

PROGRAMMING AND ART

Data Visualization and Beyond

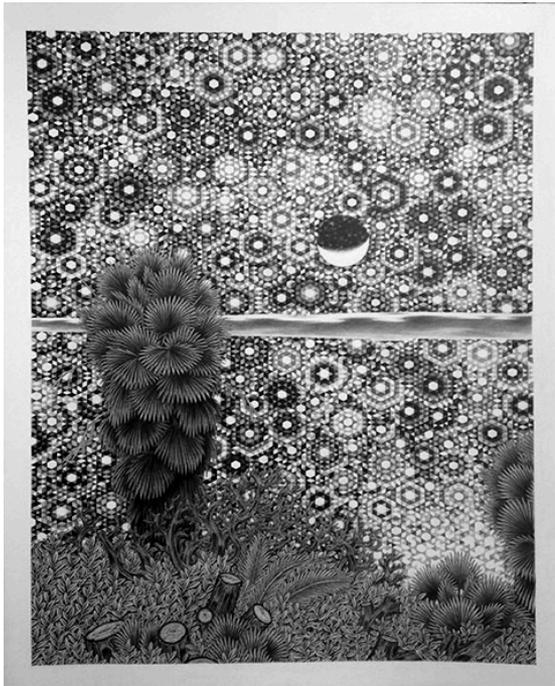
MARGARITA DANIELYANTS

ART185GL

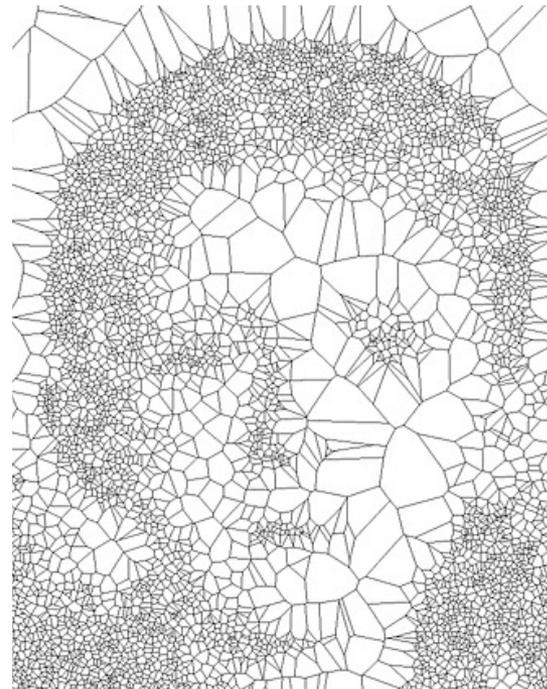
PROGRAMMING

What is and is not art?

“craft plus a special degree of inspiration”



Analog – Graphite on Bristol



Digital - Computation

PROGRAMMING

- A creative act, involves aesthetics
- Efficiency and a vision

```
function representFeaturedLabels (labels) {
  // Remember smallest and second-smallest indices
  var firstIndex = -1, secondIndex = -1;
  var html = "";
  for (var i = 0; i < labels.length; i++) {
    // Is this label smaller than the current second-smallest?
    if (secondIndex == -1 || labels[i] < labels[secondIndex]) {
      // Is this label also smaller than the current smallest?
      if (firstIndex == -1 || labels[i] < labels[firstIndex]) {
        // This label is the smallest, so (re-)represent
        html = "<div><span>" + labels[i] + "</span> <span>" +
          labels[secondIndex] + "</span></div>";
        firstIndex = i;
      }
    }
    else {
      // Replace the current second-smallest label
      html = html.replace(labels[secondIndex], labels[i]);
      secondIndex = i;
    }
  }
  return html;
}
```



PURPOSES

- **Communicating information of all sorts**
- **Aesthetically pleasing – easier for viewer to be engaged**
- **Implemented anywhere from science to graphic design**
- **A realm of art on its own**
- **Plays into visual perception and cognition**

