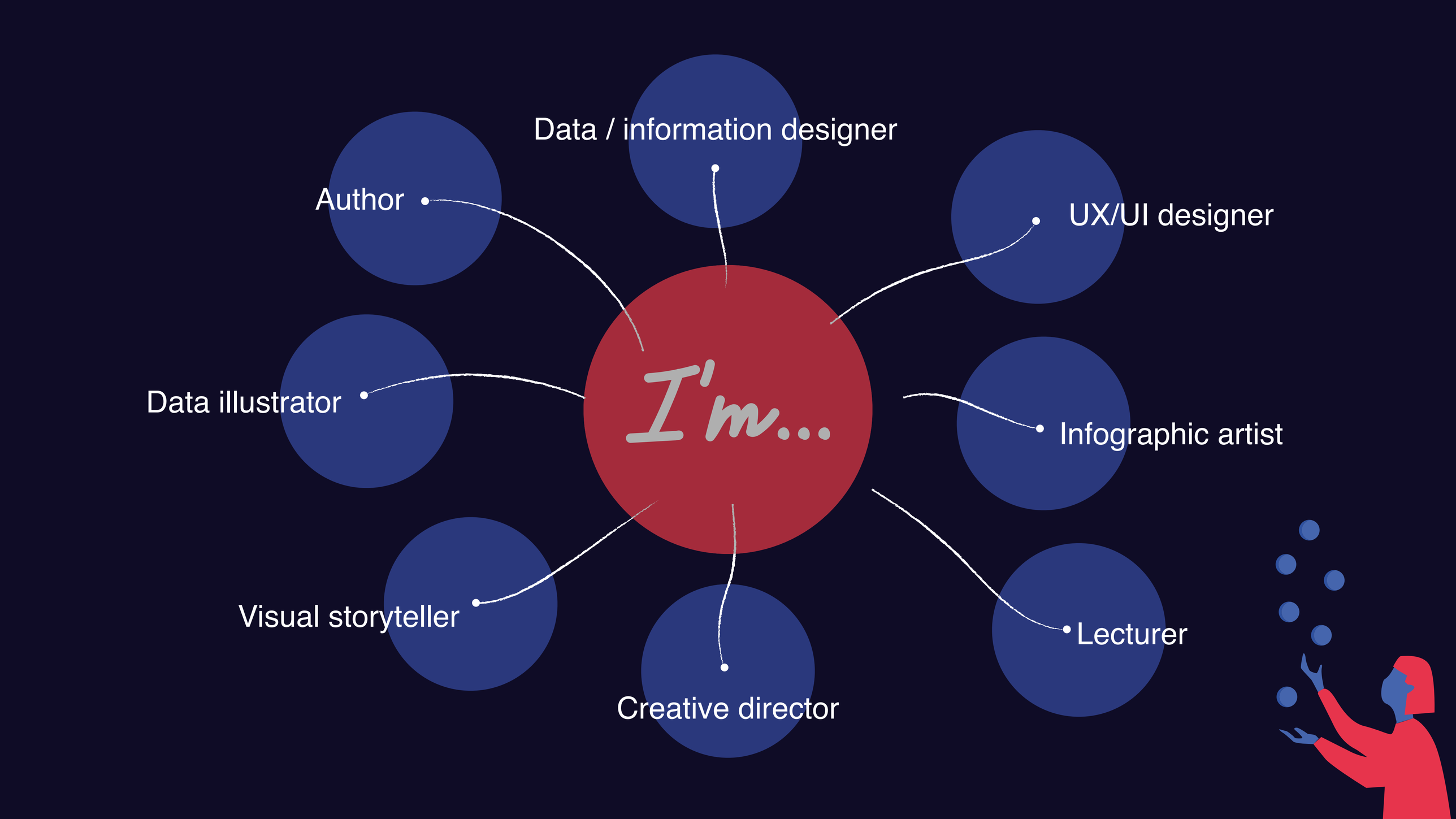
visualizing ~~data~~ *knowledge*

Valentina D'Efilippo
www.valentinadefilippo.co.uk
@defilippovale

¡hola!

Valentina D’Efilippo
www.valentinadefilippo.co.uk
@defilippovale


I'm...
Data / information designer
Author
UX/UI designer
Data illustrator
Infographic artist
Visual storyteller
Lecturer
Creative director

A self portrait // circa 1990

design
is a superpower

data

our world / people

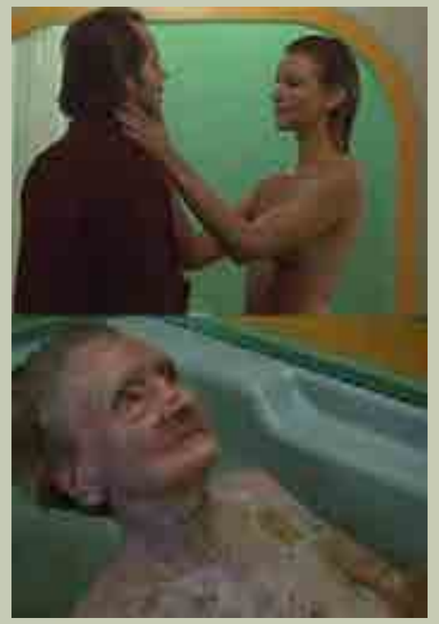
THE SHINING

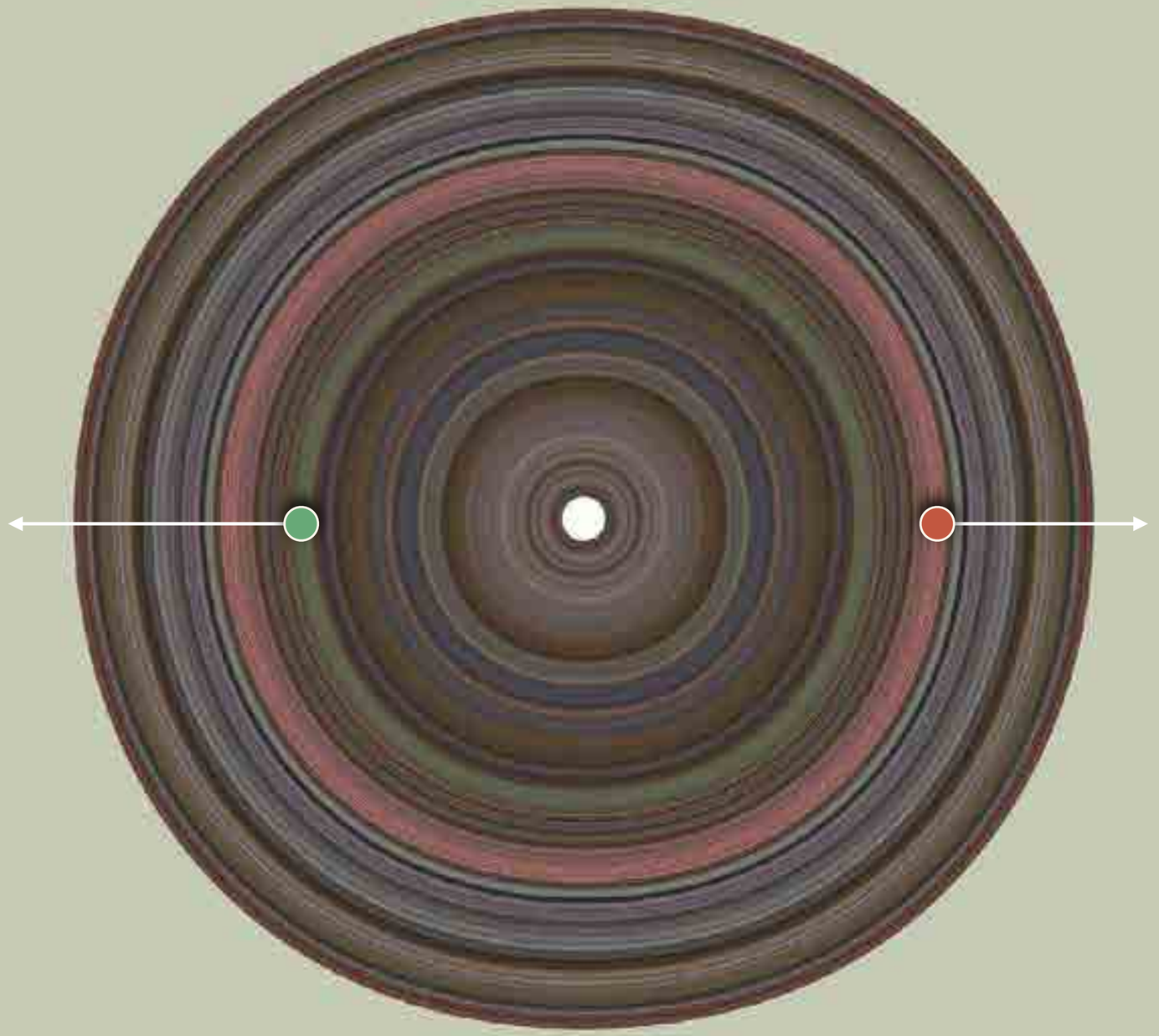
OUTDOOR LOCATION

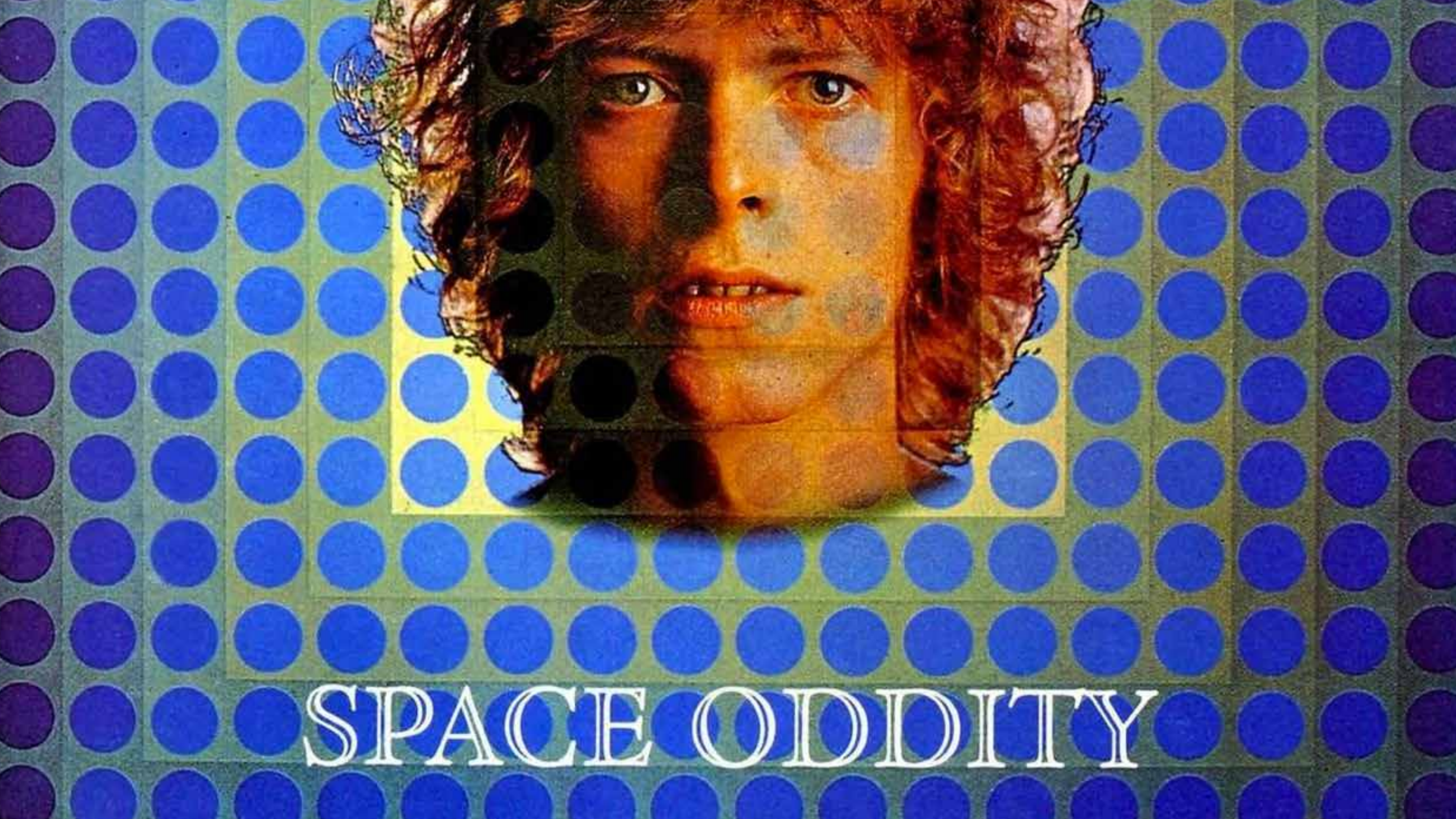
OLOUR PALLETE

TEMPO - EDITING RHYTHM

The Shining / Stanley Kubrick






SPACE ODDITY

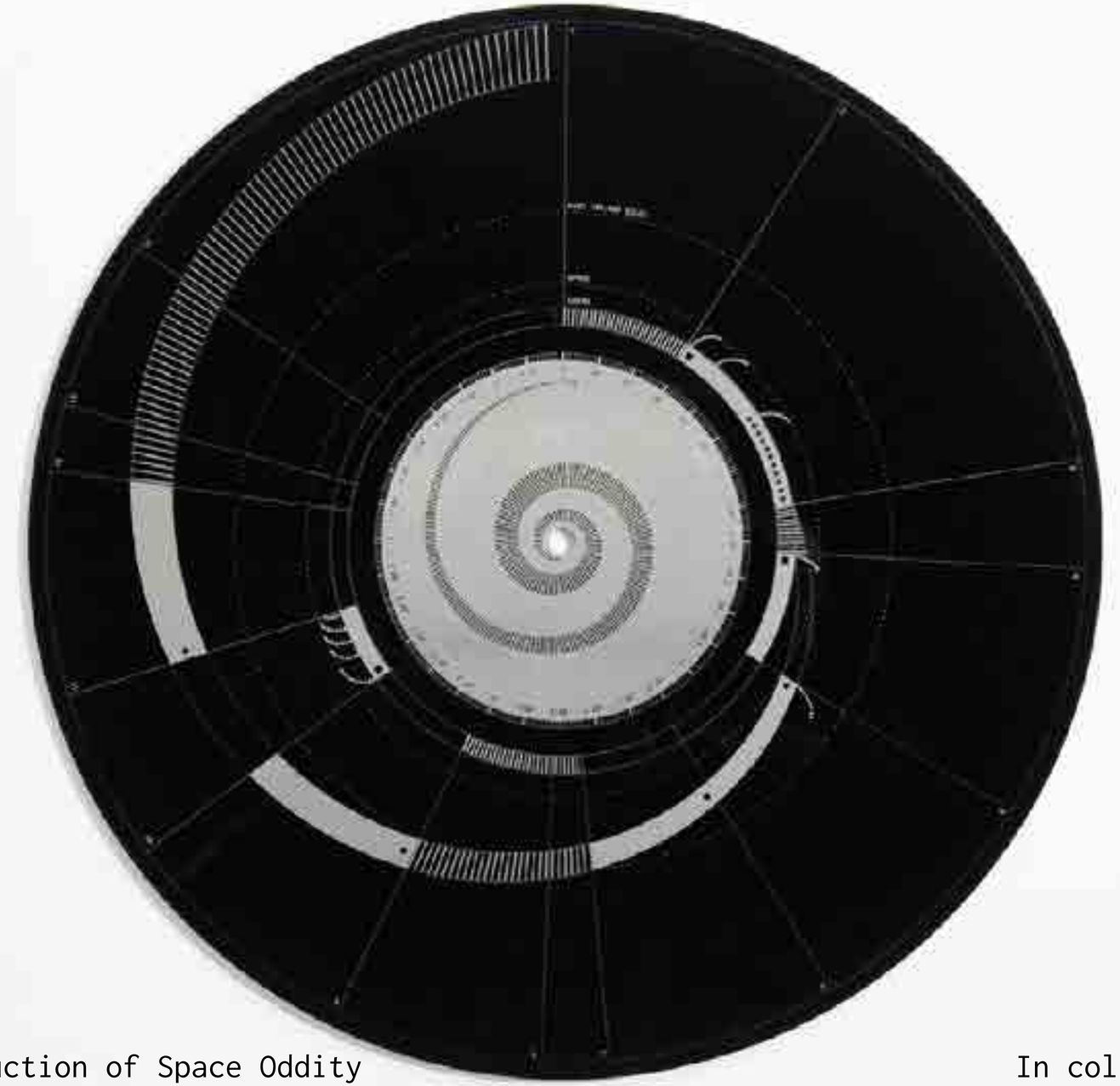
Odditviz/ A visual deconstruction of Space Oddity

In collaboration with Miriam Quick

Odditymiz/ A visual deconstruction of Space Oddity

In collaboration with Miriam Quick

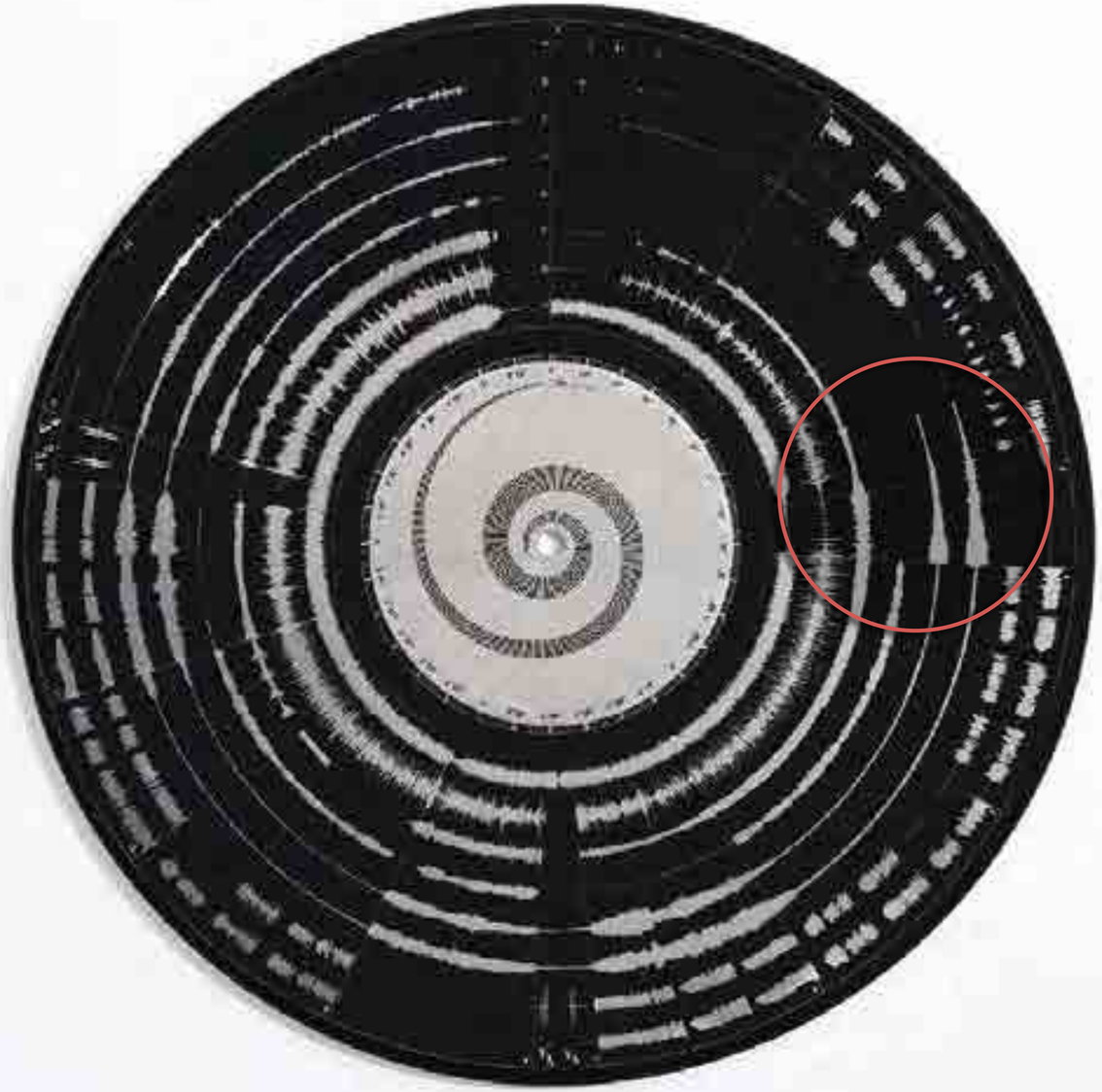
1 Narrative
2 Recording
3 Texture
4 Rhythm
5 Harmony
6 Structure
7 Melody
8 Lyrics
9 Trip
10 Emotions



