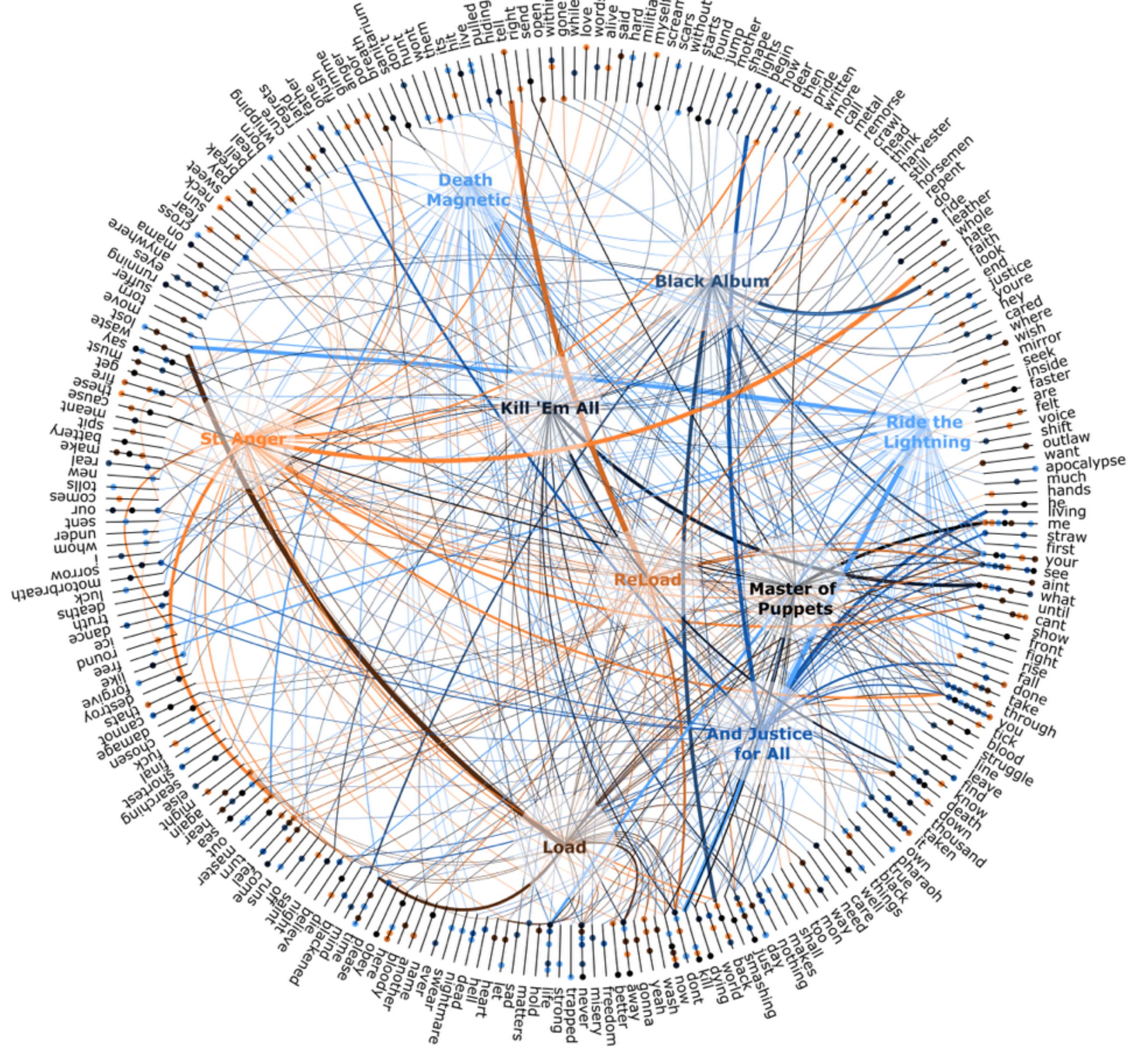


Data Visualization and Info Aesthetics

La Cura Summer School
Monday, August 22, 2016

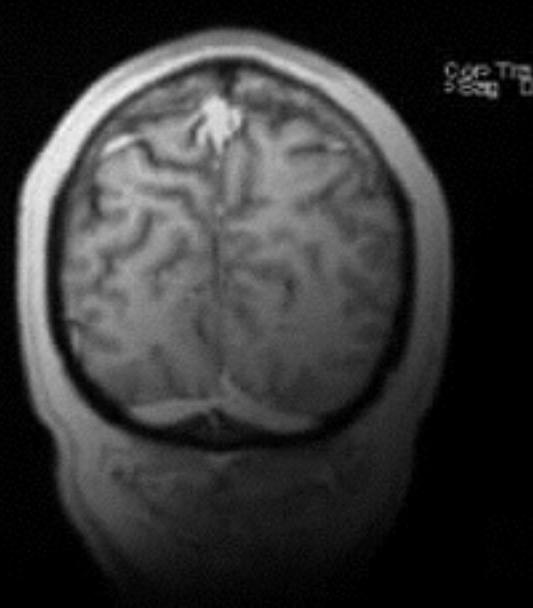
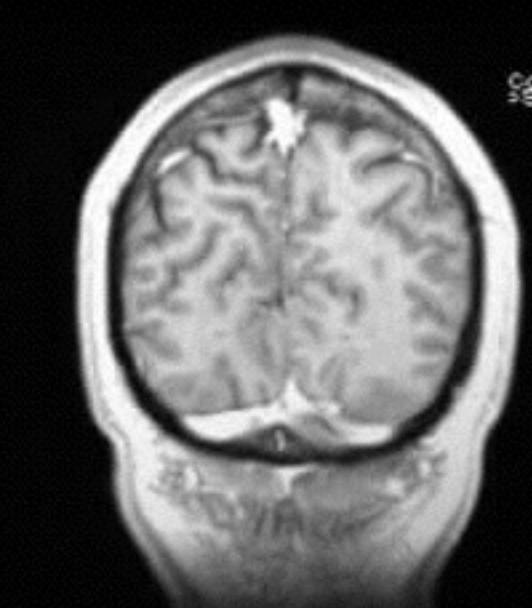
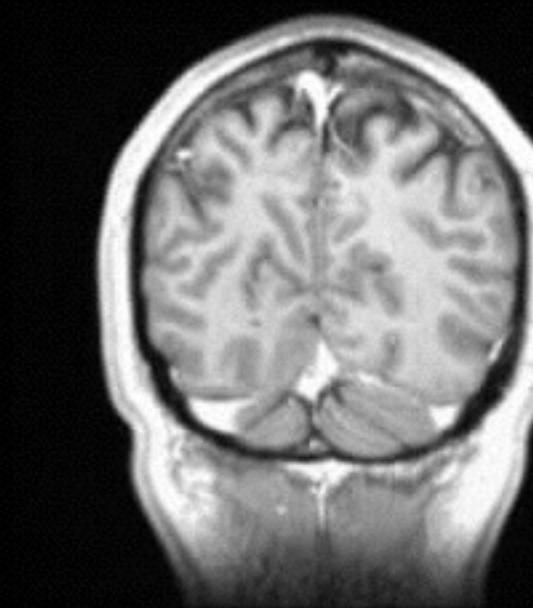
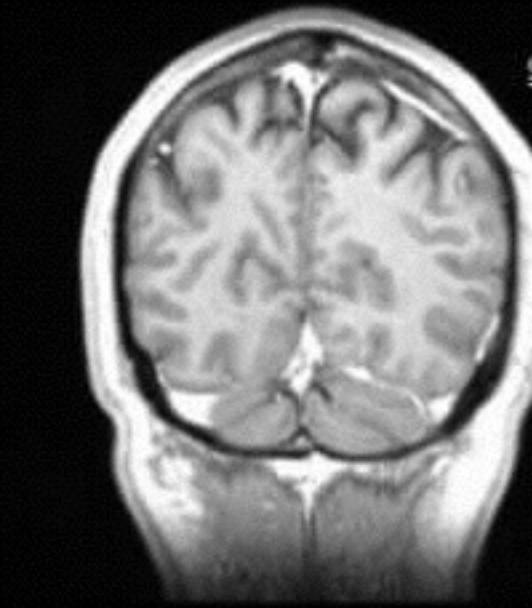
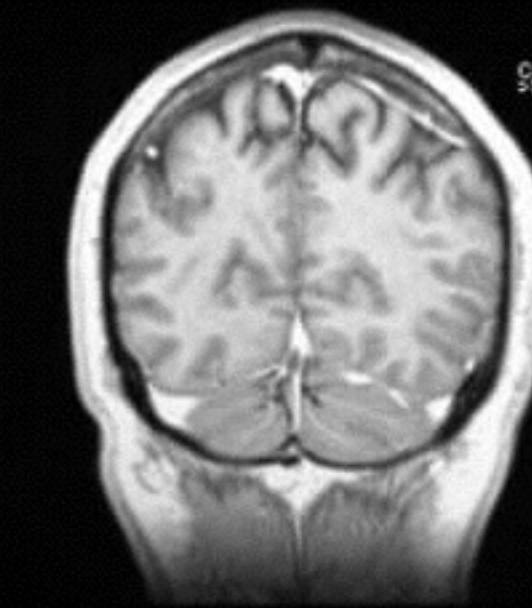