DATA VISUALIZATION

Can be conveyed through various visual outlets

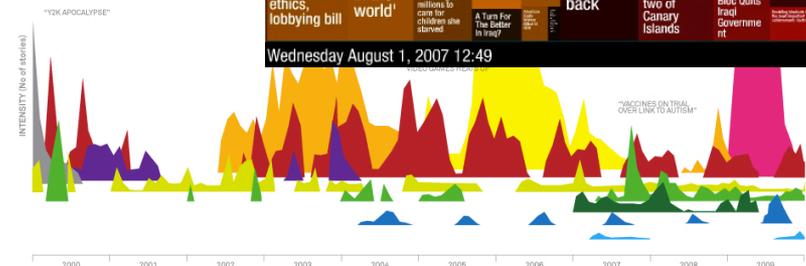
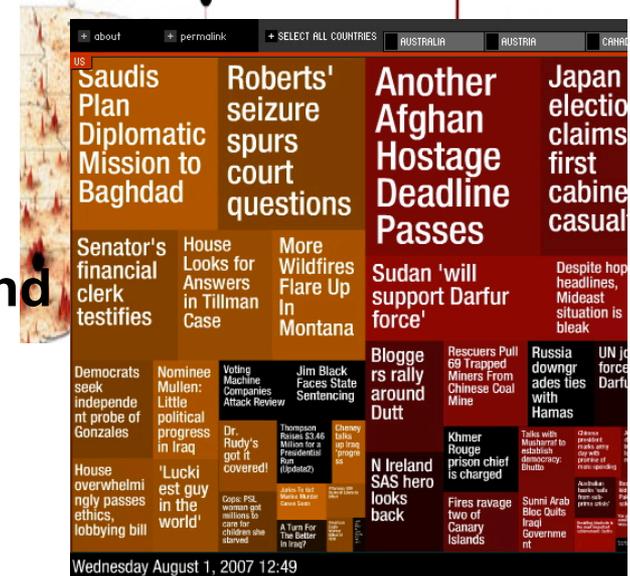
Data, histograms, data connections

Providing new experience for consumers and observers with a new visual experience

Jer Thorp: the ultimate goal is to explore the human side of data. “design has a really interesting role of bridging that gap and making data more human”

ibers.

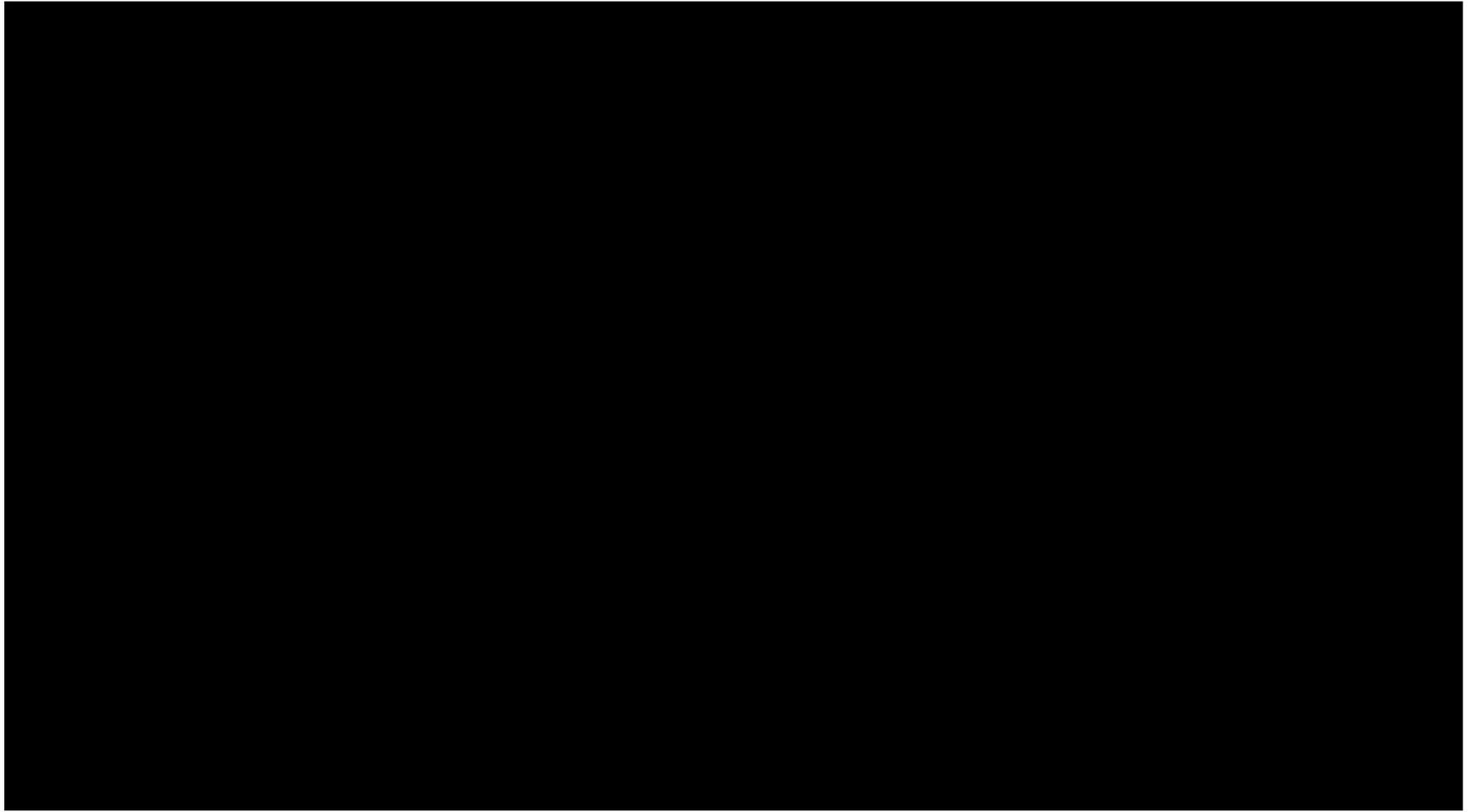
80% of the U.S. population lives in a metropolitan area. Top five population centers are numbered



