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EDITORIAL NOTE:
A TIME OF SUCCESSION

Since the beginning of February this year, *Suomen antropologi: Journal of Finnish Anthropological Society* has navigated a succession. The previous editors-in-chief, Heikki Wilenius and Tuomas Tammisto, passed their roles on to me, Suvi Rautio, and I have received not just a warm welcome, but also copious amounts of support from my predecessors. Driving the journal forward over the last several years, Heikki and Tuomas prepared well for this succession, putting considerable love, sweat, and tears into building a platform that makes the handover of their knowledge and experience of the journal's editorial processes as fluid and user-friendly as possible. The guidance I received from both Heikki and Tuomas—as well as the range of video tutorials and written guidelines they developed and made readily accessible through our archives—is both robust and thoughtful. In going the extra mile, creating and passing on these detailed tutorials, Heikki and Tuomas have created a foundation of editorial transparency, which I too intend to build upon.

Beyond their transparency, my predecessors worked hard to ensure *Suomen antropologi* joined the ranks of open access journals. It an absolute honour to follow in their footsteps and take the reins of a journal which adheres to a sustainable and ethically sound method of scientific publishing.

Beyond passing on their knowledge and constructing the open access platform upon which *Suomen antropologi* leans, more generally, the editorial team, which now includes both old and new members, have played a thoughtful role, participating in and steering the journal with me on its journey through stages to come. During my tenure as editor-in-chief, I aim to maintain the community-organised ethos my predecessors began, seeking to ensure that any changes I make to the journal adhere to the desires and expectations of the editorial team members. My guiding principles centre around doing my best to maintain transparency in the decision-making processes and opening all avenues which allow for inclusive participation from all members of the editorial team.

Alongside publishing peer-reviewed articles, I propose that we continue publishing submissions laying beyond the review process. Thus, I have already taken the opportunity to introduce a new periodic essay series, entitled 'The Anthropologist's Toolkit: Reflections on Ethnographic Methodology'. My intention is that this essay series peers into the anthropologist's toolkit, reflecting on what constitutes ethnographic methodology in all its multimodal forms. As a part of this, we invite contributions which explore the multiple engagements coming into play when working ethnographically with humans and more-than-humans.

For more information about this essay series, please refer to our recently updated Submissions page on the journal's website.

A TIME OF SOLIDARITY

Managerial and administrative roles aside, I am also keenly aware that my new editorial role consists of more than simply providing an outlet to showcase thought-provoking research. My role at *Suomen antropologi* is to ensure that we remain committed to providing an avenue for anthropology research which critically engages with scholarly debate. In these times, this avenue remains more crucial than ever. At the beginning of this year and since publishing the first issue of 2024, anthropologist and professor Ghassan Hage's contract with the Max Planck Institute in Halle was terminated after his superiors falsely accused him of antisemitism based on his public comments regarding Palestine. Since then, a range of institutional associations—including the European Association of Social Anthropologists, the American Anthropological Association, and the *British Journal of Middle Eastern Studies* alongside groups which mobilised organically (such as Israeli Jewish scholars working in Israel and worldwide)—have joined forces with an outpouring of statements voicing their solidarity against the accusations and allegations lobbed at Professor Hage by Max Planck.

Given the global rise of authoritarian right-wing politics, powerful institutions are increasingly getting away with hypocrisy. Readers of this journal not based at Max Planck but situated here at the University of Helsinki or any other Finnish academic institution are also acutely aware of the double-standards of academia, which keep rearing their ugly heads inevitably leading to decisions restricting academic freedom. In recent months, rather than inviting dialogue, students and scholars gathering to discuss the humanitarian catastrophe imposed by Israel—with support from global imperialist powers—on Gaza have continuously faced censorship and attempts to silence them based on fabrications, such as 'academia is not a place for politics'.

We, the editorial team of *Suomen antropologi,* stand with Professor Hage and with anyone who dares to courageously speak up for the people of Gaza as well as any other targets of inhumane torture. As a scholarly journal, we are steadfastly and all-the-more determined to ensure that our platform remains an avenue of tolerance and critical debate and discussion, where the real lives of the subordinate and the weak need not be marginalised or silenced.

THIS ISSUE

Before I delve into the short summaries of the exciting contents in this, I want to extend my heartfelt appreciation to its editors. Editors Tuomas Tammisto, Henni Alava, Pekka Tuominen, and editor *emeritus* Matti Eräsaari dedicated considerable care and time to collaborating with the authors featured herein, helping to shape their articles in order to achieve a high standard and meet our journal's exacting requirements. Most of the work with the authors was completed before I took on the role of editor-in-chief.

This issue includes four peer-reviewed articles. Matt Tomlinson, in his article 'Spirit Mediums and the Art of Suggesting Stories', revisits Fredrik Barth's notion of the guru and the conjurer to examine the knowledge generated by mediums in spiritualist demonstrations. In this compelling piece, we learn about the value of knowledge through narrative, and the notable differences in narration that mediums in spiritualism, like other religious movements, take on from gurus and conjurers.

Adam Reed's article, 'Putting Collaborations in Collaboration: An Ethnographic Examination of Experts Acting Seriously', considers the exercise of collaboration through game design and the deliberate subversion of its norms.

Ingjerd Hoëm, in 'On a Globalising the Present and the Ethnographic Study of Historicity', draws upon ethnographic material from life stories and the nonfiction literature of J. K. Arnulf, D. Mendelsohn, and K. Kassabova. Here, she explores the temporal orientations and experiences of connections and disconnections between past and present, self and intergenerational relationships.

Following Hoëm's article on historicity, Penny Harvey also considers narrative, but from a prehistoric era: through the narrative of geological time. Her article, 'Geology as Uncomforming Infrastructure', probes the complexities of the geological record through the world of geologists and rocks. Harvey describes how the role of hosting and hosting relations sits at the heart of the UK government's initiative to establish a geological disposal facility for the management of highly radioactive nuclear waste. Originally delivered as a virtual Westermarck lecture in 2021, Harvey's article offers a subsequent amendment to that lecture as a peer-reviewed article, accompanying this issue's forum on infrastructures.

This issue's 'Infrastructures' forum was first conceived during a workshop held at Tampere University in spring 2022 with Penny Harvey. Each of the seven essays in the forum considers how anthropologists and those in related fields can better understand how people use, understand, and experience infrastructures. Herein, we offer an array of diverse papers

drawing upon ethnography from a range of field sites. The politics of urban infrastructures is considered through the context of Namibia (Metsola). Environmental infrastructures are explored in the disposition of oil palm plantations in the Wide Bay area of Papua New Guinea (Tammisto), infrastructuring the environment through wetlands (Lounela), and the knowledge infrastructure of climate change mitigation and climate governance (Karhunmaa and Käkönen). In addition, institutional infrastructures are considered through the lives of internationally mobile children in Finnish schools (Korpela). Finally, the forum concludes with two pieces on tracing infrastructures used to search for missing persons following the Bosnian War and the present-day Mediterranean (Huttunen) and in relation to the heightened sociopolitical recognition of people's disappearances in Poland (Matyska).

Alongside the peer-reviewed articles and the Infrastructures forum, I am proud to offer the first essay in a new series, 'The Anthropologist's Toolkit: Reflections on Ethnographic Methodology', a series we launch with this issue. In this essay, 'Reflections on Ethnographic Re-enactment and Co-Authorship: *From the Cubby* Screening in Helsinki', I provide a brief review of the ethnographic film, *From the Cubby,* screened in Helsinki in autumn 2023. Alongside my review, I also extend the conversation to consider the valuable role that ethnographic re-enactment can play in both documentary filmmaking and ethnographic writing.

This issue also contains one research report in the form of a written *lectio præcursoria*. For readers who have never attended a public doctoral defence in Finnish academia, *lectio præcursoria* are short twenty-minute lectures delivered by doctoral candidates during the public defence of their theses. *Suomen antropologi* publishes these public lectures from the fields of anthropology and related disciplines to celebrate the work of doctoral researchers who have just recently successfully defended their dissertations. I am delighted to include in this issue the *lectio præcursoria* of Dr Annastiina Kallius, who defended her thesis 'The Politics of Knowledge in Late 2010s Hungary: Ethnography of an Epistemic Collapse' at the University of Helsinki in spring 2023. In reading her *lectio præcursoria*, we gain a sneak peek into Kallius' timely research, peering into life under Prime Minister Viktor Orbán's illiberal regime in Hungary and the 'epistemic collapse' the country faced, whereby liberalism retreated to a minority position in both political as well as epistemic terms.

