remote sensing 2

Prompts, Papers & Participatory
Practices from the 2022 Symposium

ual: camberwell
college of arts

Remote Sensing was a platform to share knowledge, approaches, and challenges in fieldwork, with a focus on places, communities, and collections. In late April 2022, the second *Remote Sensing* symposium took place at Camberwell College of Arts, University of the Arts London. Organised by BA Illustration Course Leader Dr Rachel Emily Taylor and Senior Lecturer Sara Ortolani, the event was a development on the themes from the first symposium—which took place in April 2021, during a national lockdown in the UK amidst the COVID-19 pandemic—and explored the changing significance and understanding of field work and research during a period of enforced isolation and remote access. The 2022 symposium, which simultaneously took place in-person and online, considered the changes and the progress made by curators, visual communicators, and researchers as they have reflected on and incorporated into their practice the forms of knowledge making that came out of the pandemic settings. The event concluded with a ranging, vital and somewhat meta presentation and conversation between Dr Timothy Morton and Dr Sheena Calvert titled 'I'm Not Here' (enabled by now-ubiquitous online meeting software), which discussed the phenomena and philosophical significance of remote-ness in participatory practices and more widely.

In this publication, a number of symposium presenters provide context and insight into their research put forward in the symposium in April 2022. They are: Drs Maja and Rueben Fowkes, who spoke about their experience in exhibition-making in more-than-digital worlds and here present 'Ecological Uncodings: Decolonising Digital Futures', abridged from an article from *Springerin* no.3 (2021); Dr Dylan Yamada-Rice, whose talk explored socially-distanced games and play as a means of remote data collection and here presents a concise look at those subjects and research from their presentation,

detailing how they engage research participants remotely; and Futuress (Maya Ober and Nina Paim), who spoke in conversation with Paul Bailey during the symposium, and who brought questions about democratising design education from their position as the then-editors of Futuress, a self-described 'hybrid between a learning community and a publishing platform'. Futuress' contribution here is a glossary of key terms and ideas that it also a guide and an invitation to join them in the 'space' they have created.

In an open call intended to augment the symposium prompts and the conversations that took place on the day, several papers and essays by writers, academics, and visual practitioners are also presented here. Responding to the core prompts from the 2022 symposium—how pandemic restrictions produced modes of knowledge-making and how we can move beyond the restrictions into a new understanding of research and field work—and taking a range of formats that include visual essays and in-depth reviews of practice, the open-call contributors are: Angela M Bowskill, 'Multi-Modality: Sensory Ethnography in Lockdown'; Pat Wingshan Wong, 'Barter Archive: Billingsgate Fish Market'; Karen Piddington, 'Sheepology: Nonhuman Encounters'; and Dr Fadi Shayya and Dr Matthew Flintham, 'Engineering the Landscape: Tracing Militarised Accounts of the Landscapes in Utility Patents'.

Lastly, responding to the theme of translation as a research method for illustration, specifically drawing from the *Remote Sensing* directive to consider the processes and methods that enable practitioner research to continue and adapt in a post-pandemic world, and to expand on the critical need to make space for new forms of knowledge-making, a number of students from MA Illustration course at Camberwell College of Arts (who were studying at the time of the symposium)

present here key examples of their personal visual research methods for illustration. Some of the methods in this publication represent formative, incomplete, even failed methods that took place in the course of a project, but all of them had a significant role in informing the thinking and form of a final project outcome. The MA Illustration students (now graduates) are: Zilan Zhao; Yuchen Bian; Marília Arruda Pereira; Yitian Li; Yurou (Romi) Qian; Tianling (BG) Xu; Qingchun Zhang; and Beth Blandford, who also developed a practical workshop during the symposium derived from their translative research methods. Beth's reflections and insights from this experience are also included here.

To bring together the range and diversity of contributions, this publication is collected into three open prompts that draw from ideas raised during the 2022 symposium: a remote space is not neutral, can a remote space ever be neutral?; listening as a remote space; and imagination as a remote space.

We would like to thank again all the contributors, speakers, and participants for their work presented in this publication, and to invite our readers to now consider and contribute to the ongoing conversations and practices that explore and expand the themes of *Remote Sensing*.

Dr Rachel Emily Taylor & Sara Ortolani (organisers) with Bryony Quinn (editor)

A remote space is not neutral, can a remote space ever be neutral?

Listening as a remote space

Imagination as a remote space

a remote space
is not neutral,

can a remote
space ever be
neutral ?

ecological uncodings:

decolonising digital futures

Dr Maja and Dr Reuben Fowkes

The supremacy of the hi-tech vision of the future is taken for granted to such an extent that the voicing of alternative scenarios arrives with the force of an epistemological breakthrough. The premise of TJ Cuthand's film *Reclamation* (2018) of a post-digital world in which the settler colonialists have abandoned Earth and relocated to Mars, leaving behind indigenous communities to fend for themselves on a polluted planet, directly challenges the dominant technocratic rule. The schemes circulating in techno-futurist circles to terraform Mars by detonating nuclear bombs to melt its icecaps and create a breathable atmosphere are revealed as privileged white fantasies for escaping climate disaster. At the same time, the tables are turned by imagining another path to the future in which two-spirit people take the lead in detoxifying the air, rehabilitating the land and restoring communities. Breaking the futurological monopoly of the colonial extractivist project crystallises as an essential first step toward ecological reworlding. As the film suggests, once the structures and habits of domination are relinquished, the restorative energy of natural healing and radical care has the potential to bring about a terrestrial recovery, with its protagonists' fearing only that 'one day the colonisers might return' (Fowkes, 2022).

Could there be, however, indications that the hold of digital technology over the future is beginning to slip? When approached not as a succession of technological milestones, but rather as inseparable from the gearing up of economic globalisation and acceleration of climate change from the mid-1980s, the short history of the digital era is disclosed as contingent and circumscribed by larger forces. Distinctions made between the virtual realms of digital reality and the materiality of the offline world no longer appear viable in light of the ecological and decolonial critique of the

Cartesian divide between nature and culture. The reluctance of technophiles to admit the complete dependence of the virtual on terrestrial materiality has also been shaken by the growing threat to the physical infrastructures of digital networks posed by extreme weather events. Although critical accounts of networked information technology remain in awe of its power and promises, there is new awareness of how digital culture 'inhibits our ability to think meaningfully about the future,' by reducing our options to a technical choice between platforms (Greenfield, 2018). Explored here is how in contemporary art a far-reaching critique of so-called digital space is emerging, revealing the dependence of techno-futurism on fossil fuel energy and the mining of rare earth minerals, as well as making visible the interconnections of technological modernity with histories of colonialism and extractivism.

The universalising belief in the neutrality of digital technology is challenged in Tabita Rezaire's film *Deep Down Tidal* (2017) to expose how the internet functions as a tool to maintain and reinforce global structures of colonial power. Observing that the internet is as much 'an oppressive space as real life' (Nestor, 2018) and rejecting the framing of discussions of the relationship between the African continent and new technologies in terms of narrow technocratic questions around internet access and the digital divide, the artist set out to challenge Western domination of cyberspace. The optic cables on the seafloor are disclosed as not just a technical mechanism for the transfer of data across the globe, but also as a conduit for the transmission of 'exploitation, exclusion and eco-system disruptions' (Rezaire, 2017). The fact that these cables mostly follow the underwater paths of copper telegraph lines laid in the nineteenth century along colonial shipping routes established in the slave trade era are further

grounds for considering them as the infrastructure of electronic colonialism. The operations of this 'twenty-first century form of colonisation' have been described by Michael Kvet in terms of the 'centralised ownership and control of the three core pillars of the digital ecosystem: software, hardware, and network connectivity' (Kwet, 2019). The artist however goes further, by demonstrating that the decolonisation of the internet is not simply a matter of decentralising ownership of the hardware and taking control of the software, but also entails a process of digital healing to address the Anthropocene histories of ecological destructiveness and racial violence from which digital technologies emerged.

The ecological queering of the abstract purity of digital realms is tangible in debates around cryptocurrency, where the ideal of a purely digital currency based on solving computational puzzles and existing independently of financial institutions collides with the environmental realities of its huge carbon footprint. As Adam Greenfield noted in *Radical Technologies: The Design of Everyday Life*, the economics of bitcoin mining depend on 'treating the atmosphere as a giant heatsink, and the global climate as the biggest externality of all time' (Greenfield, 2018). The significance of the fact that many such energy-intensive virtual mining operations are located in southwestern China, in an area that is rich in hydropower and also inhabited by ethnic minority groups, has been explored by artist Liu Chuang in the three-channel video installation *Bitcoin Mining and Field Recordings of Ethnic Minorities* (2018). Aerial footage of the river valleys and dam infrastructures are combined in the films with images of bitcoins, abstract technological representations and anthropological recordings of the lives of the indigenous peoples of the region. The film makes visible the discrepancy between the illusory claims of immateriality of virtual realms

and the relentless 'harvesting' of electricity to power the digital mining rigs required to validate the blockchain, a massive operation consuming around seventy percent of the world's computational power. A further tension emerges between the imagery of so-called high technology and the traditional technologies of the ethnic minorities, whose futures are narrowed and consumed by the forceful integration of their lands and rivers into the energy matrix of industrial modernity. In a moment when all three screens converge on the image of a spider painstakingly weaving its web, it becomes clear that such acts of colonial and extractivist interventions that make digital worlds possible are also carried out at the expense of non-human terrestrials.

The sense of the Anthropocene moment of planetary peril and the resultant spread of ecological consciousness heighten the potential for ecological uncodings. As artist Janek Simon recalled in a recent interview, the 'first crack' in his 'technological optimism appeared sometime around 2007,' when he found out about the 'economics of electronic waste' (Teixeira Pinto and Warsza, 2020). His sculptural installation *Alaba International: Selection of Objects from Alaba, Nigeria* (2019) dealt with the trade in second-hand electronics or tokunbo in Africa's largest open-air market in Lagos, which also serves as a station for the disassembling of dysfunctional items into parts for recycling. This form of toxic urban mining, in which gold and other precious metals are separated out for reuse, is revealed as a continuation by other means of the exploitative practices of colonial economics. The irreducible detritus of electronic waste also turns into technofossils, the geologically novel phenomenon of the material remains of the technosphere in the stratigraphy of the planet. The techno-futurism of China's largest industrial hub and global electronics

Figure 2. Janek Simon, *Huaqiangbei Commercial Street: A Selection of Objects from Shenzhen*, 2019. Courtesy of the artist.

manufacturing centre is the focus of the paired installation *Huaqiangbei Commercial Street: A Selection of Objects from Shenzhen* (2019). The recycled raw materials, as well as tonnes of newly extracted precious metals and rare earth minerals, converge on this digital megalopolis, where the main factory of Foxconn, producer of electronic goods for companies such as Microsoft, Apple and Huawei, is located. Responsibility for the socially and environmentally destructive practices hiding in open sight in the circulation of digital products in the technosphere is, in that sense, both systemic and personal.

The complex interplay between globalised cultures, non-Western ontologies, ecological realities, and technological developments, as well as the evolution of human subjectivity in the Anthropocene, were problematised in Korakrit Arunanondchai's multifaceted installation *Painting with History in a Room Filled with People with Funny Names 3* (2015). The information overload of a saturated global culture was thematised in a chaotic environment consisting of paint-splashed mannequins, expressive canvases mounted on scaffolding and the technological paraphernalia of a TV studio. At the heart of the installation was a film in which the artist, dressed in ripped jeans to symbolise the rebelliousness of youth subcultures, engages in a conversation with a drone. Epitomising the vertical perspective of technological mastery and the neo-colonial domination of peripheral territories, in this case views of Thailand's scenic islands and cityscapes, the drone is a cross-cultural figure named Chantri inspired by the Garuda bird of Hindu and Buddhist mythology. The work probed the discrepancies between Eastern and Western worldviews, or to use theorist Yuk Hui's term cosmotechnics (Hui, 2017), such as around the convergence of spirituality and machines. In other words, although everyone is intercon-

nected in the digital sphere, there are many faces of technology, depending on which culture and position one approaches it from.

The decolonisation of the digital realm, by stripping away its encoding as an anthropologically universal extension of the human body and contesting its status as a virtual space that exists independently of the materiality of physical reality, has the potential to pluralise the planetary future. The techno-futurist scenario for solving the climate crisis of the Anthropocene is revealed in contemporary art and theory as irreparably white, Western and patriarchal, as unapologetically capitalist, extractivist and neo-colonialist, and also as essentially duplicitous, diversionary and divisive. As the climate crisis places physical limits on the further development of Anthropocene modernity, cracks are emerging in the monolith of homogenising technological futurity where ruderal visions of retro-futurism, indigenous futurism and Afro-futurism are taking hold. The key insight of Afro-futurism has been described by theorist Frédéric Neyrat as the call to 'invent the future even when there is no longer any possible future' (Neyrat and Ross, 2020), a paradoxical situation facing all attempts to imagine another cosmotechnics under the conditions of 'structural futurelessness' brought by climate breakdown. Just as today it's impossible to think or speak modernity without the colonial or industrial prefix, the same will likely soon be true of the digital, with the dropping of the pretence that modern technology can be separated from its exploitative and extractivist foundations.
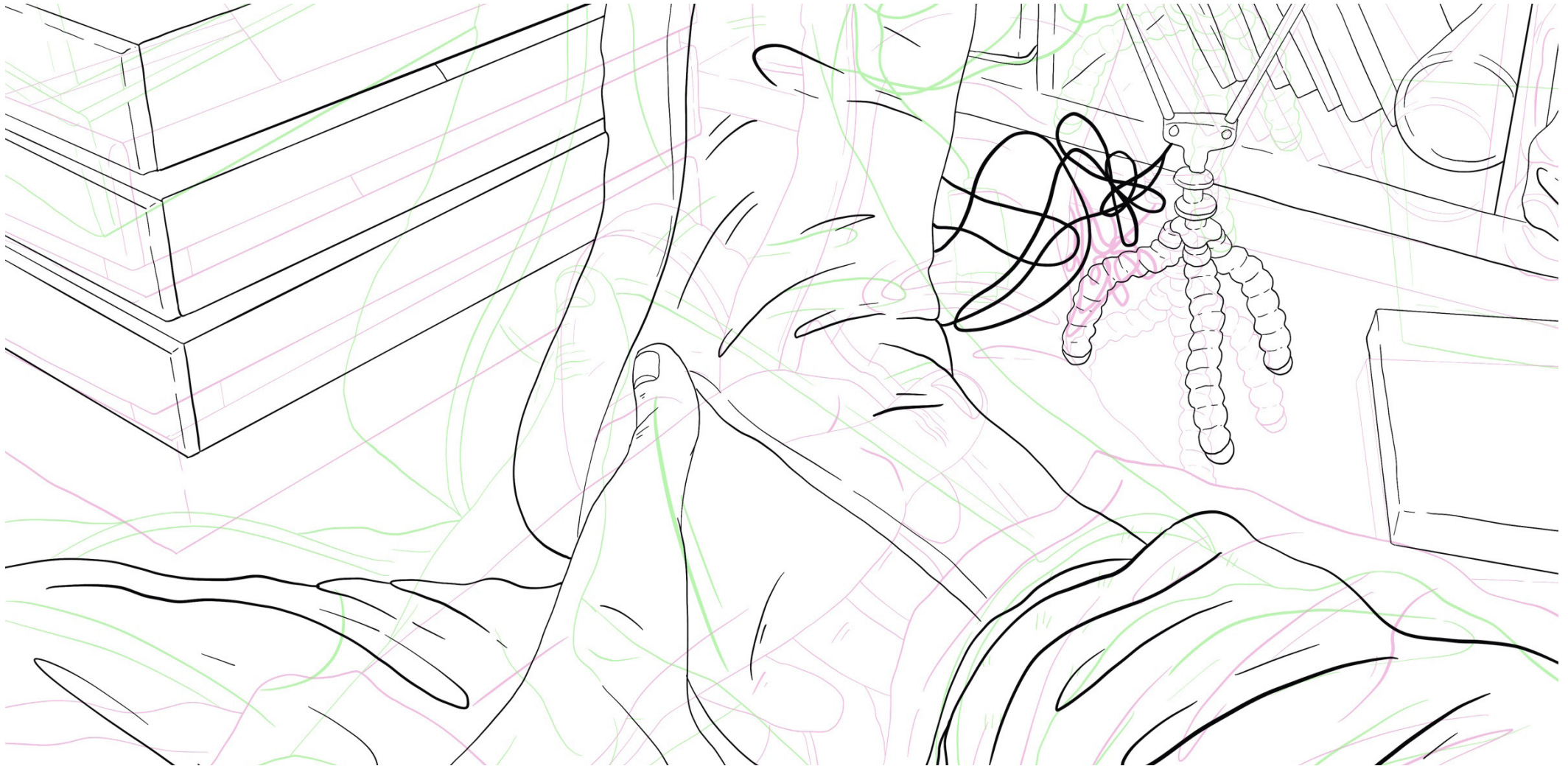
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Research Methods for Illustration: Translating an experience of embodying a space through animation and sound

Beth Blandford

The aim of *The Personal is Still Political: An Embodied Space* was to find new ways of illustrating an embodied space, that is 'the location where human experience and consciousness takes on material and spatial form' (Low, 2003). In the context of fourth wave feminism, which has defining features such as its use of internet tools, its intersectionality and how feminism relates to the Anthropocene, the range of 'experience and consciousness' as well as 'material and spatial form[s]' are vast.