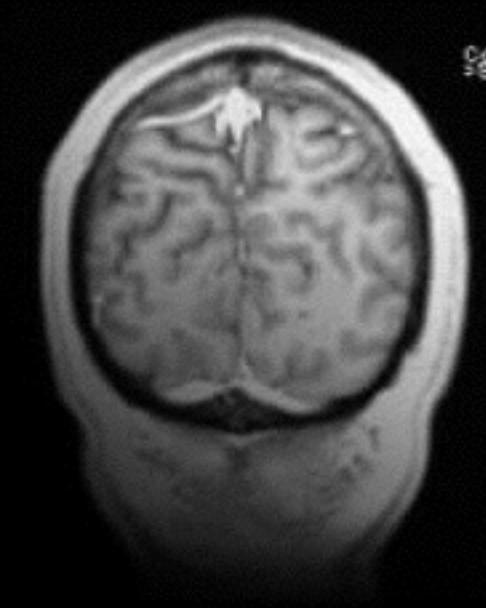
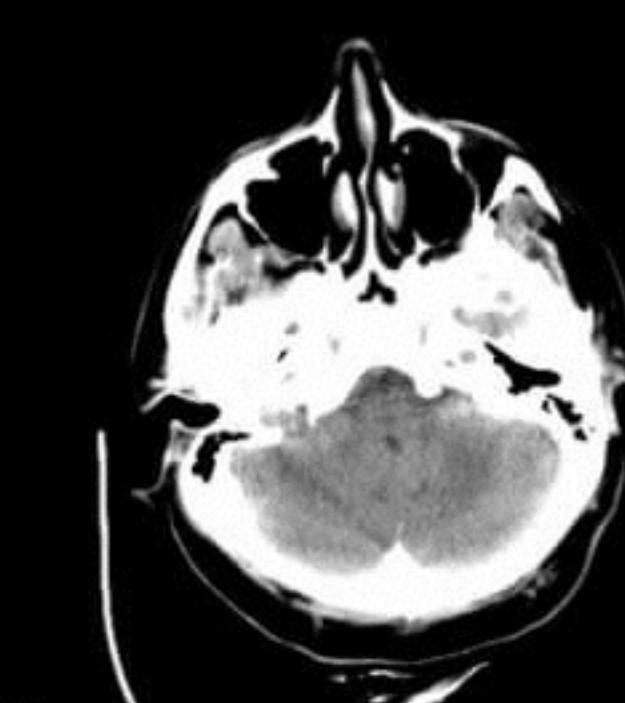
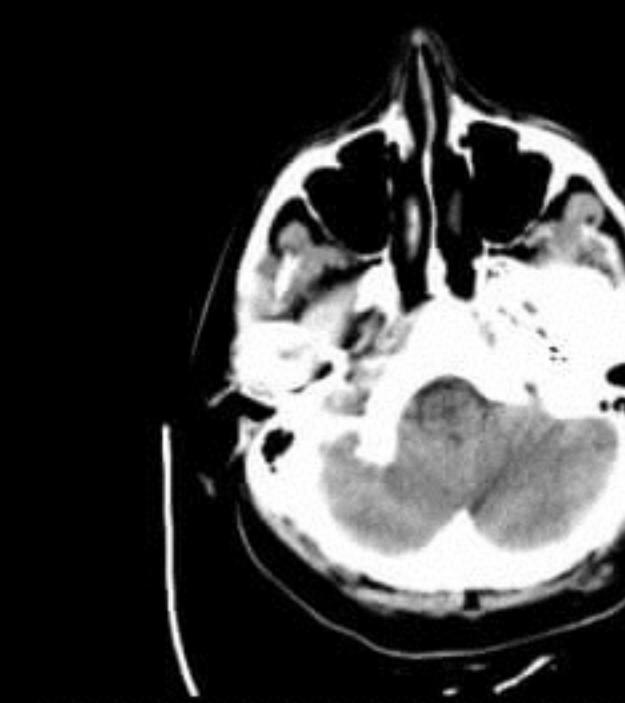
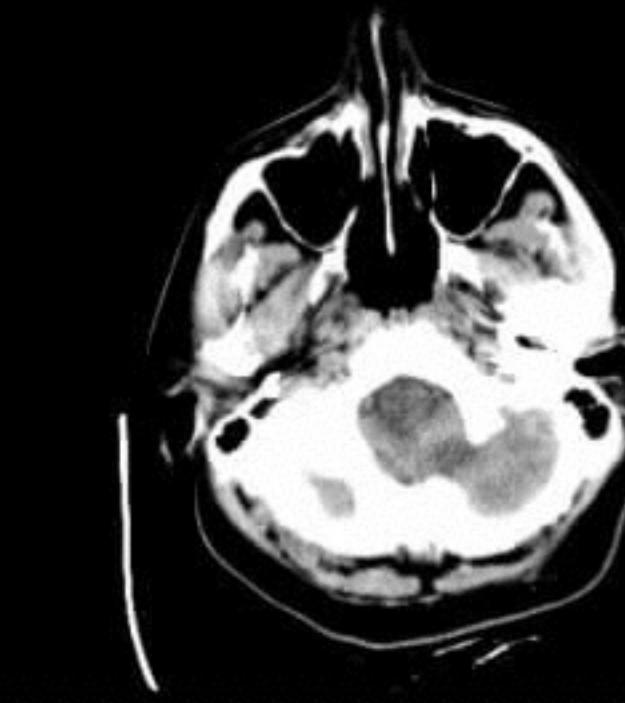
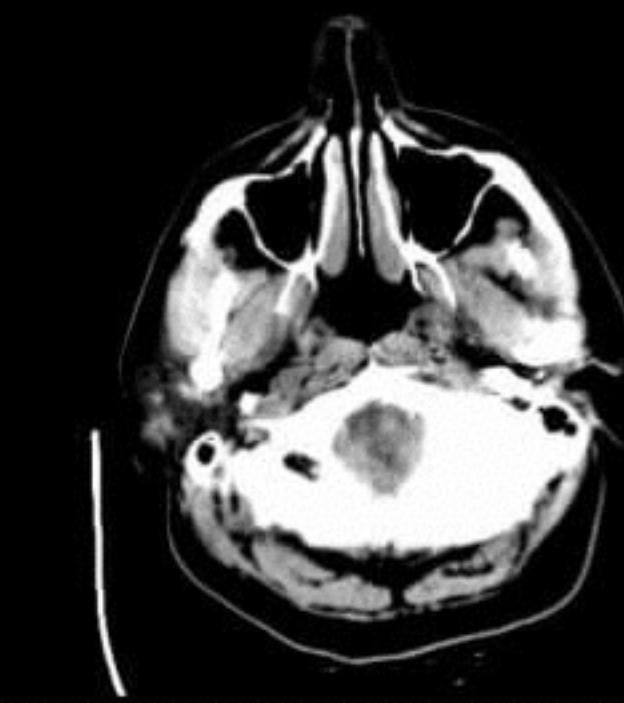
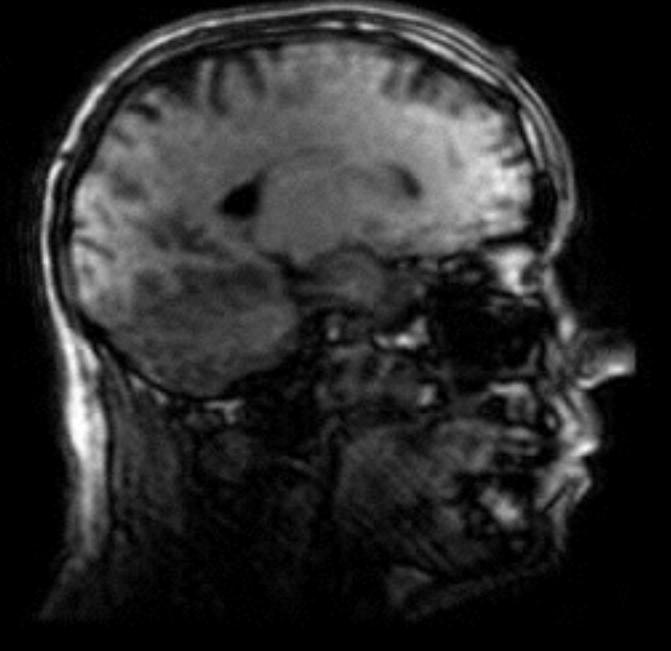
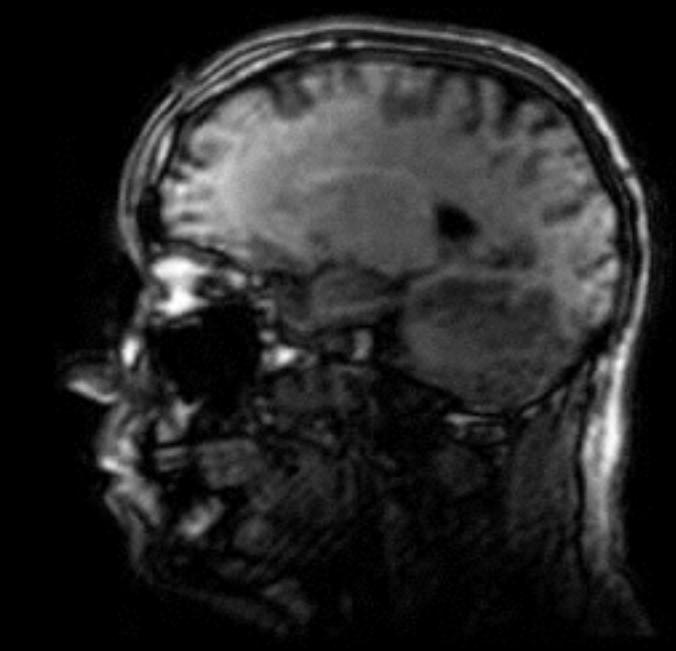
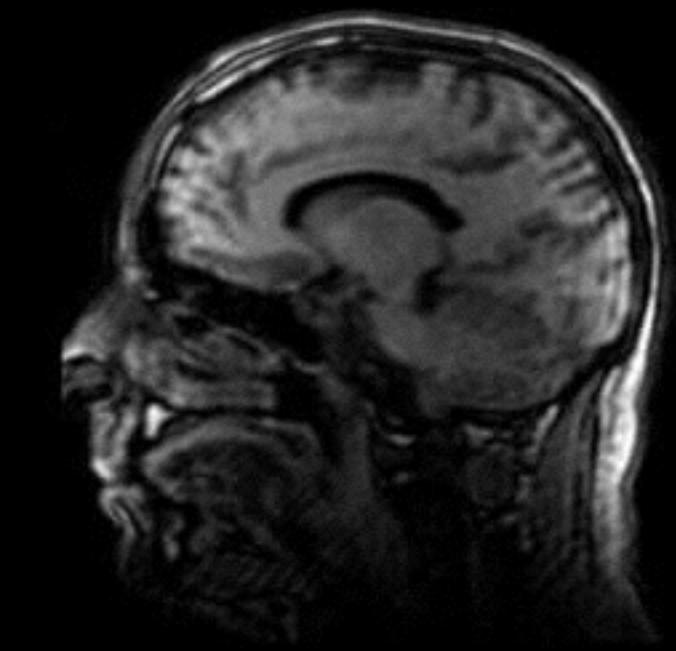
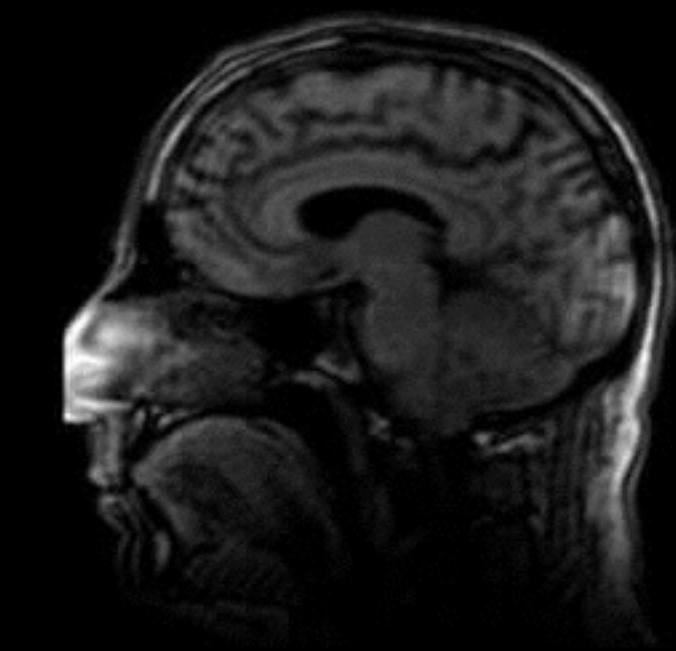
