



Northwestern  
University

# Introduction to Data Visualization & Data Storytelling

## Week 2





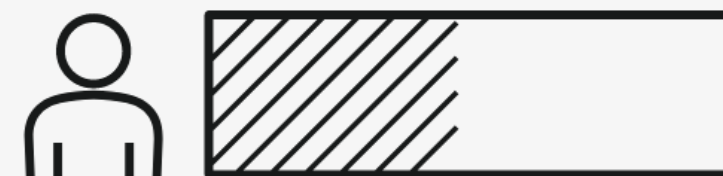
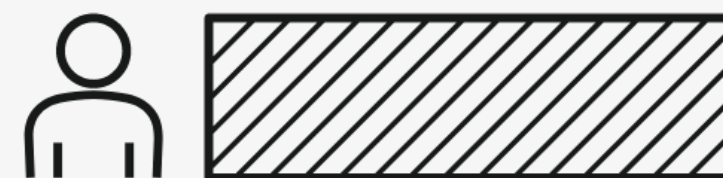
# Short break!

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We start again in 5 minutes...

# POLL

*When was the bar chart invented?*





# DATA VIZ HISTORY



# PRE-HISTORY



- Babylonians, Egyptians, Greeks and Chinese
- Clay, papyrus

*Babylonian world map (600 BC)*

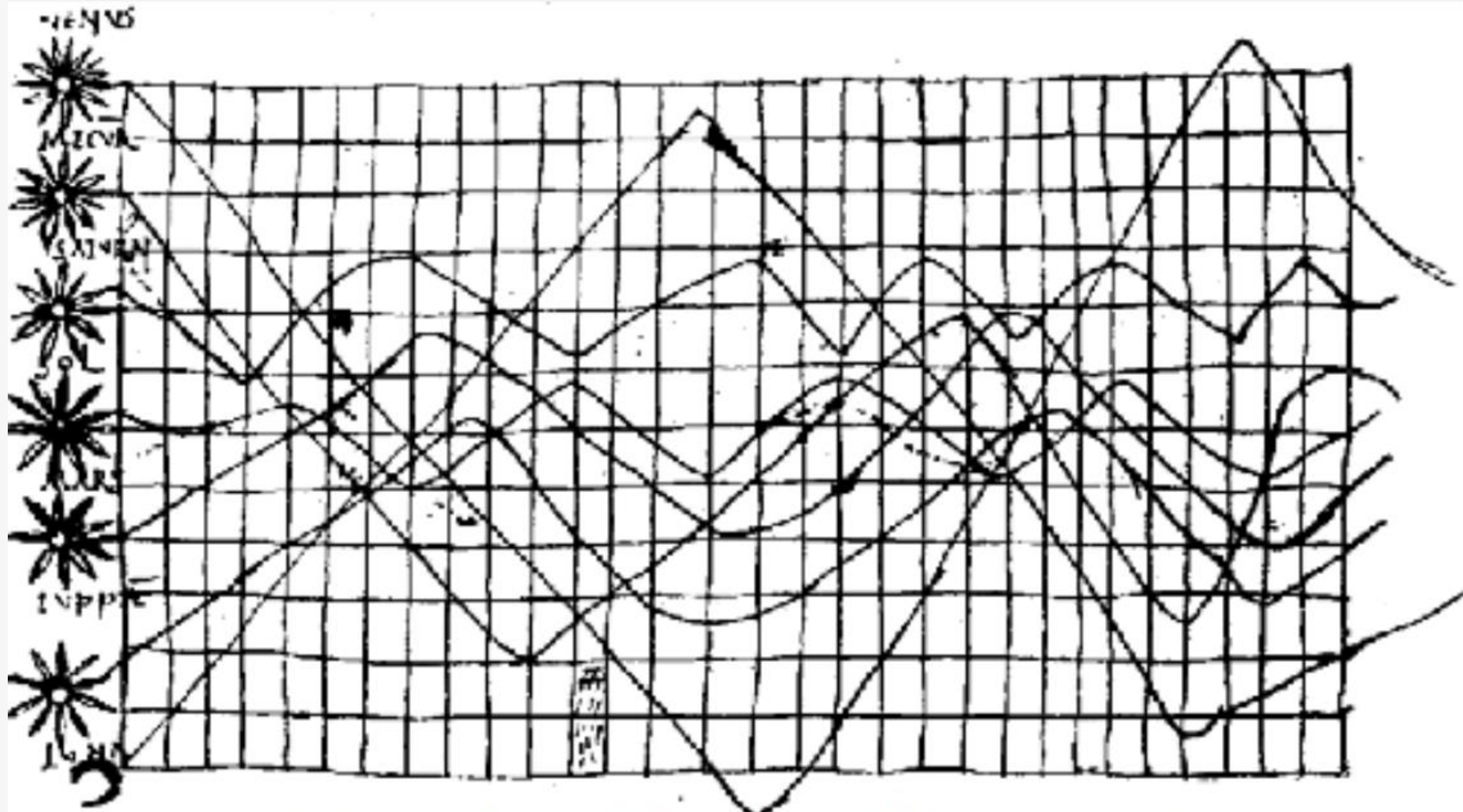


# MAPS (Middle Ages)





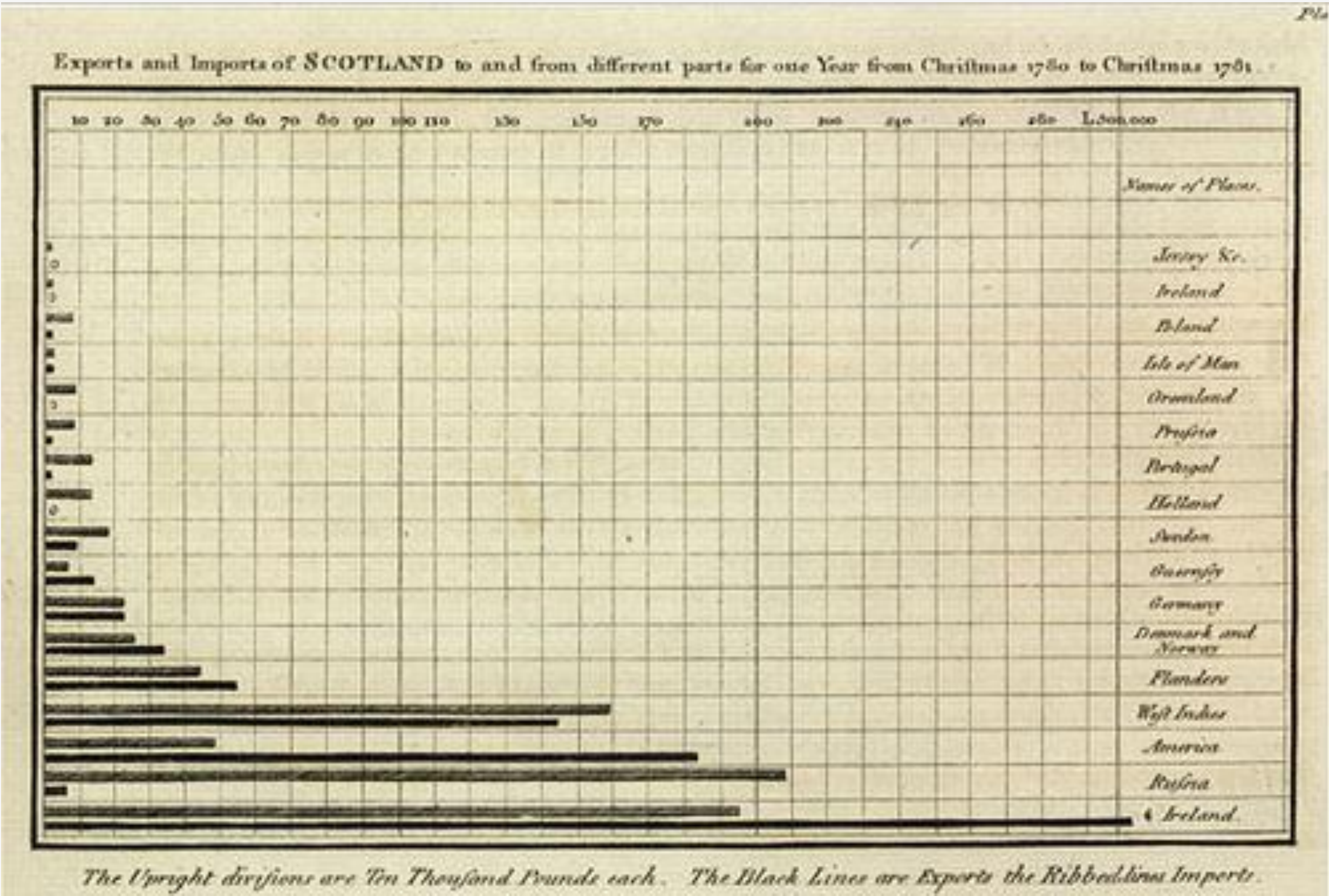
# LINE GRAPH (950 AD)



