

Lara Chapman

Portfolio - selected writing & research projects

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Petrified Designers: Fictitious Narratives
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Long-form essay

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Research methods: literature review, instagram dig, interviews with 5 x designers and 1 x geologist, writing to clarify thoughts

Fictitious Narratives

Words Lara Chapman

“Researchers detail the most ancient bat fossil ever discovered,” reads the first of 1,020,000 headlines that appear when I search for “fossil” on Google’s news tab. It was posted two days ago. “Dinosaurs lived in the arctic research suggests” (one week ago); “Giant rhino fossils in China show new species was taller than giraffe!” (two weeks ago); “ninety-nine-million-year-old snail fossilized in amber while giving birth” (one month ago). The list goes on and on. Fossils are being discovered all the time.

Essay

A fossil offers a snapshot of the elusive former lives that our planet and its creatures have lived. Each time a fossil is uncovered, our understanding of the world shifts subtly. They let us glimpse the past, tell stories, and imagine a world that is radically different and yet, in some ways, surprisingly similar to that we know now. Scrolling through Google and its strata of data, it struck me that the headlines almost exclusively relate to animals. But when the time comes (provided that the Earth is still intact), 10,000, 100,000 or even 1m years from now, what will our fossils show? What stories will we leave behind for future generations to uncover in the human-inhabited layer of the Earth's shell? Will our descendants even be able find our fossilised bodies amidst the detritus that our society – obsessed with extraction, production and consumption – has left behind?

These are some of the questions that I have noticed a small but growing number of designers and artists starting to ponder. These practitioners are turning their backs on the more predictable archetypes of design (note: endless chairs and lamps) and instead focusing their attention on fossils. More specifically, they have focused on “technofossils”, those material footprints that humans will leave behind through manufactured goods. These technofossils will last almost indefinitely and their accumulation is now creating a new geological layer in the Earth's crust, something the geologist and engineer Peter K. Haff named the “technosphere” in 2014.

At first glance, fossils seem an unlikely subject matter of, or medium for, design. Traditionally, they are not designed at all, but instead occur naturally and accidentally across timespans far beyond our reach. So why is the subject now being extracted by designers and brought to the top of the discipline's crusty surface? The reasons, like the subject, are multi-layered and entangled in science, storytelling, curiosity, aesthetic intrigue, and fear. Let's take a little dig together.

Early projects centred around design and fossils began to appear in the 2010s, running almost in parallel with a growing scientific focus on Earth science, deep future time and humans' long-term impact on the planet. In 2012, Yesenia Thibault-Picazo, a designer and sound artist, began *Craft in the Anthropocene*, an ongoing project that investigates what the future of geology may look like. Thibault-Picazo's work has multiple outcomes, but all are premised on the question of

what our descendants will find when they dig down in thousands of years. Could our waste become their resources? Our technofossils, their fossil fuels? One outcome, for instance, is an imagined future rock that will be found in sites across the north of the UK – Cumbrian Bone Marble. Although speculative, the material is not mere fanciful fiction and is instead based on scientific research and conversations with Jan Zalasiewicz, a geologist and the leader of the Anthropocene Working Group [AWG] – a group of geologists, biologists, atmospheric chemists, polar and marine scientists, archaeologists and Earth scientists. In 2009, this group was tasked by the International Commission on Stratigraphy to gather evidence of whether humans are changing the surface of our planet.

The outcomes of the AWG's research are intended to determine whether the Earth has moved into the Anthropocene – an unofficial but widely used unit of geological time – or if we remain in the Holocene, which began approximately 11,700 years ago. Derived from the Greek words “anthropo”, for “man”, and “cene” for “new”, the Anthropocene posits a radical reshaping of the Earth's geology around human activity, but needs to be backed up by evidence of human-made changes to the Earth before it can be formalised as a new epoch. Since geological units of time are measured by Earth's rock layers and the fossils found within them, the AWG is, in essence, looking for technofossils. They have been searching for “the potential for synthetic materials, from artificial radionuclides produced by nuclear testing to plastic waste, to leave an identifiable signal in the strata,” writes David Farrier in his book *Footprints: In Search of Future Fossils*.

This scientific search seems to have played into design's penchant for technofossils. Without it, there would be no subject matter to explore. Indeed, it was only when Zalasiewicz told Thibault-Picazo about the potential geological implications of foot and mouth disease, which devastated the UK's livestock and agricultural industries in 2001, that she began her project. During this epidemic, farmers were forced to slaughter millions of sheep and cattle to eradicate the illness. Before the animals were buried in pits, however, they were partially burnt to remove the virus and sanitise the bodies. “The physical phenomenon of this burning was a pre-fossilisation which helped the bone material to transform and, basically, undergo

Images by Louise Silfversparre, Yesenia Thibault-Picazo, Ella Bullay, Jeff Ezzone, Something & Son and Robin Rabert.



Abhurite from Louise Silfversparre's Technofossils project.



Cumbrian Bone Marble, created by Yesenia Thibault-Picazo



A plastiglomerate, found by Patricia Corcoran, Charles Moore, and Kelly Jazvac.



A CAD image depicting Something & Son's planned *Future Fossil* sculpture.



A concrete Anglepoise Lamp, designed by Robin Tarbet for Robot Bin Things.



Bluebell fossils created by Ella Bulley for her *Garden Fossils* project.

the process of fossilisation," explains Thibault-Picazo. As a result, "this pile of bones could become a marble in the medium future". She believes that future humans could mine this material and has created a series of material samples and objects, such as a pestle and mortar made from layers of cow bones and synthetic marble, which are cast into blocks and then worked into real stone. The process for making her Cumbrian Bone Marble mimics the geological process that the actual livestock bones will be exposed to, thereby creating an artificially accelerated fossilisation.

These designers are grappling with changes already in motion. They are shocking scars tucked into the nooks and crannies of our landscapes.

Thibault-Picazo describes the subject of her bone marbles as "a little bit gross and quite grim", but the project may nevertheless possess a sense of optimism – our waste may become our great-great-great-great-great-great-great-grandchildren's treasure. Given time, it will no longer be rubbish, but rather a resource ready to be extracted. This may seem reassuring, but it is also a dangerous idea. Max Norman, for instance, writing in the November 2020 edition of the *Los Angeles Review of Books*, suggests that "visualizing future fossils helps us with the private task of coping with the underlying truth of which ecological consciousness is only the latest manifestation: we live in a fragile, contingent world, and everything that we care about will one day disappear. Geological thinking is the Stoicism of the Anthropocene, a resource for learning how to die in the world we have made for ourselves." Could deep-time design, then, be a form of escapism? By reframing activities that produce vast amounts of waste and cause huge ecological damage as prospective sources of future resources, is our guilt absolved?

Yet Thibault-Picazo's speculative fossilisations frequently feel terrifying, not mollifying. "Climate

scientists at the Australian National University recently proposed that human activity is forcing changes to the Earth system 170 times faster than natural processes," writes Farrier. "By this queasy calculus, we will see ten thousand years of environmental change in fifty-eight years, less than a single lifetime." This statistic does not bring a sense of what-will-be-will-be, but should instead compel us to change, with Farrier stressing that we must show a "willingness to turn and face the damage we have done". The fact that designers such as Thibault-Picazo are dealing with these "gross" and "grim" topics is perhaps an indicator that we are beginning to do so. Indeed, Thibault-Picazo says that when she first started the project around 10 years ago, many people were largely ignorant about the impact humans are having on the planet. "I remember having discussions with people and it was a discovery for them," she says. "I think now there is more of an awareness."

While Thibault-Picazo's project is based on manufacturing speculative future fossils, other designers have begun working on collecting, categorising and displaying existing examples of technofossils. These designers are grappling with changes that are already in motion – their subject matter is future fossils that will persist for millions of years, but which already exist in the here and now. They are shocking scars tucked into the nooks and crannies of our landscapes.

When artist Kelly Jazvac attended a talk by the oceanographer Charles Moore in 2012, he mentioned a strange stone that he had come across in 2006 off the coast of Hawaii. Intrigued, she and Patricia Corcoran, an Earth scientist, travelled to Kamilo Beach, Hawaii, in 2013. Here they began a research project based on this new "stone", for which they coined the name "plastiglomerate". Plastiglomerates often look like naturally occurring stones, but when you get up close you begin to see that they contain segments of rope and foreign objects, or splashes of bright, artificial colour. As their name suggests, they are not natural. The 200+ plastiglomerate samples collected by Jazvac and Corcoran are pieces of plastic debris that have been burned in bonfires and fused with sand, pebbles, shells, basalt, wood and rocks. In their 2014 research paper 'An anthropogenic marker horizon in the future rock record', co-authored with Moore, they state: "Our study presents the first rock type composed partially of plastic material that has strong potential to act as

a global marker horizon in the Anthropocene.” Jazvac was not only inspired by the work being done by scientists, but has also actively contributed to it. Plastiglomerates are both evidence of, and a symbol for, how we are visibly changing the composition of the Earth’s crust. We are literally manufacturing the Anthropocene through the 367m metric tonnes of plastic that the world is estimated to produce each year. Plastiglomerates are fossils of the future but also of the present: nature infused with the human-made, or, the human-made infused with nature.

Jazvac and Corcoran documented plastiglomerates through a series of photographs by Jeff Elstone, in which each sample sits against a white background so as to foreground the way in which its constituent materials are sometimes discreetly meshed, at other times jarringly mashed together. The pair have gone on to exhibit their “stones” in galleries around the world, with plastiglomerates having been displayed or collected by the Yale Peabody Museum, Rotterdam’s Het Nieuwe Instituut, and Amsterdam’s Natura Artis Magistra, among others. Perhaps because of the plastiglomerates’ strange beauty, or their ability to talk about destruction, the project received widespread coverage, from mainstream titles such as *The New York Times*, *e-flux* and *Hyperallergic*, as well as specialist scientific journals. As a project, it has bridged the gap between anthropogenic research and public understanding. Speaking to *The New York Times* in 2014, Corcoran said, “I’m sure people have seen plastiglomerates in other places and just haven’t reported them or given them a name.”

Since their initial documentation in Hawaii, plastiglomerates have been found on almost every shore, from Cornwall to Sydney, from Portugal to Canada – they are far more common than originally imagined. It seems likely that the artistic representation of these readymade sculptures contributed to the burgeoning research surrounding plastiglomerates, and has encouraged other scientists and members of the public to document samples in their local areas. The project shows how designers and artists can use their material knowledge and visual storytelling to present complex ideas in a simple, engaging manner, helping to make abstract concepts such as geological time, which are often shrouded by scientific jargon, understandable. Designers and artists can serve as communicators of how we are changing our planet – deep-time messengers. Zalasiewicz tells me that

this is important, because “scientists are, in general, not very skilled at expressing ideas to the wider public.” They can, he explains, “become terribly specialised” and speak in ways that only other scientist in the same field can understand. “New collaborations [between scientists and creative practitioners] are beginning to bring research out into the open and are forcing us [scientists] to construct a narrative that will be widely

Plastiglomerates are fossils of the future but also of the present: nature infused with the human-made, or, the human-made infused with nature.

understandable.” To demonstrate how the science of the Anthropocene has become more mainstream, he recounts a story a colleague told him. When this colleague googled the word “anthropocene” in 2010/11, roughly 10 years after the word was popularised by biologist Eugene Stormer and chemist Paul Crutzen, he got 50-60 hits – an afternoon’s worth of reading could give you all the world’s digitally published information on the topic. Today, however, Googling “anthropocene” brings up 5-6bn hits and reaches well beyond science. Of course, the content on the internet has drastically grown in this period and some expansion was to be expected, but this drastic increase does serve as evidence of how the term is now commonly used beyond the realms of science by people working in literature, law, politics, public health, social history, design and more.

As wider engagement around this subject grows, the AWG has compiled a significant amount of evidence linking human activity to the changing nature of the world’s crust. This research culminated in 2016, when, at the International Geological Congress in South Africa, the group voted “by large majority” that “the Anthropocene possesses geological reality”. In other words, there is enough evidence of lasting, human-made technofossils to mark as geological change.

They posit that the Anthropocene began in the 1950s with the emergence nuclear-bomb tests, which spread their radioactive particles across the planet. This conclusion was further formalised in 2019 when the AWG completed a binding vote to affirm two key questions: 1) “Should the Anthropocene be treated as a formal chrono-stratigraphic unit?”; and 2) “Should the primary guide for the base of the Anthropocene be one of the stratigraphic signals around the mid-twentieth century of the Common Era?” Both questions received 88 per cent votes in favour. At some point during this period of rigorous scientific investigation and understanding, I suspect that many designers may have experienced an “Oh fuck...” moment. This new layer of the earth’s surface, built up from toxic material traces that can be found from the bottom of the oceans to the outer edges of our atmosphere, has been fed by design and industry – a geological accretion of what Farrier characterised as “technological innovation” and “material consumption”.

The most sensible thing to do in response to these findings might have been to do nothing: to stop in our consumption-driven tracks and acknowledge that we don’t necessarily need more design. It is an uncomfortable idea for designers – what do you do when you know that you should no longer make? When you are petrified? While designers are still pondering this question, the scientific investigations have not stopped. Despite its affirmative second vote, the AWG continues to work towards fully formalising the Anthropocene as a new layer of geological time and is conducting further research. Kirsty Robertson, an associate professor of contemporary art at Western University, Canada, whose curatorial, writing and artistic practices focus on petrochemicals and plastics, points out that the “hubris behind self-naming an era is inescapable”, and that there is more at stake than simply naming a moment in deep time – it is also about understanding our relationship to the planet. Writing for *e-flux journal* in 2016, Robertson issued a warning that “the way that the Anthropocene tends to be used as always-already underway highlights a distinction, and by proxy a hierarchy, between humans and nonhumans (or “more-than-humans”) that perpetuates a nature-culture divide and suppresses ways of understanding the world that might be more relational than taxonomic.” With this warning in mind, we can also use the Anthropocene as a means of

understanding the impact we are having and how to minimise it.

The appeal of technofossils as a subject matter for designers seems to be their ability to thrust us into an uncomfortable story that confronts us with our relationship with the planet. They tangibly link our present reality to our future traces, and serve as a crystal ball that shows us what we may leave behind. Louise Silfversparre, for instance, is a 3D designer and animator, who hopes that her *Technofossils* project (2020) may be able “to give people a deeper insight into how the habits of our civilisation and the way we live have direct consequences on the nature that surrounds us”. Silfversparre’s series of 3D-rendered animations tell the stories of six minerals that would not exist without human activity, and is inspired by the 2017 scientific paper “On the Mineralogy of the “Anthropocene Epoch”, which catalogues 208 human-made minerals. Take Trinitite, for example. In a 1m20s video, Silfversparre presents an electric-green nugget, whose perforated, jagged body gently floats and bounces. It sheds small flecks of itself like dandruff, which drift across a rusty desert-like backdrop that is accompanied by a caption which reads: “On July 16, 1945, when the United States Government conducted the first successful nuclear bomb test in the desert outside of New Mexico[...] [the] desert sand melted under the incredible heat, creating a radioactive, green-colored glass that today is called Trinitite. This is the only known event where the mineral Trinitite has been created.”

The technofossils Silfversparre presents seem somewhat fictional, like kryptonite, with her use of digital technology enhancing this sense of the uncanny. “I was conscious that 3D and animation can easily end up being perceived as just beautiful visuals and nothing more,” she says. “Does that mean that I’m beautifying a problem through my aesthetic choices? Will the audience focus more on the visuals than the subject? There’s always a risk of that, but I hope to draw the visitor in through the animations, get them to stop, and become involved through the information and the meaning behind it.” While the video draws you in, it is the caption that delivers the story and the punch. The digital nature of the project also lets Silfversparre speak about technofossils that have had “hardly any previous documentation”, and show them in their natural habitats, rather than removed from context in a gallery.

Outside of the world of galleries, however, are other projects dealing with technofossils. On social media, the *@Technofossils* Instagram account was launched by an anonymous author in January 2020, and posts photographs of moments where objects and nature intersect – a marble gravestone being enveloped by a tree trunk; a Nokia 5510 from 1998 cemented into a wall; the negative, fossil-like trace of a keyboard embedded in a dodgy pavement repair. It playfully investigates our future fossils through the networked grid combined with everyday observations. In academia too, the subject is receiving increasingly rigorous investigation. Alice Twemlow's 'Design and the Deep Future' programme at the Royal Academy of Art, the Hague (KABK),¹ encourages staff and students to engage with ecology, design and geological time through symposia, exhibitions, events, research projects and lectures. Twemlow, an educator and design critic, writes in her essay of the same name that she began this programme because, "We need to pay more attention to what happens when a designed entity becomes trash, of the social behaviours, politics, infrastructures, mechanisms, and economies that shape and gather around its disposal." She believes that this, in turn, may "enrich our understanding of design culture" and could also "help provide a much-needed critique of the kind of labels used a lot today that mislead with their deflection of attention away from the physicality of waste, such as the supposed immateriality of information, the 'cloud', service design, 'innovation culture', and the 'creative economy'." Twemlow stresses the need for designers to look beyond design and into other disciplines such as archaeology and discard studies, "to allow for investigation into the kinds of topics that orbit time and design, topics such as waste and trash, the dematerialization of design, repair and re-use, digital detritus, and speculative design." It is an idea also supported by Zalasiewicz. "If designers have this long-term perspective in mind," he says, "that might help to create objects that cause less damage in the process of fossilisation." The end-of-life of objects, he adds, is an indispensable topic for design education.

Another educational initiative around deep time is *A Museum for Future Fossils*, a workshop and graduate summer school in Canada/USA, which launched in

¹ A platform I worked on as a research assistant, which sparked my interest in geological time and its entanglement with design.

2019, run by Kirsty Robertson with anthropologist Eugenia Kisin and artist Gabriel Levine. The workshops further led to a series of events, a reading list, artworks by participants and an exhibition at Artlab Gallery, Western University. According to its website, the

A marble gravestone being enveloped by a tree trunk; a Nokia 5510 from 1998 cemented into a wall; the negative, fossil-like trace of a keyboard embedded in a dodgy pavement repair.

overarching question that the course sought to explore was: "What does it mean to think curatorially about human impact on the environment?" This institutional engagement with technofossils seems to be building momentum – the more work that is made, the more the interest grows, the more work is made. Deep time may soon be, if it is not already, *zeitgeist*.

Something & Son, a design studio run by Andy Merritt and Paul Smyth, is also seeking to understand how to engage the public with thinking about humans' impact on the environment in the context of geological timescales. Merritt and Smyth have spent the past seven years working on *Future Fossil*, a sculpture-cum-bandstand commissioned by Milton Keynes Council as a permanent artwork for the town's Oxley Park. It is intended to open in 2022 and speaks to questions of permanence and impermanence. Milton Keynes was designed in the 1960s as part of the UK government's plans to create a generation of new towns in southeast England, hoping to relieve housing congestion in London. The UK Office of National Statistics indicates that around 270,000 people now live there. *Future Fossil* reflects upon the speed at which Milton Keynes has grown, contrasting this with the longevity of the fossils that have been discovered there. Although Milton Keynes is now inland, it is estimated that around 167m years ago the site was under a shallow tropical sea, dotted with tiny islands.



Experiments in Cumbrian Bone Marble.



Trinitite, shown as part of Silfversparre's *Technofossils* project.

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Today, tiny fragments of prehistoric marine and land organisms, including brachiopods, oysters and other bivalve molluscs, can be found in the limestone on which the town was built.

“In a very disposable era, I like the idea of making a work that, like a fossil due to my material choices alone, could outlast me.”

