

Lecture 6: Storytelling and Functions

October 5, 2026

Course Administration

① Sign up for consultations!

- sign up for slots Lecture 11: November 16
- let me know if you cannot make any slot or all slots are full

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- ② In-class workshop: November 9 Lecture 10, instructions posted
- ③ Will return Tutorial Quiz 4 (and older ones) after class
- ④ Fully composed chart feedback in a minute
- ⑤ Anything else?

Tutorial Quiz 4

Answers I got that are not the answer

What's wrong with this command?

```
hist.example <-  
  ggplot() +  
  geom_histogram(data = df,  
    mapping = aes(x = cv, color = "red"))
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Tutorial Quiz 4

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 - y variable
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Right answer

`color = "red"` shouldn't be inside `aes()`

Fully Composed Chart Feedback

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- With novel data!
- Some had annotations!
- Some success

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Moving forward

- Your feedback may say “see comment A”
- See notes [here](#)

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- See notes [here](#)
- The biggest improvement is usually adding THE POINT
 - Description: troop levels over time
 - The Point: troops gathering strength in days before war
- We'll work on this today

On Telling Stories

- ① Components of a story
- ② Pulling a story apart
- ③ You try

In R – functions

- ① Why functions?
- ② Defining a function
- ③ Getting things out of a function
- ④ Modifying a dataframe
- ⑤ Functions and ggplot

Next Week's Assignment

Find a storytelling graphic. Post link to google sheet by Wednesday noon.

Finder	Commenter
Luke	Miguel
Veronica	Chloe

Daija on Miguel's graphic

Warmest Summer on Record in North America

