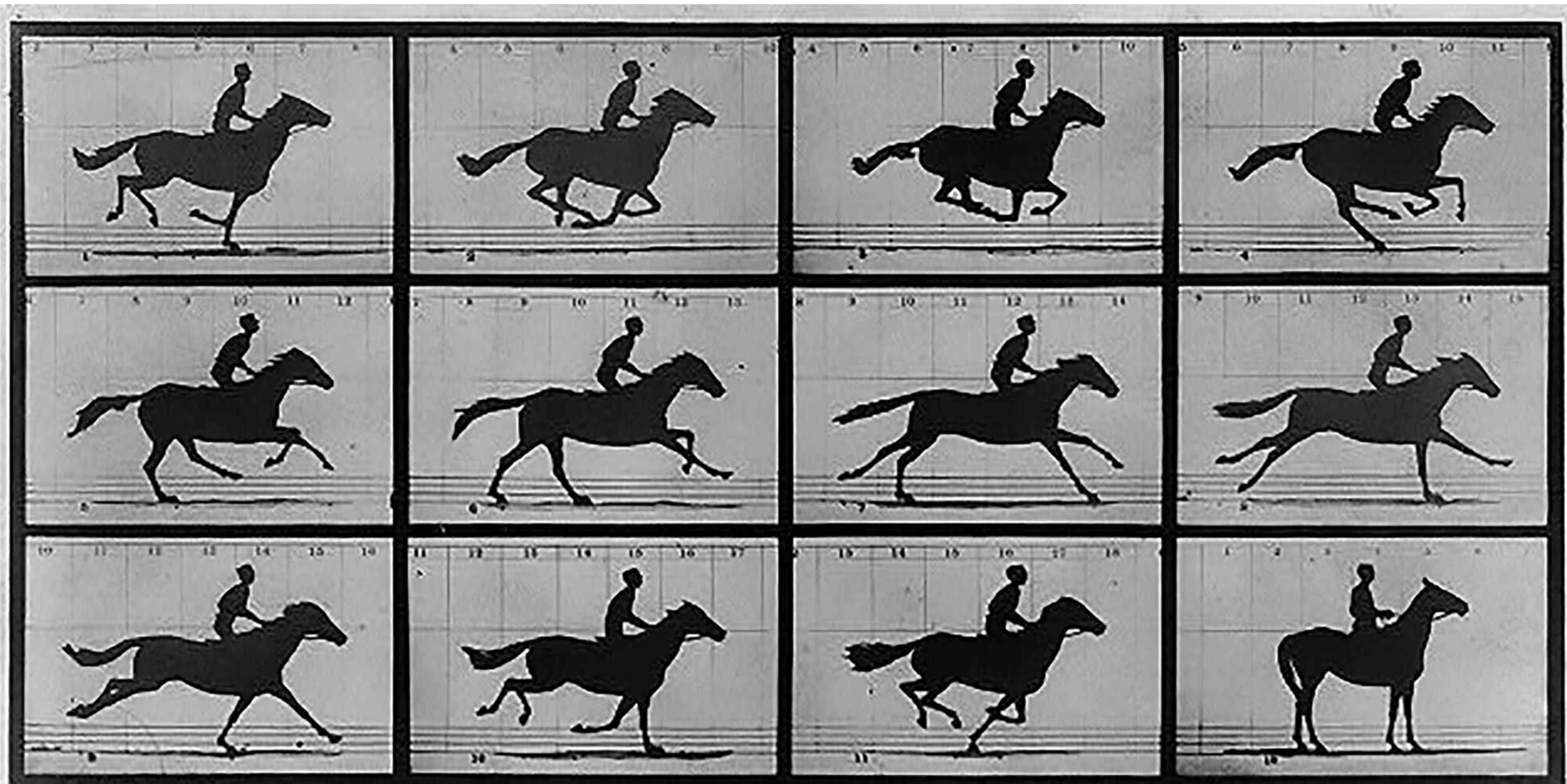


**Lecture 10**

**DD 324:**  
**Data Visualisation**

**Interactivity & Motion**

**Humans have been telling  
stories and making things  
move for ages.**



Copyright, 1878, by MUYBRIDGE.

MORSE'S Gallery, 417 Montgomery St., San Francisco.

## THE HORSE IN MOTION.

Illustrated by  
MUYBRIDGE.

"SALLIE GARDNER," owned by LELAND STANFORD; running at a 1.40 gait over the Palo Alto track, 19th June, 1878.

The negatives of these photographs were made at intervals of twenty-five-hundredths of a second, and about the twenty-fifth part of a second of time; they illustrate consecutive positions assumed in each twenty-five-hundredths of a second during a single stride of the horse. The vertical lines were twenty-five-hundredths apart; the horizontal lines represent elevations of four inches each. The exposure of each negative was less than the two-thousandth part of a second.

Eadweard  
Muybridge  
1878



**Interactivity and motion  
are baseline expectations  
for content in 2025.**

# Why would we want data to move?

# Why would we want data to move?

1

# Why would we want data to move?

1

*Animation can draw attention.*

# Why would we want data to move?

2

*Motion can help transition:*

- *between parts of a visualisation,*
- *between different ideas,*
- *between different aspects of the same data.*