To conclude this issue of *Suomen antropologi*, we offer two book reviews. *White Borders: The History of Race and Immigration in the United States from Chinese Exclusion to the Border Wall* written by Reece Jones, is reviewed by Ville Laakkonen, and Krause Franz's *Thinking Like a River* is reviewed by Jaanika Kingumets.

I close this note with a final reminder: as always, this issue of *Suomen antropologi* is published as a fully open access journal with no APCs or embargoes. Whilst the journal pays a modest fee to our language editor, Vanessa Fuller, and the editorial secretaries, Anna Pivovarova and Saara Toukolehto, all of the other labour which ensures that this journal continues is completed on an entirely voluntary basis. Thus, I thank all of the editors, and thank all of our authors who submit their work to us and participate in scholarly discussions through our platform. Last, but not least, I extend my gratitude to the external expert reviewers, upon whom the publication of our scientific articles entirely relies. All of our reviewers agree to take on the voluntary and time-consuming work of carefully reading and assessing manuscripts, a task which is particularly hidden since it is completed anonymously. I thank each of you!

Matt Tomlinson

SPIRIT MEDIUMS AND
THE ART OF SUGGESTING STORIES

ABSTRACT

Fredrik Barth called attention to two ways ritually transmitted knowledge gains value: knowledge he associated with the figure of the 'Guru' valued for being widely shared versus knowledge associated with the figure of the 'conjurer' or 'initiator' valued for the opposite reason. In this article, I argue that there is another kind of ritual knowledge-transmitter who holds an appropriately 'in-between' position: the spirit medium. During 'demonstrations', mediums in the Spiritualist tradition offer signs from the spirit world for their audiences to recognise in relation to their deceased loved ones. Whereas Gurus (in Barth's typology) are likely to be storytellers and conjurers are not, mediums are distinct for telling what I call 'protonarratives'. Protonarratives are character sketches joined with allusions to events or signs that suggest stories. They are not narrative in form, but can evoke stories that live in listeners' memories.

Fredrik Barth began his Huxley Lecture for the Royal Anthropological Institute in 1989 by suggesting he would do something Huxleyan. More than a century earlier, Thomas Henry Huxley had sensed that Charles Darwin's theory of evolution was correct, but his sense was merely intuitive, as the theory was still 'tentative and incomplete' (Barth 1990: 640). Yet, once Huxley committed himself to Darwin's ideas, Barth (1990: 640) declared, 'he proceeded to apply rigorous scholarship and creative imagination to the task of recasting received biological wisdom in its new and unproven terms'. Barth now wanted to do the same kind of thing for anthropology. He expressed scientific modesty in the standard terms of small steps and giants' shoulders, but he was aiming high for this honorary occasion: he would 'transform' the field by developing an 'Anthropology of Knowledge', which would 'depict the conditions of creativity of those who cultivate knowledge, and the forms which follow' (Barth 1990: 641). As Darwin and Huxley had transformed biology, along with Alfred Russel Wallace (on whom I will say more), so would Barth transform anthropology. He would enable the construction of a comparative framework in which 'God is in the details, and reality is ultimately always concrete and tangible' (as Eriksen 2015[2013]: 191 summarises).

In that lecture, published the following year with the title 'The Guru and the Conjurer' (Barth 1990), Barth compares two ideal types. Gurus share knowledge to gain disciples who will spread their knowledge. Conjurers, by contrast, share knowledge with a select few who are supposed to keep the knowledge secret. Barth links these ideal–typical roles to

broader social structures and values, using Bali and Bhutan as his ethnographic sites for Gurus' activities and Papua New Guinea as his point of reference for conjurers' activities.

In this article, I revisit the Guru–conjurer distinction, which, it must be acknowledged, is not among Barth's best-known or most influential works. As for all ideal–typical distinctions, it is both easy to find contrasting examples and not always productive or satisfying to do so. And, yet, there is a role that serves as a fruitful point of comparison, being neither Guru nor conjurer, but similarly invested in sharing knowledge in a particular way: the spirit medium. To clarify why this third category is more than just a 'see also' addition to a simple taxonomy, I turn to narrative. Narrative has been written about exhaustively by anthropologists, and my goal in this article is not to retheorise narrative for its own sake. Rather, I suggest that, whereas Gurus thrive in storytelling mode and conjurers of the kind Barth knew among the Baktaman do not, spirit mediums occupy a curious middle ground in which stories are continually gestured at ritually but rarely told within the key ritual frame. Mediums offer protonarratives, or suggestions of stories. These protonarratives are later developed into full stories, both by audience members and mediums themselves, shaping public expectations of what counts as effective spirit mediumship.

This article is divided into three parts. In the first, I summarise Barth's distinction between Gurus and conjurers, and I consider these roles in relation to narrative as ritual practice. I draw on two extended ethnographic treatments of each type: Kirin Narayan's *Storytellers, Saints, and Scoundrels* (1989) for a storytelling Guru and Barth's *Ritual and Knowledge among the Baktaman of New Guinea* (1975) for conjurers. In the second part, I examine mediums who

work in the Anglophone Spiritualist tradition. I describe how mediums tell protonarratives when they give 'demonstrations' of their mediumship, verbally sketching partial character portraits of audience members' deceased loved ones with allusions to events. These portraits and allusions can inspire listeners to recall stories that give demonstrations the ring of whole truth and the pull of emotional gravity. Mediums do tell stories outside of demonstrations, and these stories are meant to illustrate how mediumship works: the embarrassing but instructive failures as well as the vertigo-inducing moments of wonder. In the third part, I describe the experience of hearing and trying to interpret protonarrative signs, focusing on one reading I received at a public Spiritualist service. Analytical attention to protonarratives, I argue, can deepen anthropological understandings of the interplay between signs, characters, and stories, in which the dead are ritually revived in acts of social recognition.

THE STORIES GURUS TELL, THE STORIES CONJURERS DO NOT TELL

'The Guru and the Conjurer' has one quirk: in most of the text, Barth does not use the term 'conjurer', but 'initiator'.[1] I mention this minor inconsistency because it throws into sharp relief Barth's rigorous consistency in detailing the work these people do.

A Guru gathers disciples. The fact that disciples can carry their new knowledge forward and gain disciples of their own means that Guru-based knowledge is exportable, decontextualisable. A base of knowledge can be expanded, as one can draw on other teachers and a wide corpus of myths, for example. Truth is foregrounded. The presentation of truth can

be done creatively, but performance style is not usually of special interest; the truth of the shared knowledge is what matters. Ultimately, for a Guru, the value of knowledge consists in giving it away.

For a conjurer (or initiator or the adept), the opposite is true. The value of knowledge consists in holding onto it. Yet, conjurers are caught in a double bind: they must ensure that their knowledge is reproduced somehow. Conjurers do not have disciples; they have short-term and ever-changing relationships with those whom they initiate. Their knowledge is not exportable. It is revealed in and relevant to the moment of initiation, and not discussed explicitly afterwards. A conjurer's knowledge is a self-contained system, not something to be expanded, although in graded initiation systems the knowledge transmitted at one level can be added to or even contradicted by that transmitted at another level. Mystery rather than truth is foregrounded. The style of revelation enhances the value of the knowledge, and a conjurer/initiator must deliver 'a spellbinding performance' (Barth 1990: 643).

Ideal–typical contrasts like these provoke readers to think of cases that do not fit. Coming up with examples that blur the boundaries is all too easy. Online conspiracy-theorist groups, for example, present their knowledge as mysterious revelation, yet aim to spread it as widely as possible. Some exponents of sacred truth think it should be limited to those smart enough to follow them. Yet, rather than focus on contrasting cases like these simply to prove anthropology's eternal truth that different people do things differently, it can be more fruitful to look at forms of practice that make us consider the categories in new ways.

A focus on narrative can help us think afresh about Gurus, conjurers/initiators, and other speakers committed to sharing knowledge with audiences in ritualised ways. In recent decades, anthropologists have written at great length and in fine detail about narrative. Because I want to keep the focus in this article on spirit mediumship and the ritual use of narrative therein, I will not summarise the sprawling literature on narrative and its relationship to healing, memory, chronotopy, and the like, but will simply follow Kirin Narayan's (1989: 243) straightforward approach: 'narrative is in the broadest sense a means of organizing experience and endowing it with meaning'; it includes a temporal dimension, but sequences need not be linear; a 'plot' joins events and characters, implicating listeners in some way. Narayan's characterisation of narrative is a useful starting point. As I will show, the notable thing about Spiritualist mediums' narratives is that they are only hinted at during the most markedly ritualised parts of mediums' work.