One of the methods I used to explore how to illustrate an embodied space was influenced by Open Weather, a collaborative design and research project with geographer Sasha Engelmann and designer Sophie Dyer. In their DIY satellite ground station workshop—in which we captured a NOAA (National Oceanic and Atmospheric Administration) 19 weather satellite passing overhead and decoded the recording into an image—I was introduced to feminist methods of capturing satellite imagery. Open Weather finds that foregrounding their bodies as a situated technology is one way to challenge the gendered norms and codes attached to particular pieces of technology and technical practices. I wanted to explore how I could translate an embodied space using digital tools, which then led to my animated film.

Another method I was exploring was influenced by the Matrix Feminist Design Co-Operative, an architectural practice founded in 1980, and their book *Making Space: Women and the Man-Made Environment* (1984). The book includes an analysis of design bulletins from 1974 by MTP, a construction company and housing association.

The design bulletins showed data that was collected on how women and children 'aimlessly' use space by showing their path patterns, as well as time and activity charts. This data was ultimately used to influence the design of public and domestic spaces. I applied these methods of drawing using an embodied approach, that is, drawing from specific memories and observations of how I have navigated domestic and public space. I wanted to subvert the idea that we can understand a person's needs through distant observation and assumption alone. Recreating the time and activity charts allowed me to decode and translate memories in a way that recognised the nuance in my navigation of public and private spaces.

Remote Sensing symposium workshop

During the symposium, the aim of my workshop was to see how different individuals translated a specific navigation of a space through path drawing. I produced a basic floor plan of the symposium entrance and space, and participants were invited to draw both their physical and their emotional movement in the space, allowing them to consider how they felt when taking a particular path and how that influenced their drawing.

The results of this workshop were a glimpse into how we choose to translate our movement and emotions when given a specific task. Some participants used words to title their paths, others wrote further feedback or clarifications to better communicate their thinking. Some paths simply showed direct/basic movements, whilst others were adorned with symbols or were otherwise chaotic, showing numerous types of line drawings that depicted many different emotions or types of movement. Of all the paths drawn, 75% included more than one type of line drawing to depict movement, and 28% included a deliberate scribble: a series of small pen movements in one space to communicate spending an extended amount of time in one place. Overall, each response was unique and the way a person has used a space cannot be determined through the analysis of drawing alone, but it can be used in series of methods of translation.
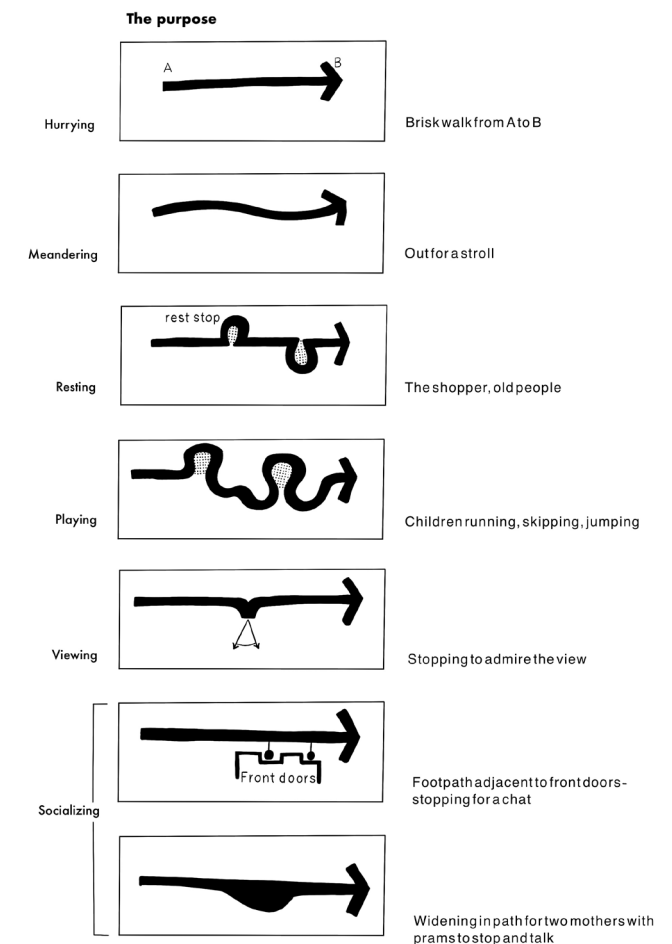
The purpose

Hurrying — Brisk walk from A to B

Meandering — Out for a stroll

Resting — The shopper, old people

Playing — Children running, skipping, jumping

Viewing — Stopping to admire the view

Socializing — Footpath adjacent to front doors - stopping for a chat

Widening in path for two mothers with prams to stop and talk

Fig 2: A re-rendering of 'Meandering path patterns' from *Housing the Family* (1974) in *Making Space: Women and the Man Made Environment* (Matrix, 1984)
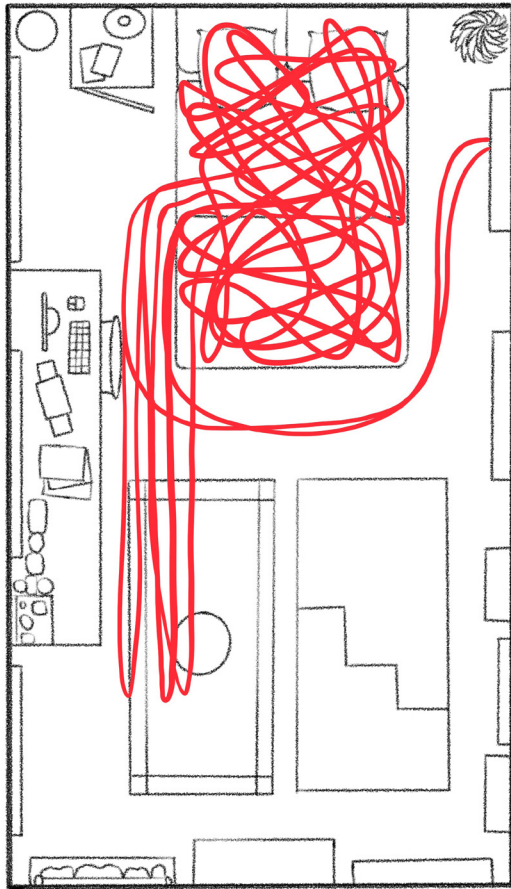
Restless Night

Fig 3: Studies of the paths I have taken in my room (Blandford, 2021)
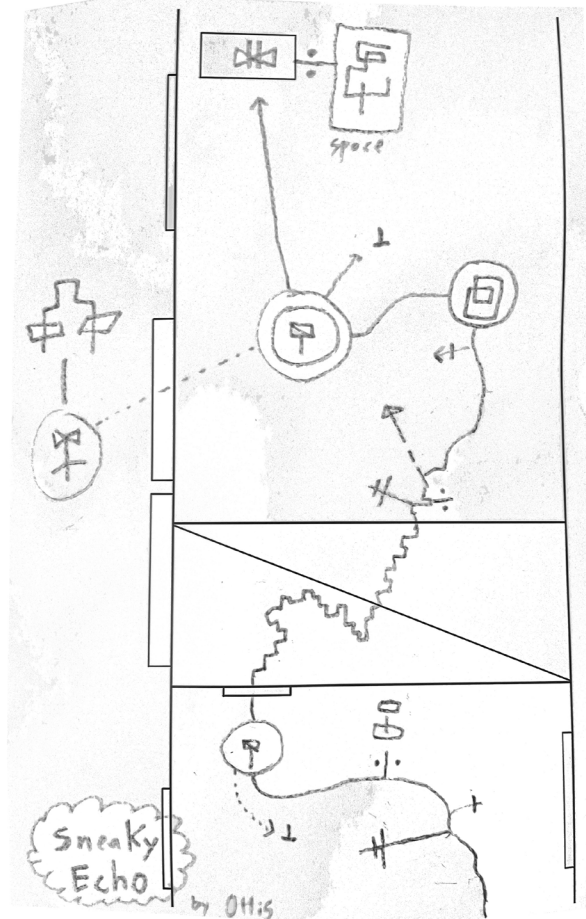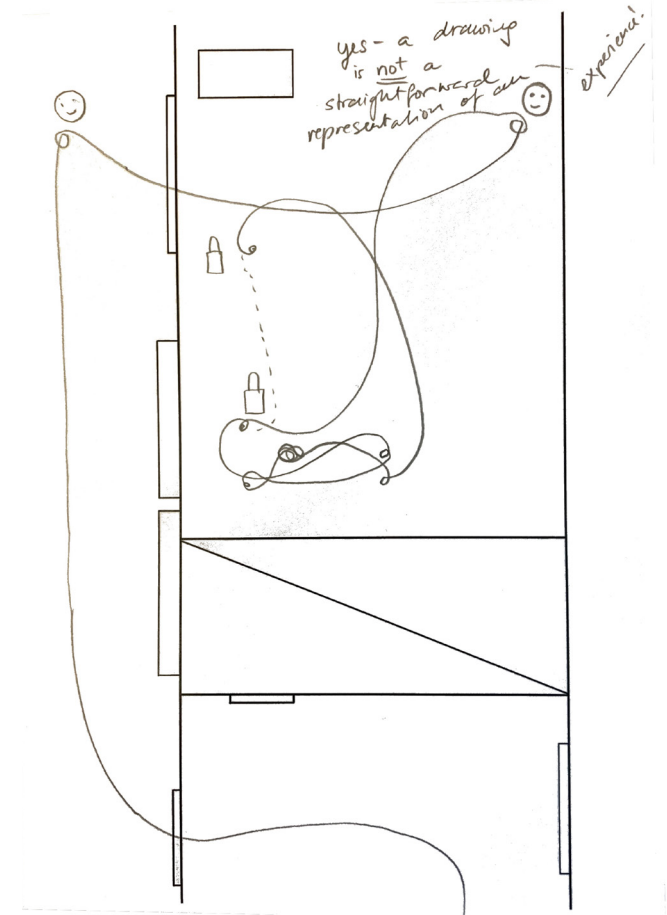

Fig 4: A selection of responses by participants of the Remote Sensing Symposium workshop (2022)

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multi-modality: sensory ethnography in lockdown.

Angela M Bowskill, MA Photography
Inter-Disciplinary School of Digital Arts (SODA), Manchester, UK

Artistic research is as important as the work that you produce — it is the centre of your work.
Dr Yan Wang Preston (SODA Workshop & Tutorial, 2022)

The River Lune has always been a familiar presence throughout my life. Growing up near the river, as children we played in its shallow waters. Paddling and catching tadpoles, swimming and picnicking, with the annual summer village fetes at its banks.

My relationship with the River Lune grew during lockdown. Unable to meet family and friends, I turned to this permanently running stream of water and its freshwater wildlife. As a response to the pandemic, and a general ban on socialising, I naturally sought a more tactile interaction with my surroundings.

Using sensory ethnographic methodologies enabled me to move beyond what was all too familiar. I collected river sediment along its course at four different points — starting from the source at Newbiggin-on-Lune, to the mouth of the estuary, south of Lancaster — originally to colour map the river's course, from the almost black muddy peat to the pale, soft sand where the river flows towards the sea. I discovered that the colour varied only slightly in the different sediments, but it was the content of the samples that ranged from very large stoney sediment from the source becks, to the fine, soft sand near the mouth of the estuary.

Innovative methods (of sensory ethnography) are needed ... in order to pay attention to the things that cannot be expressed in spoken words.
Dr. Dylan Yamada-Rice, *Experimental Research Methods* (2018)

Fig 1. We belong to the river and the river belongs to us.

After drying the samples, I masked a test sample with the four different sediments on antique mirrored glass. The clear glass resin gave the sediment samples a permanent 'wet' look. From the test tile I was able to see the effects of the different sediments on the tile.

The resin liquid solidifies quickly but after 24 hours it is completely hardened, with the stones and roots embedded in the resin. Because the sample of the sand sediment was uneven on the sample, it was difficult to control and to get an even covering, I made a note to use a sieve for the full tile.

Figs 2a & 2b. Collected samples from the River Lune's source at Newbiggin-on-Lune (stoney), the shallow river at Fairmile (smaller, finer stones), the lowlands at Gressingham (roots and rotted grasses); and near the mouth of the estuary (sandy), south of Lancaster.

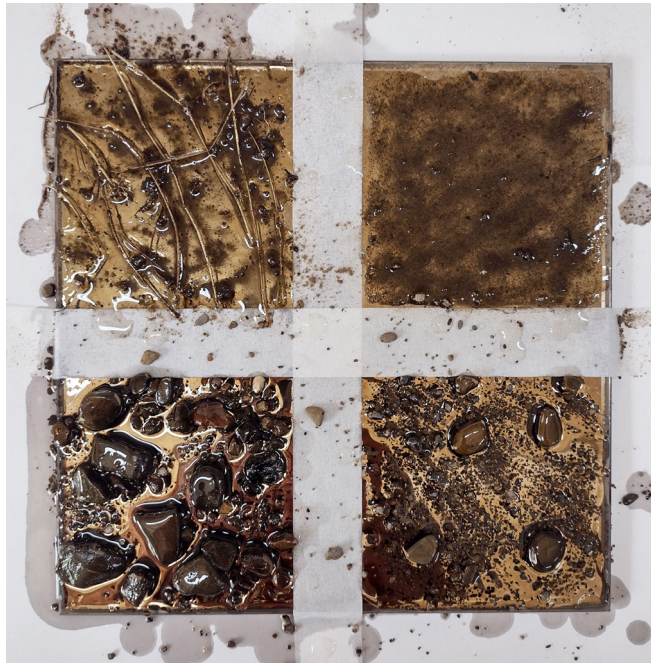Fig 3. Preparing the clear glass resin with the thinner and activator.