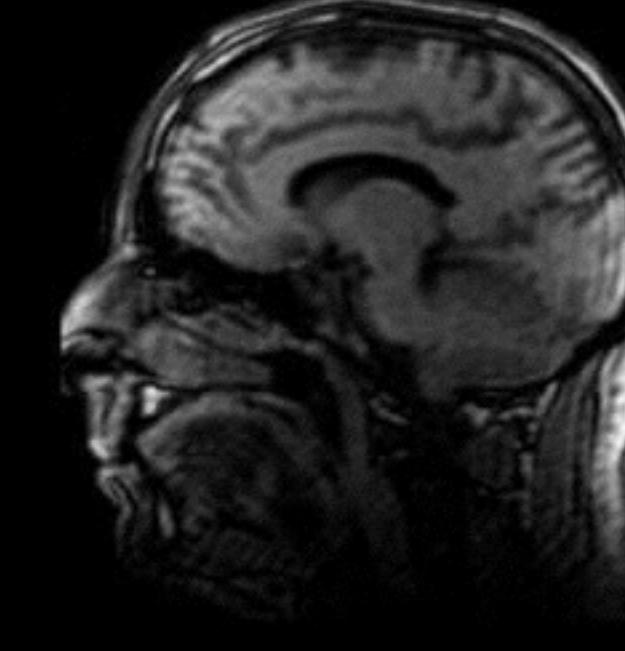
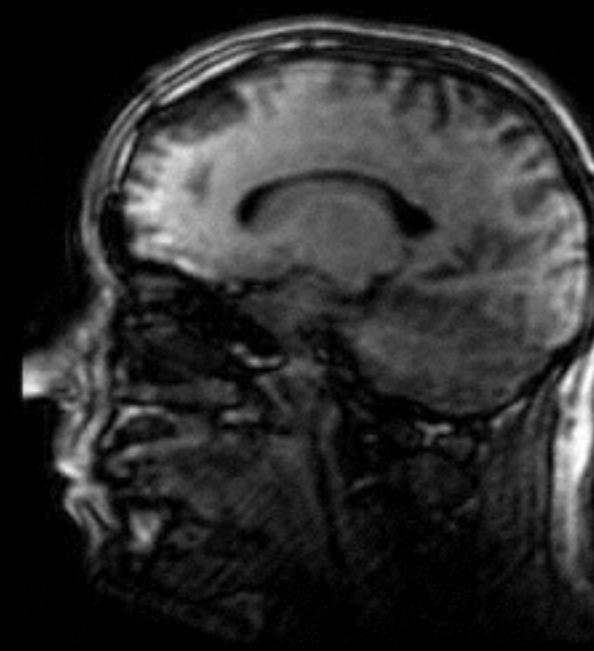
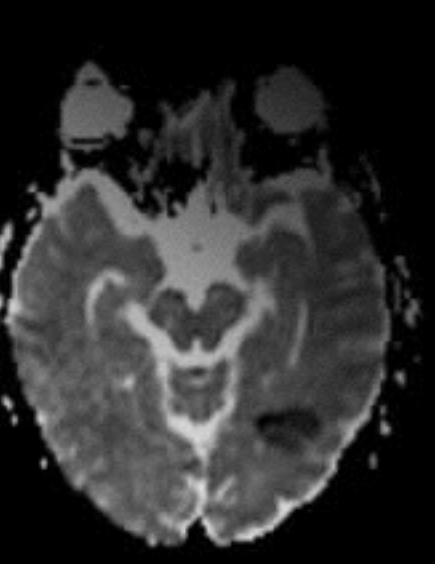
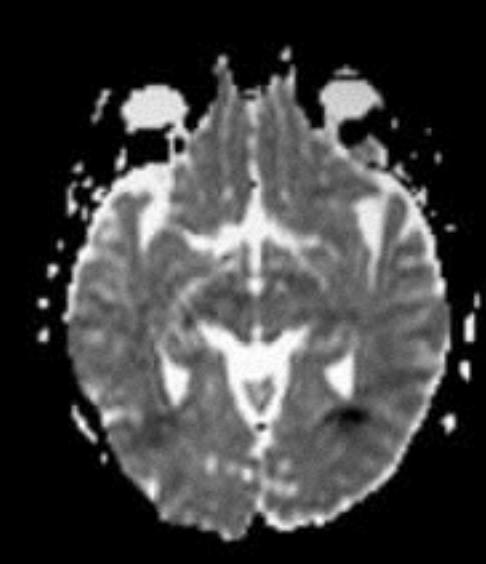
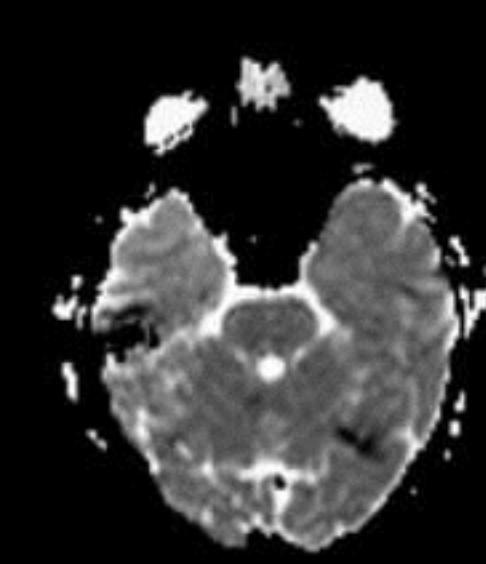
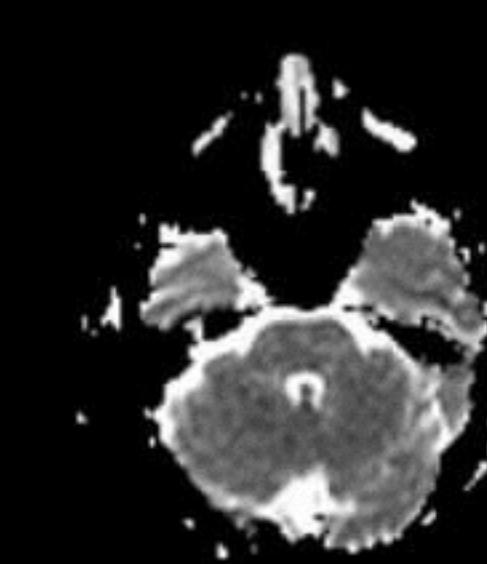
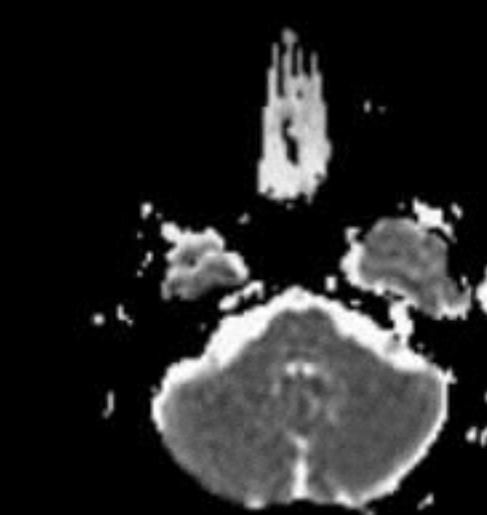
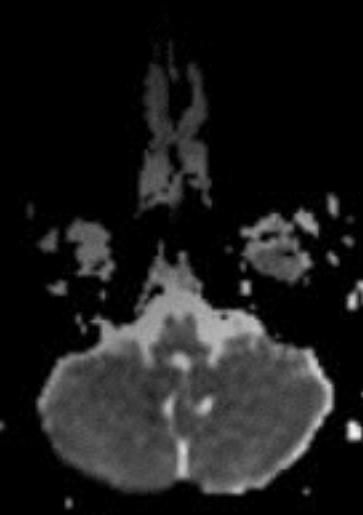