# THE SCALE OF TIME

0 *years*

20,000,000 *years*

40,000,000 *years*



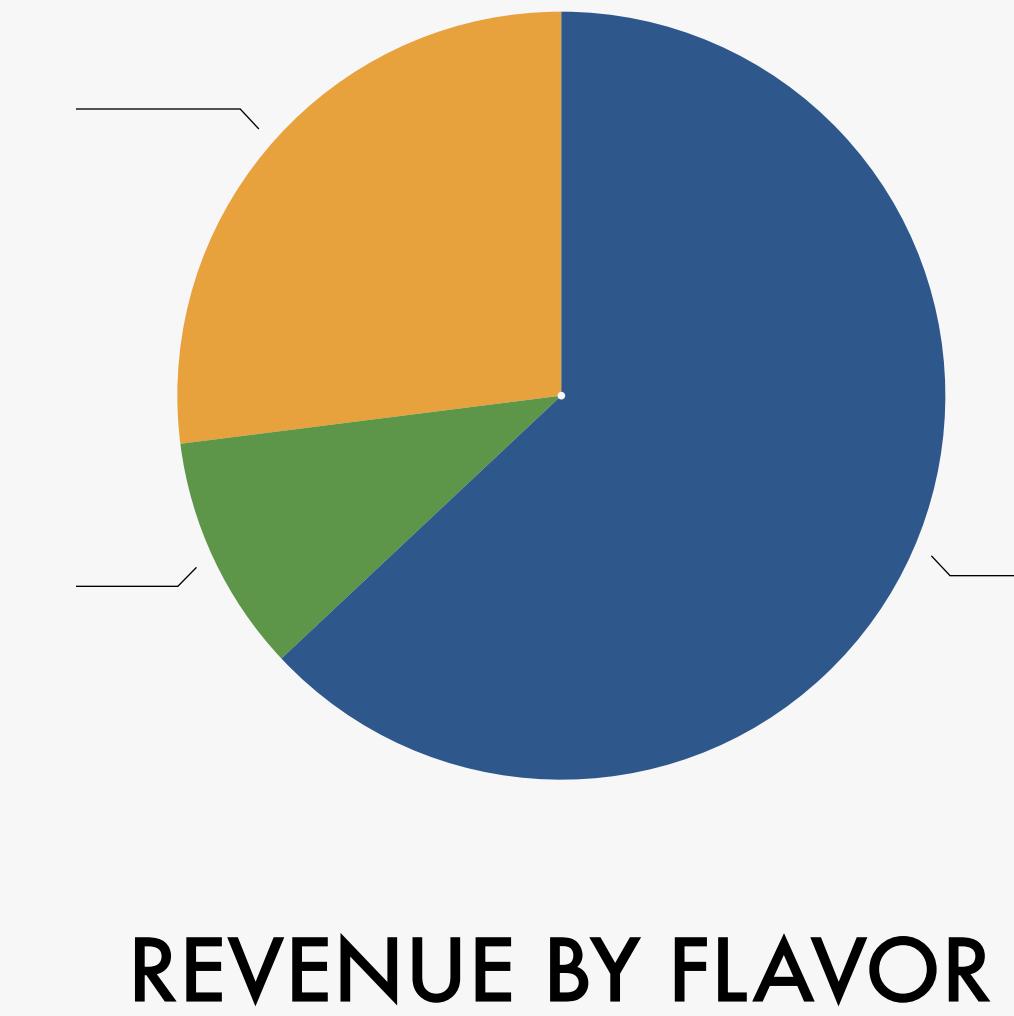
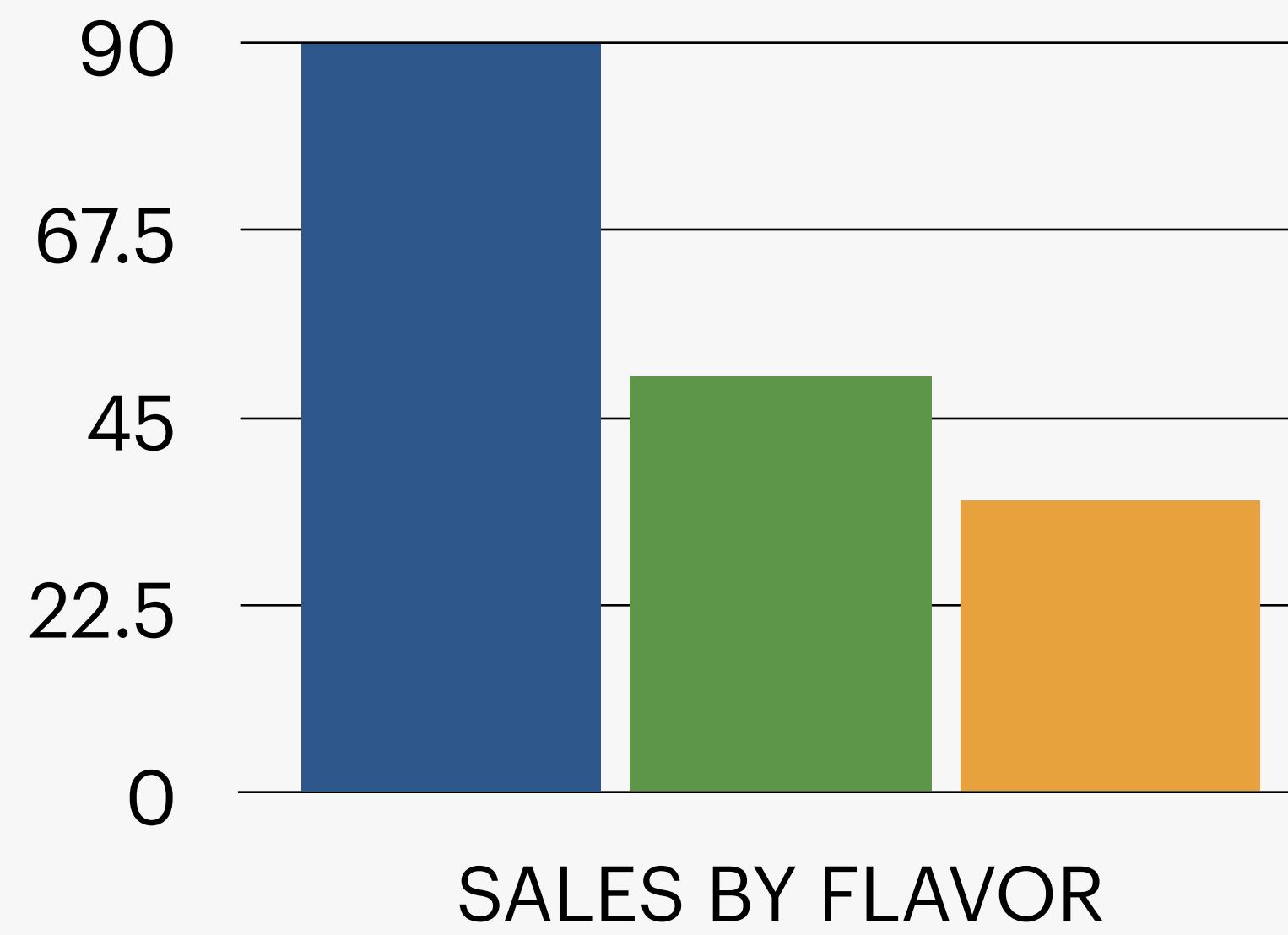
To Scale: TIME (Start at 3:00)

