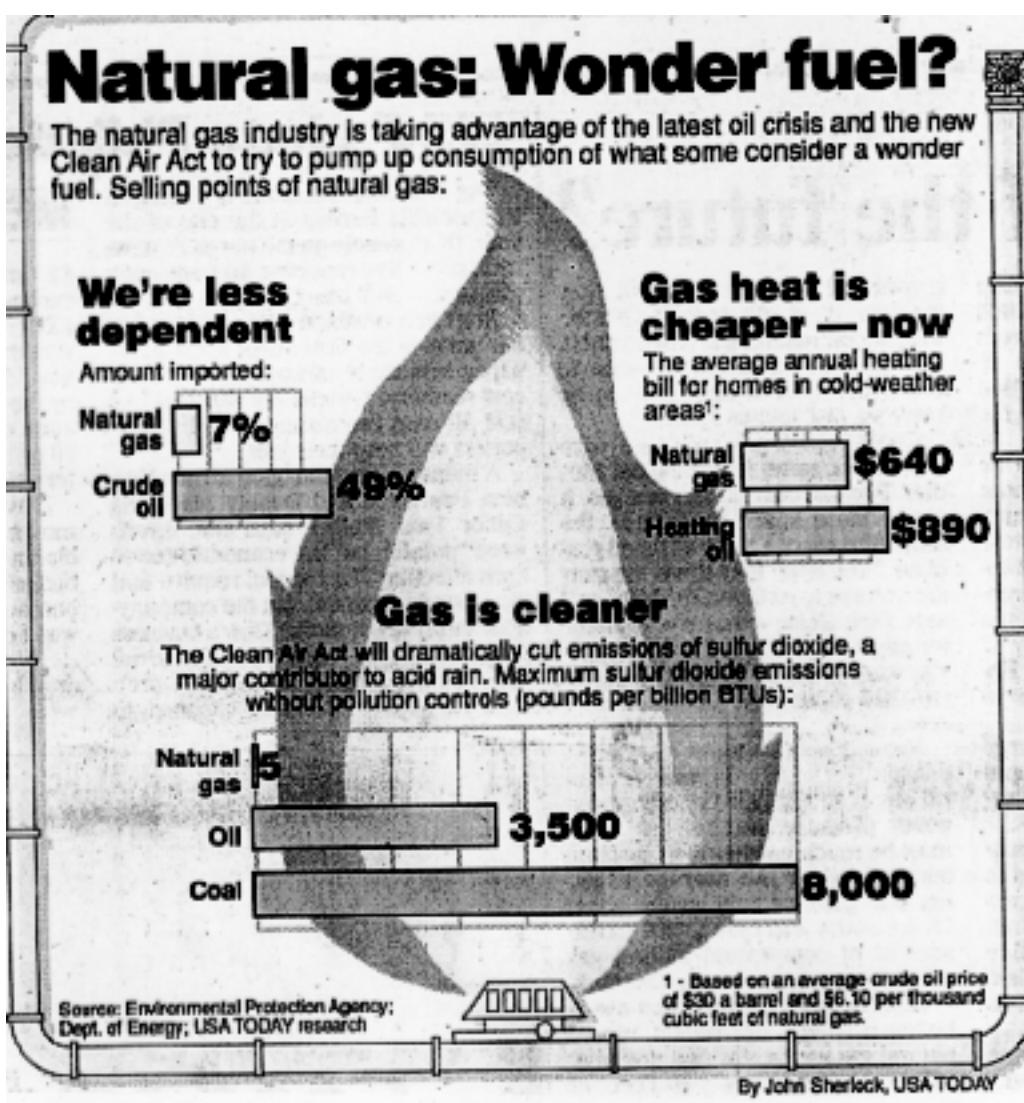
This line, representing 27.5 miles per gallon in 1985, is 5.3 inches long.

New York Times, August 9, 1978, p. D-2.

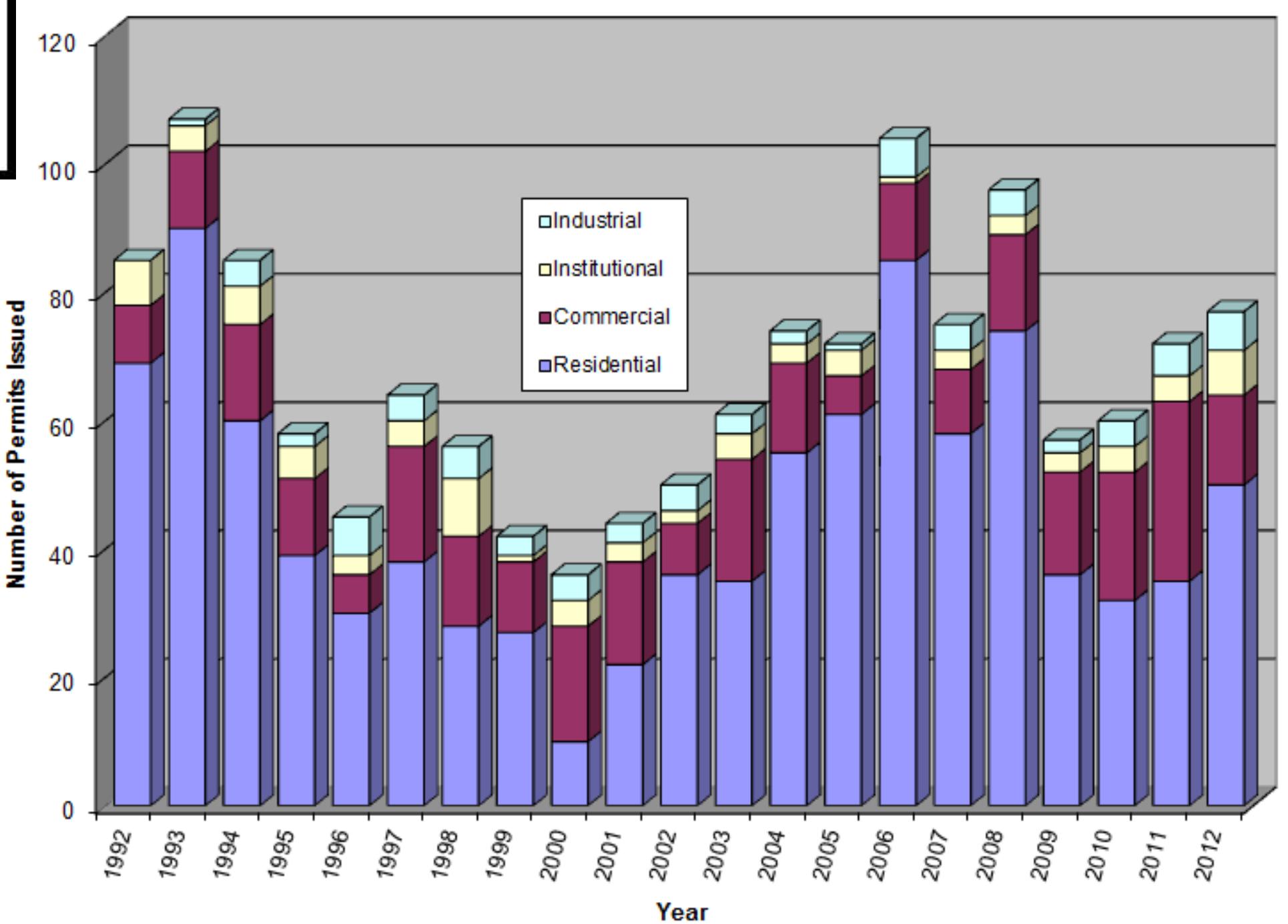


Ohio
Virginia
New Hampshire
Massachusetts
Michigan
New York
Rhode Island
Connecticut
Indiana
Maine
California
Nevada
Colorado
New Mexico
Utah
Arizona
Minnesota
Missouri
Texas
Quebec
Alberta
Ontario
British Columbia
Tennessee
South Carolina
Florida
Mississippi
Georgia
Kentucky
North Carolina

