

Big Bang Data

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Recently, a cohort of students from the Masters in Digital Anthropology course visited the '[Big Bang Data](#)' exhibition at Somerset House. Exploring the rise of Big Data, the exhibition featured a mix of pieces commissioned from media artists alongside exhibits explaining the history and scope of the 'data explosion'. Here are a few of the students' reactions to exhibition pieces that inspired them:

Big Data and Twig Data by Jo Cunningham



The Big Bang Data exhibition identified 2002 as a landmark year for data when digital took over from analogue. During 2009, more data was produced than all the preceding years put together.

This explosion in data production is linked with the capacity to store data and one of the exhibits showed the evolution of storage devices, from punchcards that could hold just 0.08 kilobytes, to floppy disks, CDs, and finishing with DNA, 1 gram of which can store 455 exabytes. This seemed a surprising choice appearing in a case next to a 16 GB USB stick.

In fact using DNA for data storage is already in progress and recently featured in an interview in *New Scientist* with Karin Ljubic Fister, a researcher at University Medical Centre Maribor, Slovenia. Her team translates messages written in digital 1's and 0's into the four 'letters' of DNA. The DNA message can then be transferred into a plant, which can then produce seeds containing the information. A further plan is to build 'readers' for us to access this data easily e.g. from a leaf. She describes her vision for the project, 'Imagine walking through a park that is actually a library, every plant, flower and shrub full of archived information'.

For anthropologists concerned with the split of nature and culture this could be an interesting area. Replacing the rather faceless and slightly sinister images of vast data centres storing Big Data, there could be fields of data to explore, trees of knowledge to read and academic debates at your fingertips.

Data.Tron by Dmitry Ryabchuk

The 'Big Bang Data' exhibition is a highly thought provoking place, especially if you come from Digital Anthropology. It shows how data can be managed, or to be precise the different practices of data management. It would be logical to say that just as every culture has its own customs, myths, and rituals, so does it have different data management approaches.

The whole exhibition answers a question, which many anthropologists get asked, when they negotiate access to their field sites – "What kind of data will you be using in your research?" For an anthropologist almost everything is data, even the way people talk to each other at different times of day.

One of the installations did however catch my eye, as it answered the question in a different fashion. A piece by Japanese artist Ryoji Ikeda - 'data.tron'. In it he followed the idea that all knowledge, or data we have about universe, can be deconstructed to simple 0's & 1's. Using sounds and effects from different computing devices and some sci-fi tunes he created a video, which while reacting to every sound in the track also showed us how all data is being simplified until only lines of 0 & 1 are left.

It reminded me of the research by UCL researchers at [UCLIC](#) and in the [Extreme Citizen Science Project](#), both of whom were collecting anthropological material using pieces of electronical equipment, which basically did the same deconstruction as Ryoji Ikeda did in his installation – data to 0 & 1.

I've created two videos inspired by this work:

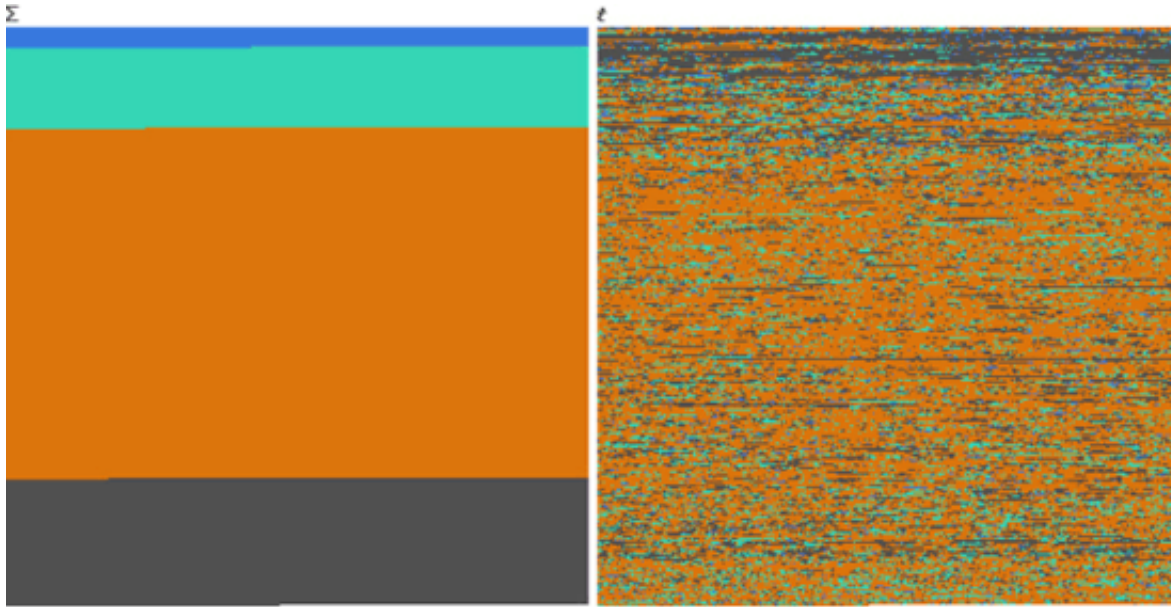
Visualising Data - visuals by Dmitry Ryabchuk, music by Ryoji Ikeda