In her monograph on the cheerful Guru she calls Swamiji, Narayan (1989) shows how he instructs people on moral and religious principles through storytelling. A wide variety of people come to him: fellow ascetics, disciples, interested laypeople, and local children. They come with a range of interests and motivations. The main character in Swamiji's stories is often a Guru. Sometimes he tells stories to soothe people's anxieties or give them new perspectives on challenging situations. Sometimes he seems to tell stories just for fun. He does not usually offer explicit interpretations of his stories, allowing listeners to come to their own conclusions about what they mean. He is tremendously creative, shaping his narratives to people's interests and situations, often teasingly inserting audience members' names into the stories—for example, by using foreign spiritual seekers' Indian names to represent especially gullible characters. But he denies his own creativity, because his stories come from a vast

Hindu mythic corpus and, as he puts it, 'I just tell what's already there' (Narayan 1989: 37).

Many of his stories are both funny and pointed, causing his audiences to laugh, but also realize that serious moral messages are being expressed. For example, the tale of the 'Nose-Cutters' describes a religious movement in which people have their noses cut off in order to see God (Narayan 1989: 132–145). The group prospers as it travels about, growing in number and eating good food, with initiates dancing ecstatically after having their noses cut off and proclaiming that they, too, are now able to see God. A king meets the group and is told explicitly that he cannot see God because his nose is blocking his vision. The king consults with his pandit and agrees to have his nose cut off the next morning. The king's prime minister is deeply suspicious about the Nose-Cutters, but knows he will not be able to change the king's mind on his own. He asks his grandfather for advice, and the old man offers to go to the ceremony. The next day, the grandfather approaches the king to caution him, but the king is dismissive. Then, the old man makes an offer: 'Don't wantonly cut off your nose and spoil yourself. You're my King and these are all your subjects. Let my nose be cut off first' (Narayan 1989: 137). The king agrees. The group's Guru duly slices off the grandfather's nose. And, then, instead of whispering a sacred mantra into the man's ear, the Guru essentially tells him: 'Everyone will now mock you unless you lie and say you've seen God!' But, the grandfather tells everyone the truth instead: he does not see God, he is hurting badly, and he was told to lie. Soldiers begin beating the Nose-Cutters, who now admit that they had been lying all along, as instructed.

Swamiji asserts that this tale is historically true, although Narayan points out that it is a standard bit of folklore with many variants.

She also observes that a psychoanalytic reading would interpret it as a tale of castration. She notes Swamiji's creativity, as he diplomatically compares the wise prime minister to one of his male listeners and teasingly names two of the naïve Nose-Cutters after an American and an Englishwoman in the audience. One man in the audience, Mr. Advani, is not explicitly mentioned when Swamiji tells his tale, although Narayan makes it clear she thinks he might be one of the listeners addressed most directly by the story, because he had organised a workshop for a suspiciously wealthy Guru and bragged about its success.[2]

Swamiji's charisma manifests in many ways. He is sympathetic, egalitarian, and generous. Like all good ascetics, he does not care about wealth. He has renounced sex. Disciples consider their Gurus to be divine humans, and Swamiji's feet, like those of all Gurus, are worshiped (Narayan 1989: 82–84). People who come to him say they feel peaceful in his presence and can sense his *shakti* or spiritual power (Narayan 1989: 93–94). And, his storytelling is evidently extraordinary, something he is especially gifted at, something in which his listeners find themselves wrapped up. Narayan (Narayan 1989: 197) points out that the morals of his stories can be summarised simply, but to do so would be to lose their force: 'When a story is spun, one is drawn into a compelling imaginative space, listening with suspense over the outcome and delighting over details. The moral does not stand naked, but swathed in texture and color, it strides through a story into an imaginative landscape'.

Swamiji perfectly fits Barth's profile of the Guru. His narrative teaching is ritualised in the sense I have developed elsewhere of ritual as the production of textual patterns articulated with an ideology of their effectiveness (Tomlinson 2014). Even by colloquial definitions of ritual,

Swamiji's teaching fits: it is highly patterned activity set apart from many of his listeners' everyday lives, designed to articulate moral and existential understandings. The knowledge he shares is meant to lead to the clarity of truth rather than the murk of mystery. He has disciples. He is creative, but his storytelling's effectiveness does not depend on stylised performance; it emerges from his enthusiasm and confidence as the holder of a wide range of knowledge that he is always ready to give away.

The conjurer or initiator stands in stark contrast to the Guru, as Barth's monograph *Ritual and Knowledge among the Baktaman of New Guinea* (1975) makes clear. Baktaman boys and men participate in a seven-grade system of initiation, which Barth refers to as a 'mystery cult'. The purpose of initiations is to reveal secret knowledge—and, yet, obscurity and deception are hallmarks of the rites, so the knowledge revealed remains confusing and inconclusive. Initiates are made to observe food taboos, are sometimes isolated, are shown symbols which remain unexplained, and are physically beaten. Barth (1975: 82) compares this method of acquiring knowledge to 'peeling the layers of an onion, or exploring a set of Chinese boxes'. He (1975: 28) gamely offers his own interpretation of the rites as 'focus[ing] on man's relation to nature, rather than to other men'. Men are symbolically reborn by passing under the legs of other men, and male sexuality is legitimised. The rites suggest the role of ancestral forces in making the natural world prosper with plentiful game and fruitful crops. The physical beatings are a painful lesson in the cost of gaining valuable knowledge.

For the initiates, one of the most pointed lessons seems to be that nothing is as it seems and trusting others is hazardous. Initiations cultivate 'the fearful awareness of a vital, unknowable and forbidden truth behind the secret and cryptic ritual acts. But this is created at the cost of trust between novices and initiators' (Barth 1975: 62). Symbolism remains unexplained, as Barth (1975: 77) indicates when he suggests his own interpretation and prefaces it by saying that this 'translat[ion](…) to a verbal code' is something 'no Baktaman does and (…) I doubt (…) would ever be able and willing to do'. Yet, because the initiation system does include a final level, the seventh, there is a notional end point to the mystification, even if no final truth emerges. As Thomas Hylland Eriksen (2015[2013]: 121) puts it, a Baktaman man who is 'initiated into the seventh grade has, simply, understood more, and carries heavier and deeper secrets, than those who have not reached as far. (…) The older men are (…) key persons in Baktaman society. They can communicate with everyone, and they possess all the keys.'[3]

Narayan's Guru, Swamiji, has a conjurer counterpart in the leading Baktaman initiator, Kimebnok. Whatever he is like outside of the initiation rites, within them Kimebnok is not a storyteller. Although the rituals follow a sequence, it is not narrative in structure, and stories do not seem to be told as part of the process. It is possible that a micronarrative edges into the fourth initiation rite, when a song is sung about the time warriors killed an enemy woman and her child (Barth 1975: 77, 146–147). Beyond this, Barth (1975: 83) is explicit: 'No Baktaman initiation rite is accompanied by the telling of myths; and in the small corpus of myths that I found current among the Baktaman there are none that show any connection with any major segment of the initiation rites described so far'. However, Barth makes it clear elsewhere that the Baktaman case is an extreme one. In his monograph *Cosmologies in the Making*, he (1987: 5–6) observes that whereas Baktaman have 'hardly any myths', other Mountain Ok groups do have

them; indeed, Bimin-Kuskusmin 'maintain an enormous corpus of secret myths organized in elaborate cycles, which are told as central parts of cult and initiation rites, and are also regularly commented [on], in appropriately secluded settings'. Baktaman initiation is an extreme case, then—useful as an ideal type, but not representative of broad Mountain Ok practice.[4]

To return to Baktamin territory for the purposes of comparison, initiation rituals are a profusion, a spectacle. The colour red, the qualities of water, the darkness of a temple interior, the sense of mystery, the threat of pain, the sight of bones, the sound of drums, the harvesting of taro: these become meaningful in a partial and confusing way. And (not surprisingly since it is Barth's own ethnography), the model of the conjurer/initiator presented in 'The Guru and the Conjurer' fits Kimebnok snugly. Baktaman ritual is mostly a self-contained system, although Barth does acknowledge the influence of neighbours' practices. The knowledge offered within the rites is valuable because it is kept private, not publicly shared. The rites do not aim at finding truth, but at cultivating mystery. A sense of incompleteness limns the initiation system because, as Barth (1975: 101) poignantly notes, 'time and time again the same phrase crops up: 'This was all our fathers told us before they died'. The style of performance directly connects to the value of the knowledge gained. Initiators do not gain disciples. Ultimately, the most valuable knowledge is that which is not revealed and can never be revealed.