Alabama
Washington
Oregon
Wyoming
Manitoba
Brunswick
Idaho
New South Wales
South Australia
Victoria
Queensland
Hamburg
Hessen
Saxland
Bayern
Nordrhein-Westfalen
Brandenburg
England
Essonne
Seine (Paris)
Loiret
Seine Saint Denis
Seine et Marne
Val d'Oise
Yvelines de Seine
Gironde
Pas de Calais
Val de Marne
Nord
Garonne (Haute)
Loir et Cher

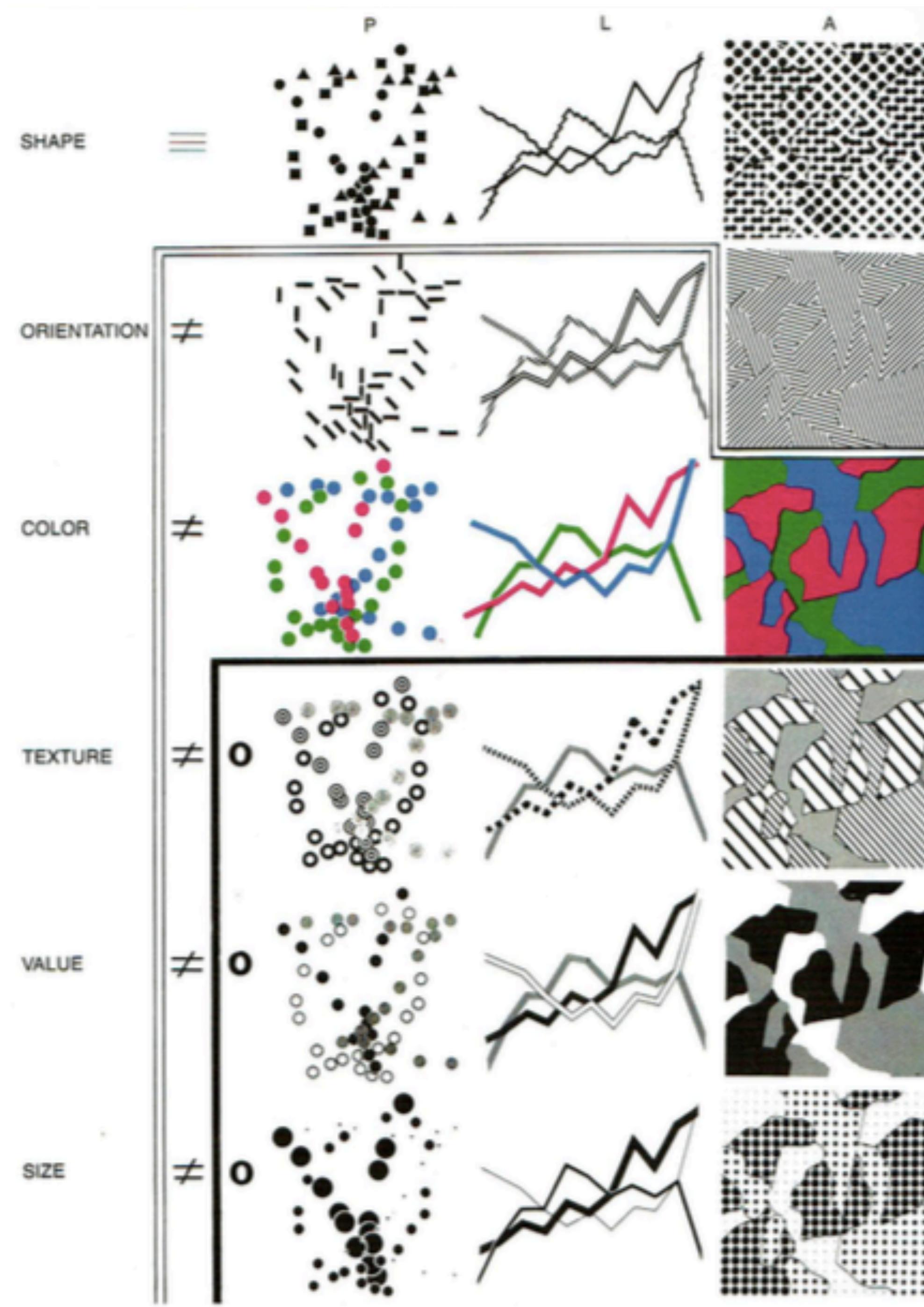


Oliver Building Permits Issued



Midway in the journey of our life
I came to myself in a dark wood,
for the straight way was lost.

RENDERING



Bertin, Jacques, and William J. Berg. 2010. Semiology of Graphics: Diagrams, Networks, Maps. 1st ed. Redlands, Calif: ESRI Press: Distributed by Ingram Publisher Services.

Hadley Wickham’s “A Layered Grammar of Graphics”

