Fractalnoia – 11 Datasets You Cannot Believe Just Happened

Tomi Dufva
Aalto University
Koulukatu 20 as 21
20100 Turku, Finland
tomidufva@mac.com

Mikko Dufva
VTT Technical Research Centre of Finland
Tekniikankantu 1 PL 1300
33101 Tampere, Finland
mikko.dufva@vtt.fi

1. INTRODUCTION

The collection of data is increasing exponentially and it is more and more available to the general public as private databases are opened up. This Big Data holds promises of new insights, unparalleled innovation, even artificial intelligence. However, the ubiquity and availability of data connected to our human desire to see patterns where none exist means that humans have to deal with increasing amounts of meaningless data analysis, "fact-based" conspiracy theories and click-bait infographics. As the data is all digital it morphs easily into whatever we want, releases itself from the context and appears on fashionable graphs that may look nice, but carry no meaning.

The decoupling of data and its context is a problem in all levels of society. Cherry-picking “letting the data speak for itself”, or reducing a complex issue to a set of KPIs (key performance indicators) makes the view of an issue distorted, whether it is about corporate strategy, national policy or personal health decisions. Furthermore, because we have an implicit faith in numbers, it prohibits alternative views to an issue or at least demotes them to a lower status.

2. OUR APPROACH

How then can we reconnect with our data in a meaningful way? We argue that the first step is to become aware of just how easy it is to present data scraped from the internet, make correlations that frame it in a questionable way and present in a context which is not connected to the origins of the data in anyway. We do this not based on a rational and logical argument, but rather by giving a slightly tongue-in-cheek experience. We believe having a physical experience of manipulating the data without given instructions is more powerful in getting the message across.

In other words, in our installation we show how arbitrary and easy it is to make "data analysis", deduce causations from correlations and combine different datasets. In addition, we give the audience a physical feeling of the datasets, although it is inherently false, to further point out how the context of the dataset can be chosen. The audience gets to manipulate the data by placing everyday physical objects, such as fruit, to a table. The objects present different datasets and graphs are created based these datasets. We thus combine a primitive action of moving common objects to the digital world of information technology and project the resulting graphs for the audience to see. By being able to literally grasp the data and create any type of combination of the datasets, the audience gets to experience both the ease and complexity of drawing meaning from data.

3. TECHNICAL DETAILS

The installation uses RFID tags hidden inside the fruit. The tags are then read by two RFID readers hidden in the table. An Arduino microprocessor keeps track of the presence of the tags and controls the lights. The information about the presence and ID of the tags is sent to a computer, in which a program made in Processing draws the graphs. The data for the graphs is scraped from publicly available databases, focusing on time series data. The datasets were chosen with the aim of having a diverse presentation of issues.

4. CONCLUSION

We wish to bring to fore the role of humans in a domain that is seemingly dominated by clouds, computers and algorithms. We hope the installation is both amusing and thought-provoking, broadening the discussion around big data and data presentation.

Figure 1: *Datasets are presented as fruit and vegetables*

Figure 3: *The installation makes random conspiracy theories based on the data*

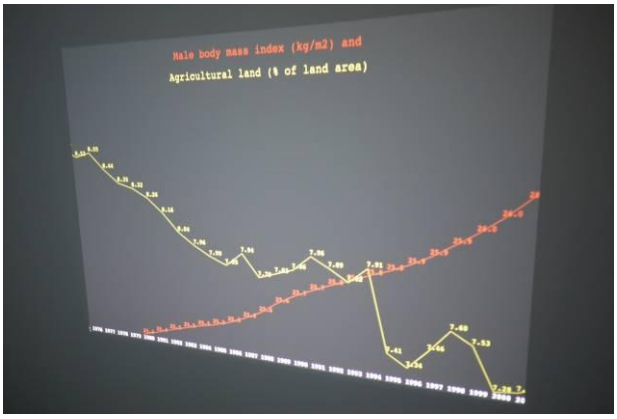

Figure 2: *Data is scaled to fit the graph*

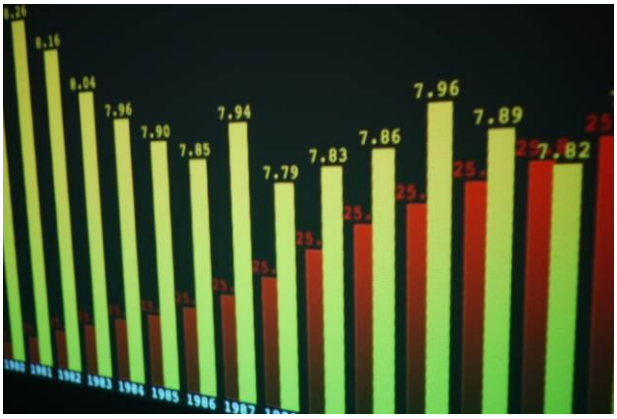

Figure 4: *Different types of graphs are included*

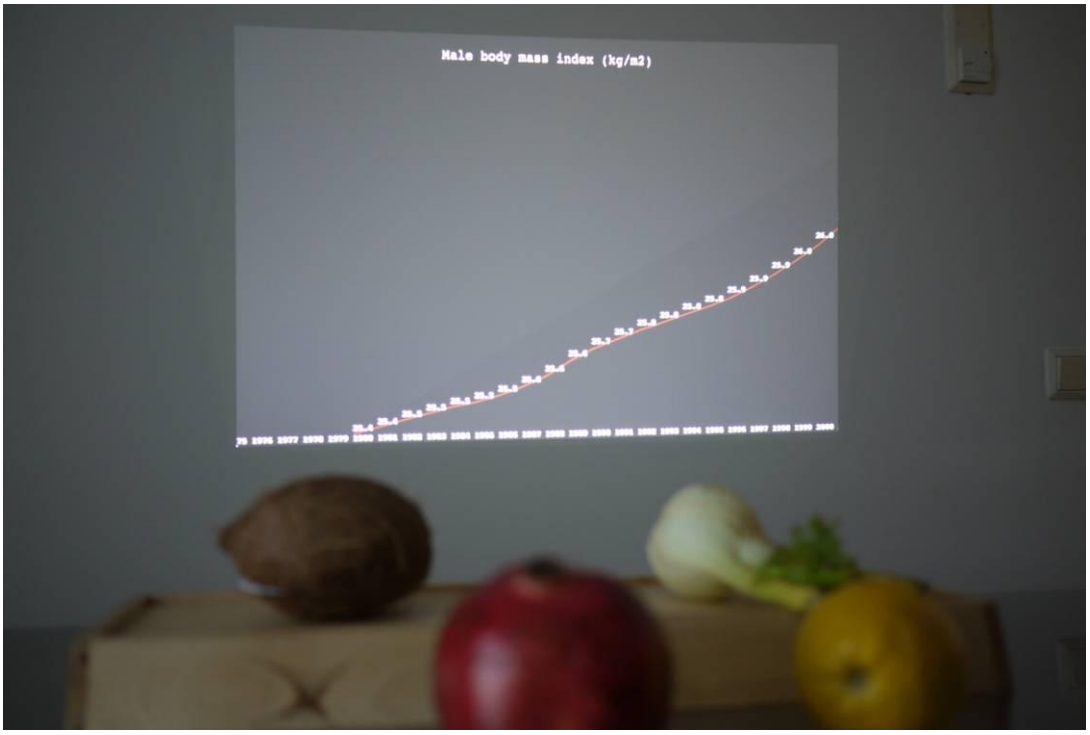

Figure 4: *Place the fruit on the table, see the data on the wall*