<https://www.youtube.com/watch?v=HXesg8I5-5Y&feature=youtu.be>

Data Manifestation - visuals and music by Dmitry Ryabchuk

<https://www.youtube.com/watch?v=W40pwLFsa0A&feature=youtu.be>

Pixellating the War Casualties in Iraq by Louis Evans



Picturing the Casualties in Iraq, Kamel Makhoulfi, 2010

The exhibition provided a space for digital artists to visualise data and contribute to the discussion of ‘who has access to your data’? The coming together of aesthetics, sociology and political analysis often exhibited the dark side of data, displaying how public our data really is. This, for me, was most striking when government exploitation of public data was subverted to visualise previously classified government intelligence; a project undertaken by Kamel Makhoulfi based upon material publicised by Wikileaks. The theme of where ‘information’ resides is approached from a different perspective. The seemingly abstract illustration was used to display US military data of civilian and military deaths during the Iraq war between 2004 and 2009. Each pixel signified an individual’s death (blue denoted ‘friendly’, green = ‘host nation’, orange = ‘civilians’ and grey = ‘enemies’). The image on the right shows the data as it developed chronologically through time, while the left shows the sum of deaths. Makhoulfi uses this effective example to see through the ‘noise’ of big data, showing how the impact of killings is diluted in the media across time. The decision to represent human life as a single pixel further explores the power data has to reduce the human element to simple quantification.

The piece serves as a reminder that the presentation of data is just as important as the gathering of the data itself. As such, Makhoulfi explores notions of how we can become desensitised to an overwhelming volume of data, especially when context is absent through its appearance. Consequently, the importance of interpreting and engaging with big data is effectively revealed through art.

The Finitude of Infinite Perception by Tim Saunders

At the heart of the Big Bang Data exhibition there is a curious dialectic. Data is conceived as cosmological and infinite. Even the title of the exhibition acts as an echo of the early universe, with the connotations of inflation and expansion that this entails. Yet between the grand envisioning of the infinity of data lies the messy reality of data itself. That far from being infinite, data is by its nature and representation a clear definition of the finite.

This is amply, if unintentionally, exemplified by the positioning of two fairly cosmological exhibits towards the beginning and end of the exhibition. Sandwiched between are exhibits that highlight the finitude that actually constitutes the data, its representation and use.

The exhibits show again and again the subjectivity and bounded realities that Big Data creates and mediates. Yet all the while the exhibits continue with their aesthetic of the cosmological and the infinite. This conception is embedded in the specific materiality of the exhibition itself. The exhibition space is dark, with exhibits shining like bright stars against the velvety blackness of the space.

It is this which reveals where the infinity of data lies. It is not the data itself but the infinite void which exists between the data. Much like the galaxies and nebulae of interstellar space only exemplify the infinite void of the universe.

Therefore, what the exhibition actually reveals is not the vastness of the data but the vastness of that which is not data, the fact that data shows us only a glimpse or a snapshot of the reality that rushes past unnoticed.