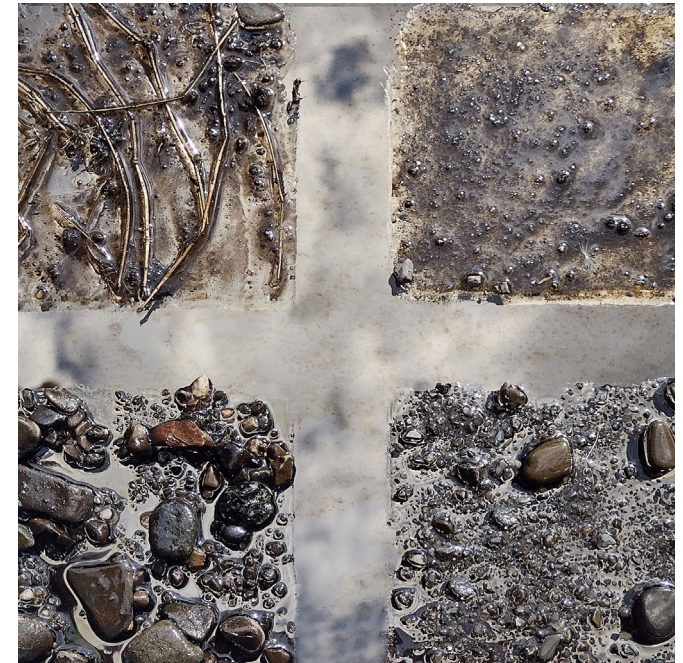Fig 4. Testing the four samples with the active resin.

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Fig 5. The four samples solidified and dried with the clear glass resin.

Fig 6. The first sample of large stoney sediment taken at source at Newbiggin-on-Lune.
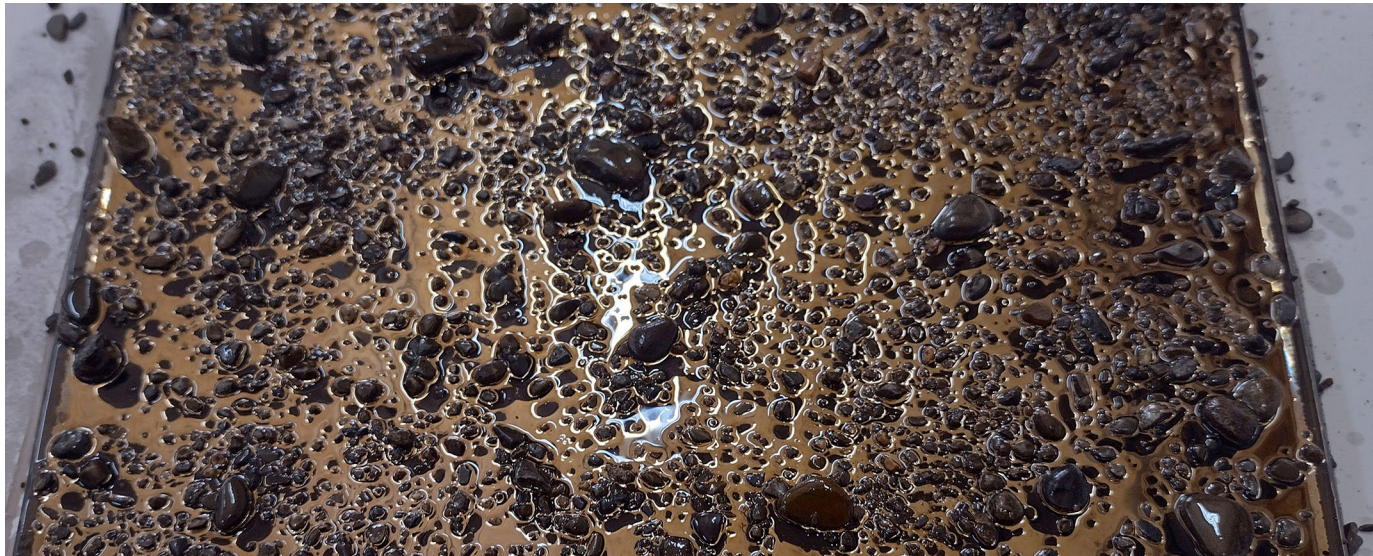

Fig 7. The second sample of sediment taken from Fairmile in shallow river with stones smaller than the source sediment.

The connecting sinew between knowledge and place is experience
Yi-Fu Tuan, *Space and Place, The Perspective of Experience* (1977)

What is in our power is to maintain availability and openness to our material surroundings … Articulating beauty in everyday life was proven a practice that sustains sensory attentiveness, openness and imaginative interest towards the material world … That is, aesthetic relating to surroundings was proven to cultivate and sustain further aesthetic relating to surroundings …
Pauliina Rautio, 'Children who carry stones in their pockets: an autotelic material practices in everyday life', *Children's Geographies* (2013)

Spending time and effort in carrying stones around without knowing or caring why one does this is an act of allocating time and space for the world to happen, of developing an orientation of curiousness and an eye for serendipity.
Pauliina Rautio, *Children's Geographies* (2013)

Fig 8. The third sample taken from the lowlands at Gressingham with plant and grass roots being dominant in this sample.

Fig 9. The fourth sample taken from near the mouth of the estuary, devoid of roots and stones.

Fig 10. River Lune sediments solidified in resin, photographed underwater at the source.

The more interdependent and connected we realize being, the more possibilities open up for us.
Pauliina Rautio, 'Children who carry stones in their pockets: an autotelic material practices in everyday life', *Children's Geographies* (2013)

To ask what is, and to learn practices of investigating that which is, staying tuned to encounters that reveal some of it, to keep multiplying one's possibilities in the grand rhizome of life.
Hillevi Lenz Taguchi, *Global Studies of Childhood* (2011)

Having collected samples of the different sediments from the Lune's riverbed, I became more objective scientifically. It was a detachment from my emotions of the past, to look closely at the beauty of the river in new and unfamiliar ways.

I photographed the sediments at the point where I collected them: underwater. Doing this in sunshine highlighted the sediment against the 3-D mirrored tile. For comparison they were also photographed in the studio under controlled daylight. I have gained a deeper knowledge of the River Lune, and abstracted it — something I would not have been able to do without exploring new sensory and multi-modality methods.

Fig 11. River Lune sediments from the lowlands, photographed half underwater in the daylight studio under controlled lighting.

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Research Methods for Illustration: Translation from a personal, invisible spatial perception to a visible space through video and animation

Zilan Zhoa

Figure 1: The visual representations of behaviours within the space.

Figure 3: Physical behaviours induced by the space.

Figure 4: The visual representations of behaviours within the space.

This project, *Falsifying the City*, is about building a new awareness of urban spaces by creatively remaking them. The idea of 'remaking the space' is a form of translation. Based on ideas of the dérive, or 'drifting' in urban space, I improvised movements inspired by a certain environments, translating the form of space into the form of the body. The process is like an experiment: at the beginning, I classified my movements by the type of physical behaviour, such as run, lie down, jump, etc. In the following steps, I collaged certain types of behaviour into spaces where they would never happen — running on a building façade, for example — and then playing with the graphic forms and colours. I mapped these experimental behaviours into one image, transforming the way my body occupies visible and invisible spaces into imaginary ones.
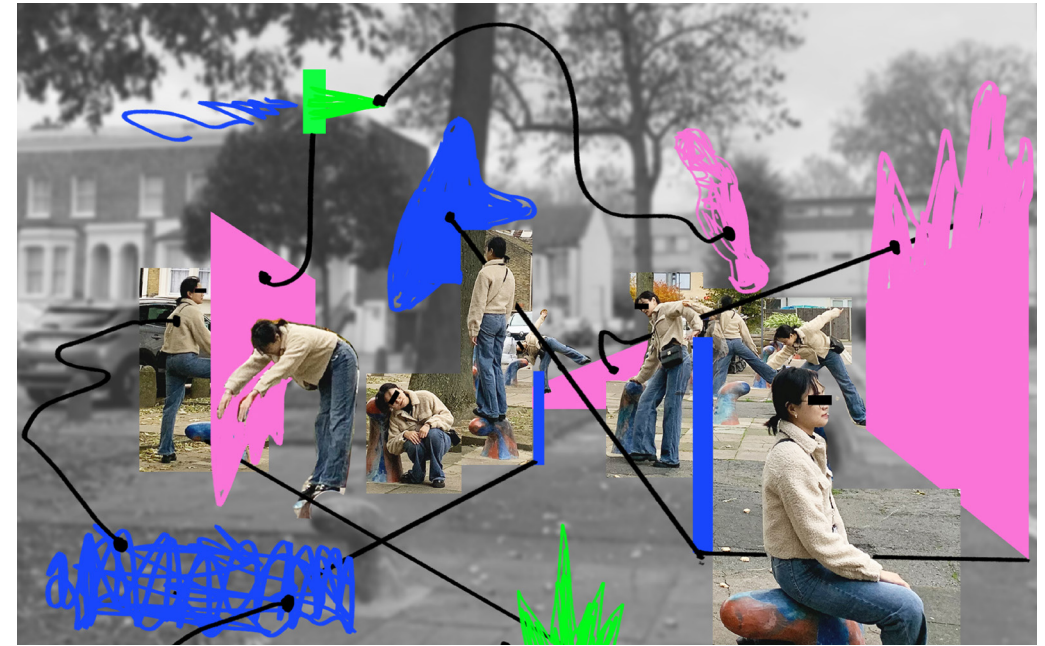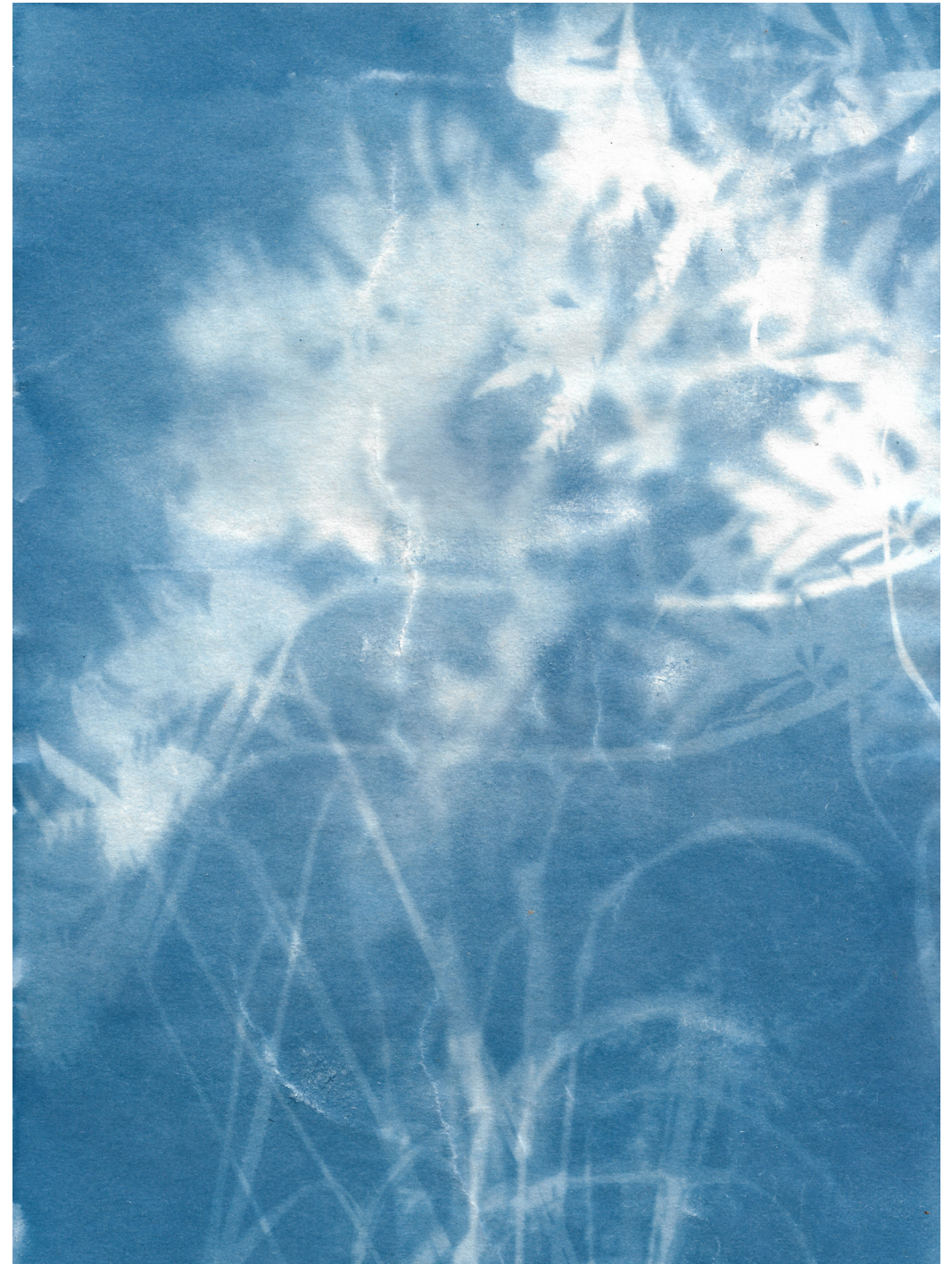
I used Adobe Aero to create the visuals that were achieved through several transformative and translative methods, resulting in a space that has been changed by imagined possibilities.