North America had its warmest meteorological summer on record. The record heat in Canada helps explain the record-breaking wildfire season that sent smoke streaming into the United States (see next map). Asia, Africa, South America, and the Arctic also had their warmest June–August periods, and Oceania had its warmest winter on record. Europe had its third-warmest summer.

Land & Ocean Temperature Percentiles Jun 2023–Aug 2023

NOAA's National Centers for Environmental Information

Data Source: NOAA GlobalTemp v5.1.0–20230908

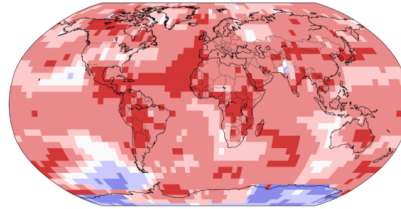
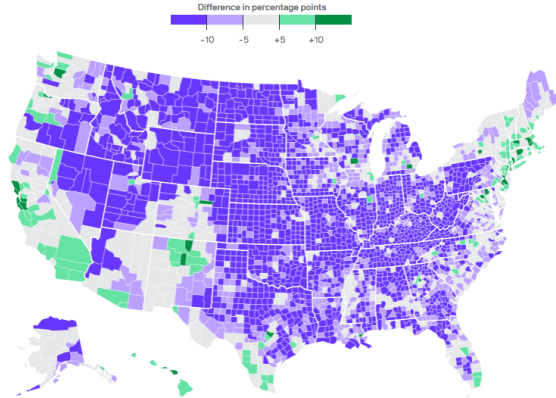


Figure 7. Land and ocean temperature percentiles for June–August 2023. Source: NOAA's National Centers for Environmental Information.

"Summer 2023 in Review: A Look Back at Drought Across the US in 10 Maps," *NOAA Drought.gov*, September 21, 2023, [link](#).

Alexandria on Katya's graphic

Share of adults worried about global warming compared to the national average, 2024



Data: [Yale Program on Climate Change Communication](#); Map: Alex Fitzpatrick / Axios

Stories

Today

- ① Components of a story
- ② Pulling apart a graph

1. Components of a Story

Act 1

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- introduce characters
- set up problem

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- main character changes as a result of problem

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- main character changes as a result of problem

Act 3

- climax
- resolution of problem

What Does this Mean for a Policy Brief?

Type 1: Build to resolution

- ① Pose the problem, showing its importance
- ② Give evidence for the problem or magnitude
- ③ Propose resolutions

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Type 3: Start at the end

- ① Start with conclusion – like White Lotus
- ② Pose problem
- ③ Given evidence