The fruitfulness of 'The Guru and the Conjurer' is its core question: Does the value of knowledge consist in sharing it or in keeping it? In considering narrative, I have noted that Gurus tell stories and conjurers (at least the paradigmatic Baktaman initiators) do not. This makes intuitive sense: Gurus want knowledge to be shared, developed, and understood; conjurers

want knowledge to be retained and appreciated as much for its unintelligibility as anything else. Narrative lends itself more to the kind of expansion and explanation that Gurus offer rather than what conjurers offer.[5]

In the next section, I examine the knowledge generated by mediums in Spiritualist demonstrations. Before doing so, however, I want to return to Barth's comparison of his research with Huxley's. As mentioned, Barth suggests that Huxley's achievement was to begin with a creative leap of scientific faith (in support of Darwinian evolution) and, then, doggedly work to update scientific understandings in its terms. In seeking to follow Huxley's success, Barth also refers to the work of Huxley's and Darwin's compatriot Alfred Russel Wallace. Barth (1990: 640) suggests that 'a kind of cultural Wallace Line' separates Bali and its Gurus from Melanesia and its conjurers. The Wallace Line, the great biogeographical divider of southeast Asian from Australian and Oceanic species, runs between Bali and New Guinea; but for Barth (1990: 641) the point is that anthropology has no Wallace Line of its own yet—and his lecture might make a contribution in that regard, going beyond 'myopic localism' to enable greater comparative and synthetic consideration of 'variable and changing humanity'.

Barth does not mention the creative leap of scientific faith that Wallace himself took, and which put him at odds with Huxley and Darwin. Wallace knew that natural selection effectively explains most biological evolutionary processes. But, he wondered, what process works on humanity's minds and souls? He became convinced that Spiritualist mediumship was experimental work, coaxing the philosophy of life-after-death away from theology and into the realm of true science. Huxley and Darwin disagreed strongly, and declined Wallace's invitations to séances (Raby 2001: 188–189).

TELLING THE STORY OF MEDIUMS' STORIES

Spiritualist séances today are not called séances, and they look nothing like the affairs that took place in Wallace's day. At the Canberra Spiritualist Association, where I conducted research between 2017 and 2019, regular public services are held in a rented hall on the first, third, and fifth Sundays of each month, with several weeks' summer break in December and January.[6] The meeting site is situated within the Pearce Community Centre complex, a bland functional space which looks ready to host a school assembly or dance class. The lights are on, the plastic stackable chairs are set out in rows, and basic electronic equipment (laptop, projector, microphone, speakers, and sound mixer) ensures everyone can hear what is said and follow the lyrics of the recorded pop songs to which we sing along.

I have described Spiritualist services and the practice of mediumship in several other publications.[7] To keep the focus on narrative in this article, I move straight to the 'demonstration', the ritual highpoint of any Spiritualist service, during which a medium works interactively with an audience to create dialogues, joining listeners with loved ones in the spirit world. Giving a demonstration is sometimes called being 'on platform'. Work on platform does not lend itself to storytelling because mediumship techniques give rise to sensations whose connections cluster around character rather than narrative. A medium sees images in her mind's eye, hears sounds, smells scents, and feels bodily pains and welling intuitions.[8] Her job is to offer these signs, sometimes lightly interpreted, to her audience in order to see if they recognise them as fitting the profile of a deceased person they knew. If enough signs align into a constellation of character—the kind of mosaic portrait

that evokes memories of your late aunt, for example—this is considered evidence that the medium is really in touch with the spirit of that person.[9]

In present-day Spiritualist practice, mediums generally do not change their tone of voice while speaking on behalf of people in the spirit world. They do not adopt squeaky voices for children or creaky ones for elders. They speak conversationally. They also explain to audiences that it is the medium's job to pose questions and listeners' job to reply 'yes', 'no' or 'I don't know'.

A good example of a reading during a medium's demonstration comes from the Canberra Spiritualist Association (CSA) service of 16 April 2017. It was Easter Sunday, which may have limited the attendance, which was only ten people counting everyone in the room. Each service usually has one medium doing the demonstration, and on that day it was Lynette Ivory, treasurer of the CSA and wife of Norman, the Association's president.

To begin the third reading in her demonstration, Lynette said, 'I have a gentleman showing himself to me now who would have been in the Air Force. He's quite a tall man. He's got a dark navy uniform on, possibly an English uniform; if it's not English, then it's Australian. I don't believe it's American. I don't believe it's European.'[10] By 'showing himself', Lynette means she can see an image of the man, who is invisible to everyone else in the room (unless they happen to be mediums, too, and also sense what Lynette reports sensing). She has offered her audience the first bit of evidence: this man was in the Air Force. Everyone who has a deceased relative in this category should perk their ears up, but even those who do not remember any military relatives should keep listening, because sometimes details shift in the dialogue between medium and audience. Although detail number one might not make

sense to a listener, details two, three, and four might. Lynette continues:

> This was a gentleman who would be somebody's grandfather, looking at what he's showing me. He was only quite young when he passed. He passed during the war in a plane. And he was a real lad. God, he was a lad. He lived life to the fullest. He really crammed everything into his life that he possibly could, it was almost like as he was approaching his maturity, he knew that he wasn't going to live to old bones because he wanted to experience everything. Can anyone relate to a grandfather or great grandfather who would have been killed in the war?

At this point, someone in the audience apparently indicates that they might be the correct recipient, probably by raising their hand (I did not note the reactions, and nothing is audible on the recording). 'You think you can?' Lynette asks. 'Okay. Do you recognise an airman in the English air force?' Her respondent likely nods, because Lynette now says, 'Right. I don't think he would have been an officer because he didn't have a cap. He had those little—you know, little things that fold up, little beret-type thing. So, he wasn't an officer.' She adds:

> Lynette: He was tall, and he was slim. He hadn't had time to—and he had a sense of humour because he says he didn't have time to get a beer gut, he didn't have enough time to drink enough beer. So, he must have liked his beer as well. Oh, and he said, 'And don't forget the food, I liked the food as well. Liked food and beer. And the girls,' he says. He's just not letting that go. Do you recognise this gentleman?

Emma: That's—I think so, yeah [inaud].

Lynette: Okay. He has pale skin. He has rather—I can only call them bony features… a bigger nose than normal, but high cheekbones and quite a strong jawline. And he loved to dance. He loved to do all things and just enjoy life. He rode a motorbike at times, he told me. He was just an all-round—I don't know what to call him. He was a fun-loving young man. And he had the time of his life. And even when he was in the forces, fighting in the war, he still had fun. And he said that was only—his attitude was what got him through the hard times, and he said there were some pretty horrid times that he was aware of. And he said he was very glad that he went quickly, he didn't have all the carry-on after that some of them had. He tells me he left behind somebody he cared a great deal for, and that was something that upset him. I'm not sure whether he was married to this lady, or whether he was going to be married to her, but he was very, very fond of her, and that was the one thing he regrets about his passing is that he wasn't able to complete that life with that lady. Does that make any sense to you?

Emma: Yes.

Lynette: You understand that? Thank you.

At this point, Lynette pauses for twelve seconds. She has already accomplished the main task of a reading: she gave evidence which 'Emma' accepted. Emma has a deceased air force veteran in her family, a man who knew how to enjoy life to the fullest. He was tall, slender and pale, had a big nose, high cheekbones, and a strong jaw. He died suddenly, and from the spirit world he

regrets the pain this caused a woman who loved him. Emma does not respond to these details point-by-point (nor is she expected to), but she affirms that over all they make enough sense for her to recognise the man with whom Lynette is in spiritual communication.

Because Emma knows who the man is, Lynette moves to the next part of a reading: delivering a message.

> Lynette: He's saying to me that you're entering a time in your life where you're trying to make a decision about something. Does that make sense to you, do you understand that? No.
>
> Emma: Think so.
>
> Lynette: Sorry?
>
> Emma: I think so, yeah.
>
> Lynette: Yes, yes, there's no thinking about it. It is so. You're trying to make a choice, perhaps maybe not a decision, but there's something there where it's either/or. Does that make more sense to you? Well, he says, will you stop mucking around and just get on with it? Because things won't move until you make a choice or make a decision. It's almost like you're worried that if you make a wrong decision that things won't work out. It's, 'Oh, don't worry about things like that. Just *do.* Do what you want to do. Do what you feel is right. Worry about the consequences afterwards.' You know, like children: they go and climb a tree after being told a hundred times they'll fall and hurt themselves. They don't care. They do it anyway. And then they fall and hurt themselves. So. Doesn't matter. It's the same with decisions and choices we make,

okay. Do it. If it doesn't work out, okay, do something else. Don't sweat the mistakes, because mistakes are how you learn, okay. [If] we never made mistakes, we'd never have things like cars or microphones and stuff like that. Did you understand the relationship of this man, a grandfather or great-grandfather?