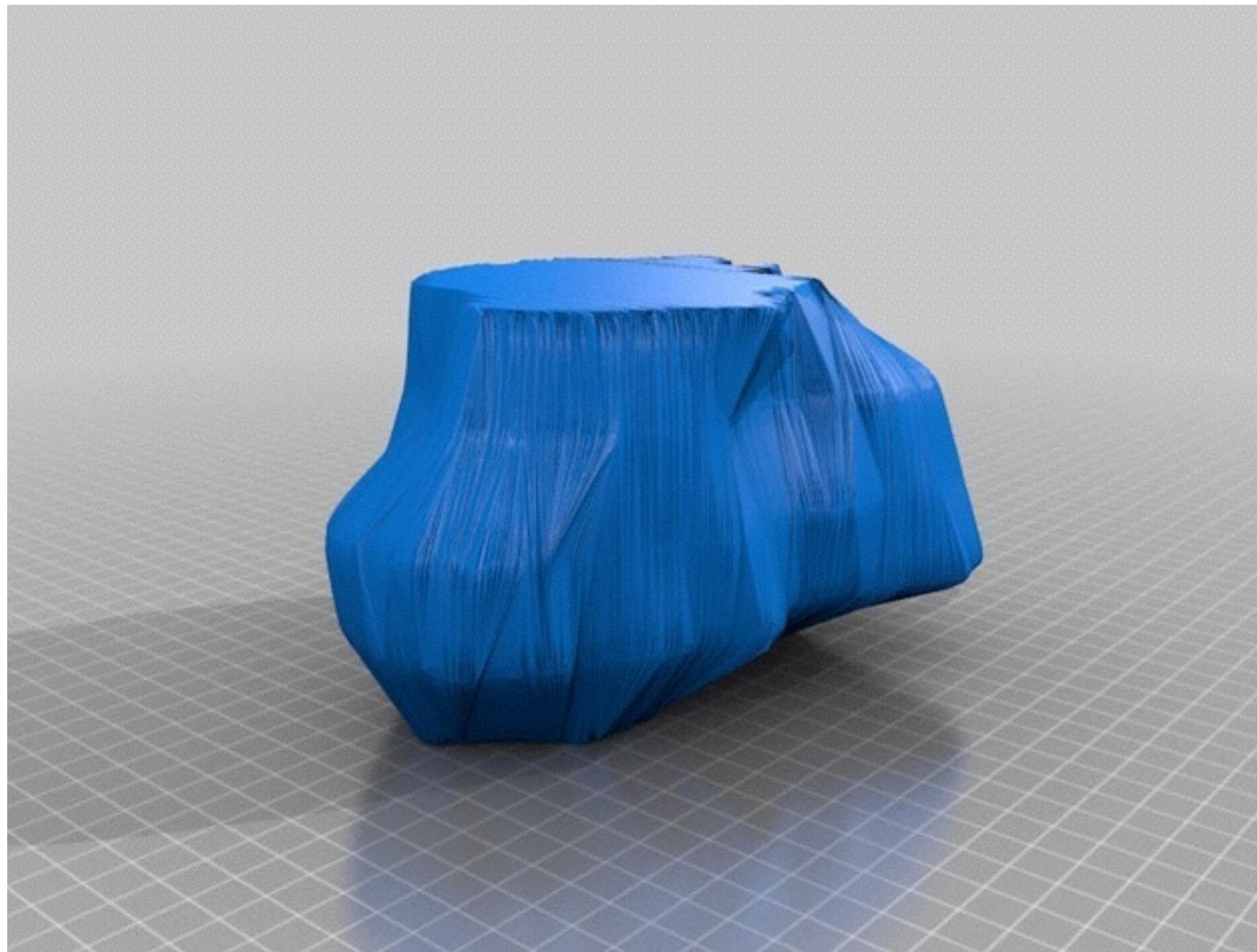


Why do we have an
‘Data Visualization and Info Aesthetics’
section in the Summer School?