**Research Methods for Illustration:
Translation as a form of
transcription that captures
momentary experiences and
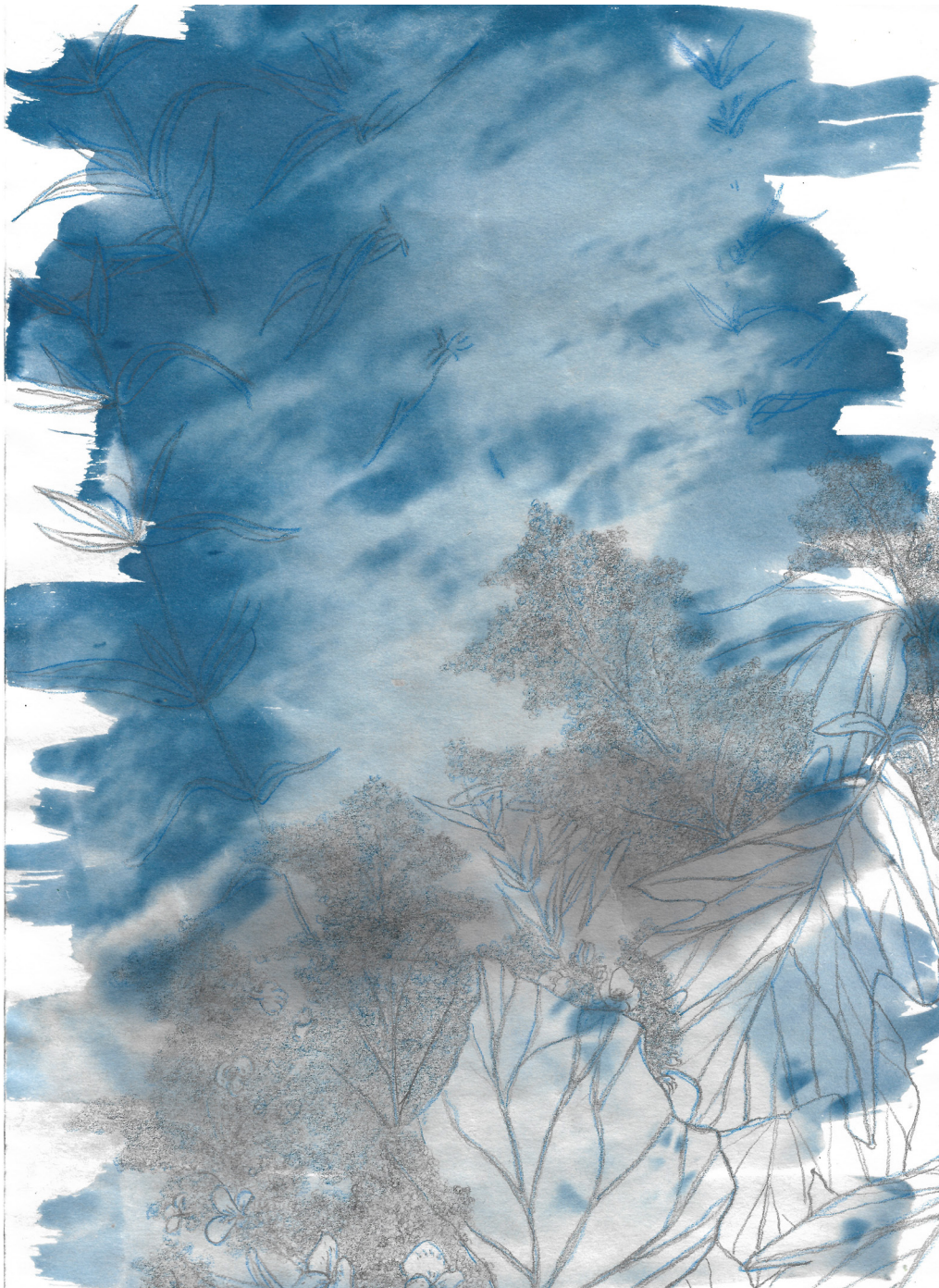makes them into tangible
memories**

Yuchen Bian

For *Parks of My Own*, I recorded the events — large and small — that I encountered in a park, which came together to form my memory of that place. I find it fascinating that different people have different perceptions of the same place. In this way, my memories of the park are very private, can I say that I 'possess' the park in my memory, can I call the park 'mine'? But with 'remembering' there is also 'forgetting'. I visited a park for the first time recently, but then, when I stood in a specific spot, I realised that I had been there before. Is there anything that is left behind even after forgetting? Can I consciously immortalise the memories I want to keep? In my research, a very important thing is transcription, which I use as a medium. In the process of collecting my memories, by using the method of cyanotype, my encounter in the park was transcribed and frozen, and the sun was the witness. Knowing that the memories of this purposeful journey would be preserved in some form, somehow gave me some peace of mind that I didn't have to fight the invisible battle of forgetfulness within my brain. My experience was translated into a new and fixed form. After that, I further transcribed more memories that were not captured by the sun onto the print.
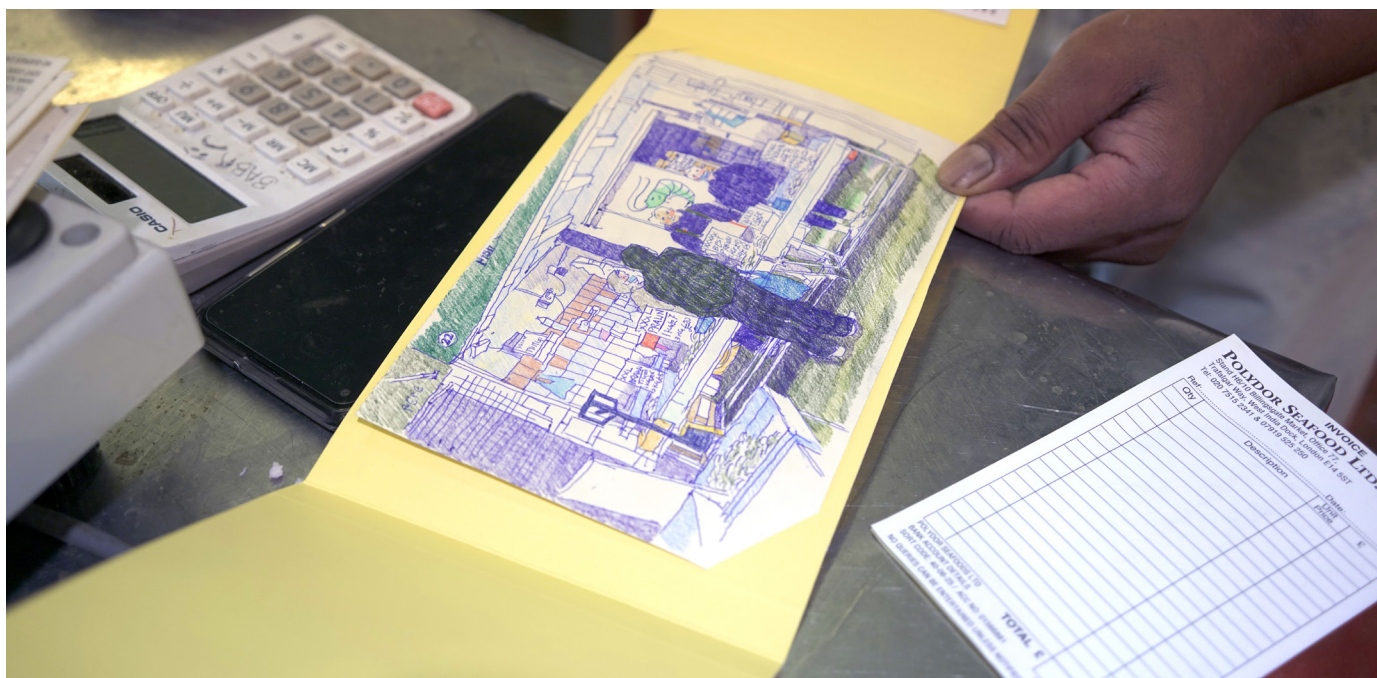
listening as a remote space.

barter archive: billingsgate fish market.

Pat Wingshan Wong

Barter Archive (2019–ongoing) is a research project centring on the Billingsgate Fish Market in Canary Wharf, London, which will relocate to Dagenham, an industrial suburb, in 2028. It has now become vital to archive the place and the community's stories.

In this project, I transformed my passive sketching process into an active and socially engaged practice that approaches the community and invites their participation and contribution. The archive engages with the idea of barter physically and symbolically. It includes memorable objects that belong to the fishmongers and were temporarily 'bartered' for by using my observational drawings of the happenings in the space as a currency, as well as making videos that document the stories and memories of the people in the market. The archive incorporates community voices into the archiving process through transparent negotiation and mutual trust. By using this bartering process, I have investigated the public and personal significance of the space and how it is effected by the rapid urban development of Southeast London.

Barter Archive opens-up the idea of authorship to include collecting stories. I created records for a community who may not otherwise engage in archiving, adopting a bottom-up and grassroots method of re-examining history. This approach is the opposite of the expertise and institutional top-down domination of historical records and challenges how value is assigned through culture and society (Wong, 2021b).

The project started before the COVID-19 pandemic began, in late 2019, and continued throughout the whole period. Before 2020, the market was full of activities of trade and bargaining, and the market was crowded and covered by sounds of trollies and conversations. Since then, the atmosphere of the fish market has drastically changed, with much fewer customers. This triggered a shift in my intentions: rather than only constructing a virtual

community story archive, I would create space for them to spread their voices to a wider public.

During my research process, I immersed myself in sketching the Billingsgate Fish Market at five o'clock in the morning, from Tuesday to Saturday, thus opening up dialogue with the fishmongers. I recorded and documented the fishmongers' stories and witnessed their strong community bonding.

After I bartered my drawings for the fishmongers' belongings, I conducted a 3D-scanning process to record the objects. This provides an innovative perspective from conventional institutionalised archives, which prioritise tangible objects over ephemeral stories and effects. The value of the 3D scanned object is that they are accessible to the public online by Instagram; the public audiences become the archivers by interacting with the updated posts, and the archive becomes a collaborative collection.

Barter archive is appointed a second role as a remote space to invite the public to visit the market. By transforming the physical fish market to a virtual space, the archive provide access to more diverse audiences through the website. Geographical concerns and specific situations do not limit this virtual archive; the public can reach the market community online. The audience can use the hashtag function in the archive to search for news and information via the categorising function. The archive also reveals the complex layers between every community relationship and how each story overlays another.

As the project expanded online, I discovered many interesting layers and more of their personalities and lives within the market. Big Greg, a monger who is also an influencer in the market, promotes the shops in the market on his social media to attract the public and to support the community. His posts gain thousands of followers, which have significant impact on promoting the market (Wong, 2021a). As part of a barter exchange, he

inspired me to collaborate with him to shoot a Barter Archive advertising video in the market.

As a site-specific project, the priority has been to keep visiting the site and participating with the community physically. The direct interaction builds-up mutual trust for further in-depth research. During the pandemic, it became increasingly difficult to conduct site visits, leading to some alternative ways to research. Barter Archive has an online social platform on Instagram, which is used to gather community members and spread news — it has also become a conversational tool for communicating with fishmongers online. We will talk about when I will come to the market, for example, and they will also see the project updates over time. When this community project works remotely, it expands my practice from on-site to off-site, and more audiences from the public or inside the fish market can engage more effectively. This also becomes a testing ground and experiment for the community-led artist in experiencing to bring the community to daily life without physical restrictions.

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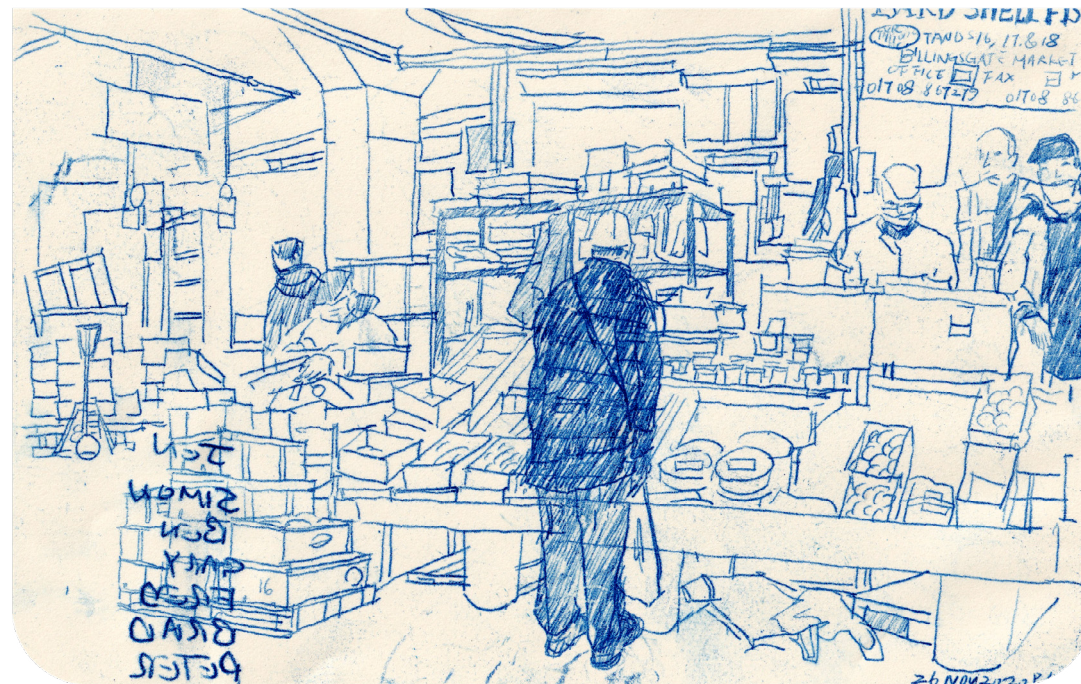
futuress:
what's in a name?

Futuress

What's in a name? The future plus the female suffix, the future multiplied, the future as many and as multiple as us, who make *Futuress*!

Futuress: where feminism, design, and politics meet. We are a hybrid between a learning community and a publishing platform building solidarities across scales.

We look ahead, but we are also deeply rooted in the past. Our name is a nod to the famous 'The future is female' slogan, which appeared in the mid-1970s in various merchandise from Labyris Books, New York City's first women's bookstore. The slogan demanded a future beyond patriarchy. It was a collective message, uniting the emerging feminist and lesbian movements. The baton has been passed on, and *Futuress* strives to serve a similarly uniting purpose, one for our fourth wave feminist movement, which is decidedly intersectional and queer, and uses the tools of digital communication to mobilise and disseminate across difference!

* the asterisk

What's in a symbol? In the early days of the internet, the asterisk functioned as a truncation mechanism: placing it after a word would retrieve results containing any words that began with that prefix. The principle has since been adopted by the queer community. After the word trans*, the asterisk indicates an umbrella term encompassing the wider community of people who don't neatly fit into the gender binary, including those who identify as two-spirit, genderqueer, non-binary/gender non-conforming, agender, or gender fluid—just to name a few possibilities!
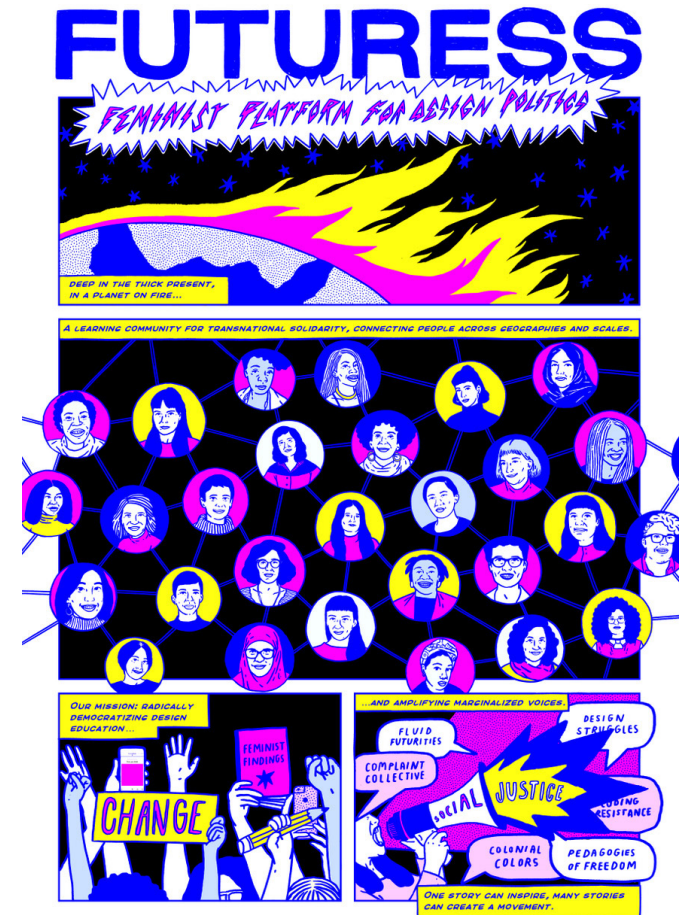
The asterisk modifies the meaning of transitivity by refusing to situate transition in relation to a fixed or final destination. According to queer theorist Jack Halberstam, it

... holds off the certainty of diagnosis, it keeps at bay any sense of knowing in advance what the meaning of this or that gender variant form may be, and perhaps most importantly, it makes trans* people the authors of their own categorizations.