—Robin Tarbet

Standing more than 8m high, *Future Fossil* resembles a cave, but it is formed from the inverted negative of a house's facade – to create it, a mould designed to resemble the newly built residences that surround Oxley Park will be filled with “the materials of our time”, says Merritt. The structure, he says, will be a highly engineered cocktail of steel, eco-cement, plastic, metal, old logs, and even fruit and vegetables, which has been designed to be structurally sound. “My preference was that we burnt the mould away to leave the chasm,” says Merritt, who explains that this idea was abandoned due to the damage it would do to the materials, as well as the environmental impact of burning. Instead they are working on other de-moulding methods. With time, the natural components of the sculpture will rot, leaving nooks and crannies for nature to grow in, while the human-made materials will persist. This strange concoction of building materials points to the messiness of our future strata, which, after years of compression underground, will contain a puzzling collection of materials that have been extracted from and travelled across the world – an exotic cake with ingredients that would never naturally be found together. Not everything will survive as a perfect impression of a house or product. In fact, most things will meld together, crushed under the weight of geological time and pressure to become a new layer in the Earth's crust. Each future fossil is dependent on its context and conditions. Standing inside the *Future Fossil*,

one might wonder if this is what the world will be like in 10,000 years or more. What will we leave behind? How do we understand what we design? And how might these designed objects persist?

It is not only down to design, however. In his book *The Earth After Us*, Zalasiewicz asks the reader, “What fossils did you make today?” Zalasiewicz explains that it is not just living bodies that become fossils, but also many of the things we do. Traces of activity have the potential to become “ichnofossils” or “trace fossils”, which can similarly be discovered down the line and tell stories about us. “Humans have the capacity to make fossils all the time,” writes Zalasiewicz, “each time, for example, that one defecates, or walks through the park.” His reframing of unremarkable everyday activities encourages a certain self-consciousness about our individual behaviour, inviting us to look at the world around us through deep-time-tinted glasses. One trace that we will leave behind in abundant quantities is packaging. *Robot Bin Things* by Robin Tarbet, for instance, is a series of whimsical sculptures that resemble a little army of robots. Upon inspection, they reveal themselves to be concrete castings taken from the packaging of tech products – garbage that has been fossilised. Tarbet creates his fossils based on packaging that appeals to him and which, he believes, might look good when cast. This aesthetic pull of the fossil form, however, as well as the nature of the subject matter, pose a dilemma to all designers working in the field. “There is a constant awareness of using up resources and an acknowledgement of overconsumption,” explains Tarbet. “[But] in a very disposable era, I like the idea of making a work that, like a fossil due to my material choices alone, could outlast me. Found out of context works could potentially pose a question of how it's come to exist, as an art anomaly with the characteristics but none of the intended functions of the consumer products it originates from.”

And so we come to another explanation for designers' interest in fossils – the lure of the intentional trace. By studying what will survive intact and what will be crushed in particular conditions, we can to some extent engineer things and, by extension, ourselves, to remain forever on the planet – a secret horcrux of fossilised eternal life. What does it mean to self-consciously make things that will last? In the introduction to his book, Zalasiewicz writes, half-jokingly: “If you desire immortality for some aspect

of your own personal sojourn on Earth, then these pages might contain some more or less soundly based practical advice on how you might increase your chances of carrying a final message, that of your own brief existence, into the next geological era. If you wish, then, to adorn some museum of the far future, read on.” Designing for an audience of the future is an intriguing proposition. On the one hand, you could imagine Elon Musk or Richard Branson cottoning onto the fact they could memorialise themselves in fossil form. Rather than their current space race, they could instead invest billions in the fossil race – the slowest and, possibly, most pointless competition on Earth. On a less egotistical note, we could ask questions around how we might design for humans many generations away – those whose world, language and cultural references will be drastically different from our own. What will they need to know and why, and could fossils be used to show some of the things the Earth has lost? *Garden Fossils* (2014), for instance, is a speculative botanical archive of fossilised flowers that will likely no longer populate our planet in the future due to climate change. Made by Ella Bulley, a London-based material designer, the archive documents two examples of endangered plants: English bluebells and cherry blossoms. The first is on the UK endangered species list, while the latter is blooming earlier and earlier due to climate change, causing concern around its ability to reproduce if exposed to sudden frosts.

Bulley collected damaged specimens of the plants and encased each of them in a bioresin of her own recipe, mimicking the petrification process that sees objects trapped in tree resin transformed into fossilised amber with the organism preserved inside with pressure over time. “At the time [of making], there were a lot of projects about ‘The world's ending because of climate change, do something now!’ or ‘This is what the world will be like in a post-apocalyptic future!’” says Bulley. These kinds of projects can become alarming and disempowering in their scope, but Bulley's archive offers a specific, tangible story about loss. “Rather than having stories or images or texts about these flowers that once were, I wondered if there is a way to preserve for future generations,” she says, with her project asking if we can manipulate historical documentation, and create homemade histories to counter the wider societal carelessness that is changing the course of nature's history. But *Garden*

Fossils also speaks to a current audience, challenging them to consider if we can preserve species by slowing down the climatic dangers they are exposed to as a result of our behaviour.

I search around my room for inspiration on how to conclude this essay and am confronted by the silent stillness of all the future fossils that I have accumulated in my life. Typing these words, I am acutely aware of the materials in my laptop – the plastic keys clicking, the aluminium casing heating up under the strain of all these words, and its extraordinarily efficient interior, a charcuterie plate of rare metals pulled up from the depths of the Earth. And suddenly, I too am petrified. A petrified design writer, writing about petrification and petrified designers. I suppose the technofossils have done their job. Design's growing interest in this field is intrinsically linked to the environmental crisis. It provokes us to reflect on our culpability – technofossils are, after all, designed things. They invite us to look further ahead than we are accustomed to doing and gaze with more clarity into deep time – to bridge the gap between now and then. One can only hope that this budding interest in technofossils will help trigger a shift in how and what we design and consume. As to where this path of designers and technofossils will lead us, only time will tell. **END**

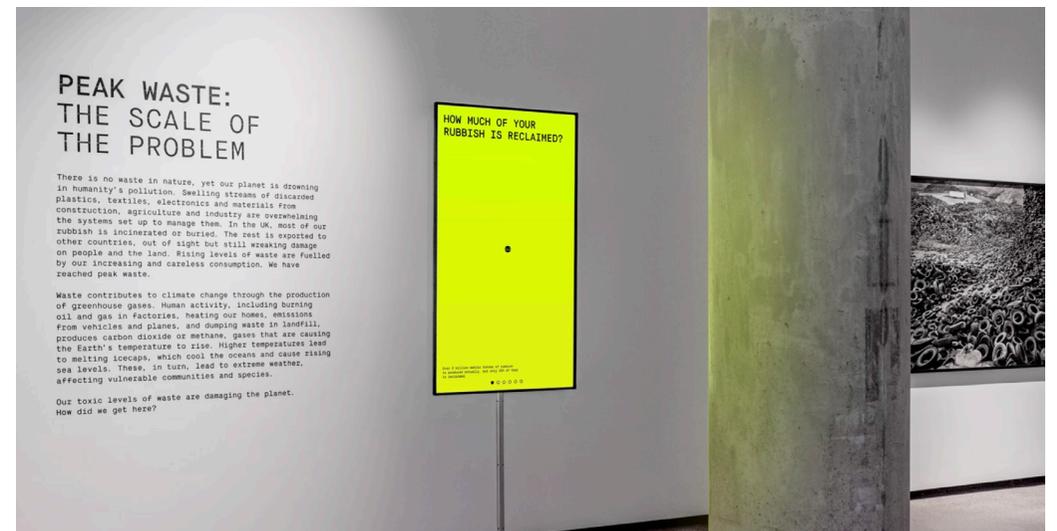
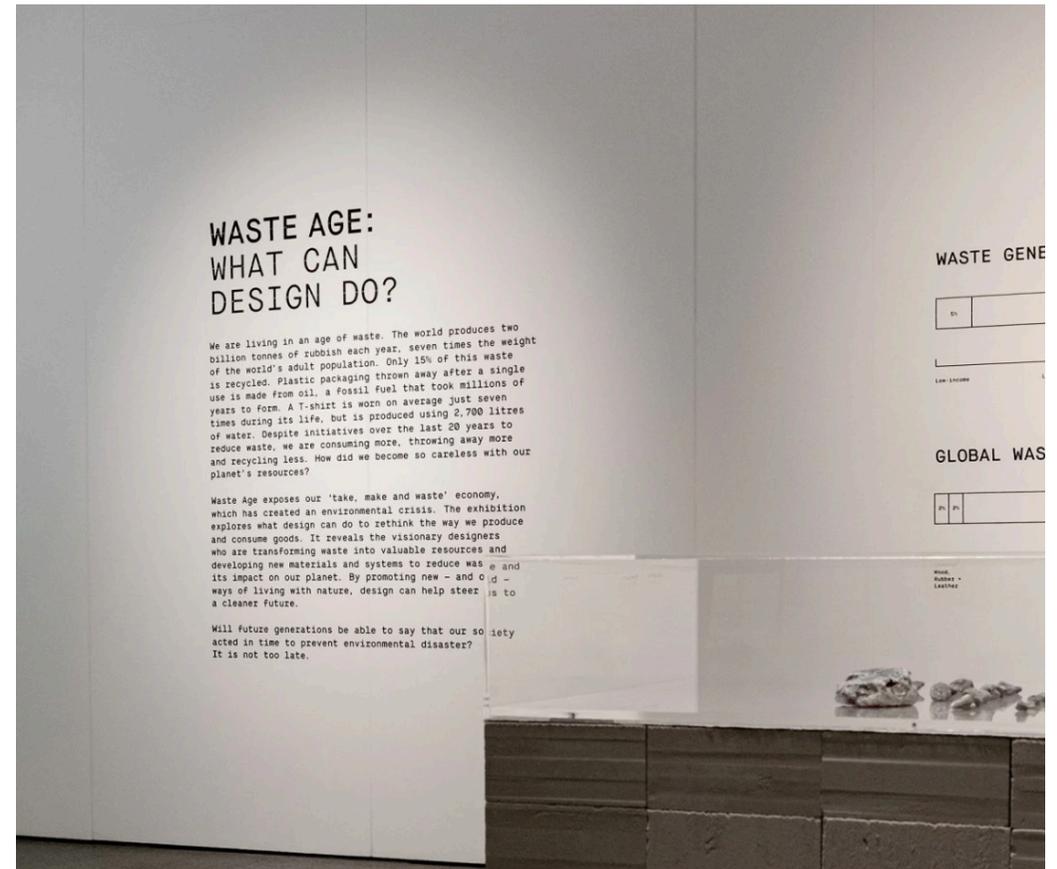
Waste Age: What can design do?

The Design Museum, October 2022 - February 2023

Exhibition copy - Captions, sub-section texts, timeline copy, press-releases, presentation copy, audit report, catalogue copy and edits, copy for infographics and internal documents such as interpretation plans, text plans etc.

Keywords: waste, design, circularity, climate crisis, material research/innovation

Research methods: Conversations and interviews with experts from different fields around waste, waste management and design, cross-editing and collaborative writing with colleagues



How to Reduce Waste When Creating an Exhibition

TEO Journal

Case Study

Keywords: waste, exhibition design, choices, environmental audit, museums, climate crisis

Research methods: environmental audit by URGE, close collaboration and transparent conversations with 2D and 3D designers, interviews colleagues from other departments, gathering data

How To Reduce Waste When Creating An Exhibition

Reflecting on museums' ecological impact with the Design Museum's Waste Age



by [the Design Museum](#) in [Insights](#) 10 May 2022
from London, United Kingdom

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Inviting external experts into the process of designing the Waste Age exhibition, the Design Museum team has questioned practices and reconsidered resource use, production methods, supply chains and lifecycles of exhibits and materials, to be less wasteful and more environmentally sustainable. The team shares here the results of this waste reduction process, providing a framework for future exhibitions to build from.

Introduction to Waste Age

We are living in an age of waste. The world produces two billion tonnes of rubbish each year, seven times the weight of the world's adult population. Only 15% of this waste is recycled.

Waste Age: What can design do? – a touring exhibition by [the Design Museum](#), curated by Gemma Curtin and first shown at the Design Museum from October 2021 to February 2022 – tells the story of the environmental crisis created by our 'take, make and waste' economy. The exhibition explores how the design industry has contributed to creating our extractive throwaway culture but also how design can – and must – help to find less wasteful ways to live and consume.

While Waste Age asked 'what can design do?', it also called for the Design Museum to explore how to reduce waste when creating an exhibition. We were conscious that, as a museum, we are contributing to the waste problem and that the museum sector at large has a lot of work to do to minimise their exhibitions' environmental impact. Julie's Bicycle, a non-profit organisation mobilising the arts and culture industries to take action on the climate and ecological crisis, states that the museum sector **accounts for almost a quarter** of the CO2 equivalent emissions of all Arts Council England NPOs, more than theatre, dance, libraries and other cultural institutions. This arises from practices such as disposing of virgin materials from temporary exhibitions to landfill after the exhibition has closed, shipping objects internationally, and the heavy carbon costs created by this and AV heavy exhibitions that consume large amounts of energy.

Working on Waste Age provided an opportunity to interrogate our practices and reconsider how to approach and design exhibitions to be less wasteful and more environmentally sustainable. It offered a moment for internal reflection and an opportunity for inviting external experts into the process of designing an exhibition, providing analysis of and practical advice on

resource use, production methods, supply chains, and lifecycles of all exhibits and materials. This aimed to minimise the waste produced in Waste Age and provide a framework for future exhibitions to build from, creating a longer legacy of the exhibition.

We asked ourselves "what can design do to reduce the environmental impact of exhibitions and museums?"



The brief called for a refreshing innovative approach to the design of a touring exhibition that embeds sustainability at its core.



Photography by Felix Speller and The Design Museum

Embedding wastelessness into the design brief

From the earliest stages of appointing 2D and 3D designers to work on the exhibition, we prioritised sustainable, waste-free practices, embedding these criteria into the initial brief that the 2D and 3D design teams received.

The brief called for:

- A refreshing innovative approach to the design of a temporary, and touring exhibition that embeds sustainability at its core.
- Use of the existing exhibition structure and elements and stock from the museum.
- Reusing items from local sources or securing the future re-use of virgin material.
- Above all, an open approach and rationale when other options are taken.

The brief also explained the necessary teamwork and communication that would allow for the development of a less wasteful exhibition design. It states: "The materials, methods used in the build of this exhibition will be scrutinised, the choices made should be transparent, with the aim to have a carefully chosen palette of ethically considered materials."

After going to tender, we appointed Material Cultures as the 3D design team and SPIN for the 2D design. Both teams used experimental and thoroughly researched approaches, creating new aesthetics and material palettes that celebrated minimising waste and demonstrated the creative opportunities that can arise from working in a more environmentally conscious manner.

A post-waste framework for 3D exhibition design

Material Cultures is an architectural practice and non-profit organisation that was co-founded by Summer Islam, Paloma Gormley and George Massoud with the mission to create a post-carbon built environment. They applied their knowledge of material cycles to develop an exhibition design to counter and critique the wasteful practices of the museum and cultural sectors.

Their proposal and design were based on three key principles:

Reuse wherever possible

In the Waste Hierarchy¹, which ranks waste management options from best to worst in terms of their environmental impact, reuse is listed as the second most effective way to minimise waste and is better for the planet than recycling, recovery or disposal. With this in mind, Material Cultures reused the existing interior stud walls from a previous exhibition. They also reused the silicate blocks that were used to construct plinths in the previous exhibition, Charlotte Perriand: The Modern Life, restacking the bricks into new display structures suitable for Waste Age.

Rethinking the material palette

For the new structures within Waste Age – a square timber-based room constructed in a cassette-style and a curved brick wall – Material Cultures replaced carbon-intensive materials that are commonly used in exhibition builds such as MDF with carefully sourced bio-based, low carbon materials that are responsibly and locally produced. These materials absorb and store carbon rather than emit it, drastically reducing the carbon footprint of the exhibition.

The materials included:

- Untreated plywood
- Woodwool panels – made from timber offcuts and waste
- Adobe bricks – made from unfired clay, sand and straw
- Felt – made undyed sheep's wool
- Clay renders – made with waste materials from the UK brick industry

Design for deconstruction and reuse

The exhibition was designed with the afterlife of each material in mind, prioritising the ease of reuse at the conclusion of the exhibition. Material Cultures used construction methods and joining details that allowed all the elements to be simply dismantled. The timber cassettes were constructed with simple joists and screws and the unfired-clay wall's shape and thickness were engineered to allow dry stacking rather than mortaring. Focusing on design for disassembly meant that all the elements could be reused for future exhibitions or donated to other organisations.

The elements were used for:

- All wood wool and timber were donated to New Road Group (construction company)

- 800 fired bricks were donated to New Road Group
- Most of the Perspex cases will tour with the exhibition to Paris and the remainder have been given to RCA students
- 250 fired bricks, 10 silicate blocks and 10 adobe bricks were donated to Ella Doran from the Royal College of Art and Urge
- The felt was donated to fashion designer Phoebe English for use in a future collection
- Unfortunately, the remaining bricks were not able to be distributed for reuse due to a last-minute cancellation from the party who had accepted them. This points to the complex logistics of reuse and the need for increased and timely collaboration and communication when trying to minimise waste



Photography by Felix Speller and The Design Museum



© SPIN

Photography by Felix Speller and The Design Museum



© SPIN

Waste Age [was] an opportunity to assess the environmental impact of graphic design elements and rethink their material choices and aesthetics in the context of waste.

Reducing waste through 2D Design elements

SPIN is a London based graphic design studio with over 20 years of experience across a range of projects, including exhibition design and identity. Run by Design Director Jonas, Zieher, Managing Director Patricia Finegan and Creative Director Tony Brook, SPIN's team used Waste Age as an opportunity to assess the environmental impact of graphic design elements and rethink their material choices and aesthetics in the context of waste. They describe the design as "stripped-back, and therefore informative and visually impactful in a way that conveys the urgency of the message behind Waste Age."

Their design minimised waste by exploring novel methods of printing and designing including:

Inkjet printing

Throughout the exhibition, SPIN utilised hand-held inkjet printers – usually used for industrial labelling – for wall texts, infographics, quotes, "do not touch" signs, and more. The extensive use of this printer mitigated the need to use vinyl or plastic lettering, greatly reducing material waste. They selected water-based ink to avoid toxic chemicals. The method of printing helped to shape the aesthetics of the typeface which was adjusted to make it clearer when printed with the gun.

Typefaces constructed from found material

For the section headings, SPIN developed an animated typeface from Waste Materials such as plastic bottles and aluminium cans. The largescale typeface aimed to demonstrate how waste can be repurposed to be functionally and aesthetically impactful.

A reduced-waste catalogue

Working with the publishing team at the museum, SPIN worked to minimise the impact of the printed catalogue. It was printed on the world's first CarbonNeutral® printer, using vegetable-based inks, uncoated and recycled paper stock for the cover and sustainable paper sources for the pages. It was printed in the UK to reduce carbon-intensive shipping impacts and was sold without plastic shrink wrap packaging or other plastic-heavy packaging processes.

Recycled and recyclable captions

The captions were screen printed onto recycled and recyclable plastic. The sturdy material meant that the captions lasted the duration of the exhibition run and did not have to be replaced due to damage.



© SPIN



© SPIN



Photography by The Design Museum



The audit was undertaken to set a new benchmark for the process of future exhibition and to gain a deeper institutional understanding of how to make a lighter impact on the planet.



© SPIN

Learning and Assessing through an Environmental Audit

Throughout the development of Waste Age, the exhibition's team and designers worked with URGE Collective who audited the process and the impact of the exhibition. The audit was undertaken to set a new benchmark for the process of future exhibition and to gain a deeper institutional understanding of how to make a lighter impact on the planet.

