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POLLUTION PODS: CAN ART CHANGE PEOPLE'S PERCEPTION OF CLIMATE CHANGE AND AIR POLLUTION?

Michael Pinsky,
Artist

Laura Sommer,
Researcher at the Norwegian
University of Science and Technology



Pollution Pods in Trondheim, Norway during the 2017 Starmus Festival © Michael A Pinsky

Michael Pinsky is a British artist whose international projects have often taken the form of residencies that explore issues of the public realm. Taking on the combined roles of artist, urban planner, activist, researcher and resident, he engages closely with local people and resources, allowing the physical, social and political environment to define his methodology. His work has been shown notably at TATE Britain; Museum of Contemporary Art, Chengdu; Saatchi Gallery; The Victoria and Albert Museum; La Villette, Paris; Modern Art Oxford, Armory Center of the Arts, Los Angeles... Dr Michael Pinsky graduated from the Royal College of Art. He has received awards from the RSA, Arts Council England and the Wellcome Trust amongst others, and his exhibition Pontis was shortlisted for the prestigious Gulbenkian Museums Award.

Laura Sommer is one of two PhD candidates working on the Climart project. She has a bachelor's degree in Psychology and deepened her understanding of climate and natural matters during her master's in Global Change Ecology. Laura Sommer worked at the Department of Psychology of the Norwegian University of Science and Technology, focusing on creative environmental communication, behavioral change and cognitive psychology.

The artwork *Pollution Pods* is part of the *Climart* project, a wider research program that looks to explore the ways in which art can change people's perception of climate change. Before presenting the *Pollution Pods* project itself, Michael Pinsky describes his process of artistic creation and explains how his work engages with the challenge of "representing the invisible". The conception of *Pollution Pods* is part of a scientific work studying the type of reaction that climate art can bring about in audiences, thinking specifically about the extent to which artworks lead people not only to reflect on the reality of their daily lives, but also to alter their behaviour.

With *Pollution Pods*, the artist hopes to disrupt our embodied experience of pollution, which is generally that of a background phenomenon to which we grow accustomed. To do this, five geodesic domes, five closed physical spaces containing toxic air from different cities around the world, are connected, forcing visitors to experience abrupt change in air quality. *Pollution Pods* is an eminently sensorial experience, whose objective is not so much to offer a privileged audience the thrill of danger safely contained, but rather to push visitors to reflect on their own contradictions and trigger behavioural change, as the embodied knowledge of pollution renders willful ignorance almost intolerable.

GETTING PEOPLE TO ENGAGE WITH THE CLIMATE CRISIS: WHAT DOES ENVIRONMENTAL PSYCHOLOGY TELL US?

“Aesthetic practices that take up political disruption are not simply raising awareness or communicating messages.

This is not politics as propaganda. Instead, aesthetic practices operate through a ‘radical uncanniness’ that realigns, disrupts and reinvents political engagement as material and sensible events (Rancière, 2004 [2000]). Such disruption can become a way to materialize and articulate what would otherwise be un-sayable and un-thinkable.”

(Gabryss & Yusoff, 2012)

Since the beginning of my career, my artistic practice has engaged with pressing environmental issues. For COP21, held in Paris in 2014, I emptied out the St Martin Canal and recovered the many objects discarded by Parisian residents during the previous year. Of course, we found many of the ubiquitous city bikes and shopping trolleys, but surprisingly we also found single bed frames and small fridges, most likely an indicator of transient and migrating populations. I took audio samples from these jettisoned artifacts to create a composition to accompany the objects which I mounted on the surface of the canal. I was attempting to draw attention to our insatiable appetite to consume and how this needs to be facilitated by an effective waste disposal system. This artwork called ‘*L’Eau Qui Dort*’ caught the attention of a group of environmental scientists based at the Norwegian Institute of Science and Technology who were working on a project called *Climart*. They chose to include *L’Eau Qui Dort* in a study of thirty-seven artworks shown at COP 21 to see if art can change people’s perception of climate change.