Odditыviz/ A visual deconstruction of Space Oddity

In collaboration with Miriam Quick

Recording

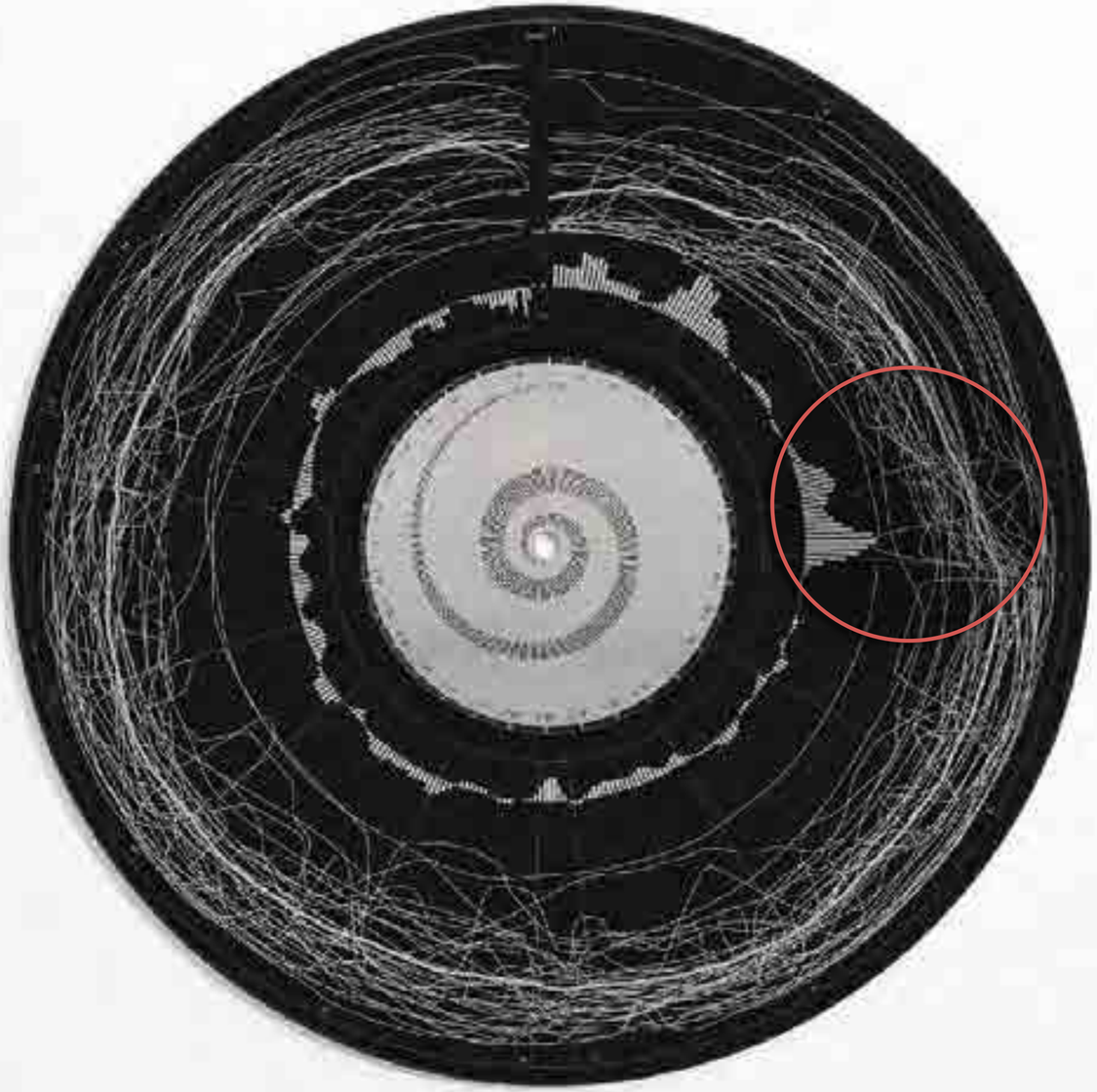


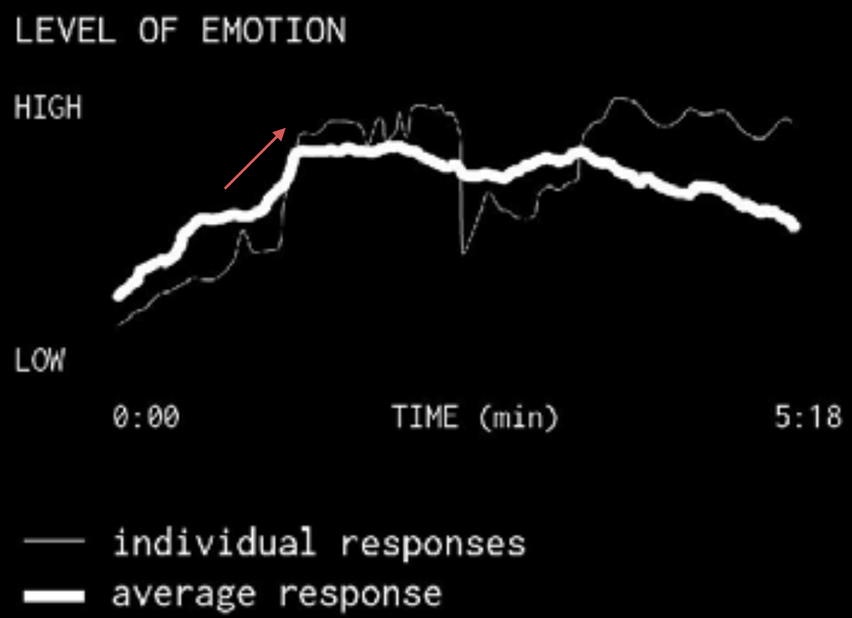
Liftoff waveform

Odditыviz/ A visual deconstruction of Space Oddity

In collaboration with Miriam Quick

Emotions



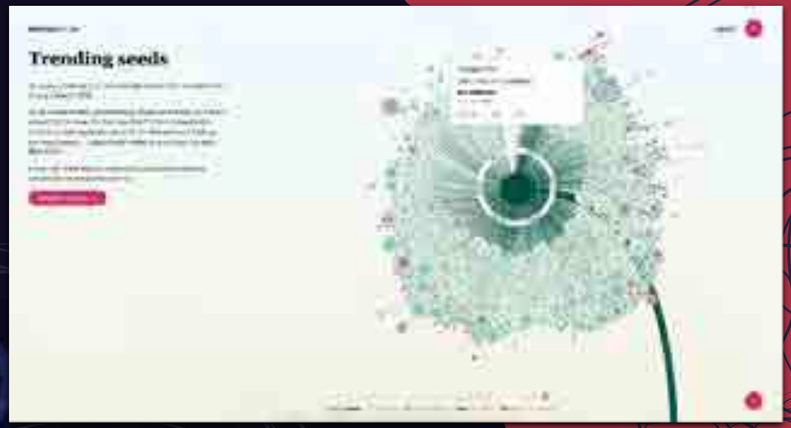


Odditviz/ A visual deconstruction of Space Oddity

In collaboration with Miriam Quick

curiosity

Physical



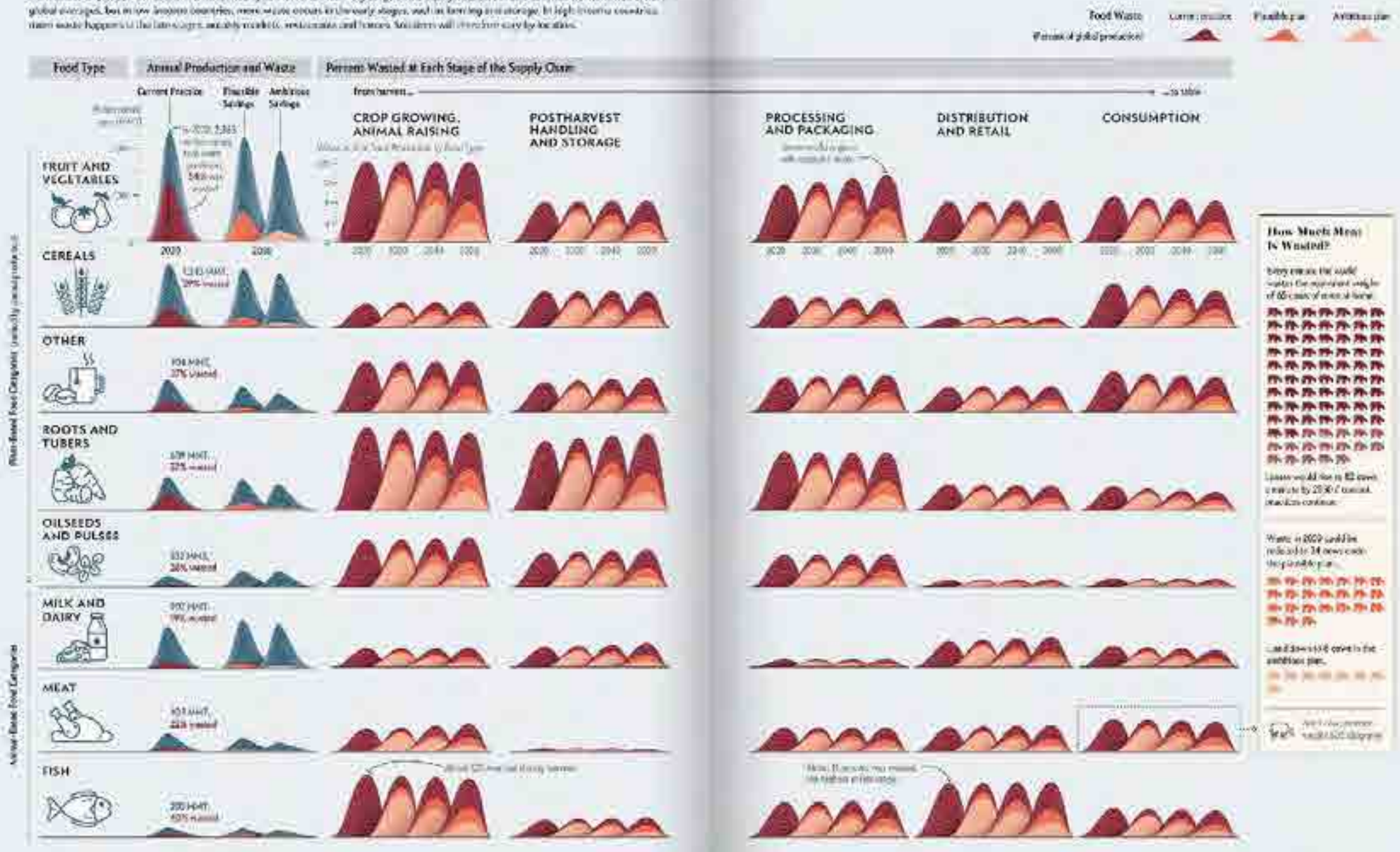
Digital

Print

Experiential

Food Lost, and Possible Reductions, across the Supply Chain

Plant and animal food intended for human consumption is lost across every stage of the supply chain, from field to fork. The numbers here are global averages, but in low-income countries, more waste occurs in the early stages, such as farming and storage. In high-income countries, more waste happens in the late stages, notably markets, restaurants and homes. Solutions will therefore vary by location.



FUTURE OF MEDICINE 2019

How to Reduce Maternal Mortality

To prevent women from dying in childbirth, the first step is to stop blaming them

TEXT BY MONICA R. McLEMORE, GRAPHICS BY VALENTINA D'EFILIPPO

Monica R. McLemore was assistant professor in the early health care nursing department and a Ghistem scientist at Advancing New Standards in Reproductive Health at the University of California, San Francisco. She maintains a clinical practice in Zuckerberg San Francisco General.

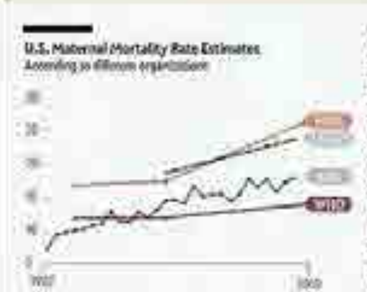
The shameful secret is out: Although the number of women who die in childbirth globally has fallen in recent decades, the rates in the U.S. have gone up. Since 1987 maternal mortality has doubled in the U.S. Now approximately 900 maternal deaths occur every year. One of the most striking takeaways from examining the data is racial disparity: Black women are three to four times more likely to die from pregnancy-related conditions such as cardiac issues and hemorrhage and to bear the brunt of serious complications as well. That risk is equally shared by all black women, regardless of income, education or geographical location. In other words, the factors that typically protect people during pregnancy are not protective for black women.

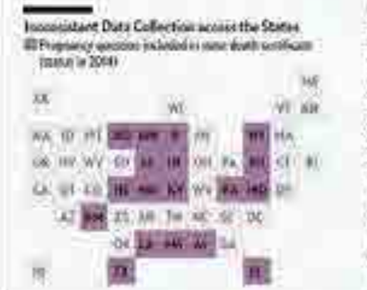
Fortunately, most of these deaths are considered preventable, and therefore, much more can be done to stop them. First, everyone—from doctors to the media to the public—needs to stop blaming women for their own deaths. Instead we should focus on better understanding the underlying contributing factors. These include a lack of data, not educating patients about signs and symptoms—and not believing them when they speak up, errors made by health care providers, and poor communication among different health care teams. Finally, studies have shown that interventions such as wider access to midwifery, group prenatal care, and social and doula support are effective in improving maternal health outcomes.

Progress has been slow and uneven. Deaths from hemorrhage, for example, have been reduced by half in some states because of standardized tool kits for care. And California has led in the pursuit of understanding root causes of maternal mortality. Still, structural racism is proving to be an intractable force.

The U.S. Is an Outlier

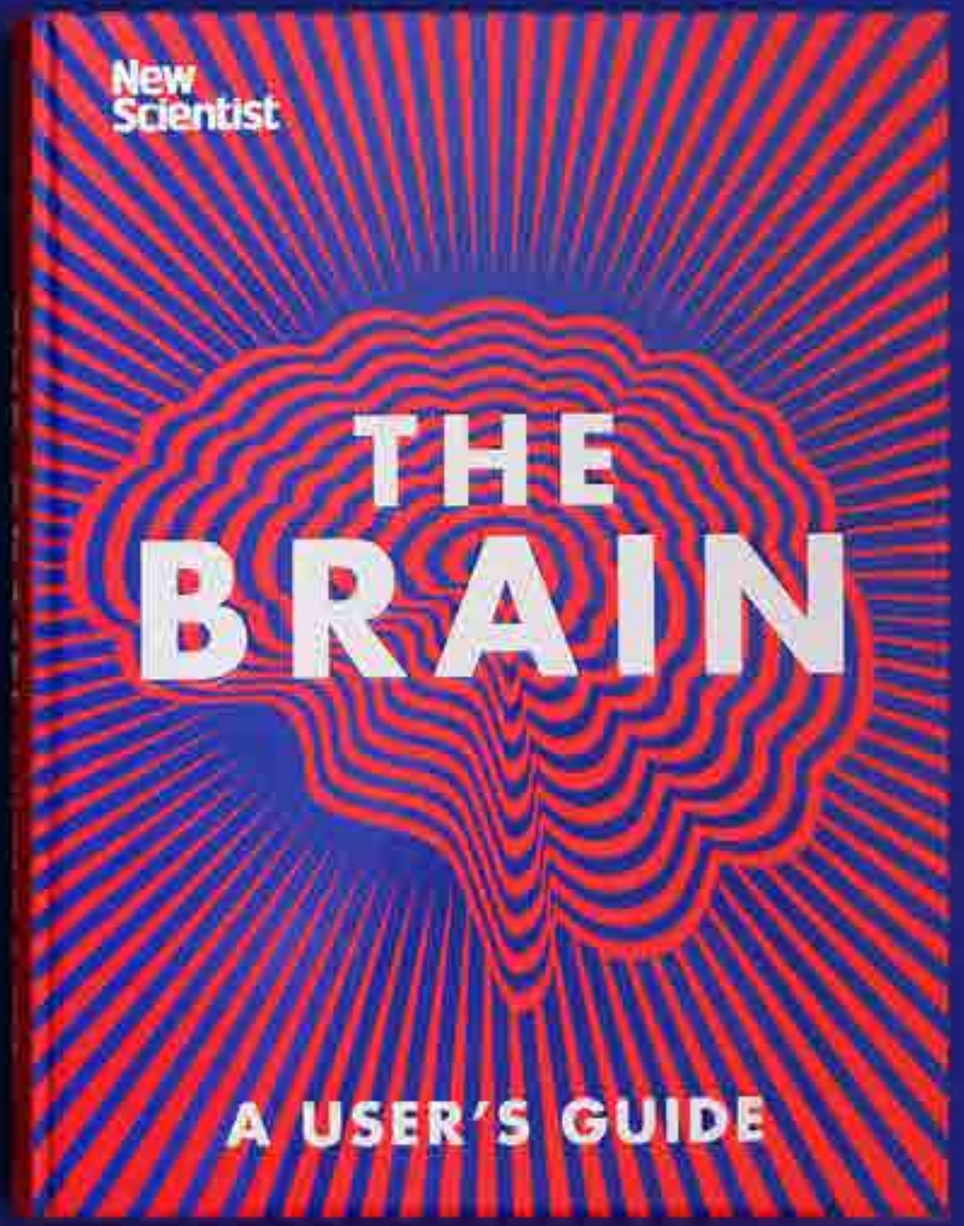
The high maternal mortality rate (MMR) in the U.S. often is blamed on the poor health of mothers, but a comparison with other wealthy countries undermines this argument. MMR—shown here using two estimates, one by the World Health Organization (WHO) and one by the Institute for Health Metrics and Evaluation (IHME)—is not rising in countries with similarly increased rates of cardiovascular disease, obesity, diabetes and other conditions during pregnancy. Other factors must therefore be contributing to the rise in MMR in the U.S. As a 2018 paper in *Obstetrics & Gynecology* concluded, "the increased mortality rate now in the United States in recent years reflects significant social as well as medical challenges and are closely related to lack of access to health care in the non-Hispanic black population."





Maternal Mortality Data in the U.S. Is an Unreliable Mess

As bad as the numbers sound, the U.S. MMR is widely considered to be an underestimate. That is because different methods are used to count deaths related to pregnancy, and reporting is inconsistent. The World Health Organization, for instance, defines maternal deaths as the death of a woman while pregnant or within 42 days of the end of a pregnancy. But the Centers for Disease Control and Prevention defines maternal mortality as "the death of a woman while pregnant or within one year of the end of a pregnancy." Both these definitions exclude accidental or incidental causes of death. The difference in time frame for maternal mortality is further complicated at the state level, where data collection time does not legislate to be comparable because of different definitions of the cause and time of death. States could fix this problem by creating standardized maternal mortality review committees, which comprehensively evaluate each maternal death and discuss the factors that contributed to the outcome.


New Scientist
THE BRAIN
A USER'S GUIDE

BRAIN CELLS
are as old as you are.
Only two parts of the brain are continuously generated: the **hippocampus** (essential for memory and mood control) and the **striatum** (essential for the coordination of movement, as well as learning and memory).

TASTE BUDS
are replaced every
10 days

HAIR
is still replaced every
6-7 years

OUTER SKIN CELLS
are replaced every
2 weeks

RED BLOOD CELLS
are replaced every
4 months

LUNG CELLS
are replaced every
20 years

HEART CELLS
less than half of your heart cells are replaced

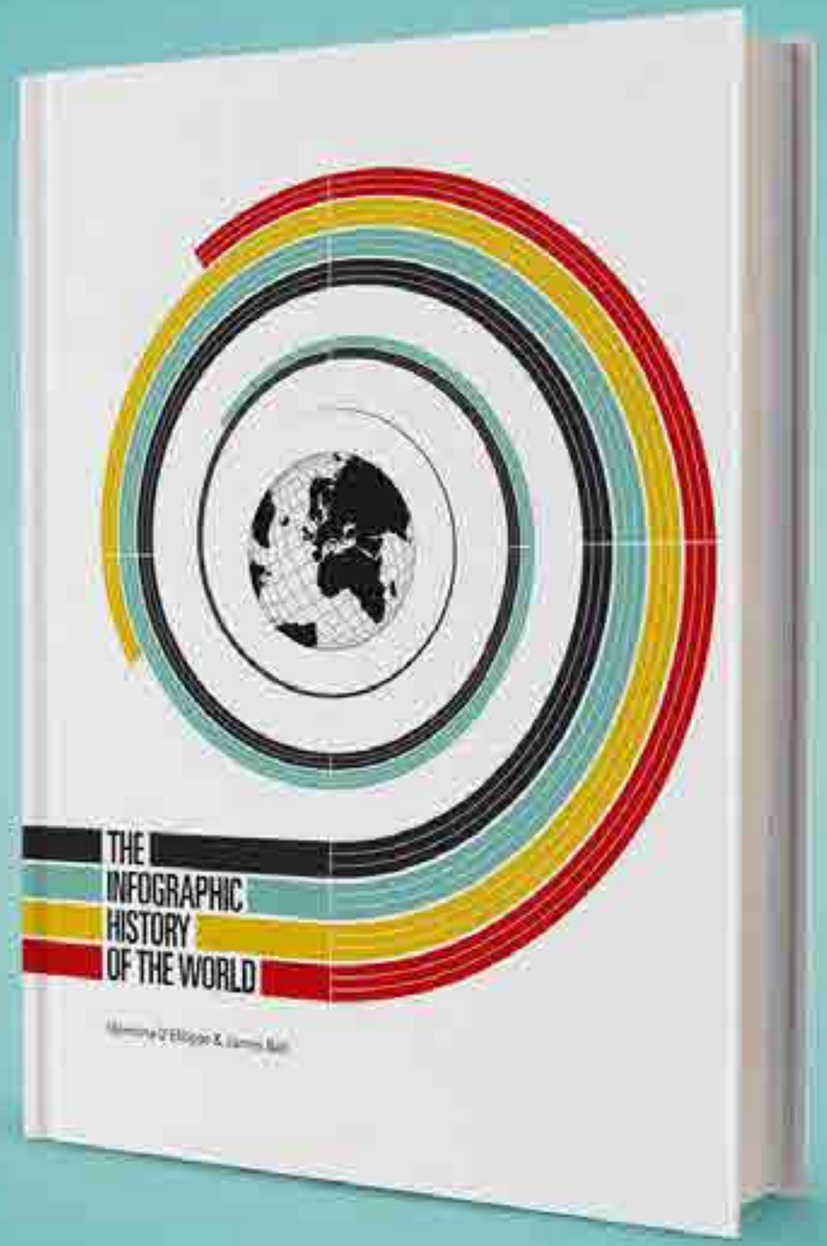
LIVER CELLS
are replaced every
300-500 days