Primarily URGE focused on measuring the carbon footprint of the exhibition. They also provided feedback on the design and curatorial decisions in terms of their impacts. URGE's team gathered insights through a combination of interviews, observation, and data analysis, with the group setting up digital carbon trackers and working with contributors to gather information first-hand from challenging and complex supply chains.

URGE gathered data on:

Exhibits – weight/distance and type of transport

Emails/video calls – numbers sent and received across the whole team

Materials and processes – Exhibition design and production/build and graphic design and production

Key Findings of the audit

The audit revealed that the total exhibition impact was approximately 21.2 tons of CO₂e (CO₂ equivalent). The CO₂e emissions were the result of:

Building energy:

Energy supply is the most important step in reducing emissions. If the Design Museum used the national average electricity, the impact of the exhibition would be about 185 tons of CO₂e. The museum's use of renewable energy cut the total impact by about 95%.

Exhibits:

The objects weigh roughly 500kg, and the average distance they travelled was 1,100km (many are from London) thus the logistics footprint is less than 20kg CO₂e.

Commissions:

the Fadama 40 exhibit single-handedly doubled the exhibition's carbon footprint, chiefly because of the materials and transport choices involved (i.e. large amount of copper & air freight of one component of the installation).

Exhibition build:

The highest build impact is the screws. Using 4,800 standard stainless steel decking screws has an impact of 1.9 tons of CO₂e – roughly 20% of the total exhibition footprint. URGE recommended minimizing the CO₂e impact of this surprising find by reclaiming and reusing the screws after the exhibition.

Using a timber frame system over a standard aluminium exhibition frame system saved 1.5 tons of CO₂e, reducing the impact by about two thirds.

Using unfired bricks instead of fired bricks saved 6 tons of CO₂e, the second most significant saving after switching to renewable electricity.

Digital communication:

Up to 10% of the total footprint is associated with digital communication

Emails: approximately 11,000 emails and 11GB of data have been shared, which equates to around 1 ton of CO₂e.

Video calls: approximately 750 person-hours were spent on video calls. The impact of this is less than 0.5% of the total footprint.

total exhibition impact: approximately 10 tons CO₂e – 80% of which is in the build.



Photograph by Emily Snodden and The Design Museum



The museum sector has a lot to learn and change to reduce its impact and sharing knowledge and resources is key to expediting these urgently needed changes.

Key Learnings for the museum

Chase data:

Gathering detailed information and following up with suppliers throughout the audit helped the Design Museum make informed decisions. It challenged assumptions and showed that some unexpected options – such as using recycled plastic for exhibition captions – had the lowest impact.

Challenge convention:

Both the 3D design and audit processes encouraged the Design Museum to question accepted methods of planning and building exhibitions. Sustainability isn't something that is achieved instantly, but the more alternatives are explored, the more viable and genuinely impactful options are found.

Work together:

Only the expertise of many specialists made this process possible. Communication between Museum departments revealed how making changes can have knock-on effects, so the Design Museum aims to increase this collaboration across the organisation in future.

Use renewable energy for electricity supply:

The Design Museum had already converted to renewable energy before Waste Age. However, the auditing process allowed for a deeper understanding of the positive impact of this change and will help to drive future decisions about the building and its energy use.

Select low impact construction materials for the build and commissions:

Low impact materials which are sourced locally will have the least environmental impact. If material needs to be shipped, lightweight and carbon-negative or neutral materials should be prioritised.

Source projects locally wherever possible:

This avoids carbon-intensive shipping and mitigates the need for air travel as part of the procurement process. Waste Age's curators chose not to fly at all – partly due to COVID-19 – and exhibitors used video links rather than sending couriers to oversee installations.

Count digital carbon:

Making up 10% of the exhibition's total impact so far, the surprisingly high emissions created by video calls, websites, emails and attachments were exposed by the audit's carbon tracker.

Be open to learning and resource staff and time to make this possible:

The Design Museum's construction and installation teams went through a learning process of working with unfamiliar materials, such as walls of self-weighted bricks, which posed new challenges. This meant that more time and resources were needed for sourcing and understanding materials. One unanticipated benefit of using bio-based materials was that they did not dramatically increase in cost in line with other more conventional building materials in 2021. This meant that the materials budget was adhered to at a time when other exhibitions were challenged with rising material costs due to high demand and post-Brexit taxes and shipping costs.

The process will not be perfect:

Working to minimise waste and lower carbon footprints is a complex undertaking, especially within the constraints of tight deadlines and working to budgets. While Waste Age was a big step forward in the approach of the Design Museum the museum's team are still learning how to minimise impact and some decisions could have been made differently. Waste Age provided a benchmark to build from in the future rather than a perfect blueprint for an exhibition.

Share knowledge and resources:

The museum sector has a lot to learn and change to reduce its impact and sharing knowledge and resources is key to expediting these urgently needed changes. Internally, the exhibition's team has shared the learnings of Waste Age through discussion with colleagues, circulating the audit findings and creating best practice documents which can help future exhibitions to build on this knowledge and reduce their impact. Externally, the Design Museum has offered advice to other institutions, loaned the printing guns to galleries and designers and shared their learnings through articles, talks and interviews.

Exhibition mentioned

Waste Age: What can design do?, by the Design Museum

¹ Department for Environment Food and Rural Affairs. (2011, June). *Guidance on applying the Waste Hierarchy*.

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Springtime Everywhere

Published on Real Life, October 2020

Long-form essay

Keywords: digital nature, climate crisis perceptions, aestheticisation, smoothness, planetary consumption

Research methods: Interviews with photojournalist and senior program lead of 'Climate Visuals' and a owner of Google Earth Blog / technical manager / developer, close use and observation of Google Earth interfaces and platforms, reading/listening to a diverse range of information around the topics of smoothness, visual impact, the climate crisis, the coding and mechanics of Google earth etc.

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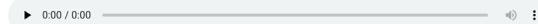
In prioritizing clarity and smoothness in its representation, Google Earth supports how we are consuming the planet

Lara Chapman

October 05, 2020



Image: From *Postcards From Google Earth* by Clement Valla. Courtesy the artist.



Full-text audio version of this essay.

"If you look at Google Earth, it's springtime everywhere," explains Gopal Shah, Google Earth's product manager, in a YouTube interview. In a TED talk he boasts that Google Earth is "cloud-free," since the clouds and their shadows are edited out. "I like to think of this as Mother Earth's best selfie," he says, smiling indulgently. He pauses, as if waiting for the audience to laugh. But if Google Earth is the world's selfie, does that make Google — the company taking the picture — into the world's self? And how is this self and that selfie affecting the perceptions of our planet?

Though Google Earth may seem like a straightforward representation of the world as it is, it is actually made by stitching together millions and millions of pictures from various sources — satellites, planes, trekkers, cars — produced by Google itself or third-party suppliers. The result is not an objective mirror, as its seamless presentation in the Google Earth interface can make it appear, but a construction shaped by the countless decisions of humans and the algorithms they have programmed. The default images shown on Google Earth, for example, are not necessarily the most recent ones. Rather, it displays what it regards as the best imagery for each location, though the criteria for this are not disclosed.

Google Earth is governed

by a certain smoothness that makes the representation seem plausible as Earth's replica

Judging by what the app shows us, these decisions are governed not by an essential demand for accuracy but for clarity: for a certain smoothness that makes the representation seem plausible as Earth's replica. Just as Instagram filters can remove blemishes, plump our lips, and thin our chins, Google Earth filters its representation of our planet, digitally nipping and tucking unpleasant weather patterns, harsher seasons, and the nighttime hours to render Earth as budding, healthy, and predominantly green. The version that feels "real," that we'd prefer to be real, is not the one that is verifiably accurate but the one that's easiest to consume, the one whose concerning blemishes have been fixed.

Earlier versions of Google Earth had a patchwork aesthetic that made its underlying constructedness more apparent: Images were visibly stitched together and colors were not quite aligned; there were rendering glitches and anomalies such as collapsed bridges and roads, collected, for instance, in screenshots by artist Clement Valla. "These jarring moments," he argues in an essay for Rhizome, "expose how Google Earth works, focusing our attention on the software." But in the 15 years since Google Earth's launch, the company has worked to efface such evidence, overriding anomalies with a smoothed-out representation that masks the sources and the contexts in which images have been acquired and selected, meshing them into giant collage of renders and real-time images. As Valla explains, Google uses the Universal Texture — a mapping technology invented and patented by Google that allows it to extrude 3-D surfaces and models from two-dimensional images — to achieve this smoothing; he suggests that the company's software and algorithms privilege the cloudless images that yield more realistic results. But this realism is not simply empirical.

As its name implies, the Universal Texture promises a god-like (or drone-like) uninterrupted navigation of our planet — not a tiled series of discrete maps, but a flowing and fluid experience. This experience is so different, so much more seamless than previous technologies, that it is an achievement quite like what the escalator did to shopping.

The smooth, uncanny constructions are designed to facilitate an endless consumption of the earth, much like the escalator carried shoppers frictionlessly through a mall.

Cumulatively, the selection of millions of "best" images on these terms creates an overall distorted representation of Earth. In making smoothness the underlying design principle of Google Earth, Google risks denying the bleak realities our world faces. In 2014, two years after Hurricane Katrina had left a wake of destruction across the southeastern U.S., Google defaulted to pre-Katrina imagery for Google Earth, which some critics described as "airbrushing history." (Google eventually purchased more up-to-date images to use as the default.) Similarly, as artist Tamara Kametani's *The Sea Stayed Calm for 180 Miles* documents, Google Earth's real-time viewing software shows the strip of ocean between Libya and Lampedusa as peaceful waves, but this "real-time" footage is, in fact, an animated rendering that significantly reduces Google Earth's processing load. In this case, a programming hack falsifies the representation of the world's deadliest migration route.

But Google Earth's denial of the planet's crises is not limited to erasing evidence of climate change — indeed, its Voyager feature even offers guided tours such as "See Climate Change's Impacts" which includes pit stops at the sites of burning forests in Indonesia and melting glaciers in Chile. It happens through encouraging users to see the world as theirs for consuming.



"Everybody believes that when they are looking at a map, particularly a modern map, that they are looking at the truth," Peter Barber, the former head of maps at the British Library, said on the BBC Radio 4's *Mapping the Future* podcast. Yet, as Barber explains, a map is "a selection from the truth tailored to the requirements of the user and reflecting the values of the society in which it is produced."

This logic of tailored mapmaking is quite clear when one looks at Google Maps, which foregrounds consumption and consumerism by highlighting the shops, restaurants, bars, and tourist attractions nearby. It positions us as consumers in a world full of places to spend our money and orients us to move through locales in this way.

If Google Maps supports and fuels consumerism, what sort of user and which values does the planet's "best selfie" convey? Google Earth initially grew out of a company called Keyhole, which Google acquired in 2004, that developed mapping software used to simulate bombing raids in Iraq. According to this report in the *Guardian*, Google still likely sells versions of Google Earth and its data to "just about every major military and intelligence agency." This suggests that at least some of the embedded values of Google Earth include viewing the planet as fundamentally a site of struggle for territorial control, and mapping as a strategic means for securing subordination and subduing resistance.

Yet publicly, Google has shifted the focus of Google Earth's marketing toward the desktop tourist, who is presumed to have a different sort of conquest in mind: to be able to approach the planet as an object of consumption they can explore unilaterally at their leisure. In 2017, Google launched an update of Google Earth accessible in Chrome (rather than as a stand-alone program). For this version, the company, according to engineering manager Sean Askay, was "starting with more of a consumption experience." Google Earth was presented as a kind of entertainment platform replete with media partnerships and the Voyager feature that allowed users to "climb Mount Everest, swim with sharks, or visit Afghanistan with Zari the purple Muppet." When you complete the phone installation of the Google Earth app now, the final screen reads, "The Earth is yours, go explore." It's as though you have suddenly become a consumer of Earth rather than one of its inhabitants.

Google's "Universal Texture" facilitates an endless consumption of the earth, like the escalator carrying shoppers frictionlessly through a mall

Architect and critic Mark Dorrian has argued that Google Earth's "interface works through a principle of grasping, which intensifies the sense of the manipulability of the virtual object: through the hand icon that appears one can 'take hold' of the earth and spin it, or even invert it, which is a strangely disconcerting experience at first." This god-like power dynamic, too, reinforces a sense of our separation from the planet we consume. This was perhaps a useful distancing for Google Earth's military clients, who could operate at a remove from potential consequences of their actions. But for general users, it offers an equally false sense of autonomy over and separation from Earth, which occludes our ability to see the sorts of collective action necessary to reverse the disasters we face.

As Covid-19 lockdowns were shuttering citizens indoors in April, for instance, Google Earth seized on the opportunity to launch a slew of themed virtual

tours (e.g. the National Parks of the United States tour). It made Google Earth accessible in all browsers and added 2,500 new images to Earth View, a spinoff showcasing surreal and awe-inspiring landscapes from above. For all the feeling that Google Earth's could be a helpful resource for learning about the climate crisis, its interface of zooming in and out and around the globe seamlessly in high-definition undermines its potential. The form comes to contradict the content: We may revel in the beauty and awesomeness of seeing the earth from the sky — and our ability to freely manipulate this view — despite the crises the imagery may depict. Deforestation on a devastating scale can take on the same aesthetic as any other “virtual holiday” on Google Earth.

In fact, the effects of the climate crisis may be even *more* aesthetically pleasing than the average landscape when viewed from the sky. Toby Smith, a photojournalist and the senior program lead at Climate Visuals, suggests that “human activities like mining or deforestation leave quite sexy and attractive patterning, scarring and infrastructure which looks amazing on satellite photos — disproportionately good, compared to how a naturally preserved landscape does. For example, if you look at the areas of the Amazon that haven't been destroyed yet, it's all just green. It's very difficult to promote that climate solution of ‘don't touch the green carpet’ through aerial imagery.” Although Climate Visuals researchers have not specifically conducted research into the efficacy of aerial photography, they have found that the most impactful images for changing behavior around climate change include humans, are local, and tell new stories — characteristics that are entirely absent from aerial photography.

Aerial images can be helpful for *conducting* research — Google Earth and other satellite-imagery repositories like NASA and Landsat (which are more up to date) are useful for tracking ecological change — but they offer little in the way of rhetorical power. As Dorrian notes, “scintillating images of the beauty and diversity of the earth's surface, of extraordinary definition and reproduced with highly saturated colors, achieve a kind of hyper-reality that appears simultaneously abstracted and highly palpable and that sublimates both pristine and devastated landscapes alike.” The public's will to act on the visual information conveyed about planetary destruction is neutralized by the touristic and consumeristic affordances of the map, which may placate us with the feeling of having been entertained. In an article for the *New Statesman*, India Bourke describes this as “tourism for the Trump Age,” which focuses on consumption through “a world surveyed at a safe and sanitizing distance.”

Google Earth's commodification of the planet is part of a long legacy of extracting resources from the Earth for profit, only it performs its extraction through digital representation. It encourages people to be entertained by the planet and to feel separate from that legacy of extraction. It also requires a huge amount of energy in and of itself, inviting us to consume the planet in another way. Conservation and consumerism can never be compatible bedfellows.



In *The Society of the Spectacle* (1967), Guy Debord writes:

When the real world is transformed into mere images, mere images become real beings — dynamic figments that provide direct motivations for hypnotic behavior. Since the spectacle's job is to use various specialized media to show us a world that can no longer be directly grasped, it naturally elevates the sense of sight to the special pre-eminence once occupied by touch.

By participating in the 21st century fantasy of a frictionless existence, Google Earth — a form of “specialized media” that shows us that the “world that can no longer be directly grasped” — treats our planet as a toy, an object of pleasure, an entertainment platform that can be casually manipulated, updated, edited, and enjoyed rather than an unfathomably complex, nuanced and at-risk ecology to be respected. As we smoothly transition from one location to another, Google Earth whispers its hypnotic mantra of “*Springtime everywhere. Springtime everywhere*” and smooths and soothes us into a strange relationship with our uncanny planet.

This sanded-down, polished, slippery-slide smoothness isn't exclusive to

Google Earth. Within the Smooth Earth there is the “Smooth City” — a term coined by architect and critic René Boer to describe the sanitized urban condition that is becoming ubiquitous, in different intensities, across the globe. In the Smooth City, “public spaces are well-designed, well-maintained, clean and safe, if you conform to the rules ... However, it can also be a highly normative, controlling and arguably oppressive environment, in which gradually all opportunities for productive friction, sudden transitions or subversive transgressions have been eliminated.” Inside the Smooth City, one might find Smooth Citizens, who aspire “to become as smooth and impervious” as their devices, as Nikki Shaner-Bradford has described. We also have “Smooth Food,” textureless and surreal, glistening with slimy and jelly-like surfaces, which journalist Jenny G. Zhang describes as “food without bite to it.” Zhang concludes that our attraction to smooth food is a reaction against our unsmooth era: “Smooth food is for when you want to close your eyes and rest your head, senses off, save for the heightened feeling of running your fingertips over the satiny surface of a plane that never ends; it continues, uninterrupted, in all directions.”

The allure and danger of smoothness is in how it placates, mollifies, and sedates us. What is the alternative? I am reminded of the Instagram bio of Yehwan Song, an art director, graphic designer and developer, that reads “Anti-user-friendly.” What would an anti-user-friendly Google Earth look and feel like? If Google's Earth was friction-full rather than friction-less, how would it affect our perceptions of our planet? What could a Rough Earth do? ●

Lara Chapman is a writer, design researcher and curator based in London. She writes about the patterns and politics that operate in everyday objects and has previously written for DISEGNO, Running Dog, Frankie Magazine and others.

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Design and The Deep Future [various pieces of writing/work]

Published on www.kabk.nl/en/lectorates/design, 2017-2019

Website copy and management - authoring section introductions, interviews with researchers, blog-style entries on projects, introductions to projects, alt-descriptions for images

Keywords: deep future, design and artistic research, space junk, digital detritus, plastic waste, self-destructing design, repair

Research methods: Interviews with researchers, researching relevant projects and suggesting content

SPACE JUNK

KABK / Lectorate Design / SPACE JUNK

Published on May 15th 2017

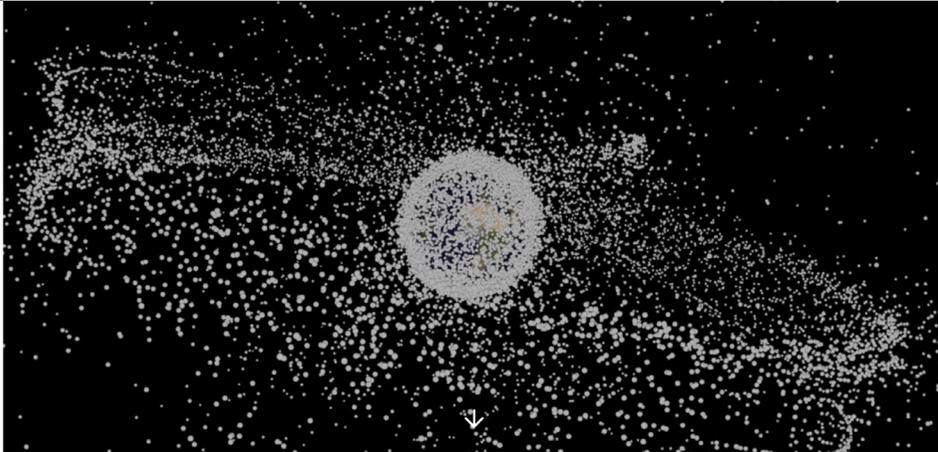
In the past 60 years, outer space has gone from a virtually debris-free environment to a zone cluttered with man-made pollution. Much of this space debris is made up of defunct satellites and spent rocket stages as well as fragments from their break-ups and collisions. As of January 2019, the European Space Agency—which defines space debris as 'all artificial objects including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional—estimates that there are more than 128 million pieces of debris smaller than 1cm, about 900,000 pieces of debris 1–10 cm, and around 34,000 of pieces larger than 10 cm in orbit around earth. These numbers continue to grow as fragments collide and break into multiple pieces. Humans are only just coming to understand the devastating consequences of our pollution on earth. It seems likely that similar, unpredictable consequences in space will become apparent in our future. At present, space debris poses a serious hazard to spacecrafts due to the risk of collision. This can cause billions of dollars worth of damage as well as endangering the lives of astronauts.

