ATMOSPHERIC MEMORY
BY RAFAEL LOZANO-HEMMER

Commissioned by Manchester International Festival, Science and Industry Museum, FutureEverything, ELEKTRA / Arsenal Contemporary Art, Montreal and Carolina Performing Arts - University of North Carolina at Chapel Hill.
Originally produced by Manchester International Festival and curated with FutureEverything and Science and Industry Museum.

atmosphericmemory.com
#atmosphericmemory
In 1837 Charles Babbage, the inventor of the first computer, had a profoundly intriguing idea. He proposed that every word ever spoken by a human being leaves a permanent trace in the air. He imagined a sufficiently advanced computer that could calculate the movement of all air molecules: rewinding these paths, would allow us to recreate the voices hidden in the atmosphere. Babbage wanted to hear long-lost loved ones, vows unredeemed, promises unfulfilled and even the evidence of criminal acts.

More than 180 years later, the effects from the industrialization and automation that Babbage championed are evident:

The burden of total digital recollection is one of the defining conditions of our times. We have filled the world with networked microphones, cameras, GPS trackers and biometric sensors. Data clouds, under the control of a very small number of private interests, store and process all our words and actions.

At the same time, the composition of the atmosphere has been radically reshaped due to the industrial revolution. Carbon emissions have changed the climate of our planet and plunged us into an environmental crisis. Every molecule of carbon that we have burnt into the atmosphere remembers.

The concentration of carbon dioxide in the air was 285 parts per million when Babbage was alive. Today it is 418, which is significantly higher than the 350 parts per million scientists consider safe. As the COVID-19 pandemic has shown us, the air that we breathe has become a battleground for the future of our planet.

Atmospheric Memory celebrates the turbulence and tumult of the medium that sustains our life: invisible but precious, filled with voices and history, transcending all national borders. The project also calls for a restoration of the air in response to our current climate emergency, and for the transformation of the digital atmosphere into a shared public resource.

Text by José Luis de Vicente and Rafael Lozano-Hemmer.
RAFAEL LOZANO-HEMMER BIOGRAPHY

Rafael Lozano-Hemmer (born 1967) is a Mexican-Canadian artist who works with ideas from architecture, technology and performance. His team at Antimodular Studio in Montreal consists of 15 artists and developers from seven countries.

His participatory public art has been commissioned for events such as the Expansion of the European Union in Dublin (2004), the Tlatelolco Massacre Memorial in Mexico City (2008), the Vancouver Olympics (2010), the pre-opening of the Guggenheim Abu Dhabi (2015) and the Augusta Raurica Roman Theatre in Basel (2018). In 2019 his interactive installation “Border Tuner” connected people across the US-Mexico border using bridges of light controlled by the voices of participants in Ciudad Juárez, Chihuahua and El Paso, Texas.

In 2007, he was the first artist to represent Mexico at the Venice Biennale. In the past few years, Lozano-Hemmer was the subject of 9 solo exhibitions worldwide, including a major show at the Hirshhorn Museum in Washington DC, the inaugural exhibition at the AmorePacific Museum in Seoul, and a mid-career retrospective co-produced by the Musée d’Art Contemporain de Montréal and SFMOMA. His ongoing Covid-19 Memorial is currently on view at the Brooklyn Museum in New York. Collections holding his work include MoMA in New York, Tate in London, NCMA in Raleigh and MUAC in Mexico City.

He is represented by bitforms gallery (NYC), Wilde Gallery (Geneva, Basel, Zürich), Max Estrella (Madrid) and PACE (Worldwide). His experiential pieces are available through Dérive Art Agency and Superblue. More info at www.lozano-hemmer.com
TROPOSPHERIC REMAINS CURATORIAL STATEMENT

The troposphere constitutes the lowest and densest level of the Earth’s atmosphere; where most of the Earth’s water vapor resides, where lightning sparks, and where rain clouds accumulate. While the troposphere may feel lofty over our heads, this layer of the atmosphere performs an intimate and reciprocal exchange with our lives on the ground. Toxic gases seeping up from landfills, wafting from agricultural operations, or dispersing from smokestacks linger in the atmosphere as smog and return to the land within rain. In other instances, greenhouse gases accumulate within and beyond the troposphere as a byproduct of industrial energy consumption.