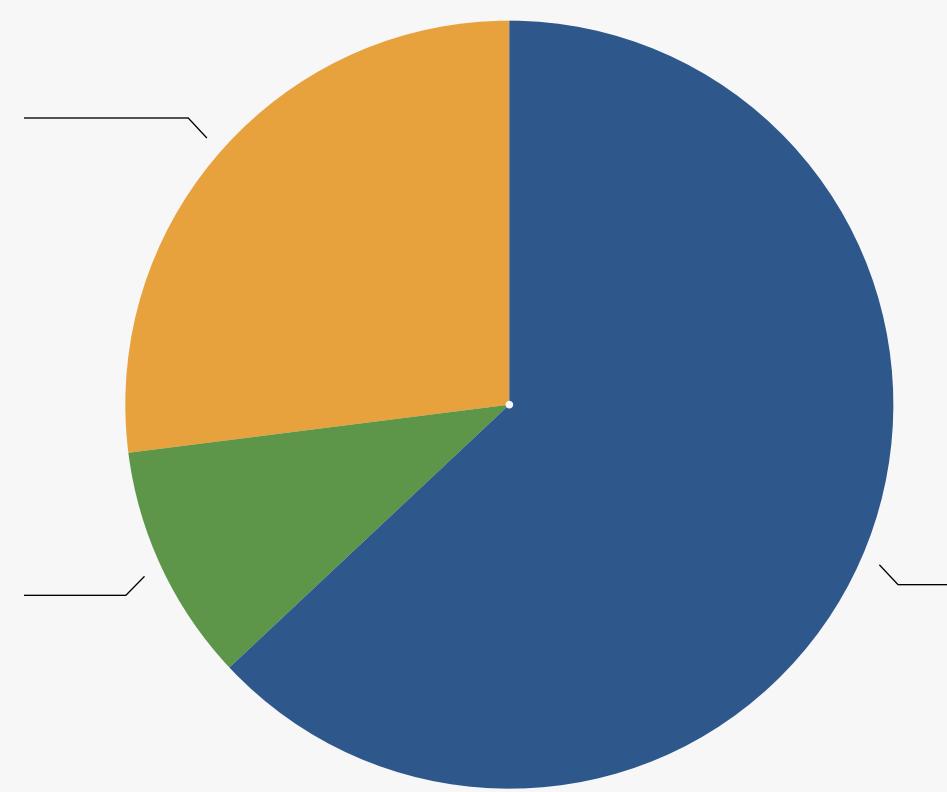
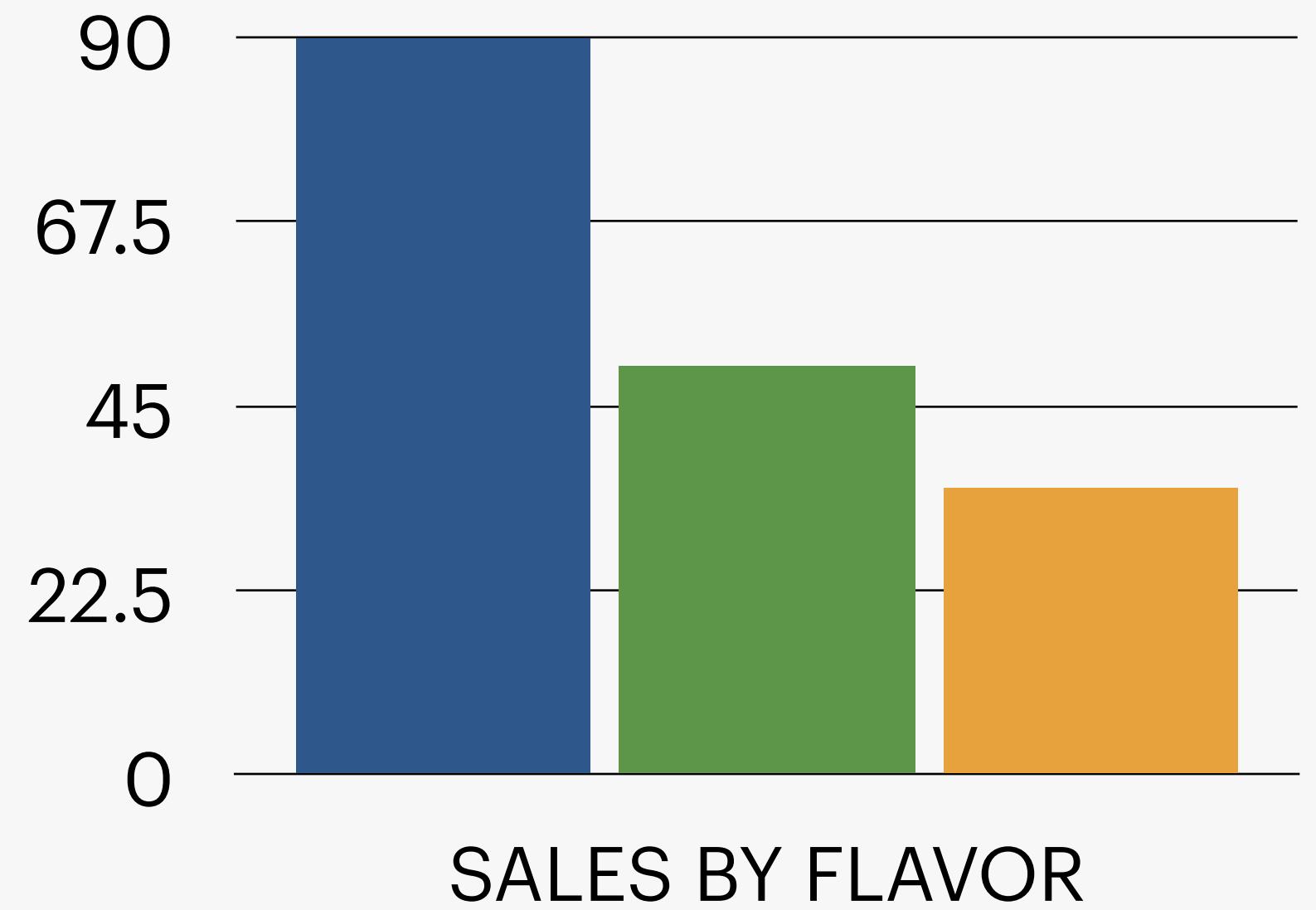


Why all world maps are wrong (Start at 4:35)