data | aesthetic mapping | geom | stat | scale | coord | facet

<http://ggplot2.org/>

<http://vita.had.co.nz/papers/layered-grammar.html>

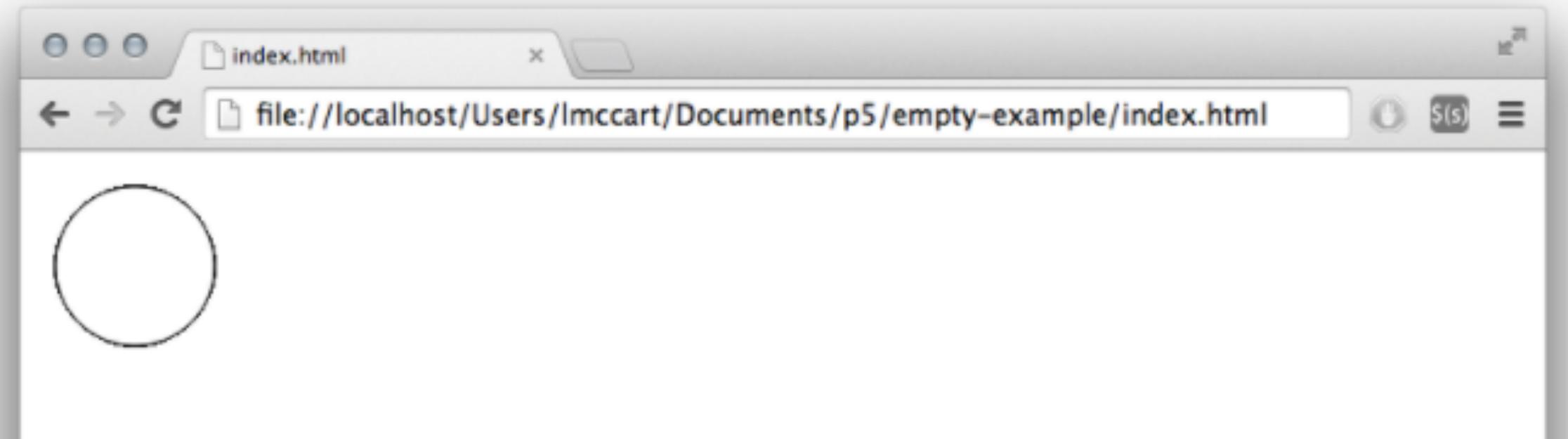


A screenshot of a web browser window titled "p5.js | get started". The address bar shows "Secure | https://p5js.org/get-started/". The main content area contains the following p5.js code:

```
function setup() {  
}  
  
function draw() {  
    ellipse(50, 50, 80, 80);  
}
```

This line of code means "draw an ellipse, with the center 50 pixels over from the left and 50 pixels down from the top, with a width and height of 80 pixels".

Save your sketch and refresh your page view in your browser. If you've typed everything correctly, you'll see this appear in the display window:



OBSERVING POINT, LINE, AREA IN ART

<http://www.tate.org.uk/art/artworks/stephenson-flaxman-understudy-t01943>

<https://www.moma.org/collection/works/92947?locale=en>

<http://www.tate.org.uk/whats-on/tate-modern/exhibition/malevich>

<https://www.youtube.com/watch?v=they7m6YePo>

COMPUTATION

The designer of the future has to become a database designer, a meta-designer, not designing objects, but shaping a design space in which unskilled users can access user-friendly environments in which they can design their own objects.

JOS DE MUL IN REDESIGNING DESIGN



STEALTH CAM®

05:35 PM 08/28/15

77 F



FD1



STEALTH CAM®

05:41 PM 08/31/15

87 F



FD1



STEALTH CAM®

04:14 PM 08/31/15

95 F



FD1



STEALTH CAM®

11:22 PM 11/28/15

41 F



FD1



Runway



Mon, Sep 18, 4:47 PM



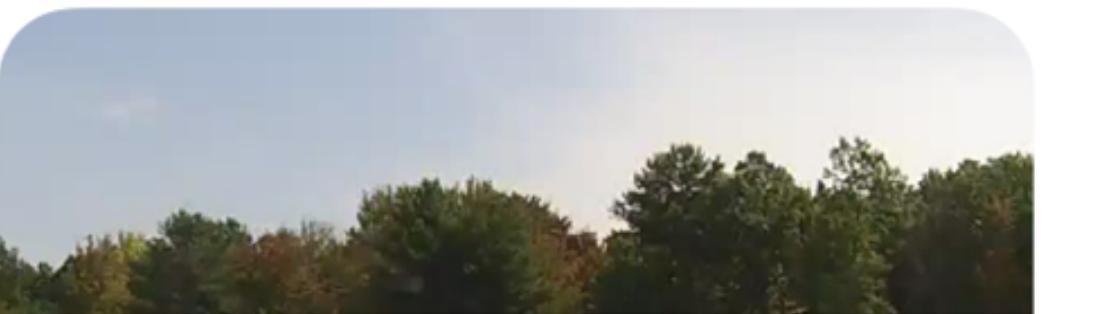
Flying Dollar has a visitor!

Saturday 3:53 PM



Flying Dollar has a visitor!

Tuesday 11:07 AM



Text Message



30 frames / sec = 2.6 millions frames / day

**I Must Garden Squirrel Repellent - 32oz Ready to Use Spray**

\$14.95 prime | FREE Same-Day

Delivered today for FREE with qualifying orders over \$35. [Details](#) | In Stock. Sold by **I MUST GARDEN** and Fulfilled by Amazon. Gift-wrap available.[See all buying options](#)**Top customer reviews****★★★★★ Four Stars**By [Michelle Schwalbach](#) on May 4, 2017**Verified Purchase**

working great so far, I sprayed it on cushions a couple of weeks ago and no squirrel issues.

Comment | 2 people found this helpful. Was this review helpful to you? Report abuse**Most recent customer reviews****★★★★★ The squirrels thought it was candy sprayed on the leaves ...**

The squirrels thought it was candy sprayed on the leaves to keep them away it did not work !

Published 7 days ago by Amazon Customer

★★★★★ Don't waste your money or your time.By [Carl L. Anderson](#) on July 20, 2017**Verified Purchase**

The squirrels here in Central NJ could care less about this stuff, actually will come up to where it is sprayed and sniff it, do nothing.

Comment | Was this review helpful to you? Report abuse**★★★★★ Two Stars**

Have to reapply after every rain. Did not seem to deter the squirrels. They are still eating my hibiscus.

Published 15 days ago by Sonja Pickering

★★★★★ Squirrels 1/ product 0By [Jennifer Hart](#) on July 17, 2017**Verified Purchase**

Squirrels laugh at this stuff. Sprayed and then watched the squirrels still come up to my porch. Did this several times and still no luck

Comment | Was this review helpful to you? Report abuse**★★★★★ Squirrels destroyed my cushions**

It didn't work against squirrels

Published 17 days ago by I can read

★★★★★ In fact I am not so sure it didn't act like salad dressing on the plants for the critters to ...

Absolutely did not work. In fact I am not so sure it didn't act like salad dressing on the plants for the critters to enjoy!

Published 22 days ago by deborah wilson

★★★★★ This Stuff Works! ReallyBy [CJNeuman](#) on March 15, 2017**Verified Purchase**

Finally a product that does what it says! AAA+++

Comment | Was this review helpful to you? Report abuse**★★★★★ One Star**

never kept them rascals away still dug up my plants

Published 28 days ago by Amazon Customer

★★★★★ Squirrel buster spray.