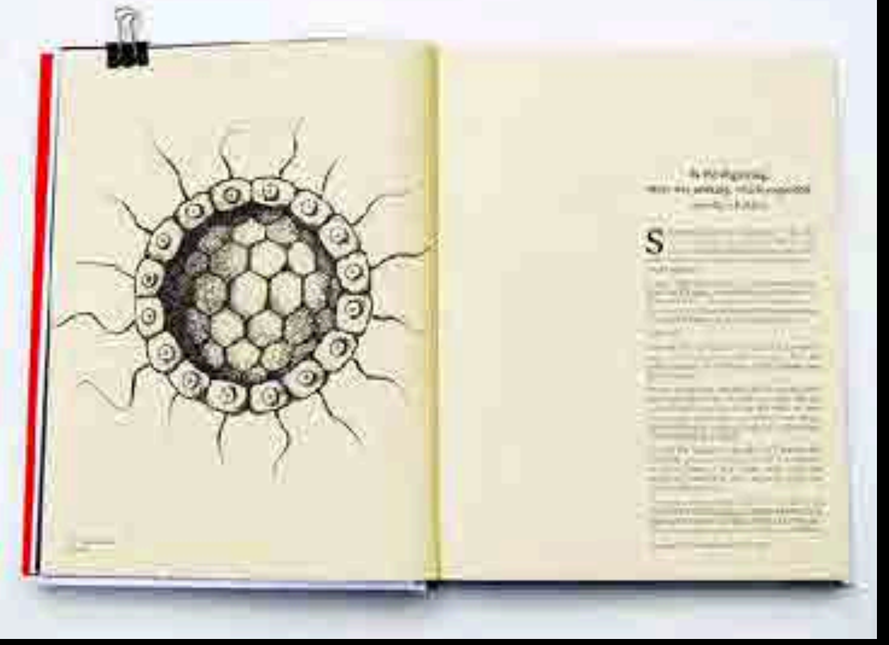
BONE CELLS
are replaced every
10 years

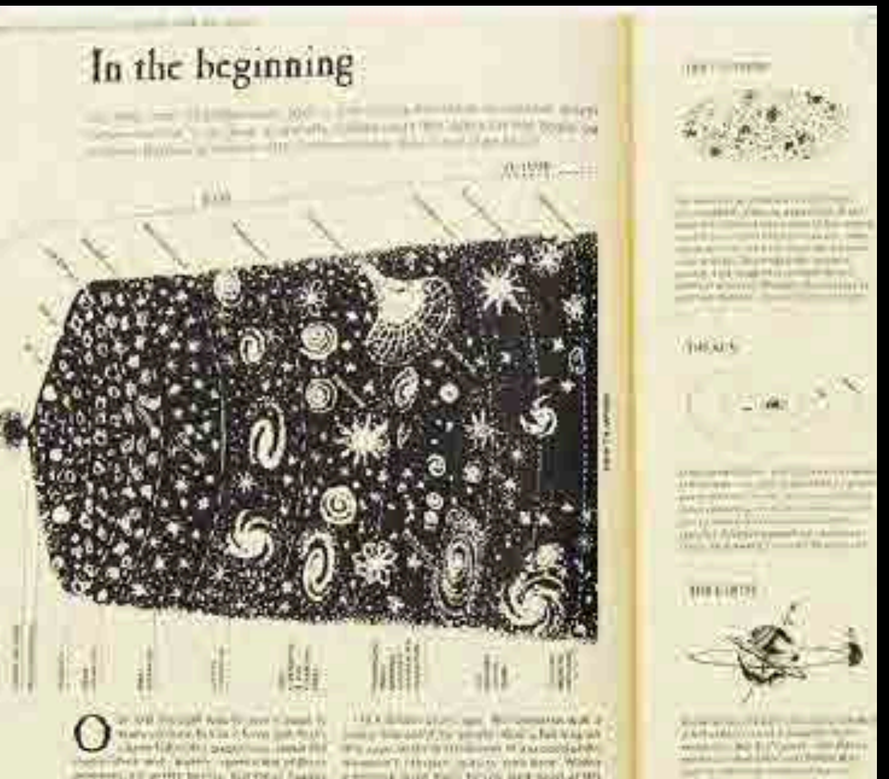
GUT LINING
is replaced every
5 days

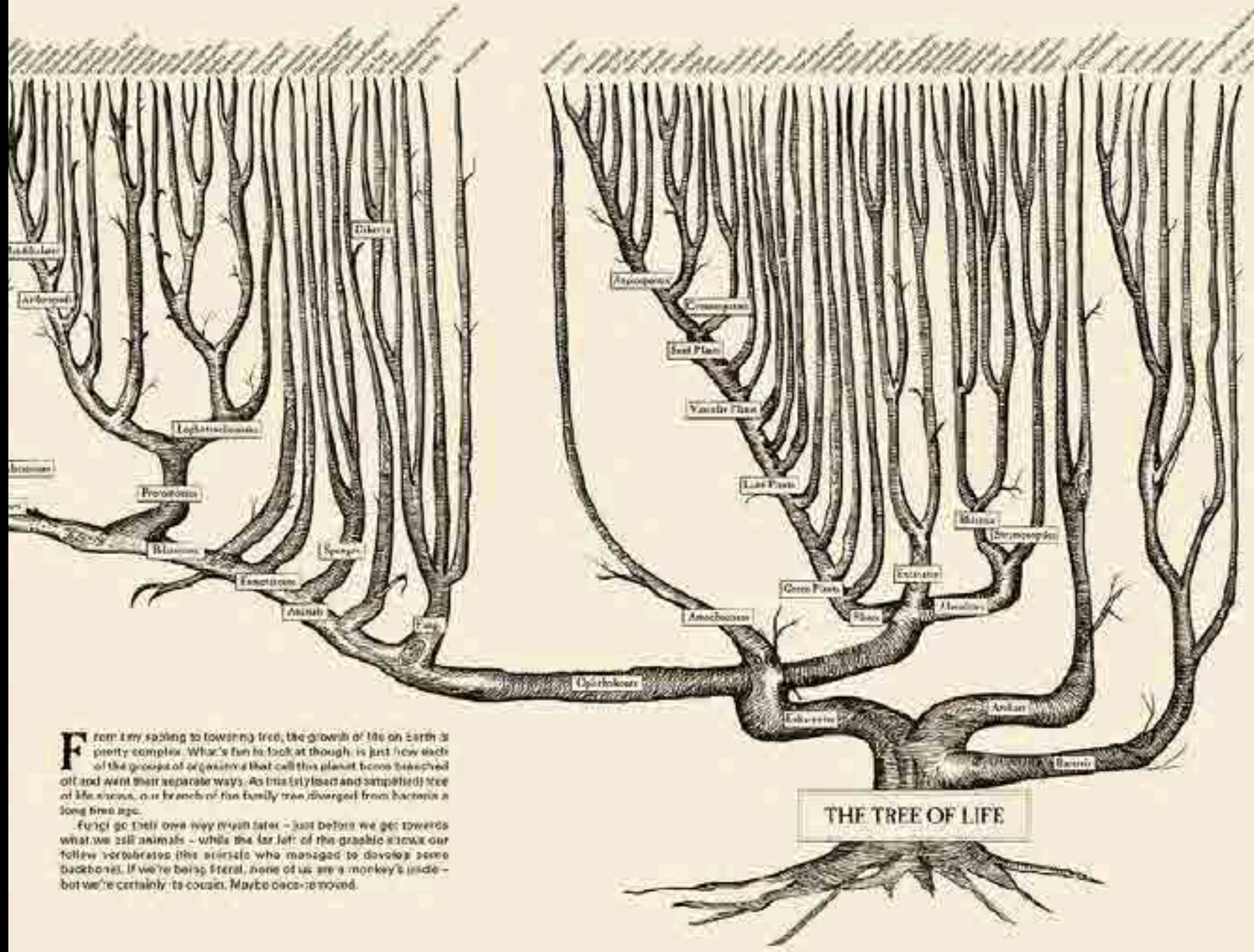
FAT CELLS
are replaced every
8.5 years

MUSCLE CELLS
are replaced every
15 years


THE
INFOGRAPHIC
HISTORY
OF THE WORLD

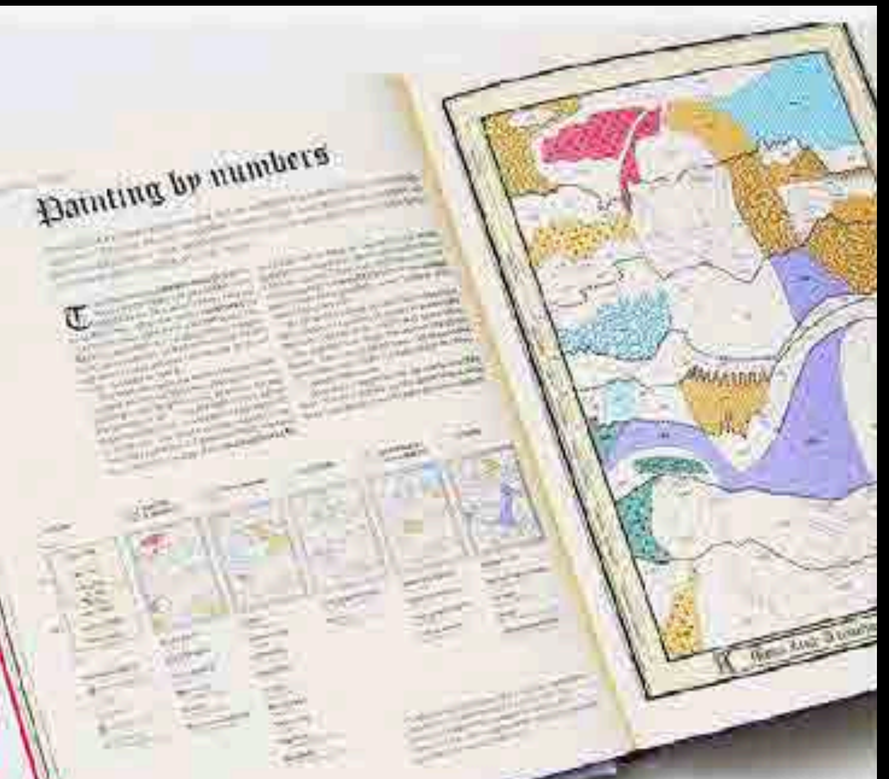


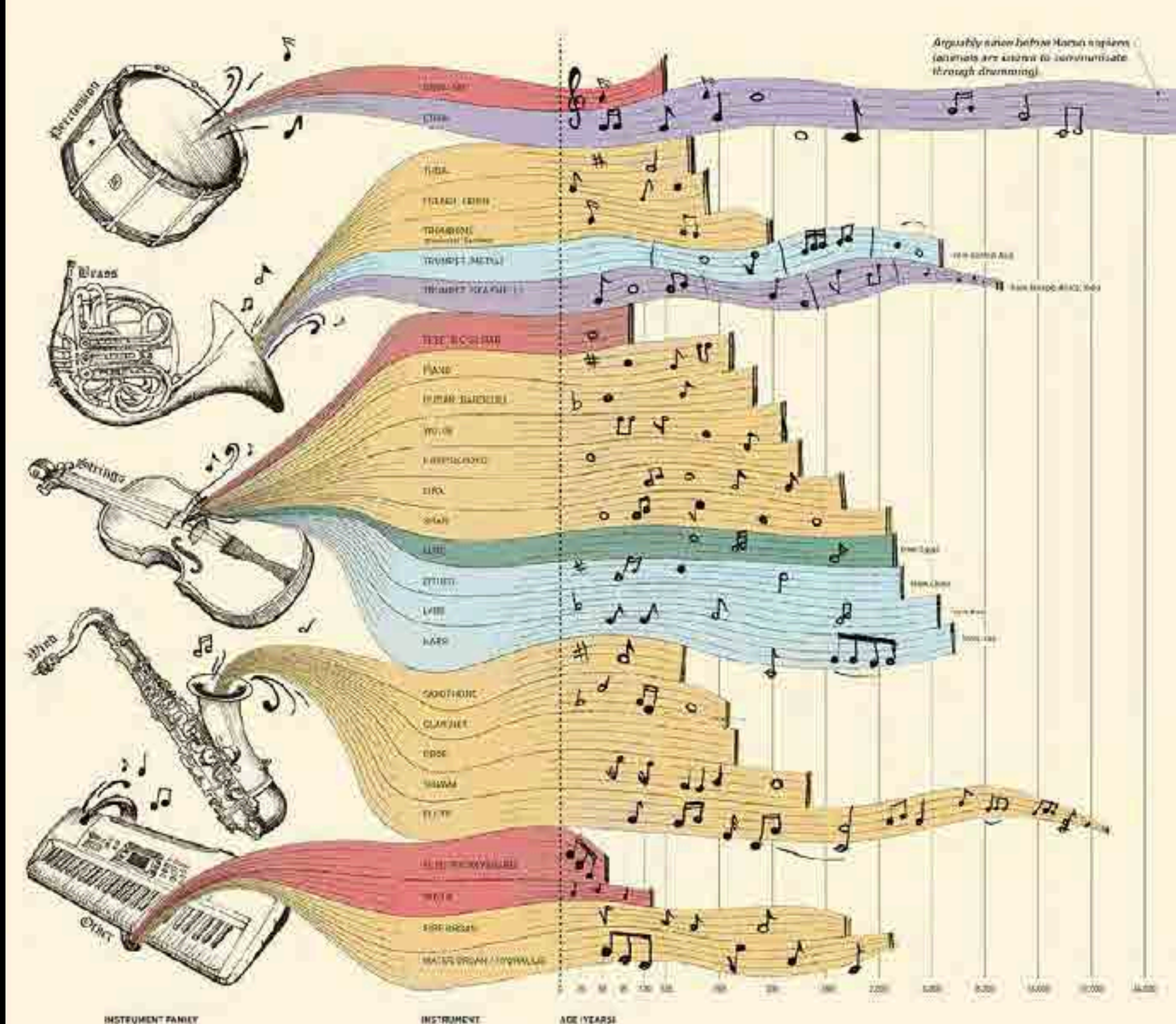


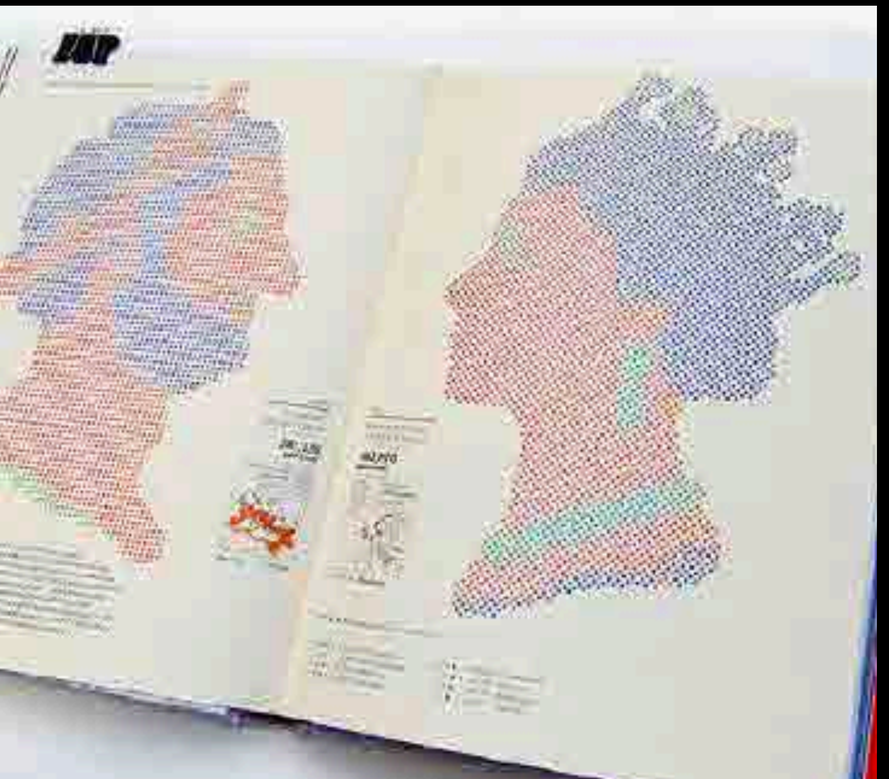


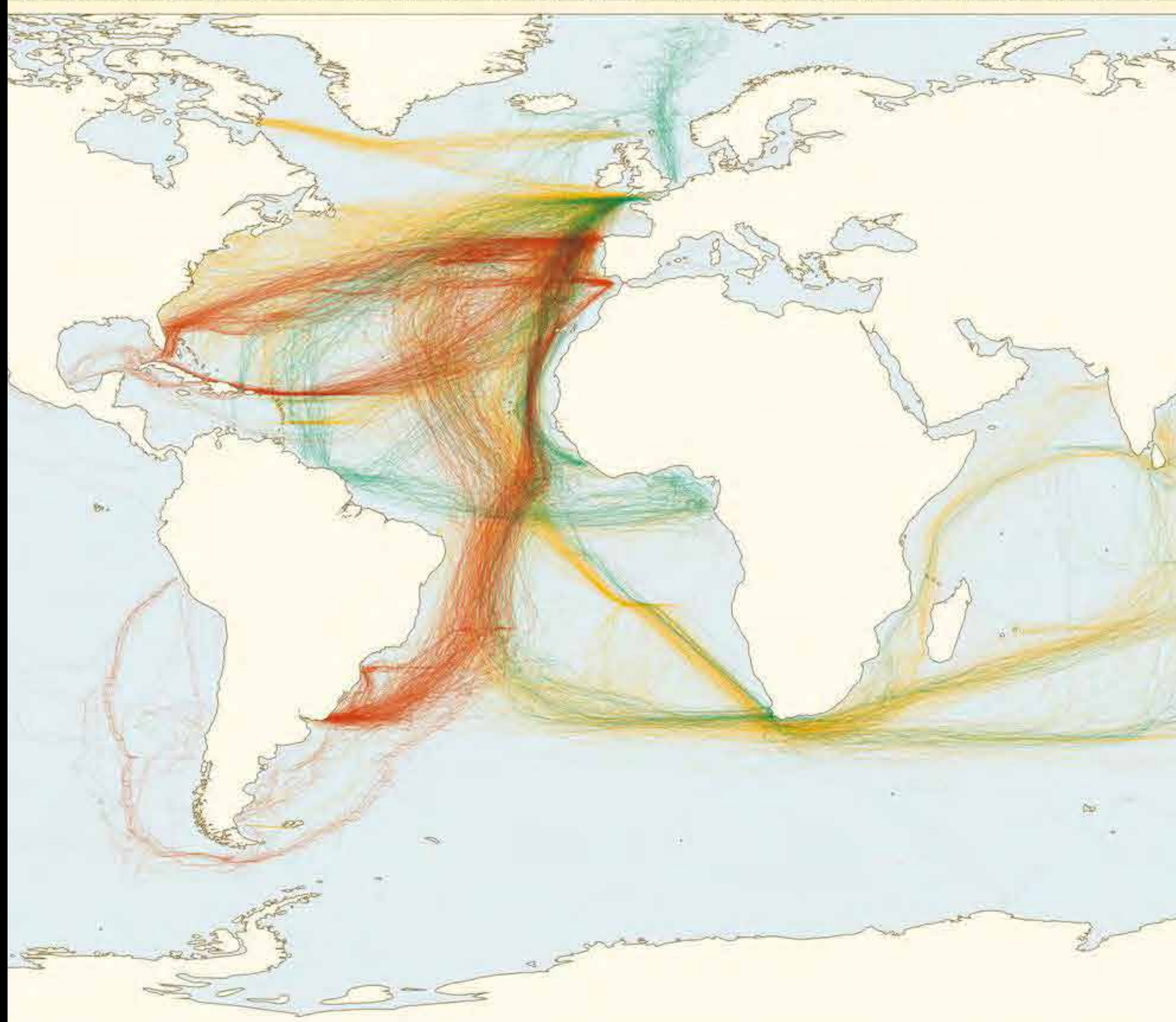
From tiny sapling to towering tree, the growth of life on Earth is pretty complex. What's fun to look at though, is just how each of the groups of organisms that call this planet home branched off and went their separate ways. As this (stylised and simplified) tree of life shows, our branch of the family tree diverged from bacteria a long time ago.

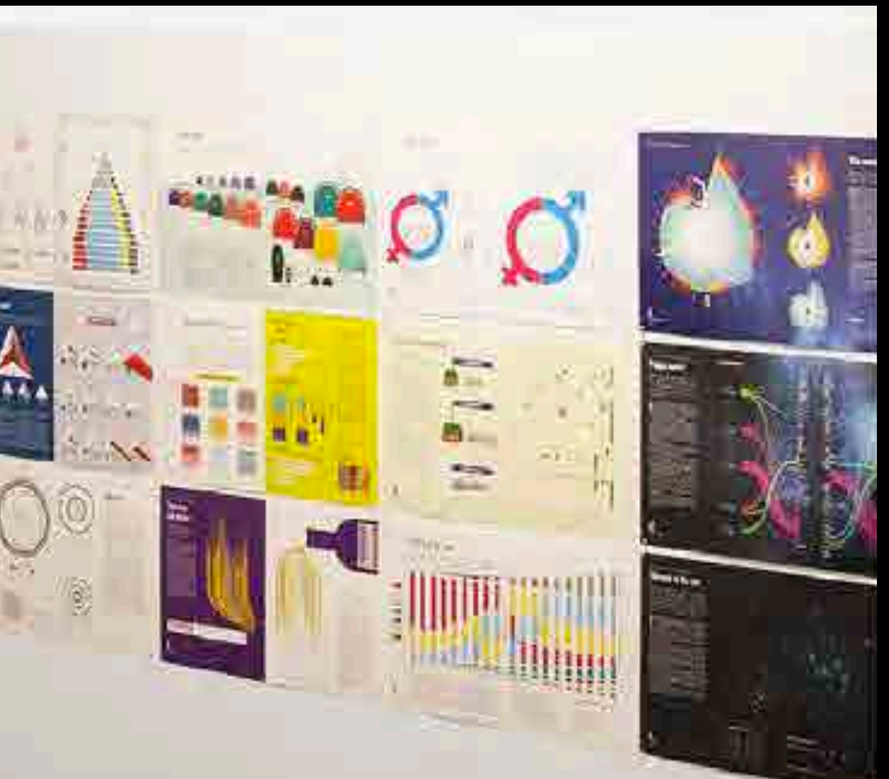
Fungi go their own way much later – just before we get towards what we call animals – while the far left of the graphic shows our fellow vertebrates (the animals who managed to develop some backbone). If we're being literal, none of us are a monkey's uncle – but we're certainly its cousin. Maybe once removed.

