

# Data Montage: Towards Coherence in Multimodal Data Representation

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# Multimodal Data Representations



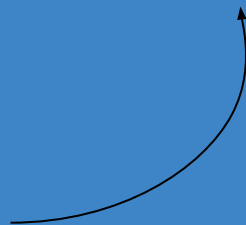
## Montage of Attraction

A way of combining different visuals and sounds in order to evoke associations and comparisons in a film

**Molecular Units**

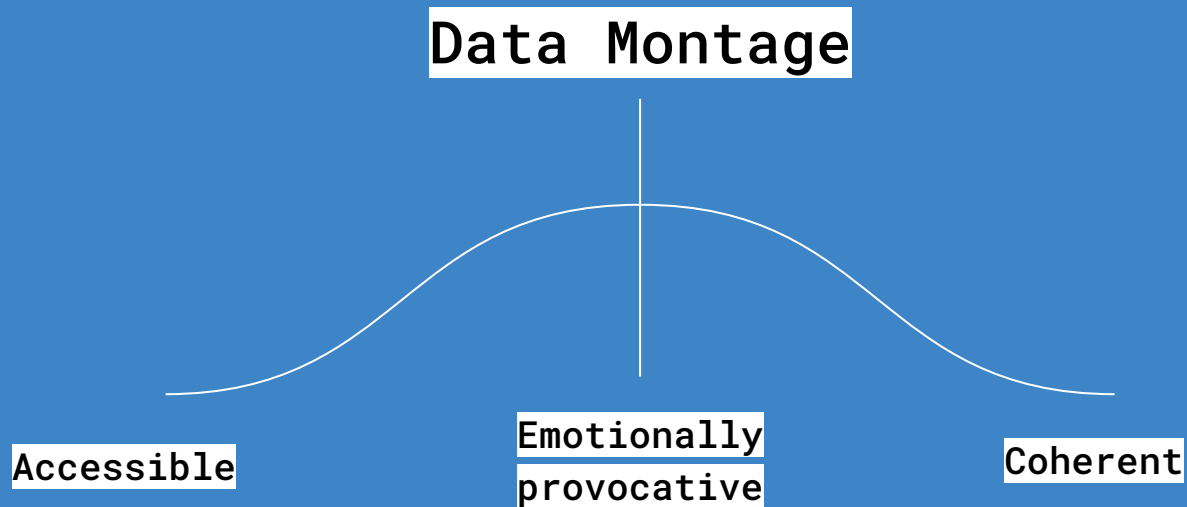
According to montage of attraction, an effective theatrical performance comprises heterogeneous components that, while maintaining their meaningful individuality, when fused offer a deeply engaging and emotionally stimulating experience