In addition to this orbiting debris, other kinds of outer-space pollution exist. Pieces of trash remain on the moon that range from leftover rocket parts to everyday objects—including a plastic bag. Some objects also return to earth from space only to become waste. And finally, there is the waste on earth that accumulates as byproducts of the space industry.

In SPACE JUNK we delve into the various types of space waste and explore design solutions that seek to reduce and create awareness around the issue of space junk.

[European Space Agency \(2018\) ESA's Annual Space Environment Report](#)

ADRIFT: THE SECRET WORLD OF SPACE JUNK



Still from *Adrift*, Cath Le Couteur and Nick Ryan, 07:43", 2017

KABK / [Lectorate Design](#) / [Adrift: The Secret World of Sp...](#)

Published on November 4th 2019

'GUYS... I GOTTA TELL YOU... I THINK MY SPATULA'S ESCAPED.'

PIERS SELLERS, ASTRONAUT AND METEOROLOGIST ABOARD MISSION STS-121, 2006

Content type: Film and Research Project

Credits: [Cath Le Couteur](#) (director and writer) and [Nick Ryan](#) (composer, sound designer, artist and audio specialist)

Year: 2017

Introduction:

Adrift is a short documentary exploring the intriguing but dangerous world of space junk. Combining footage from space missions, interviews with astronaut and meteorologist Piers Sellers and astronomers at Collowara Observatory and a fictional narration from the perspective of Vanguard—the oldest piece of space junk currently in orbit—this film illuminates the phenomenon of space junk; a little-known issue of our time that is in urgent need of attention.

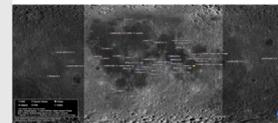
The film is part of a larger research project entitled *Project Adrift*. Read more about it [here](#).



CREDITS:

Film Editor and Sound Design: Florence Kennard and Michele Chiappa
 Director, writer, soundtrack specialist and voice-over: Sally Potter
 Cinematographer: Constanza Garcia Ulibarri and Richard Numeroff
 Screenwriter: Heidi Julavits
 Animator of Vanguard: Daffy London
 Re-recording mixer: Jason Peacock
 Film music: Tim J Matthews
 Production team: Castillo-Sepúlveda, Monica Greco, María Isabel Reyes and Marsha Rosengarten
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NUANCES OF REPAIR: INTERVIEW WITH GUY KEULEMANS



Archaeologic Vase, series 5, Guy Keulemans, 2019.
Stoneware (Wheel thrown and fired to bisque by
Kiyotaka Hashimoto), paint, sterling silver staples.
Image: courtesy of the artist.

KABK / Lectorate Design / Nuances of Repair: Interview w...

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Credits: [Guy Keulemans](#) (University of New South Wales and guest lecturer at KABK, 2019). Interview by [Lara Chapman](#)

Year: 2020

Introduction

Guy Keulemans is an Australian designer, artist and researcher working with critical objects to examine historical processes, philosophical concepts and sustainability theories. His research is particularly focused around themes of repair and reuse. In the following interview, Keulemans discusses the need for more nuanced understandings of repair, the financial challenges roadblocking the repair economy and how we can begin to change our cultural attitudes and innovate around repair.

**'THERE IS POTENTIAL FOR BETTER AND MORE
TYPES OF REPAIR IN OUR CULTURE.'**

GUY KEULEMANS

Lara Chapman: Having worked and studied in both Europe (for your MA and early career) and Australia, do you find any cultural differences in attitudes to repair across these continents?

Guy Keulemans: I think the interest in repair and the way that it expresses culturally is reasonably consistent among what you would call the Global North. All these places have a traditional aspect to repair that can be considered 'make do', i.e. stuff breaks and you have to fix it. Historically there has always been a frugality behind that. This is still the case in the Global South where repair is definitely seen as a necessity of life and there are some really fantastic expressions of frugality of repair, for example in the Indian tradition of Jugaad. *

That being said, there are still different cultures of repair in the Global North with distinct expressions or themes—you have the 'make do' approach which is not necessarily about aesthetics but about restoring things to function; you've got DIY types of repair which include the 'make do' but also have an interest in innovating or improving the aesthetics or function of the object in the process; then you have professional repair services which are increasingly becoming corporatised. Some of the more interesting developments in Europe are initiatives to do with product stewardship and remanufacturing where companies have licence or subscription models and take back broken or obsolete products for their internal remanufacturing for repair.

Ultimately, all of these expressions are essential and we need to innovate around repair. There is potential for better and more types of repair in our culture.



Trent Jansen's 'Jugaad With Pottery High Tray' repaired by Guy Keulemans and Kyoko Hashimoto using silver staples cut from a Georgian spoon. Photo by Lee Grant.

LC: In your own practice, you distinguish between various approaches to repair and favour 'transformative repair' and 'design-led repair'. What do these terms mean and what do they offer?

GK: Design-led repair is simply what it suggests—you bring designerly skills, training and expertise to the practice of repair rather than a simple functionalist or engineering approach. Transformative repair is

similar but perhaps a little bit more focused on the specific improvement, change or transformation in the aesthetics or function of the object through the process of repair. These approaches are examples of the ways that repair can be innovated and become more "21st century" (for lack of a better word).

UNTIL OUR EXTERNALITIES FOR RESOURCE EXTRACTION ARE REALLY TAKEN INTO ACCOUNT, THE PROGNOSIS FOR REPAIR IS SOMEWHAT DARK

LC: Do you see students of yours taking a more 21st-century attitude to repair that is different from when you were studying design?

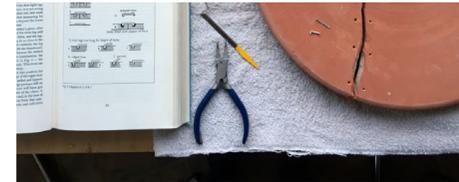
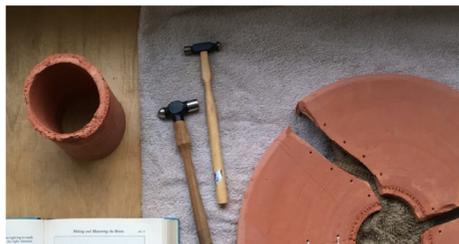
GK: I think the younger generations are acutely aware of the dangers of climate crises that are coming and are already happening. This drives their motivation towards repair or their interest in repair, reuse and sustainability in general. It's a tricky situation though because while that might drive their cultural interest in repair, the financial imperative still doesn't exist because repair services are expensive.

In the Global North, it is often cheaper and considered more acceptable to buy again and buy new than to repair. We are so wealthy but also so wasteful. This is due to the fossil fuel economy where materials are really cheap relative to their extended cost and their impact on the environment. That has also led to the decline in professional repair services which is a great tragedy from the perspective of the planet.

LC: Do you think the economics of repair will shift in the future?

GK: Until our externalities for resource extraction are really taken into account, the prognosis for repair is somewhat dark. We need to work particularly on a top-down approach where government policy can start to motivate people financially towards repair, better maintenance as well as adaptive re-use.

Hopefully, we also start to see an improvement in corporate responsibility and interest in repair at an institutional level where designers, engineers and marketing people start to see that there is value in promoting better repair of their products. Obviously, profit is the bottom line driving what companies do but with the right regulatory framework, there *should* be opportunities for making money out of these sustainability practices.



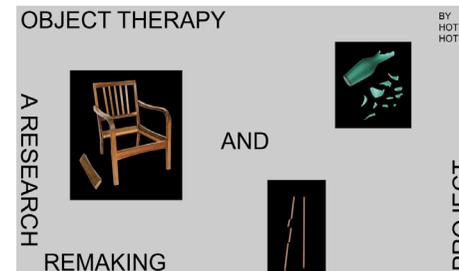
Process photo of: Trent Jansen's 'Jugaad With Pottery High Tray' repaired by Guy Keulemans and Kyoko Hashimoto using silver staples cut from a Georgian spoon.

THE STUDENT-LED INVESTIGATION INTO REPAIR ISN'T JUST FOR THE PURPOSE OF REPAIRING ONE OBJECT BUT RATHER BECAUSE REPAIR CAN FUNCTION AS A METHOD TO BETTER UNDERSTAND THE DESIGN OF PRODUCTS IN A BROADER SENSE

LC: As an educator, how do you design a curriculum that allows students to engage with repair as something that they can do professionally that would sustain them in our current economic systems?

GK: For me, teaching repair isn't just about pragmatic things or functional design skills but rather a broader conceptual investigation into how the world of products exists and how it should change.

The way that I have taught repair-focused courses in the past is through the framework of critical design so that the student-led investigation into repair isn't just for the purpose of repairing one object but rather because repair can function as a method to better understand the design of products in a broader sense. When you start to repair something you get a very intimate inside knowledge into how that object was designed in the first place. On a practical level, you start to see technical connections of how things are put together and how things can be taken apart. At a more conceptual and critical design level, you can start to explore concepts, like design for disassembly, and start to think about how the broader systems and infrastructures that support any one particular product such as repair services, waste management systems, international freight shipping and marketing and so on.



Screenshot of the 'Object Therapy' project website

LC: What would a brief for that kind of course look like?

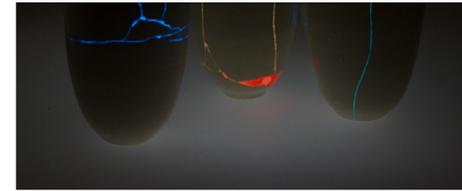
GK: We have done briefs in the past that somewhat mirror my own research projects. For example, one that I did a few years ago was called *Object Therapy* where we collected broken objects from the general public and then assigned them to designers and artists who hadn't necessarily done any repair work previously but had skills that could be applied to repair. Part of that process was to understand the context which the object came from. Was it used by the person that owned it? What was its significance? Did it have sentimental value or was it purely functional? How could it be improved and delivered back to that person in a transformed way? This is a kind of ethnographic human research project where you understand not just the product but its context.

Every student would bring in a broken object and we'd assign them around the class and they would talk to each other and discover that context for themselves.

LC: One of your other projects that deals with repair viscerally and iteratively is *Archaeological Vases*. Could you explain how this project came about

The vases started from my fascination with the Japanese repair craft called *kintsugi* which is the repair of ceramics using a tree sap called *urushi* which is native to Asia which is then decorated with gold or silver. It is a great craft and a key precedent for transformative repair. However, I didn't just want to recreate what is already being done so well by the Japanese; I wanted to progress that form so I started using different kinds of glues and photo-luminescent pigments and things like that to push that approach.

This gradually led me to explore ceramic repair more broadly and, in fact, the pre-existing form of repair before *kintsugi* was stapling with metal and before that, if you look back into the archaeological record, it was often done with plant materials and organic glues.



Archaeologic Vases, series 3, Guy Keulemans. Stoneware (Wheel thrown and fired to bisque by Kiyotaka Hashimoto) and repaired with photoluminescent pigmented glue

What I find really interesting about ceramics is that nowadays we view ceramics as break-and- replace objects. They are thought of as being difficult and not worthwhile to repair. This is a result of the fossil fuel economy. Right now, energy is cheap so firing ceramics is cheap and ceramics, therefore, are cheap. But this wasn't always the case. Before, and even during, the Industrial Revolution ceramics were *really* expensive; they were prized objects in a home and if they broke, a lot of effort was put into repairing them.

LC: Can you explain the process of stapling ceramics?

GK: The amazing thing about stapling is that it is very labour intensive. It is not necessarily attractive in the modern perception of what a beautiful ceramic looks like. At an aesthetic level, a lot of people think they are super ugly... I think they are super fascinating [laughs]. They have some functional benefits too—stapled ceramics are much stronger and more usable than glue repaired ceramics, they are watertight and can be put into a dishwasher.



Archaeologic Vases, series 5, Guy Keulemans, 2019. Stoneware (Wheel thrown and fired to bisque by Kiyotaka Hashimoto), paint, sterling silver staples.

I AM VERY INTERESTED IN VISIBLE REPAIR VERSUS INVISIBLE REPAIR

LC: The visibility of the staples seems to be intentionally provocative...

GK: That's right. I am very interested in visible repair versus invisible repair. Within stapling, there are different levels of visibility. 100 years ago, the very best stapled ceramics would be painted to camouflage the staples into the decoration or glaze, concealing the repair as much as possible. But for cheaper, more functional ceramics the staples were left exposed.

Conceptually speaking, there is something nice about seeing a visible repair which we don't really see as normal. A classic example is car repair, you smash your car and take it to the shop and the mechanic repairs it so that it doesn't ever look like it was smashed. There are probably some particular contextual reasons for that in car repair, as you don't want to be driving around a car that looks like you're a terrible driver having lots of accidents. But for other products, what's the big deal? Why do we have a stigma about repair? Sure, the product was broken but if it is repaired to be as good or better than the product it was before there shouldn't be a stigma. I think this is something that we can start to adjust our thinking around. I am fascinated by aesthetic transmission and perception and how we can start to change that cultural attitude towards repair.

LC: You also seem to frame the vases, at times, through the lens of speculative design. Could you discuss why?

GK: I frame some of my repair works through speculation because I think material and aesthetic communication of dystopian and utopian futures can be quite persuasive. For example, if there was some kind of material scarcity in the future, for whatever reason—post-climate change, post-WWIII, post-nuclear war, who knows—then how would we use materials and repair things in the absence of certain products?

We used to repair ceramics with staples and it is very functional so why shouldn't we go back to that? A lot of the time it all comes down to economic and material necessity, the need for frugality. There is no reason that these things will not happen it just becomes a case of when and how?



Process photo of: Trent Jansen's 'Jugaad With Pottery High Tray' repaired by Guy Keulemans and Kyoko Hashimoto using silver staples cut from a Georgian spoon.

IF WE ARE INTERESTED IN SOMETHING LIKE ENVIRONMENTAL SUSTAINABILITY WE SHOULD TRY TO LEVERAGE OR EXPLOIT ANY KIND OF TIMELY EVENT TO THAT AGENDA

LC: How do you find the vases you repair?

GK: Because I am a designer, I like to control the whole process and, for me, it is not so much about the functional aspect of keeping one vase in use or repairing one that was broken naturally. I am interested in the technique and the communication of the object. My father-in-law, Kiyotaka Hashimoto is a Japanese-trained ceramicist. We design the vases together then he makes them and then I break them. He is very accommodating. He puts so much effort and care into the production of these vases and then I go and drop them off ledges and crush them with tools!

LC: Are they designed to crack in a certain way, with weak points?

GK: Not so much with the vases but what you are talking about is the concept of break lines which I have worked on in past products such as *Smash Repair* which I produced in collaboration with Martijn Dijkhuizen for Project 21's *Repair Manifesto* back in 2009.

The concept of break lines or intentional failure points is not new, it is embedded in some industrial products because designers and engineers know that ultimately something will break and if something is going to break you want it to be easily repairable or replaceable. For example, sometimes slotted wooden sprocket teeth were used in historical turbine engines because if there was a problem with the engine (such as it overpowering or coming into contact with resistant force) the wood part would break, absorbing the shock and was replaceable. This avoided irreparable damage to the whole cog.



'Smash Repair' by Guy Keulemans and Martijn Dijkhuizen, 2009.

LC: I've never thought about intentionally making something break to facilitate repair. Most of the time when you hear about intentional breaking it is to do with Apple and other big companies using built-in obsolescence to increase sales...

GK: That's a tricky one. Planned obsolescence is widely believed but not well supported by evidence. When you get down to it, the engineering context that does create repair problems and obsolescence isn't often intentional, it is a by-product of trying to fix other engineering problems. Although there are some cases where they should have known better. Apple is an interesting one because they make really great products on one hand and on the other hand their products are really crap in terms of repairability because they keep integrating components together to solve other problems such as lightness.

ULTIMATELY, NUANCE IS ALWAYS NEEDED WHEN WE THINKING ABOUT HOW AND WHEN A PRODUCT SHOULD BE REPAIRED

LC: But it does feel like larger companies lobby against repairability...

GK: This is a complex issue that needs nuance to understand it. I agree with you that that is a problem but, to be fair to them, their motivation is that they want to repair the product the right way. Corporations want to control their products and are not so interested in fostering DIY or alternative forms of repair.

One of the ways we can assess products is on a case-by-case basis or on a product typology basis. We need to look at product typeform stability by which I mean some product types have fairly stable rates of innovation—a good example is the bicycle. Since the innovation of the safety bicycle in the late 19th century/ early 20th century, the basic bicycle typology hasn't changed that much, there have been certain innovations in gearing, frame types and material but the basic typology is more or less the same, it is a very *stable* product type, that actually means that it is very repairable and we should *definitely* resist any kinds of corporate or industrial initiatives to make bicycles less repairable.

With other types of products, for example mobile phones, that are still in the process of rapidly innovating its much harder to argue for repairability. Although I am really focused on advocating for repair, I can also see the argument that for a product that is innovating very very quickly, it may be better for a company to manage that repair, simply because a year, or three or five years after they produce one particular brand or model the technology may have progressed substantially. It may then be better for that material to go back to the company where they can remanufacture it into a more technologically advanced new product rather than trying to maintain older products that are starting to become obsolete from a functional point of view.

Ultimately, nuance is always needed when we thinking about how and when a product should be repaired.

Through the Emoji Looking Glass

Graduation Project, DAE 2019, Short-listed for the Gijs Bakker Prize for excellence in design research

Exhibited at DAE Graduation show in 2019, V&A Late in January 2020, Salone di Mobile at DAE 75 years exhibition 2022, Adelaide Perry Gallery in Sydney in 2022.

Featured in FRAME and LS:N Global

Subject of keynote lectures at DAE Research festival 2022, Empathic Research panel discussion 2019 and Knowledge Circle Podcast

Project outputs: book, augmented emoji tour of 7 paintings (with audio) in the Rijksmuseum and 7 paintings in the V&A, Unicode emoji proposal for a hand-on-hip emoji

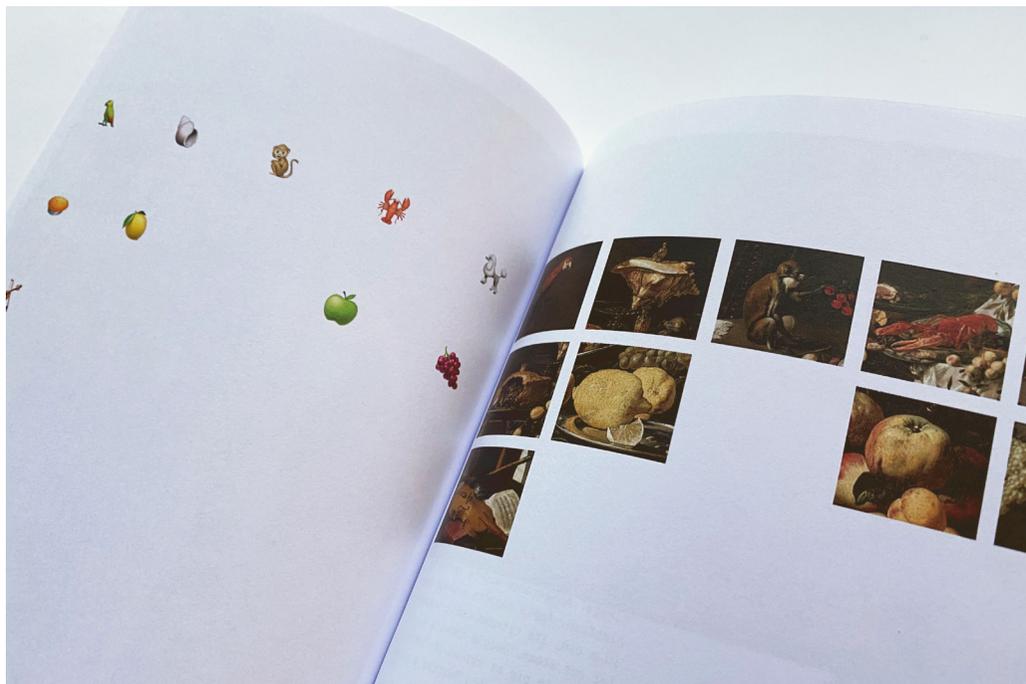
Writing outputs: Book Introduction, script writing for augmented reality installations, map copy, presentations and speech writing, project introductions for exhibitions/magazines

Keywords: emoji, museums, the politics of visual collections, colonialism, taboo, design research,

Research methods: visual comparisons, surveys in the museum, first-person research in joining emoji activist group and Unicode, interviews with curators, emoji designers, emoji activists, graphic designers etc., research into other museum interventions,







CONVERGING COLLECTIONS: AN INTRODUCTION

We stood in front of a monumental painting, its larger-than-life figures looking down on us from their ornate gold frame.