In the first publication that emerged from this data collection (Sommer & Klöckner, 2019¹), the researchers divided the artworks into four “clusters” based on the emotional reactions viewers showed to the artworks. Then they looked at what thoughts, or “cognitions”, in psychological terminology, the spectators of the artworks had when they saw the artworks. The cognitions under investigation were chosen from what environmental psychological research indicated would be relevant to engage people with the climate crisis: Did the artworks, for example, make people reflect and contemplate? Did the topic of the artwork have relevance to their daily life? Did it highlight the personal impact their behavior was having on the environment? Such were the questions that the spectators were asked to assess when sharing their thoughts on the artworks.

In a last step, the researchers tried to define common characteristics of the artworks in the clusters and link them to the emotional and cognitive reactions. Cluster 1, which contained artworks that were participatory, playful and colourful, seemed to make people feel good, but the cognitive reactions showed that these artworks also had the lowest level of reflection, contemplation and relevance for daily life. The researchers therefore decided to call this group of artworks “*The Comforting Utopia*”.

L’Eau Qui Dort was part of the second cluster, called “*The Challenging Dystopia*”. The thoughts people had about this dystopian art were that it was confrontational, had something unusual that made them stop, was relevant for their daily life and made them aware of the impact of their own behavior.

¹ Sommer, L. K., & Klöckner, C. A. (2019). Does activist art have the capacity to raise awareness in audiences? A study on climate change art at the ArtCOP21 event in Paris. *Psychology of Aesthetics, Creativity, and the Arts*.



Pollution Pods in Portland, UK © Michael A Pinsky



Exploring the Pollution Pods at the TED 2019 conference in Vancouver - Photographer - MA - Marla Aufmuth

The group of artworks which the researchers found to release the strongest positive and negative emotional response, as well as cognitive reaction, showed solutions and made the cause and effect of behavior visible. This group was called “*The Awesome Solution*”.

In a second publication (which is still under review), the researchers then found that:

- the influence of negative emotions on the reflections and thoughts about the artworks was stronger than that of the positive emotions, but that both indirectly influenced policy support;
- the thoughts and reflections caused by the emotions were what made the viewers support climate policies.

Klöckner and Sommer concluded from this that the subjectivity of the reaction triggered by climate change art is what makes the art experience powerful, and that some characteristics of an artwork are more helpful than others to achieve a subjective, emotional and reflective reaction in the viewers.

People do not change their behaviour unless an issue affects their everyday life

DRAFTING OF POLLUTION PODS PROJECT

Following COP21, the *Climart* scientists wanted to study an artwork in more depth and use their findings from COP21 to influence the creation of a new artwork. I was selected by the group to create a new commission in Trondheim. My projects have been created to raise environmental concerns and attempt to change behaviours, perceptions and opinions, but I have never really known in an empirical way whether my projects have been at all successful in this endeavour. At last, here was an opportunity to understand how my approach affects participants.

During the first phase of the project, I discussed with the team their findings and their approaches to the study. We discussed the causes and consequences of climate change and we discussed unpalatable solutions. We discussed the feeling of hopelessness people have when they see the typical visual icons of climate change; the sad polar bear on a melting iceberg or a starving child standing on a sun cracked desert. We discussed how the frame of art is uniquely time-privileged since the viewer is expected and expects to take time to reflect. We discussed how art can bring people together physically and psychologically



Pollution Pods by Michael Pinsky at Somerset House for Earth Day 2018
© Peter Macdiarmid for Somerset House



A visitor experiencing the contaminated air of Pollution Pods
in Trondheim, Norway © Thor Nielsen / NTNU

to create a sense of togetherness and promote common action. We discussed how art can question and create new social norms.

From all these conversations and the findings from the ArtCOP21 studies, one thing became clear; people do not change their behaviour unless an issue affects their everyday life. Certainly, the direct effects of climate change are impacting parts of the world as the sea level rises and temperatures increase, along with the frequency of extreme weather phenomena. But in the major western cities, the impacts of climate change still seems remote. So, I started to think about my life in London and about some of the causes of climate change. People feel the impact of fossil fuels in the city as airborne pollution. Whilst the pollution itself does not greatly contribute to climate change, the causes of air pollution and climate change overlap hugely.