*Positions of the Sun, Moon, and Planets Throughout the Year (Europe, 950 AD)*

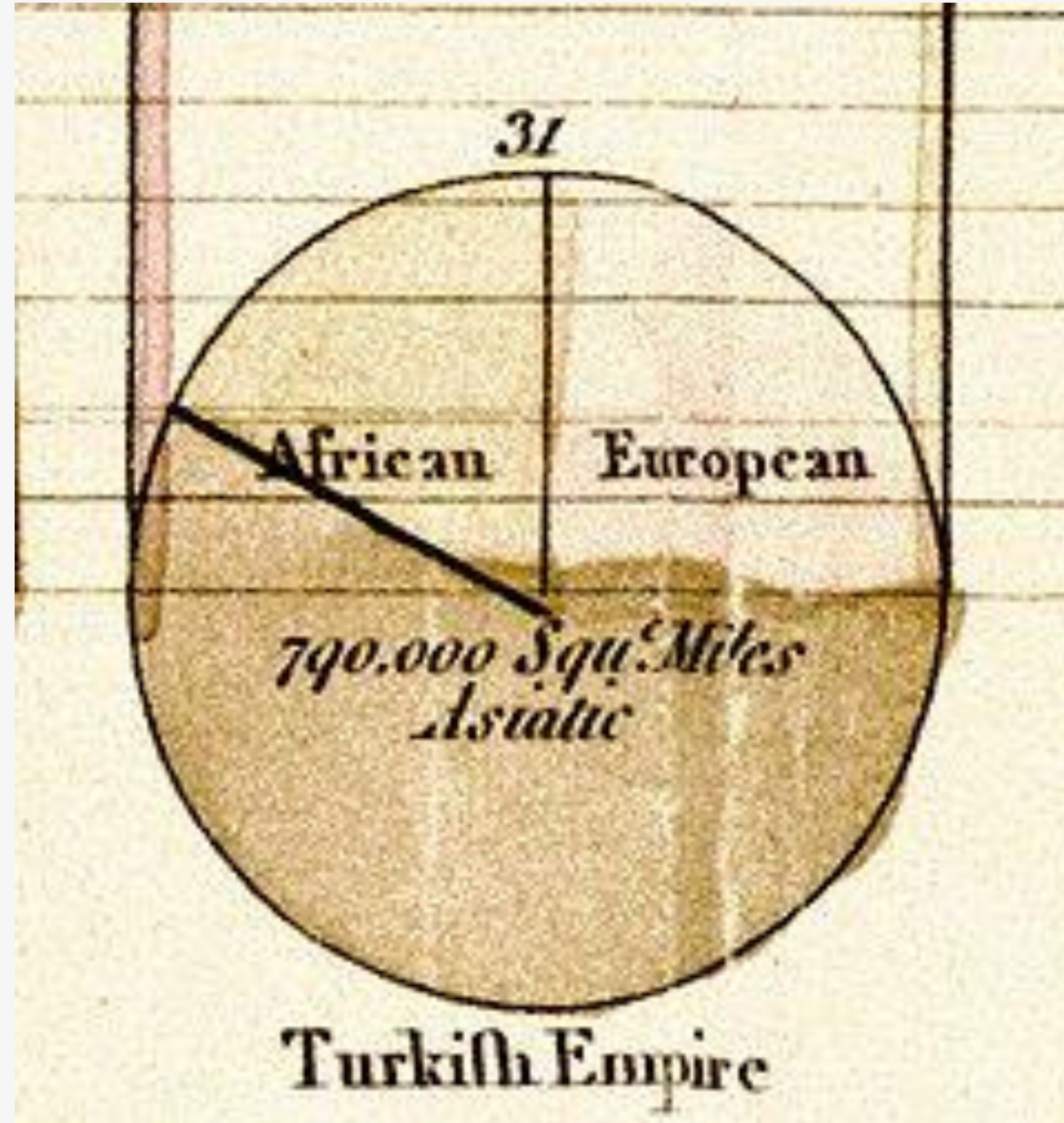