Manage the complexity

Show the invisible

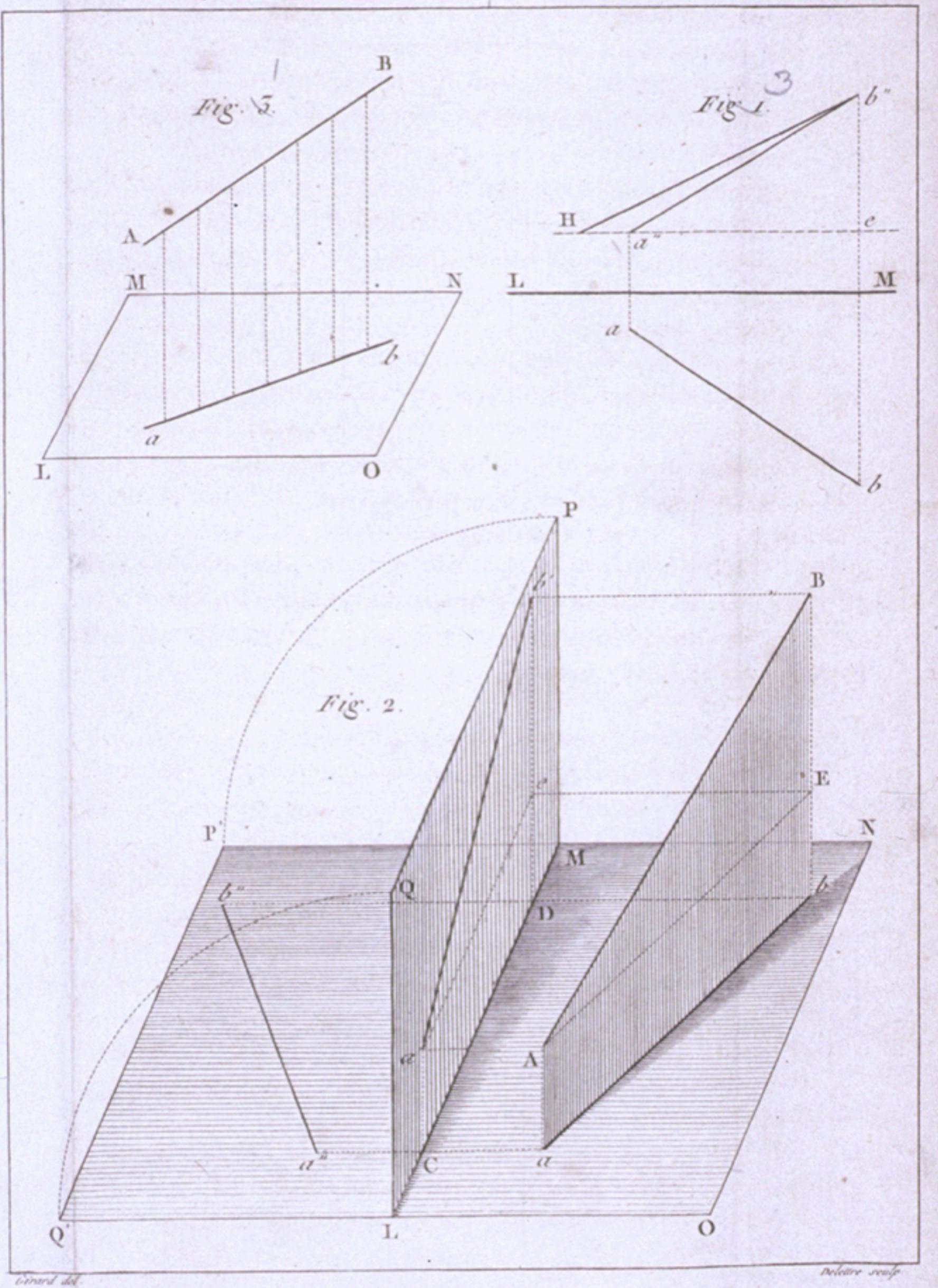




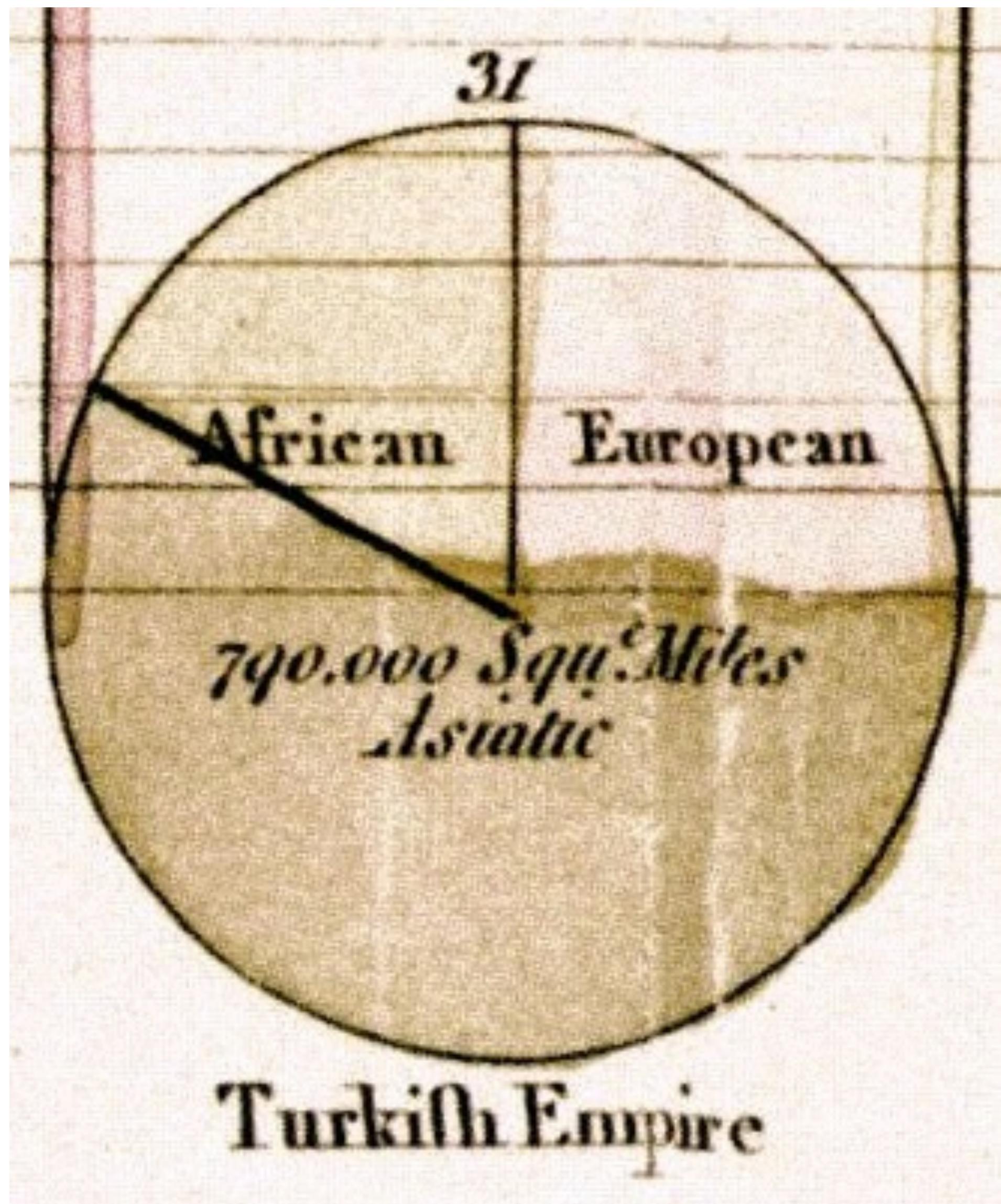
Patrick Lichy
Salvatore Iaconesi's Glioma, 2012

**Show the invisible → on the body,
on the physical space, on the city**

Data and Philosophy



Gaspard Monge
Géométrie descriptive, 1798



William Playfair
Pie chart circle graph, 1801

Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.
 Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite

Paris, le 20 Novembre 1869.

Les nombres d'hommes présents sont représentés par les largeurs des zones colorées à raison d'un millimètre pour dix mille hommes ; ils sont de plus écrits en travers des zones. Le rouge désigne les hommes qui entrent en Russie, le noir ceux qui en sortent. — Les renseignements qui ont servi à dresser la carte ont été puisés dans les ouvrages de M. M. Chiers, de Ségur, de Fezensac, de Chambray et le journal inédit de Jacob, pharmacien de l'Armée depuis le 28 Octobre.

Pour mieux faire juger à l'œil la diminution de l'armée, j'ai supposé que les corps du Prince Jérôme et du Maréchal Davout qui avaient été détachés sur Minsk et Mohilow et qui rejoignirent Orscha et Witebsk, avaient toujours marché avec l'armée.

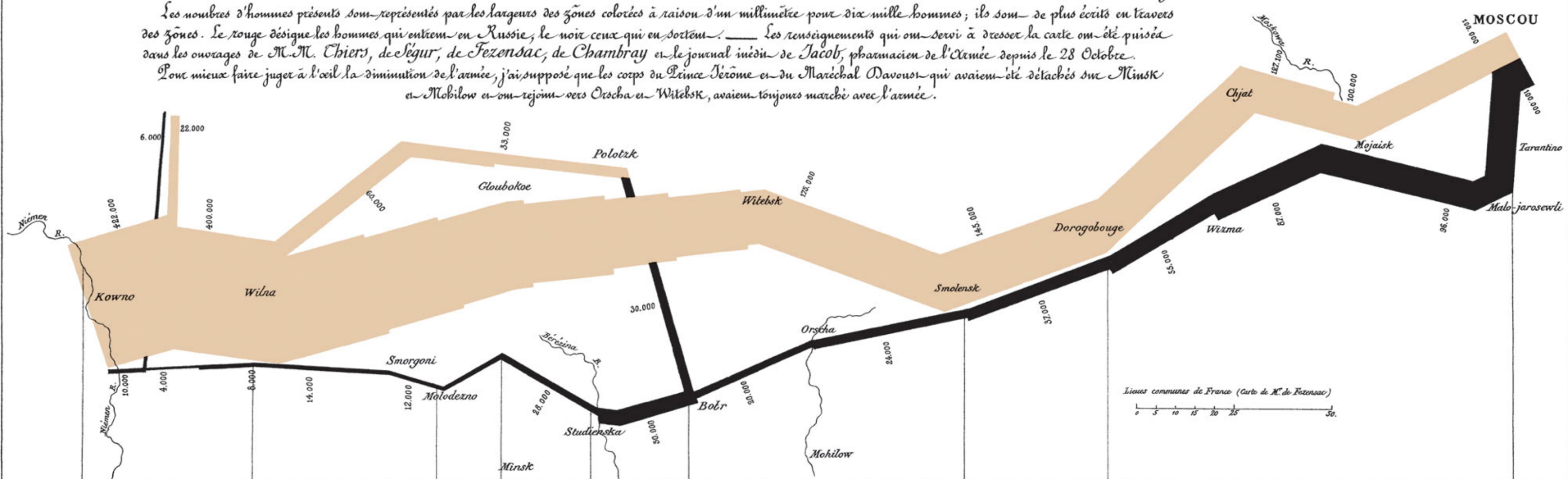


TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.