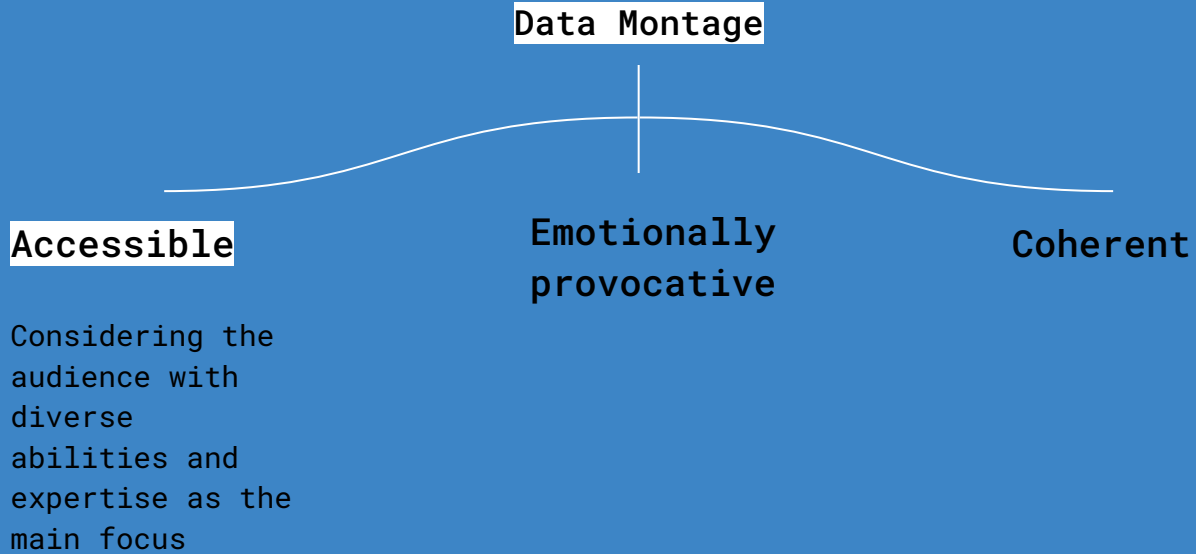
**Organic Unity**

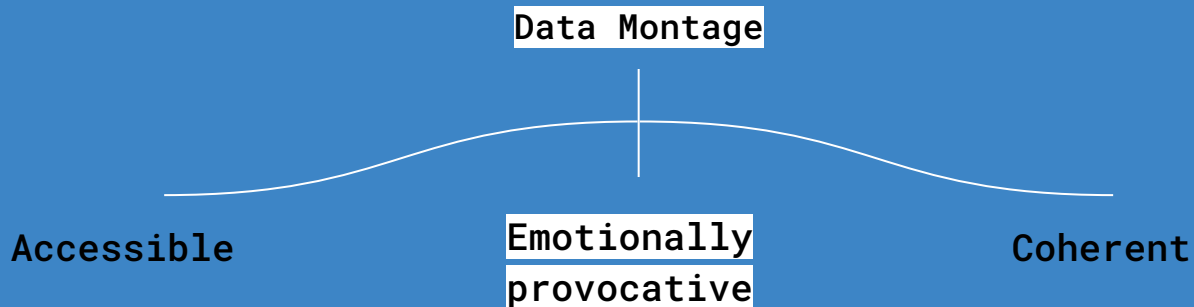


# Data Montage

Careful interweaving of perceptual variables in multimodal interfaces

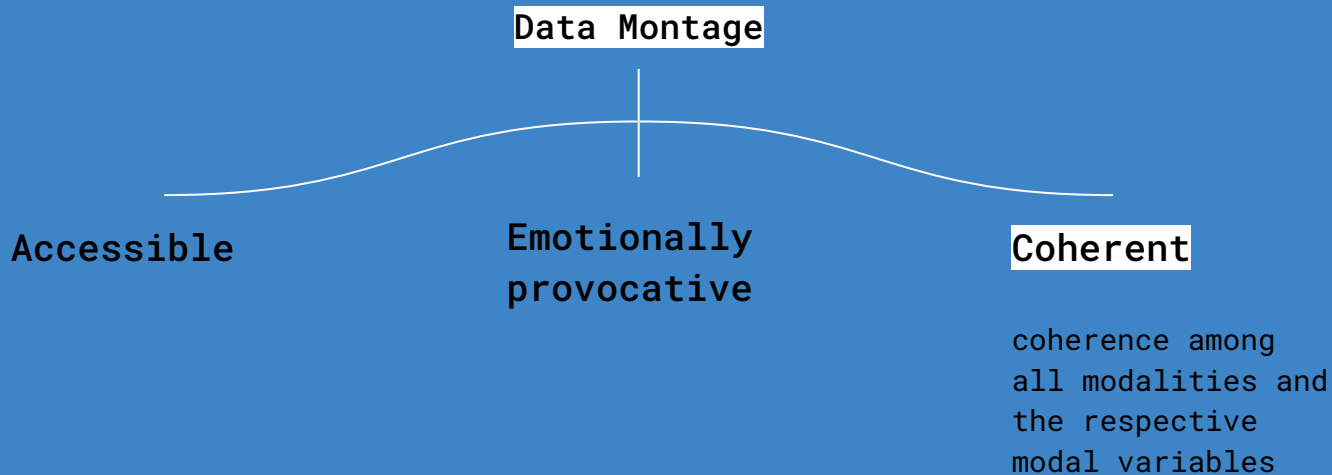






elevated emotional  
impact from the  
interweaving of  
modalities, the  
subject matter,  
and the underlying  
data