# Warmup exercise

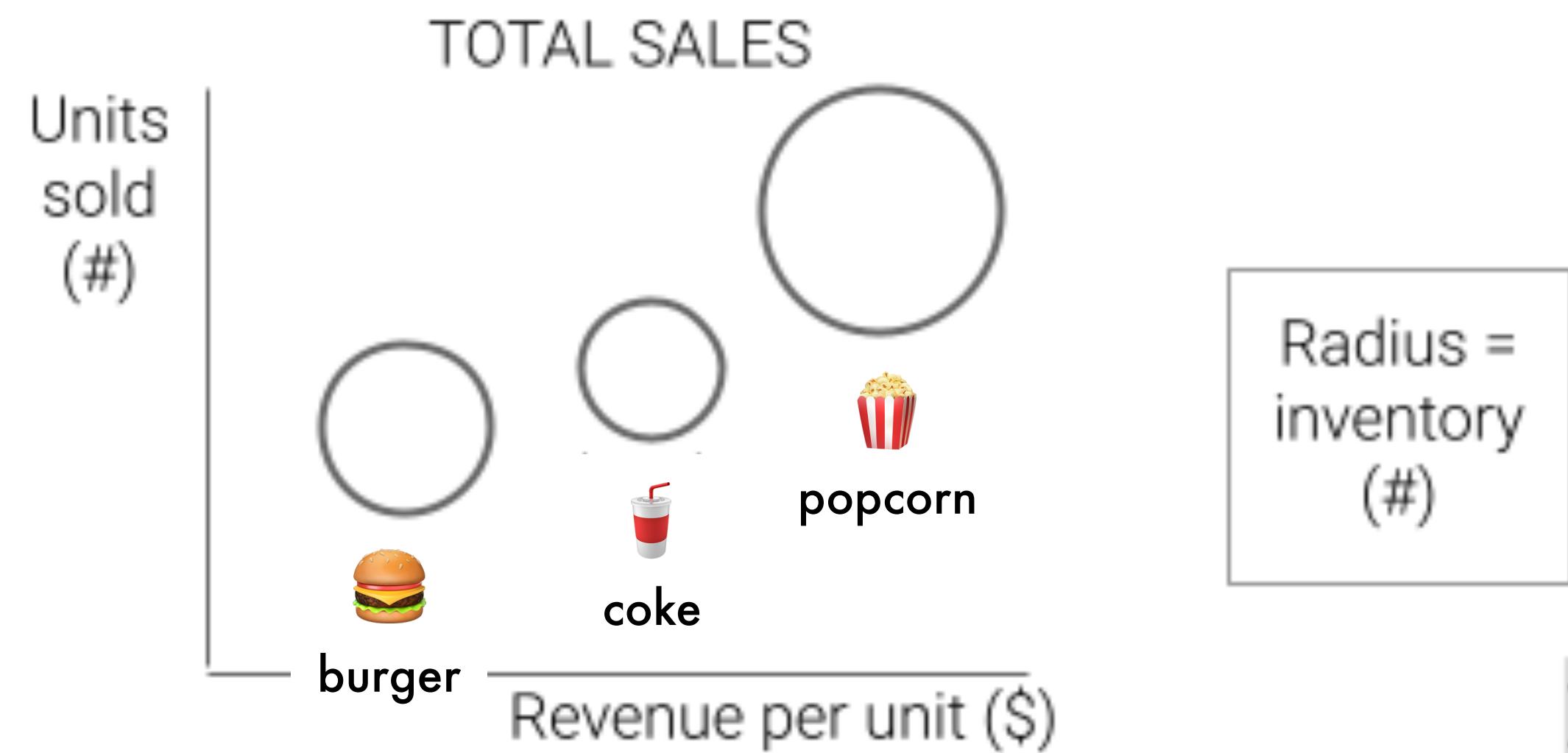
How would you transition from one chart to the other? Draw the 2 intermediate frames on paper.