> Emma: A grandfather, yeah.
>
> Lynette: A grandfather, right.
>
> Emma: Yeah, but I never met.
>
> Lynette: You never met. Oh, okay, so that doesn't matter. 'I know you. And I'm watching you,' he says. 'I'm watching you because I want you to do what you want to do, okay?' He says, 'Laugh a lot more, laugh a lot more. Life is just full of wonderful things. So laugh and live and love.' And he said, with you, even though you may not have known him in the physical, he's with you, and he's put a little light above your head. He says there's a star shining above your head for you. Can I leave that with you?

After suggesting that Emma is 'trying to make a decision about something', Lynette evidently senses doubt or hesitation, because she (Lynette) pre-emptively says 'no'. But, Emma says she thinks this might actually make sense. Lynette, like most talented mediums, wants firm answers, so she suggests that Emma should not overthink her response, which should be a clear yes ('It is so').

As she delivers the message from the spirit world, Lynette confirms with Emma that this man is her grandfather. She quotes him, but does not change her voice qualities in doing

so, and there is no confusion between the 'I' of Lynette and the 'I' of the airman. The message is a pep talk, encouragement to be bold and act rather than wait in hesitation. Lynette signals that the reading is over by asking if she can 'leave that with you', meaning Emma has accepted the identification of her grandfather and will think about him and his message from now on. After a fifteen-second pause, Lynette begins her fourth and final reading of the day, bringing through the spirit of a man who was solidly built with upright posture, who avidly read newspapers, and who unshakably held his opinions.

If one were to approach Lynette's demonstration as an exercise in storytelling, like Swamiji spinning yarns to counsel and teach his listeners, one would be left with thin threads to weave. There are many details of the late man's appearance and personality, but the stories anyone except Emma can tell about him are limited: a man joined the air force, liked to carouse, and met a woman who loved him; he died in the war and left her grieving. This is the outline of a story—and a compelling one—but, the details are in the man's character rather than the narrative itself. In Elinor Ochs' and Lisa Capps' (2001: 24) terms, the challenging 'dimension' of narrative in mediums' demonstrations is its 'tellership', 'the extent and kind of involvement of conversational partners in the actual recounting of a narrative'. Mediums are the tellers—they bring forth all those bits of evidence from the spirit world—but they do yet not string them into stories. Their listeners are able to tell stories, but are limited in their responses to affirming or denying their recognition of the signs the medium offers or saying that they are uncertain.[11]

MEDIUMS' STORIES OF MEDIUMS

Mediums speak in ritual contexts other than demonstrations. During services, they sometimes tell stories when delivering addresses on spiritual topics. For example, after a demonstration by the medium Jane Hall on 18 March 2018, which I analyse in the next section, Lynette Ivory provided an impromptu comment on it. As she began to give the church notices, Lynette said:

> Lynette: D'you know, I was just sitting there thinking, when I first came into Spiritualism, giving evidence of survival in any Spiritualist group in New South Wales… just did not figure in the meetings. And when I first started to sit in a group, my very first platform performance was, mmm, woeful, to say the least. Because—
>
> Norman Ivory: It wasn't that bad!
>
> Lynette: [Laughs.] Norman threw me in at the deep end, and I was very, very new, and knew very little about Spiritualism. I knew almost nothing about communication. I hadn't read many books. I'd seen Doris Stokes on television, but not doing a demonstration…. And all I did for the next twelve, eighteen months—'cause [Norman] made me do platform [i.e., give public demonstrations]—was give psychic readings. And one night I was going to do a service, and he said, 'Why don't you try to see somebody?' Well, y'know, big joke. And surprisingly—I could not believe it—the very last reading I gave, I saw somebody [in spirit form]. And even more amazing was the person [in the audience] recognised it [i.e., recognised her description of the

deceased person]. And, from that moment on, I have worked very hard to develop my mediumship. And I think it's so wonderful now that so many are going to really study, and to learn about Spiritualism and how to develop their own mediumship.

Lynette's brief story of failure gives her the chance to lovingly poke fun at her husband for having put her in an awkward position. It also comments on the lack of spiritual maturity in New South Wales years earlier, as mediums were stuck giving psychic readings—working telepathically with people in the audience, connecting mind to mind, but not actually communicating with people in the spirit world.[12] It also sets up a story of unexpected success when, with Norman's prodding, she tries to connect authentically with the spirit world one day and to her surprise it works vividly. Lynette's words can be heard as a commentary on the mediumship we have just seen: behind and before Jane's successful demonstration came a tremendous amount of difficult work, struggle, and doubt. Like Swamiji telling stories of Gurus, mediums' best topic is often mediums and mediumship.

THE EMOTIONAL PULL OF PROTONARRATIVES

In protonarratives, character descriptions are joined with allusions to events. To show how this work gets done, I describe one of Jane Hall's readings during her demonstration at the CSA service of 18 March 2018. Nineteen people attended that day, four of them men, close to the average numbers for a CSA service.

Jane gave four readings during the service. After the second, she said, 'Okay, let's see where I'm going now. All right.' She paused for around ten seconds. 'Ooh, okay. I have a lady that joins me.'

And as I feel her draw close to me, I know with this lady, she has a great mind. And I know with this lady that it—her mind doesn't leave her before she goes to the Spirit, but her body does. So, I know she starts to lose condition within her body, but her mind stays sharp as a tack. So, my body starts to dwindle, and I know I have a fabulous attitude to life. I know that I have an incredible passion for life. But… there is frustration with the fact that my body breaks down, and that my body can't keep up with my mind.

I know I'm connected as family to the person in here. And I know with this lady, it's a really funny thing to say, but I have to say, 'Fiddlesticks.' So, I don't know if this lady used the word [laughs] 'fiddlesticks'… it's a funny thing to do. It's almost like I have to say, 'My body deteriorates, fiddlesticks.'

So, I know her attitude is fantastic. I know that I would be living in… this is strange, I would have travelled to Florida. Florida. Florida, that's in America. Okay, can anyone understand that information?

An audience member responds, but her words are unintelligible on the recording. Jane asks, 'But you can understand America?' The woman responds, 'Not America, no.' I raise my hand to indicate that I might be the recipient. As a participant observer, I try to put all my energy into contextually appropriate action, so I am following the medium here. Yes, I do know a deceased woman somewhat like the one she has described. A connection to America? I was born and raised in New Jersey.

Our dialogue begins:

Jane Hall: Right.
Matt Tomlinson: Maybe.
Jane: I don't like maybes.
Matt: Florida [inaud]—[13]
Jane: Huh?
Matt: Florida, yes, but it wasn't that far away.
Jane: It wasn't that far away, Florida?
Matt: Well, I grew up in New Jersey, which is on the same coast.
Jane: And she went to Florida?
Matt: Maybe. Uh, yes, she might have—
Jane: Thank you! [Laughs.]

Good mediums are like good trial lawyers. They elicit 'yes' or 'no' answers. As a listener and potential respondent, I could tell the 'America' prompt meant I was a likely suspect for the role of recipient, as nearly everyone else in the room was Australian, and Jane knew I was American. In my mind, however, I had equated 'traveling' with far distances—like, say, from New Jersey to Canberra—and the woman I had in mind as Jane Hall's contact in the spirit world had not travelled so far while physically alive.

But Jane picks up the 'yes' answer and identifies it as the first correct bit of evidence, as most mediums would ('Thank you!'). Now, I mumble a few words, some of which are not intelligible on the recording, and Jane repeats 'Right'. She teases me mildly and affirms the evidence: "Kay. Might seem far to all the rest of us, but she travelled to Florida, yes or no?' I say yes. She then asks, 'And, would you understand the lady with the really sharp mind?'

I like to think most of my relatives are sharp. And, the woman I am thinking of, my mother's elder sister, must have been to Florida, because we had relatives in Key Largo. Jane repeats what she considers already proven: This woman's

'body started to deteriorate?' ('Yes.') 'And she went to Florida?' ('Yes.') 'Right,' she laughs, 'so you can take everything!' By 'take everything', she means I have accepted all of these details as identifying features of a particular deceased family member.