Many of the sweet potato vines had been destroyed before I purchased

VISUALIZING UNCERTAINTY & MEASURING PERCEPTION

New York Braces for Blizzard Amid Warnings of Closings and Hazards

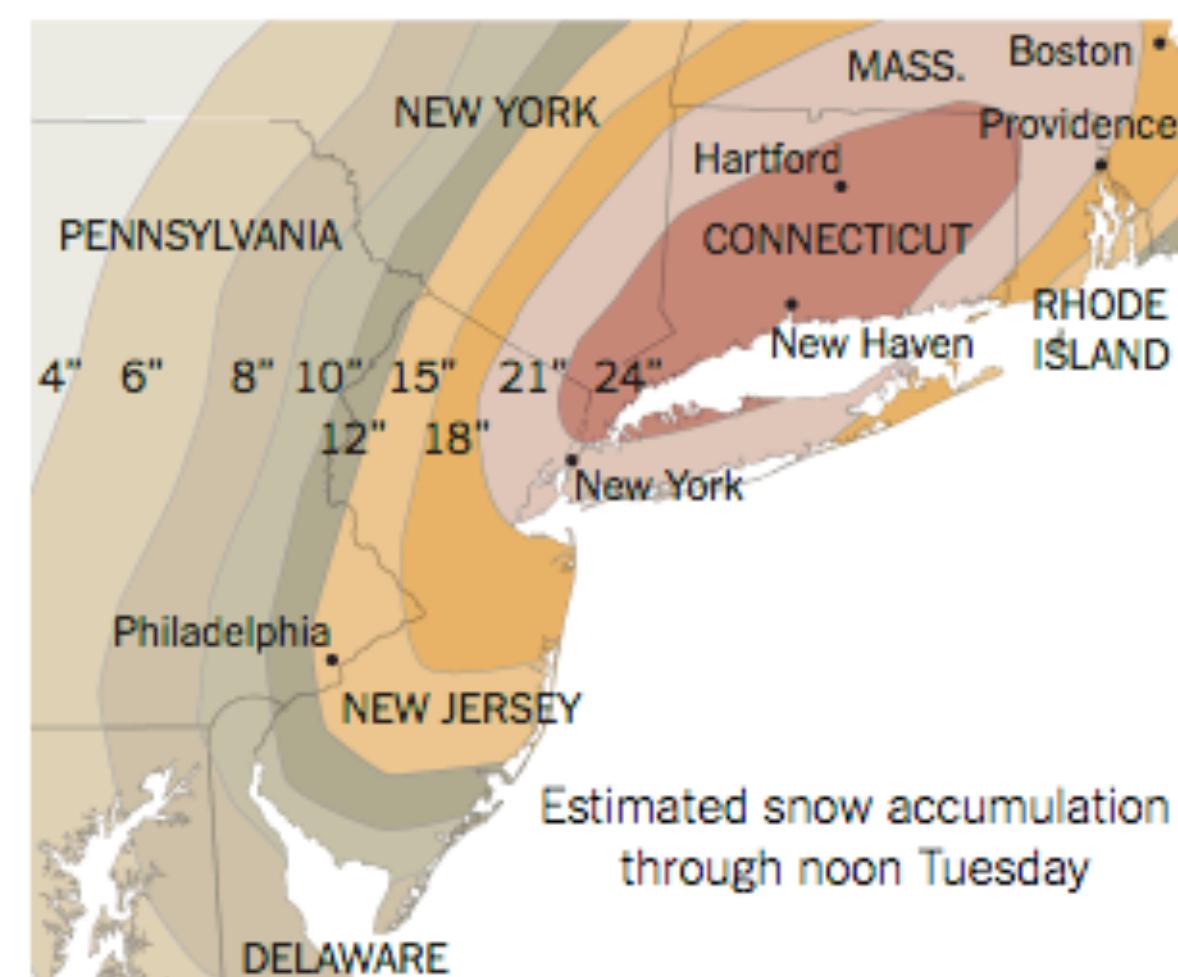
By COLIN MOYNIHAN JAN. 25, 2015

[f](#) [t](#) [m](#) [r](#) | [b](#) [6](#)

Mayor [Bill de Blasio](#) said on Sunday that the storm approaching on Monday was likely to be one of the biggest to ever strike New York City, and he urged people to stay indoors to avoid powerful winds, low visibility and “treacherous” road conditions.

The [National Weather Service](#), which issued a blizzard warning for the greater New York City area, forecast gusts of wind up to 50 miles per hour and snow accumulation of “at least one to two feet.”