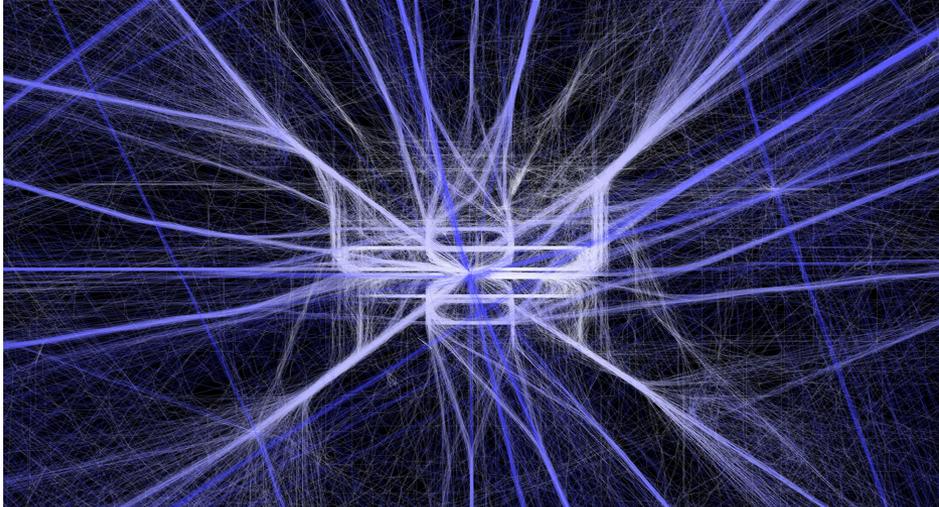
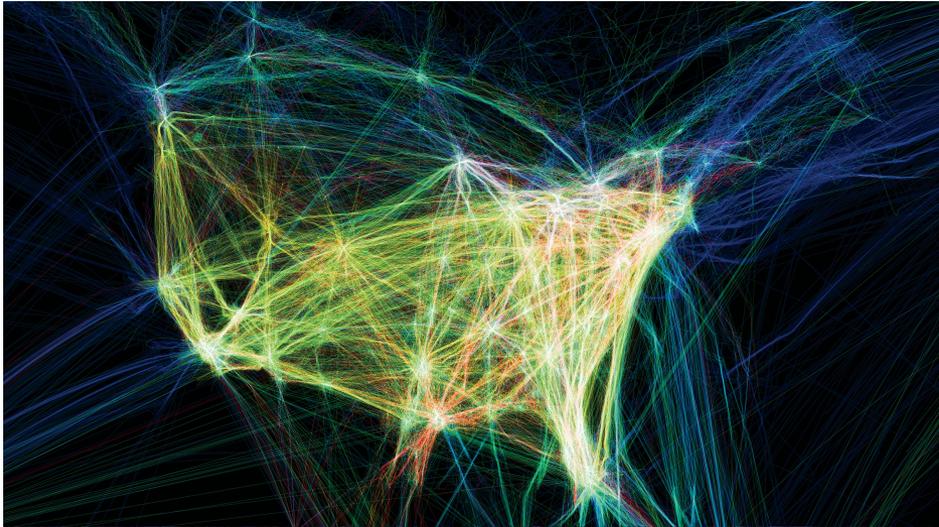
Story (worldwide deaths)

- ▲ Killer Weaps (1000)
- ▲ Killer Weir (0)
- ▲ Mobile Phones & Tumours (0)
- ▲ Autism Vaccinations (0)
- ▲ Asteroid Collision (0)
- ▲ Millennium Bug (0)
- ▲ Mad Cow Disease (204)
- ▲ Violent Video Games (Unknown)
- ▲ SARS (774)
- ▲ Bird Flu (282)
- ▲ Swine Flu (702)

Mountains Out of Molehills
A timeline of global media scare stories.