One of the reasons why people are not motivated to change their behavior, in regards to either Climate Change or pollution, is that we habituate to the gradually changing environment. Global changes are relatively invisible, which makes the violence that comes with them slow. This certainly applies well to pollution. We are capable of adjusting our senses to accommodate to and mentally

The global changes are relatively invisible, which makes the violence that comes with it slow

block out background noise, visual clutter and toxic air. It is only when we pass through the threshold from one environment to another at speed that we really encounter and acknowledge the difference. This often happens when we exit a train or plane: our senses have not yet had time to acclimatise to the new environment.

It was with this statement in mind that I started to develop the idea of a number of connected rooms, each containing the polluted air from a major global city. As visitors would be 'transported' from city to city moving directly from one room to another, their senses would not have time to acclimatise, leading them to experience the visceral shock of entering each distinctly polluted environment.

At first, I thought that creating these environments would be quite straightforward. I would just go the cities I had selected to sample, suck air into a compressor and then transport this back to Norway to release the toxic air into the rooms. I decided to reach out to scientists for advice. My first port of call was the Norwegian Institute for Air Research. Their feedback to my approach was both interesting and clear. The process of compressing the air could lead to a volatile solution. The process of releasing the air in a confined space was dangerous. The other aspect they drew my attention to

was that one's impression of pollution is radically altered by humidity and temperature. With this feedback I started to consider the best approach to this concept. The first challenge was figuring out how to materialise something that is essentially invisible.

In my projects, I consider both the narrative of the work, which I see as its horizontal axis, and the visual moment, which becomes the vertical axis. Often, socially-engaged practice and issue-based artwork can have strong and effective stories but lack visual clarity. An artwork that is visually memorable, seductive, surprising and shocking can etch itself in people's minds in a way the written word cannot. The visual manifestation of the work can function as a shortcut to the themes it is trying to embrace. However, artworks that are only a literal illustration of a problem lose any sense of the nuances contained within the narrative. These are what I call "Oh, I Get It" artworks. The visual essence of the work should be in dialogue with the issues it is trying to unravel and facilitate the audience's reflections on the themes without being didactic.

For the *Climart* project, I was drawn to the geodesic dome as a container for these polluted environments. These structures are both used in crisis scenarios and in the famous biosphere experiments. The structure designed by Buckminster Fuller² also alludes to his seminal manifesto, *Operating Manual for Spaceship Earth* which remains surprisingly topical today, decades after its initial publication. I proposed to create a circle of these domes, each connected by a tunnel, suggesting the interconnectedness of our biosystems and to remind us that air passes freely across national borders. By directly quoting Fuller's iconic structure as its primary visual statement and spatial metaphor, *Pollution Pods* would conjoin art and technology, while questioning division and containment as a prime technique of Modernity.

An artwork that is visually memorable, seductive, surprising and shocking can etch itself in people's minds in a way the written word can struggle to do

SCIENTIFIC EVALUATION

From the scientific side, the researchers had to answer for themselves which aspects of the Pods they expected to impact viewers the most: Would it be the experience of the single domes? Should the visitors be asked about their feelings and thoughts after every dome, or after the whole experience? What feelings and thoughts could be reasonably assumed to be triggered by the artwork? What would be the best outcome measure to assess reactions to the artwork?

They decided to do qualitative interviews with a random selection of the audience and a quantitative questionnaire measuring the feelings and thoughts people had after experiencing the whole artwork. The qualitative study found that what the *Pollution Pods* offer to visitors is a form of experiential learning, which reduces the psychological distance of climate change to the visitors. The art installations enable them to sense how air-pollution and climate change impact them and will impact them in their daily lives.

On the other hand, the questionnaire study by Sommer, Swim, Keller and Klöckner (in press) found that intentions

to act were strong in visitors and increased to some extent after visiting the Pollution Pods. The changes in intentions individuals reported were positively associated with emotions such as sadness, helplessness, and anger. Furthermore, changes in intentions were associated with thoughts connected to the "awareness of the environmental consequences of people's actions, their willingness to take responsibility for these consequences, and belief in the relevance of environmental problems to their daily

life" (Sommer, Swim, Keller & Klöckner, in press³). Even though the intentions were favorable, few visitors took advantage of the possibility to estimate their CO₂ emissions – therefore, changes in actual behavior after visiting the artwork could not be measured, which is a common problem in environmental psychological research. Nevertheless, Sommer and colleagues emphasised the value of art, which is especially effective in drawing attention to the personal relevance of climate change and the individual's responsibility to act. In this respect, the *Pollution Pods* were successful in highlighting exactly those reflections.