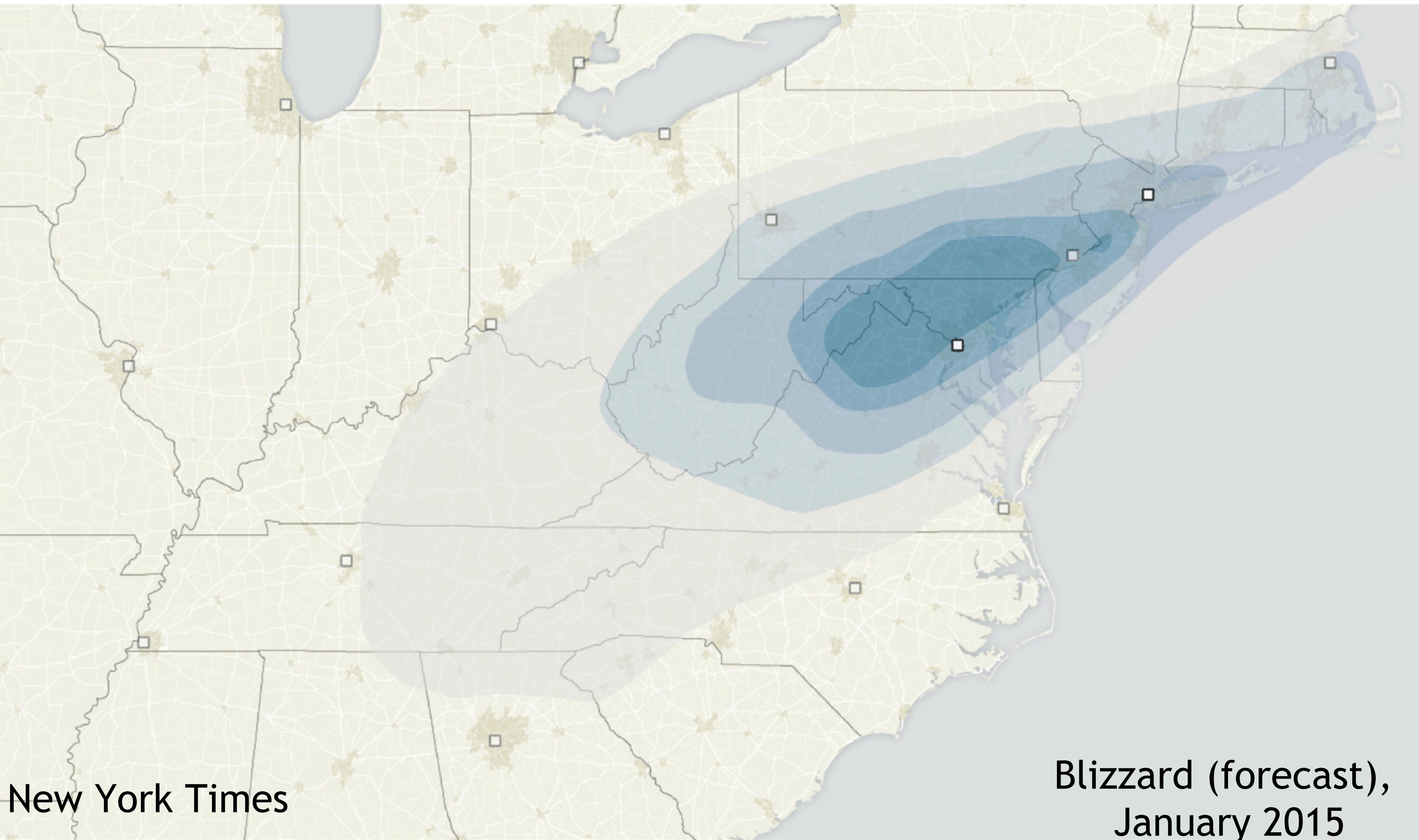
A Big Snowfall in the Forecast



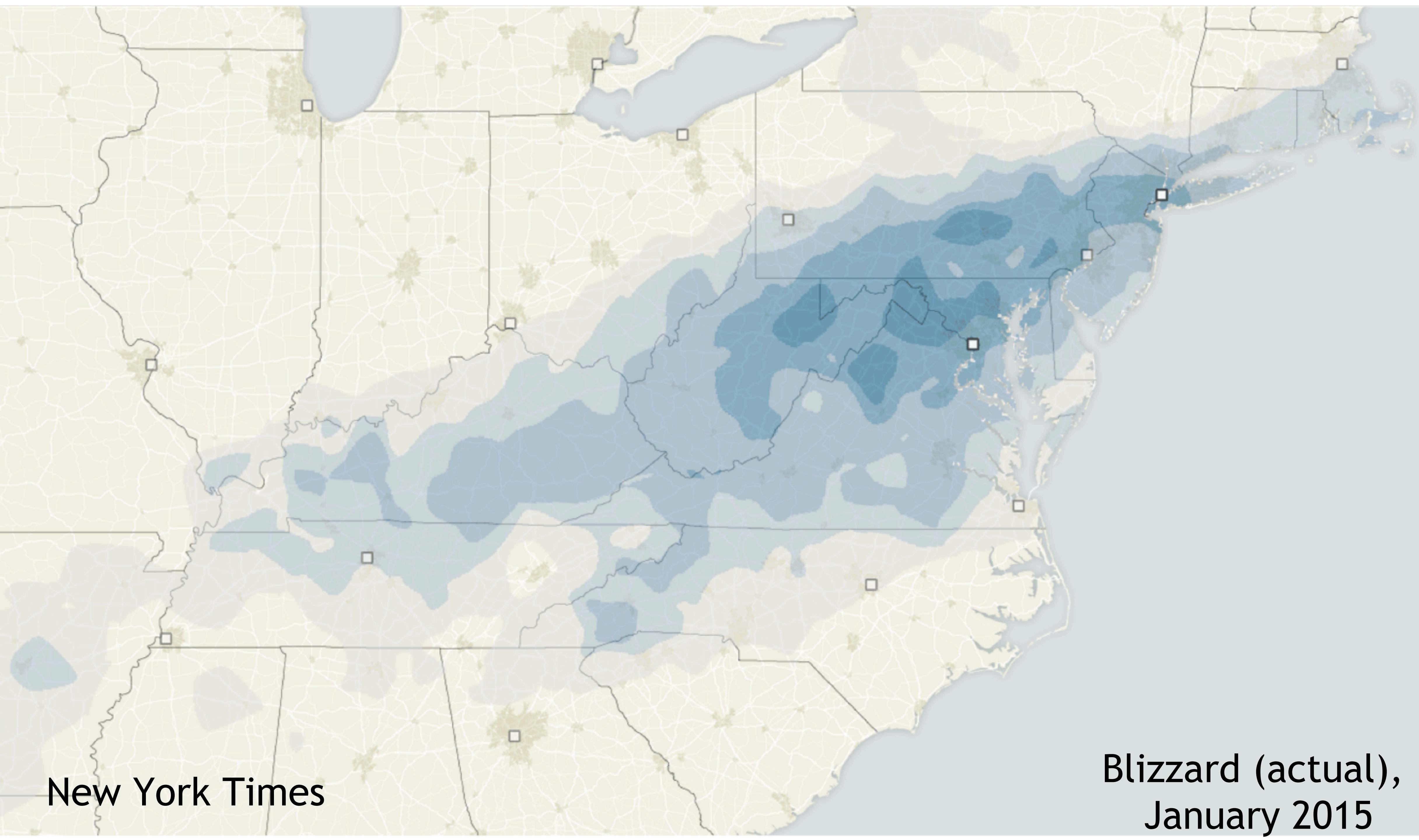
Source: National Weather Service

But Mr. de Blasio said the storm could bring up to three feet of snow, beginning with flurries late Monday morning, and that the heaviest snowfall would probably come Monday night into Tuesday morning.

Schools will be open on Monday but are likely to close on Tuesday, Mr. de Blasio said. Alternate side of the street parking was canceled, along with the city's annual count of the homeless population, which had been scheduled for Monday night.



New York Times



Blizzard (actual),
January 2015

Post Nation

The ‘historic’ blizzard missed New York City, and therefore didn’t happen



15



A man skis north on Central Park West on Tuesday morning in New York City. New York, and much of the Northeast, was hit with heavy overnight snow from Winter Storm Juno. (Photo by Alex Trautwig/Getty Images)

Overnight a blizzard dumped several feet of snow on...not New

Most Read

- 1 A fortress against fear



- 2 Prosecutor: Man told 2-year-old to 'put up his hands' and fight before beating him to death



- 3 41 injured, 2 dead including La. fire chief as unlicensed party bus driver plows into crash scene



- 4 'Toxic environment' for sons accused of campus sex offenses turns mothers into militants



- 5 At NIH, one woman says gender bias has blocked promotions





Henry Blodget
@hblodget

Follow

There is basically no snow. And the entire city is shut down.
Absurd.

7:04 AM - 27 Jan 2015

87 55



Dr.MargaretMcMenamin
@DrMcM

Follow

BUST! After all that hype we get a run-of-the-mill snow storm.
NJ closed. Roads closed. School closed. Waste of
time/resources! #Hype #Juno

7:33 AM - 27 Jan 2015

3 5



Drew Kerr
@DrewKerr

Follow

After NY-based media inundates rest of U.S. with blizzard-
mania, & blizzard becomes bust, no wonder media not trusted &
unwanted.