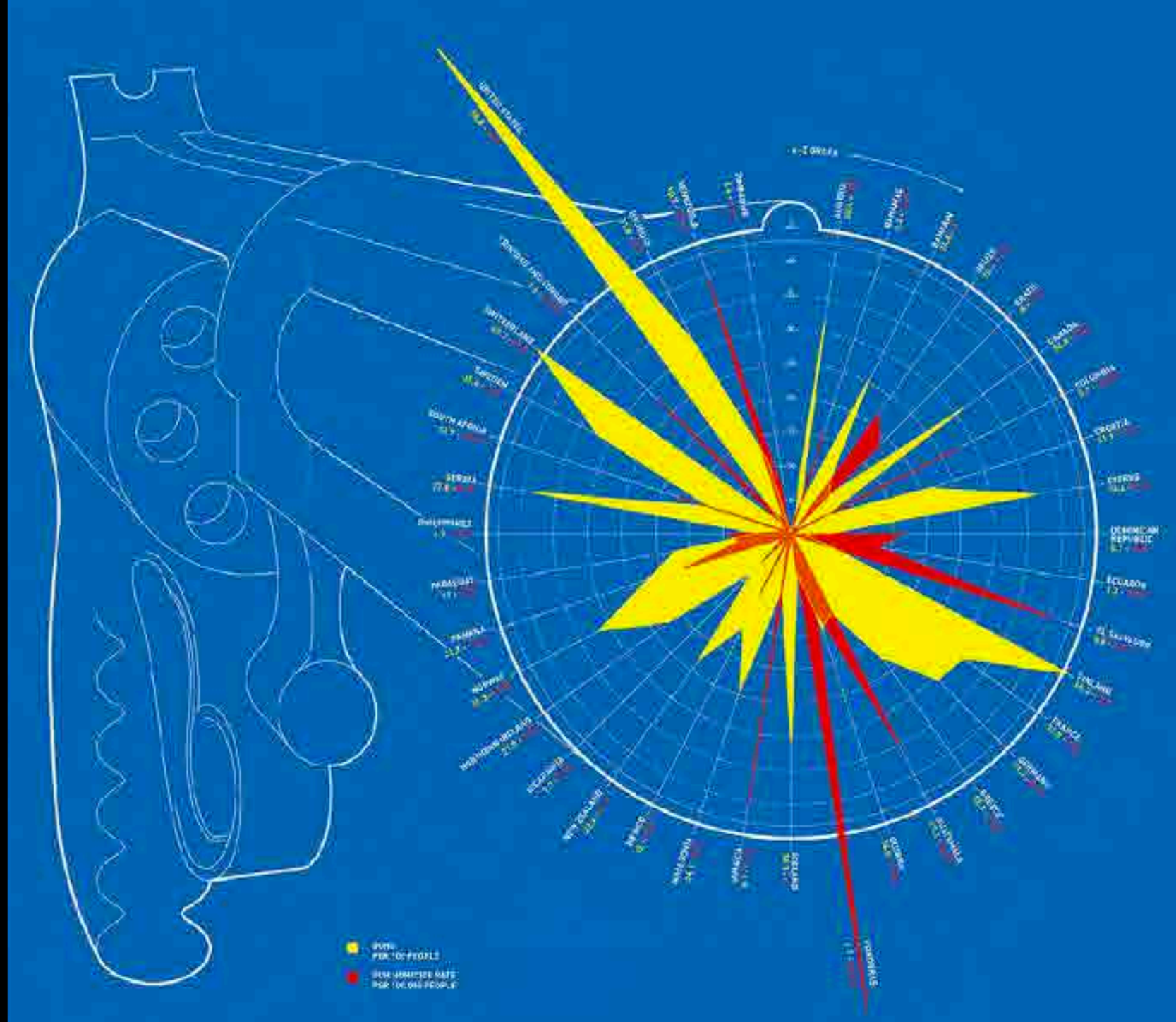

Painting by numbers

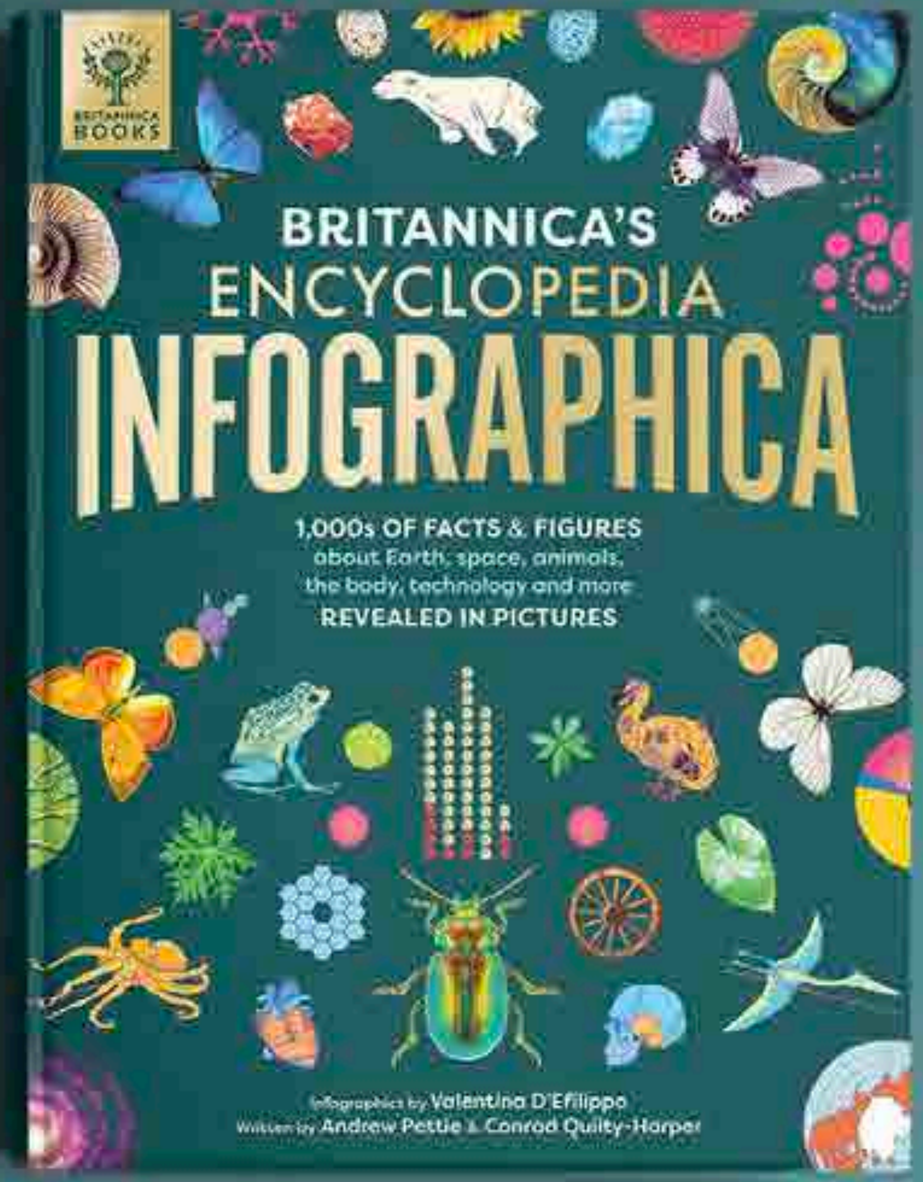

Percussion
Brass
Strings
Wind
Other
Arguably since before Homo sapiens (animals are known to communicate through drumming)
INSTRUMENT FAMILY
INSTRUMENT
AGE (YEARS)







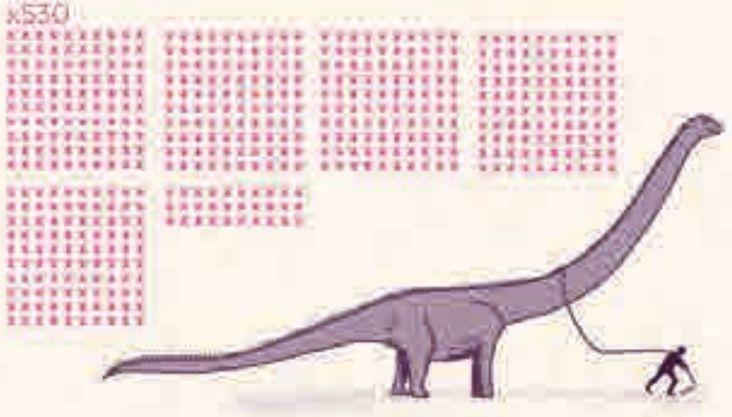



BRITANNICA BOOKS
BRITANNICA'S
ENCYCLOPEDIA
INFOGRAPHICA
1,000s OF FACTS & FIGURES
about Earth, space, animals,
the body, technology and more
REVEALED IN PICTURES
Infographics by Valentina D'Efilippo
Written by Andrew Pettie & Conrad Quilty-Harper

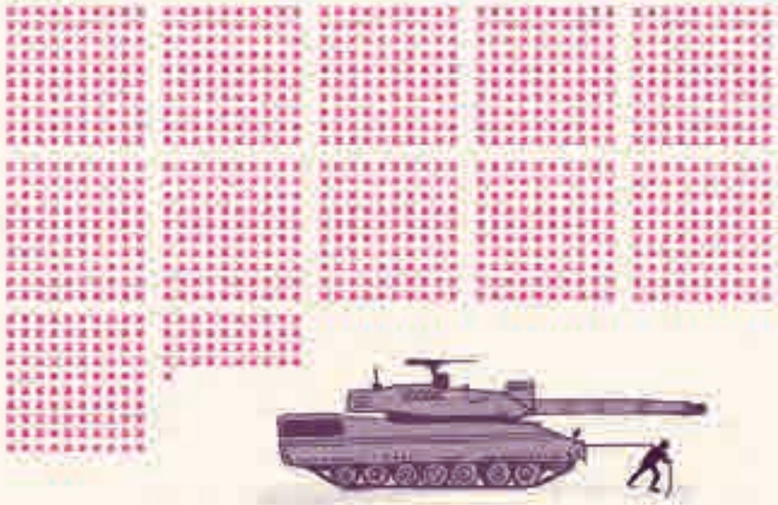
LEAFCUTTER ANT
can carry **nearly 9 times** its own weight (0.02 g).
This is equivalent to **human carrying a cow!**

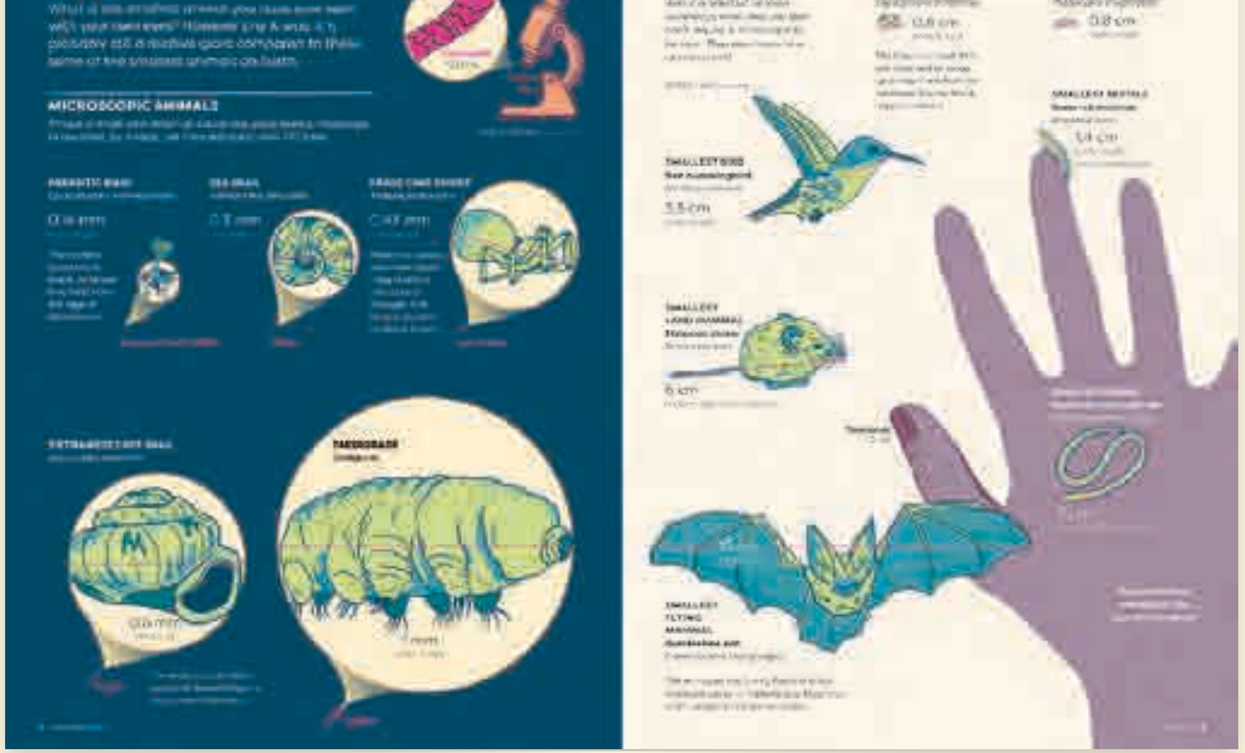
RHINOCEROS BEETLE
can carry around **100 times** its own weight (2.4 g).
This is equivalent to a **human carrying an elephant!**

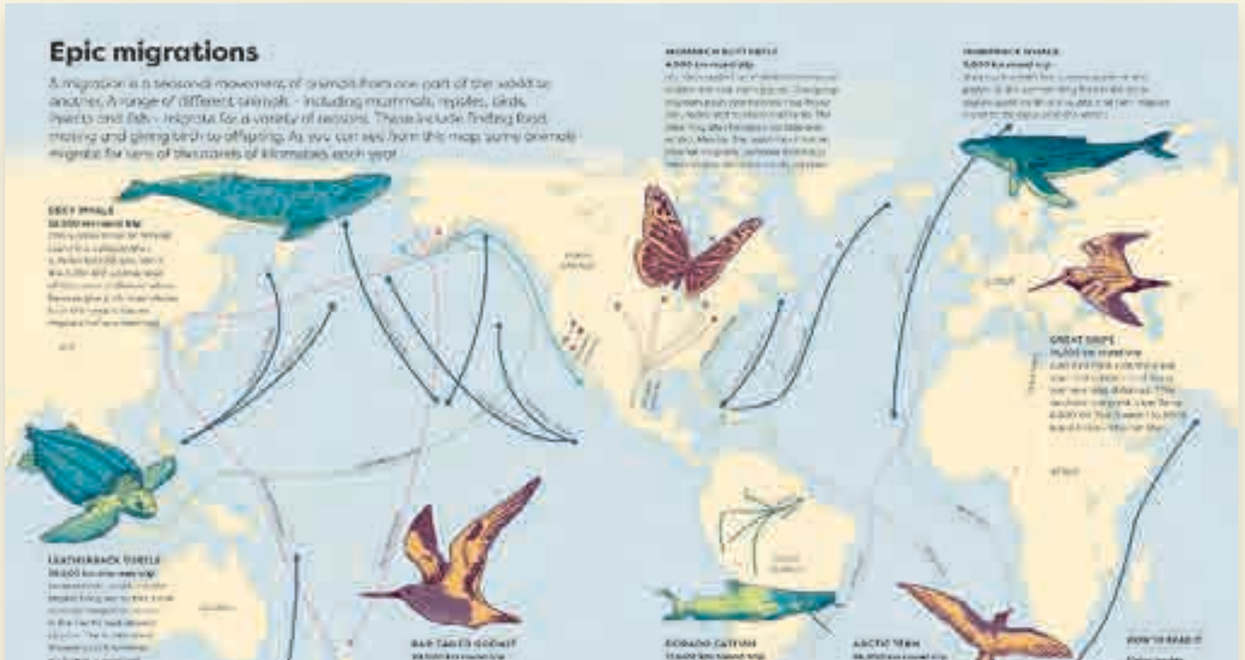
ORIBATID MITE
can pull around **550 times** its own weight (0.0001 g). This is equivalent to a **human pulling the weight of a Supersaurus dinosaur!**



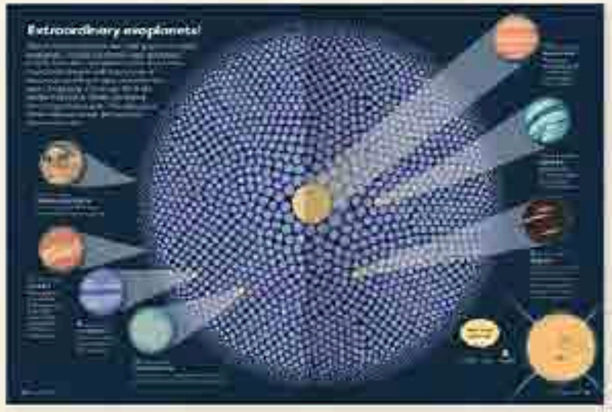
DUNG BEETLE
can pull **more than 1,100 times** its own weight (0.09 g). This is equivalent to a **human pulling a tank!**

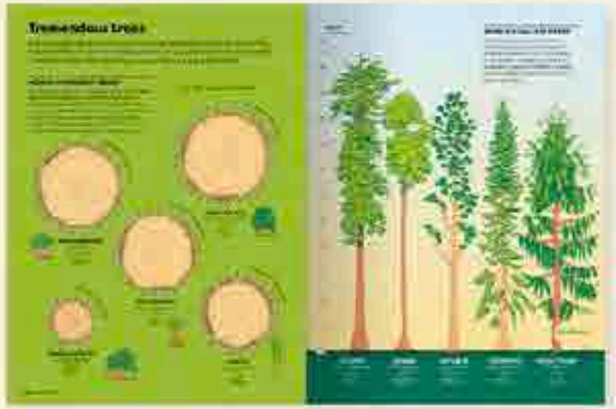


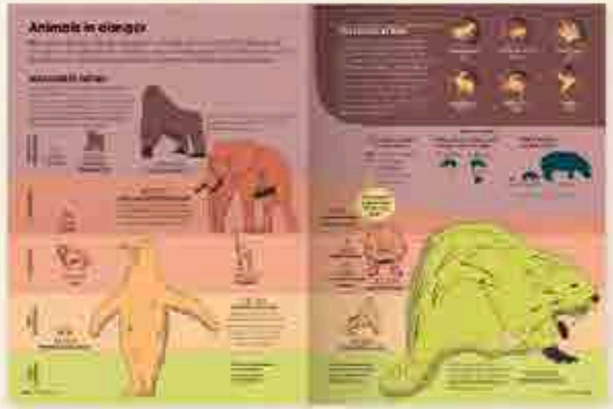


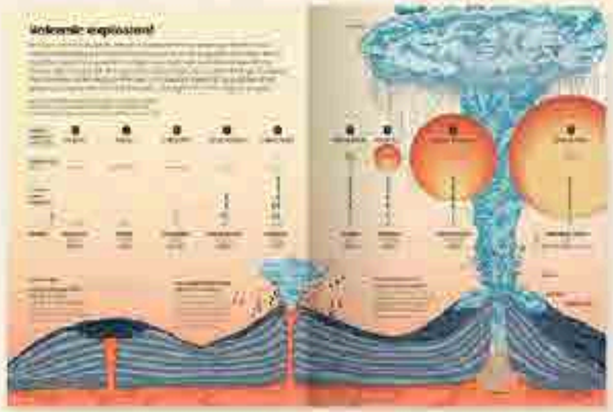


A timeline of everything

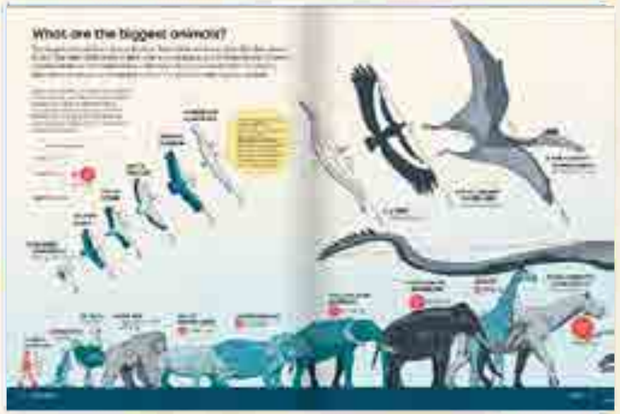

Extraordinary exoplanets!


Tremendous trees


Animals in danger

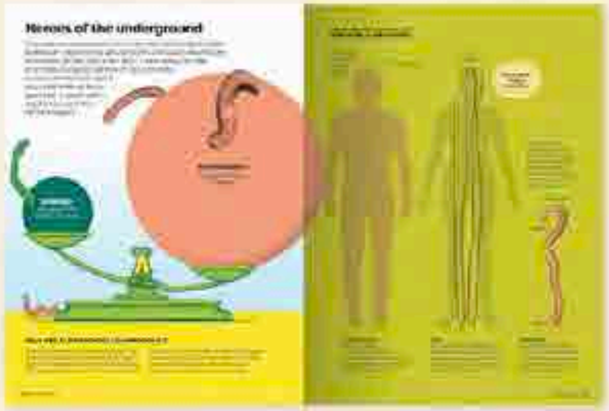

Volcanic explosion!

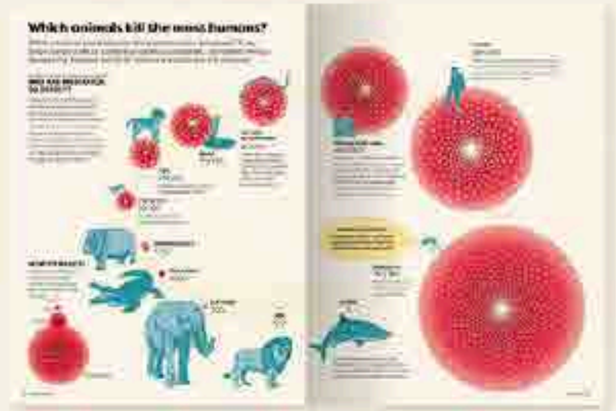
Introducing Earth


What are the biggest animals?

Plants versus plants

Dancing auroras


Senses of the underground

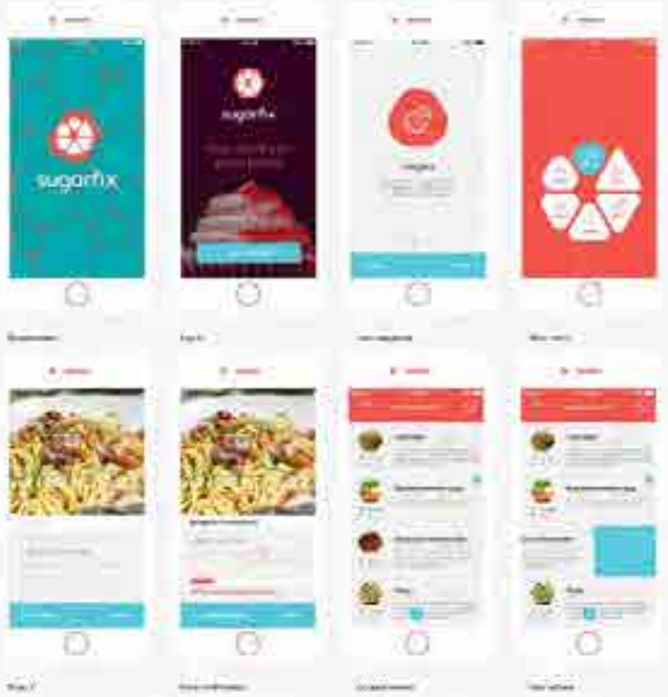

Which animals kill the most humans?

How many planes are in the sky?

Everything is an event on the skin
Explore the responses by
September
Humidity
Low humidity
Skin types
Most popular ritual
Toner
Hydrate

Everything is an event on the skin
September

Richard Freeman
Loris Quinn Jetter


sugarfix

MY DIARY
Today
Last 7 days

Insights
Today
Last 7 days

Image: Johan Persson

NUCLEAR TESTS ABOVE GROUND

1961

TEDx Parma

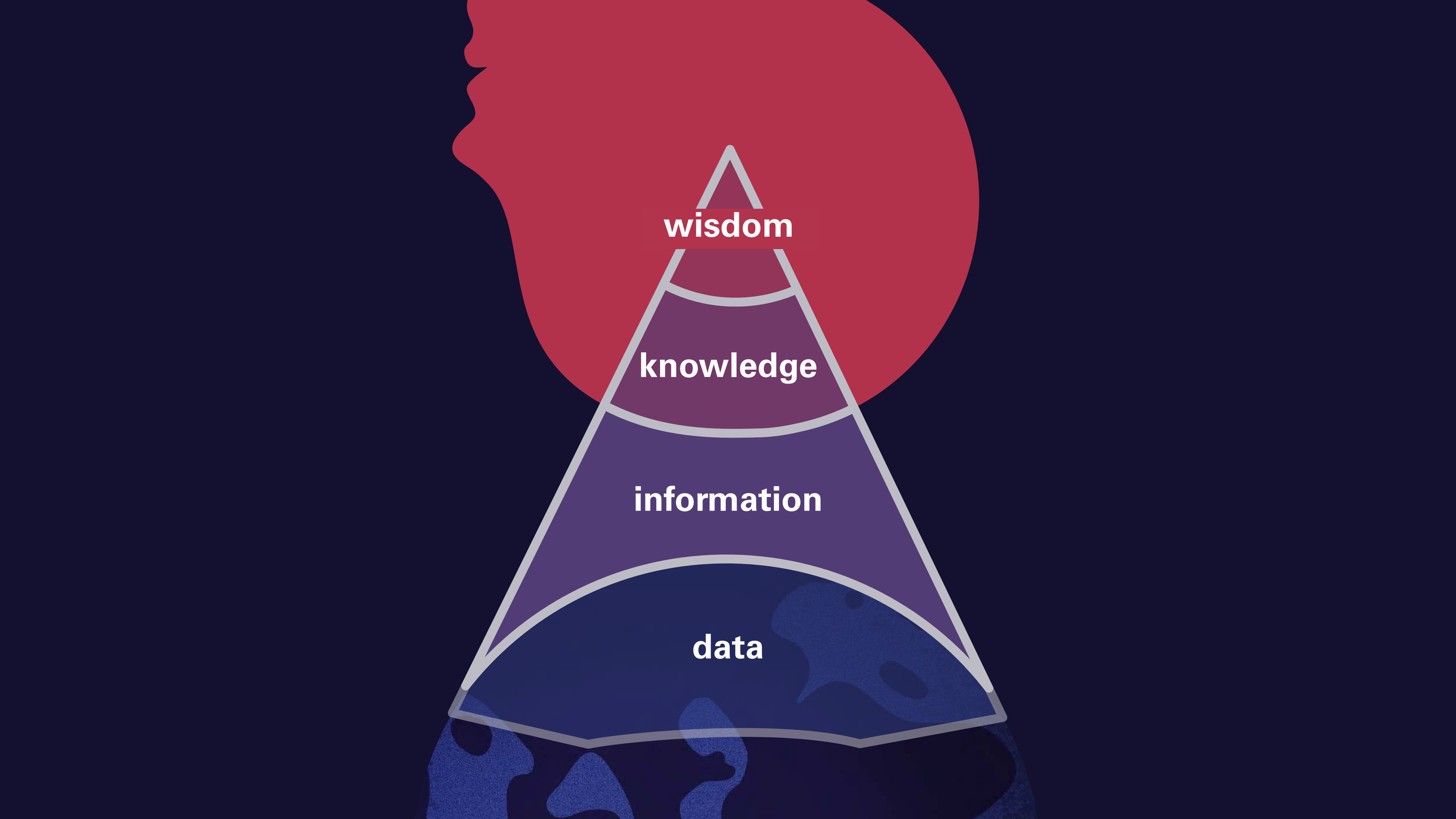
visualizing
~~data~~
knowledge

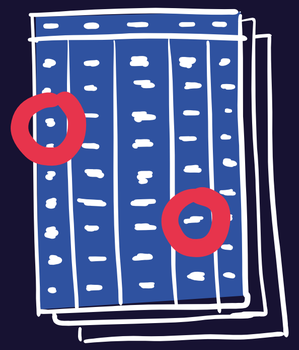
how do we transform
data into knowledge?