REVENUE BY FLAVOR

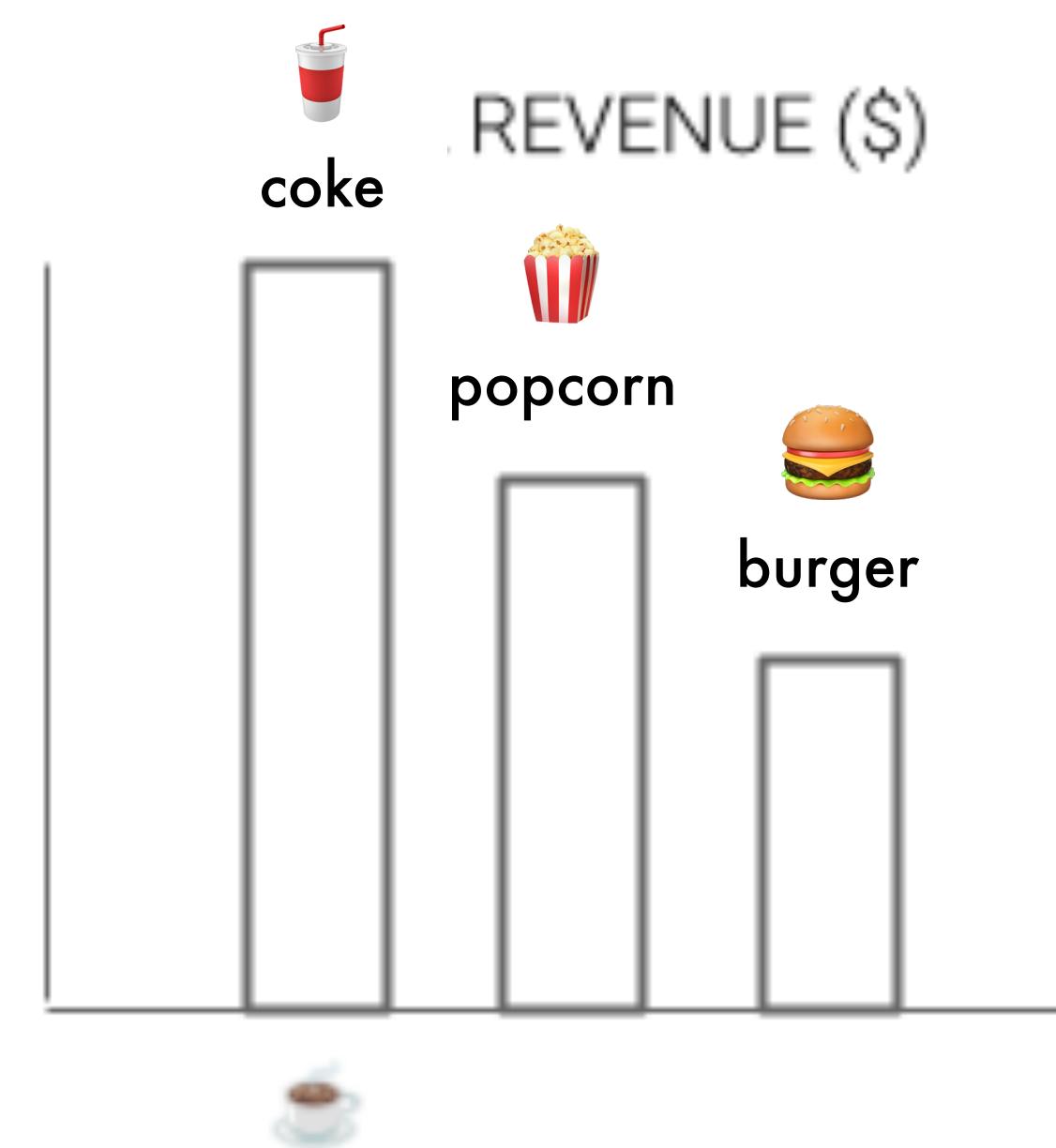
# Animate scatterplot to bar chart



1

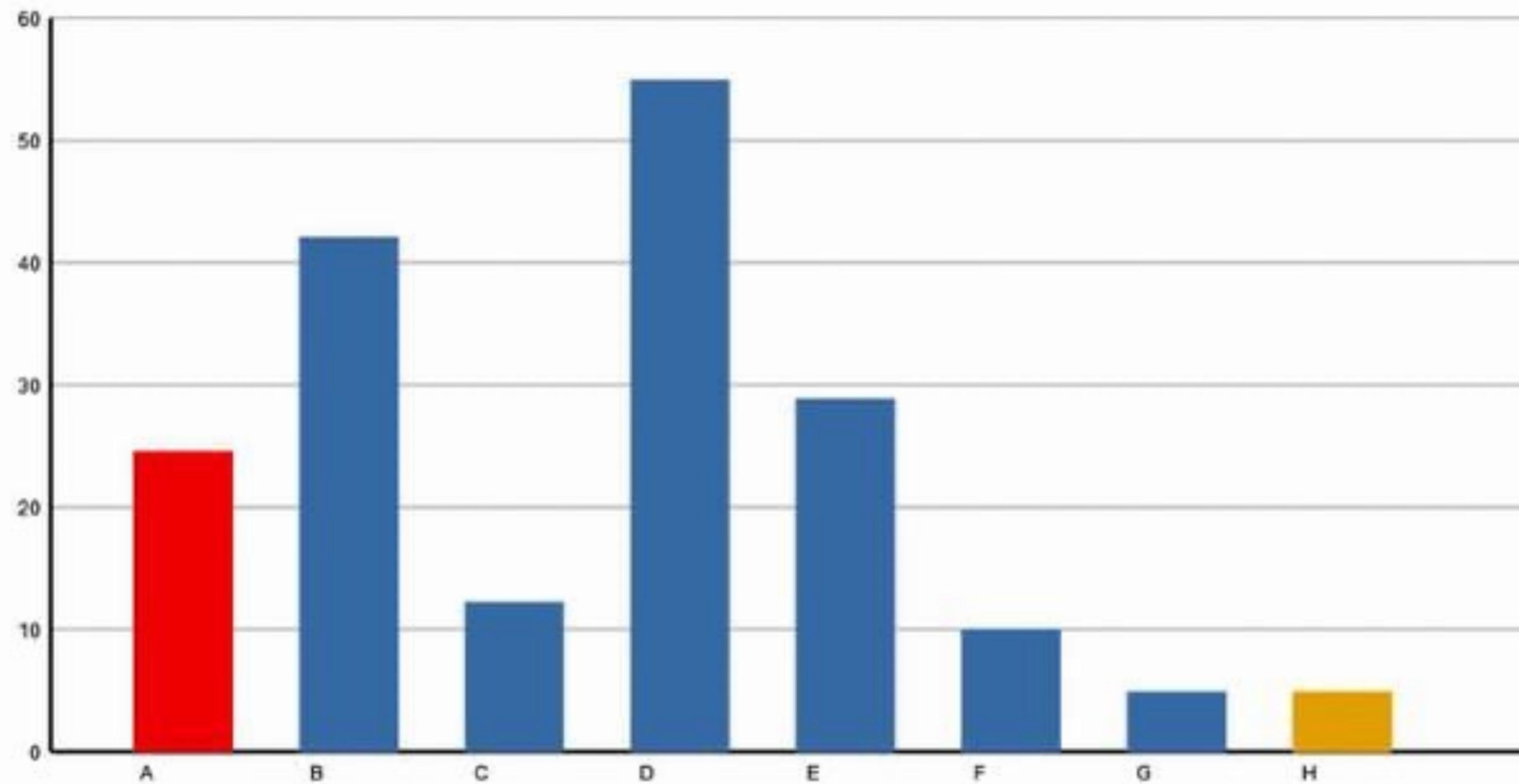


2



3

4



VIDEO: Animated Transitions in Statistical Data Graphics

# Why would we want charts to move?

3

*Time can be used as a channel and can give you an additional dimension to play with.*

# Electoral Bond Donations By Parties 2019-2024

visualized by @india.in.pixels



**Jan 2020**

Source: Election Commission of India  
India in Pixels by Ashris

SOURCE

Much of what can be achieved  
with motion can also be done  
with interactive media.