The asterisk has since been adopted as the Gendersternchen—German for gender star—a nonstandard typographic symbol used to render this highly binary Indo-European language more gender neutral. In 2020, the Gendersternchen was voted one of the best '10 German Words of the Year' by *Gesellschaft für deutsche Sprache*. For all of those reasons, the asterisk was chosen to represent Futuress. But the symbol does something else too: it signals our passion for typography and for rendering type-design— perhaps one of the biggest boy's clubs in the design sphere—more diverse and inclusive. All the fonts used by *Futuress* are designed by womxn and womxn-identifying people.

The prefix De-

What's in a prefix? In English, 'de' is added to the beginning of verbs, nouns and adjectives to denote removal and reversal, infusing those terms with their opposite meaning. To 'decolonise' is to undo colonialism. To "depatriarchalise" is to counter remove patriarchy. To 'deprecarise' is to reverse precarity. But 'de' also alludes to the phonetic sound of the letter D, how sometimes the word design is abbreviated in the field. The word 'design' comes from the Latin *designare*, meaning to draw

a plan. In English, the expression 'by design' means intentionally, something that is done as a result of a plan. Design and its thinking have historically been complicit with multiple structural systems of oppression— serving to concretise, perpetuate and disseminate power and privilege. Contemporary struggles for social, spatial and environmental justice are efforts to counter undo these historical systems of oppression which exist in our world *by design*.

Futuress is run by the non-profit association depatriachise design. Our mission is to: 1) radically democratise the access to design education and discourse; 2) empower and amplify the voices of womxn, BIPoC, LGBTQIA+, people with disabilities, migrants, refugees, and others from marginalised backgrounds.

depatriarchise design

We continue @depatriarchisedesign call-for-action, against the seemingly apolitical, but deeply problematic design discipline. With our ever-growing learning community, we carry on with the mission to democratise design education and amplify marginalised voices.

depatriarchise design and Futuress have been supporting each other in being the killjoys of design. Knowing that feminist work is, first and foremost, a collective endeavour, in October 2021, we permanently joined forces to connect and amplify intersecting communities.

Ever since, to echo the words of adrienne maree brown, we have been striving towards 'shaping the future we long for and have not yet experienced.'

Activism   A-c-t-i-v-i-s-m

'We practice activism when we care for one another, we practice activism when we share intimate parts of ourselves with one another', Lucas LaRochelle. At Futuress, we strive towards radical transformation of design, education and publishing. Learning *from* and *with* feminist activists who came before us, and imagining those who will continue after we are gone, we engage in a transgenerational endeavour of building queer and feminist worlds, to echo Sara Ahmed's words. Sharing urgent stories coming from different corners of our community and making spaces for those who couldn't find themselves within design schools and institutions —this is the core of our daily activism. This includes the everyday labour of sending emails, coordinating phone calls, answering slack messages, paying invoices of our collaborators, and more so that we can maintain, connect and care for our community. Echoing Lucas La Rochelle's words 'Activism is not always a process of antagonism .... Modes of soft activism, modes of sharing, and being vulnerable also have immense power.'

Liberation   L-i-b-e-r-a-t-i-o-n

Autonomously distributing and controlling messages has always been crucial for any activist movement struggling for collective liberation. Ritu Menon, co-founder of the Indian publisher Kali for Women, pointed out how every time there's an uprising of the women's movement, there's also an uprising of the feminist press:

North and South, but especially South, women have spontaneously, consciously, deliberately, through handbills, leaflets, pamphlets, source

books, magazines and periodicals, theoretical debates, books and journals, created another world, and commented on the world they are in. (Ritu Menon and Urvashi Butalia)

It was the case in the 1970s, when the Women in Print movement ignited an international network of feminists through journals, magazines and newsletters. In her book *Liberation in Print*, scholar Agatha Beins stresses that these periodicals circulated information, propagated connections and, most of all, created an imagined community of feminists. But this is also the case in our current global feminist moment, which has seen *Futuress* emerge through multiple modes of digital communication. And the very origin of our model—combining learning and publishing— stems from a remote workshop on histories of feminist publishing.

In 2020, the first lockdown sparked by COVID-19 brought together twenty-six womxn and non-binary people to form the L.i.P. Collective, short for Liberation in Print. While isolated at our respective kitchen tables and bedroom desks, we came together through the beams of light from our computer screens to dive deep into the past, collaboratively uncovering little-known stories around feminist print periodicals that came before us. Our stories were compiled into the colourful zine *Feminist Findings* and accompanied a wunderkammer exhibition, first shown in Berlin and since reimagined in Seoul! Meanwhile, all of the L.i.P. stories have been published on our website and are freely accessible to anyone.

Learning Community

'Without community, there is no liberation," said the ground-breaking writer Audre Lorde, while reminding us that community must not mean the shedding of differences, "nor the pathetic pretence that these differences do not exist.'

At *Futuress*, we use multiple digital modes of digital communication to build community across differences. We aim to serve as a support network for individuals asking difficult questions, and who are seeking a safer space to think, discuss, and work. Today, we are an incredibly diverse group, with people from various backgrounds and cultures scattered throughout the various continents and corners of the planet.

We champion values of solidarity, generosity and collaboration, and hope to work through and across our differences, becoming enriched by our differences.

Complaint Collective

Complaint Collective is a line of articles on *Futuress*, examining abuse and discrimination in design institutions and education. It is a nod to the ever-inspiring Sara Ahmed. So far, we've covered stories about Switzerland, France, Germany and the Netherlands—but, as Sara Ahmed says, 'We sound louder when we are heard together.' So, please join our growing band of killjoys by pitching ideas around

Research Methods for Illustration: Translation through a series of reinterpretations to make family memories my own

Marília Arruda Pereira

Being a translator is the way that I position myself as an illustrator. For example, in my project *Janelas de tempo* (*Time Windows*), using various acts of translation, I explore a collection of my family's old photo albums. I think that translating a family memory that I was not a part of allows me to place myself in it, because a process of translation is always one of reinterpretation. The first step in my practical research was to make collages using the photos; reconfiguring through movement and reassembling the elements of a photo, rewording — or re-imaging — what it is communicating.
The next step was to look at that collage and to try and understand what was being said and not being said in the image. Other people's memories awakened images from my own, which I then used to write a poem. In a very literal act of translation, this poem was written in both Portuguese and English. Lastly, collage and poem came together as references for a drawing that, in itself, is a way of remaking the original picture. I went back and forth in translating from image to text, text to image. Text allows me to say things that I couldn't say with images, and vice versa, and so I discover things that I didn't even know I was trying to say. Hence, my process was comprised of a series of translations that 'again-make' (Kate Briggs, *This Little Art*, 2017) my family's history and memories, adding my own presence and experience.

Research Methods for Illustration: Translating a sense of emotional remoteness from history through the tangible process of layering visuals to construct an image

Zitian Li

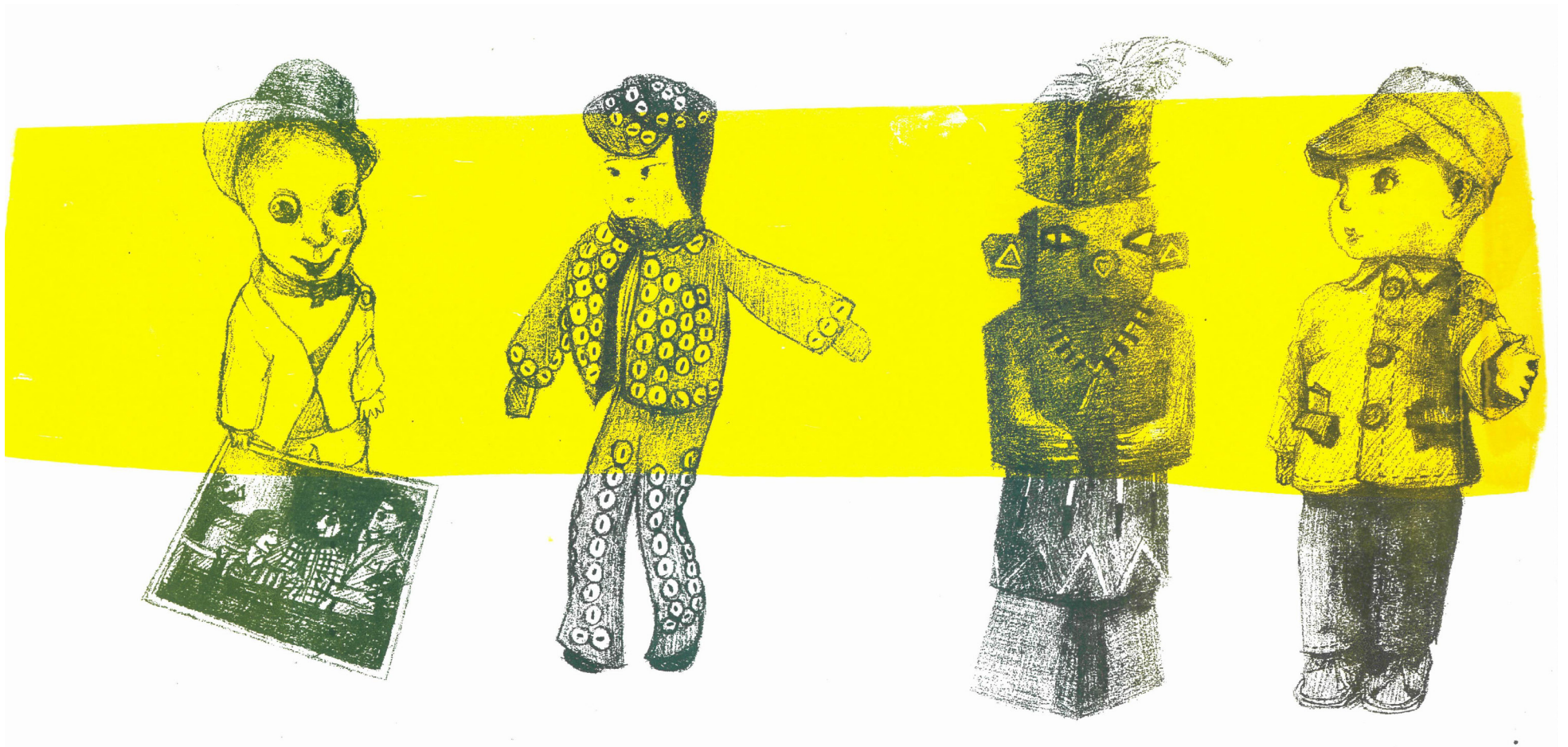Figure 3: Screen-printing with hand-drawn texture and different hues.

Figure 1 and 2: Layers of the screen-print hues and textures in progress.

Figure 3: Screen-printing with hand-drawn texture and different hues.

In this project, *Toys Museum*, it is an intangible and abstract experience that spans time and space that I want to understand and record through visual forms of translation. It is also about the texture and light of time. I was inspired by an article I read in *National Geographic* that collected lullabies from mothers who sing to their young babies. In the Australian aboriginal world, there exists a kind of 'song cycle' — an oral/story-telling tradition from a long, long time ago — that passes the words down from generation to generation, linking the past to the present, and each person in the community. This story inspired me to think about the relationship between the past and a contemporary moment, and tangible and intangible forms of communication, which can also be inherited. In these process images from Toys Museum, I have tried to translate a sense of emotional remoteness from history — or an unattainable past — using a screen-printing process that allows different layers to represent time by varying hues, which are further adapted by texture. It is the unique texture and light of old things — such as toys — that records time, I think.

imagination as a

remote

space.

sheepology: nonhuman encounters

Karen Piddington

As part of my practice-based PhD studies at Chelsea College of Arts, I use film, sound, sculpture, and drawing as a speculative form of enquiry into notions of animality and 'becoming-animal', to explore what new multispecies relationships might be possible. I am also a 'lookerer': a volunteer assistant shepherd.

Lookering

Sheep and ponies graze on a number of important conservation and ancient chalk downland sites in and around Brighton and Hove — where I live. This forms part of a conservation programme run by Brighton and Hove City Council in a bid to reclaim and rewild overgrown land and create perfect chalk downland habitat to support wildlife diversity and a return of native plants and insects.

The COVID-19 global pandemic that was first reported at the end of 2019 saw human activity thwarted, worldwide. Dubbed the 'anthropause' (Rutz, Loretto, Bates et al, 2020), this unique period with its absence of human intervention and interaction led to an increase in wildlife activity, with nonhuman animals 'reclaiming' spaces and venturing freely into towns, cities, and waterways.

This presented me with a unique opportunity to intensify my lookering activities with the aim of developing my understanding of multispecies interconnectedness and its place within my practice.

The word 'lookerer' is a Sussex dialect term for someone who looks after livestock in the fields. The lookerer's role is to check on the wellbeing and safety of sheep and ponies, and to report any signs of ill health, such as unusual behaviour, weight loss, runny eyes or noses, and lameness; check troughs and bowsers for a water supply; ensure fences and gates are secure and any signage is in place.

Figure 1: Birdsfoot Trefoil photographed in a sheep field.

Figure 2: Gate and sheep signage at Benfield Nature Reserve, Hove, East Sussex.

The sheep temporarily dwell in these spaces —
it is a transient set-up. Once the long grass, brambles,
and thorn bushes are consumed, their work is done
— they are moved on to the next reserve.In 2022,
200 sheep were grazing a large field next to a busy
road outside Brighton and Hove. Except for during
the COVID-19 lockdowns in the UK, there is a
constant drone of traffic, drowning out natural sounds.

Lookering as art practice

I take-up residency in the landscape, seeking
encounters and alliances with nonhuman species.
I ease myself into these paradoxical spaces and
into close proximity with the surrounding sheep
(Herdwicks and Derbyshire Gritstones breeds).
This takes time. Sheep are prey animals, which
means they stay alert and aware of danger. They
create a 'flight zone', or space which they place
between themselves and any potential threats,
such as humans. They keep their distance. I attune
myself to their perceptions and temporality, as
they sense and attune to my presence.

     I find a position of sameness with the sheep.
I shape shift, transforming my scale; crouch down.
It's a process of transformation — casting off my
humaness. I morph into the environment, into the
flock, becoming invisible. It's an instinctive behaviour,
one that dwells somewhere deep in a sense of
knowing — of animality. Intuitively, I know that to
become landscape or sheep, I first must become
invisible to gain the trust of the flock.

     Once I am sufficiently invisible, the sheep
settle. I can watch them closely. What is this
perception of the nonhuman other? I examine their
bodies, their behaviour and movements, the twitches,
postures, texture of their fleece. I study their line of
vision, their focus; the sounds they hear; the odours
they smell. It's a sensory mutation and one that
broadens my senses — I'm far more aware of the

Figure 3: Aerial shot of a sheep field at Benfield Nature Reserve, Hove, East Sussex.

terrain and of natural elements: air, water, soil, plant
life. These wash out the human, rationally constructed
world and open up a multiplicity of other beings,
all interwoven and sharing the space. It's a process
of 'deterritorialisation'. Philosopher Giles Deleuze
and psychoanalyst Felix Guattari refer to 'deterritori-
alisation' or 'line of flight' as the point at which
'becoming-animal' takes place, the point at which
there's a movement away from the subject, until
'there isn't a subject; there are only collective
assemblages' (Deleuze and Guattari, 1987, p.35).

Figures 4: Electrical supply to fencing and measure for electrical current.