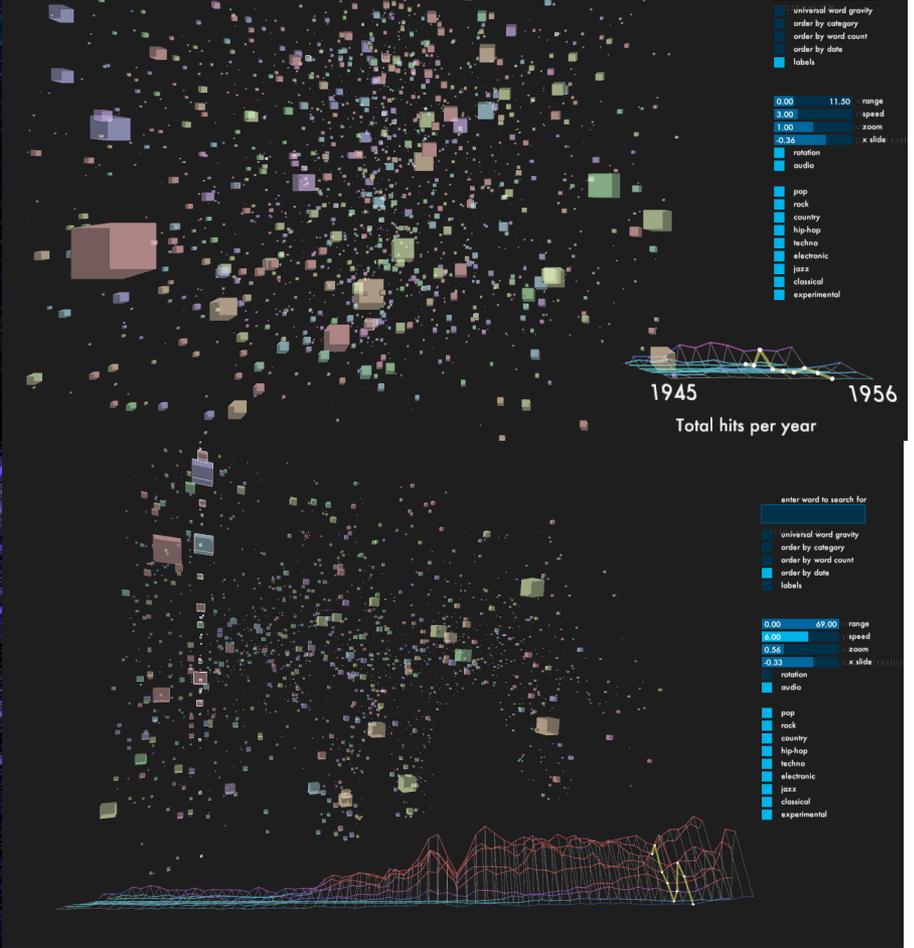


DATA VISUALIZATION

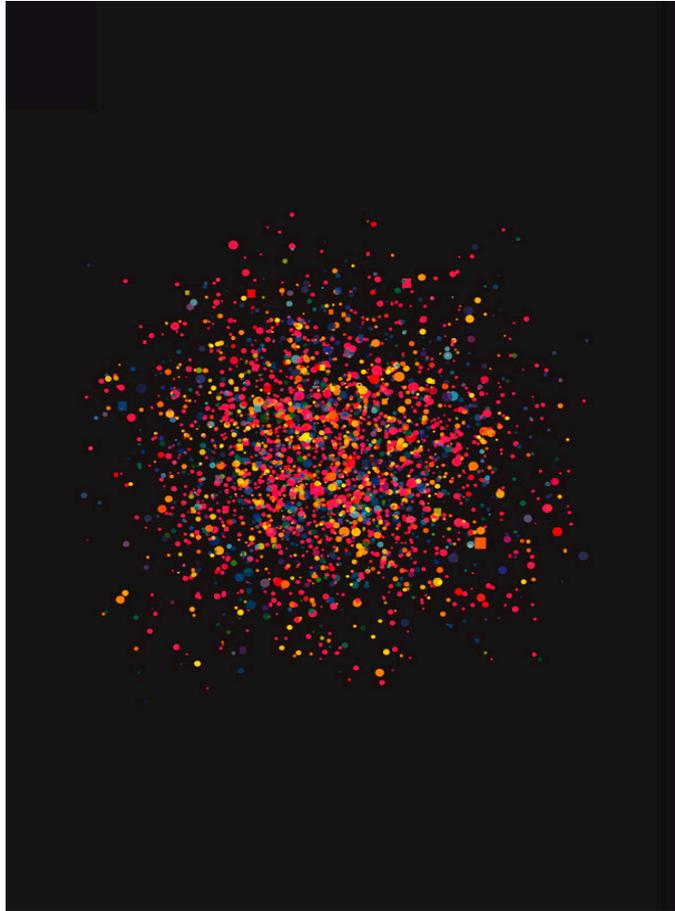


Music Journalism Timeline

A collection of New York Times articles about music, structured by genre.



WE FEEL FINE



An exploration of human emotion on a global scale

- **Harvesting human feelings from a number of weblogs using phrases “I feel/ I am feeling”**