visualizing (communicating) ~~data~~ *knowledge*

Seeing

`visualisation`

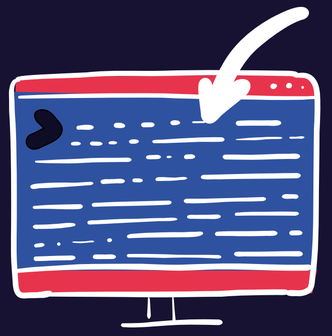

wisdom
knowledge
information
data



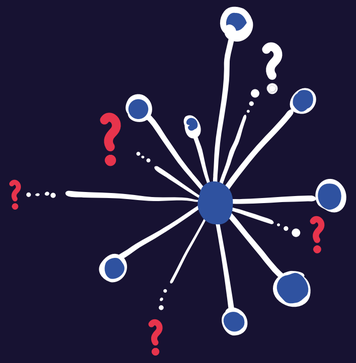
Studies

Experiences

DATA

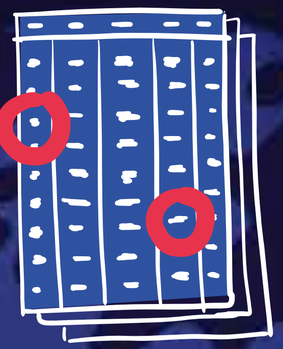


Databases



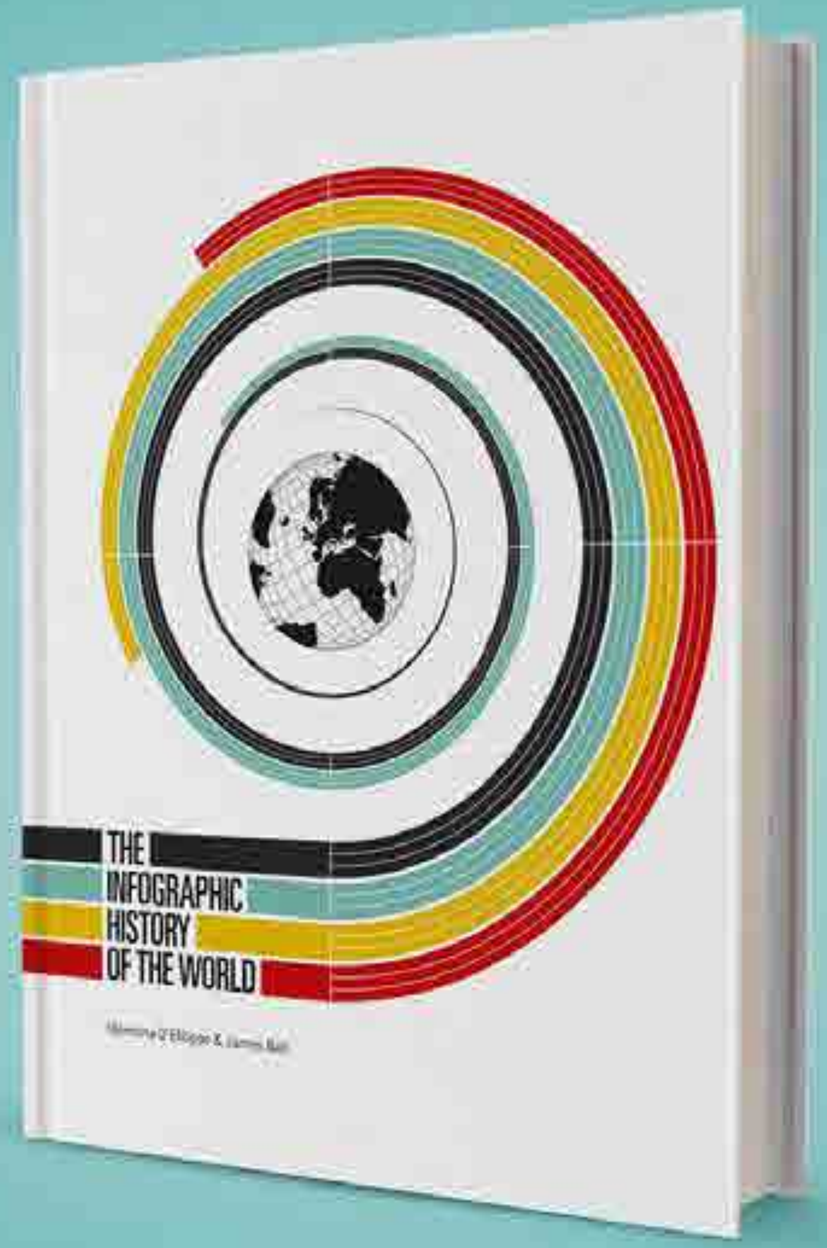
Missing data

knowledge comes from...



studies

identify the insight



The Infographic History of the World // Valentina D’Efilippo & James Ball

How do the world's conflicts compare?

www.poppyfield.org

wars	from	to	where	deaths
Dutch-Achinese War	1904	1907	Africa	24,000
Russo-Japanese war	1904	1905	Asia	152,000
Southwest African Revolt	1904	1905	Africa	13,000
Second Yemen Rebellion	1904	1904	Asia	30,000
Korean guerilla war against Japanese occupation	1907	1910	Asia	18,000
French Conquest of Wadai Sultanate	1909	1911	Africa	12,000
The second Rif War	1909	1910	Africa	10,000
Mexican Revolution	1910	1920	North America	125,000
Italo-Turkish War	1911	1912	Africa	20,000
1st Balkan War	1912	1913	Europe	82,000
2nd Balkan War	1913	1913	Europe	61,000
Moro Rebellion	1913	1913	Asia	15,000
World War I	1914	1918	Asia, Europe, Nc	10,671,000
Russian Revolution and Civil War	1917	1922	Europe, Asia	802,000
Estonian Liberation War	1918	1920	Europe	12,000
Latvian Liberation	1918	1920	Europe	13,000

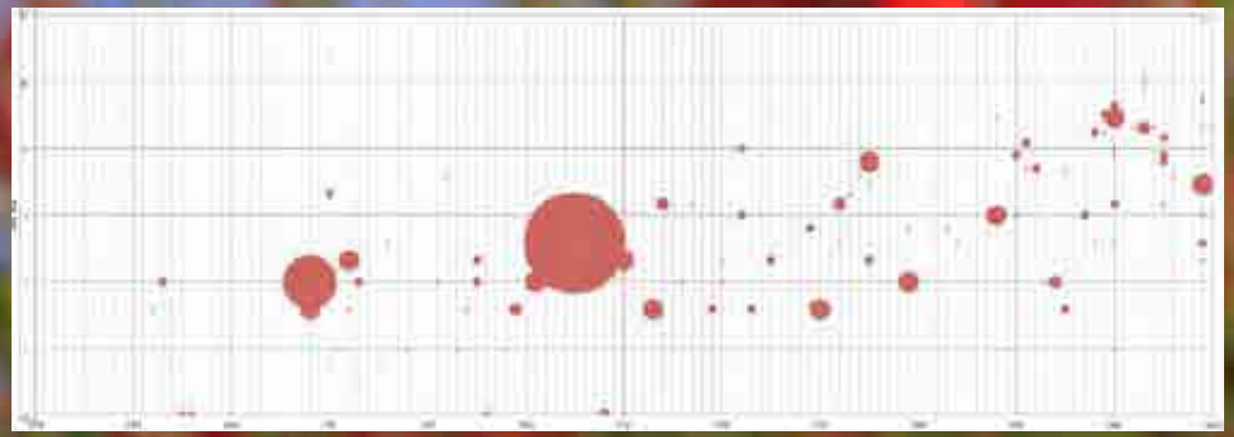
Poppy Field

In collaboration with James Ball

Pattern recognition | Semiotics

Data

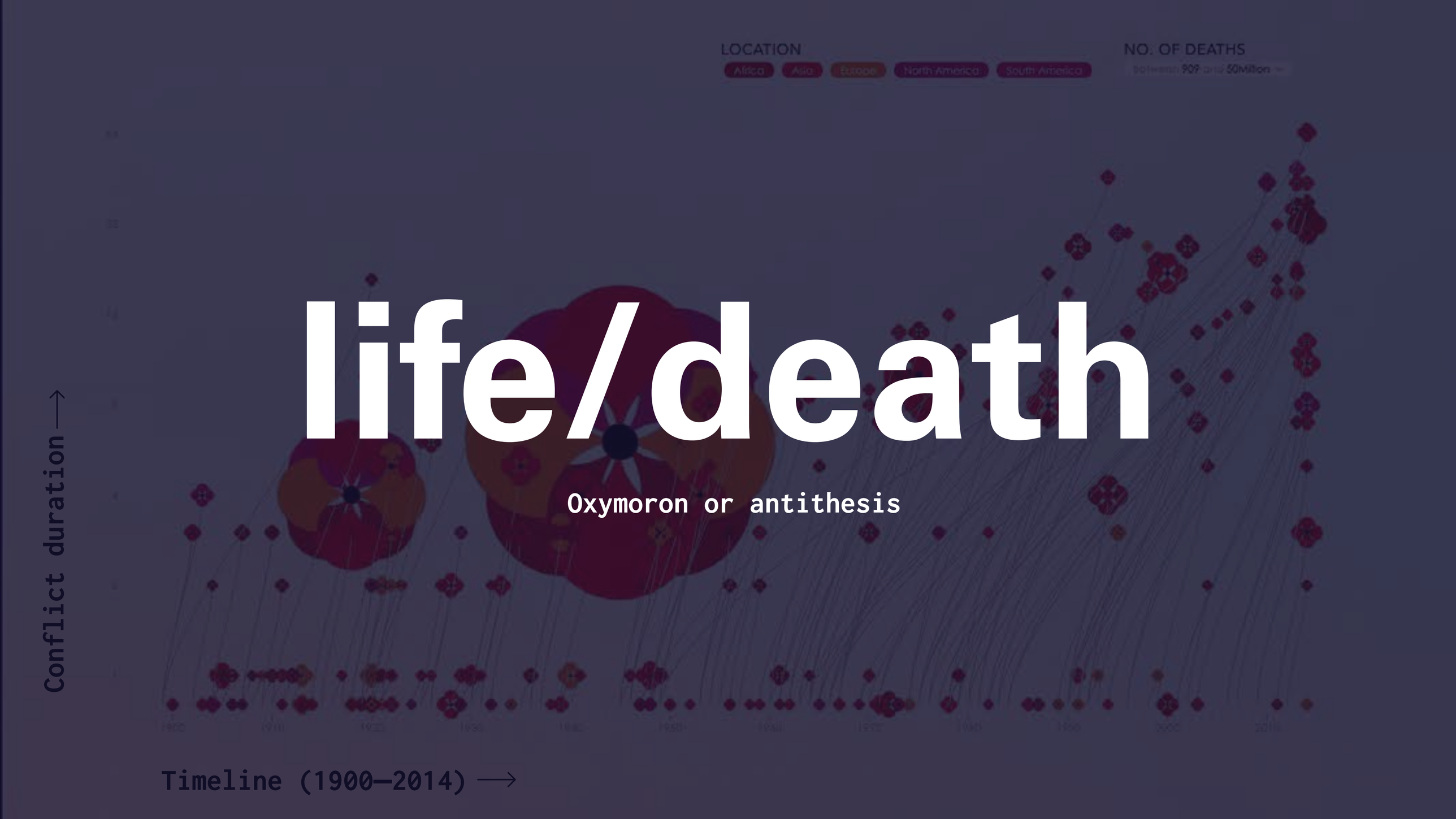
Story



Poppy Field

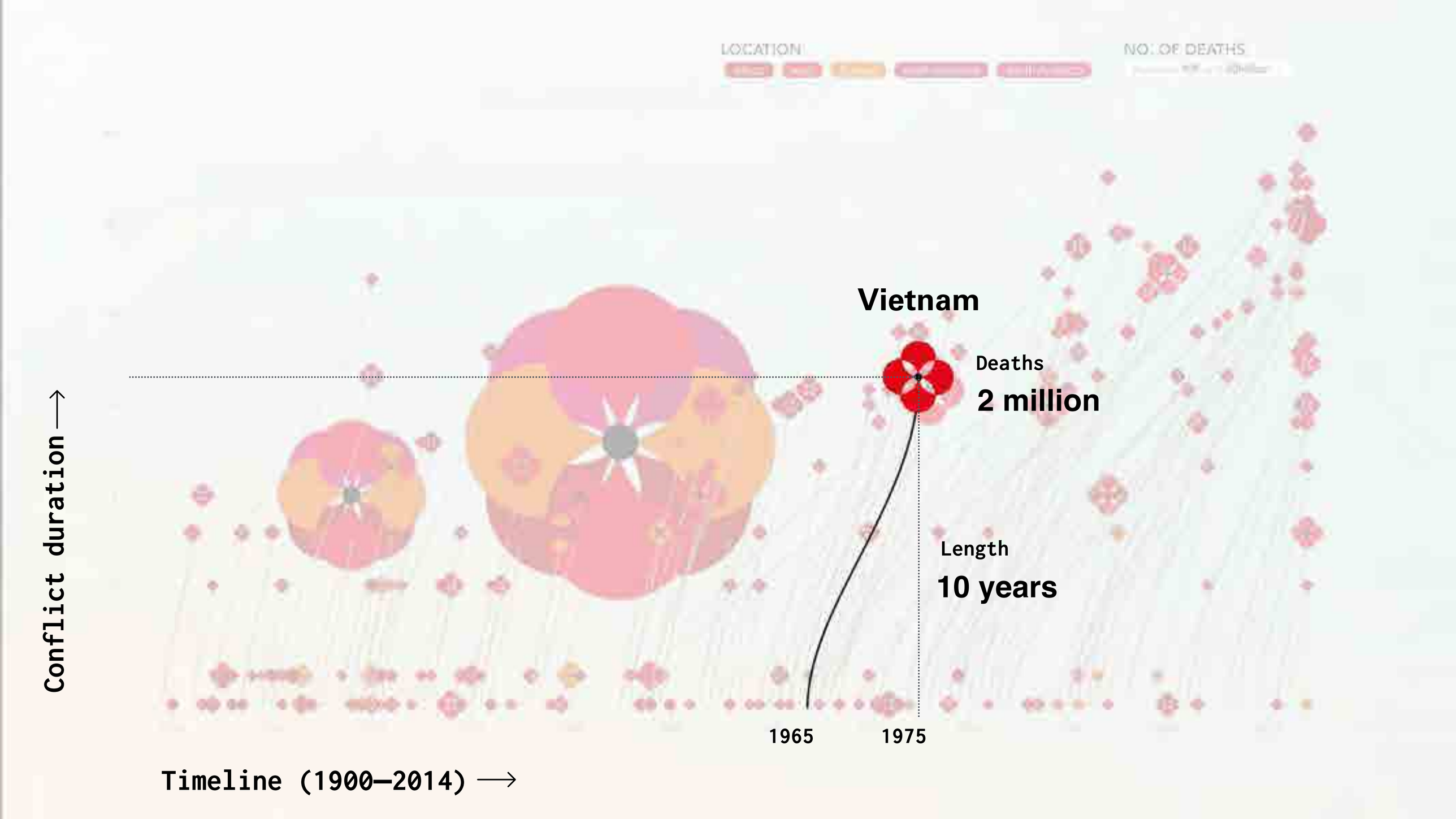
In collaboration with James Ball

Getty Image



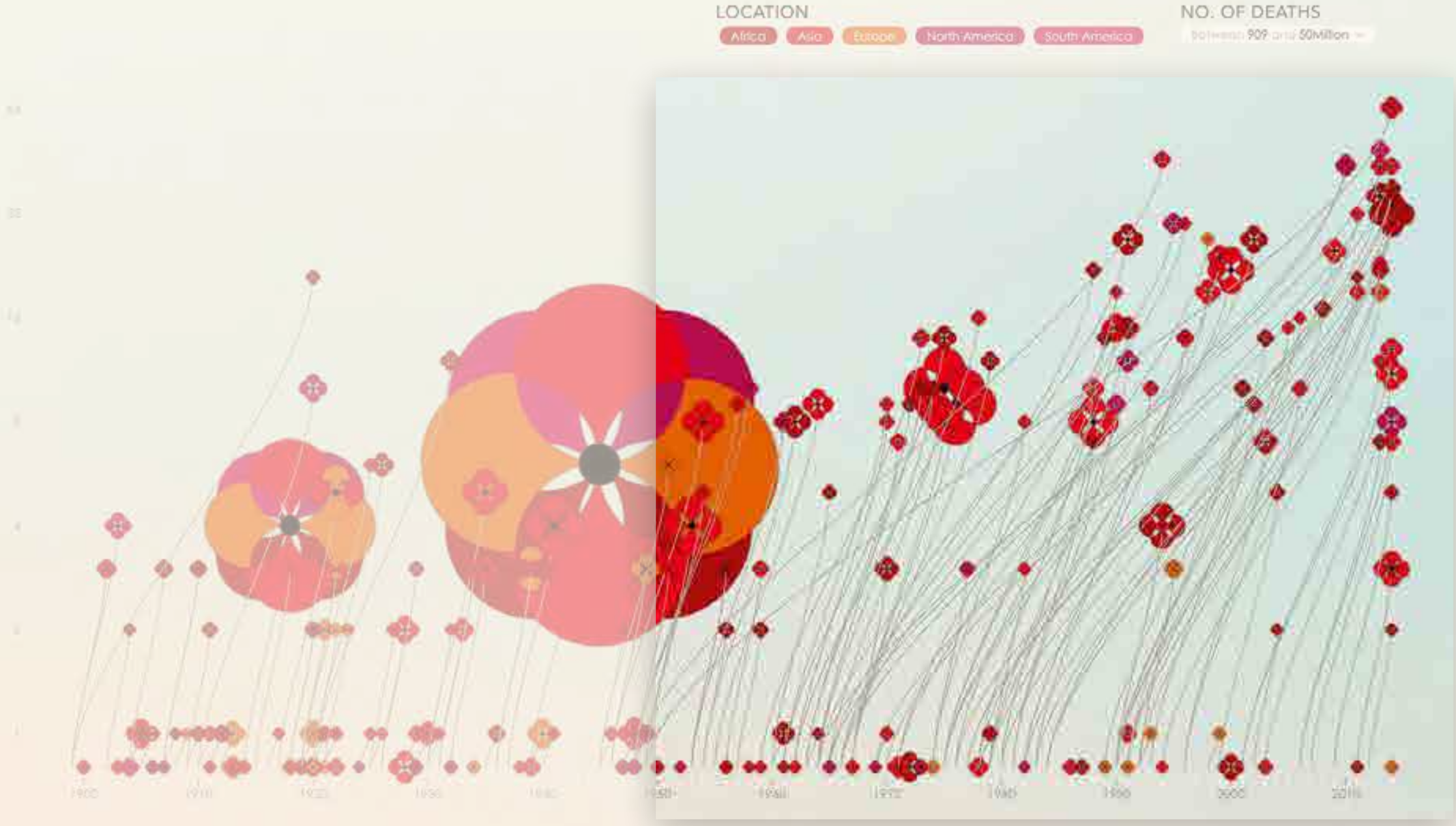
life/death

Oxymoron or antithesis

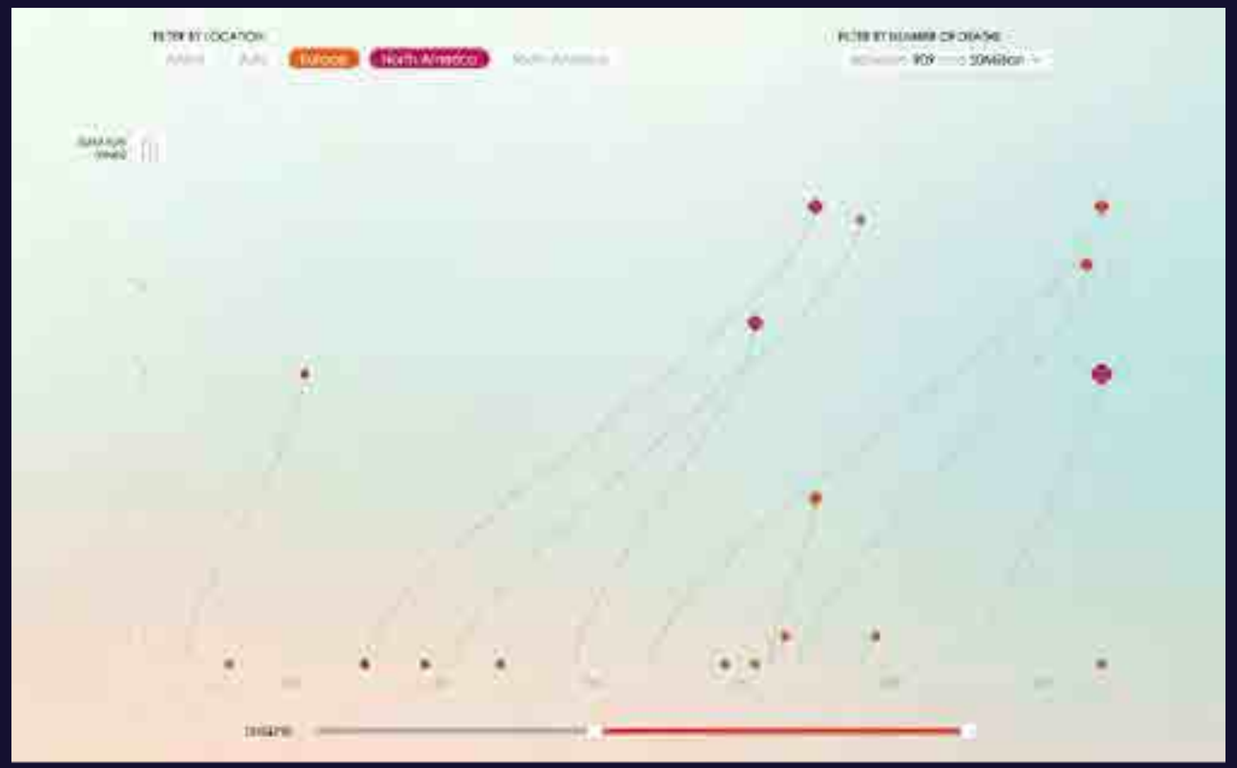

LOCATION
NO. OF DEATHS
Vietnam
Deaths
2 million
Length
10 years
1965
1975
Conflict duration ⟶
Timeline (1900–2014) ⟶

LOCATION
NO. OF DEATHS
The Second World War
The Great War
Conflict duration ⟶
Timeline (1900–2014) ⟶