'Becoming-animal'

'Becoming-animal' is a concept devised by Deleuze and Guattari and is discussed at length in their book *A Thousand Plateaus* (2004), and may be thought of as a process or method that 'replaces subjectivity' (Deleuze and Guattari, 1987, p. 35). 'Becoming-animal' offers a mode of escape from binary thinking and fixed identities. It's a movement from major to minor; from molar to molecular; from unity to complexity; a movement that is rhizomatic and nebulous — always in flight rather than settled; from organisation to destabilisation. In art, 'becoming-animal' presents a creative opportunity for traversing certain self-centred conceptions and has gained in popularity in postmodern discourse on the nonhuman animal. However, today's artists are moving beyond the Deleuzian and Guattarian framework, particularly now as concerns regarding human impact on ecosystems and biodiversity intensify.

Sheepology: Nonhuman Encounters film — intention

Moving slowly around the space without drawing attention to myself, I use a Sony a6400 camera (switched to auto) to film and photograph my co-inhabitants as they go about their daily lives. I use a digital camera for its simplicity — it's slick, fast and cheap to use and I am able to carry it around with me in the landscape.

Sheepology: Nonhuman Encounters is created from a collection of sheep clips filmed during my 'lookering' sessions in January 2022. From the outset, there was no coherent plan for the work, other than to portray an array of interconnecting spaces and perspectives within a landscape, and to shine a light on the invisible lives of the sheep, a kind of window onto the subtleties of their lives. The idea was for the viewer to be drawn into the work — into the space with the sheep.

To view *Sheepology: Nonhuman Encounters* view here: https://www.youtube.com/watch?v=Ln-2bnFKXmlI&t=4s
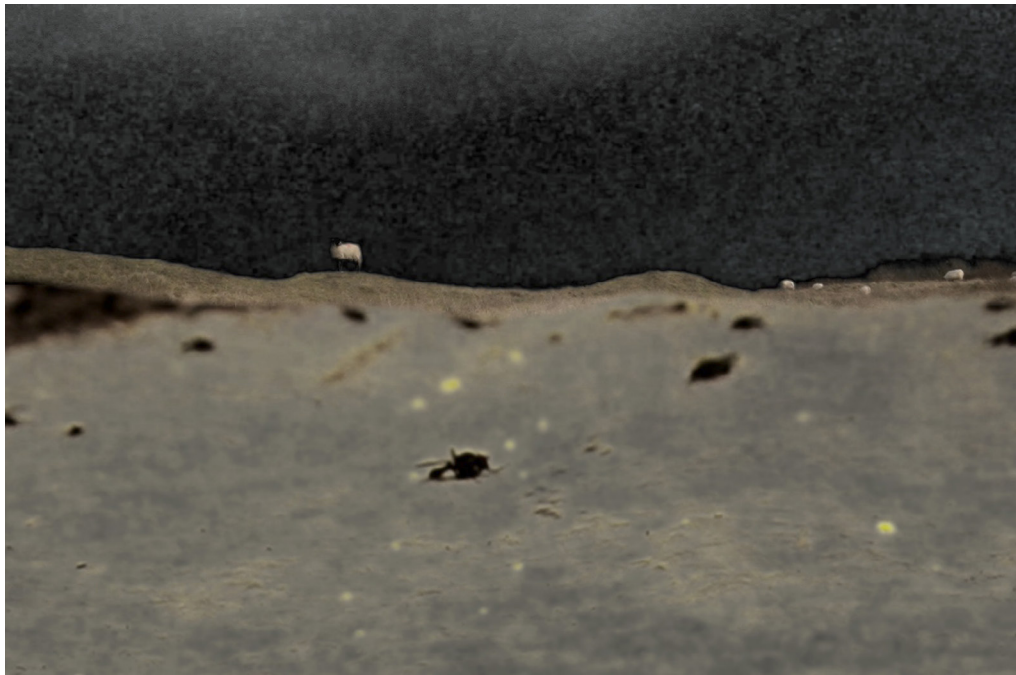
Learning

The suspension of much human activity during
the COVID-19 pandemic and associated lockdowns
seemed to bring a new focus on our engagement
with the natural world and the species we live
closest to but take for granted.

For me, the terrain within which my research
takes place expanded to include remote sensing.
By interweaving the lived experience with my studio
practice, an intense and significant space for remote
research emerged. This afforded me a broader
conception of interspecies connectedness. Here,
I could explore and experiment with video footage
and recordings to reveal a multiplicity of kinships and
realities, and *Sheepology: Nonhuman Encounters*
embodies this interspecies entanglement.

Within this space, my role became one of
mediator, facilitating the flow. As a result, the work
was given space to establish its own 'line of flight'
beyond my control. Trajectories and connections
emerged and these informed and influenced my
research and understanding.

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Research Methods for Illustration: Translation from a human's perspective to a tree's perspective through animation

Yurou (Romi) Qian
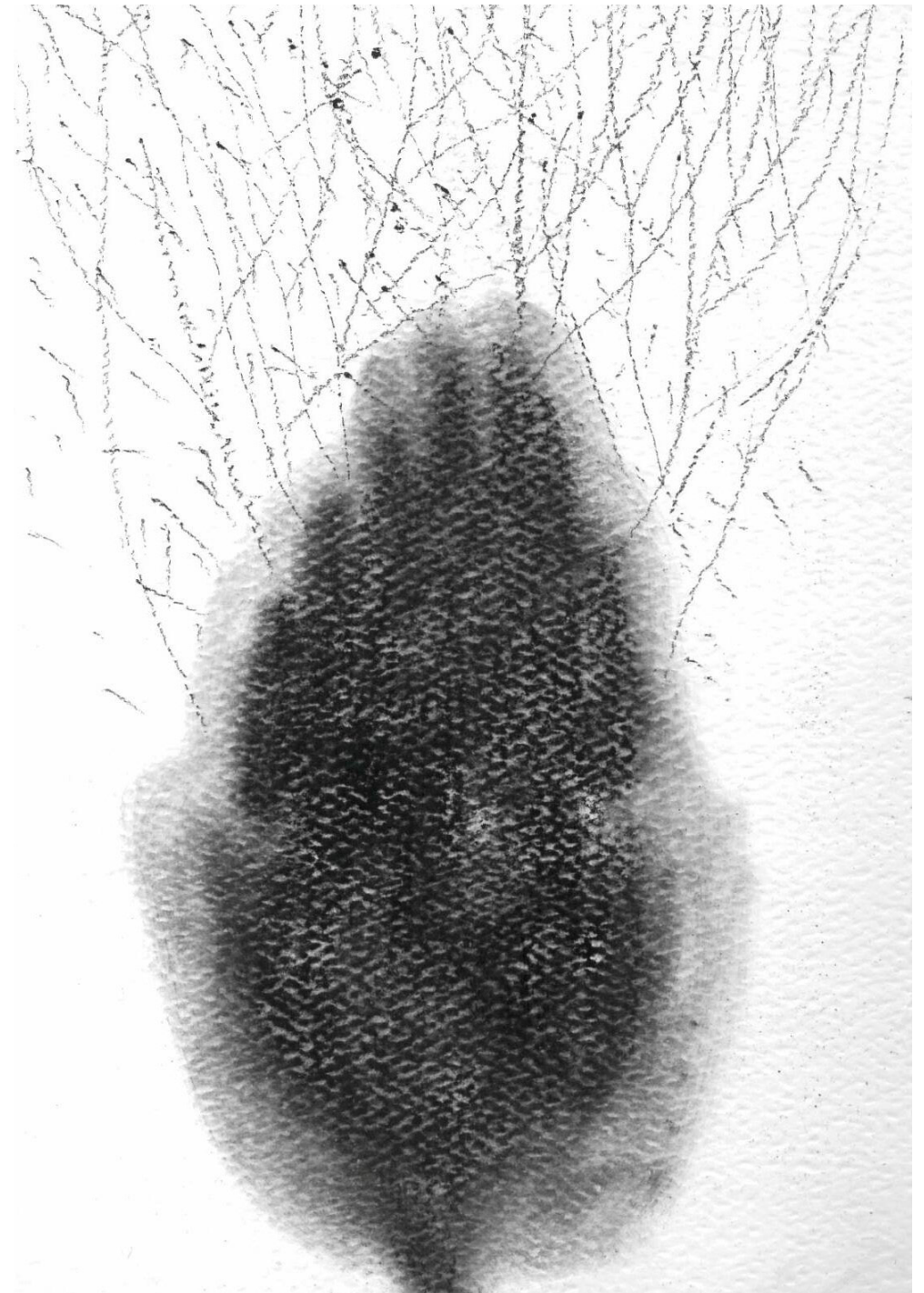
THumanREE is a frame-by-frame animation exploring the connections between trees and humans in an urban social context. There are various translation methods that I have used in this project, such as translating a photograph into a drawing, as well as translating my conversations with trees from their perspective and language. These methods transform the rich and clear details that humans can observe into the more intuitive and purer sensations and vitality that trees can reveal to a human being. Elsewhere, translation as a form of reproduction and reassembly of images, and the translation between formats and media, allow me to combine photographs and drawings for animation that can more clearly show or extend the process of reproduction than a still drawing can. The images I have made are in themselves a kind of reproduction of the real world, but then I further reassemble them to produce a new understanding and observation of urbanisation and forest development.

Research methods for illustration: Translation through a variety of mediums to turn a genuine place into an imagined one

Tianling (BG) Xu
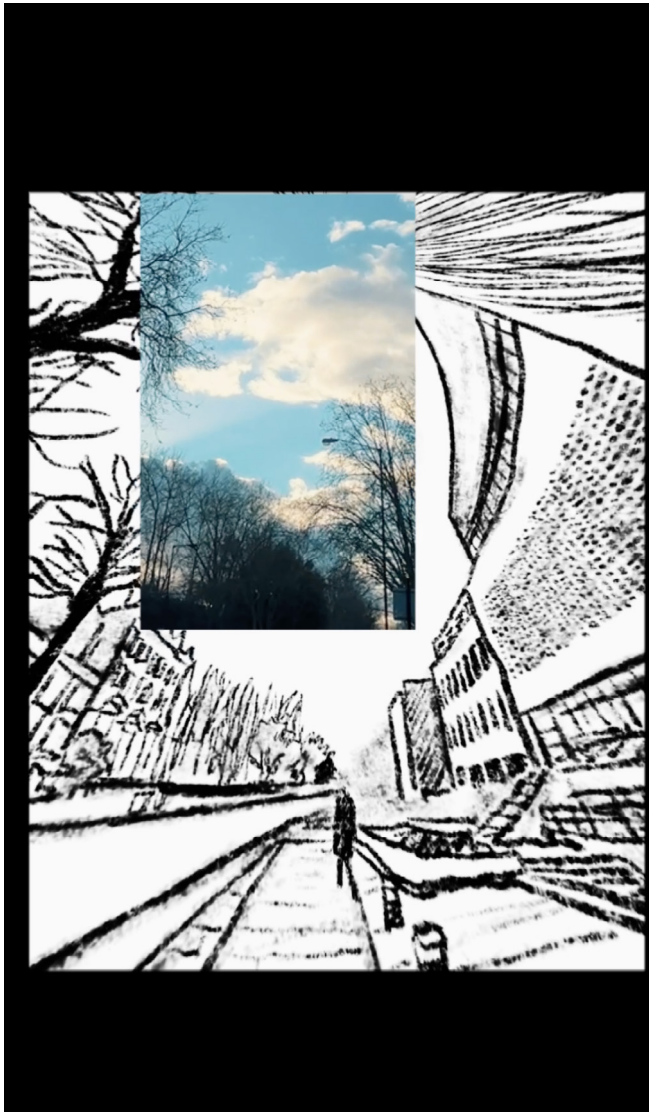
As part of my process in creating hybrid illustration short-form animations, I take photos and videos of my daily interactions and use them as material for my illustrations. I redraw these scenes using Procreate before posting it to panoraven.com, a website that automatically generates a 360-degree environment from a drawing. Through this process of technical translation, the real world turns to black and white, and what the viewer focuses on is the movement. The effect makes a place feel more dreamlike or imaginative.

I use this translated, moving environment as a new source for further illustrations, recombining it with the original videos, and further editing them to give the impression that the drawing and reality are one universe. The importance of this form of translation in my practice is the way that I can mix illustration and video, pushing the boundaries of my illustration discipline.

Link to animation:
https://youtube.com/shorts/LlyqSYYQbw8

Ins: BG-TLX

socially distanced games & play to engage research participants remotely

Dr Dylan Yamada-Rice

During the COVID-19 lockdowns of 2020 and 2021, it became necessary to move research, like everything else, online. However, my research is with children who, I have found, engage best when the methods I use relate more to their everyday favoured communication practices, including playing and doing, which I had not previously undertaken remotely. Relatedly, my art practice is largely around developing hands-on methods that use physical and digital materials to allow child-participants to take part in research as a response to the UN Convention on the Rights of the Child (1989), which stipulates children must be given a voice in issues that affect them. In relation to this, my practice is constantly seeking ways that might be more meaningful to younger participants than traditional social science methods, such as interviews or surveys. This is particularly important because the ways children communicate are not like adults, in that they rarely start out with the wider overview and then hone into the details they want to share. Instead, they are messier, muddling storytelling and play in addition to sharing insights that directly answer research questions (Olsson, 2013). During lockdowns, maintaining playful methods and those that use making remotely became an experiment. Here, I report on two studies that included these experiments that used distanced play and games to undertake research with children: one about sleep, the other on climate change. Both projects were undertaken for Tutti Frutti Productions, a theatre company based in Leeds, UK.

Sweet Dreams

This project began before the COVID-19 pandemic. My involvement was two-fold: firstly, undertaking in-school art and design workshops to get

children's insights into what makes good sleep practices to inform Tutti Frutti's production of a play. Secondly, to collect quantitative data from the play's young audiences. The former was achieved pre-pandemic and the findings were used to inform the development of a play called *Sweet Dreams*, written by Mike Kenny. The second part also began pre-COVID-19 restrictions with a group of MA Art and Design students to develop interactive means of quantitative data collection about the child-audience's sleep habits. The students produced ideas and early prototypes using physical interaction design that would be placed in theatres and fit with the overarching topic of sleep. However, the pandemic came before these designs could be used and the play was put on hold during numerous waves of lockdown. Then, as social distancing restrictions eased, Tutti Frutti adapted the play to be shown outdoors, but government rules again shifted, and this too became impossible. Finally, the theatre company settled on a podcast format, that changed the theatrical performance into an audio production.

Listen here: https://tutti-frutti.org.uk/show/welcome-to-sweet-dreams/?section=our-work

As a result, the means of quantitative data collection with audiences also needed to be adapted for a digital platform. Working with by-then-recent MA graduates — Arman Ataman, Juliette Coquet, and Dimitris Menexopoulos — *Sleeptime Karting* was developed (Figure 1).
   The aim of the game was to continue to make the quantitative data collection into an 'experience' but to do so using digital play that could be accessed remotely and on-demand. *Sleeptime Karting* did this by providing

Figure 1: *Sleeptime Karting*, developed with Arman Ataman, Juliette Coquet and Dimitris Menexopoulos.

children with an opportunity to drive a digital kart around a bedroom floor and, in the process, answer survey questions (should they want to). From previous work creating what I call 'data experience machines', I learned that it is important to find a balance between data accuracy and fun: make it too fun and the data can become distorted by child-participants answering questions inaccurately to enjoy play possibilities (Yamada-Rice, 2021). The team attempted to solve this by offering two routes into the game. One allowed child-participants to take the gamified survey and the other to enter a free-play mode and simply enjoy digital go-karting. In the survey mode, players drive around a child's bedroom floor towards a token that represent a multiple-choice answer to the survey questions (Figure 2).