Les Cosaques passent au galop
le Niémen gelé.

-26° le 7 X.^{bre}

-30° le 6 X.^{bre}

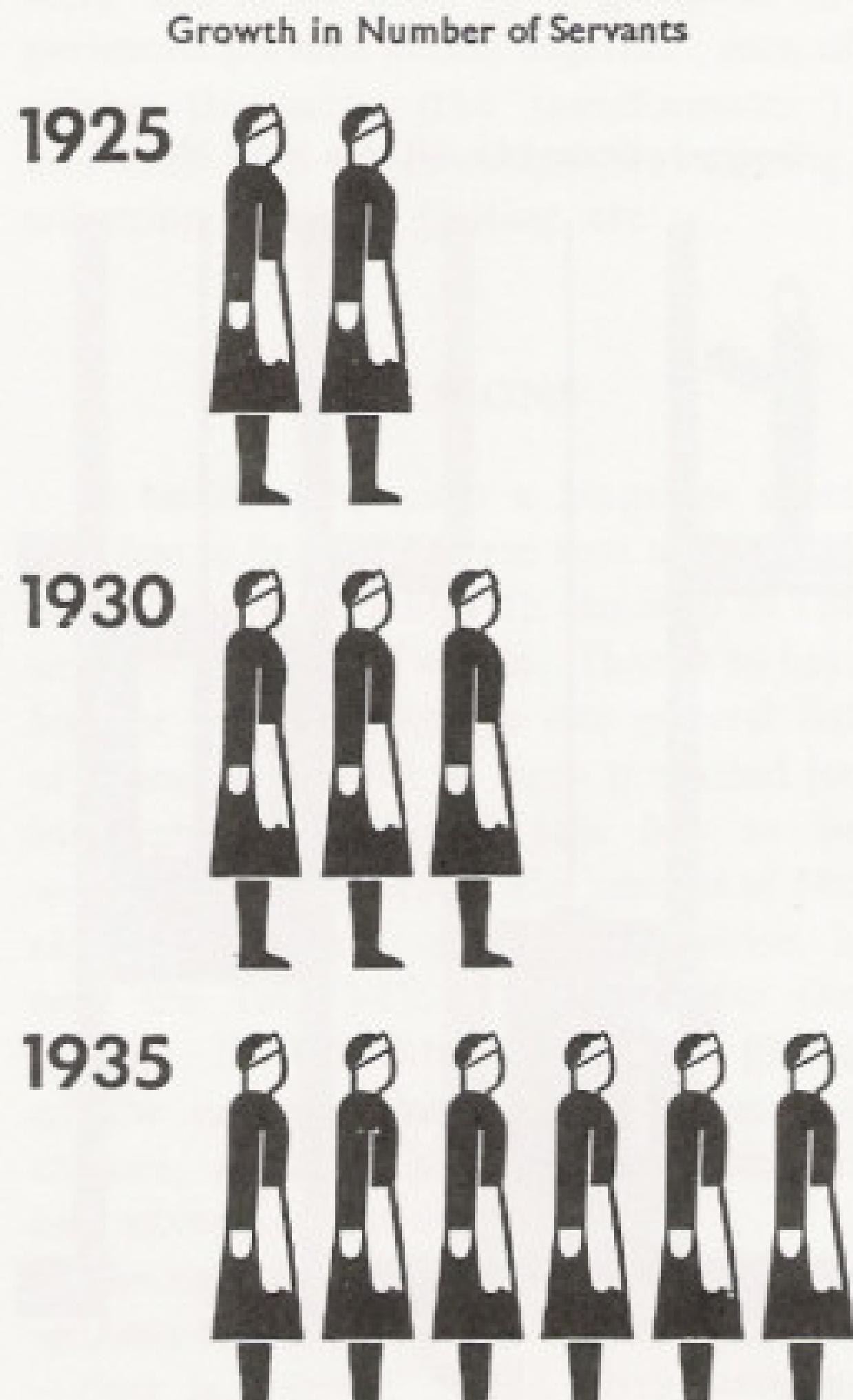
-11°

-24° le 1^{er} X.^{bre}

-20° le 28 9.^{bre}

Charles Minard

Napoleon's
Russian campaign, 1869



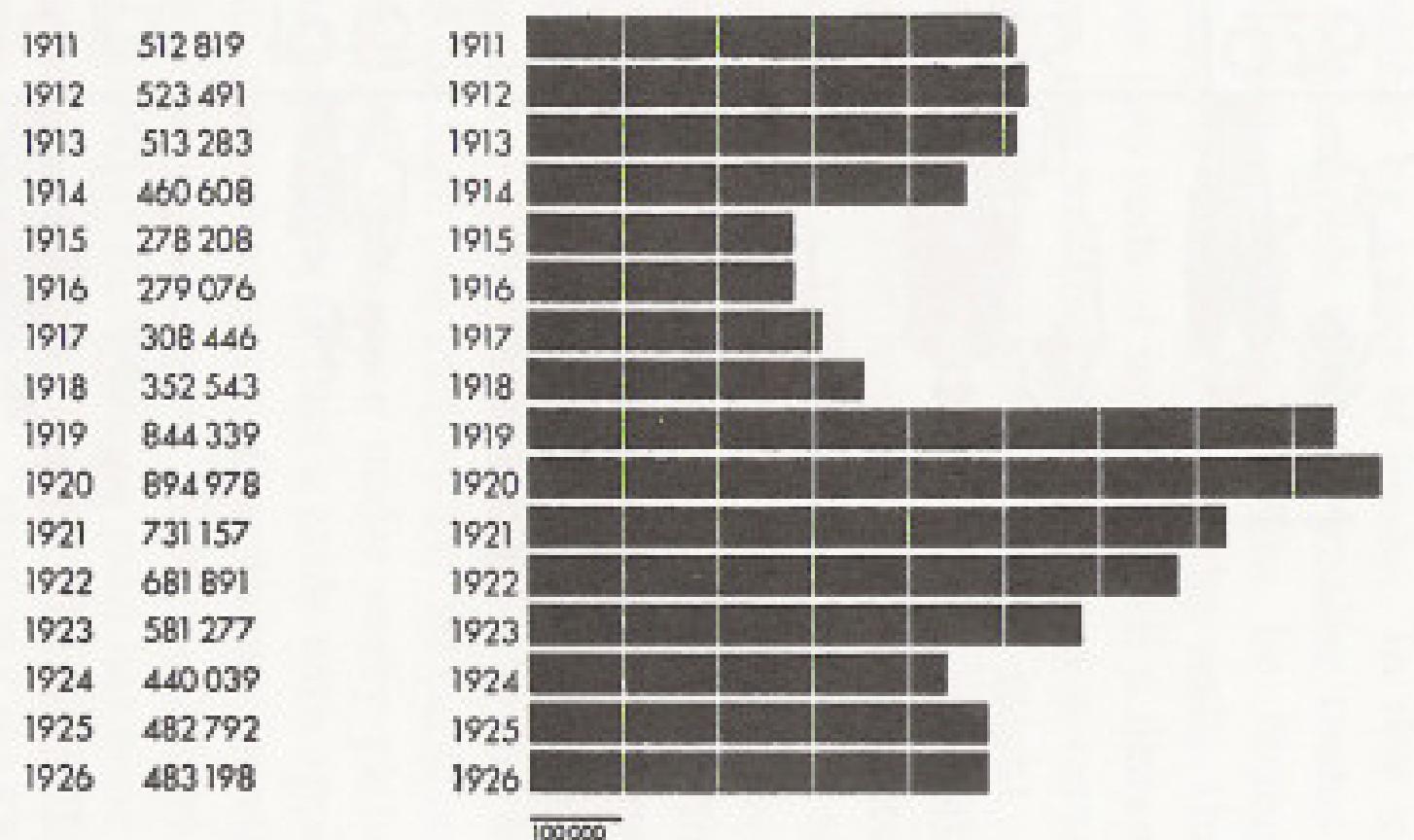
PICTURE 9

in an amount-picture. You new suggestion of the substitute, to be used on roads where the rule to keep changed into the rule to go and the other way round (see pages 10 and 11). Frequently this changes the line of division between the two directions and if the directions are reversed words and the chauffeur loses his way of the language used, because he has been caused. The idea is to put " Go slowly and get over to the side of the road " on this sign at some distance from the place of change. Then at that point there will be a board, which will be clearly visible to automobiles but for persons who have no training in reading it will be important to have the sign 'mobile front' and 'automobile back' very different from one another. Only in this way will the chauffeur see the automobile clearly seen from behind. The automobile back has to be as dark as possible, the front as light as possible. The sign for ' automobile back' is for the amount picture of the number of automobiles in existence.

