“A butterfly flaps its wings in the Amazon and a hurricane happens in Japan.” What impact does our breath have on the world? Does the propulsion and impact of the molecules of air and water we release as we talk, leave an imprint? These are the questions asked by artist Rafael Lozano-Hemmer’s recent work Atmospheric Memory in collaboration with Future Everything, ELECTRA/Arsenal, Montreal, Manchester International Festival, Science and Industry Museum. The exhibit is 5 years in the making, inspired by the words of computer pioneer Charles Babbage who speculated in his book the Ninth Bridgewater Treatise, that every word ever spoken leaves a permanent trace in the movements of particles in the air and that the air itself is a vast library. It begs the question “What if we could trace that impact and recreate lost voices from the past? What would we want to retrieve? Loved one’s long gone? Oral histories never written?”
Air, being the one invisible element, is not easy to quantify, let alone, turn into an experience people can see, touch or feel in order to connect. Lozano-Hemmer’s work looked at every aspect of the impact of speech on the world, from the intake of air in our lungs, to the workings of our vocal cords. In order to mine the air for turbulence caused by speech he brought together teams of architects, videographers and scientists as well as historical phantasmagorical effects connected to Babbage’s time, robotics, fluid dynamic and machine learning to create mechanisms that could record trails of vapour and ripples of moisture and display them in 360 degree projections. At the beginning of the exhibit, a polyphonic tunnel featured 3,000 separate voice recording sound channels, a sound bath of human speech as people entered the space. In another part of the exhibit, he and his team created literal “figure’s of speech” using a custom made laser tomograph to scan the breath exhaled while speaking and then translated that into 3D shapes using photogrammetry.

We live in an age obsessed with ‘absolute recollection,’ where technology captures every moment, every act, every impression. But is the atmosphere an archive in itself?

The exhibit questions our obsession with absolute recollection in the digital age where everything is recorded from in house voice assistants to smart watches that are always listening, measuring and keeping copies of our physical and vocal actions. Today, in a world where words can travel around the world in a tenth of a second should we delve even more deeply into what we want to record for posterity? Should we be letting go?

Artist Rafael Lozano-Hemmer “has become one of the most important explorers of how digital technologies can create systems of participation and transform the dynamics of social environments” with city wide light projection and computer system installations in places such as Trafalgar Square and Zocalo in his native Mexico city. Art and technology are increasingly coming together. Another of his exhibits immerses people in the compositions of Bach in a spherical space that supports 1,128 loudspeakers each of which plays a different composition by Johann Sebastian Bach. Another, Parreidolium, is “a circular fountain that creates portraits of onlookers in mid-air with clouds of vapor that ascend from the water basin. As a visitor looks into the water, a facial-detection system extracts their image and creates an ephemeral likeness in cold vapour.”
Why are exhibits that seem so ephemeral and abstract so important today? Because they ask us to look deeper at the technologies we are creating and asking these questions may well be the key to ensuring our humanity. We cannot live on function alone. We require pleasure and beauty to survive and thrive. Exhibits such as these ask us to look at not just how we feel about technology, but how technology feels about us and stay connected to the truth, that we are inexorably linked. Beyond the societal benefits of this type of art, who knows what other uses may come about? Might measuring voice not provide a new way to measure patient health? Could explorations of sound not also lead us to better understand the human ear and the impact of sound. This is why neuroaesthetics is growing so rapidly as an area of science and why universities such as John’s Hopkins Art + Mind Lab are studying the impact of music on health.

An exhibit last Fall at the Victoria Albert Museum included a project that used data collection to see what information surveillance camera’s around the world were collecting and how they were interpreting what they saw. The chilling results were that most surveillance AI had a hostile view of the world, having been programmed for protection purposes. Without artistic explorations such as these, it might never occur to us to look at our creations from both ends of the telescope.

Future Everything in Manchester’s next project opens Saturday, August 31st. Hello Yemen, is a traveling digital art exhibit that aims to help people understand in the context of their own lives, what the people of Yemen are going through. The “UN calls it the worst humanitarian crisis in our history." Research has shown that we has human beings feel empathy when things are real and present to us. Created by artist Vicky Clarke and Creative Technologist Chris Ball with words written and performed by Amerah Saleh, this is an interactive artwork that will be popping up all over the city to give people a chance to connect and hopefully, take action.

Hello to Yemen, Exhibit at Future Everything FUTURE EVERYTHING

Trickle Down Exhibit FUTURE EVERYTHING
Other projects include: Trickle Down, A New Vertical Sovereignty by artist Hannah Knowles, which explores blockchain and its impact on distribution of wealth in four very different communities. To begin, visitors donate a coin which is visibly turned into bitcoin. The installation also includes a film that is composed of real auction scenes represented through clothes in four very different communities from the prisoners at HMP Altcourse Prison in Liverpool, attendees at the Ethereal Summit, Employees of the blockchain company, Consensys Hub in NY, citizens of Manchester shopping at Openshaw Market and the Russian Community in Central London buying artefacts at Sotheby’s. The installation reflects the breath of wealth and financial power individuals have in each community. With every showing, the video donates micro bitcoin amounts to these communities. The exhibit records who views the exhibit and who donates to the which communities to explore and provoke questions about value and distribution.

**Soil underpins society, from the food we eat to the clothes we wear. As a threatened resource, how can we harness data to sustain the future of our soil?**

GROW, in partnership with the GROW observatory and EC funded project uses participation to turn citizens into data scientists and draw on their experience using digital culture. The project facilitates shared knowledge across specialities, sharing the knowledge of scientists and policy makers with that of people who are who are passionate about preserving soil. In this way, three groups pool their knowledge and learn from each other. It turns citizens into data scientists and helps people make sense of the data through exciting visualizations and artwork, allowing communities to connect and also provides a huge resource of information for everyone on what new products and could be built using data generated in GROW.

Atmospheric Memory by Lozano-Hemmer FUTURE EVERYTHING

If you haven’t already, Future Everything is worth putting on your radar.