Figure 2 shows the tokens that represent possible answers to the question 'Where do you fall asleep?' From left to right, the tokens illustrate a bed, a car, the floor, a parent/guardian's bed, a sofa, or a pushchair. The questions were derived in collaboration with NHS hospital sleep specialists. Further, to create a crossover with Tutti Frutti's podcasts, the audio questions used the same voice as an actor in the play and referred to characters from *Sweet Dreams*. So, the full question for Figure 2 was 'Ivy [a character in the play] falls asleep on the Moon. Where do you fall asleep?'

In keeping with the aim of *Remote Sensing* to allow us to question future approaches to fieldwork and engaging 'remotely', the techniques that emerged from *Sweet Dreams* extend the body of work I have been developing in the way that they think about how playful interaction design can allow children to contribute to quantitative research in ways that make data collection an 'experience' and, thus, more engaging than a traditional survey. It is a concept that originally emerged from my interaction design teaching where I began questioning how a good user experience should
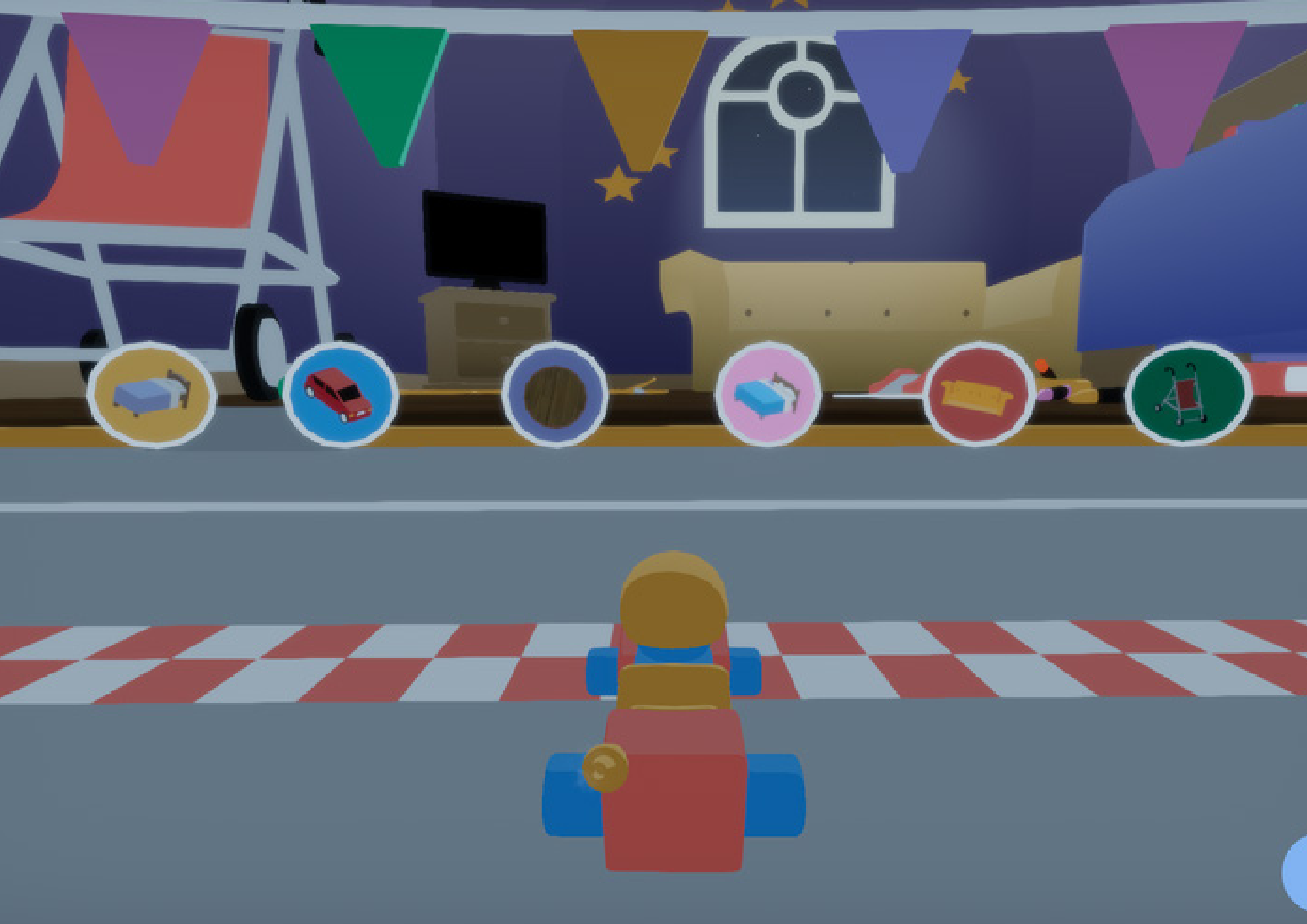
not only exist at the end of research, during dissemination, but can also be incorporated into the creation of engaging and interactive data collection means.

The next section gives insight into digital making as part of remote research about climate change.

Climate Heroes

This project, *Climate Heroes*, was more in keeping with the first part of *Sweet Dreams*, which took place prior to the COVID-19 pandemic and used physical materials that encouraged thinking through making (Ingold, 2013) to prompt children to share insights into what makes good sleep practices. This time, to inform future work they were planning as part of Leeds City of Culture 2023, Tutti Frutti were interested in children's engagement with and knowledge about climate change. Specifically, they wanted to know how virtual spaces could connect schools and get children talking and making in relation to the topic of climate change.

To inform the development of the project, I referred to key theories such as a study by Parry et al (2022) that found child-participants:

... recommended changes to climate change reporting and increasing access to education about climate change issues to reduce anxiety and enhance motivation for positive personal engagement. Involving young people in conversations and education about climate change were seen as protective factors for mental health and enablers for motivation (Parry et al, 2022, p.31).

Others, such as Bartlett (2011), have shown how climate action material for adults includes images of children to reinforce the idea that adults must

act for the benefit of young people's futures, prompting further stress to children. Thus, I framed the study as potentially sensitive in triggering anxiety or other pressures. So, taking account of BERA (2018) best practices for research ethics, I decided to use the online gaming platform Roblox, which I knew about from my work at Dubit, a kids digital media studio. Roblox's internal research data showed the game was one of the top three most popular, free-to-play and, at that time, ad-free gaming platforms. Using a familiar space allowed child-participants space to express their agency by reducing power imbalances between them as they took part remotely, and in a school setting, and me as an adult researcher with more freedom and power.

The findings of an earlier virtual focus group with child-participants led me to develop a unique Roblox space in the online gaming platform. This took the form of an urban landscape with prompts to promote discussion about climate change. For example, by meeting in front of school bike stands in Roblox, children could be reminded of their idea to cycle to school as one way in which they can help make a difference to the climate crisis. They were then prompted to think of other ideas for sustainable living (Figure 3).

As a prototype for ideas being developed for their involvement in the City of Culture 2023, a series of avatars were made to respond to Tutti Frutti's interest in getting children making with digital and physical materials (Figure 4).

Initial avatar designs were posted on billboards in the Roblox space as prompts for discussion (Figure 5).

As with the need to balance play and my research agenda in the *Sweet Dreams* project, so too did the design of a space for conducting

research inside a favourite gaming platform for children in *Climate Heroes* require a balance between suitability for promoting conversation and allowing children to use the natural affordances that they love about the game. Further, Ann Lewis (2010) writes that while researchers have a responsibility to give children a voice in issues that affect them following the UN Convention (1989) we also have an ethical responsibility to enable children to be silent, should they want to be. Also, that a child's silence can be invested with meaning, too. Roblox provided children with opportunities to not answer every research question but rather promoted a powerful form of non-verbal yet multimodal communication (Kress, 2010) to complement children's voices.

Figure 4: *Climate Heroes*: Tree Lover avatar designs.
Image: Dr Dylan Yamada-Rice.

Figure 5: Avatar design posed on Roblox billboards.
Image: Dr Dylan Yamada-Rice.

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engineering the landscape: tracing militarized accounts of the landscapes in utility patents

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This short paper marks the beginning of a speculative and visual collaboration between architect and academic Fadi Shayya and visual artist Matthew Flintham. It draws on Shayya's recent PhD thesis, *The Politics of Survivability: How Military Technology Scripts Urban Relations*, and Flintham's ongoing visual exploration of militarised landscapes and sites of political/social contestation.

The transformation of militarised notions of urban and rural landscapes through warfare across the geographies of Iraq, Afghanistan, Syria, and, most recently, Ukraine, is accelerated by technical advancements in armoured vehicles and weapons systems. However, it is in the context of training and testing sites in the UK and the USA that we will begin studying the technology of warfare — and, by extension, modern technical thought (Simondon, 2017) — so that we might establish visual research methods to critique and negotiate technology's exclusionary territorialisation of geography as a battlespace.

The commonly used Mine-Resistant Ambush Protected (MRAP) vehicle privileges soldiers' lives and safety in conflict environments, and yet, as a complex assemblage it also represents the end-point of a military-industrial supply chain, and the convergence of a set of socio-environmental and political economic conditions. We will focus on key components of the MRAP as expressed in a number of detailed utility patents, which are specifically configured to disperse and mitigate blasts and deflect projectiles considered by the military as part of the landscape of warfare.

We ask, how does such technology abstract the landscape and exclude us? War and engineering make the field difficult to access. Technical objects are usually 'black boxed' while operating, meaning that once in general use, certain complex technologies become concealed, opaque, or invisible to the user, as do the socio-political conditions of their

development (Latour, 1999). In addition, the military institution adds layers of obstacles to access its technologies, and critical events like the COVID-19 coronavirus pandemic make it more difficult for researchers to access sites of military activity such as training zones and testing ranges.

This collaboration will consider these technologies of survivability, and it will do so remotely via the study of publicly available utility patents, which are amongst the few accessible documents to describe such technologies in detail. Indeed, o scrutinize military utility patents is an attempt to escape the binaries and grand narratives that often fail to critically evaluate the established power structures and conditions that precipitate conflict. Instead, we will focus on the technical assemblages which link soldiers, landscapes, and innumerable policy decisions, all channeled through the vortex of training and conflict deployment.

Through a visual study of military vehicle utility patents, we will focus on the mechanical minutiae of survivability: vehicle suspension systems, armour plating, blast attenuating seating systems, the threads of alloy grub screws, and other details of conflict-specific engineering. Exploring survivability via patents allows us to remotely examine the mundane relational politics connecting soldiers' bodies to technical objects and urban landscapes — an attempt to scrutinise the material connections between humans and nonhumans in the context of conflict and training.

To begin our collaboration, we offer a number of exploratory images relating to military utility patents. While our images focus on axles and suspension systems from the MRAP, the broader intention is to imagine new ways of visualising these technologies in an expanded field of signification, or a continuum of material and immaterial connections and influences. We hope this expanded interpretation of technical objects might allow us to

critically evaluate the idea of the MRAP family of military vehicles as 'mobile fortified enclosures'. We will also seek to employ illustrative and expanded methods of visualisation to explore the spatialisation of such vehicles in urban warfare, and the subsequent reduction of landscape into terrain.

Working from Beirut and London respectively, we will remotely test digital visual methods and incorporate photographic material acquired during previous fieldwork in training and conflict zones. The illustrations presented here are a first step: they reimagine the coded and esoteric language of military utility patents, and positions them in direct relation to original photographs of actual military training environments in the United Kingdom — places such as the ersatz urban warfare villages on Salisbury Plain, and MoD Shoeburyness weapons testing ranges (from previous fieldwork by Flintham). We hope to escalate this remote collaboration into a sustained inquiry by undertaking new fieldwork in the UK and elsewhere, and incorporating VR and AI visual technologies towards future displays and exhibitions.

Figure 1 and 2. Patent Transpositions, incorporating patent 'Axle Assembly' for US military vehicle (U.S. Provisional Application No. 61/277,982, filed Oct. 1, 2009), and photographs by Matthew Flintham.
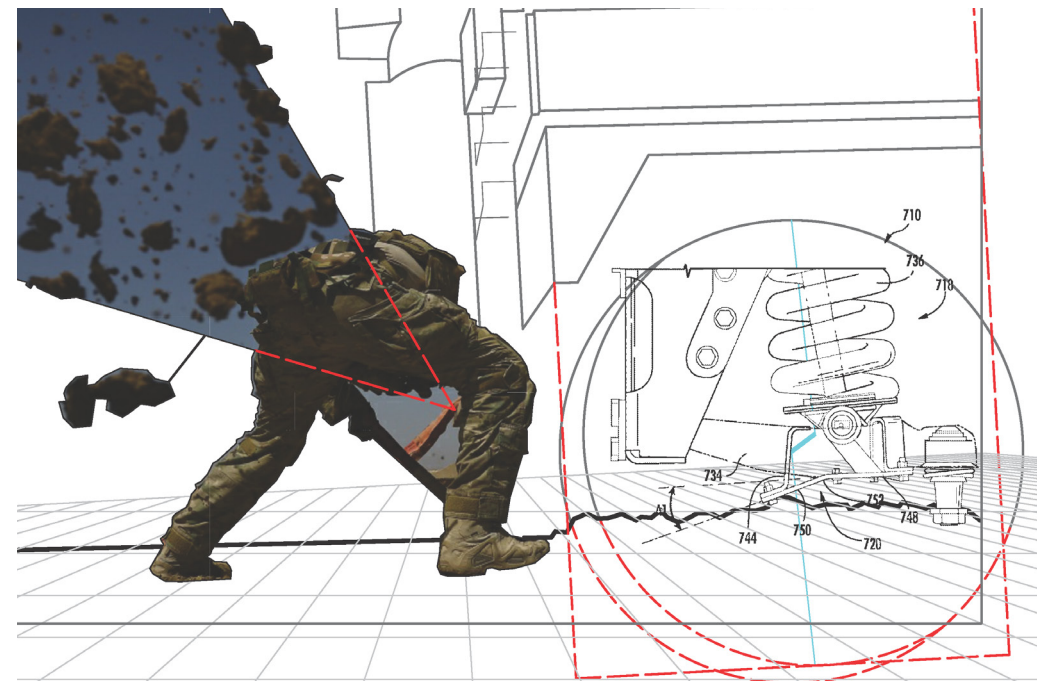
Figure 3 and 4: A breakdown while wheels bog in muddy ground
in a Kandahar Airfield, Afghanistan, image (Young Jr., 2014);
a visual tracing of depths, incorporating the 'Axle Assembly'
for a US military vehicle (US Patent Application
No. 2011/0169240 A1, 2012)