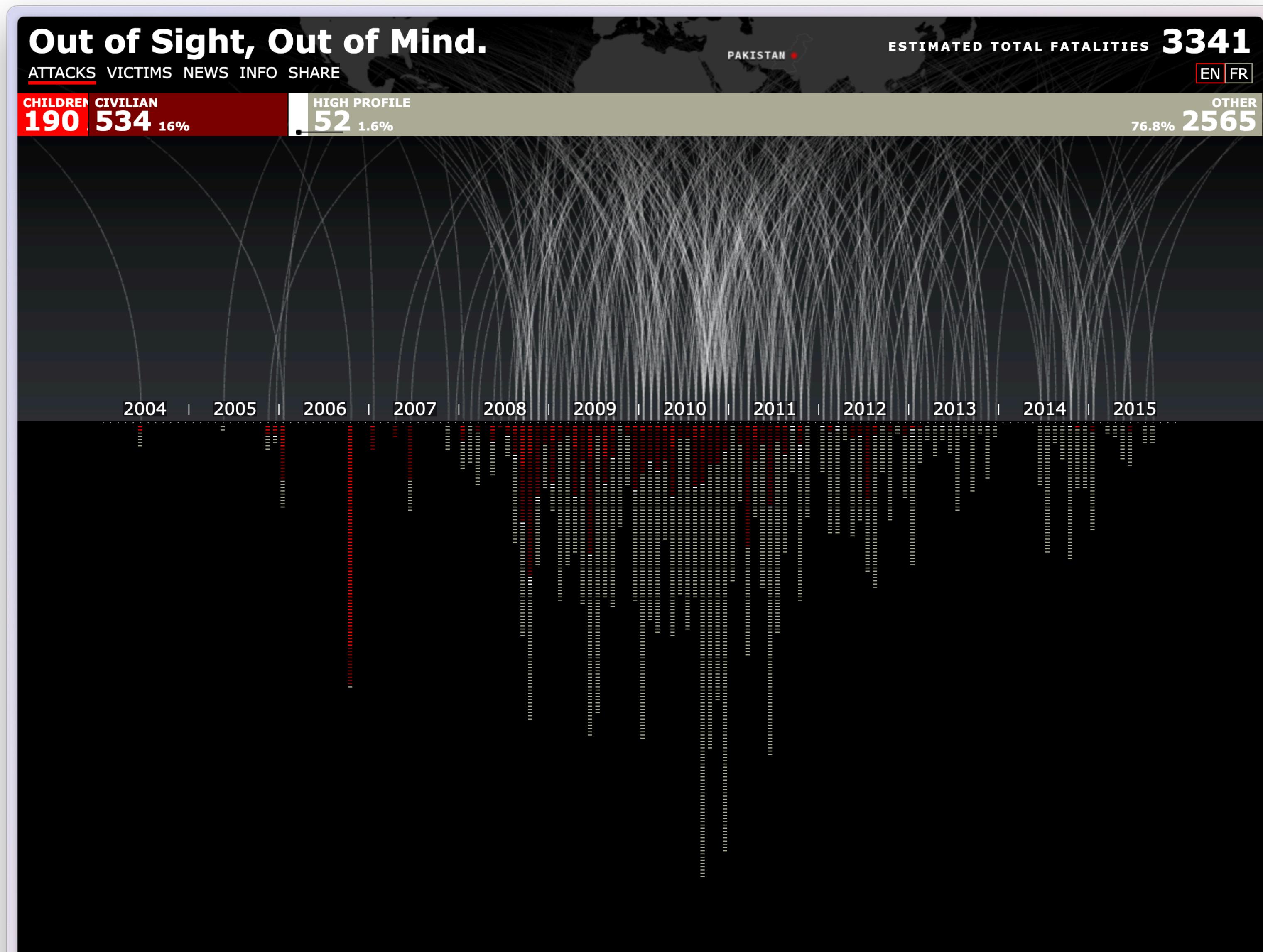
### INTERACTIVE

Changes when you  
interact with it.

### VIDEO

Changes on a  
fixed timeline.

[drones.pitchinteractive.com](http://drones.pitchinteractive.com)



Similiar to a video, just  
created with code.

Hover interactivity.