# WILLIAM PLAYFAIR (1759-1823)



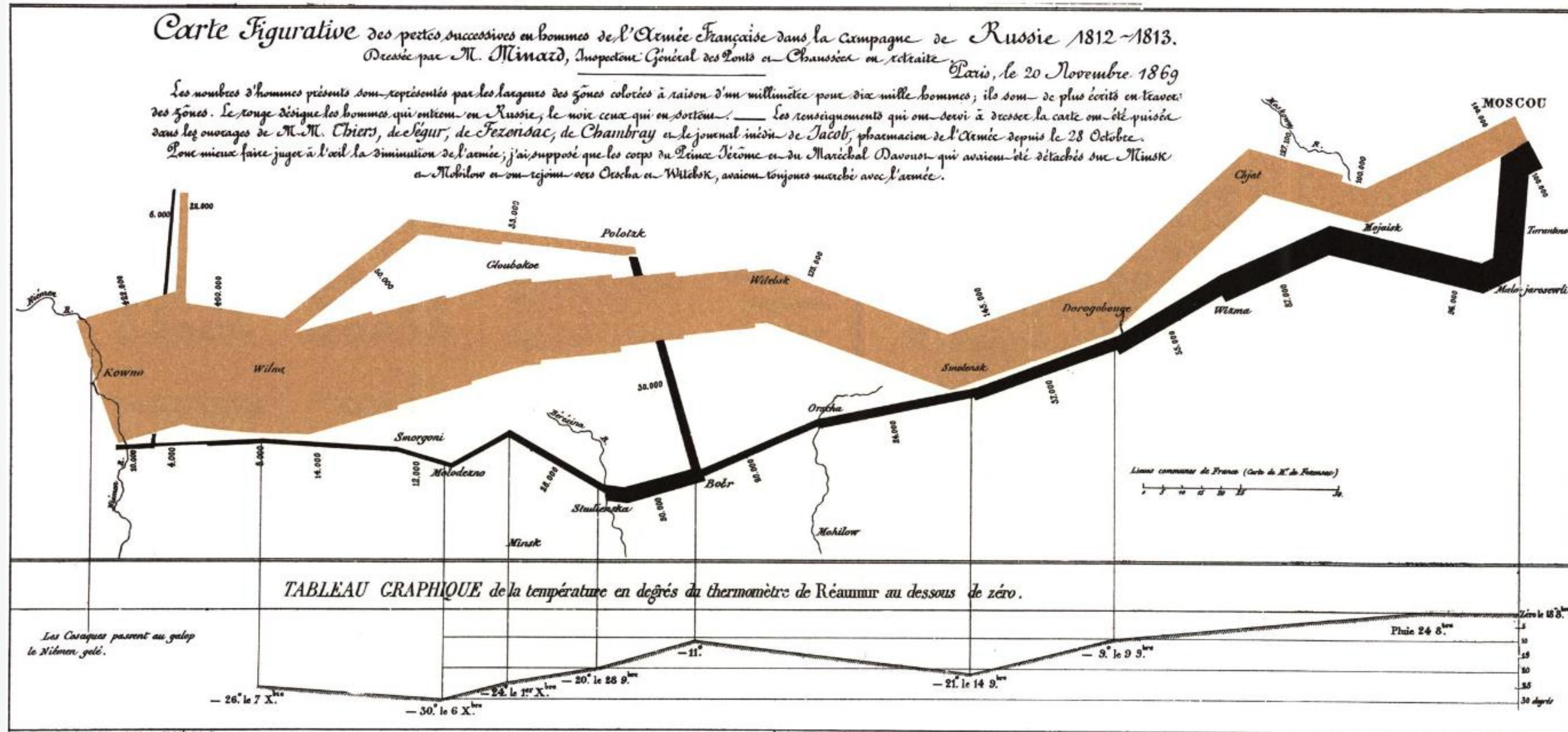


# WILLIAM PLAYFAIR (1759-1823)



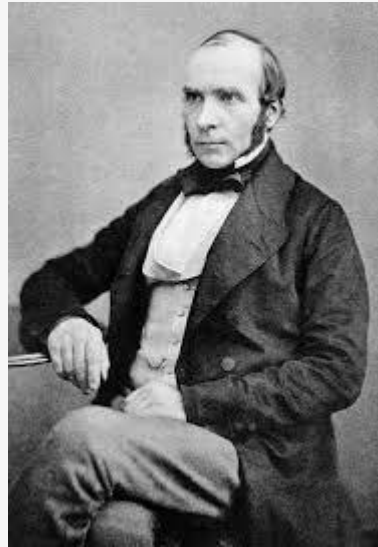