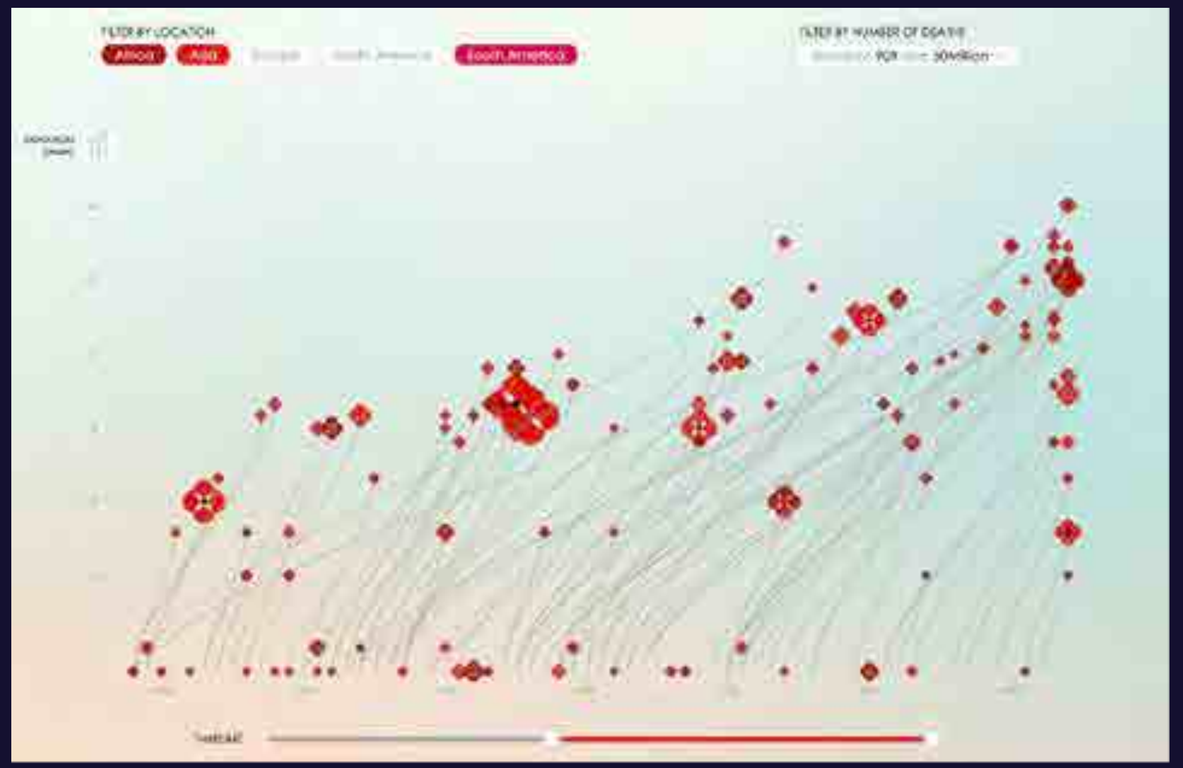
LOCATION
NO. OF DEATHS
Israel / Palestine
Conflict duration ⟶
Timeline (1900–2014) ⟶


LOCATION
Africa
Asia
Europe
North America
South America
NO. OF DEATHS
1950—2014

Europe & North America



Rest of the world

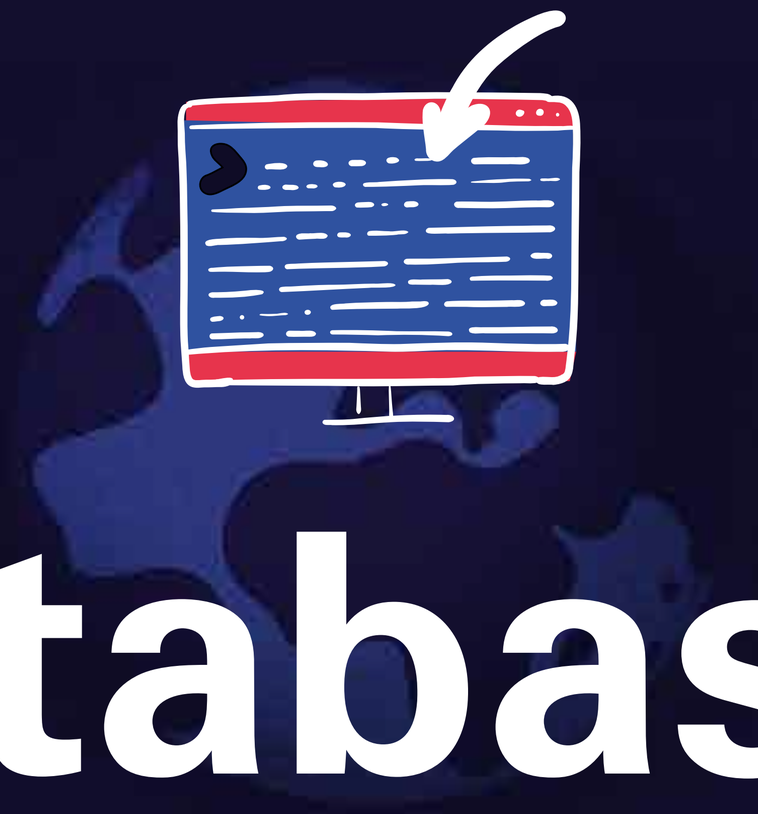


Code by Nicolas Pigelet // Poppyfield.org

www.poppyfield.org

to foster understanding and to create empathy

knowledge comes from...



databases

extract stored data

Can social media become a catalyst for social change?

www.metoomentum.com

Alyssa Milano

@Alyssa_Milano

Follow

If you've been sexually harassed or assaulted write 'me too' as a reply to this tweet.

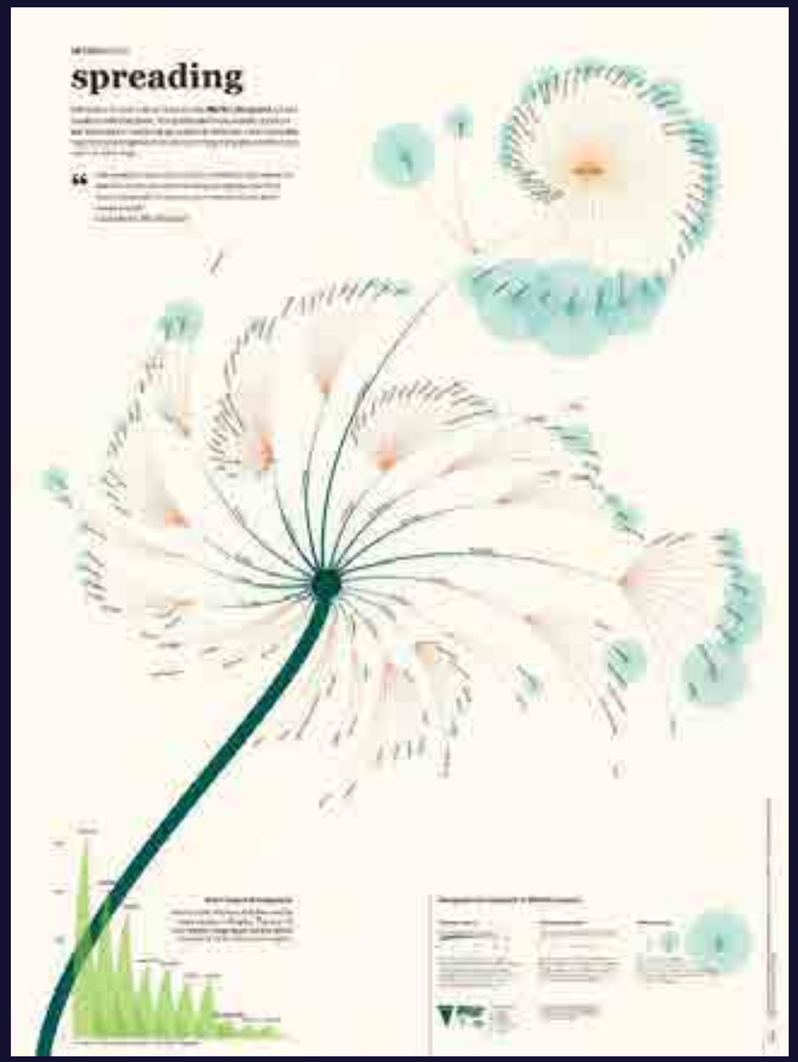
> Me too.
>
> Suggested by a friend: "If all the women who have been sexually harassed or assaulted wrote 'Me too.' as a status, we might give people a sense of the magnitude of the problem."