# pudding.cool

A digital publication that...  
**explains ideas with visual essays**

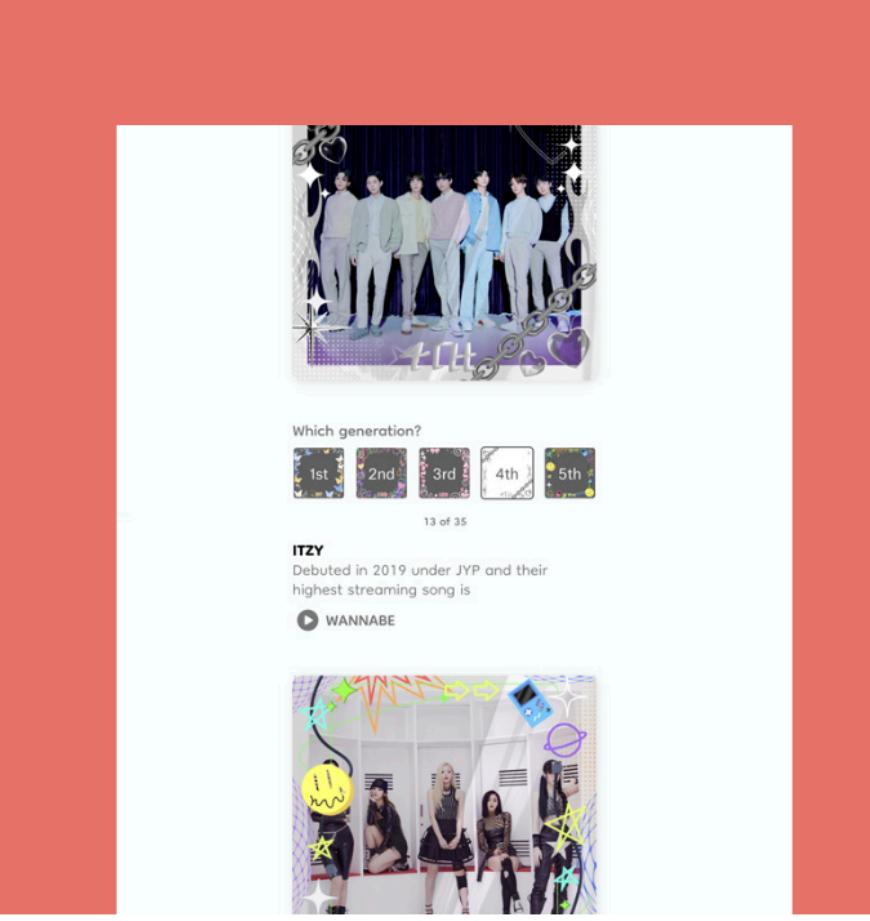
The Pudding

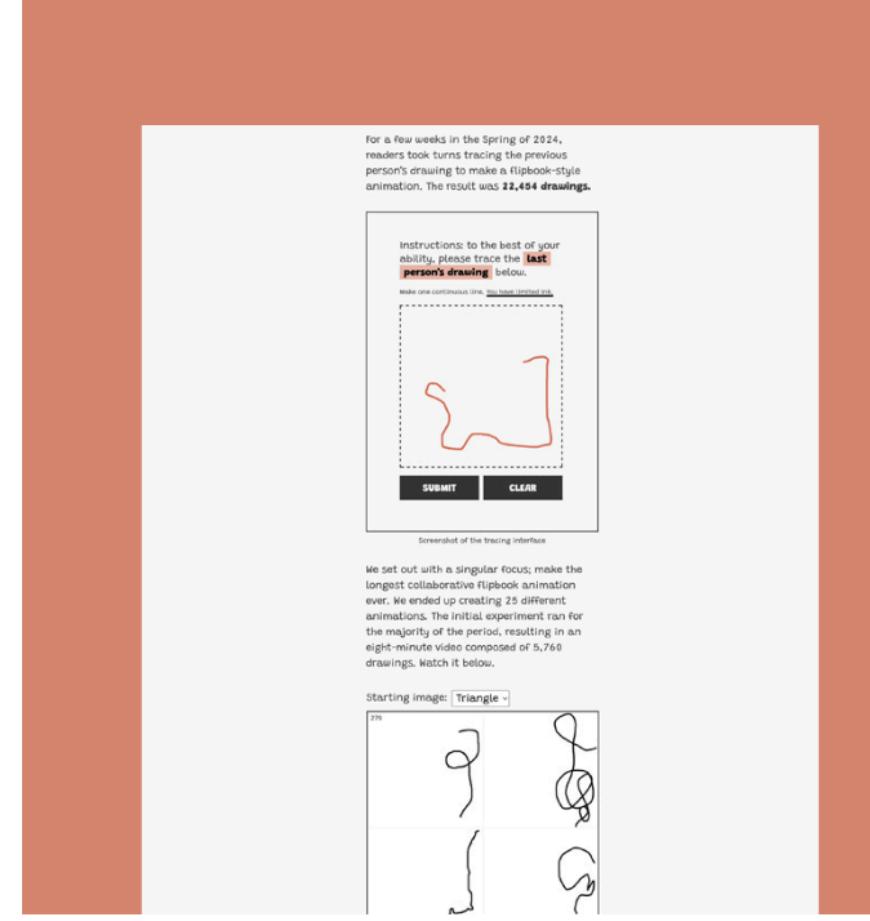
ABOUT SUBSCRIBE MORE

OUR FAVES POPULAR UPDATING YOUR INPUT VIDEO AUDIO

#198 NOV 2024 #192 OCT 2024 #182 MAR 2024

  
**sitters vs standers**  
The American worker divide: Those who sit, and those who stand.

  
**k-pop generations**  
Organize these K-pop groups by generation, and we'll make an article using the results.

  
**flipbook**  
The results from making a crowd-sourced flipbook animation.

#162 DEC 2022 #159 SEP 2022 #151 APR 2022

User input is recorded and added to the dataset live!

# Four Experiments in Handwriting with a Neural Network

Distill

ABOUT PRIZE SUBMIT

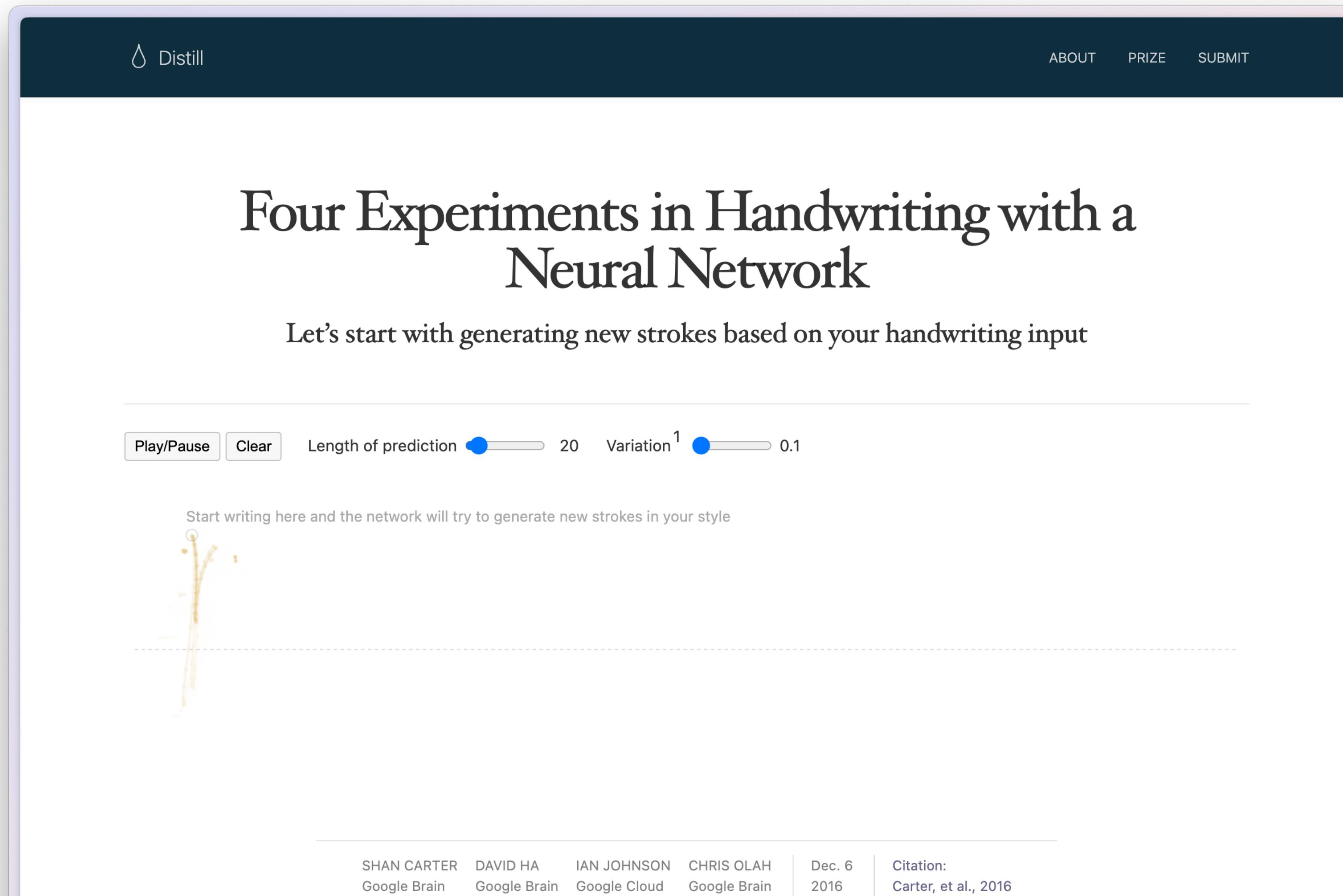
# Four Experiments in Handwriting with a Neural Network

Let's start with generating new strokes based on your handwriting input

---

Play/Pause Clear Length of prediction 20 Variation 1

Start writing here and the network will try to generate new strokes in your style



User input is recorded and used to explain.