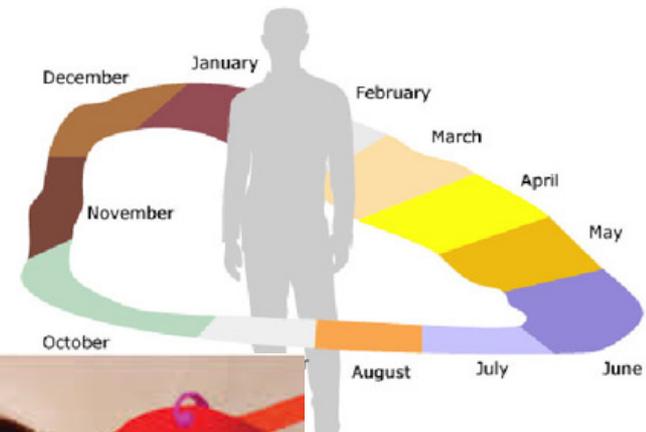
Self organizing particle system

SYNESTHESIA

Perceiving more than one sensory pathway at a time

Spatio-temporal synesthesia

space and time



Chromesthesia

sound and color



APPLICATIONS



Oefner, Dancing Colors

vibrations



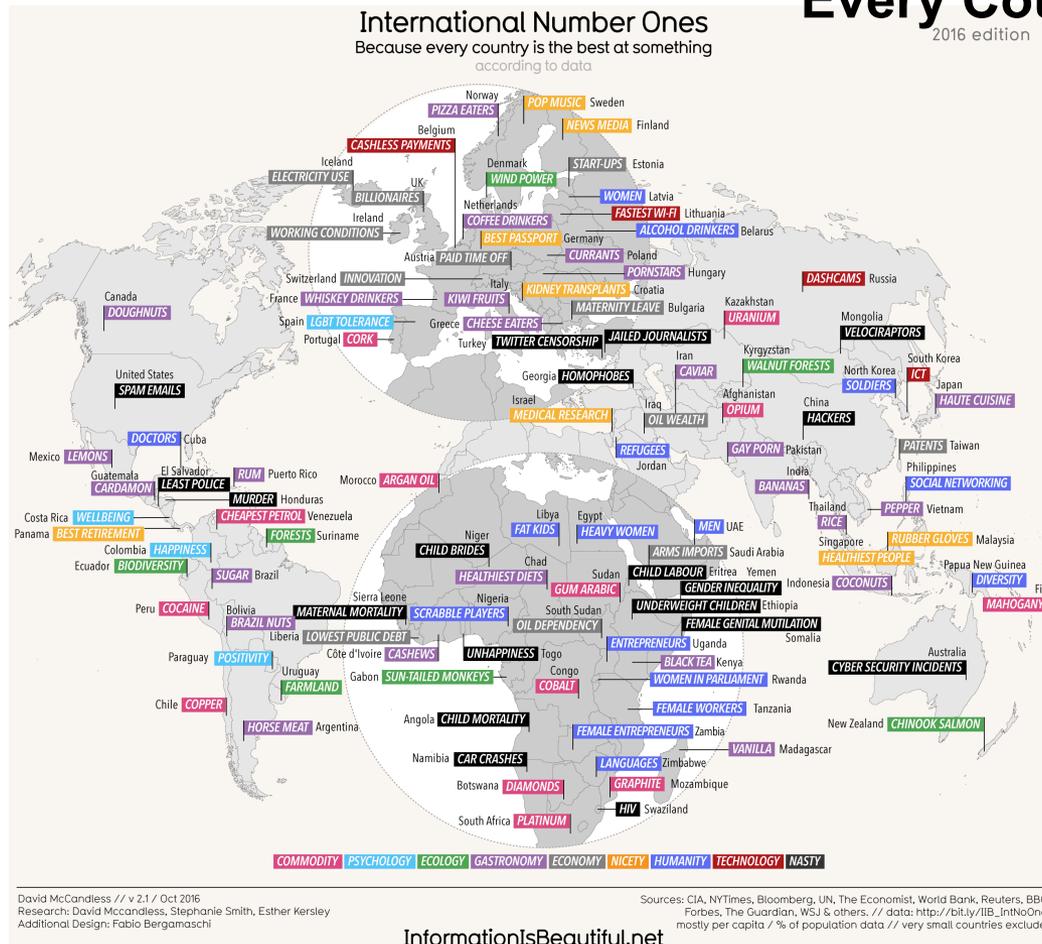
Oefner, Field of Sound

movement

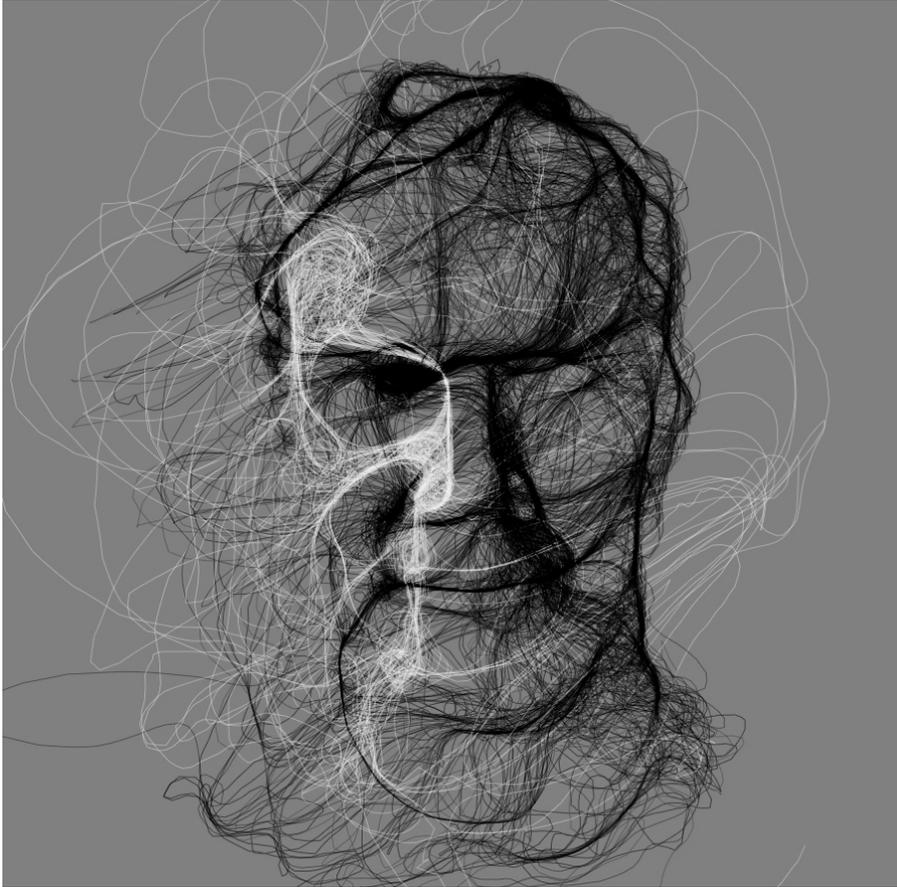
DAVID MCCANDLESS'S WORK

“data is a fertile, creative medium”

Every Country is Best at Something



GOLAN LEVIN



INTERSTITIAL FRAGMENT PROCESSOR

Interstitial Fragment Processor

Interactive installation by Golan Levin
Denver Art Museum, February 2011
www.flong.com

SOURCES

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<http://www.flong.com/projects/zoo/>

https://www.mat.ucsb.edu/~g.legrady/academic/courses/17w259/17Design_basics.pdf

<https://www.smashingmagazine.com/2007/08/data-visualization-modern-approaches/>

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