"There's another white finger pointing right," one of us says to the other, in turn pointing our white fingers towards the painting. And, just like that, history, and gesture, repeat themselves. We mark the 'white finger pointing right emoji' off on our checklist and move on through the gallery to the next painting, sculpture, or object, searching the collection for emoji counterparts, emoji parallels, pre-emoji "emoji".

It might seem like an odd activity for a graphic designer and design researcher/curator to spend a day wandering the vastness of the Rijksmuseum in Amsterdam looking for "emoji" within its collection. Certainly, many curious gazes fell on our clipboard which held a thick wad of 118 pages on which the 3,019 strong emoji set was printed, ready to be discovered within the museum's walls and ticked off the list.

The pages you now hold in your hands show the result of this exploration – in which the collection of the Rijksmuseum was viewed through the lens of emoji, and emoji, through the lens of the Rijksmuseum – and the strange, amusing, politically charged and unexpected insights that were revealed.

The Rijksmuseum is a Dutch national museum dedicated to art and history. With over 8000 objects on display and about one million in its collection dating from 1200-2000, the museum is the largest in the Netherlands. Emoji are a universal communication system. They are sent and received digitally, predominantly through smartphones and platforms such as WhatsApp and Messenger. With over 3000 emoji approved by the Unicode Consortium and encoded as digital characters since 2010, the emoji keyboard represents our world through the categories of smileys and people, animals and nature, food and drink, travel and places, objects, symbols and flags.

On first glance, emoji and museum collections appear to exist in different worlds. Emoji are

fast, cute, seemingly-frivolous, digital. They are used on an everyday basis, almost unthinkingly. On the other hand, museums tend to be much slower, emphasising qualities of rarity, grandeur, authenticity and awe-inspiring narratives in physical spaces and objects. Museums are visited by the user only once in a while, a special occasion. But what happens when these two seemingly disparate collections come into conversation with each other?

Despite the considerable differences in the mediums they operate in, emoji and museums collections actually share many parallels in how they are produced and their political, cultural and social entanglements. They both represent collections of visual material that are constructed, curated and selected by unilateral forces and, then disseminated to a public/user fully formed. In other words, there are cultural gatekeepers – in the guise of curators and collection specialists in museums and the Unicode Consortium and the major technology companies for emoji – that shape the visual languages and cultural artefacts of our times.

Museums' collections and emoji can be seen as technologies of cultural production that are shaped by a process of inclusion and exclusion. Indeed, if you examine your 'recently used' emoji on WhatsApp you will see a small-scale version of this manifesting, in which the emoji you select and the emoji you exclude from your use, creates a personal visual, linguistic and emotive culture. On a larger scale of this process, emoji and museum collections both go through a rigorous and bureaucratic selection procedure that defines what ends up both in and out of their collections. Therefore, new truths and new cultural narratives constantly manifest through the medium of curating – both the curating of museum collections and the curating of the emoji set.

This shaping of culture became apparent in unexpected ways when the collection of the Rijksmuseum and the collection of emoji were harnessed as tools to examine each other.

In both instances, the absurdity and arbitrariness of the decisions of what is selected, depicted, and therefore valued was brought to light. By matching figures and objects in the Rijksmuseum to emoji, surprising gaps, patterns and repetitions become apparent. For instance, there are seven types of boat emoji 🚤🛥️🚢🚤🛥️🚢🚤 (which we repeatedly saw throughout the museum, as the boat is a symbol of Dutch colonisation and power) but no lighthouse emoji. There is no teapot emoji. There is no mirror emoji.

Furthermore, the exercise made very visible the highly constructed nature of these two collections that embody the biases of the people who created them and the distortions of reality that are a result of this. Hence the title of the publication: 'U+0000' which is the digital codepoint for Null or Nothing, commenting on the fact that both of these collections started from a blank slate. In particular, sexist, racist and class-based distortions resulting from particular ideologies became noticeable when examining the museum's collection through emoji. The pointing white male finger mentioned above was a key example of this. Time and time again this gesture of power and assertion appears in paintings however, there are no women pointing or people of colour pointing. The emoji keyboard includes different "skin tone variation" options but many of the darker skin tones remained unchecked on our list and often when these were noted, it was in depictions of inferiority to another white character in the painting. This contrast between the content in the two collections made emoji look quite progressive in terms of representation.

However, in turn, emoji's conservative values were also revealed by the Rijksmuseum, while we saw an image of a man holding a baby in the museum, there is no man holding a baby emoji, only a woman. Although this emoji is described as a "breastfeeding" emoji, most companies have designed it to look as if the woman is simply holding the baby at breast height, reflecting a taboo to nudity. The Rijksmuseum, on the other hand, showed plenty of bare-breasted women as well both entirely nude depictions

of both men and women. Furthermore, the lack of an emoji with a man holding a baby speaks of a hangover of gender biases in the emoji set, despite attempts to rectify disparities in gender representation. To some extent, what this illuminates is that technology is built from current realities and therefore reproduces certain truths. Emoji were built from the white male dominated structure of Silicon Valley and reflects the specific cultural realities and ideologies of that place. Although gender disparity has been somewhat evened-out with new emoji being added to address this inequality, some inbuilt biases remain.

Another interesting insight that emerged through this exercise was the changes in the cultural stories of our times through the representations of mythical figures. Angels figured heavily in the Rijksmuseum but the only other spiritual figures that we observed there were a couple of centaurs and some mermaids. Meanwhile, the emoji set has many fictional characters such as fairies, vampires, mermaids, superheroes, ghosts, goblins, aliens, smiley poos, witches, genies, levitating people, zombies and Santa Claus, showing how mythical narratives are shifting and evolving. It also reveals the salience of myth in our everyday communications and how we use these to express, explore and, perhaps, escape from our lived realities.

The hand and body gestures of emoji also became an interesting lens to examine the paintings and sculptures of the museum. Some of the gestures in emoji were revealed to be very contemporary gestures (or at least connected with contemporary connotations) and had no replicas in the museum such as the raised first 🖐️, a symbol of resistance. Similarly, abstract symbols such as the many love heart emoji and the coloured circle and square emoji were only observed on the third floor of the museum which shows artworks from the 20th century onwards, illuminating them as modern symbols.

We observed that other gestures became dated back to antiquity, such as pointing as a gesture of power and kissing as a gesture of

affection. Often, we were surprised when a gesture in a painting such as a sassy hand on hip, defiantly crossed arms in front chest, two people whispering to each other and arms stretched out upwards and outwards in praise did not have a corresponding emoji.

The selfie arm emoji also prompted a discussion when this same action of holding something up and in front of the face was seen in artworks of the museums but instead of the smartphones, there were mirrors and objects of value in their place. Were these forms of narcissism in the pre-phone and selfie age?

In the making of the book, a third collection entered our research: Emojipedia - the largest archive of information about emoji. Existing online, the archive was founded and is predominantly run by Jeremy Burge, an emoji historian, and vice-chair of the Unicode Emoji Subcommittee. We used this archive for the descriptions of the emoji and to find their code points. The inconsistency of the descriptions which range from very brief and objective to extremely detailed and highly subjective demonstrates the irregular ways the collections evolve and, therefore, the unreliability of the information within them. Furthermore, the often strange categorisations of emoji e.g. the clothing in the 'smileys and people' section rather than the 'object' section, indicates the arbitrary nature of categorisations within archives which are not neutral but a product of the society and people they are born from. The inherent power of categorisations also became clear in delimiting what is acceptable to enter a collection and how this shapes what then is legitimised by entering a collection.

Through this making of the book, we experienced this subtly violent process of inclusion and exclusion in our own mini-collection and faced the impossibility of neutrality in this selection. There was a necessary subjectivity to the choice of artworks we included as well as the emoji we identified within them. Although we attempted to represent works from across the museum and give a sense of both a range of subject matter, time scale, dominant scenes

and the recurring icons and symbols we found, the book's selection is still biased based on factors such as ease of access, copyright of images, personal attraction to certain images and a sense of humour. Due to the two-authored nature of the publication, there are also some inconsistencies in what information was included about an emoji for example sometimes the technical details of an emoji was included and sometimes it was not. We deliberately left these inconsistencies in the book as a testament to the difficulties of creating a consistent collection.

Using a collection as a lens to inquire about another collection seems like a very simple methodology. However, when put into practice and taken seriously, this approach has much potential for making visible the politics of collecting practices and allowing peculiar insights to surface that might otherwise remain undiscovered. Should this method of research be applied to other museums and their collections or other institutions and contexts (it could even be done in a supermarket) it would reveal different patterns and gaps based on the context and its agendas and politics. Through emoji, there is the possibility for understanding collections and spaces in new ways - to create new readings, to reveal hidden truths. And, in turn, this shines a reflective light back on emoji, uncovering original and idiosyncratic understandings of this contemporary collection of visual, digital artefacts.

A SYMBOLIC EXCHANGE

AN AUGMENTED EMOJI TOUR OF THE RIJKSMUSEUM



INTRODUCTION

Collections, from art to emoji, are full of symbols. Sometimes these symbols are playful, sometimes political and other times problematic. Ironically, their ubiquity can make them unnoticeable, unconsciously consumed and accepted.

Visual collections and the symbols within them have inherent power. They are shaped by the culture they are produced in but they also shape this culture, reinforcing or challenging its dominant values and biases. What is included in the collection is legitimised and elevated in status whilst what is excluded is deemed unimportant.

Constructed by gatekeepers who impose their ideas of order and categorisation, collections offer others very little agency for intervention.

As worldviews shift and change over time, collections and their contents face cultural dilemmas. Can a collection transcend its origins in colonialism or other structures of inequality? How should collections deal with violent objects such as weapons or hateful imagery? What role does appropriation play? These dilemmas traverse the contexts of all collections, from the institutional to the digital.

This augmented tour brings together two collections: emoji and the Rijksmuseum collection, creating new readings through a form of "symbolic exchange" that brings out the parallel cultural battles in their imagery, encodings, and systems. It highlights hidden or unacknowledged narratives and reveals the potential of visual symbols and collections to define our times. It also confronts the issue of hierarchy and agency in the interpretation of cultural languages.

FLOOR 0

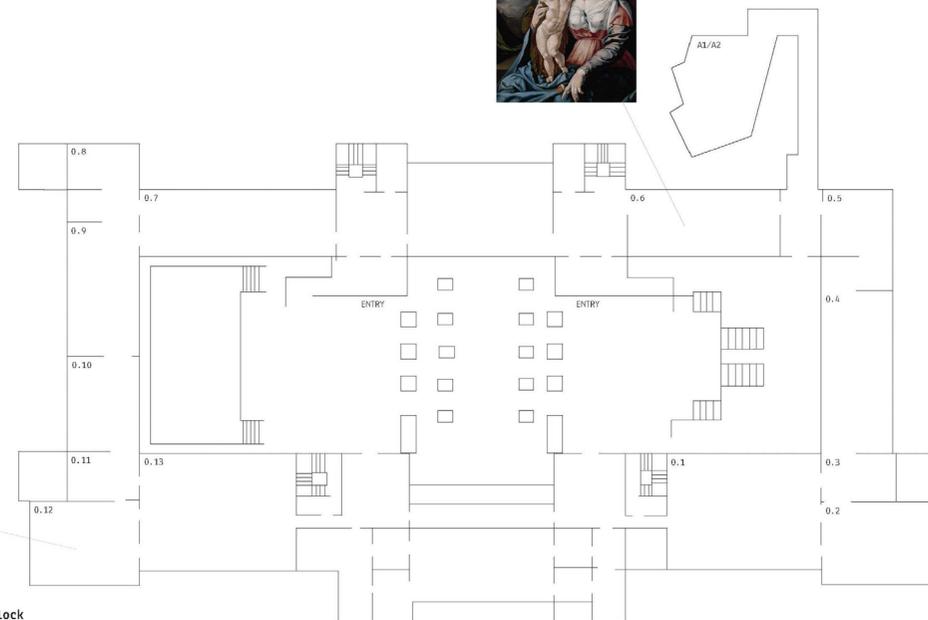
Room	
0.1	Geertgen tot Sint Jans
0.2	Fra Angelico
0.3	Prints
0.4	Weepers Cabinet Militia Company
0.5	Italian Renaissance
0.6	van Oostanen / van Scorel / Beuckelaer
0.7	Delftware
0.8	Music
0.9	Jewellery / Fashion
0.10	Dutch Porcelain
0.11	Relics
0.12	Arms
0.13	Ship Models
A1/A2	Asian Pavilion

The Holy Family

Jan Cornelisz Vermeyen, c. 1528 - c. 1530
oil on panel



Flint gun with battery lock
Jean le Page, 1808
gold (metal)



HOW TO USE THIS MAP



1. Install the ARTIVIVE APP



2. Locate the artworks and hold your phone in front of them



3. Enjoy!

Xandra van der Eijk: Listening Closely
Published in DAMN Magazine, Issue #81: The Art of Protest, 2022
Profile

Keywords: climate crisis, oceans, design research, reefs, more-than-human voices, activism

Research methods: interview with designer



Lying at the bottom of the North Sea, between the UK and the Netherlands, are tons of human debris. Shipwrecks, aircraft ruins, abandoned oil rigs, wind farm structures, and more, rest on the ocean floor. Concealed by the murky waters and the sea's inaccessibility to anyone except the most skilled divers, these traces of human activity and exploitation have been allowed to decay because almost no-one thinks about or cares about this stretch of sea and all that lies beneath its surface.

What are the consequences of not paying attention to this underwater space? Who is responsible for researching it and protecting it? Who is exploiting and colonising it? How can we learn more about a body of water that is almost completely inaccessible and therefore obscure? What lifeforms live and thrive there? How do they feel and function? How can we communicate with them? Can we help to amplify their story? How can the sea and its inhabitants protest?

These are some of the many questions that artistic researcher Xandra van der Eijk and the Embassy of the North Sea, seek to explore in a long-term project aimed at getting the sea recognised as a political entity with legal rights. If ultimately successful, it will ensure that "the voices of plants, animals, microbes, and people in and around the North Sea are listened to and involved," states the Embassy website.

As part of this mission, van der Eijk's ongoing project *Ghost Reef* immerses audiences in an audiovisual installation expressing the voice of the North Sea. She encourages engagement with the sea through beautiful, calming, 3D rendered animations of the many lifeforms that exist there, along with a watery soundscape of field-recordings taken on the seafloor at two biodiversity hotspots. The audio captures the diverseness of the space through a variety of sounds, with different noises layered over one another. It

is an exercise in close listening that creates a connection between humans and this faraway space. van der Eijk explains: "If you start to build a relationship with [sound], then you start to care about it. Once you care about something, you value it so much that you want to protect it. This is important for you and me, but it is also important for policy making." The interview was published by MU Hybrid Art House, who first commissioned the project together with the Embassy of the North Sea in 2017.

Ghost Reef is on display at the 23rd Biennale of Sydney (until 13 June 2022), fitting well within the theme of the Biennale – 'rīvus'. Set by Columbian curator José Roca, the event's artistic director, 'rīvus' means stream or flow. Through multiple projects by an international group of contributors, and with a focus on local indigenous practitioners and their knowledge, the Biennale explores the importance of water and watery worlds to our planet and climate, examining and giving a voice to all that live in and with these. It is a theme that feels particularly pertinent, the event having opened as Australia was being subsumed by floods – rain was wreaking havoc and destruction on the landscape, habitats and homes throughout the country.

Ghost Reef is the first project visitors encounter when they arrive at one of the six Biennale locations, welcoming visitors with the sounds

of the sea. Its position seems apt, being inside a timber building on an old pier in Walsh Bay, suspended over Sydney harbour and the lands and waterways of the Gadigal of the Eora Nation.

The care that van der Eijk feels towards the North Sea extends to the thoughtfulness given to all aspects of the installation – from its production to how it is experienced. Walking into the building, one encounters the gentle sounds of the underwater world, while five 2x1 metre fabric screens suspended from above illuminate the otherwise dark room. The large scale, frosty projections intend to evoke a feeling of immediacy and closeness. van der Eijk attempts to describe the sensation: "You can stand in front of the screens and feel..." Lost for words, she gestures with her arms, lifting them above her head and around herself, expressing a very physical experience of intimacy and enclosed-ness.

The screens also function as loudspeakers. The use of transducers, which van der Eijk says essentially involve "a black box connected to a little computer that gives signal vibrations to the screen it is attached to," adding "You don't see that it vibrates but it turns the whole screen into a speaker." This means that people can get very close to each screen – hearing, experiencing and observing its individual sounds. But when walking through the space, there is one big soundscape, with

elements of audio coming from different directions.

"It becomes a spatial sound, which, in combination with the images makes the experience truly immersive, with the very calm close-up views of reef images turning slowly," informs van der Eijk. "The idea is to show how the life that lives in those reefs would experience the place." The 3D animations are deliberately devised to seem as if they are filmed from the perspective of ocean life, looking through its eyes and mimicking how it would experience other lifeforms at their own scale, at close range. "It takes away the anthropocentric view, in the sense that if you are a diver, you have this overview and you have this murkiness, so you'd see a little bit of life here and a little bit of life there. We took that completely out and tried to make animations that are somewhere between reality and speculation." The imagery is based on photos that divers have taken over the years, thus they are rooted in real-life documentation and research but then expanded upon.

The decentering of the human perspective that happens in *Ghost Reef* is a key aspect of much of van der Eijk's work, as is the presence of care. These are deliberate and considered tactics that protest and resist our treatment of the world around us and of non-human life forms. Due to the nature of her works being of tranquil beauty and gentle mesmerisation, it can seem jarring to label them as forms of protest. This dissonance extends to van der Eijk herself. "I am really not the kind of person who stands at the barricades and relates to the general idea of protest or activism," van der Eijk remarks. Her understanding that protest can operate in many ways and is present in her work has come after many years of contemplation and struggling with how and where to position her practice. She describes this kind of



Ghost Reef, 2020 - ongoing

What are the consequences of not paying attention to this underwater space?

Who is responsible for researching it and protecting it? Who is exploiting and colonising it?

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How can the sea and its inhabitants protest?

activism as a form of “trying relentlessly”, attempting to find her way “with a firm but soft hand”, aiming to influence things as much as she can. van der Eijk also refuses to be anybody’s competition, declaring “That is a form of activism I think.”