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

The New York Times

≡ SECTIONS    HOME    SEARCH    ⚙

POLITICS

## 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** ...

4.0%

5.8%

Draw the line for the Obama years.

User input shows difference between user's mental model and reality.

*“The universe is made  
of stories, not atoms.”*

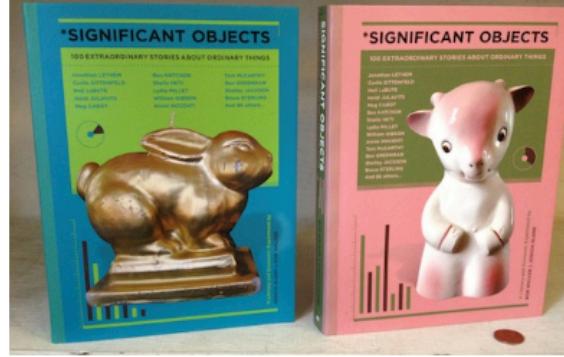
*—Muriel Rukeyser*



# SignificantObjects

...and how they got that way

FOSSILS    TALISMANS    IDOLS    TOTEMS    EVIDENCE    ABOUT    PRESS    NEWS

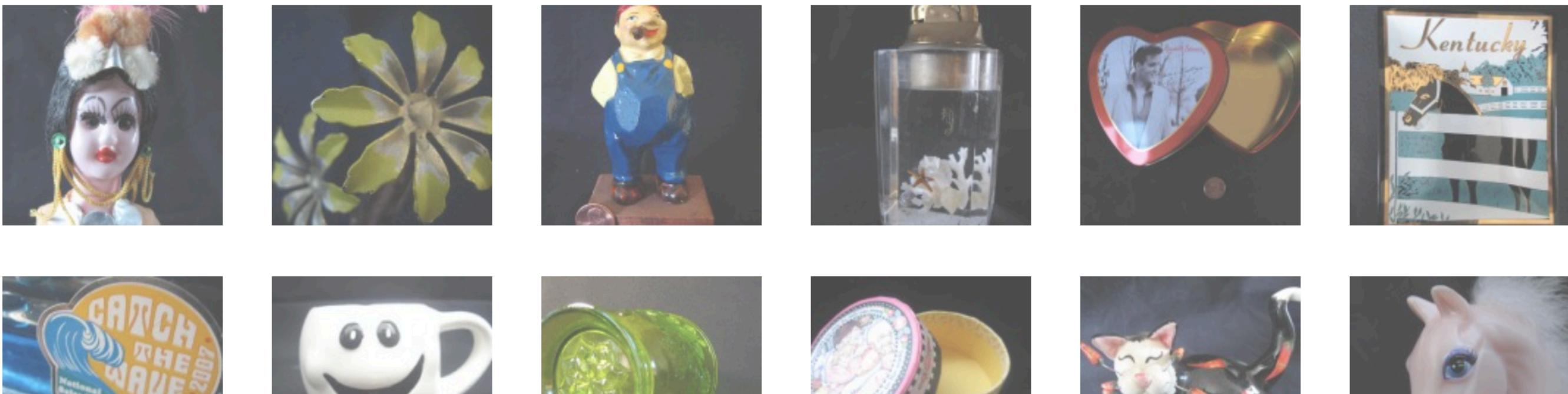


Significant Objects, a literary and anthropological experiment devised by Rob Walker and Joshua Glenn, demonstrated that the effect of narrative on any given object's subjective value can be measured objectively.

The project auctioned off thrift-store objects via eBay; for item descriptions, short stories purpose-written by over 200 contributing writers, including [Meg Cabot](#), [William Gibson](#), [Ben Greenman](#), [Sheila Heti](#), [Neil LaBute](#), [Jonathan Lethem](#), [Tom McCarthy](#), [Lydia Millet](#), [Jenny Offill](#), [Bruce Sterling](#), [Scarlett Thomas](#), and [Colson Whitehead](#), were substituted. The objects, purchased for \$1.25 apiece on average, sold for nearly \$8,000.00 in total. (Proceeds were distributed to the contributors, and to nonprofit creative writing organizations.) All the project's stories are archived on this site.

Glenn and Walker are now pleased to announce that a collection of 100 of the project's finest stories has been published by Fantagraphics in a highly impressive volume, masterfully designed by [Jacob Covey](#). It is available now via [Powell's](#), [Amazon](#), [B&N](#), or wherever finer books are sold.

Follow the latest news and other interesting notes on objects, stories, and value at [significobs.tumblr.com](#). We're also on [Twitter](#), and [Facebook](#), and sometimes we even post in the [news section of this very site!](#)



**\$128.74**

**\$128.74**

*trinkets from thrift  
stores and garage  
sales*

**\$128.74**

*trinkets from thrift  
stores and garage  
sales*

**\$3,612.51**

**\$128.74**

*trinkets from thrift  
stores and garage  
sales*

**\$3,612.51**

*priceless treasures  
with stories attached  
to them*

# What is the value of a story?

\$128.74

*trinkets from thrift  
stores and garage  
sales*

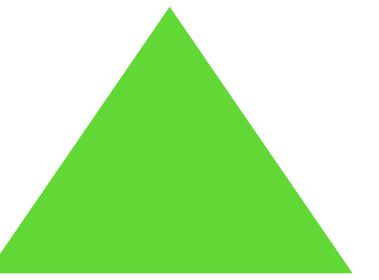
\$3,612.51

*priceless treasures  
with stories attached  
to them*

# What is the value of a story?

\$128.74

*trinkets from thrift  
stores and garage  
sales*



28x

\$3,612.51

*priceless treasures  
with stories attached  
to them*

# Literacy

# Literacy

## Graphicacy?

# Graphicacy

*the ability to understand and present  
information in the form of sketches,  
photographs, diagrams, maps, plans, charts,  
graphs and other non-textual formats.*

162

## GUEST LECTURE



# From numbers to narratives

**NEEL LAKHWANI**

Designer, Tibba Design Studio

(also my brother)

Make the viewer think about  
data insights, not the method  
of representation or the  
technology