But, now, I push back, if mildly, 'Except "fiddlesticks,"' I say. No one in my family speaks this way. 'Right,' Jane continues. 'But, did she have a great sense of humour, attitude to life?' I say yes, and the reading continues. Over the next several minutes (a bit less than six minutes), she offers the following questions and statements, with which I agree:

'Would you understand this to be family as well?'

'You would understand that she loved having children around?'

'Would you understand her to have done a family tree, or is it you, your brother—you have a brother?' (I respond only to the first question: 'It was—my father did it, but she was very interested in it, and she wanted us to be interested in it.')

'She liked art.'

'She would have liked animals, too.'

'Do you know this lady's house when she was alive?'

'There must have been a time, also, where she lived in the country.'

'But there must have been also time where she lived in the city.'

'But you would know that when she lived in the city, that her heart missed the country.'

'She didn't like the traffic.'

She also offers the following question to which I answer no:

'Would you understand this to be grandparents?'

In addition, she offers the following statements and questions to which I answer that I do not know, or say 'maybe' or 'probably':

'I feel like there's a loss of a child, either for her or connected to her.'

'If I say she had a problem with one side of her body, would you understand that?'

'There was some Irish [heritage] coming in as well?'

'She must have lived through a bushfire? Or there must have been a bushfire around… at one time?'

As I heard her that day, Jane Hall was sketching the character of my aunt, Carole Price. Sceptical readers will note that the correct characteristics are rather common: Who doesn't like art and animals? And, one detail is incorrect—this is not my grandmother—while others are hazy. Bushfires? Aunt Carole was from Brooklyn, and as an adult she lived in an apartment in Manhattan and also had a home in rural northeastern Pennsylvania. Were there ever forest fires in Mehoopany? Probably, but they do not burn in my memory.

But, Jane has said things which resonate emotionally with me. Her description of the woman living in both the city and the country is the most forceful one. It always impressed me that my aunt, who was a librarian in a public school, and her husband Frank, an income tax accountant, managed to own two homes on modest salaries. Moreover, these homes were amazing in different ways: an apartment on Hudson Street in the West Village (rent controlled, with building management desperate to claw it back and rent it to someone else at a much higher rate), and a charming A-frame on a wooded hillside above a valley of small farms.

The question of intellectual belief, too often dismissed as no longer relevant in the study of religion, surely is relevant when participation in ritual requires the gathering and evaluation of what counts as evidence (Tomlinson 2023a). But demonstrations like the one I describe here can cleave intellectual beliefs from emotional commitments. Intellectually, I am not sure whether Aunt Carole is trying to communicate with me. Emotionally, I would be excited if she did. Although we were not especially close, she is the aunt I knew best. She was conservative in her religious orientation, and I know she would disapprove of Spiritualism, unless her postmortem experience has made her change her mind. Emotional commitment is like a fishhook: once you're on it, pulling away becomes painful. Or, to phrase it positively, there is pleasure in having a stranger—the medium, who does not know your family—highlight your family relationships for an audience of strangers. You want your family to matter to people who did not know them. Whereas Gurus offer truth and conjurers offer mystery, mediums offer social recognition, an affirmation of you and your family's place and togetherness in the world.

With my emotional commitment to understanding this character as Aunt Carole now established, our dialogue continues:

Jane: But you would understand she would be very happy to get on the bus and get out of town.

Matt: Yes.

Jane: That was her thing: Get on the bus, get out of town. Now I know, also, there must have been quite a lot of kilometres from the... city... to… the country life that she was in. There's lots of kilometres, or it's miles, as you would say [laughs]. You would understand there's a lot of space between where she lived before and where she—like, the city?

Matt: Yes.

Jane: Like, it's not like [a] Canberra and Braidwood kind of thing.

Matt: No.

Jane: We're talking about, like [a] Canberra and Adelaide kind of thing.

Now the intellectual and emotional split becomes trying. The fact that Aunt Carole rode the bus between New York and Pennsylvania is not a minor detail for me. It's a vital part of the stories I associate with her. She resisted learning to drive for most of her adult life, and even when she learned to do so, would never drive far. Uncle Frank could drive, so he drove them between their homes sometimes; but, when Carole had to make the trip herself, she took the bus. Her long bus trips between America's biggest city and a piney outpost whose popular brand of bread was called Hillbilly always stuck in my imagination. Yet, Jane's description of the distance, like her estimation of that between New Jersey/New York and Florida, gives me pause. From Manhattan to Mehoopany is around 150 miles; Canberra to Adelaide is more than 700 miles, not quite comparable. (Canberra to Braidwood is about 50 miles.) This kind of calculation seems both necessary and ridiculous to make, and I could not help but make it.

During the demonstration, I felt committed to completing the presentation of Carole's character and remembering stories about her. So, at the time, I say 'Uh huh', and we move on despite my doubts about the mileage of those bus trips. The point is that bus trips are one of the main memories I associate with Carole, and numbers wash away in the sense of distance.

After a few lines of conversation with me, Jane then describes the trip:

Jane: 'Cause she just shows me the bus journey, and just looking out the window as the—everything goes past. And there must have been very flat—parts of that journey must have been very flat.

Matt: Parts.

Jane: Parts. That's right. 'Cause I just see there's a part where it's flat, okay, with her as well. And just have to say… family must have stayed in the country. Yes?

Matt: She had a place in both the country and the city. And, so, her husband would be with her when she was in the country.[14]

Jane: Right. Okay. 'Cause I just feel like I'm going back, but I know I go back to—family's, family's in the country. Okay. Right. Lucky her, huh? [Laughs.] What a great life. So, now, I also know that they must have grown, grown, grown things on the land.

Matt: Yes.

In my memory, traveling to Carole's home in Mehoopany was the opposite of a trip through a flat landscape. We passed through the majestic Delaware Water Gap, and her corner of Pennsylvania has the nickname, perhaps overstated but nonetheless evocative, of the Endless Mountains. My dispassionate mind realises that, of course, there are plenty of flat

patches along the way. But, flatness does not feel like the defining feature of the route between Carole's homes, but rather the unremarkable thing you skip past to get to those steep hills, sharp curves, and, now and then, grand views.

And, yet, the description of growing 'things on the land' offers a final emotional tug for me. Because, yes, Carole was an expert gardener, with a fruitful and well-tended patch on her Mehoopany hillside. Going to her country place was always a feast, both literally and metaphorically, as we ate great food that we did not have at home, and the smells from the garden and countryside were intoxicating. Add to this the irrelevant but somehow pressing detail that Carole was an expert on mushrooms, and Jane's statement that 'they must have grown, grown, grown things on the land' feels utterly right to me.

Our dialogue continues for another three minutes, and covers some new territory: pet dogs and other animals, Carole's quirkiness, and my own acknowledged 'craziness', of which Carole approves. But, the point for this article is simply that Jane Hall's reading, in which she persuades me I could be in communion with my late aunt, is a protonarrative. There are suggestions of stories. A bushfire burned. Carole took long bus trips between her city home and country home. She might have lost a child. Her mind remained lively as her body betrayed her. But, the full narratives live in my memory and are not expressed aloud. Neither Jane nor the audience hears the stories about trips to Picnic Rock and Mehoopany Creek, watching a summer meteor shower, sledding down the lower part of the long driveway in winter, the lighting of sparklers and whooping across the valley at midnight on New Year's—in short, stories of *how* we knew Carole. What the audience hears is a classically successful Spiritualist demonstration. The yeses outweigh the noes. I confirm that I can recognise the person the medium describes. And, the description concludes with an encouraging message from the person in the spirit world.

Like many mediums, Jane Hall tells stories of mediumship outside of the demonstration but within the larger ritual frame of the Spiritualist service. For example, at the CSA service of 21 May 2017, she told one on the topic of identifying personal spiritual symbols. Explaining that people in the spirit world often indicate their presence to loved ones using specific symbols, Jane mentioned that when a grieving client comes to her, she will speak to the spirit world and say that the client is 'not in a head space to find that symbol now. Will you give that to me?'

She continued, laughing occasionally as she told the tale:

> Not always do they give it to me, but sometimes they do. I have had people [in the spirit world] say… 'I'm giving you a symbol. This is for your brother in the Spirit world, and he's showing me golf balls.' Now, the person I was bringing through, this lady's brother, was a gay man, with very flamboyant—very over the top, very loud in how he dressed. But he didn't have anything to do with golf at all. Nothing. So, she looked at me like I was slightly crazy and went, 'Okay, I'm not quite—don't think you quite got it there, 'cause he really didn't—he wasn't into sport at all. And *definitely* not golf.'
>
> So—and I said, 'That's okay. I may be wrong, and I'm okay with that. But, just take it, just in case. Just take it, just in case, right?'
>
> So, a few days later, I had an email, and she'd written at five a.m.… So, she'd leapt out of bed, gone straight to her computer, and written a letter. 'Oh my goodness,

I cannot believe it, I'm about to go to a family member's funeral, it's at a golf club! Oh my gosh, I just realised, my brother lived right next to a golf club! Oh my goodness, I cannot believe this!'