8:02 AM - 27 Jan 2015

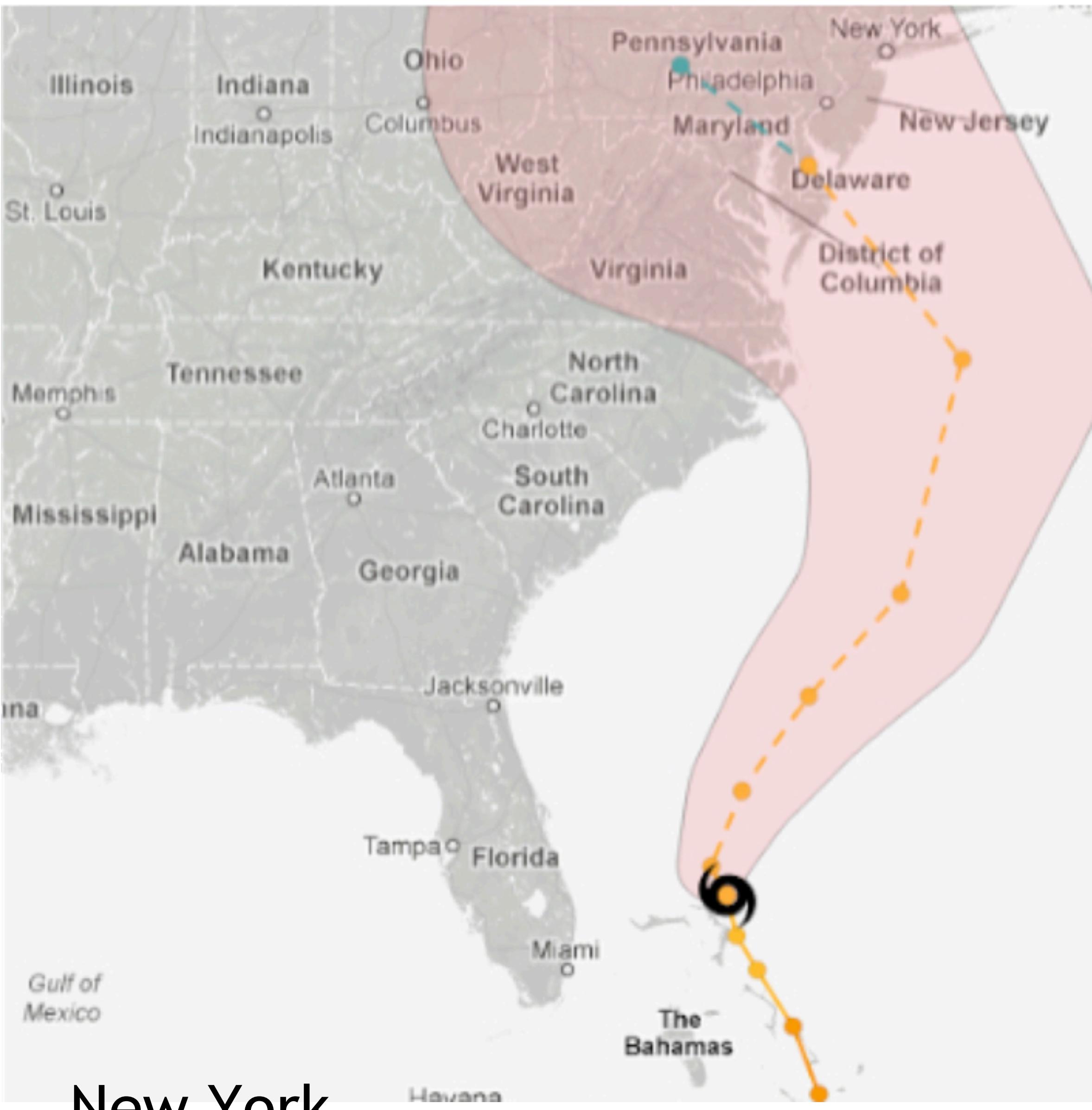


Anna Zhang
@BanannaZhang

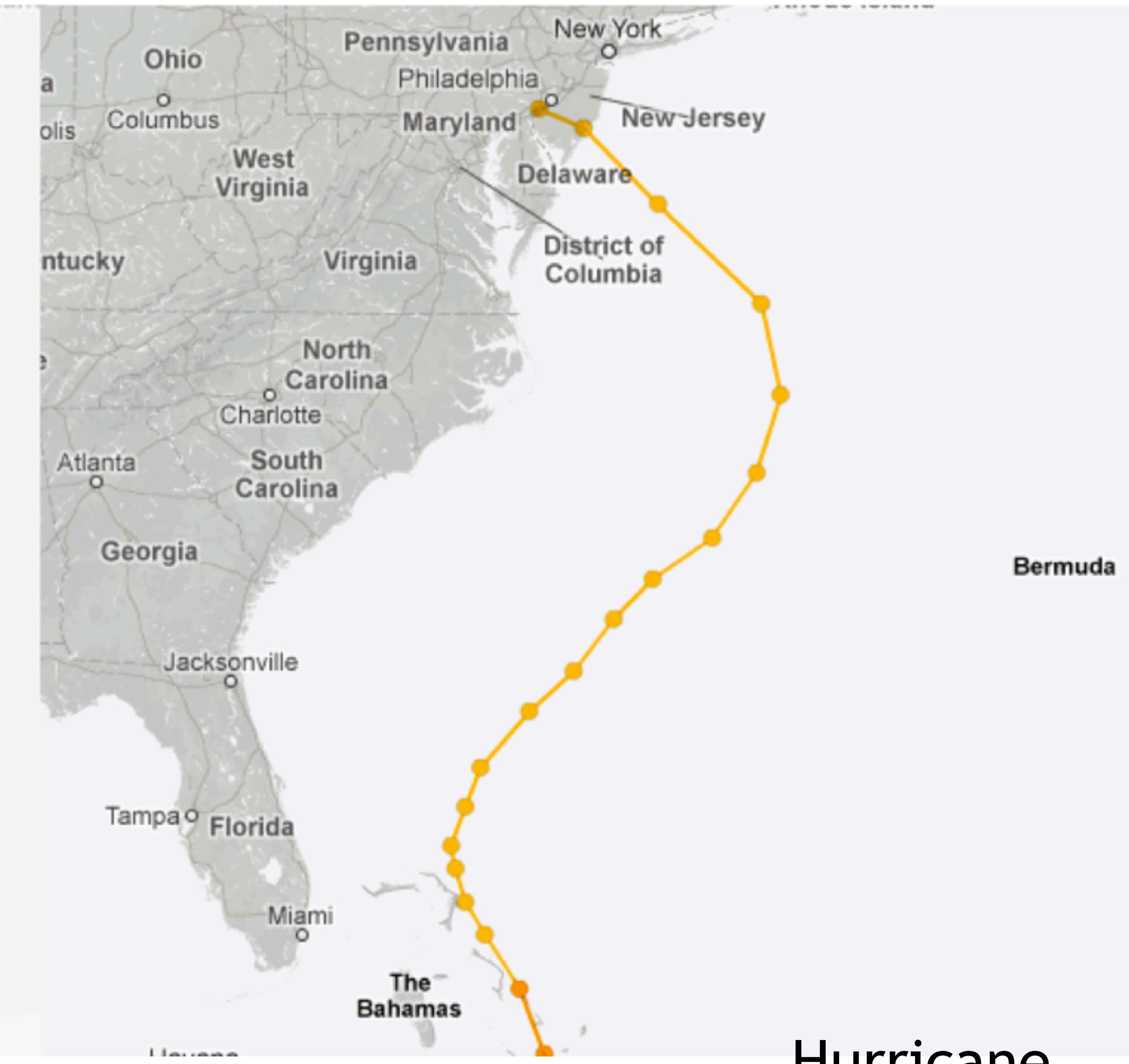
Follow

#juno2015 The storm to end all subsequent snow days that my
company will be doling out since this one was such a bust.