- ④ Return to resolution

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 - people want a resolution
 - make sure these relate to evidence **you have presented**
- All parts should be linked

Helpful Tips You Can Apply

- Do slide headers read as a story? aka horizontal alignment
- Vertical alignment – within slide agreement
- Use headers to work out your story, then build inside
- Be wary: things that work for a presentation don't always work for a written product

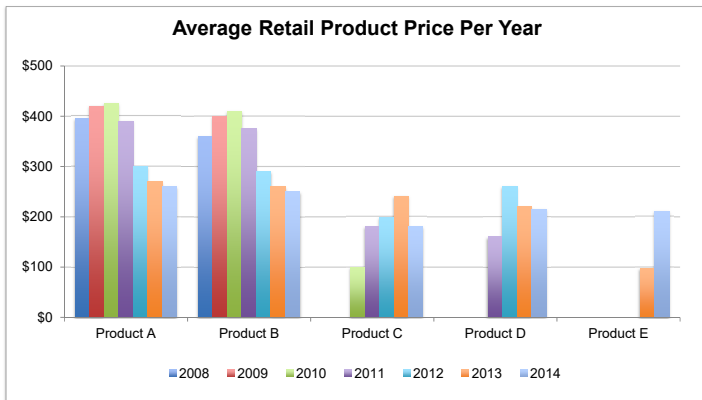
Common Pitfalls

- Failure to motivate problem or issue
- Too little definition
- Too much information
- Conclusion without evidence

Telling a Story with Graphics

FIG0801

Price has declined for all products on the market since the launch of Product C in 2010



Telling a Story with Graphics

FIG0811

In the next **5 minutes...**

OUR GOAL:

- 1 Understand **how prices have changed over time** in the competitive landscape.
- 2 Use this knowledge to **inform the pricing of our product**.

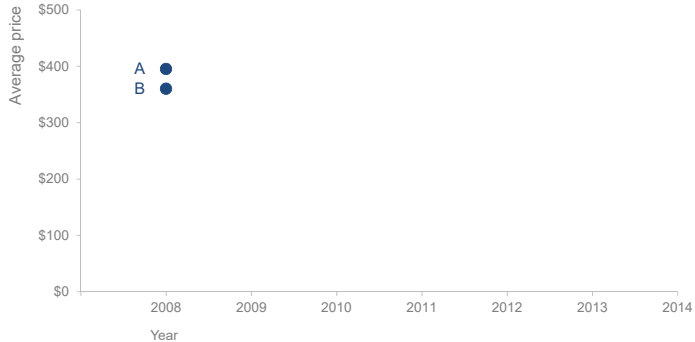
We will end with a **specific recommendation**.

Telling a Story with Graphics

FIG0812

Products A and B were launched in 2008 at price points of **\$360+**

Retail price over time

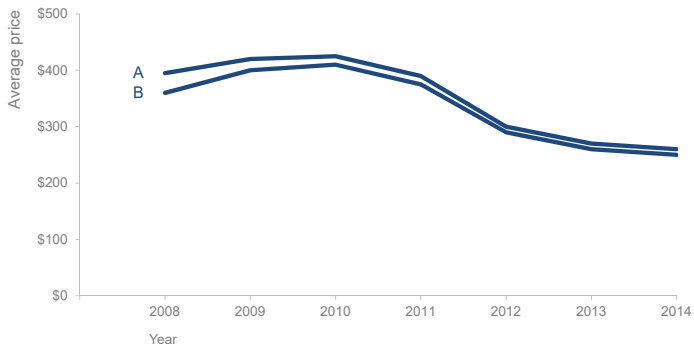


Telling a Story with Graphics

FIG0813

They have been priced similarly over time, with B consistently slightly lower than A

Retail price over time

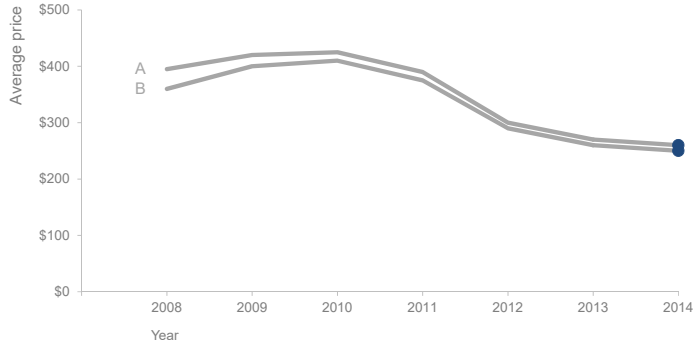


Telling a Story with Graphics

FIG0814

In 2014, Products A and B were priced at **\$260** and **\$250**, respectively

Retail price over time

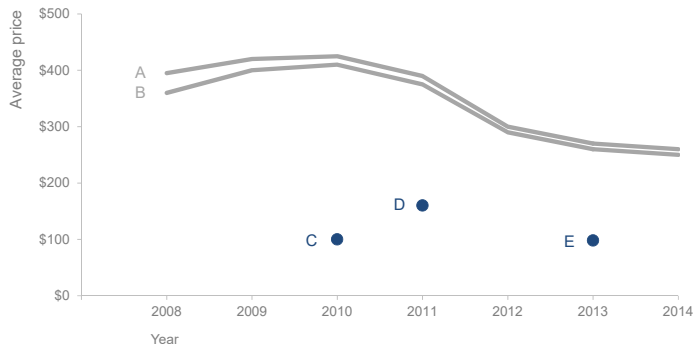


Telling a Story with Graphics

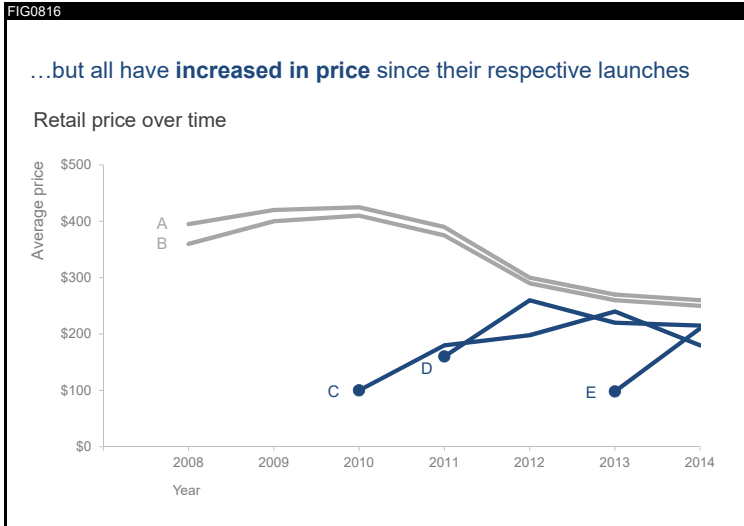
FIG0815

Products C, D, and E were each introduced later
at **much lower price points...**

Retail price over time



Telling a Story with Graphics