It was in 2018, as an artist-in-residence in Chile, that van der Eijk began to truly interrogate her practice. While researching a hydroelectric dam and its entanglement with climate justice, colonialism, capitalism, displacement and indigenous people, she confronted herself. “I couldn’t really continue working without actively reflecting on what I’m doing and my position in the world.” She began to wonder if the story she was researching was hers to tell. “I was completely blocked because I thought: how can I work in a way that doesn’t appropriate the experience of the people who have lived through this big drama? It is not my country, it’s not my politics.” Understanding her position of privilege as a white Westerner, she decided not to produce any more work on this project but to instead find ways of working that would have the best impact in the future. “I began to ask myself – given my unique position, my network

and the different things that I do – how can I work in such a way that it contributes to decolonising... life... decolonising everything. Decolonising my own career and my own thinking, as well as the way that can feed into my surroundings.”

Since then, van der Eijk has chosen projects that “tend to focus on the influence of the technosphere on evolutionary processes” – which includes topics of emergent ecologies, extinctions, time-based processes, things that are in continuous development and decay. This is something she was already doing but hadn’t been so aware of doing. She finds it a much bigger and more honest way of working. “I decentralise the view of myself rather than putting myself at the centre.” This can be seen as a form of protest against the way the art and design industries function – where artists and designers produce work with their name on it, taking credit while often ignoring or failing to mention their collaborators. It is a very individualistic industry, fuelled by the desire to sell work as an end goal. It’s telling that on the Sydney Biennale website, van der Eijk’s name isn’t mentioned, only the Embassy of the North Sea.

This refusal to be in the centre also describes how van der Eijk has designed the curriculum for the MA in Ecology Futures at the Master Institute of Visual Cultures, where she is course leader. She has made a big effort to include as many voices and perspectives as possible in the reading material, tutors and coursework. In making careful, deliberate choices and paying close attention to the impact of each decision, van der Eijk promotes a diversity of fields and approaches from which to tackle ecology, demonstrating the “need to unlearn” how and what we produce, and what art and design are. She hopes this will “change what students do... the way they perceive, the way they approach other people, and the way, in terms of art, they engage with place.”

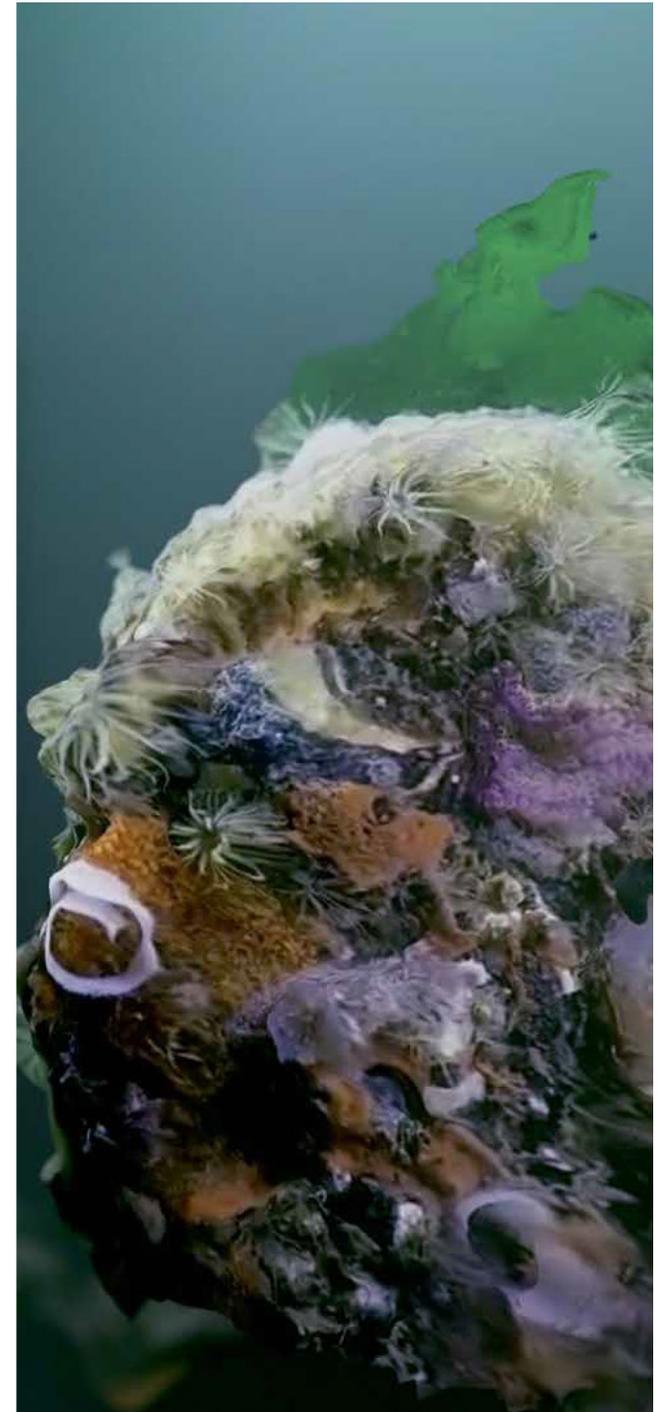
In *Ghost Reef*, we see this desire to shift human perception. Asked why the story of this particular reef is so important to give voice to, she replies: “Because it is incredibly inaccessible and the only relationship we have had with this ocean space is ‘how can we use it?’.” Meaning, how can we profit from it? We have already stripped it of all of its oysters through intensive overfishing. It used to be rich in oyster banks

and reef life, but in the 1950s, after years of extraction, the last oyster was removed. As oysters had been crucial to the ecosystem, functioning as cleaners of the water and food for other creatures, the sea became barren – an underwater desert.

Today there are other stakeholders seeking to make extraction claims on this space, which would further interfere with the fragile lifeforms that have, through their tenacity and resilience, revived and made a home for themselves amongst the shipwrecks and human debris, essentially colonising the items that humans have left behind. “To me, there is a kind of urgency to pay attention and consider the life that is there. Because now we are planning dams and more windmills.”

Ghost Reef, then, functions on multiple levels. Whether installed in a gallery space or at a biennale, it is a way to educate people on this topic, igniting their imaginations and instilling a sense of value. More broadly, it offers new research into a place that hasn’t had much focused attention, funding or protection. “It is an experiment in how we can monitor these reefs and what we can learn by listening to them and following them very closely, how we can hear life and record it in a way that shows what is happening.” It is listening as a form of protest. Taking care as a form of resistance. Paying attention and thinking deeply as a form of activism. It demonstrates that knowledge and data production are gentle modes of empowering those with voices more quiet and more watery than our own. <

Ghost Reef, 2020 - ongoing



theweirderweb.xyz is an ongoing investigation into the weirder web.

The [home page](#) is a collection of links to examples of the weirder web including websites, games, chrome add-ons etc. which were submitted by friends and strangers and found by digging into strange corners of the internet. It also includes links to interviews with some curators and makers of the weirder web. [HOVER OVER THE LINKS TO SEE WHO CONTRIBUTED THEM OR WHERE THEY WERE SOURCED]

What is the Weirder Web?

I first came across the term 'Weird Web' on *It's Nice That* in an [article](#) written by coder and artist [Neal Agarwal](#). He describes an early form of the internet before its monetisation and intense focus on clicks and social media. He describes this former internet as 'a place where online creators expressed themselves through interactive content, games & experiments. It was a place that brought delight & joy.' I believe that if you look hard enough, you might just find that the weird web lives on today.

Weird is a loaded term that carries with it the burdensome luggage of negative connotations. It also ascribes value, signifying what is the norm and what sits outside of the norm. I believe *all* the web is weird, entangled with human behaviours, compulsions, desires and of course capital gain. Admittedly, some parts of it are weirder than others. By investigating the weirder web, I also want to look at who defines, shapes and enables what the accepted and popularised norms of online activities, behaviour and platforms.

This website is also an excuse to waste some time on the internet and celebrate/investigate the weirder web.

Why investigate it?

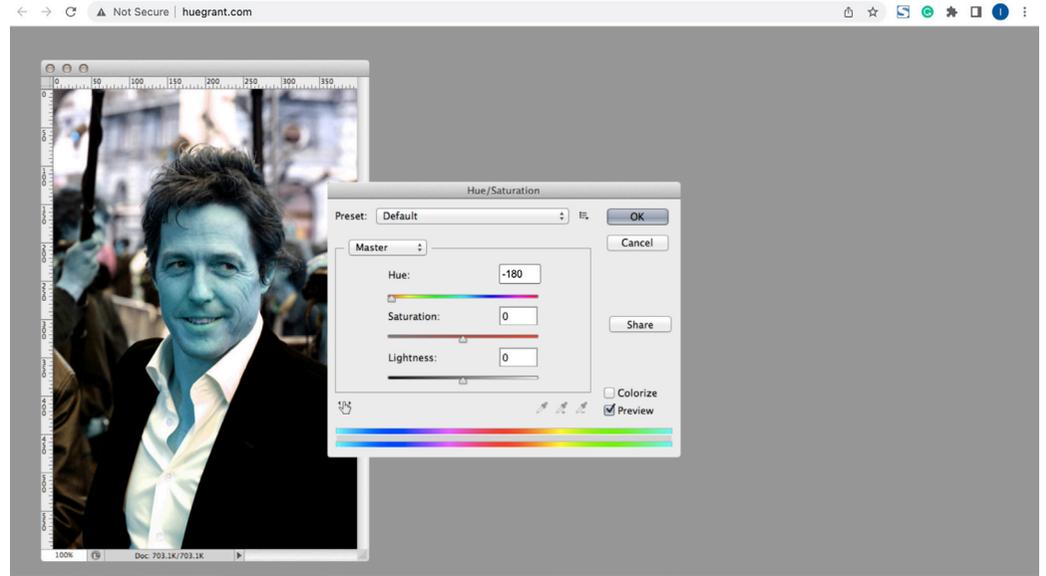
I'd like to explore current manifestations of the weird web, playfully questioning our motivations for being & doing online.

To find out more about the *whys, ifs and buts* take a look at my [essay in progress](#) [here](#)

I was invited by the [Embassy of Internet](#) to work on a project and that's what started this whole thing :)

A BIG old thanks

To the following people who have contributed websites, discussed their thoughts and chatted to me about weird shit:
- Oshin Siao Bhatt - Rachel Morón - Colin Keays - Grace Radford - Tiliu Meiner - Alex Buchanan - Priya Thanki - Laura Lyons - Stéphane Borel - Zoe Johnson - Grace Kim - Ivy Go - Fenna Wenselaar - Pete Fung - Felicity Morris - Will Drye - Robin Hunter - Robin Hunter - Eugene Kudashev - Yaser Ahmady - Jullie Helles Erickson - Gianluca Monaco - Melani De Luca - Tim Holman - David Quiles Guilló - Annie Collongie - Tanya Wight



WEIRDING THE WEIRDER WEB

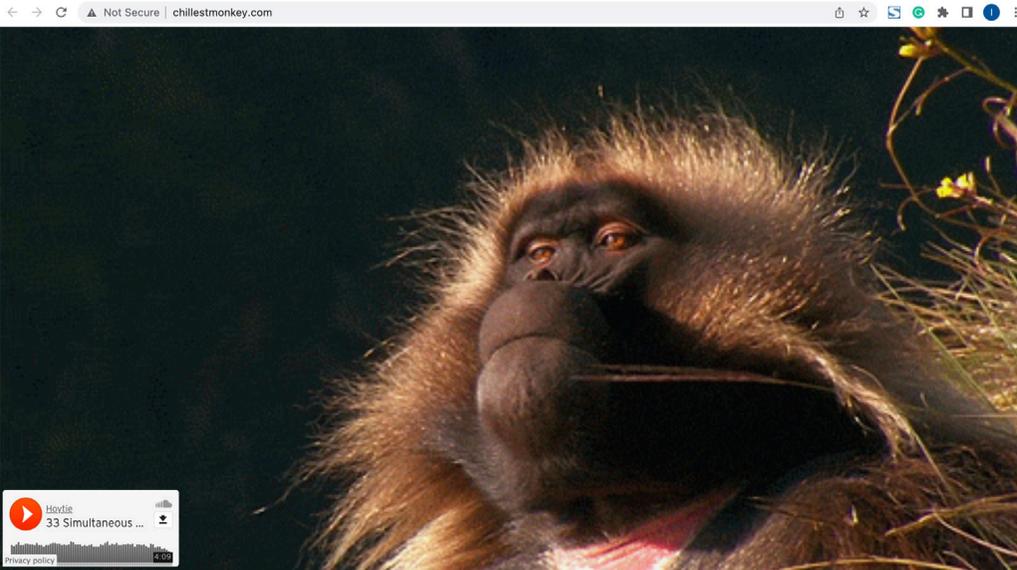
A vague ongoing plan which is mostly questions...

Throughout the next little undefined length of time, I am gathering examples of the *weirder web* and talking to the makers and curators of the odd, strange, useless and unexpected. Then I will (at some point) write an essay that shall be published here (or, somewhere else!)

A few questions guiding this research:

- Are we attracted to weirdness? And if, so why?
- What is the process of weirding?
- Who is making the weird web and why?
- Is weirdness a privilege?
- Is weirdness a strategy?
- Is weirdness useful/useless/interesting/weird?
- What are the value judgements on weird?
- The weirder web seems to induce nostalgia in many 90s kids, why has their experience of the Internet changed since then?
- Where do capital gain and the weirder web intersect (e.g. Google Experiments) and how do I feel about this?
- What are the economics of weirdness?
- Is weirdness a subversion of the smooth, frictionless, monetised internet?
- What themes and strands run through the weird web?
- Are there new potentials for weirdness?
- How is the weird disseminated?
- Is there a punch line?

If you have some thoughts about these things or want to help me think through them, I'm super up for chatting/collaborating etc. so hit me up [here](#)



Pushing Useless Buttons

A conversation with Tim Holman

If you find yourself on [The Useless Web](#), your cursor will be drawn towards a rectangular magenta button which sits under the words, "Take me to a useless website, please." The politeness and colour of the button subvert the Big Red Button tropes, and yet it triggers a similar visceral response that centres on the curiously-inducing question: *'what will happen if I push this button?'*

"We willingly push any and every button because we hope that it provides a squirt of dopamine for pleasure." And so, you will likely find yourself clicking the tantalising Useless Web button and BOOM a whole digital world of uselessness explodes (or rather, is opened tab by tab in your browser bar). Each time you press the button you'll be taken to a different domain which hosts creative, silly and seemingly pointless content. The consequences of hitting *The Useless Web's* button are not dire – no one will die, nothing will explode, no war will be started. Indeed, the word 'useless' suggests no ramifications at all (except for maybe wasting some time). And yet despite its 'uselessness', it exists and people love it. Since its inception in 2012, The Useless Web has hosted millions of visitors and billions of hours worth of interactions. Is it really, then, "useless"?

To discover more about the weird and wonderful *The Useless Web* I chatted with Tim Holman, its creator, coder and curator. He has a particular fascination with creating weird/quirky/silly/fun/surprising projects online. From creating [http://www.you.the.button](#) to [http://www.you.the.button](#), Holman embraces the odd spaces and eccentric things of the Internet.

**the interview has been edited for legibility, clarity and length

Lara Chapman: How did *The Useless Web* begin?

Tim Holman: *The Useless Web* started when I was getting into development. I'd always enjoyed the more silly aspects of websites. Growing up, there were weird sites of little games that you would go on at school, they weren't great but that stuck with me a little bit.

Whenever I come across these kinds of websites I always think 'how? And, what is happening?' So I started collecting them from this curiosity. Then, during Hurricane Sandy (2012), we were locked-in and I thought I would put all the sites together and *The Useless Web* grew from there. It has been immensely popular. There are a lot of clone sites now, so traffic isn't quite what it used to be... but I like to think I was one of the originals alongside [Sprinkle Web](#).

One of the main people that spurred my interest in useless websites was an artist called [John Berardini](#), who has been an internet artist forever, well longer than I've known about internet art. He is one of the original internet artists. One of his ways of creating artworks at the time was to make websites with flash animation. When I was collecting useless websites, I found three of four of his sites, so there are a fair few of his works in the collection. But then it expanded into a few others...

I remember *Stumble Upon* from my teenage years and lots of my friends have mentioned it too when I've talked to them about my research. It was always something I went on when I was a bit bored...

Yes, that's exactly the target audience. I know that a bunch of schools have banned *The Useless Web*, at a domain name level. I can see just what people are searching for in Google Analytics, and one search term that appears is 'the useless web unblocked'. I should probably just buy that domain and mirror my own site...

I think the idea of surprise and delight fed into *The Useless Web* because of not knowing what you were going to get sent to before you hit the button...

Why did you decide to use a button to navigate *The Useless Web* rather than some other format, like a list or something?

I'm not sure... When I made it, I had worked professionally outside of uni for about a year. I was relatively good at CSS, more so than JavaScript or my general knowledge of how to build and structure good things. I had one strength and so I tried to brand that strength through surprise and delight – "I'll bring surprise and delight to your website! Hire me the surprise and delight guy! I'll make it smooth! I'll make it feel good!"

I think the idea of surprise and delight fed into *The Useless Web* because of not knowing what you were going to get sent to before you hit the button and went to it. That's my closest feeling... I've never really thought about it.

How do you think people come across *The Useless Web*? Is it through search terms like you mentioned above or is there something more serendipitous going on?

These websites occupy a niche space but they are very memorable. So, even though it's a silly small site, people will recommend *The Useless Web* and other sites to friends. [http://www.you.the.button](#) is a good example where there is almost a side network. For example, someone will find one of the books from it funny and then share it and then it gets shared more.

So it spreads by word of mouth (if you can call it that) online. It also seems like there are a few creative coders, like you who have their own collections/curation of weird websites like [http://www.you.the.button](#) by Brock Kenzler and [http://www.you.the.button](#) by Niel Agerwal. Is it a community in coding where people share each other's stuff around?

There is, but I feel not as much as there used to be. But it could be that over the last ten years, the people that I have looked around to my peers have gotten older and maybe I have shifted into a different generation of people where I am not paying attention to the youngest people any more.

For myself, the analytics show that my work is very hit or miss. I share something and it will sometimes be a hit, and get a really great response and other times I'll work super hard on something and it will do okay. It's very Tim of me to make something like that.

I've never really considered how you get such specific audience feedback on your artworks because of the nature of analytics and the internet. Does it affect what you choose to make?

In 2012, I was checking my analytics all the time and was really wanting people to share my stuff but I guess as part of growing up and growing a little bit more comfortable with creating things constantly, I don't take the analytics to heart so much anymore. I guess it is probably the same for artists... it's like 'ooo, I'm taking my art in a brave new direction right now' and then everyone will be like 'No! Go back to squares, we don't like circles.'

'...there were so many pieces that I had to learn about in order to build this one useless site.'

I'm curious as to how you classify uselessness. On some of the sites on *The Useless Web*, there are no links to the people behind them and that, to me, feels like the ultimate kind of useless. Obviously, useless websites can become very popular and if the creator includes their name and a link to their website it directs people to them and maybe they get media coverage or employment opportunities. But if people are doing useless stuff anonymously that is...well... interesting...

Yeah, they are the true ones... I started off being a lot more strict about what to include (on *The Useless Web*) that I am now. Basically I thought you can't have an ad and you can't have many links, maybe one link to yourself was okay.

Then it started to get a little challenging because people would suddenly smash ads on their site as it was getting a lot of traffic. Back then, my opinion was that the ads would make the experience from my site worse, so I would pull them down. Also, often the domains expire and then somebody really quickly buys it up and puts some bullshit on there or genuine spam which is almost virussy. When that happens I would be like 'oh shit... I've just been sending people to dodgy sites.' Managing these things was and is quite difficult. I still check over the sites every so often. I just sit there and click through every single one which is a bit of a pain in the arse but I want to keep some quality.