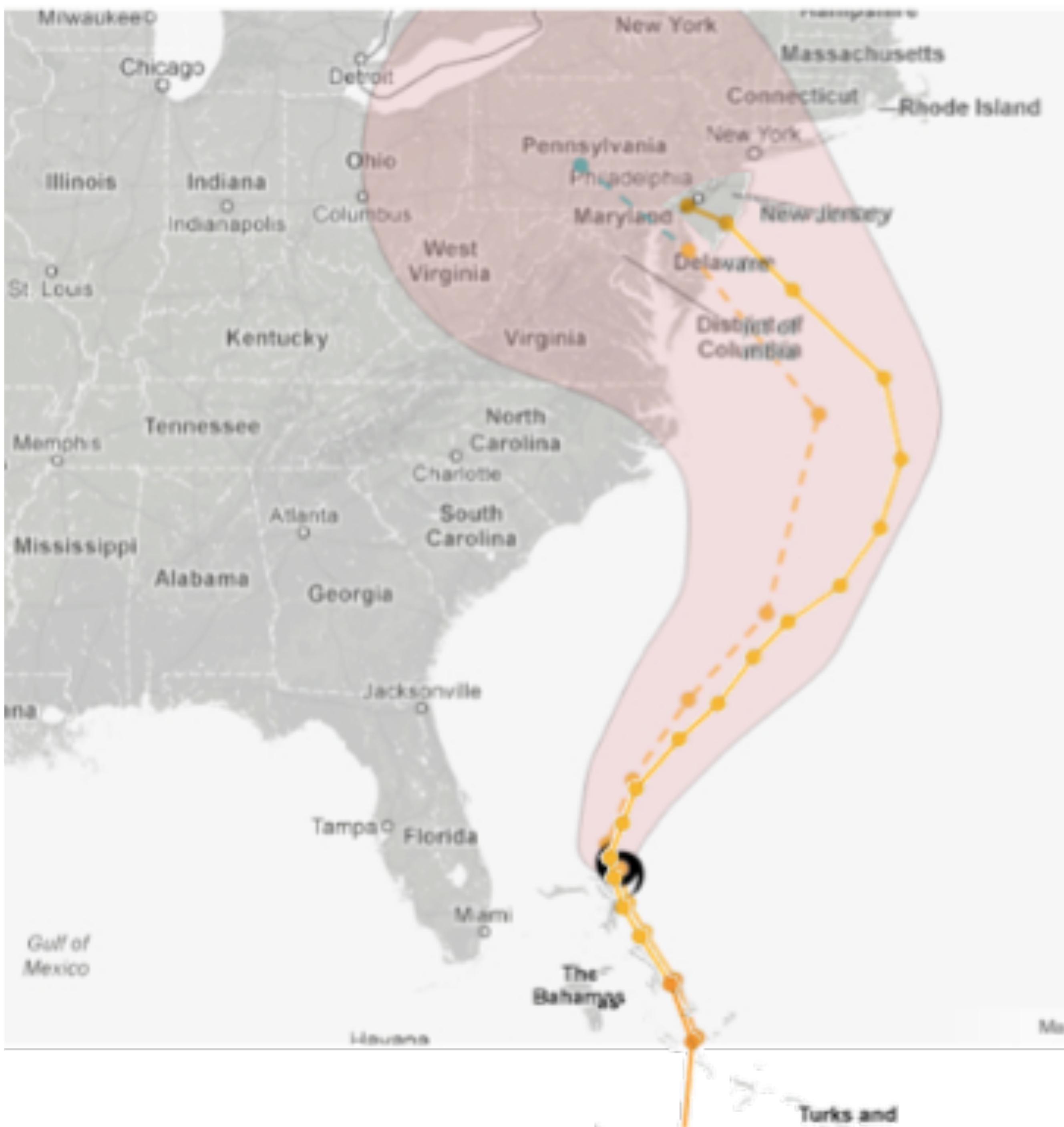
8:19 AM - 27 Jan 2015



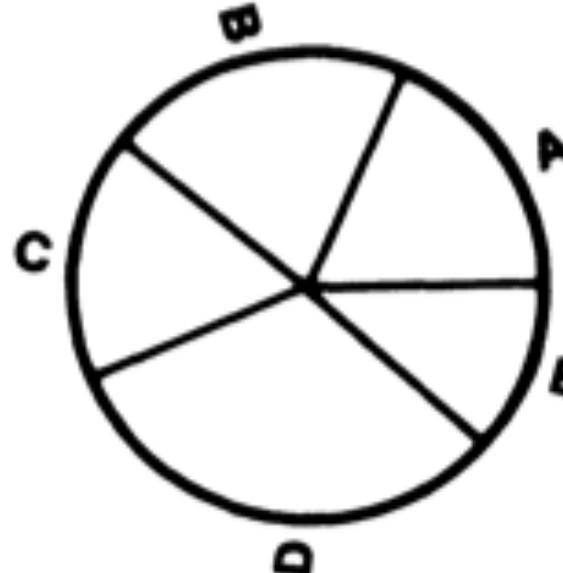
New York
Times



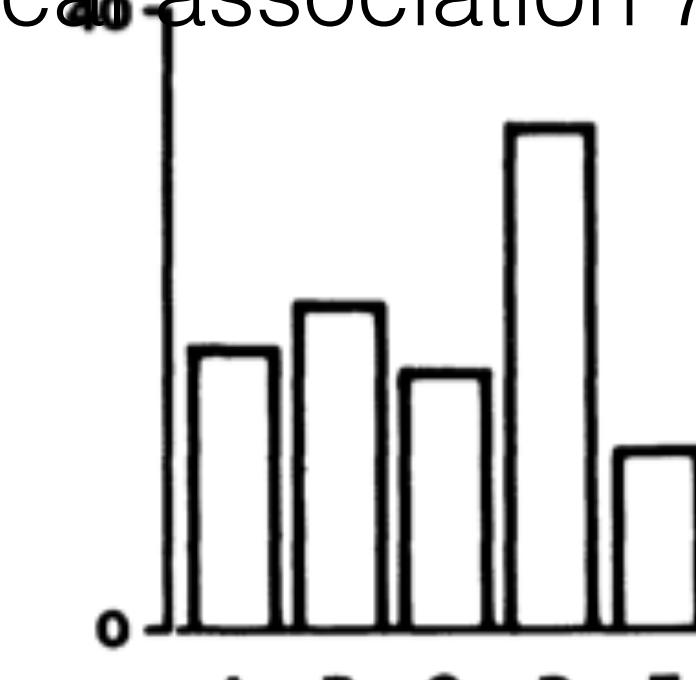
Hurricane
Sandy



Cleveland, William S., and Robert McGill. "Graphical perception: Theory, experimentation, and application to the development of graphical methods." *Journal of the American statistical association* 79, no. 387 (1984): 531-554.