# Data Montage Exemplars

	Visualization	Sonification	Auralization	Olfaction	Edibalization	Physicalization
Tied in Knots	Blue	White	Green	White	White	White
COVID Death Toll	Blue	Yellow	White	White	White	White
Eyes	Blue	Yellow	White	White	White	Orange
Data Cuisine	Blue	White	White	White	Red	Orange
Commute	Blue	Yellow	White	White	White	White
Histogrammy	Blue	Yellow	White	White	White	White
50 Years Swiss Music Charts	Blue	Yellow	Green	White	White	White
Silent Cries of China's Depressed Netizens	Blue	Yellow	White	White	White	White
Der Sound zum Tiefen Fall der SPD	Blue	Yellow	White	White	White	White
Way of Curating	Blue	White	Green	White	White	White
Reconstructing Seven Days of Protests	Blue	White	Green	White	White	White
Museum of the World	Blue	Yellow	White	White	White	White
Smellmap of Paris	Blue	White	White	Purple	White	White

# Coronavirus: How can we imagine the scale of Covid's death toll?

By the BBC Visual and Data Journalism team | 7 December 2020 | Coronavirus

The suffering from the coronavirus pandemic has come to define 2020. But how do you grasp the immense scale of loss?

Flowers - symbols of grief, peace, and love - serve as a tribute to those who have died.

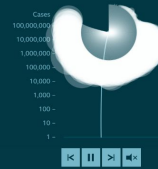
Imagine the pandemic as a **flower**. In the animation below, the **stem** grows as Covid-19 cases increase over time and the **petals** unfurl as more people die with the disease.