I've opened it up a little bit more now, mostly because a) it's from 2012 so it's eight years old and has kind of got its slightly embedded position on the internet and b) there are a thousand clones now and I don't feel like I need to compete with them. The clone sites add heaps of stuff that is completely off my spectrum.

The third thing [c] is that it has been nice to include things from when somebody sends me something and is like 'here's my weird thing.' The most recent case of this is [http://www.you.the.button](#) – it's just a site that says 'guess what this is?' and shows a potato or tomato and then goes 'Woo, you guessed correctly!' and that's the entire site. That person reached out and said 'here's this thing that I made' and I thought they'd done a fantastic job and it was definitely worth sharing around to people. I guess it's my slightly extended arm of sharing. I definitely want to encourage the new things as well.

Do you get sent a lot of stuff?

I get over 7 emails a week usually. A lot of them are pretty junky or are subdomains and I've tried to keep it to explicit domains. A lot of them are random site generators and stuff like that. But every now and then there is one that's really nice and I put it in. I like that people wanna alert their stuff to the thing.

In a talk I watched, you kept mentioning that you can learn something from every project no matter how useless. A kind of usefulness of uselessness...

Definitely, 100%. From a learning standpoint, there is always so much value in trying to bring stuff to life.

Using *The Useless Web* as an example, there were so many pieces that I had to learn about in order to build this one useless site.

At face value, the site just seems like a list of things that when you press it, it goes to something else but behind the scenes, there are a few smaller factors. Initially, I would check to see if you supported Flash and if you did, I would send you websites that also had flash, otherwise, I'd filter those all out individually. That was one task that I'd never done before and needed to learn how to do.

I also order the sites in priority and then pick a random one from the top 6 of that priority, so there was some "algorithmic" (I put it in quotations because it's not that fancy) level. This is a second layer of curation based on which sites I thought people would find more interesting and ones that maybe they'll find less interesting. If you keep clicking, you'll get to all 50/60ish/70ish websites. There was also something in there that says if you've visited a site, I won't send you there again until you've seen all the sites. I would save onto your computers local storage which sites you've seen. So if you come back to the *The Useless Web*, I'll still keep giving you new things and new things and new things. This was through a whole other piece of technology called local storage in JavaScript. This curatorial navigation follows the idea that if you passing a window of a gallery, you kind of want to see their best things on the outside and if they put all the worst things there, you'd be less inclined to go in further and see the whole exhibition.

[http://www.you.the.button](#) is a similar thing [learning experience]. It has two colours fading between each other and at the time I thought 'this should be easy to make'. But no, I had to search how to do colour blending, how to interpolate two colours between each other and make decisions about whether it was exactly half red or 10%... etc.

Every little piece has had a big lesson in it. Except for maybe the sites where there is just an image on a page – like [http://www.you.the.button](#) which is a tiny image of a fucking crouton sitting in the corner. You can go on that website and see the code and there is nothing there. It is a true mystery... but still, that person had to at least build the site and post it somewhere. It's a very interesting little hole of the internet.

I see so many projects slowly degrading and breaking apart which is a little sad. It's a kind of digital erosion..'

Do you think a lot of useless websites come out of learning assignments e.g. at uni learning to use certain software?

Some definitely. I get a little more insight into that as I'm an active developer and will know, to a relative degree, what new things are coming up and what's happening. There was a boom of websites using this library called three.js which is a 3D library and they had a couple of demos on their page and you could do a few small things to edit it and then you'd have a relatively unique thing of your own. A few of those have popped up now and then. There have definitely been some themes to sites when templates on how to do things are published and then people can fill it in with their own designs.

Do you think templates are useful in terms of helping or hindering creativity?

I have mixed feelings on templates... ultimately, I'm pro templates. If I'm starting a new project now and I want a baseline I'll use a template because its something I feel comfortable developing in and I know that I can go from there. I feel that a lot of people making websites in our community will buy a domain and think 'I've got this idea.' The idea existed and then the domain existed and then it had to pull it all out of the void and into existence. A lot of people think 'I'm waiting for the perfect writing set up to begin writing' before starting a blog for example, whereas I think, in reality, writing is just really fucking hard and you need to force it out of you. I think creativity in a weird way, except for with a few very blessed individuals, is something that you have to push out and get out and if a template gives you a head start then even better.

I think a lot about the black hole of development... I have a degree in video game engineering which was a very useless degree, truth be told. I will never miss an opportunity to slander my university. Video game programming shouldn't exist as a degree. It's ludicrous that anything should take four years to learn in my opinion, especially at an age where you can still soak up information. Anyway, I found my way to the web. I feel that the useless side of the web is an entry point into the black hole of development. I have spoken at a lot of coding boot camps and a fair few tech conferences and I always tell people to have a complete fully formed goal in your head of what you want to make. Don't try to build Facebook, build a button that says the word Facebook or something like that. And if you can finish those mini-goals even if, especially if, they are in the form of something useless, you're still accomplishing. In my opinion, that's the most important step of learning – hitting the accomplishment.

Are there specific trends you've noticed, compiling *The Useless Web* over the years?

It definitely goes through different phases like how tumblr does or like how a meme will come and go. I wonder if there are more cat or dog-specific sites on *The Useless Web*. There was an old internet trend of a dog that rolls and it will say "one roll. You sat through one roll." and it will keep counting up forever, or I assume forever. Or you pet the dog and it's like "one pet, two pets", there was definitely a bit trend of that. I also try to not accept just-a-video sites not as they were a big trend for a while. There was a brief trend of when you press a button and it plays a noise. There is one button which is [http://www.giantpushbutton.com/](#).

As the internet has moved on and browsers have updated and changed how they run code, the trends also change. Flash completely stopping, for example, wiped out a significant number of websites. In chrome very soon, Flash won't work even if you want it to work. It's done. The people that be, in this case Apple and Google, have decided this is gone.

In the last six months they have also made a change that says browsers can't play a noise unless someone has pressed a button. I understand where it is coming from, but there are a couple of arty projects like [http://www.giantpushbutton.com/](#) where, by the nature of them changing the browsers, a small piece of that project now doesn't work. I see so many projects slowly degrading and breaking apart which is a little sad. It's a kind of digital erosion...

The idea of digital erosion and digital preservation is something that a lot of museums seem to be finding really challenging at the moment...

Yeah, if you wanna save digital things, you can't. It's like old games. There is emulation where you can download an old version of firefox and then on that version I can visit and explore that website.

Do you think that making weird stuff online is subversive? It feels like the web of today is so focused on productivity, efficiency, profitability etc. and weirdness kind of rallies against that...

Sometimes, I definitely make some shit that is very directly the opposite of what people want to do. For example, making something where if you hover over a link it will smash you with a big gif on your screen. I also made something called [http://www.giantpushbutton.com/](#) in 2014 or sometime around then when America wasn't as bad as it now. Basically, it's a chrome extension and if there was the word America in the browser it would play an eagle noise and would popup all this over the top Americana bullshit. I thought it was a really funny joke that would make browsing the internet shittier but feel quite bad about it now...

I have a lot of small things that are like that. I build them in a professional manner and make the code really really nice and then publish them to all the platforms where code is published. For me, it's maybe not rebellion but I've somehow fallen into a space where I like to be in the middle ground. I have a day job and I can do all this stuff correctly but at the same time, I don't always want to walk that straight line. I want to be like 'here is this weird stuff' and also I always pick up on pieces of knowledge that will help me build the next thing and the next thing and the next thing.

'I thought it was a really funny joke that would make browsing the internet shittier...'

When I've been looking at all these examples of weird websites it feels like the web could be a lot more playful generally...

It definitely goes through phases, I think. One of the best things about the internet in my opinion and about being a coder is that new technologies roll around at a pretty quick rate. The way that I was building things three years ago is different to the way that I am building things now. This means that the next generation of people can be pretty much as equally skilled as I am. Maybe I have some skills that can help me avoid certain potholes, but essentially they have been using the language as long as I have because the language, or the framework more specifically, is new.

It means that when a new thing comes out, everything sort of resets and the question is who can create things with this new set of tools? A lot of people who are more experienced have to start again and do more simplistic things. For example, Google rolled out a new design system called material and then all of a sudden every site looked like this flat coloured stuff.

That's super interesting that the technology is so quickly affecting how we experience online, it also feels like things happening IRL (if there is a distinction affect this too) like COVID and lockdowns have also shifted what we are looking at, where and how things are being published...

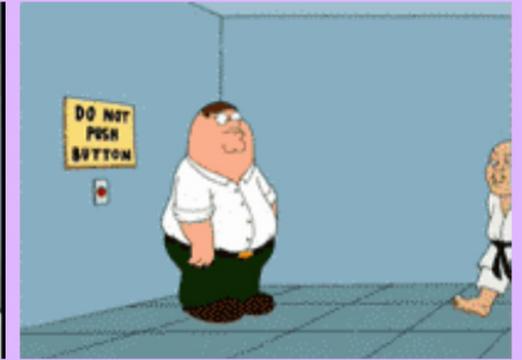
Yes, it's funny how the atmosphere and your mood affects how you are enjoying something. With *The Useless Web*, it's not that you can go from reading the news and then suddenly you go on a silly site. The context shift is still slow. It's likely that you are going to push the button at least once because you'll be thinking 'what the fuck am I doing on this website?' But then you click once and you get something that is considerably funny, you click another time and your mood will shift depending on the space you're in.

On average, looking at the analytics, people generally spend at least seven or eight minutes coming back and forth from *The Useless Web* to the sites it links to, which is huge... If you can occupy eight minutes of someone's time, that is considerable. I did the math of averaging the total views vs the time and it is billions and billions of minutes. It is over 100 years of human time spent looking at these individual sites which is kind of cool. There must be a Tim dent in productivity at some point... I like to think so anyway.

Another interesting thing about *The Useless Web* is that its popularity is seasonal. I imagine art galleries are a bit like that too and I assume they get more visitors at certain times of the year. In the middle of summer, *The Useless Web* is at its lowest traffic and then in the winter, it starts to go up again.

Do you ever think about the environmental impact of that Tim sized dent?

Yeah... some of the sites are pretty heavy on your batteries. They are computationally expensive. You can sometimes feel your fan spinning up like "fuck, we are trying to load some serious shit here." I couldn't calculate... It's definitely a lot... I don't wanna know...



Floodscapes

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Observation/Feature

Keywords: climate crisis, flooding, floodscapes, landscape art, art as activism

Research methods: interview with artists, research into history of floodscapes

Paysages inondés /Floodscapes



Un nouveau genre de paysagisme
*/Revisiting a Genre of Landscape Art
for the 21st Century*

Par /by Lara Chapman

Entre 1998 et 2017, les inondations ont affecté plus de deux milliards de personnes sur la planète. Elles sont l'une des catastrophes naturelles les plus courantes et les plus destructrices. Pendant des siècles, les artistes ont été attirés par ces implacables masses d'eau, tâchant de découvrir comment saisir l'instant même où le paysage fond dans les eaux, transformant de paisibles paysages en paysages inondés et les chaussées parfaitement aménagées des complexes pavillonnaires en mers parsemées d'archipels de toitures. Entre 1517 et 1518, dans sa série de dessins intitulée *Le Déluge*, Léonard de Vinci a dessiné des villes, des armées et même des montagnes ravagées par les flots; En 1896, Claude Monet a peint les prés inondés de Giverny dans son tableau *Inondation à Giverny*, où seuls les arbres nus semblent encore pouvoir témoigner des conséquences de la catastrophe. En 1967, Helen Frankenthaler, dans son tableau simplement intitulé *Flood* (Inondation), a saisi de manière abstraite les larges étendues de couleurs qui émergent lors d'une inondation, les détails du paysage ou de la rue ayant été submergés par les flots. Au fil des ans, beaucoup d'autres artistes se sont essayés à cet exercice de la représentation des inondations, qu'ils ont utilisé pour traiter de sujets tels que la rénovation, la destruction, les saisons et la fertilité. Mais, qu'est-ce qui pousse les artistes à revenir encore et encore à ces panoramas aquatiques? Et, quels sont les changements à l'œuvre aujourd'hui, alors que les grandes inondations sont de plus en plus fréquentes et qu'elles ne cessent de s'intensifier partout dans le monde en raison du changement climatique?

Pour l'artiste et photographe James Casebere, dont l'œuvre consiste à créer des modèles architecturaux complets, y compris des eaux hyper réalistes, et à les photographier dans son studio, les inondations ont depuis longtemps été pour lui objet de fascination. Casebere considère que son œuvre a été influencée par « des situations climatiques extrêmes » depuis l'époque où il faisait ses études, en 1978, et qu'il photographiait souvent des « tempêtes, des coulées de boue, des accidents automobiles sur l'autoroute ». Dans ses premières œuvres, « l'utilisation de l'inondation était d'ordre psychologique; l'inconscient apparaissait en filigrane, mais également les souvenirs perdus, qu'ils soient historiques ou personnels. » Ce recours réfléchi à l'inondation est présent dans « *Pink Hallway #2* », une œuvre qu'il a construite et photographiée en l'an 2000. On y voit une entrée, des murs peints en rose bonbon sertis de moulures blanches, un plafond et des embrasures en voûte et un carrelage en damier. La scène suggère une certaine grandeur, mais l'entrée est inondée à hauteur de genou. La maison est vide. Les murs ne sont pas décorés de tableaux ni de photographies et il n'y a aucun meuble. Aucun signe de présence humaine. La photographie est cinématographique par son éclairage et l'atmosphère dramatique qui s'en dégage. Le résultat est bizarre, déconcertant. Le spectateur est livré à une hésitation sur la nature de ce qu'il voit: s'agit-il d'une

More than 2 billion people worldwide were affected by floods from 1998 to 2017 and floods continue to be one of the most common and most destructive natural disasters. For centuries, artists have been drawn to these unstoppable swells of water, exploring the moment when a landscape is subsumed — transforming it from lucid countryside to floodscape, from suburban concrete streets to a sea with rooftop islands. In 1517-18, Leonardo da Vinci sketched raging swirls of waves which swallowed cities, armies and even mountains in his series *The Deluge Drawings*; In 1896, Claude Monet painted the flooded meadows of Giverny, France, in *Flood Waters*, where the bare trees were the only witnesses to the aftermath of the flood; And, in 1967, Helen Frankenthaler abstractly captured the large plains of colours that emerge with a flood, when the details of a landscape or street are buried underwater, in her painting simply titled *Flood*. Over the years, many other artists have grappled with the subject of floods, using floodscapes to explore topics such as renewal, destruction, seasons, fertility. What compels artists to return to these watery vistas a gain and a gain? And, how is that changing today, as incidences of extreme flooding continue to grow in frequency and intensity across the world due to the climate crisis?

For artist and photographer James Casebere, who builds architectural models, complete with hyper-realistic water, and photographs them in his studio, his fascination with floods has been longstanding. Casebere says his work has been informed by "extremes in climate" since he was a graduate student in 1978 when he often photographed "storms, mudslides and car crashes on the highway." In earlier works Casebere says "the use of flooding was psychological, meant to suggest the unconscious, as well as lost memories — be they historic or personal." This cerebral use of flooding is apparent in *Pink Hallway #2*, a work he built and photographed in 2000. It depicts a hallway, painted a soft pale pink, with white trimmings, arching doorways and a chess-like chequered floor. The scene suggests a certain grandeur and yet the hallway is pooled, knee-deep, with water. The house is empty. There are no paintings on the walls, no photographs, no furniture. No signs of humans at all. The photograph is cinematic in its drama and lighting. It is uncanny, unnerving and leaves the viewer uncertain if it is a photograph of a real scenario or a staged one. In 2018, 40 years after he first turned his attention to the subject of the climate, he is more self-consciously and "more directly addressing climate change and rising sea levels to draw attention to the issue." "It has become clear," says Casebere, "that we need an all-out effort to reverse the trend in carbon emissions immediately on both a personal behavioural and especially a societal policy level. Meditation and adaptation are both necessary." The result of his more concentrated focus in how he approaches floodscapes is the series "On the Water's Edge" (2018 - ongoing)



1 — James Casebere, *Pink Hallway #2*, 2000, cibachrome monté sur Plexiglas /cibachrome mounted on Plexiglas, courtesy of James Casebere, courtesy of the Artist and Sean Kelly, New York
 2 — James Casebere, *Blue House on Water*, 2018, épreuve pigmentaire d'archive montée sur dibond /archival pigment print mounted on dibond, courtesy of James Casebere, courtesy of the Artist and Sean Kelly, New York
 3 — James Casebere, *Yellow House on Water*, 2018, impression au pigment d'archive montée sur dibond /archival pigment print mounted on dibond, courtesy of James Casebere, courtesy of the Artist and Sean Kelly, New York

photographie d'une situation réelle ou d'une récréation surréaliste ?

En 2013, 40 ans après s'être intéressé pour la première fois à la question climatique, sciemment, il « traite le changement climatique et la montée du niveau de la mer de manière plus directe afin d'attirer l'attention sur ce problème. Il est désormais clair, explique Casebere, que nous devons consacrer tous nos efforts à inverser immédiatement la tendance des émissions de carbone tant sur le plan personnel et comportemental que sur un plan plus politique et sociétal. La médiation et l'adaptation sont toutes deux nécessaires. » Le résultat de ce changement dans sa manière d'aborder les paysages inondés est la série « On the Water's Edge » (Sur le fil de l'eau) qui montre des maisons étincelantes de modernité enveloppées par les eaux. Leurs fondations et leurs rez-de-chaussée sont souvent rendus invisibles sous le poids et le volume de l'inondation. « *Blue House on Water* », par exemple, montre la moitié supérieure d'une façade vert opaline avec un toit blanc en pente douce et une colonne rouge sur fond de ciel gris tirant sur le noir. À première vue, il semble que la partie basse de la maison se situe en dehors du cadre de la photographie, mais il s'agit d'une illusion de normalité. Le bas de la maison est en fait un reflet parfaitement aligné de la partie supérieure, et il brille à la surface de l'eau. L'eau a rendu cette maison inhabitable et l'œuvre souligne l'inadéquation généralisée de notre architecture et de nos milieux bâtis face aux événements climatiques extrêmes auxquels nous faisons face. Une autre œuvre de cette série montre un futur plus prometteur dans le cadre duquel nous nous apprêtons à vivre avec cet élément et la montée des eaux. Dans « *Yellow House on Water* », la maison repose sur un ponton ou une structure élevée et elle est partiellement bâtie sur pilotis, ce qui la protège en partie de possibles dommages. Le jaune semble avoir adopté une attitude enjouée qui défie l'obscurité de l'eau et des nuages qui l'entourent, suggérant ainsi une sorte de résilience au paysage ou peut-être faut-il y voir un appel à travailler de pair avec l'environnement. Ces œuvres saisissent ce que Casebere décrit comme « un sens de l'appréhension, de la perte, de la prémonition et du calme, ainsi que la manière dont les problèmes sociaux et l'histoire personnelle se recourent. »

À l'instar de Casebere, l'artiste Christophe Burk, installé aux États-Unis, représente des maisons sous l'emprise de paysages inondés. « Lorsque j'ai commencé cette série, ce n'était pas pour des raisons politiques », précise-t-il. En effet, son engagement sur cette question est le fruit du hasard, lorsque, pris par une réaction inhabituelle, Burk a changé de chaîne et est tombé sur le journal télévisé du soir. Il a alors vu les images de l'inondation qui était en cours dans le sud-est des États-Unis causées par le cyclone Florence. Les images étaient prises d'un hélicoptère et offraient une vue d'ensemble plongeante sur le paysage. « Elles étaient certes tragiques, mais également empreintes d'une beauté profonde ancrée dans la sérénité de la dévastation. » Captivé par les images, il a mis le journal télévisé sur pause et il a photographié les prises

which presents strikingly modernist houses enveloped by water. Their foundations and bottom levels are often not visible under the weight and volume of the flood. *Blue House on Water*, for example, shows the upper half of duck egg blue façade with a gently sloping white roof and red column against an almost-black-grey sky. At first glance, it looks like the house reaches below the crop of the photograph. But this is an illusion of normalcy. In fact, the bottom of the house is a perfectly aligned reflection of the top half, shimmering on the water's surface. The house has been rendered unliveable by water and the work points to the unsuitability of much of our architecture and built environments for the extreme climate-related events we are beginning to face.