ANGLE



POSITION

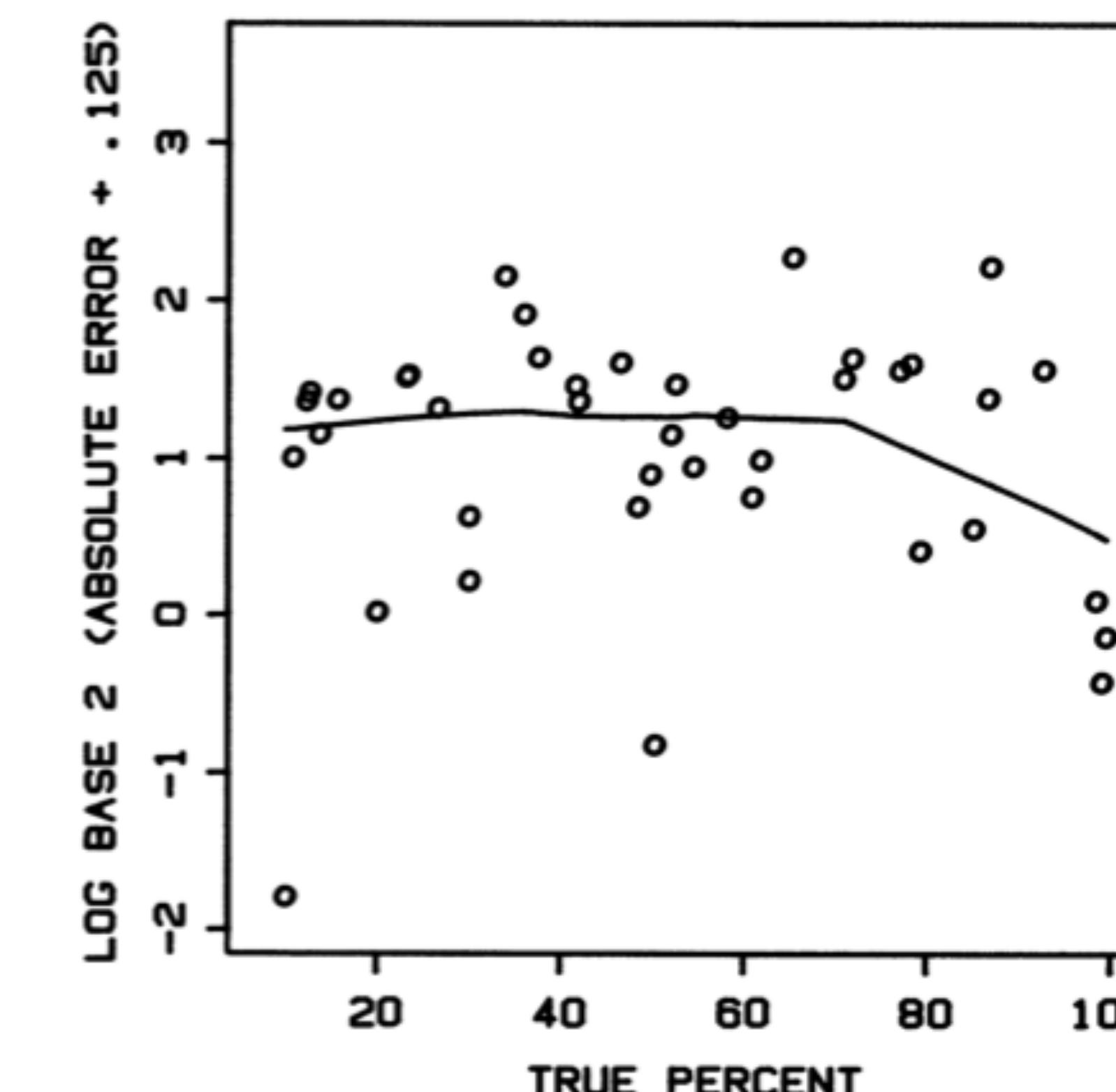
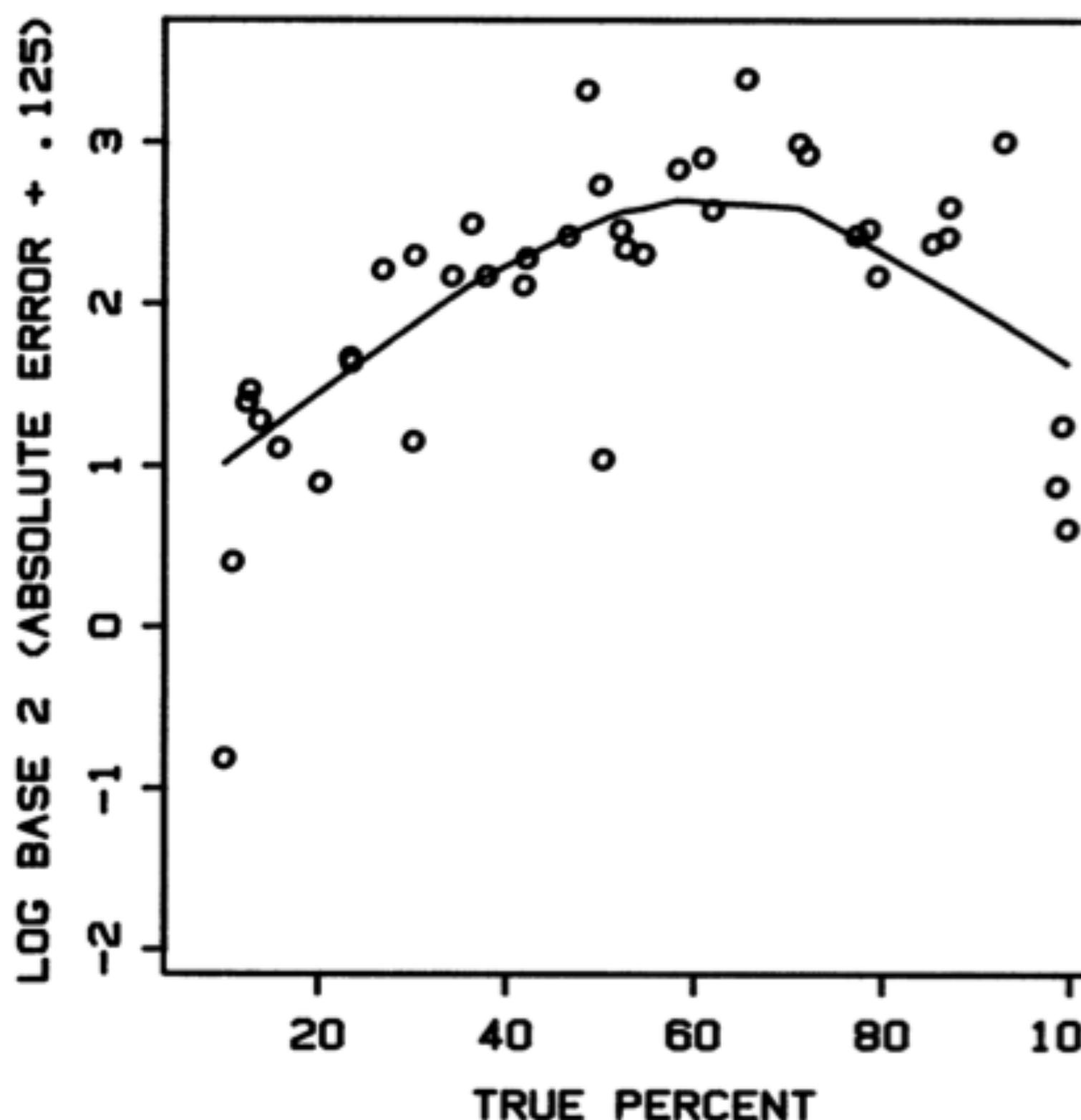


Figure 14. Position-angle experiment: Midmeans of log absolute errors against true percentages for two judgment types.

DATA VISUALIZATION:

past, present, future

THE
NEW
SCHOOL

PARSONS