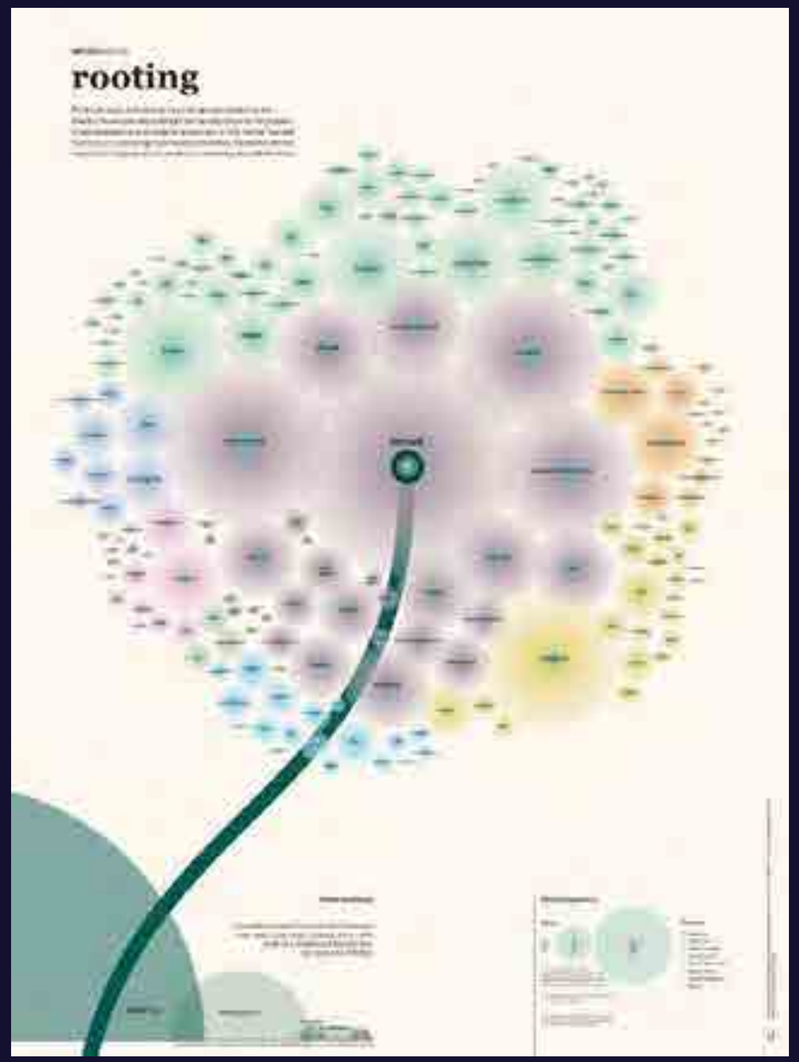
9:21 PM - 15 Oct 2017

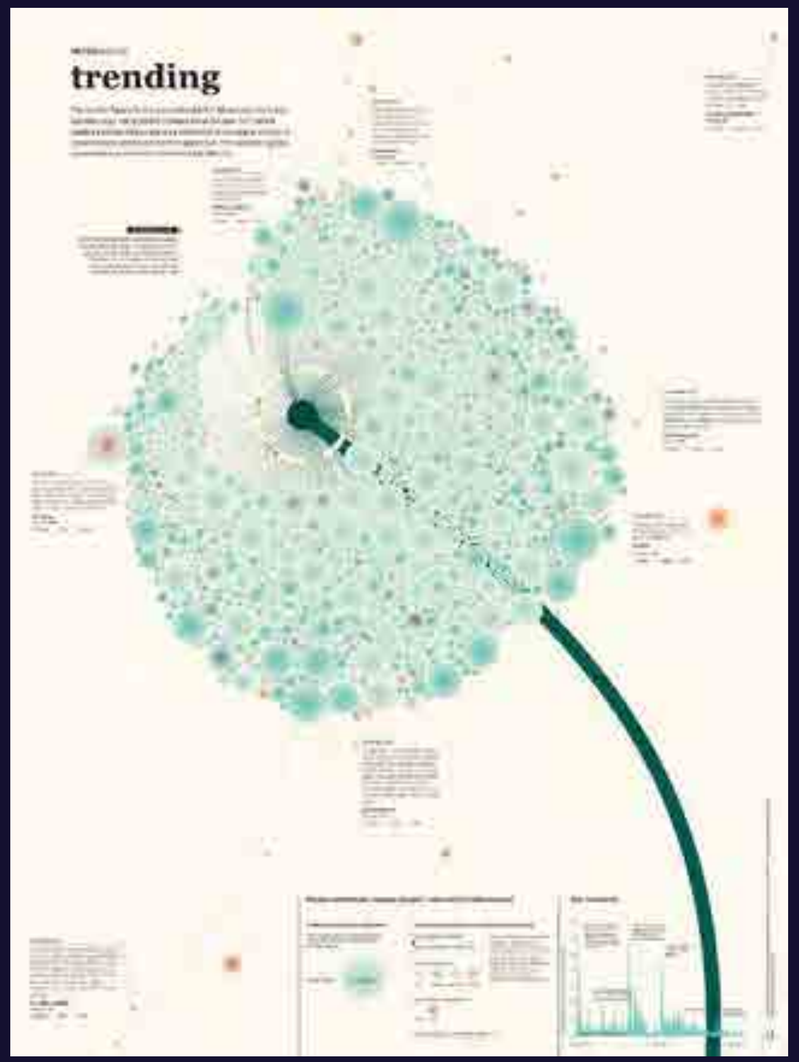
24,340 Retweets **52,844** Likes

57K 24K 53K

In collaboration with Lucia Koncincova

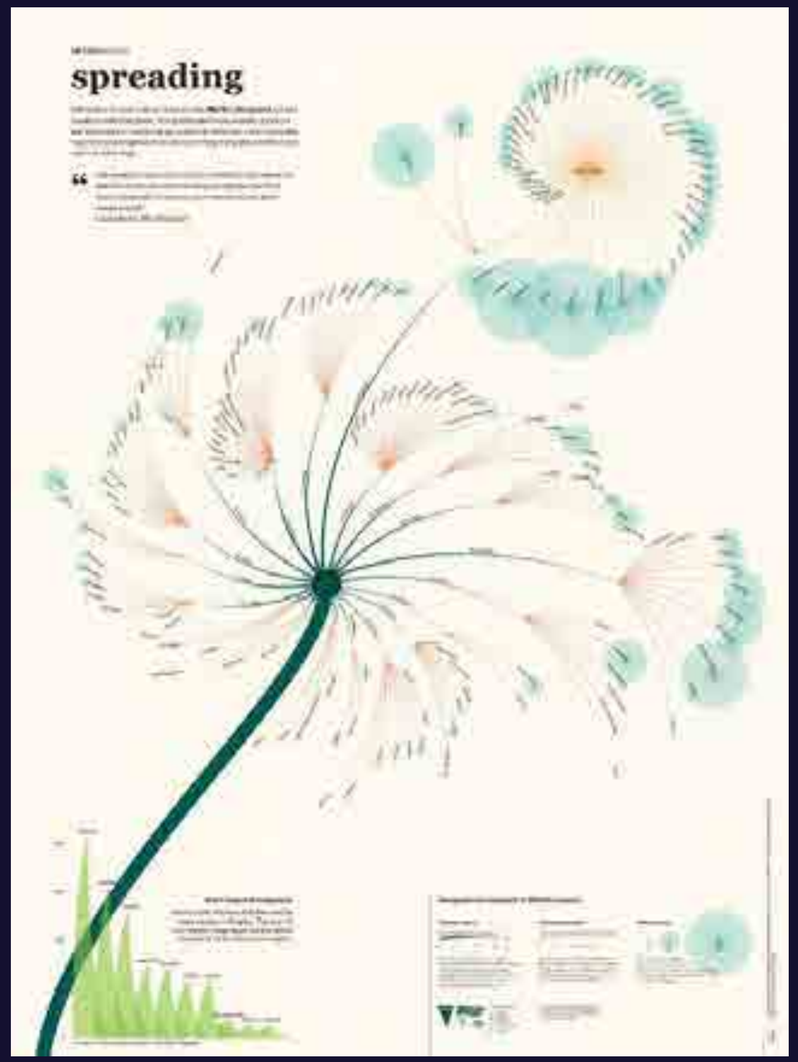


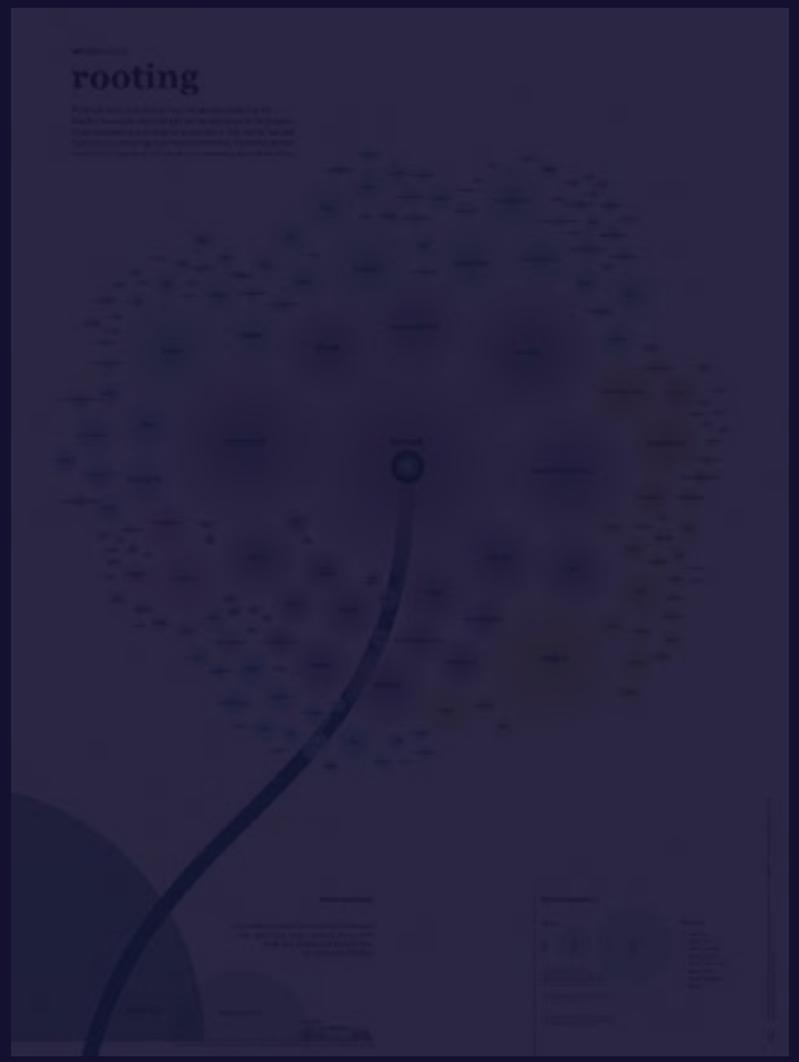


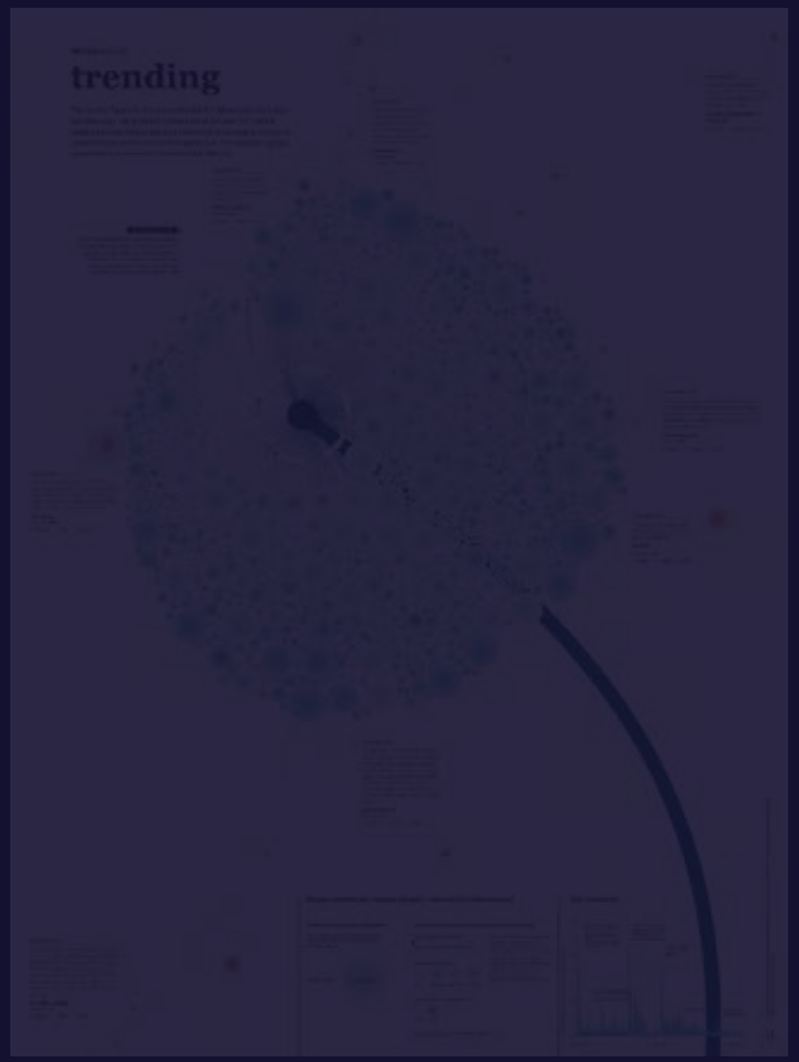


metoomentum.com / A visual analysis of the MeToo Movement

In collaboration with Lucia Koncincova

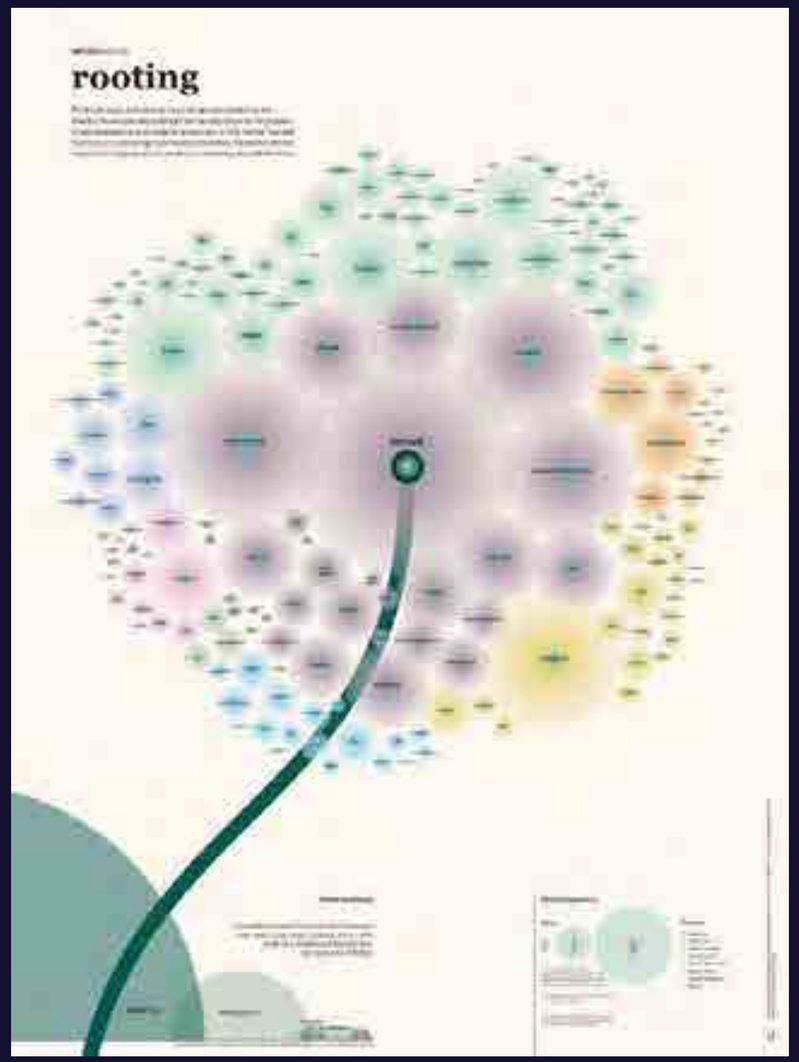






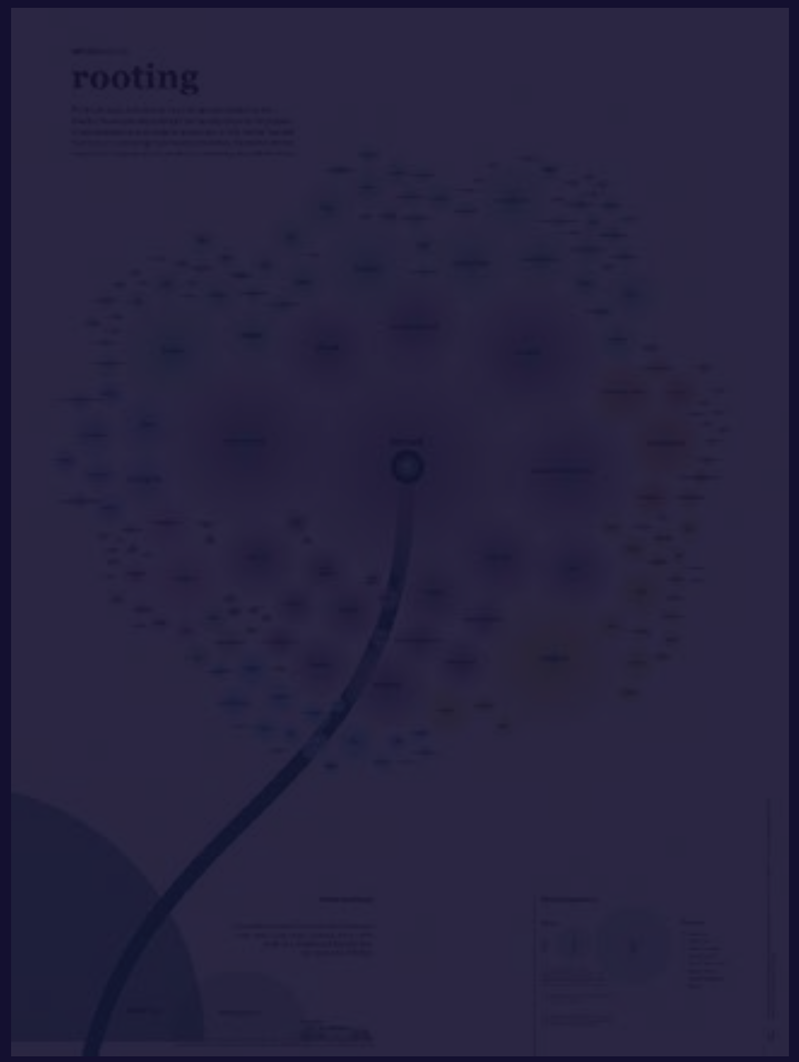
metoomentum.com / A visual analysis of the MeToo Movement

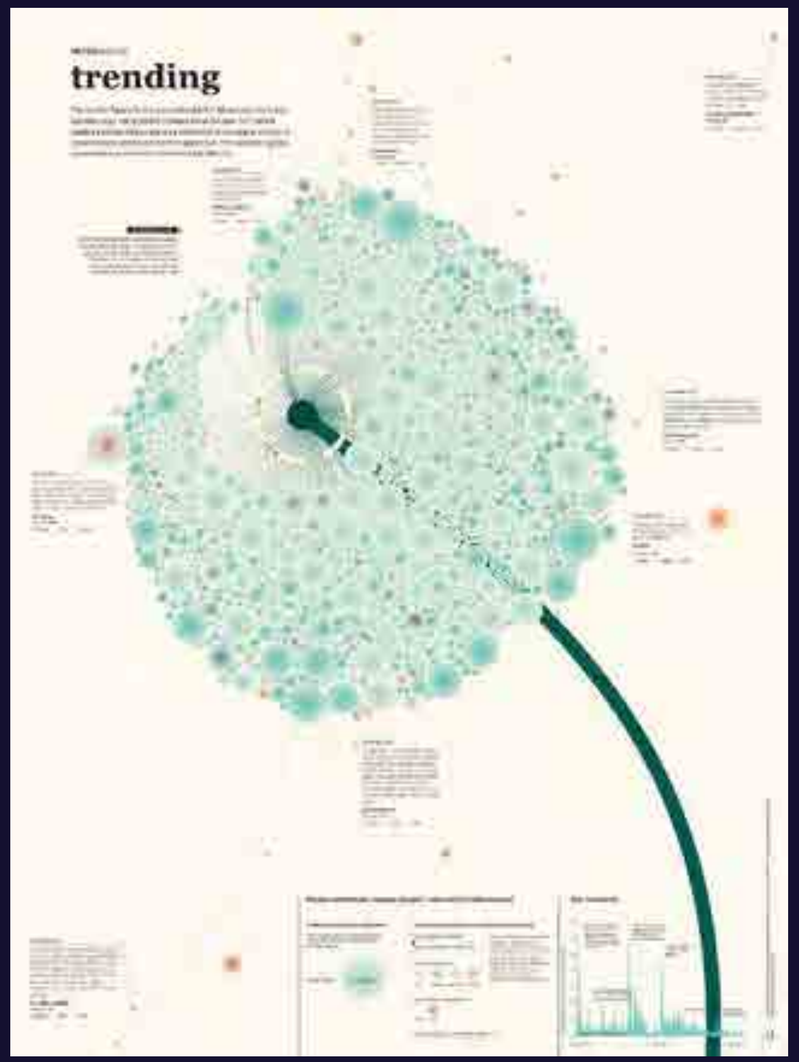
In collaboration with Lucia Koncincova



metoomentum.com / A visual analysis of the MeToo Movement

In collaboration with Lucia Koncincova

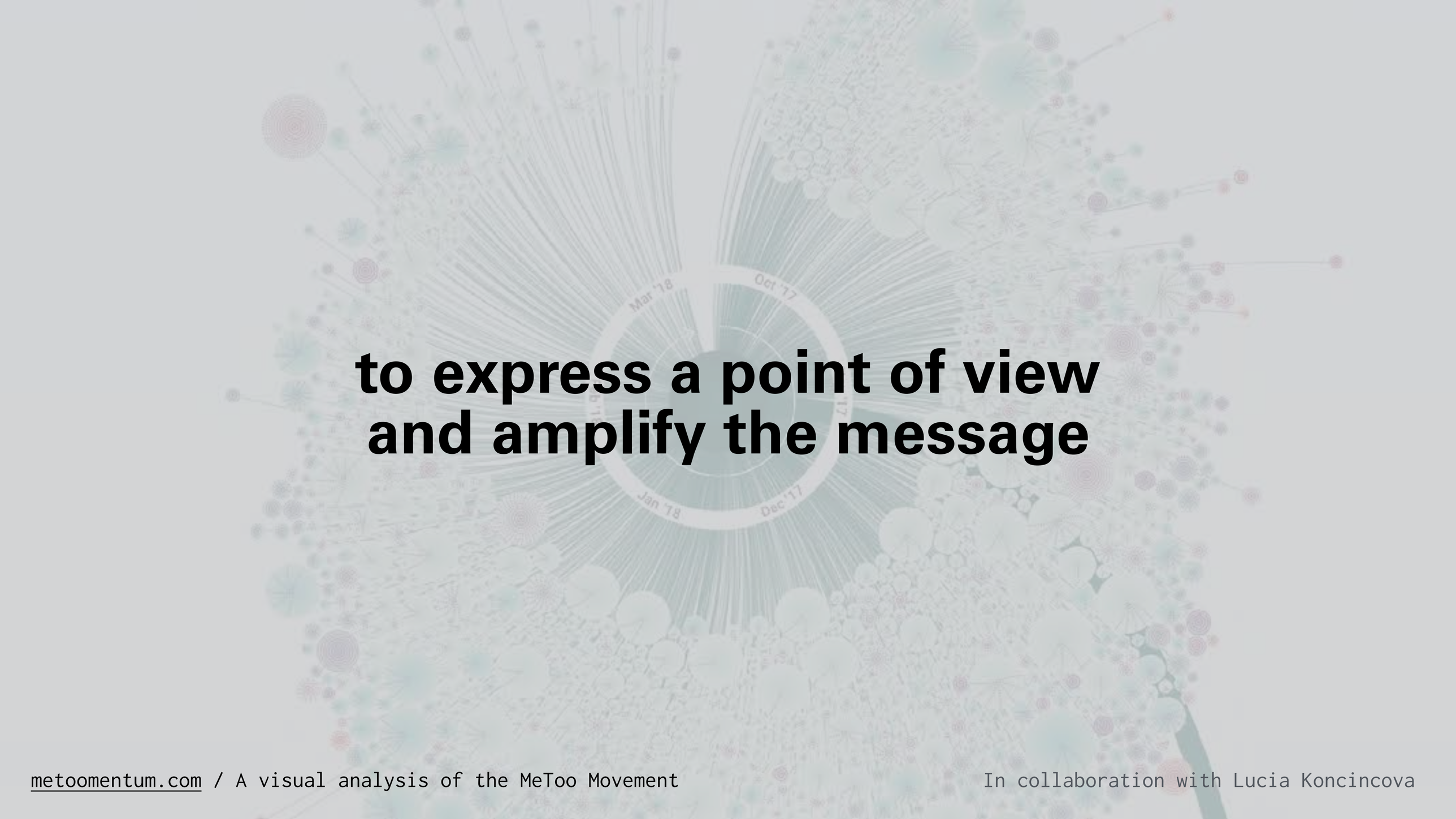




metoomentum.com / A visual analysis of the MeToo Movement

In collaboration with Lucia Koncincova

In collaboration with Lucia Koncincova



to express a point of view and amplify the message

knowledge comes from...

experiences

record and collect the data

How can we celebrate the role that Siemens plays in making our cities smarter?

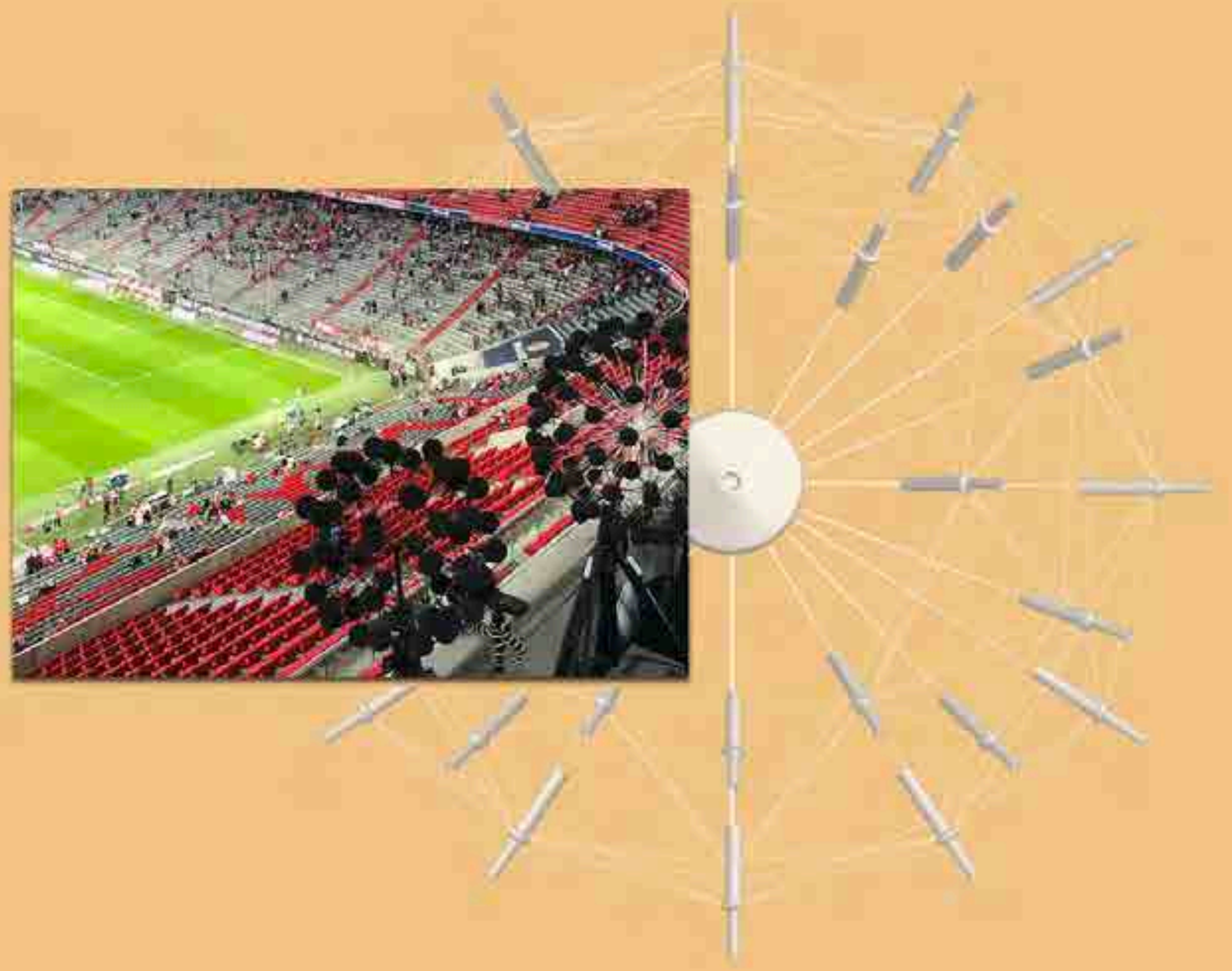
reimaginethegame.economist.com

Siemens / Reimagine the Game

In collaboration with Signal Noise

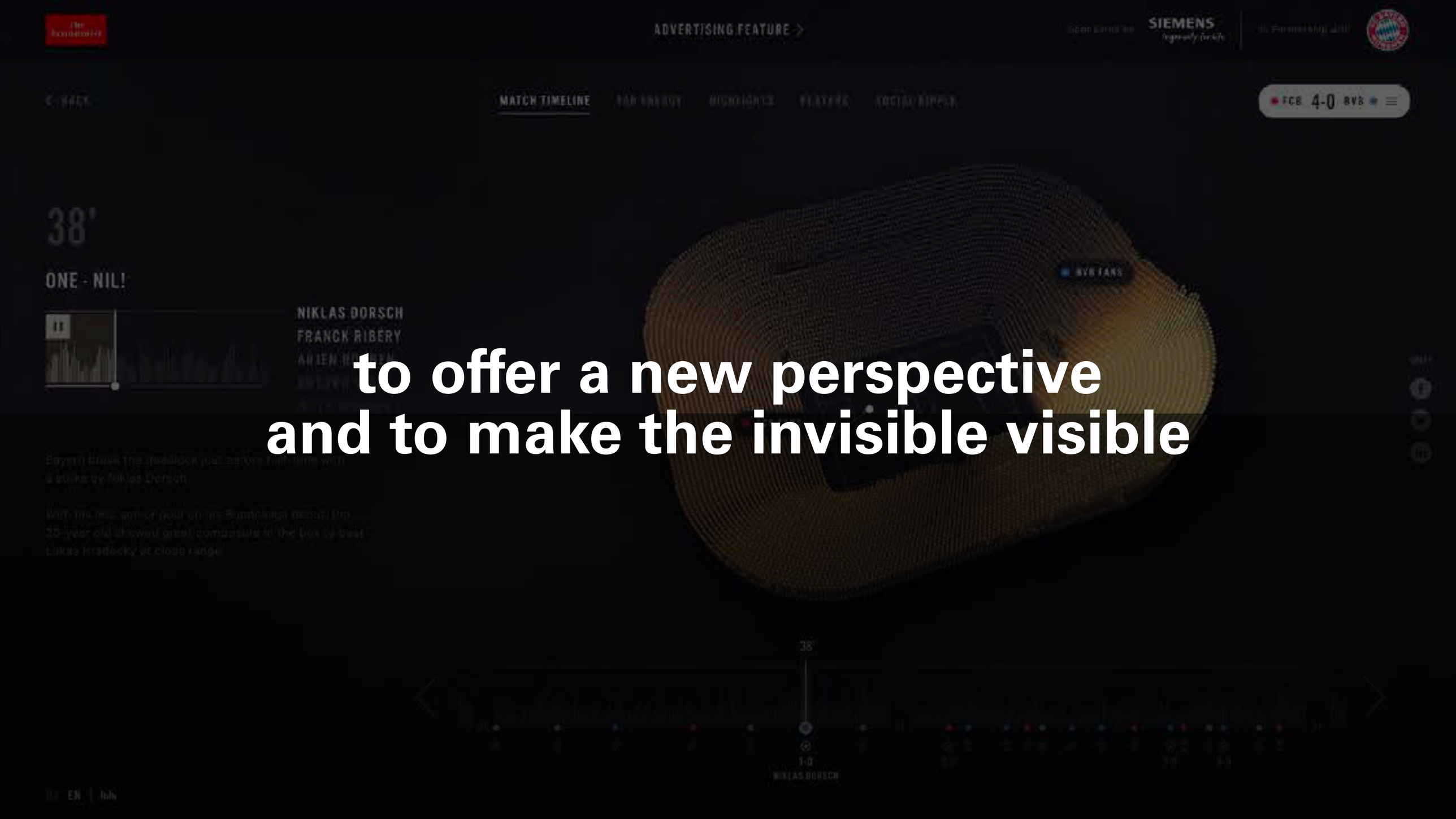
Siemens / Reimagine the Game

In collaboration with Signal Noise



Siemens / Reimagine the Game

In collaboration with Signal Noise


ADVERTISING FEATURE
SIEMENS
MATCH TIMELINE
FCB 4-0 BVB
38'
ONE - NIL!
NIKLAS DORSCH
FRANCK RIBERY
BVB FANS
to offer a new perspective
and to make the invisible visible
38
1-0
NIKLAS DORSCH

knowledge comes from...

missing data

showing or filling the blanks

How has the Coronavirus transformed London during the first year of the pandemic?