Otto Neurath
ISOTYPE, 1936

Men getting married in Germany

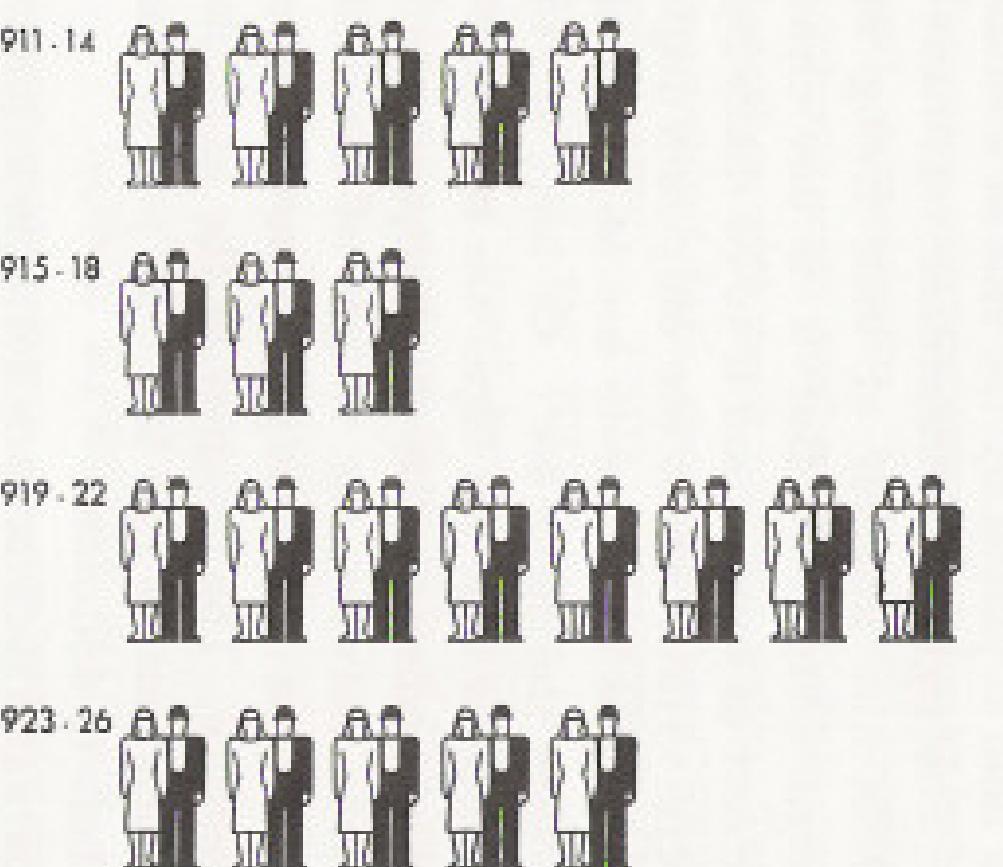
76



PICTURE 26

Men Getting Married in Germany in a Year

77



1 sign for 100,000 a year
PICTURE 27

Otto Neurath
ISOTYPE, 1936

International System Of TYpographic Picture Education

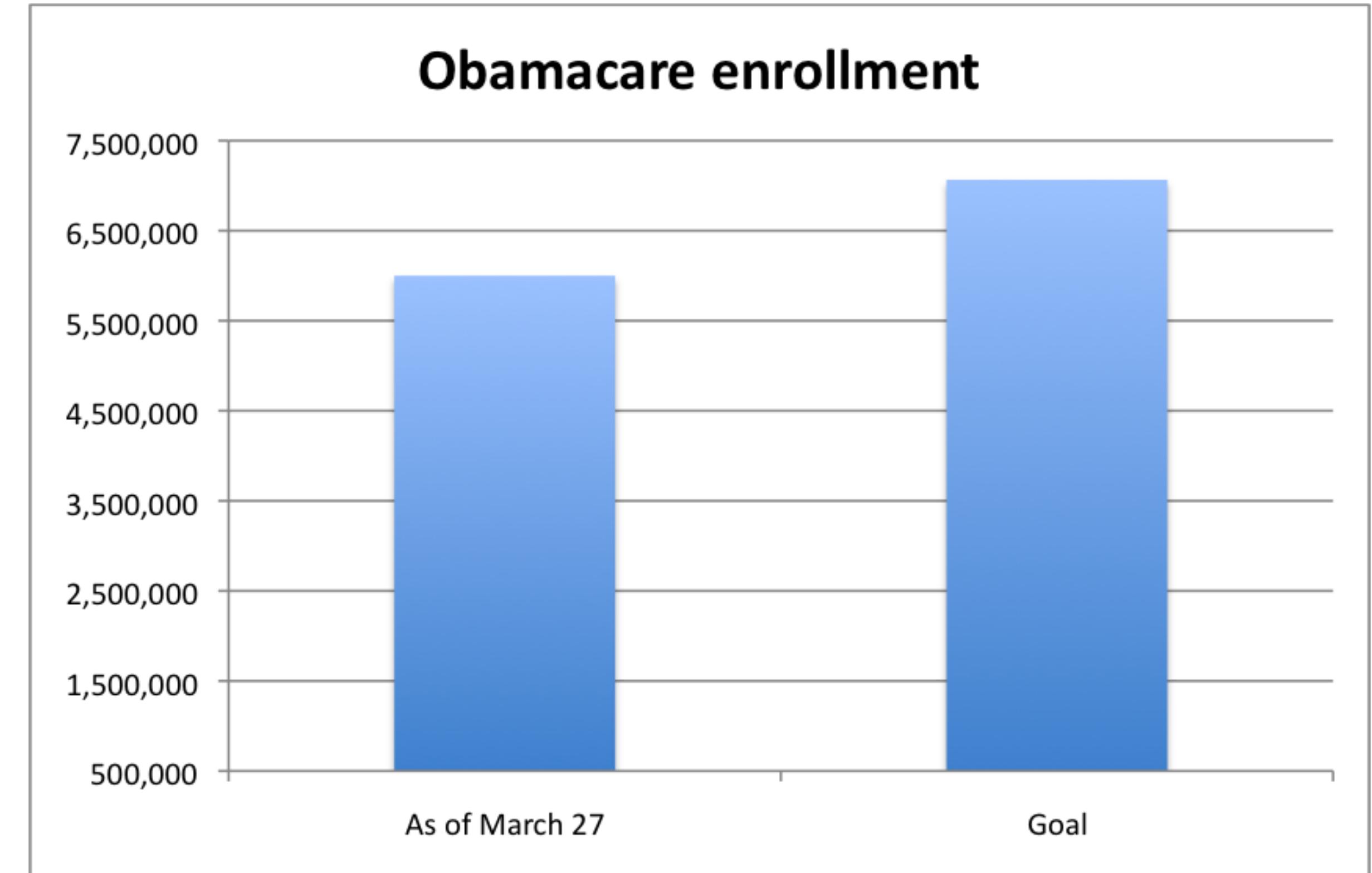


Masaru Katsumie
Pictograms for the
Tokyo Olympics, 1964



Otto Aicher
Pictograms for the
Munich Olympics, 1972

Data is an opinion



OFFICIAL BALLOT, GENERAL ELECTION
PALM BEACH COUNTY, FLORIDA
NOVEMBER 7, 2000

(REPUBLICAN)

GEORGE W. BUSH - PRESIDENT
DICK CHENEY - VICE PRESIDENT

3 ➤

(DEMOCRATIC)

AL GORE - PRESIDENT
JOE LIEBERMAN - VICE PRESIDENT

5 ➤

(LIBERTARIAN)

HARRY BROWNE - PRESIDENT
ART OLIVIER - VICE PRESIDENT

7 ➤

(GREEN)

RALPH NADER - PRESIDENT
WINONA LaDUKE - VICE PRESIDENT

9 ➤

(SOCIALIST WORKERS)

JAMES HARRIS - PRESIDENT
MARGARET TROWE - VICE PRESIDENT

11 ➤

(NATURAL LAW)

JOHN HAGELIN - PRESIDENT
NAT GOLDHABER - VICE PRESIDENT

13 ➤

A

OFFICIAL BALLOT, GENERAL ELE
PALM BEACH COUNTY, FLORI
NOVEMBER 7, 2000

(REFORM)

PAT BUCHANAN - PRESIDENT
EZOLA FOSTER - VICE PRESIDENT

(SOCIALIST)

DAVID McREYNOLDS - PRESIDENT
MARY CAL HOLLIS - VICE PRESIDENT

(CONSTITUTION)

HOWARD PHILLIPS - PRESIDENT
J. CURTIS FRAZIER - VICE PRESIDENT

(WORKERS WORLD)