*Tropospheric Remains* gathers postcards, memorabilia, and photographs from the Wilson Libraries’ North Carolina Collection and computing equipment from UNC’s Department of Computer Science (UNC CS) to ruminate on what remains in the troposphere above UNC, Chapel Hill, and North Carolina writ large.

This exhibit attends to material objects and visual culture to survey two forms of tropospheric remains: smoke from North Carolina’s tobacco industry and emissions generated from computing hardware. The first collection of packaged tobacco, memorabilia, and photographs document the long and contentious history of industrial tobacco cultivation in N.C., including glimpses into the social and economic importance of the crop. As a departure from ceremonial and medicinal tobacco use, practiced by North Carolina’s indigenous peoples, the production of additive supplemented brightleaf tobacco transformed the land, commerce, and urban centers of the state. Next, graphics processing units and prototype virtual reality helmets developed by UNC CS gesture towards the visualizing potential of computing as well as the less visible greenhouse gas emissions from data centers and cryptocurrency mines.

Importantly, this exhibit brings together tobacco and computing hardware to consider the cultural values, imaginative possibilities, and environmental pitfalls that remain *with* us and *above* us.

*Tropospheric Remains* has been curated by Amrut Mishra and Joseph Richards, two Ph.D. students in the Department of Communication at UNC, Chapel Hill in collaboration with Carolina Performing Arts.
MANCHESTER INTERNATIONAL FESTIVAL

Manchester International Festival (MIF) is an artist-focused festival of original, new work and special events reflecting the spectrum of performing arts, visual arts and popular culture. Staged every two years in Manchester, MIF has commissioned, produced and presented world premieres by artists including Marina Abramović, Laurie Anderson, Björk, Jeremy Deller, Idris Elba and Kwame Kwei-Armah, Philip Glass and Phelim McDermott, Akram Khan, Angélique Kidjo, Rafael Lozano-Hemmer, David Lynch, Ibrahim Mahama, Wayne McGregor, Steve McQueen, Sharmeen Obaid-Chinoy, Yoko Ono, Thomas Ostermeier, Punchdrunk, Skepta, The xx, and Robert Wilson.

MIF will also run The Factory, the landmark new cultural space currently being built in the heart of Manchester, designed by internationally renowned architects Office for Metropolitan Architecture. The Factory will commission, present and produce a year-round programme, featuring new work from the world's greatest artists and offering a space to make, explore and experiment. Attracting up to 850,000 visitors annually, The Factory will add up to £1.1 billion to Manchester’s economy over a decade and create 1,500 direct and indirect jobs. Its pioneering programme of skills, training and engagement will benefit local people and the next generation of creative talent from across the city, with apprenticeships and trainee schemes already underway.

SCIENCE AND INDUSTRY MUSEUM

The Science and Industry Museum tells the story of where science met industry and the modern world began. Manchester was one of the first global, industrial cities, and its epic rise, decline and resurrection has been echoed in countless other cities around the world. From textiles to computers, the objects and documents on display in the museum tell stories of everyday life over the last 200 years, from light bulbs to locomotives. The museum’s mission is to inspire all its visitors, including future scientists and inventors, with the story of how ideas can change the world, from the industrial revolution to today and beyond.

ARSENALE

Arsenal Contemporary Art is a private art foundation and cultural initiative. Founded in Montreal in 2011 by patrons Pierre and Anne-Marie Trahan, Arsenal Contemporary Art is devoted to the support, promotion and development of Canadian contemporary art through diverse endeavours. Arsenal Contemporary Art is currently the largest private art center in Canada, with three locations: Montreal (founded in 2011), Toronto (founded in 2013), and most recently, New York City (founded in 2017).

Arsenal Contemporary Art Montreal, the epicenter of the foundation, is housed inside a former 19th-century shipyard located in Montreal’s Griffintown neighbourhood. Its 80,000 square feet of exhibition space have been used to showcase an extensive list of contemporary art exhibitions featuring Canadian and international artists. Arsenal Contemporary Art Montreal houses several private collections,
including the Majudia Collection, artists' studios, exhibition spaces, and also hosts corporate, private and philanthropic events, opening the doors of contemporary art world to all.