Automatic animations on

29 September

33,649,775 cases

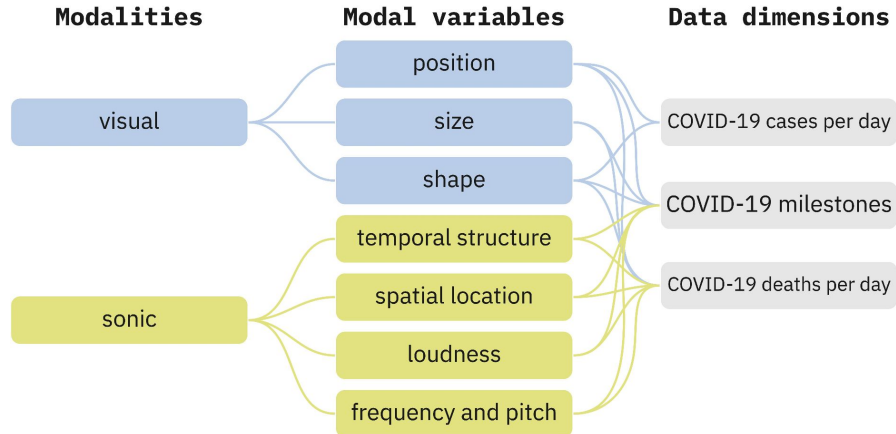
1,008,688 deaths

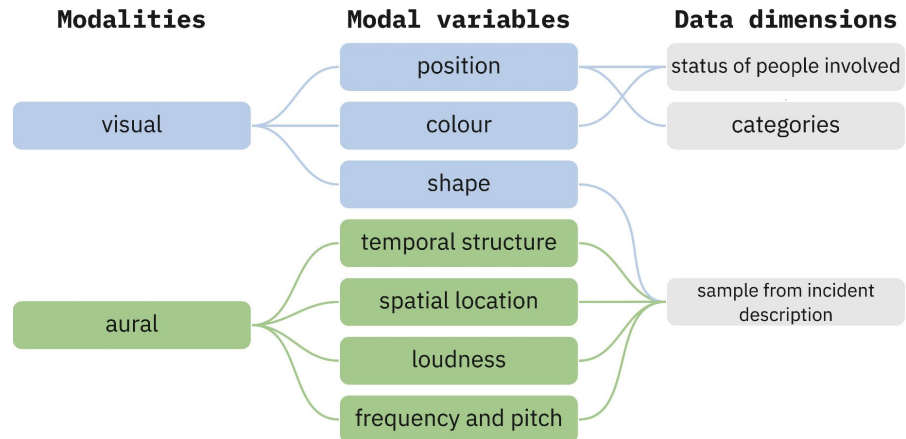


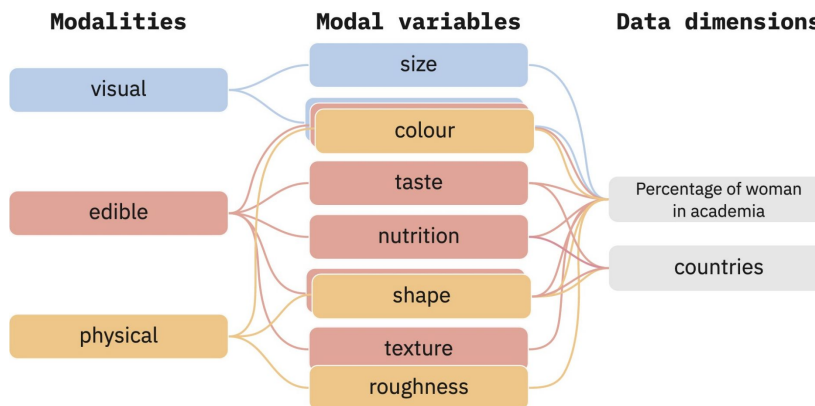
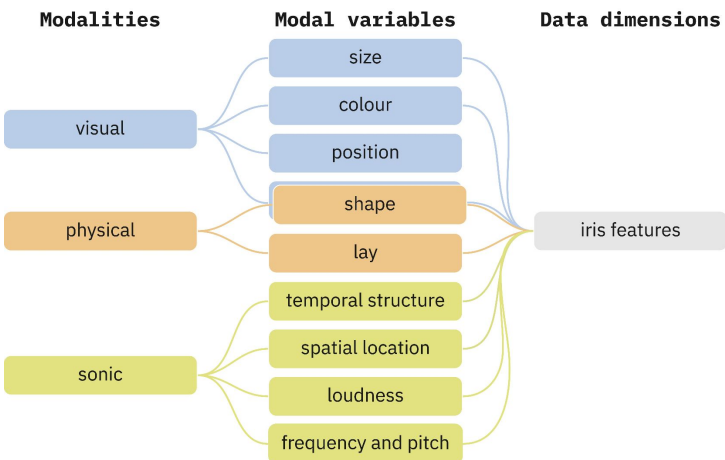
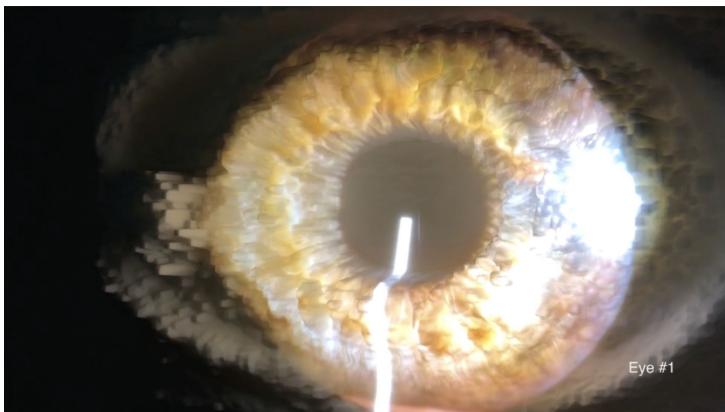
Click the **sound button** to hear the pandemic represented in audio.

The world was firmly in the grip of Covid-19 by April, as the growing petals in this animation show. Then, despite restrictions introduced by many countries, the wave of daily deaths worldwide dipped only slightly.

The number of daily deaths started climbing again at the end of summer in the northern hemisphere. And the petals representing the most recent data are the largest of all, showing that the number of daily deaths around the world is higher now than it has ever been.







Redundant encoding

Blurred boundaries between modalities

Emotional response

Beyond what meets the eyes, ears, and hands

Thank you!

Questions?