Figure 5 and 6. Soldiers are rotated and flipped during training, image (Stagner, 2013); a visual comparing the housing geometry and incorporating 'Mine Resistant Armored Vehicle' for a US military vehicle (US Patent No. 7,357,062 B2, 2008), 'Method for Manufacturing of Vehicle Armor' for a US military vehicle (US Patent Application No. 2012/0261039 A1, 2012).
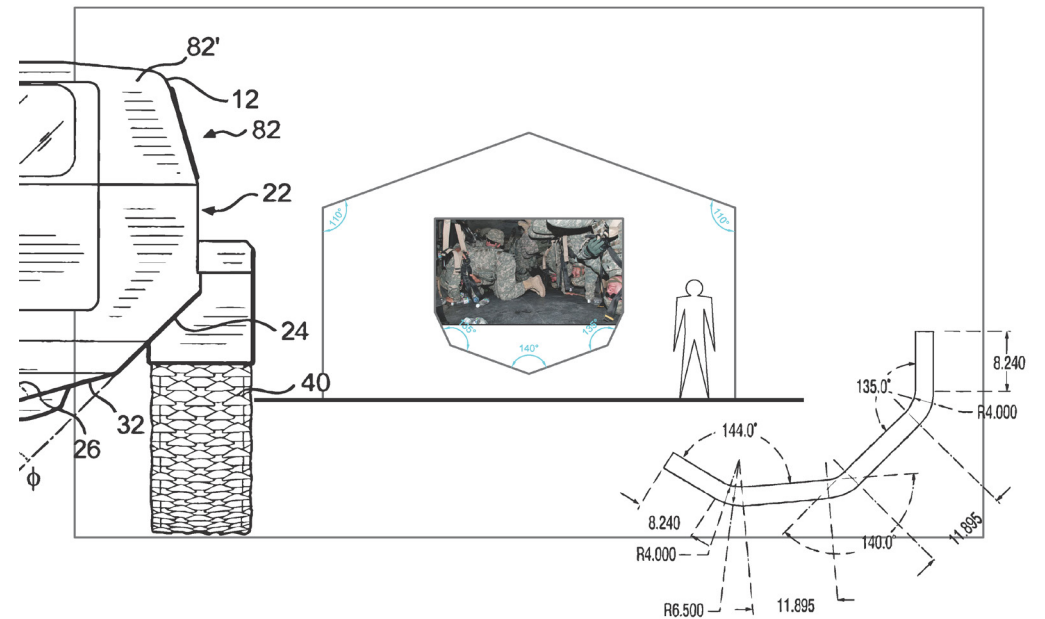
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Young Jr., V. (2014) 'JET Airmen supporting Operation Enduring Freedom' [Image 4 of 16]. [online]. Available from: http://www.dvidshub.net/image/1255009/jet-airmen-supporting-operation-enduring-freedom

Research Methods for Illustration: Translation as a method for reshaping reality to provide an audience with an imaginative space
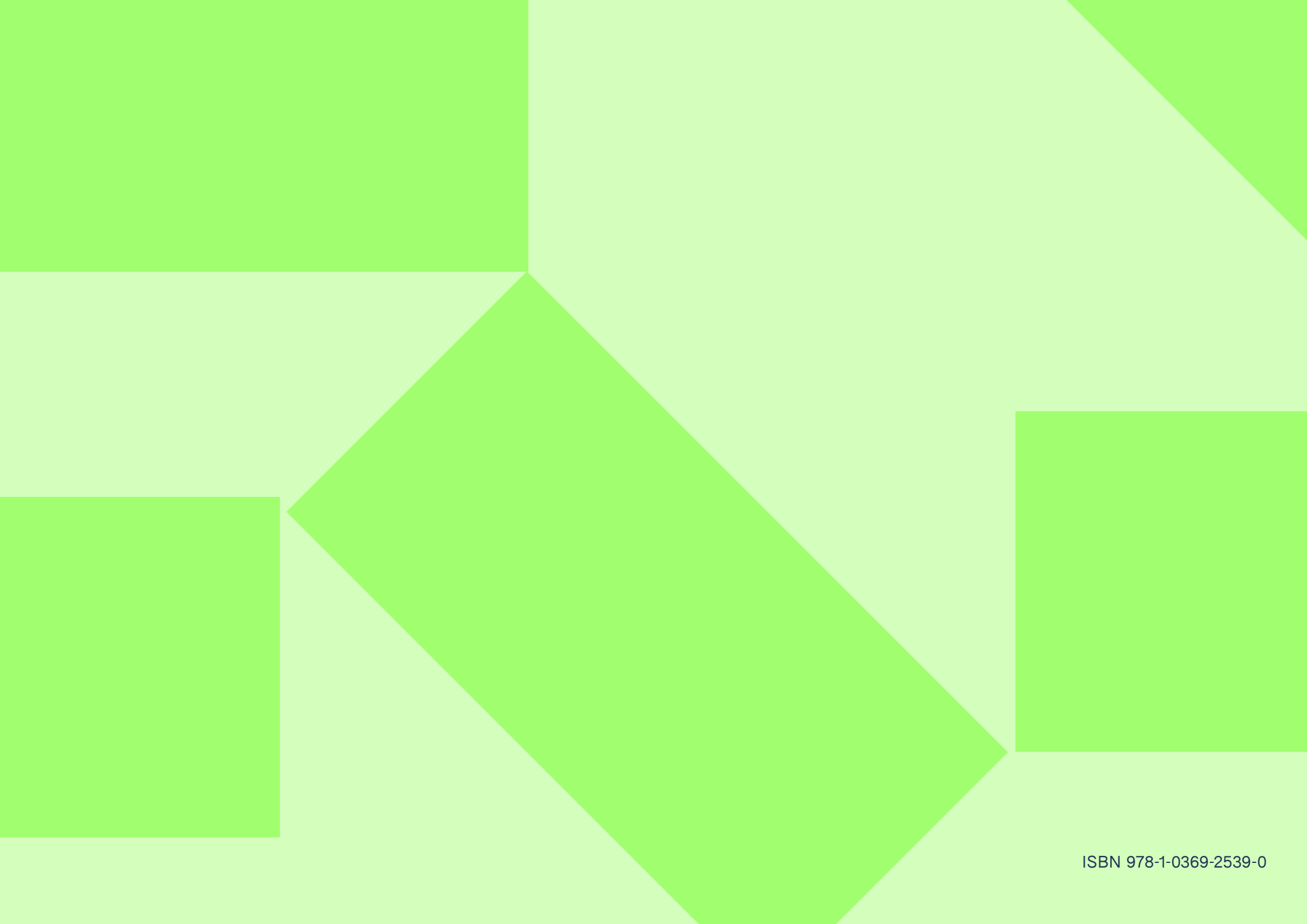
Qingchun Zhang
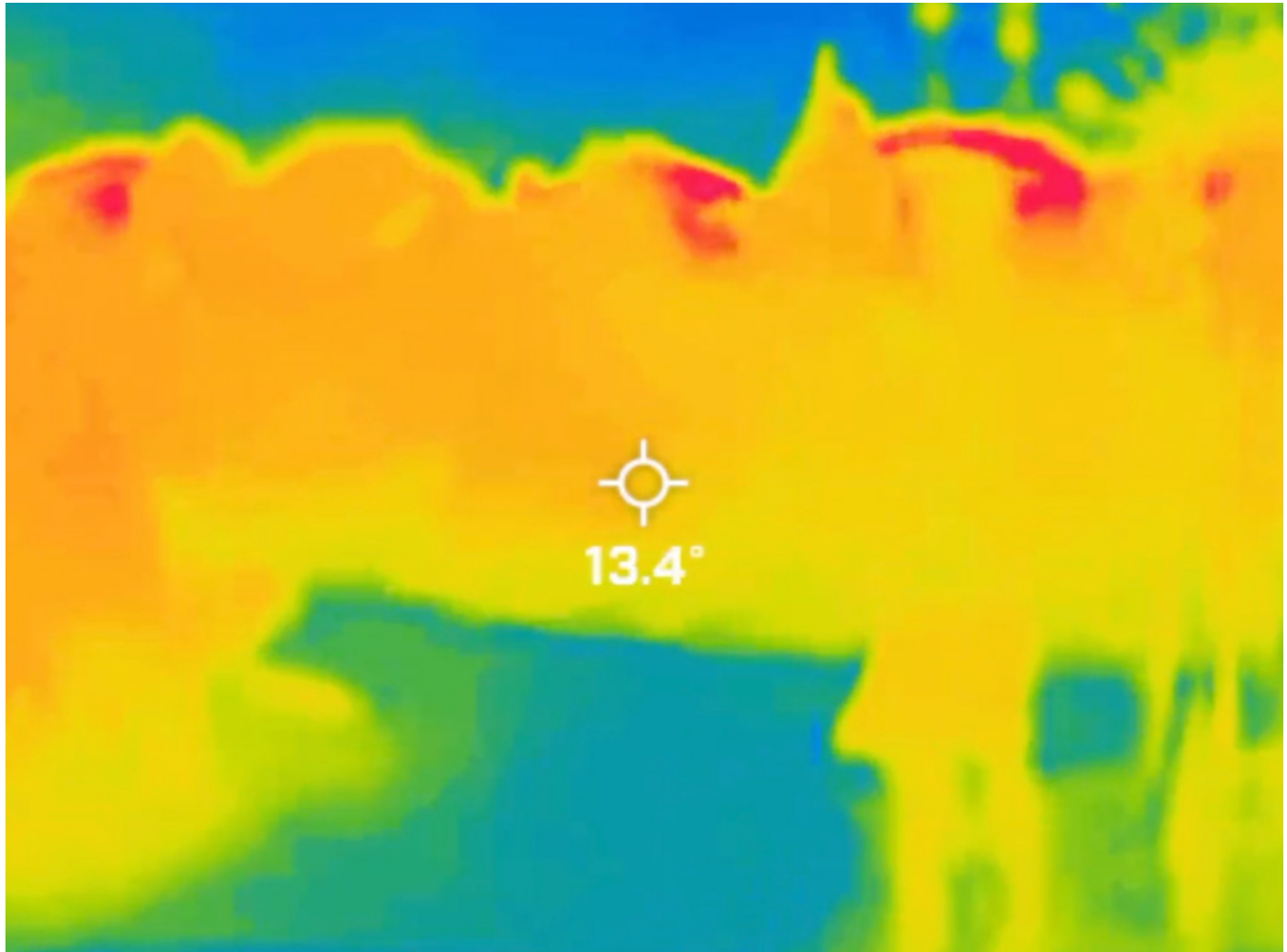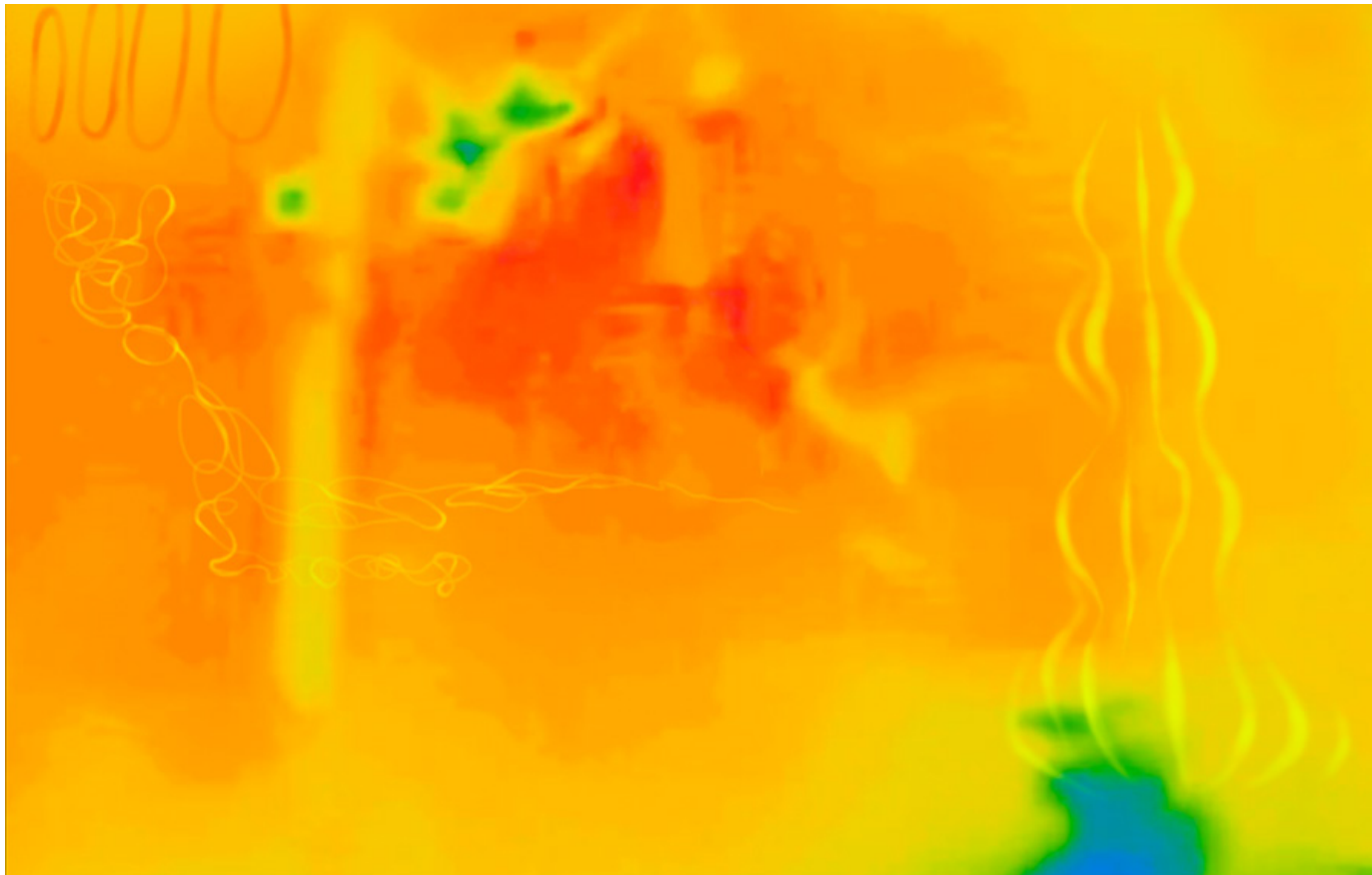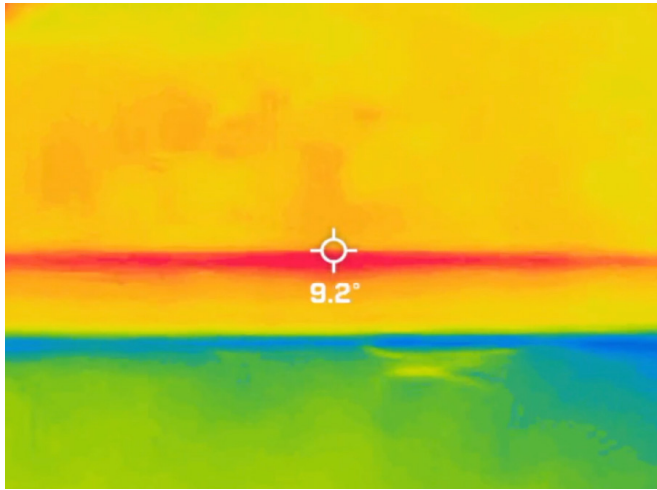
Plants in Motion is a project about the language of movement in plants. Throughout, visual translation has been used to reshape reality, offering a bizarre world. I document the form, texture and environment of a plant through photography and thermal imaging as well as doodling, which is a way of mobilising and recording subjective feelings and a personal connection to the world. In *Plants in Motion*, I tried to find a non-human perspective and a thermal imaging camera gave me the possibility to do just that. It opens my eyes to the greater possibilities of illustration practice in terms of narrative logic and presentation. The state of the plant under the naked eye and photography is real and tangible; the movement of the plant under the thermal imaging machine is smooth, rhythmic and invisible. Unlike traditional photography, the thermal imaging camera gives me a closer understanding and insight into the relationship between plants and human beings, and their surroundings. The use of new media and new technologies is a way to widen the boundaries of illustration.

Plants in Motion video link:
https://vimeo.com/666310504