# CHARLES J. MINARD (1781 - 1870)



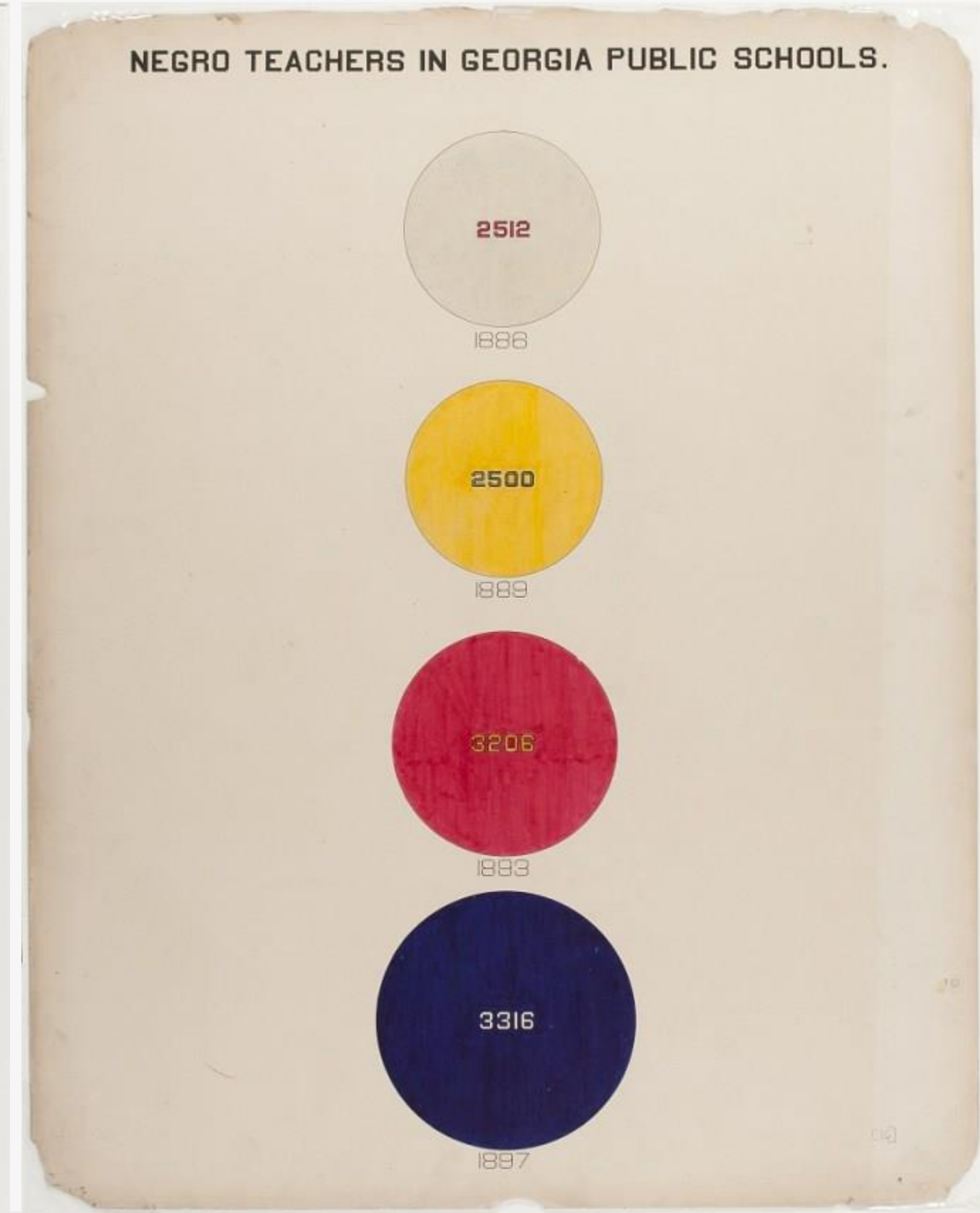
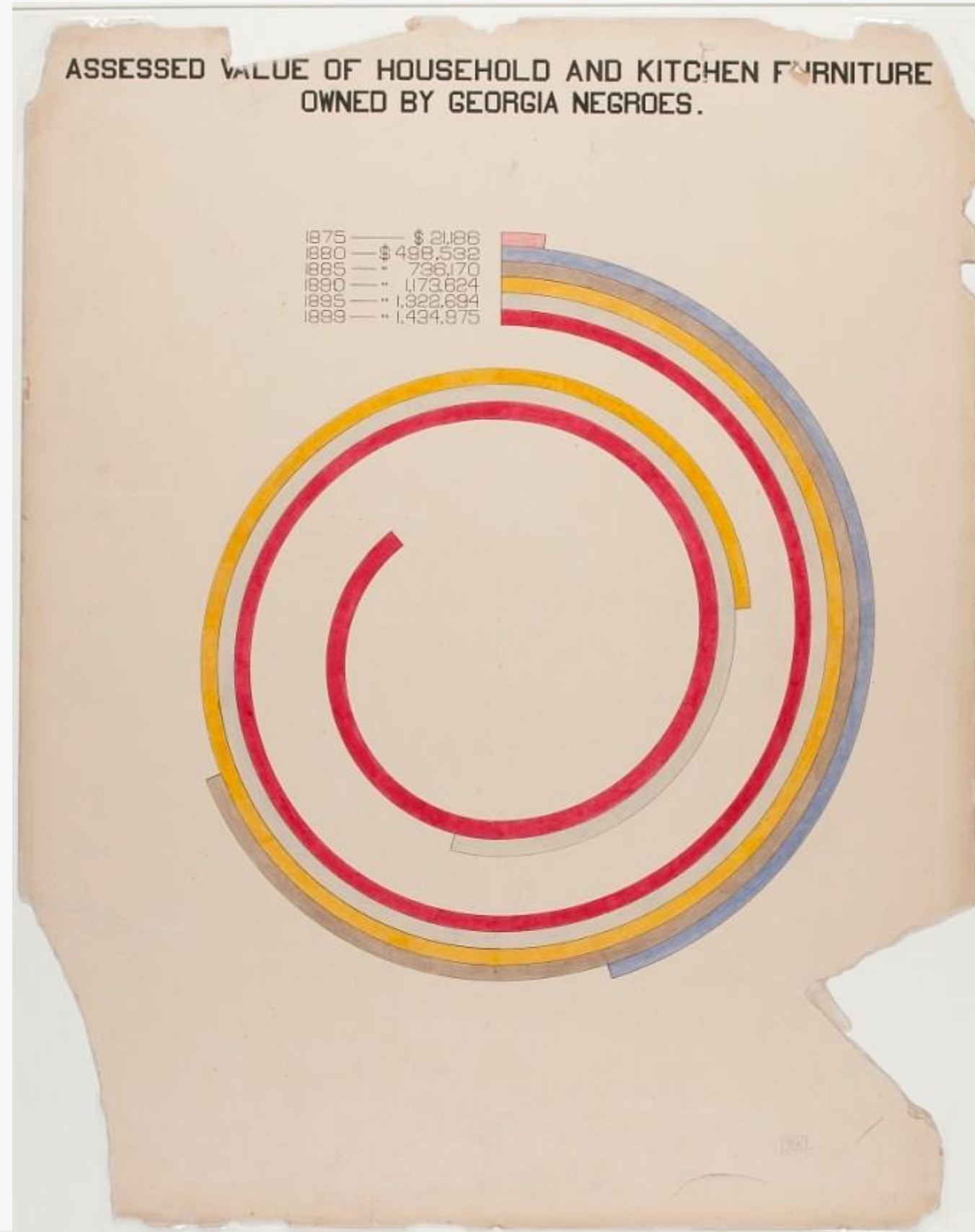