London Under the Microscope

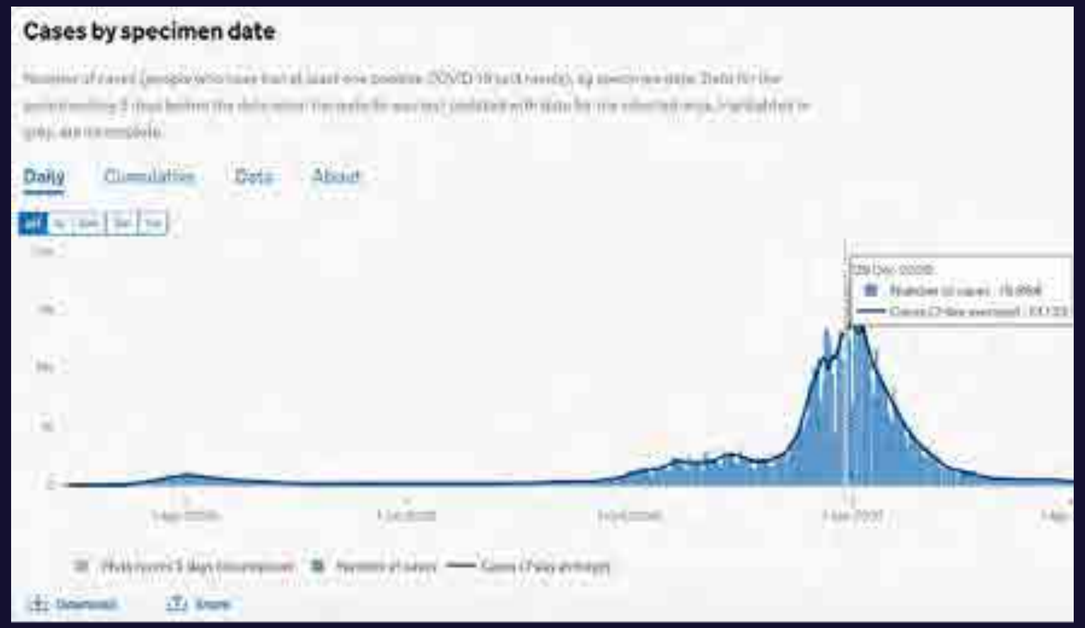
LONDON UNDER THE MICROSCOPE

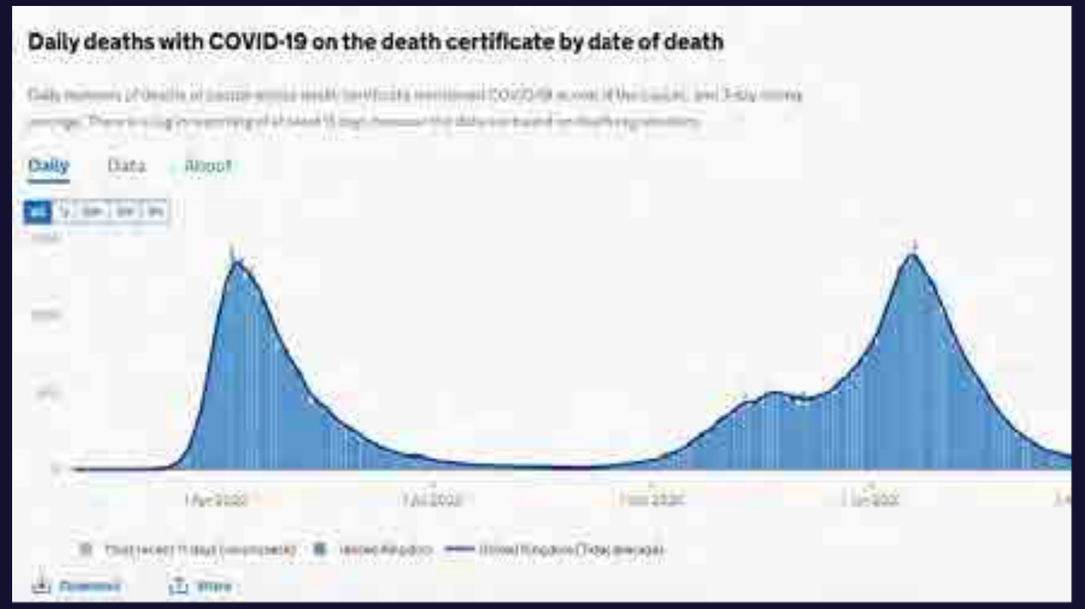
Code: **Arpad Ray**

Sonification: **Duncan Geere, Loud numbers**

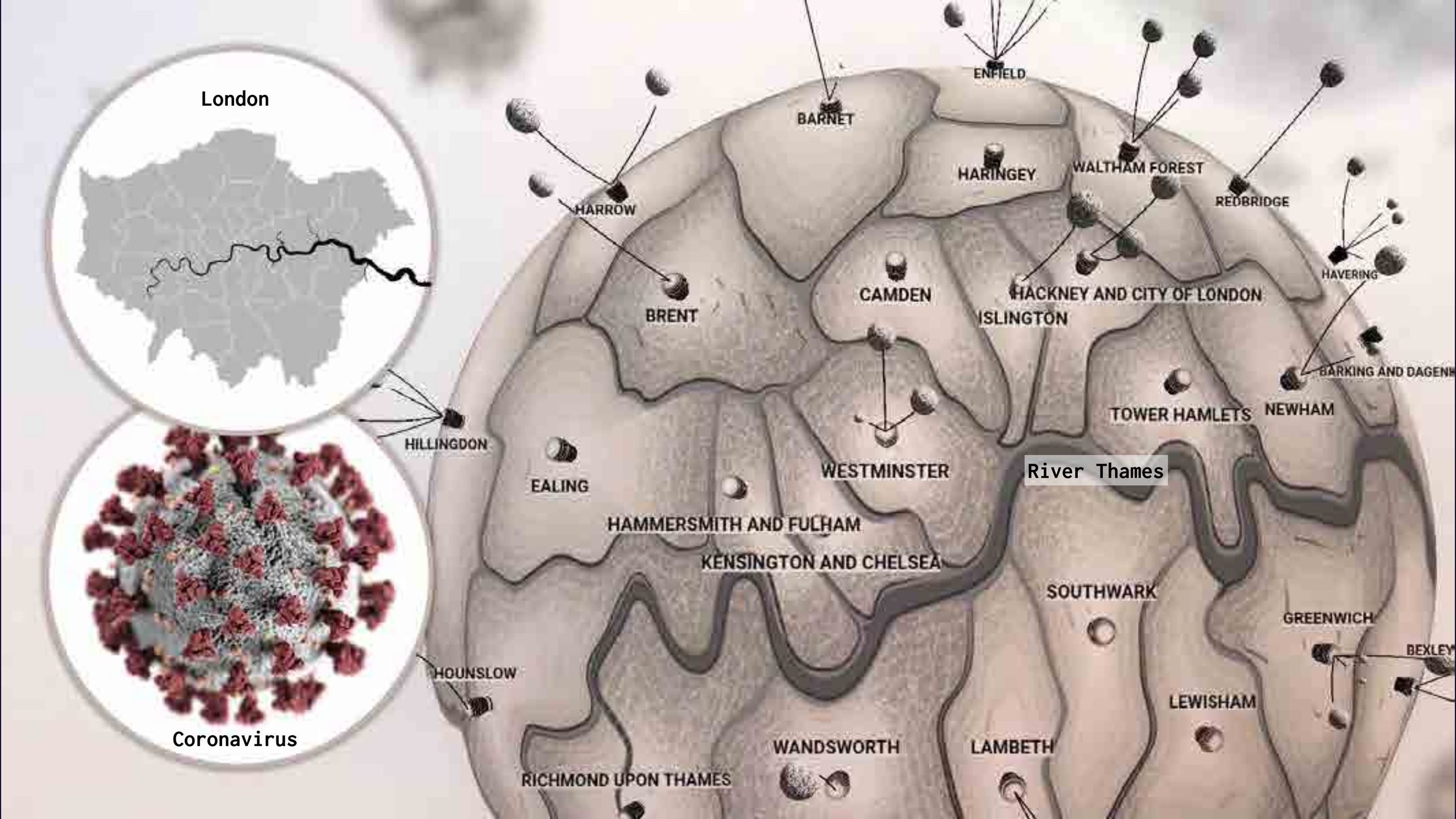
Research assistant: **Mariana Surillo**

Supported using public funding by
ARTS COUNCIL ENGLAND

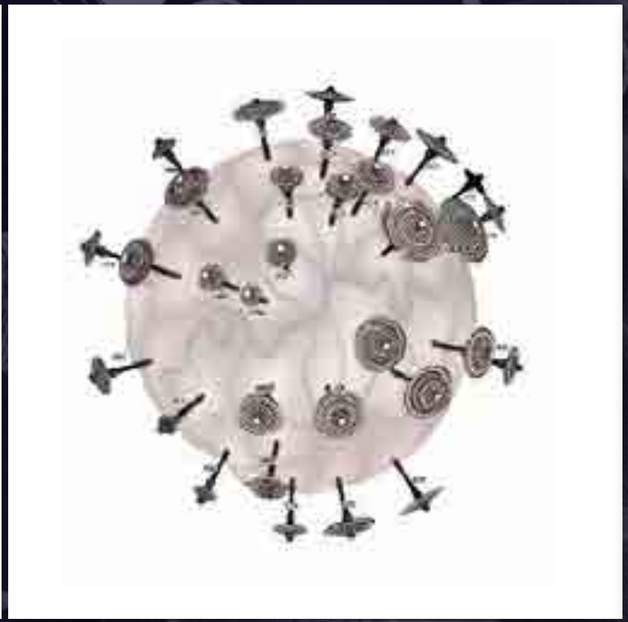




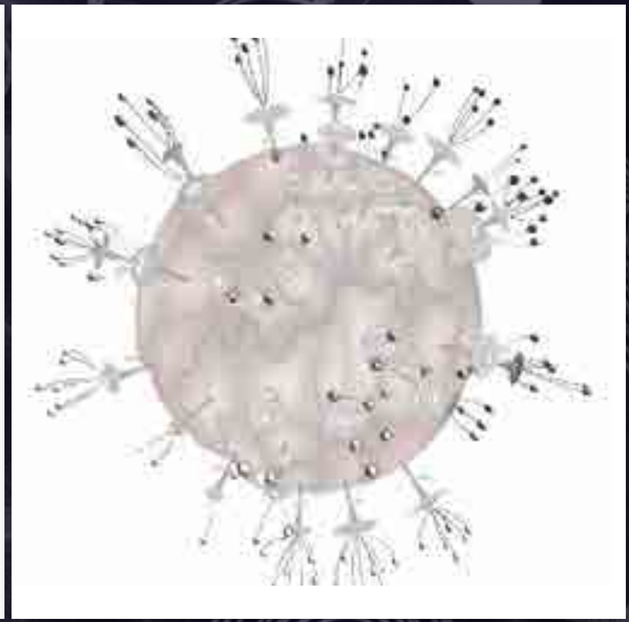
Date	Category	Copy	Quote source	Source
4 Mar 2020	Data	First confirmed death		ONS data
9 Mar 2020	New mutant	B.1.1.1		15_Mutants_Physics
11 Mar 2020	Quote	Covid-19 declared a pandemic	World Health Organization	https://www.who.int/director
12 Mar 2020	Buzzword	Self-isolate		https://www.gov.uk/governm
17 Mar 2020	Event	Working from home advised		https://data.london.gov.uk/d
18 Mar 2020	Buzzword	Panic buying		https://www.reuters.com/art
20 Mar 2020	Buzzword	Furlough		https://www.att.org.uk/covid
21 Mar 2020	Event	Schools and pubs close		https://data.london.gov.uk/d
24 Mar 2020	Timeline	First lockdown		https://data.london.gov.uk/d
26 Mar 2020	Event	Clap for Carers brings Londoners together		https://www.mylondon.news
1 Apr 2020	Event	Wimbledon cancelled		https://www.espn.co.uk/ten
3 Apr 2020	Event	NHS Nightingale Hospital opens		https://www.england.nhs.uk
5 Apr 2020	Quote	We will meet again	Queen Elizabeth	https://www.youtube.com/w
8 Apr 2020	Data	Highest daily death toll (327)		04_Daily Deaths_London_De
18 Apr 2020	Data	Mortality rates highest in poorest areas		https://www.theguardian.co
23 Apr 2020	Data	Cases constantly decreasing		01_Daily Cases_Total
26 Apr 2020	Event	London Marathon postponed		https://www.mylondon.news
6 May 2020	Quote	Black Britons four times more likely to die from Covid-19	Office for National Statistics	https://www.theguardian.co
11 May 2020	Buzzword	Quarantine		https://www.gov.uk/governm
20 May 2020	New mutant	B.1.177		15_Mutants_Physics
28 May 2020	Event	Black Lives Matter protests begin		https://www.theweek.in/new
1 Jun 2020	Event	Schools reopen		https://data.london.gov.uk/d
10 Jun 2020	Quote	Earlier lockdown would have halved death toll	Professor Neil Ferguson	https://www.standard.co.uk/
13 Jun 2020	Buzzword	Support bubble		https://www.bbc.co.uk/news
17 Jun 2020	Buzzword	Shops reopen		
23 Jun 2020	Quote	Our national hibernation is coming to an end	Boris Johnson, Prime Minister	https://www.theguardian.co
4 Jul 2020	Event	Hospitality reopens		https://data.london.gov.uk/d
11 Jul 2020	Data	Increased public transport use, but numbers travelling far below pre-pandemic levels		Google Mobility Dataset
14 Jul 2020	Quote	We must prepare for a second wave of infections	Professor Stephen Holgate	https://www.independent.co


London
Coronavirus
ENFIELD
BARNET
HARINGEY
WALTHAM FOREST
REDBRIDGE
HARROW
HAVERING
CAMDEN
HACKNEY AND CITY OF LONDON
BRENT
ISLINGTON
BARKING AND DAGENH
TOWER HAMLETS
NEWHAM
HILLINGDON
River Thames
EALING
WESTMINSTER
HAMMERSMITH AND FULHAM
KENSINGTON AND CHELSEA
SOUTHWARK
GREENWICH
BEXLEY
HOUNSLOW
LEWISHAM
WANDSWORTH
LAMBETH
RICHMOND UPON THAMES

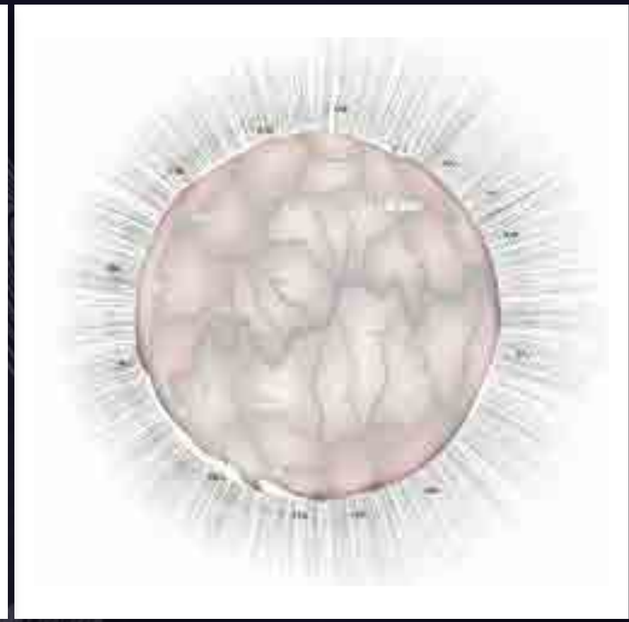
Mobility



Covid-19 Cases



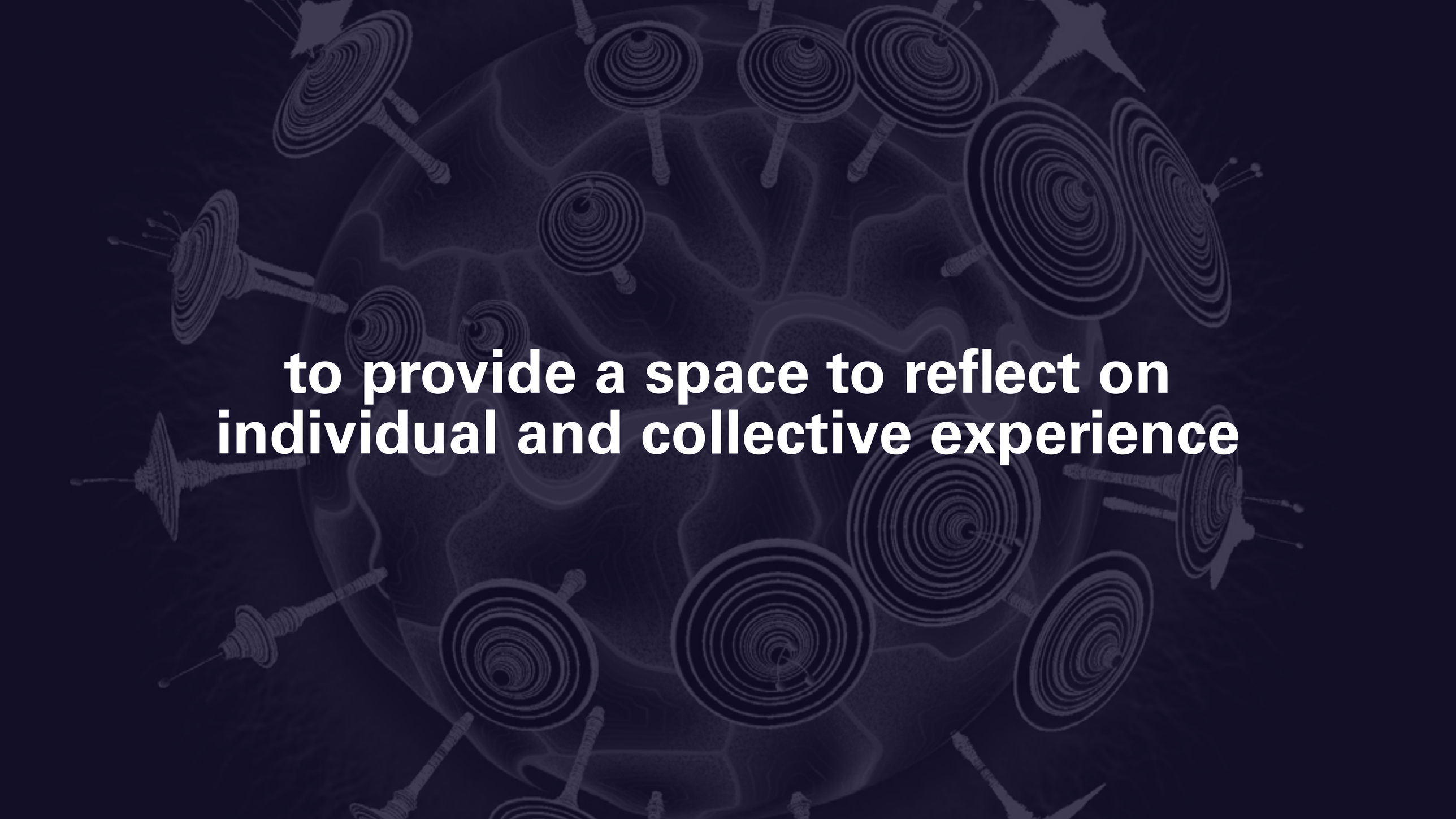
Covid-19 Deaths



Vaccines

Code: Arpad Ray

Sonification: Duncan Geere, Loud numbers


to provide a space to reflect on
individual and collective experience

visualizing (communicating) ~~data~~ *knowledge*

Seeing

`visualisation`

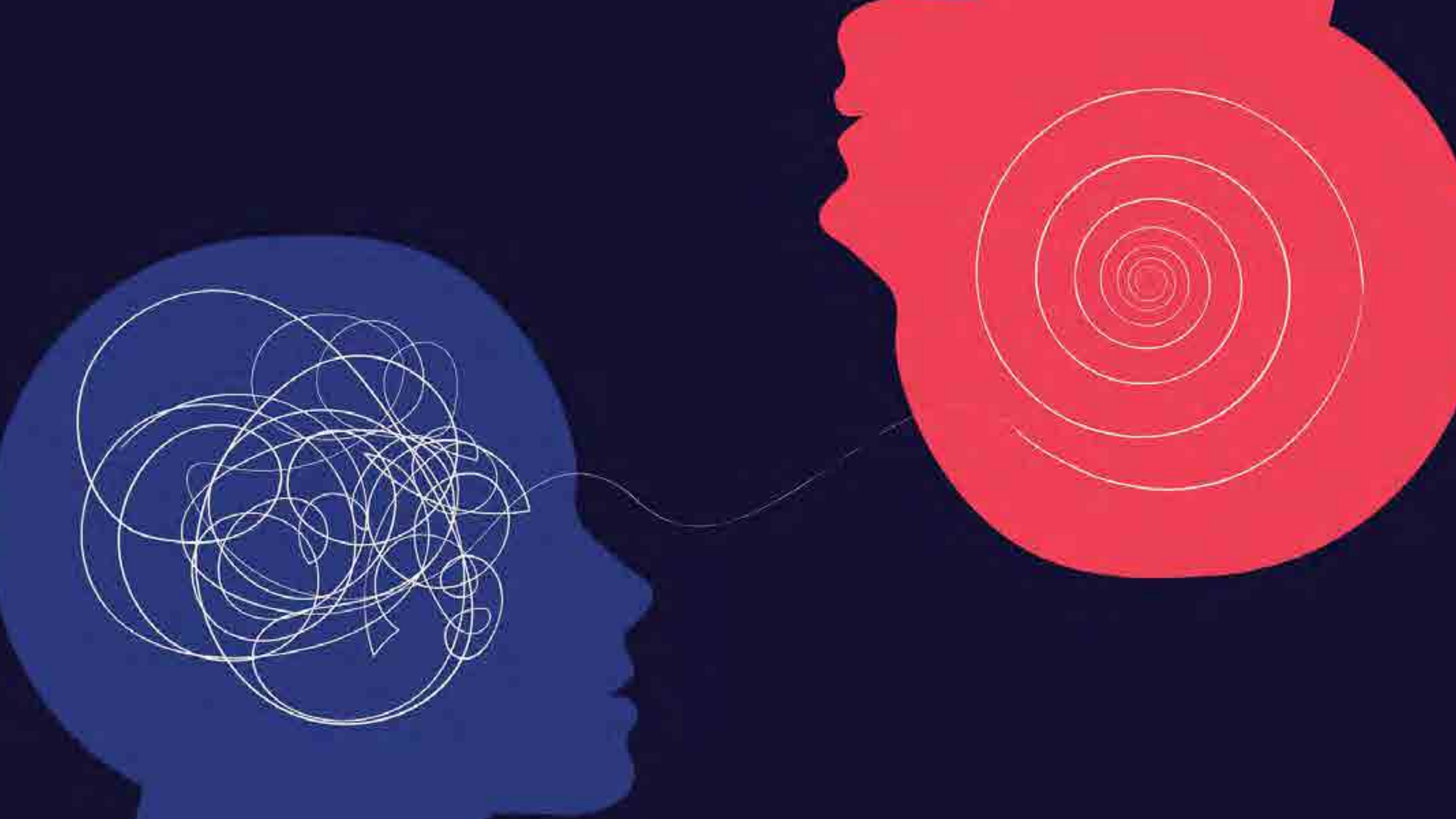
Sensing

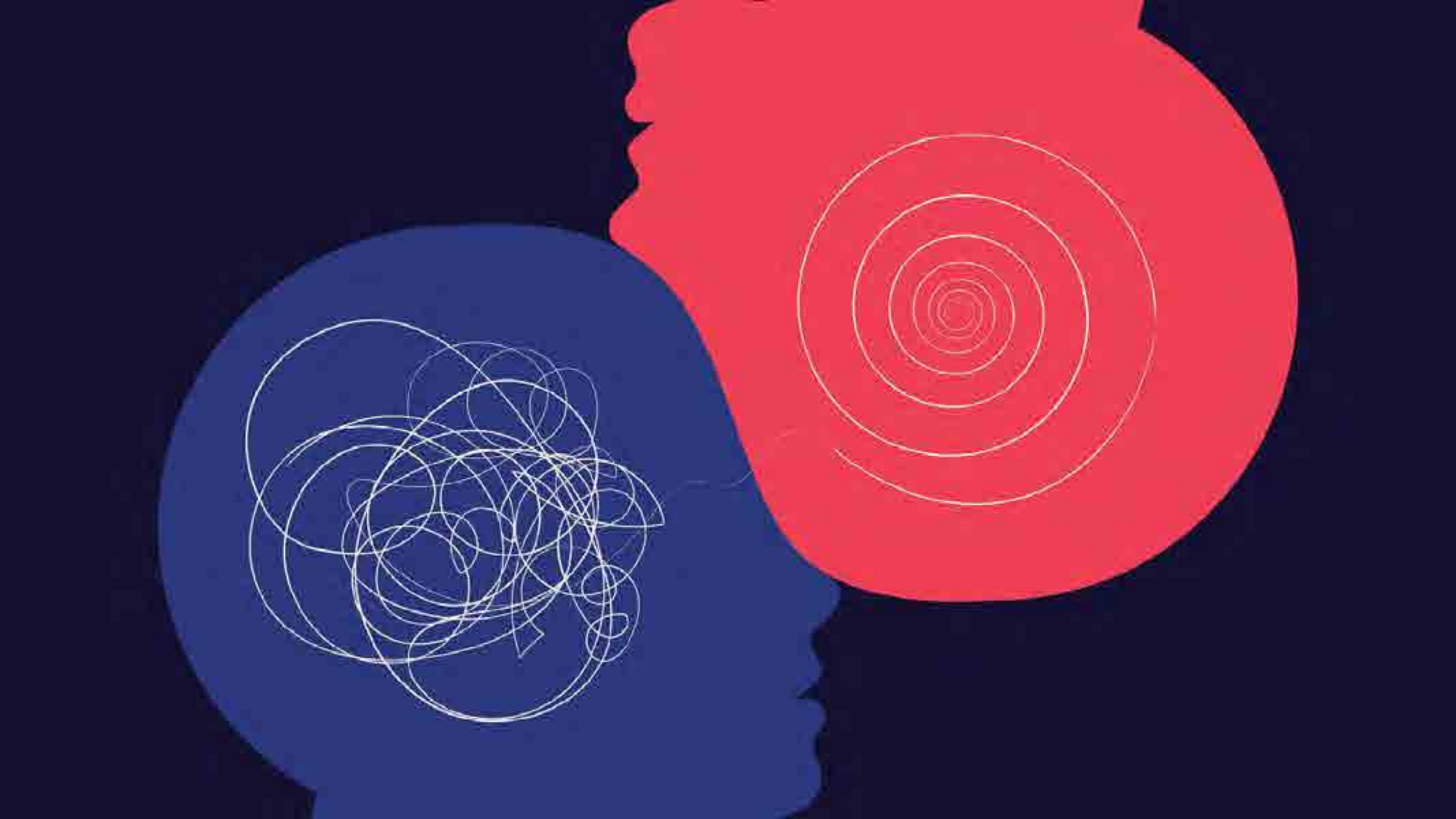
`experience`

Stimulating

`transformation`

A self portrait // circa 1990





We have the power
to influence/shape
how other people
understand the world

to get us closer to the truth
and to one another

¡gracias!

Valentina D’Efilippo
www.valentinadefilippo.co.uk
@defilippovale