Another work in this series shows a more promising future when we have learned to live with water and flooding. In *Yellow House on Water*, the house sits on a pontoon or raised structure and the house is partially on stilts, protecting it from at least some potential damage. The yellow seems to sit in cheery defiance of the dark water and clouds surrounding it, suggesting a kind of resilience to the landscape or perhaps an acknowledgement that we must work with the environment. The pieces capture what Casebere describes as "a sense of apprehension, loss, foreboding, and calm, and the way social issues and personal history intersect." Like Casebere, US-based artist Christopher Burk also depicts houses in floodscapes. "When I began these series", it was not for political reasons," he said. Indeed, his engagement with this subject matter emerged from a chance moment in 2018, when in an uncharacteristic move, Burk switched on the evening news. He saw images of the flooding in the south-eastern United States caused by Hurricane Florence. They were taken from a helicopter from a bird-eye vantage point. "Not only did

4 — Christopher Burk, *Flooded House 7*, huile sur lin / oil on linen, courtesy of the Artist



4

de vue avec son téléphone. Cette initiative a donné lieu à deux séries : « *Flooded House* » (Maison inondée) et « *Flooded Landscapes* » (Paysages inondés). La première série offre une vue surplombante sur des hauts de maisons, leur toiture inclinée nous est familière mais elle semble surgir de vastes plans d'eau qui comblent toute l'étendue de la toile. L'eau souillée d'une boue brune orangée contraste franchement avec la gaieté des bleus et des blancs de l'extérieur de ces maisons. Les arbres et les terres cultivées ont été enfouis sous l'eau, les champs alignés ont été remplacés par des carrés bruns, le vert, normalement présent, git désormais, caché sous le poids d'une pluie qui a colonisé l'espace.

Burk explique, qu'à l'origine, il a créé cette œuvre parce qu'il appréciait « l'existence d'une vision alternative au concept de paysage et qu'il a trouvé les images étrangement belles. » Quelques années plus tard, son processus de réflexion a changé en même temps que sa vision du monde qui l'entoure. « Avec chaque nouvelle saison qui passe, les tempêtes et la dévastation qui causent ces déferlements se sont intensifiés où que l'on se trouve. En tant que citoyens du monde, nous continuons, de manière directe ou indirecte, à souffrir les conséquences de ces catastrophes naturelles. » Une étrange tension envahit la série « *Flooded Landscapes* ». D'une part, ces paysages sont sereins et beaux, les étendues d'eau sont calmes et l'absence d'être ou de destruction humaine nous présente un monde paisible. Le risque étant que le spectateur s'installe dans une paix relative, en contradiction avec le souhait de l'artiste de nous faire réfléchir à la crise climatique et, plus encore, d'agir. D'autre part, ces paysages provoquent aussi l'effroi en sous-entendant qu'une catastrophe environnementale a eu lieu et, qu'avec elle, c'est le chaos et la dévastation qui a pris place. Burk joue délibérément avec la beauté de la destruction. Il considère que la tension entre le plaisir dans l'art et une sorte d'état d'urgence lui sont essentiels. « Le deuil est important, mais je veux que le spectateur puisse sentir qu'il a le pouvoir d'agir. » Et à Burk de résumer : « Les paysages inondés sont des sujets importants pour les artistes, certes, mais également pour nous tous. »

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5 — Christopher Burk, *Flooded Landscapes*, huile sur lin / oil on linen, courtesy of the Artist

6 — Christopher Burk, *Flooded House 8*, gouache et pastel sur papier / gouache and pastel on paper, courtesy of the Artist



5



6



7.



8.

I see something tragic in the imagery there was also a profound beauty in the destruction's serenity." Captivated by the images, he paused the news and took photos on his phone of the footage. This led to two new bodies of work "Flooded House" and "Flooded Landscapes". The first series depicts the tips of houses seen from above, their familiar pitch-styled roofs sticking out of the flat plains of water that fill the rest of the canvas. The mud-sullied or orange-brown water sits in stark contrast to the jovial blues and whites of the houses' exteriors. The latter series consists of paintings of trees and fields submerged in water, the lines of agriculture replaced with boxes of brown, the normal green hidden under the weight of settled rain.

Burk says that he originally created this work because he liked "that they were an alternative vision to the concept of landscape painting and found the images to be hauntingly beautiful." A few years on, his thought process has changed due to the world he sees around him. "With each new season, the storms and devastation that bring these surges have grown with intensity, regardless of ones' location. As global citizens, we will continue to be impacted, directly and indirectly, by these natural disasters." He believes that "floodscapes are an important topic, not only for artists, but for all of us."

There is a strange tension at play in both the artists' works. On the one hand, they are serene and beautiful, the calm stretches of water and lack of humans or human destruction presenting a world at peace. They risk leaving the viewer somewhat soothed, which sits in conflict with the artists' desires to make us think more deeply and act more urgently about the climate crisis. On the other hand, they are eerie in their implication that an environmental disaster has taken place and with it, devastation and havoc, the uneasy calm after the storm. Casebere deliberately plays with the beauty of destruction. He says the tension between pleasure in art and a kind of criticality are key for him, explaining, "it is important to grieve, but I want to leave the viewer with the sense that they have the power to act."

Building on the tradition of floodscapes, artists today are approaching this genre as a form of activism. They are photographing and painting from a palette of concern, urgency and a touch of optimism, helping us to face the ongoing challenges of our planet.

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Consider “The” Dictionary Published in Bum Editions, Issue #1, 2020

Keywords: dictionaries, politics of language, lexicography, corpus linguistics, word data

Research methods: interview with lexicographers and language scientists, corpus database research and testing, sourcing and comparing dictionaries from different eras

Consider the dictionary

Think back to the last time you used a dictionary - perhaps it was to settle an argument that erupted during a “friendly” game of scrabble, perhaps it was to clarify the meaning of a long, jargony word in an article or perhaps it was when you were learning a new language and wanted to know how to say ‘beer’ or ‘please’ or ‘fuck’ - regardless of why you used it, your encounter with the dictionary was probably brief, inconsequential and even slightly mundane. Chances are that a quick Google search or the flick of a few pages allowed you to find what you were looking for, consult it, digest it and then go on your merry way without a second thought. At school, we are taught to use dictionaries and by adulthood, the weighty tomes have become part of the furniture of our everyday lives, their authority cemented and their function rarely examined or questioned.²

However, if we pause for a closer inspection, the pages (or webpages) of our dictionaries can be very revealing. In representing the common understanding of each and every word, they are infused with the politics of accepted and shunned norms, identities, values and behaviours. Hidden in their seemingly dry definitions is evidence of ideologies, worldviews and timely cultural references.

A dictionary’s primary function - to classify, order and define the common uses of words - sounds simple enough. Yet words and language are not straight forward. They are perpetually changing, unstable, generative and ever-shifting. Each publication of a new dictionary edition signposts not only the development of language but also the shifts occurring in how we think, feel, understand and respond to the world we inhabit. In some ways, we can think of dictionaries as museums of language, but while museums collect cultural artefacts of the past, dictionaries collect words and our use of them across time. Consider these two definitions of marriage: 1. The act of uniting a man and woman for life (American Dictionary of the English Language 1928)³ 2. The state of being united as spouses in a consensual and contractual relationship recognized by law (Merriam-Webster Online

Dictionary, July 2020)⁴ The two definitions differ greatly, with the first reflecting the heteronormativity of the 1920s and the expectation that marriage was forever. The latter definition highlights equality and consent and is inclusive of same-sex marriages, reflecting 21st-century changes in both laws and attitudes towards what kind of love is ‘common’ or legitimate.⁵

Despite their inevitable obsolescence, each contemporary edition of the dictionary is important because words are very powerful. Words can uplift or oppress. They can reveal or conceal. Influence, manipulate, challenge or change. In the essay *Politics and the English Language* (1946), George Orwell extrapolates on the danger of vagueness when using words. He argues that “the present political chaos is connected with the decay of language, and that one can probably bring about some improvement by starting at the verbal end.” He calls for a deliberateness in using and defining words to affect change. An example of the power of language and definitions to affect change is the reclamation of the word ‘queer’ by the LGBTQIA+ community where the meaning was shifted from something with derogatory connotations to a word that is empowering and uniting.⁶

Given the importance of words, it is odd that we unthinkingly accept the definitions presented to us in the dictionary as a truth. Who is designing our language? What might their biases be? What are the mechanics of words entering the dictionary? And what are the ethics of definition-making? The people who compile, write and edit dictionaries are called lexicographers. They choose which words are included and excluded from dictionaries and therefore which words are legitimised and which are disregarded. Lexicographer Erin McKean estimates that there are less than 200 lexicographers working in the USA, indicating that our dictionaries are made by a very small, elite group.⁷

It is tempting to paint a picture of lexicographers as power-hungry villains who want to control the world of words: the Gatekeepers of Language



¹ ‘Fuck’ has been included in American dictionaries since 1965 (McKean, E. *The Joy of Lexicography*, TED talk, 2007, 2:22)



² One lovely exception to this rule is the Dominic Wilcox Impersonation Kit in which the artist/designer/inventor reads the entire dictionary, cover-to-cover onto tapes so someone could learn to speak like him. The tapes begin: ‘Listen and repeat, Aardvark...’

³ <http://webstersdictionary1828.com/dictionary/marriage>

⁴ <https://www.merriam-webster.com/dictionary/marriage>

⁵ Lexicographer Rosamund Moon stresses that changes to definitions which deal with changing social norms are particularly difficult for lexicographers because “some of these new norms are not universally accepted by any means, and may seem abnormal to some sectors of the global usership. (Moon, R. *Meanings, Ideologies, and Learners’ Dictionaries*, 2014. Europlex Papers.

⁶ Nielsen, B. (2019) *How the Word ‘queer’ has Emerged as a Term of Empowerment*. ABC, Australia.

⁷ McKean, E. (2014) *Lexicographer*. NY Times.



⁸ Misachi, J. (2017), *The World’s Oldest Dictionaries*, World Atlas.

⁹ Coventry University ‘Unit 3.6: The COBUILD Corpus’, *Understanding English Dictionaries* [Online course].

¹⁰ McCulloch, G. *Because Internet*, p. 266.

¹¹ Michael Rundell, Interview with author, 2020.

who are ruthless grammarians and intellectuals looking to prove their cleverness. You might imagine them as white-haired conservatives, sitting in their walnut-panelled private libraries scoffing at the abhorrent way the common folk are butchering words. And looking back on the history of dictionary-making, this imagined portrait isn't so far from the truth.

For centuries, humans have been compelled to order, categorise and define words - the oldest known dictionary dates back to C.2300 BCE.⁸ "In the past, most dictionaries were written by one person, usually an educated middle-class person," says Ramesh Krishnamurthy, a lexicographer and corpus linguist.⁹ He explains that these dictionary-makers relied on their memories, intuition and limited personal experiences to create definitions. "That meant that the only words and phrases that would be explained were words that were used by well-educated middle-class people. And of course, they were explained in terms of their prejudices and beliefs." And because historically the educated and wealthy have been predominantly male, most early lexicographers were men.

One of the most famous lexicographers is Dr Samuel Johnson who published *The Dictionary of the English Language* in 1755. In the introduction, he writes about his motivation for spending seven years single-handedly compiling his 40,000-word dictionary: "I found our speech copious and without order, and energetic without rules: wherever I turned my view, there was perplexity to be disentangled, and confusion to be regulated".¹⁰ In other words, he wanted to order language and control its use.

Despite this desire for control, Johnson's dictionary is widely considered by lexicographers as "the first dictionary that was based on serious evidence of English usage as opposed to just making it up,"¹¹ as he used references and citations from texts dating back to the 1500s to substantiate his definitions. Although Johnson had a more scientific approach to defining words than his predecessors, some of his definitions are still highly subjective. For example,

he defines 'shabby' as 'a word that has crept into conversation and low writing; but ought not to be admitted into the language'; and 'patron' as 'one who countenances, supports, or protects. Commonly a wretch who supports with insolence, and is paid with flattery', which is thought to be a dig at Lord Chesterfield, a prominent statesman and man of letters, who promised to be the patron of Johnson's dictionary but did not follow through with support.¹²

However, as time has marched slowly on and words have wriggled out of the definitions we try to bind them to, the role and attitudes of lexicographers have shifted too. In a 2007 TED talk, *The Joy of Lexicography*, McKean uses the analogy of a traffic policeman and a fisherman to describe this shift. She says that the public often sees her as a word-cop directing "real" words into the dictionary and pointing "bad" words away, but really, she is a fisherman [fisherperson]¹³ who throws her "net into the deep, blue ocean of English and see[s] what marvellous creatures I can drag up from the bottom." So rather than designing language, McKean is observing, documenting and preserving it.

Similarly, when I asked Michael Rundell, who has been a lexicographer since the 1980s and is the Editor-in-Chief at macmillandictionary.com, if lexicographers are the gatekeepers of language, he chuckled. "There is a lot of misunderstanding amongst the public. Linguists and lexicographers are the least pedantic and most tolerant people about language use, far more so than the general public, because we observe the way that language is changing rather than complaining about it." He explains that during his career, there have been "two massive shifts which have revolutionised the dictionary-making business" and have completely changed the mechanics of how words are included and excluded from dictionaries. This, in turn, has radically democratised dictionaries and the role of the lexicographer. These two changes boil down to the advent of the internet.

"The first revolution was the availability of corpus data which affects



12 Noah Webster, who published *An American Dictionary of the English Language* in 1828, is another example of a 'power hungry' lexicographer. Webster sought to promote American national identity through standardisation of spellings such as 'center' and 'color'.



13 There is an inherent assumption in the word 'fishermen' that any person who catches a fish is male. Language researcher Tiger Webb outlines three less exclusionary approaches: 1. To use gender neutral terms such as 'fisherpeople'; 2. To use 'symmetrical gender pairings' such as 'fisherwomen'; 3. 'Gender-neutral language reform', i.e. creating a new term.

14 If you are interested in corpus linguistics and dictionary-making, I recommend signing up to a free months trial with Sketch Engine and having an explore. It has way more features, search functions and nuances than I could cover in this article.



15 Contemporary use of the word is someone who is coolly enthusiastic and knowledgeable about something. Most dictionaries still represent the prior derogatory connotations in their definitions: Macmillan nerd as 'someone who is boring, not physically attractive, and does not have much social ability'.

the production end of dictionary-making," i.e. the writing and editing, says Rundell. A corpus (or corpora in plural) is a huge data set comprised of billions of words (the largest at the moment is about 15 billion). These are words pulled from millions of varied sources such as articles, blogs, social media posts, books, film transcripts, gaming forums, packaging information etc. The use of corpora in dictionary-making began in the 1960s but it was cumbersome and the data sets were quite small. As technology improved, so too did the enthusiasm for corpus-built dictionaries, this led to the pivotal COBUILD project in the 1980s which radically advanced corpus linguistics and dictionary-making. It was the first dictionary based entirely on a custom-built corpus of over 7 million words (small by today's standards but massive at the time). Krishnamurthy, who worked on COBUILD explains that using corpus data "meant we could get a view of the language not just as it was used by educated middle-class people but by the whole population. So basically it enabled us to have a more democratic view of how language is used in our society." Another advantage of using corpora is the real time data they provide about word usage, such as how frequently words occur and their shifting meanings over time. This data is used to determine if a word is common enough for inclusion in the dictionary.

To understand the usefulness of corpora, I tried using Sketch Engine, an industry-standard corpus database and text analysis software for dictionary-making.¹⁴ It was created in the early 2000s specifically for lexicographers and linguists to truly map and understand language. If you look up 'common' on Sketch Engine 3,376,093 concordances (which is a fancy way of describing lines of texts showing every instance of the given word in the context in which it occurs) appear. Although it would be impossible to read every entry, you quickly begin to see patterns of how the word 'common' is used - in what contexts and with what other words (e.g. 'common sense', 'common ground') - as well as many other specific, nuanced and deeper searches and analyses of words. Basically, it is kind of a super-advanced,

analytical Google search designed specifically for language nerds.¹⁵

One of Sketch Engine's other features is a software called GDEX (derived from Good Dictionary EXamples) which provides shortlists of potential example sentences. The GDEX website explains that the sentences are chosen by the algorithms based on "length, advanced vocabulary, sufficient context, pronouns pointing outside of the sentence and other criteria." When I searched 'common', my favourite result was "loss of bowel control is surprisingly common." By taking example sentences from a database rather than from one's own head, it is less likely that your subjectivities will skew the sentences. However, using corpora does not entirely alleviate the problem of biases in the dictionary. The texts within corpora are also products of their times with underlying prejudices (unconsciously or consciously) built into them. Rundell cites writing an example sentence for the verb 'to nag' to demonstrate the dilemma that using corpora can present:

"If you look in older corpora, the word nag is always used about women - they are the people who are doing it. So if you then say, our dictionary examples should reflect common usage but you look at that and see that 90% of all the examples you get shown by the corpora reference women nagging, what do you do? Do you override that and have an example of men nagging which then could be seen as a sort of language engineering? Or do you get around it by saying something like "the children are nagging" and put the blame on them instead?"

To deal with these conundrums, lexicographers follow editorial style guides which assist in choosing good example sentences and how to write definitions. "There is also a blacklist of things you have to avoid," Rundell says "like sexism or anything potentially offensive etc." Inevitably, some sentences will enter that are biased, outdated or offensive to someone. While these thorny sentences were once set in print, today lexicographers can be much more agile at updating problematic entries.

This brings us to the second revolution in the industry: online dictionaries. As dictionaries have gone digital, the size and cost restrictions associated with books that once forced lexicographers to choose one word over another has evaporated, leaving an endlessly updatable platform. Digitisation has redefined what makes a good entry, what should be included and how quickly new words are added.

Rundell says that "If you are doing an online dictionary, one of the imperatives is that you stay up to date because instead of people saying 'that word is not in the dictionary so it is not a good word' which used to be the common reaction, now they are saying 'this word is not in this dictionary and therefore it's not a good dictionary, I'll look it up in another one.'" There is a growing awareness that when we use dictionaries we are not using *The Dictionary* but a dictionary. There are many dictionaries with many different approaches and between these dictionaries, there are inconsistencies, gaps and varied underlying ideologies. We are in the process of dismantling the absolute authority of dictionaries and, in turn, the absolute power of lexicographers. They are increasingly considered language enthusiasts rather than language dictators.

Linguist Gretchen McCulloch welcomes the change in our attitudes towards words and dictionaries. She highlights that "Language is the ultimate participatory democracy. To put it in technological terms, language is humanity's most spectacular open-source project [...] It spreads and disseminates through conversations and interactions." Therefore each person has the power to shape and shift our words and the definitions by simply using them, making us all quasi-experts in language.

So, next time you use a dictionary, whether for scrabble, definitions, translations or whatever else, don't take its word for it. Pause for a moment and consider: what led to this definition? How recently was it updated? Who's worldview does it represent? Do I agree with it? Do I trust it? A dictionary is not an authority, it is a guidebook.

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