# JOHN SNOW (1813-1858)





# W. E. B. DU BOIS (1868-1963)



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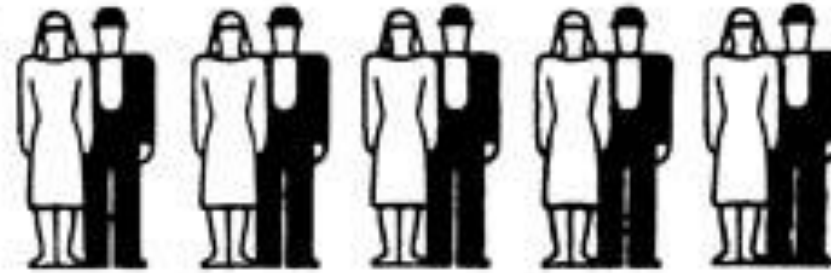


# 20<sup>th</sup> CENTURY

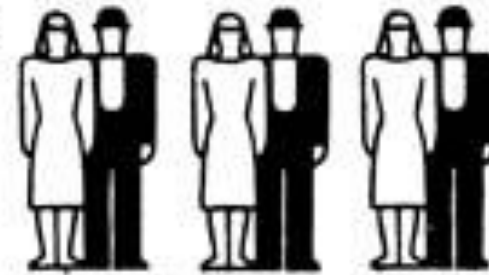


## Men Getting Married in Germany in a Year

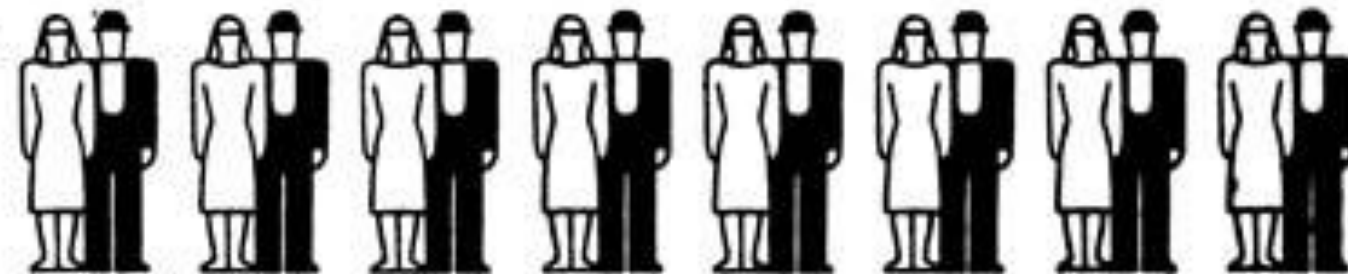
1911-14



1915-18



1919-22



1923-26



1 sign for 100,000 a year

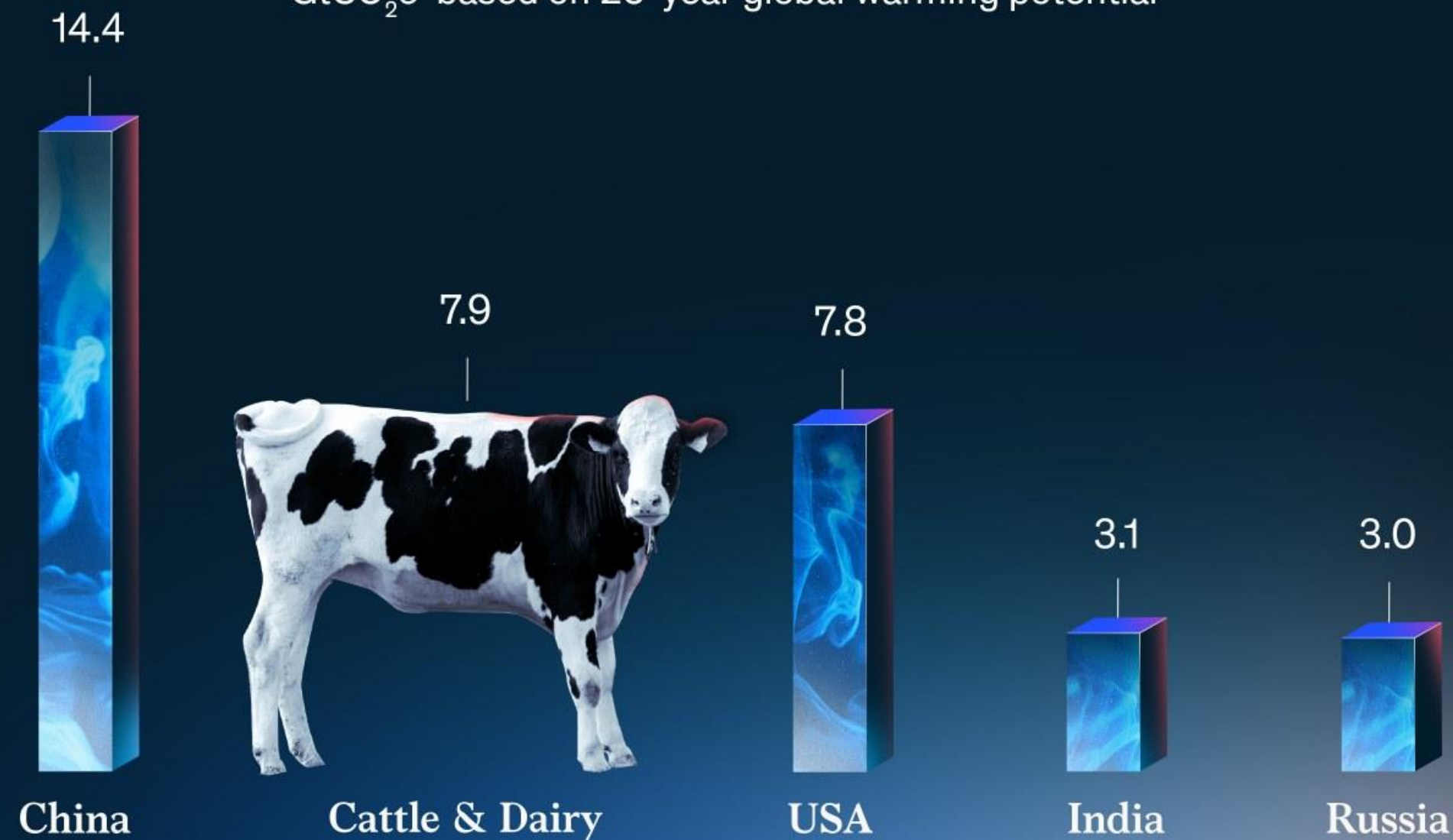


# 21<sup>st</sup> CENTURY



If cows were a country, they would be among the top greenhouse-gas emitters

GtCO<sub>2</sub>e<sup>1</sup> based on 20-year global warming potential<sup>2</sup>



<sup>1</sup>Billion metric tons of carbon dioxide equivalent.

<sup>2</sup>2016 data or most recent available; 20-year global-warming-potential values from IPCC's Fifth Assessment Report (AR5).



# 21<sup>st</sup> CENTURY



## Escher's Gallery

455 pieces of artwork by Dutch Artist [M.C. Escher \(1898-1972\)](#)