Note: the scientific results have only been partially published. As such, detailed results can only be presented for some of the studies described in this article.

² Richard Buckminster Fuller (July 12, 1895 – July 1, 1983) was an American architect, systems theorist, author, designer, inventor and futurist. He developed numerous inventions, mainly architectural designs, and popularized the widely known geodesic dome. In 1968, a year before the first moon landing, Buckminster Fuller's book, "Operating Manual for Spaceship Earth" reconceptualized the Earth as a vessel, to propose that humanity must take responsibility for maintaining the atmosphere in a state to support life.

³ Sommer, L. K., & Klöckner, C. A. (2019). Does activist art have the capacity to raise awareness in audiences? A study on climate change art at the ArtCOP21 event in Paris. *Psychology of Aesthetics, Creativity, and the Arts*.

DESCRIPTION OF THE POLLUTION PODS

Pollution Pods is an artistic installation where five geodesic domes are connected by polygonal passageways to form a ring.

Within each dome, the air quality of five global cities (London, Beijing, New Delhi, Sao Paulo, and Tautra) is recreated. A carefully mixed recipe emulates the relative presence of ozone, particulate matter, nitrogen dioxide, sulphur dioxide and carbon monoxide which pollute these cities. The visitor will pass through increasingly polluted cells, from dry and cold locations to hot and humid.

The experience of walking through the *Pollution Pods* demonstrates that these worlds are interconnected and interdependent. In this installation, it is possible to feel, taste and smell the environments that are the norm for a huge swathe of the world's population.

Crucially, the “pollution” in the *Pollution Pods* is a laboratory simulation, an olfactory representation of toxins, made by a corporation that produces artificial flavourings and perfumes to make commodities taste or smell more appealing. Here, art appears to imitate life, offering a privileged audience the thrill of danger safely contained. But the simulated pollution not only “references the real to which it is subordinate”, it is also

implicated in the phenomena it represents: the environmental control equipment used, in every stage of its lifecycle from resource extraction, through to manufacture, use, and disposal, generates pollution. Similarly, extending the boundary of the physical installation to include its bioplastics manufacture, its electricity consumption, and its transportation by land, sea and air reveals networks of ecological impacts from the microscopic scale of particulate emissions to the macroscopic scale of climatic disruption. Though presented as hypothetical and elsewhere, the danger is real and present.

Pollution Pods presents an emblem of utopian faith in technology as a secular fantasy of control that engenders a haunting anxiety around the return of what has been repressed and excluded. Being immersed in the work is to experience the separation of artistic experience from the everyday as illusory, and to recognize the artworld as a subset of the world.

By putting the vital act of breathing under the heightened attention of art, the *Pollution Pods* makes the contradiction between embodied knowledge and willful ignorance almost intolerable. Perhaps the visceral memory of these toxic places will make us think again before we buy something else we don't really need...

CREDITS

Pollution Pods was originally commissioned by the Norwegian University of Science and Technology for Climart and has been built with the support of BuildwithHubs. *Pollution Pods* has received funding from Arts Council England. The tour of *Pollution Pods* is managed by Cape Farewell. The pollution cocktails were created by IFF's global network of scent experts and dispersed using Aroma technology.

IN FACTS

Pollution Pods has been shown to the public at STARMUS, Trondheim, Norway; Somerset House, London, UK; World Health Organisation's First Global Conference on Air Pollution, Place des Nations, Geneva, Switzerland; Klimahaus, Bremerhaven, Germany; TED Annual Conference, Vancouver, Canada; Clean Air Week, Media City UK, Greater Manchester UK; B-Side, Portland, UK; Melbourne Science Gallery, Australia; UN Climate Change Summit, UN Headquarters, New York City, USA; Nuit Blanche, Brownsea Island, Activate, UK.

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