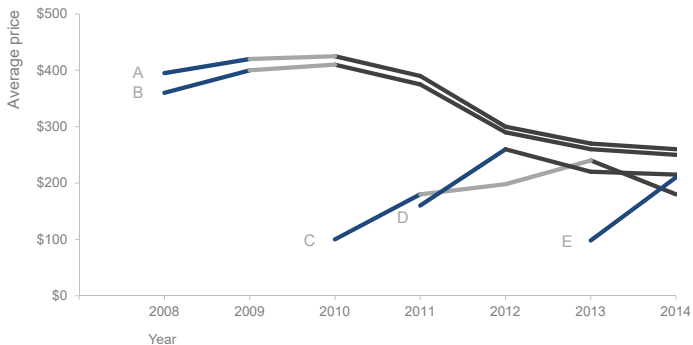


Telling a Story with Graphics

FIG0817

In fact, with the launch of a new product in this space, we tend to see an **initial price increase**, followed by a **decrease** over time

Retail price over time

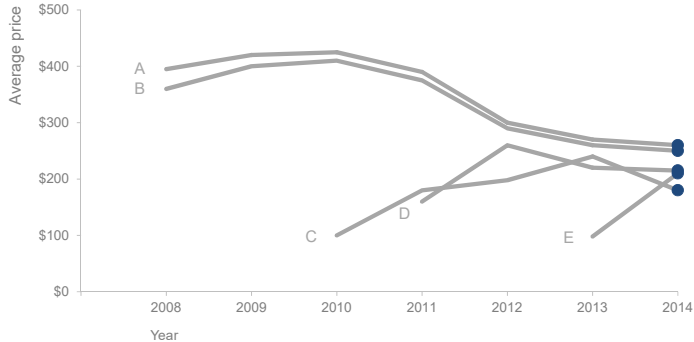


Telling a Story with Graphics

FIG0818

As of 2014, retail prices have converged, with an **average retail price of \$223**, ranging from a low of \$180 (C) to a high of \$260 (A)

Retail price over time

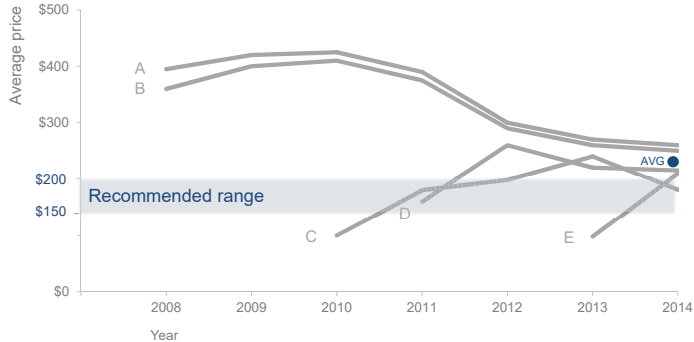


Telling a Story with Graphics

FIG0819

To be competitive, we recommend introducing our product *below* the \$223 average price point in the **\$150-\$200 range**

Retail price over time



Three Potential Stories

FIG0816

...but all have **increased in price** since their respective launches

Retail price over time

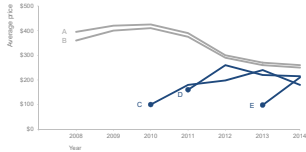


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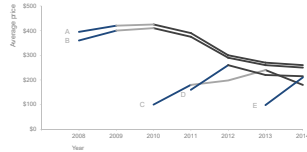
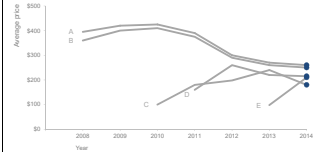


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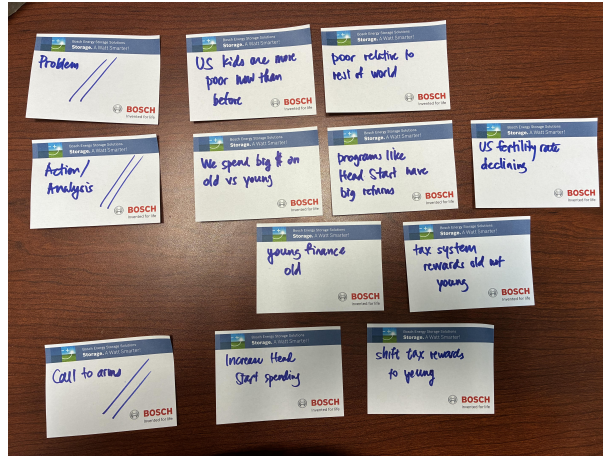
Retail price over time



Be Aware that the Presentation Version is Not the Print Version

- The final graph of the sequence just before is not a good explanation
- You may need to limit the points along the way
- And make sure you highlight the finding

Telling a Story with Post-its



Telling a Story with Post-its

- Goal today is brainstorming
- Write down your key points
- One per post-it note
- Re-organize and delete as needed
- Tell your story to your group
- I'll wander around to see if you want input



From Knaflic's [webpage](#)

R – Slides [here](#)

Next Lecture

- Next week: Fall break!
- Next next week: Maps 2 of 2 – Lecture 7
- Read
 - Manson, Chapter 5
 - Goats from the *Post*
 - *NYT* on elections maps
- Lecture 10: November 9 in-class workshop