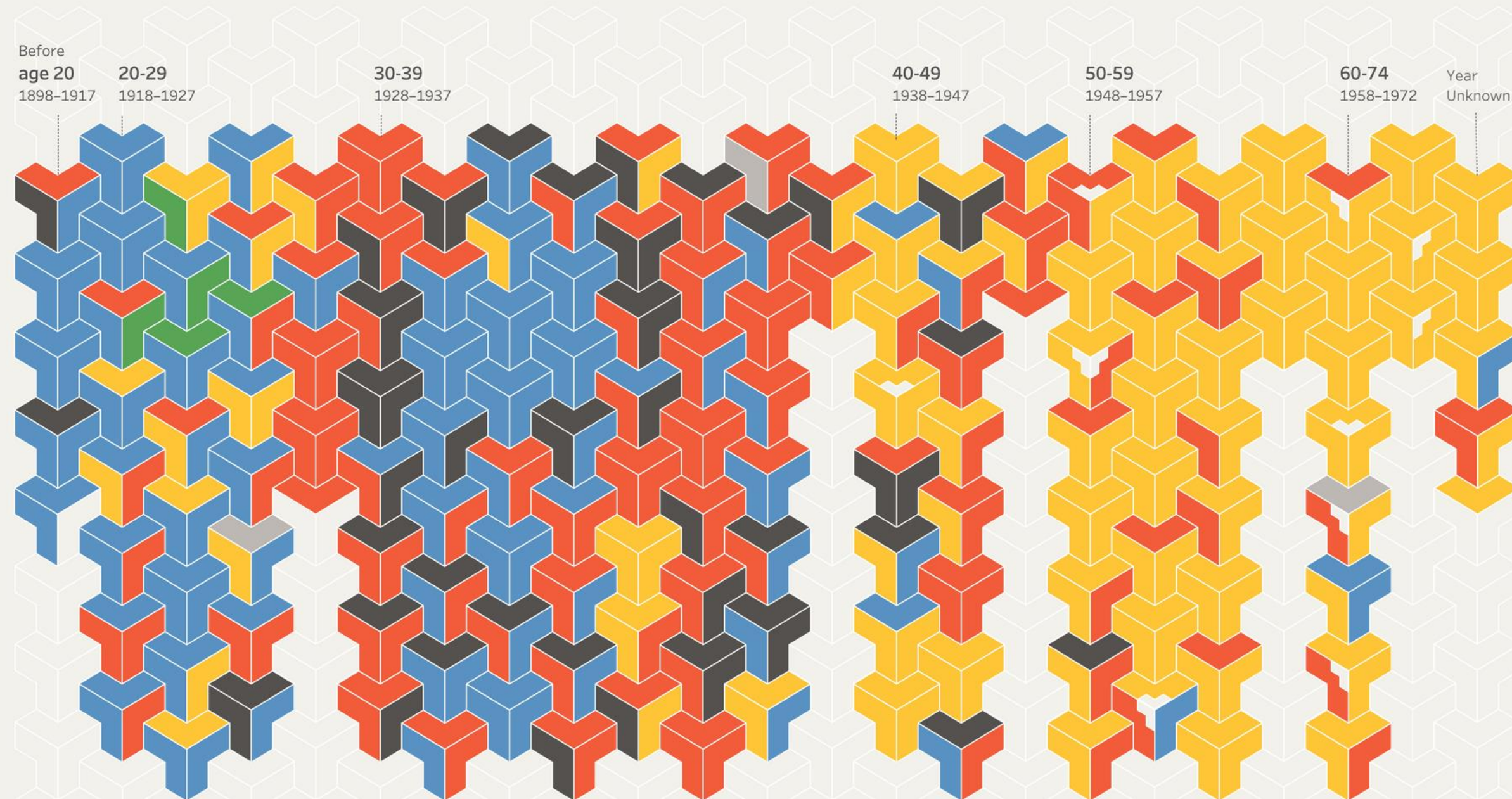
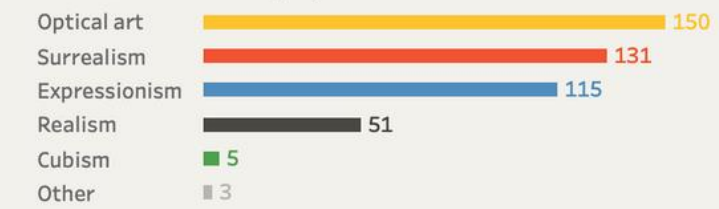


A piece of artwork



A famous piece of artwork

### Number of artworks by style



Data source and images: [www.wikiart.org/en/m-c-escher](http://www.wikiart.org/en/m-c-escher)

Wendy Shijia | @ShijiaWendy | 24 August 2020



# Short break!

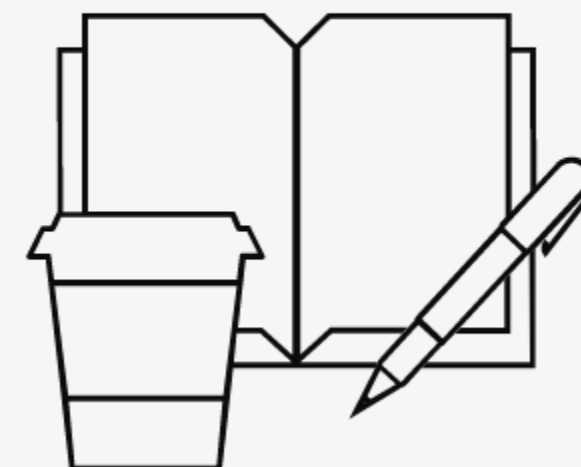
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We start again in 10 minutes...





# READINGS





# Assignment #2



# Final Project







# *Exercise*

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1. You are an Analytics Manager and are asked to give a short presentation on the topic **Slums in Urban Areas**. Your audience is a group of **urban planners** who are working with governments to develop sustainable cities and communities.
2. Using the data set *Proportion of urban population living in slums*, **draw a graph** that depicts the trends in urban population living in slums. **Be creative!** Try to go beyond commonly used graphs. Use a less common graph or, why not, come up with a new graph type!
3. Let's discuss



WHAT DID  
YOU LEARN?