FUTUREEVERYTHING

Established in Manchester in 1995, FutureEverything is an award-winning innovation lab and cultural organisation that has helped shape the emergence of digital culture in Europe. Through a curated programme of events, art commissions, critical conversations, collaborative projects and prototyping, FutureEverything pushes creative boundaries and stimulates new ways of thinking, across a diverse range of sectors, disciplines and audiences. Taking an action-research, artist-led and human-centred approach, FutureEverything is passionate about bringing people together to discover, share and experience new ideas for the future, creating opportunities to question and reflect on the world around us.

ELEKTRA

*ELEKTRA is an international media and contemporary digital art organization based in Montreal (Quebec, Canada) presenting artists and works that combine creative technological genres, such as music, video, cinema, performance, design, audio, art games and interactive arts. Our first mandate is to exhibit, create public awareness, and educate about creative uses of new technologies and new media cultural productions. ELEKTRA makes it possible for artists from all over the world to work alongside researchers, programmers, engineers and technicians who have interests in art and digital technologies.*

*Since 1999, the ELEKTRA Festival, Montreal-based cultural initiative has featured local, national and international performers. Since 2012, ELEKTRA is also the producer of the BIAN, the International Digital Art Biennial (Biennale internationale d’art numérique) focusing on new media installations, exhibitions and public art.*

*On the international scene, ELEKTRA plays the role of ambassador of Canadian digital art by disseminating the practices of both emerging and established artists.*
ATMOSPHERIC MEMORY
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Rafael Lozano-Hemmer Artist
José Luis de Vicente Curator

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Production Credits
Drew Schnurr Composer, Infinite Pianos, Atmospheric Memory Film 2021
Elio Arsenault Editor, Atmospheric Memory Film 2021
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Elliot Woods, Kimchi and Chips Flag Beacon Programming Research
Sue M Jones BSc, MSc, MRCSLT and Mark Wilson Vocal Folds Endoscopy
Morgan Bailey, Sarah Louise Davies, Marc Graham, Maeve Larkin, Javier Mazan Vocal Fold Actors
Jamar Jones Actor, Welcome Prelude Film
Ketra Freeman ASL Interpreter, Welcome Prelude Film
Ryan Pinion ASL Advisor

Art Solution, Montréal Shipping
Rock-It Global Shipping
Arsenal Contemporary Art Montréal Pre-Production Space
Solotech Montréal Pre-Production Space
J&C Joel Drapes
Harlequin Flooring

Music Credits
Untitled 79 and 309, Presque Tout (Quiet Pieces 1993-2013), Francisco Lopez
Shut In part 1, Kevin Drumm
Melancholia II, William Basinski
Calm of the Cast - Light Cloud (Talk Amongst The Trees), Alluvium
Kyema, Eliane Radigue
Cherry Coloured Funk (Heaven or Las Vegas), Cocteau Twins
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Atmospheric Memory is dedicated to UNC Chancellor Emeritus James Moeser for his exceptional leadership, service, and commitment to the arts. Sincerest thanks to our sponsors and partners for supporting this groundbreaking artistic work.

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Rafael Lozano-Hemmer is represented by bitforms gallery (NYC), Galerie Wilde (Geneva, Basel), Galería Max Estrella (Madrid), and PACE (worldwide). His experiential shows are represented by Superblue and Dérive Art Agency.


Rafael Lozano-Hemmer dedicates Atmospheric Memory to Jóhann Jóhannsson
THE ARTIST AND CURATOR SUGGEST THESE SITES FOR ATMOSPHERIC ACTIVISM:

350.org is an international movement working to end the age of fossil fuels and ensure a fast and just transition to 100% renewable energy. Their goal is reduce the CO₂ concentration in the atmosphere to 350 parts per million, the level considered safe.

350.org

Friends of the Earth’s Campaign for Clean Air keeps you informed about the air quality crisis in UK cities and how air pollution can have a serious impact on our health.

friendsoftheearth.uk/clean-air

Drone Wars is a UK-based NGO that has been founded to denounce the militarisation of the atmosphere and to fight for an international ban on the use of armed drones.

dronewars.net

Privacy International campaigns to defend and promote the right to privacy. They fight against companies collecting and exploiting personal data from users of digital cloud services and social networks.

privacyinternational.org

Garner Way Foundation was established in memory of Eric Garner, to empower others with the knowledge and awareness faced as a result of racism and injustice. Eliminating Racism Inequality Collectively.

garnerwayfoundation.org