Just because we think this doesn't fit with the person?—Spirit still has a sense of humour.... So, she knows now that her brother, who's full of life and very colourful when he was alive, has also got that still on the other side, and he wants to point that [out] to her. So, now she knows when she sees golf balls, that that is a sign her brother is around.

Here is a straightforward narrative told by a medium during a Spiritualist service in order to make mediumship more understandable to her audience. Note that its content almost sounds like a conjurer's revelation of a cultic mystery: whereas Kimebnok and his fellow initiators lead novices to understand that, for example, the colour red signifies the power of the ancestors, Jane recalls the time she told a woman that seeing golf balls would be a sign from her brother in the spirit world. But, her lesson is directed to everyone in the room: your late loved ones speak to you through signs. The sign for your deceased grandmother, for example, might be a number or flowers or a song rather than golf balls.

Narratives told outside of the demonstration but within the service can be instructional, cautionary, inspirational or entertaining. At CSA services, there are always regulars who know perfectly well how mediumship works, but there are often one or two newbies. Like Swamiji telling stories about Gurus, so, too, do mediums often enjoy telling ones about mediumship in order to instruct their listeners. This kind of full storytelling does not unfold during the demonstration itself,

but it can enhance the reputation of a medium, who learned her skills through trial and error, patience and persistence.

NARRATIVE, KNOWLEDGE, AND REVELATION

When Fredrik Barth delivered his Huxley Lecture, he mentioned his admiration for Huxley's combination of intellectual fearlessness and rigour, and suggested that his own contribution might be to establish a new Wallace Line in anthropology. Amusingly, the Wallace Line is named after Alfred Russel Wallace, who was also intellectually fearless, but applied his rigour in ways Huxley and Darwin felt were deeply misguided, treating spirit as something subject to scientific experimentation and verification. It bears mention that, at the beginning of his talk, Barth referred to another published Huxley lecture, that of Raymond Firth thirty years earlier. Unlike Barth, Firth explicitly mentioned Huxley's attitude toward religion generally and Spiritualism specifically.[15]

Barth's compelling insight in 'The Guru and the Conjurer' is that in some contexts knowledge is considered valuable because it is shared and in other contexts it is considered valuable because it is unshared. What, then, about the knowledge generated in a Spiritualist medium's demonstration, which is knowledge interactively expressed by a medium and her audience? Like a Guru's stories, mediums' protonarratives are meant to be useful to anyone who hears them, because the point of a medium's practice is to prove to her listeners—all of her listeners—that there is life after death. In its own way, this is a search for truth. But, like a conjurer's signs, there is something mysterious about the revelations in a medium's demonstration. Even eager listeners will usually not be able to make sense of all the signs she offers. Earlier,

I compared mediums to trial lawyers for the way they pose yes-or-no questions to get at the truth. Another comparison is an inversion: mediums are like school exam-takers, but for an exam where the student poses the questions. Whereas Gurus and conjurers have knowledge to share, mediums' audience members are the ones who have the knowledge. The medium must reveal and suggest knowledge which is complete for recipients, but unspoken and fragmentary for other audience members and the medium herself. When enough signs align to make a recognisable character take shape, that character lives in a hearer's memory through stories, 'swathed in texture and color…strid[ing] through a story into an imaginative landscape', as Narayan (1989: 197) describes stories' morals.

Mediums can gather disciples of a sort in home training circles, a subject I have not discussed here, but their primary relationship within the ritual event of the demonstration is with people they might not know or ever see again. Mediums can act creatively within their demonstrations, developing signature styles, but they do not need to deliver 'spellbinding' performances like conjurers do. Indeed, the best mediums tend to speak plainly, conversationally, suggesting that what they are doing is not remarkable at all. If any part of their work is spellbinding, it is meant to be what the revelation of knowledge points to—a realisation that someone who did not know your grandmother has just described her accurately and evocatively.

Spiritualism, like most religious movements, motivates narratives, but the ways mediums tell narratives as they do their work is notably different from the ways of Gurus and conjurers. For Gurus, following Narayan's example of Swamiji, telling stories is inherent to their ritual practice. For conjurers/initiators like Kimebnok, it is not. Spiritualist mediums like Lynette Ivory and Jane Hall tell stories about how they learned mediumship, including their stumbles and their successes. Yet, during their demonstrations—when they carry out their core task of connecting the living and the dead—narrative is notably constricted. Mediums tell protonarratives, sketches of characters that suggest stories without telling them. In doing so, they affirm your relationships with your deceased loved ones, not only for your benefit, but also for an audience who never met the people now taking on a lively verbal presence in the room. Standing in a middle zone between Gurus and conjurers—between shared storytelling and a sheer riot of signs—mediums suggest stories that might be told, ritually evoking a vitalist cosmos in which interconnection is absolute.

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NOTES

1 'Conjurer' is in the title, but only appears twice in the main text, once as a simile: a 'New Guinea priest in a mystery cult' is 'like a conjurer [who] tries to *withhold* the essential truths from his audience even while he initiates them as novices' (Barth 1990: 642, emphasis in original). In the article's abstract, the first term he uses for this kind of person is 'the adept', a term which does not appear in the main text. The term Barth uses most consistently is 'initiator'. A Guru, by contrast, is always called a 'Guru' by Barth, and always given a capital G, a style I follow here. In a passing reference to the Narayan monograph I discuss, he (1989: 648) allows that 'India exhibits a confusing exuberance of Gurus of diverse kinds, from *pandits*, *sadhus* and *sannyasis* to *swamis*, *babajis*, *fakirs* and storytellers'. Notably, the phrase 'and storytellers', which makes storytellers sound like a separate category, is misleading; Narayan makes it clear that for many Indian Gurus, not only Swamiji, storytelling lies at the heart of their religious practice.

2 Narayan (1989: 139) writes of her disagreement with a man from Pittsburgh, a spiritual seeker who had taken the name Gulelal. Gulelal recalled how when he previously returned to the United States, Swamiji had warned him 'not to cut off any noses'. Narayan was sure that Swamiji meant Gulelal should not pretend to be a Guru when he was back in his homeland. No, Gulelal said, Swamiji meant that he (Gulelal) should not challenge the followers of a Guru with whom he had grown disenchanted. Gulelal then asked Swamiji directly what he meant and, Narayan (1989: 140) reports, on this occasion Swamiji gave an explicit interpretation: 'Don't cut noses means don't deceive others!'.

3 Like Narayan with 'Gulelal', Barth has a telling disagreement over meaning with his interlocutors. Observing a men's dance in which performers wear cassowary feathers and mimic the birds' appearance, he points out the resemblance—and is met with 'nothing but puzzled denials' (Barth 1975: 101).

4 Barth explains the variation as a result of social organisation. Baktaman are a small group; not many novices are initiated together, and they are similar in age and background. In other groups, larger numbers and a greater diversity of participants means knowledge must be made more explicit. Compared to a 'nonverbal code' like that used by Baktaman initiators, 'Verbalization is so vastly more flexible, economical of time, space and equipment, and (where necessary) unambiguous, it would seem essential in orchestrating and motivating such composite performances to rely heavily on it' (Barth 1987: 62–64).

5 Shameem Black (personal communication, 22 January 2024) observes that the story of the Nose-Cutters can be read as a Guru's critique of a conjurer's practice. Initiates bond over shared food and a painful ordeal, but the knowledge they gain is worthless and their system crumples when the Guru (i.e., the prime minister's grandfather) reveals the truth for all to hear.

6 All descriptions given in this article pertain to 2017–2019. I began counting attendance at CSA services in January 2016, and from that time until the end of the research project, average attendance was between seventeen and eighteen individuals, with a two-to-one ratio of women-to-men.

7 Many authors who have written about Spiritualism have focused on its historical support of progressive causes (e.g., Braude 1989; Owen 1989; McGarry 2008) and its articulation with nineteenth-century technological developments in fields like telegraphy and photography (e.g., Sconce 2000; Galvan 2010). Working in the present tense, the sociologist and discourse analyst Robin Wooffitt (2016[2006]) has analysed mediums' and psychics' linguistic techniques, the religious studies scholar Anne Kalvig (2017) has examined the ways in which Spiritualism might or might not be considered a religion, and the anthropologists Vieda Skultans (1974) and Erin Yerby (2017) have written ethnographies of healing and embodiment in Spiritualism. Works on Australian Spiritualism include Gillen (1981), Gabay (2001), Singleton (2022, 2023), and Tomlinson (2019, 2022, 2023a, 2023b).