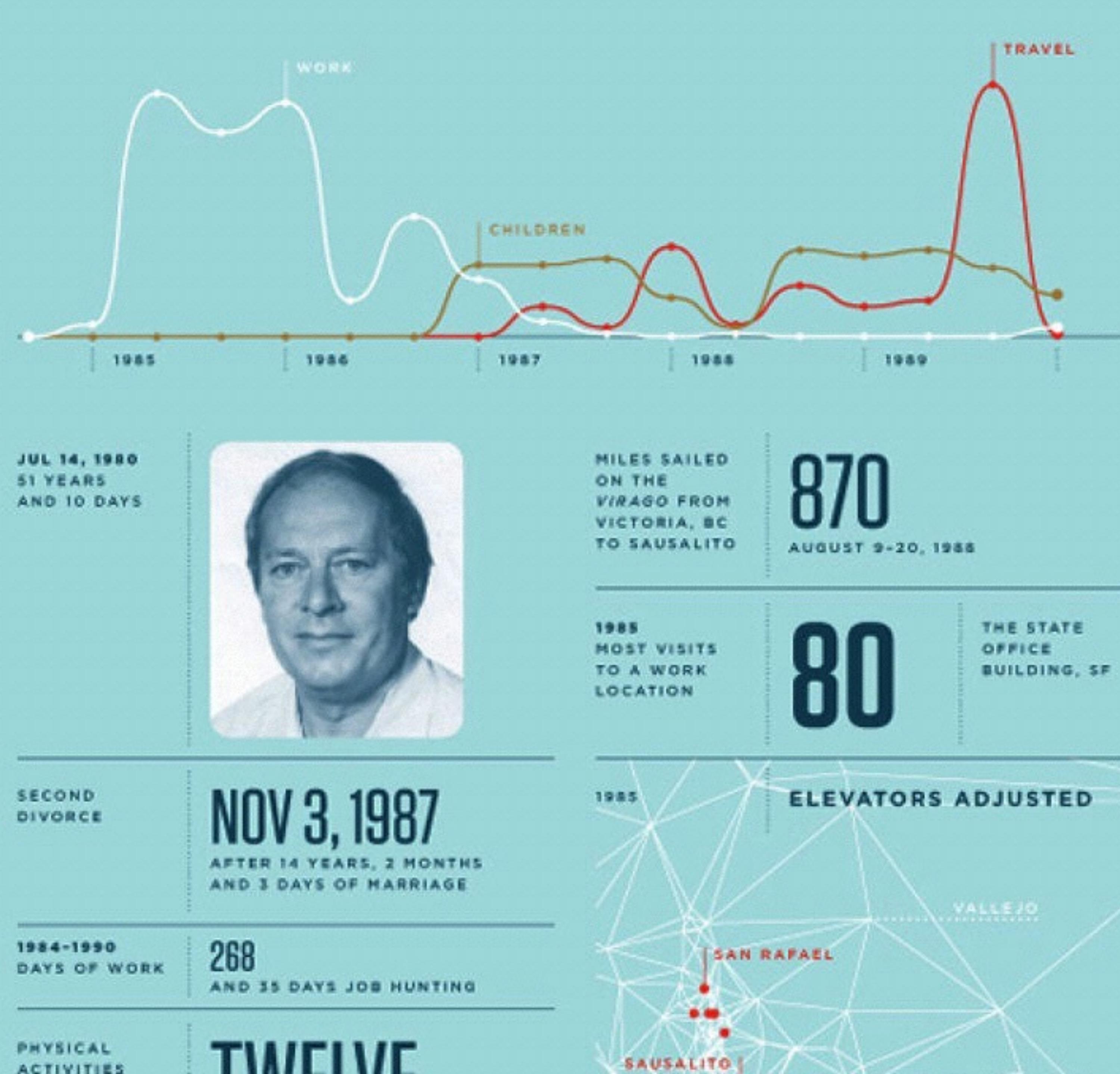
MONICA MOOREHEAD - PRESIDENT
GLORIA La RIVA - VICE PRESIDENT

WRITE-IN CANDIDATE

To vote for a write-in candidate, follow the
directions on the long stub of your ballot card.

Butterfly Ballot
Voting paper for 2000
US presidential election

Infographic → Info Aesthetics



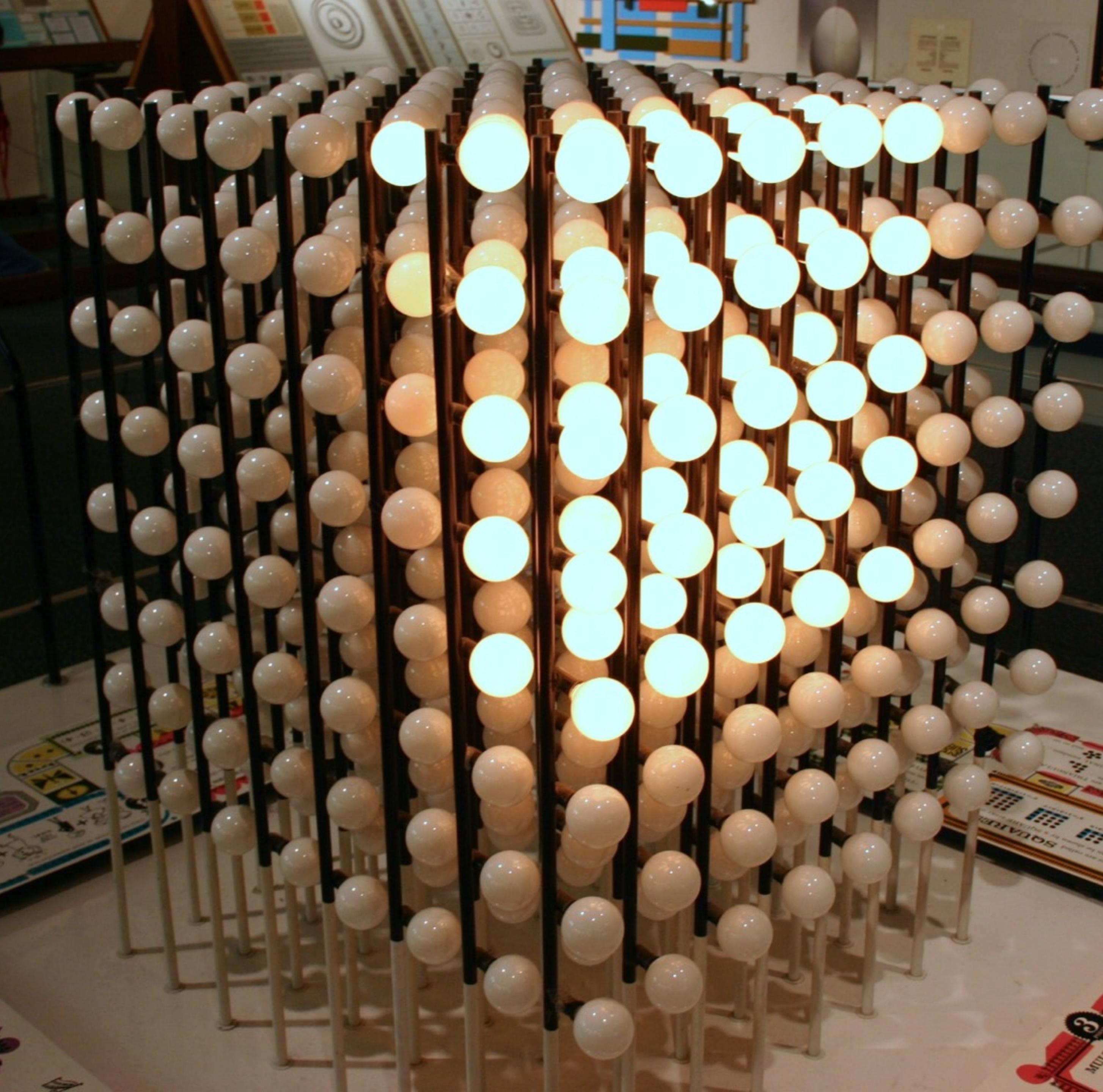
Nicholas Felton

Annual Report

Spectacularization of data

Benjamin Bratton

Data and Art



Charles and Ray Eames
Multiplications Machines, 1961



Diller Scofidio + Renfro, Laura Kurgan, Mark Hansen and Ben Rubin with Stewart Smith and Robert Pietrusko

Exit: Carbon Emissions Map

Data and City



STREETVIEW FACADES

TAXI DROPOFFS 27,610.0 / DAY

TAXI PICKUPS 33,950.0 / DAY

STREETVIEW TOP

FOURSQUARE CHECKINS 4,670.0 / DAY

TWITTER MESSAGES 23,189.0 / DAY

INSTAGRAM PHOTOS 3,677.0 / DAY

MEDIAN HOUSEHOLD INCOME \$42,261 / YEAR

INSTAGRAM PHOTO COLORS

Daniel Goddemeyer, Moritz Stefaner, Dominikus Baur, and Lev Manovich
On Broadway



HELP

**What happens when people
interact with data?**

Your Takeaways

-1- Understand how to extrapolate sense from data and complexity

- 2- How to choose data
- 3- How to organize them
- 4- How to visualize them

what we are going to do

- 1- We will make sense of data
- 2- We'll find out several ways to visualize them (narrative)
- 3- We'll implement that with software (D3...?)