8 Because Spiritualism has historically and prominently featured women mediums, and because most of the mediums I have seen during fieldwork are women, I use feminine pronouns for general reference.

9 Adam Reed and Jon Bialecki (2018a: 161) refer to a general 'non-anthropological' understanding of character as 'typically linked to a notion of a biographical arc and to an idea of a subject who is the source of action', noting that such

apparent 'constancy is a less than straightforward achievement' (2018a: 161; see also Reed and Bialecki 2018b). They observe that the definition of character involves identifying qualities that fit and erasing those that do not; in Spiritualism, such work is accomplished as mediums offer details about a person and audience members respond by affirming some details and rejecting others. Literary scholars' insights into authors' constructions of character can also be useful in considering how medium–audience interaction works. For example, Rita Felski (2019: 78), writing of character in literature, argues that 'The draw of character [for a reader] has far less to do with realism than with qualities of vividness and distinctiveness.' In Spiritualist mediumship, however, these qualities go together: characters' vividness (the ways they glow in respondents' memories) and distinctiveness (they ways they are identified individually) contribute to the sense of realism that develops during an effective demonstration.

10 In transcriptions of speech, I smooth out false starts, minor repetitions and placeholders for ease of reading. Ellipses indicate short stretches of deleted text, and '[inaud]' indicates a word or words that are not clearly audible on the recording. 'Emma' is a pseudonym.

11 Two points about Spiritualist linguistic ideology bear mention. First, because the way people talk is considered part of their character, styles of communication inform the development of protonarratives: a joker while alive, your uncle, now in the spirit world, will tease and joke with the medium. Second, mediums say they have spirit guides who help them in organising communication with people in the spirit world. In Australian Spiritualism, mediums rarely refer to their guides during services, but that does not mean mediums do not consider them a part of the process. Norman Ivory (2016: 95–96) writes that it takes time for people who have died to learn how to speak from their new location: 'people in spirit, especially recently after passing, are often not easily able to make contact with a medium, and so they are often introduced by another person from spirit who is more experienced.'

12 An anonymous reader for the journal noted that psychic work (in which the psychic's or medium's mind communicates with the audience member's mind) and mediumship (the medium's mind and body communicate with a person in the spirit world) are 'twin possibilities' in any

demonstration. Lynette's example is a vivid one: for nearly all of the demonstration she describes, she was communicating psychically, but with Norman's urging, she broke through into true spirit mediumship. The question of whether protonarratives generated in strictly psychic readings differ from those of spirit mediumship— treating these practices themselves as ideal types—is one I do not take up here, but warrants further investigation. One difference is that a psychic reading is often intended to reassure a person about the current state of their life and provide advice about how they might improve their physical, emotional, financial, and romantic situation in the future. Thus, any persuasive protonarrative will resonate with the details of the respondent's life rather than those of a deceased person.

13 It may seem odd that the author cannot recognise his own speech, but recording conditions at CSA services were not optimal: it is an echoey room with an overtaxed heater sometimes wheezing in the background and a noisy coffee urn asserting itself as it heats up.

14 Here, I am inappropriately 'feeding' the medium details. As a recipient, not telling stories can be hard work, when wrapped up in the ritual moment as one is.

15 Notably, the work cited by Huxley seems to refer to Spiritualism as a general antimaterialist philosophy and not the specific religious movement I discuss in this article. In Firth's lecture (published as Firth 1959), he cites Huxley's *Essays upon Some Controverted Questions* (1892), a book wherein Huxley responds to a critic who has misunderstood his work, W. S. Lilly. Lilly had published a polemic in the *Fortnightly Review*, in which he praised Spiritualism as a philosophy, but denigrated the religious movement that had taken on the name: 'The misuse of the word Spiritualism to denote a certain sect of vulgar charlatans is unfortunate' (Lilly 1886: 578n1). One of Lilly's intentions was to identify Huxley as a rank materialist. While poking holes in Lilly's funhouse-mirror image of him, Huxley (1892: 223) also wrote archly that Spiritualism's core claim about humanity's essentially spiritual nature was untestable: 'For the assumed substantial entity, spirit, which is supposed to underlie the phenomena of consciousness, as matter underlies those of physical nature, leaves not even a geometrical ghost when these phenomena are abstracted'.

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Adam Reed

GAMES OF COLLABORATION: AN ETHNOGRAPHIC EXAMINATION OF EXPERTS ACTING SERIOUSLY

ABSTRACT

This paper looks at the theme of collaboration through the prism of game design, and especially the example of serious games. At its heart, this is a consideration of two collaborative projects between experts. The first is a current collaboration between computer scientists, game designers, and a theatre company in Scotland, in which the author is also a collaborator and the project's ethnographer. The second is perhaps the largest and most high-profile collaborative project recently led and documented by anthropologists, Meridian 180, which aims to experiment with the norms of collaboration itself, and which has already been theorised and extensively reflected upon by one of its founders, Annelise Riles. The paper aims to put these two collaborations into some kind of conversation in order to throw each into productive relief and to ask some new questions about how we think about both the exercise of collaboration and the deliberate subversion of its norms.

Keywords: collaboration, serious games, co-operation, experts, rules, friendship

INTRODUCTION: A SERIOUS EXPERIENCE

Across this essay, I explore the distinction between two forms of collaboration: a 'normative' kind familiarly found in cross-university interdisciplinary academic endeavours, and an example of a 'nonnormative' kind deliberately set-up to run counter to the rationale and expectations of conventional collaborations between experts. In doing so, I seek to instantiate a third kind of collaboration, borne of putting those two forms side by side and of acting as if each one asks questions of or provides commentary upon the other. But that juxtaposition is further underpinned and complicated by another move: I make the subject or dominant concern in my chosen example of a normative form of collaboration (i.e., 'serious games') the inspiration behind or basis for that imaginative exercise. In what follows, both normative and nonnormative forms are diversely considered as games of collaboration.

This exploration is not entirely a conceit of my own making. Indeed, in the two ethnographic examples that I take to exemplify contrasting forms of collaboration I find a consistent willingness to either conceive of interaction as a form of gameplay or to posit collaborative action in a subjunctive mode. And, just as importantly, I find a desire to consistently foreground the concept of seriousness and in various ways place it in conjunction with the concept of play or games.

In terms of a normative collaboration, my example is drawn from a UK-based Engineering and Physical Sciences Research Council (EPSRC)–funded project, which brought experts from two fields within computer science (i.e., software engineering and security and human–computer interactions) together with experts from game design and from anthropology (i.e., myself), alongside an 'artistic partner' from a digital theatre company. Our collaboration aimed to develop the potential of using games and the methodology of serious game design for engaging professionals and 'code-citizens' in secure coding practices. As well as sometimes assessing the collaborative nature of games, the project, led by its game designers, concerned itself with making a small number of short digital games to provoke participants into considering the issues of code security. This included a digital game designed around the theme of collaboration itself (poor collaboration between programmers, developers, their bosses, and other staff within software development companies was seen as one among many causes of insecure coding practice). In addition, the game design workshops created by the project team were conceived to involve participants in collaborative exercises, deliberately placing individuals with different skills sets (i.e., in coding, software development, and security) together to co-design a serious game. These could be digital games, but just as likely boardgames, too, a few of which were eventually selected and turned into actual game prototypes by our game designers. Of particular interest in this serious game approach is the consistent emphasis placed upon the cultivation of a 'serious experience' (Mekler et al. 2018), as opposed to an experience grounded in entertainment or just having fun, for instance, and the accompanying question of how to integrate moments of critical reflection and learning into the design

and playing of games. This collaboration took place across three universities in Scotland and ran from June 2020 to January 2024.

By contrast, in terms of the nonnormative form of collaboration, I highlight the much larger and higher-profile example of Meridian 180. In this second case, we have a self-consciously unconventional collaboration between scholars, policymakers, and professionals, significantly informed by ethnographic practice and extensively documented by Annelise Riles (2017, 2022a, 2022b), one of the collaboration's chief instigators. Begun in 2011 and currently hosted at Northwestern University (Meridian 180 2024), at certain points Meridian 180 has counted as many as 1200 members from 39 countries (by comparison, our Scottish-based EPSRC-funded project had a fluctuating team of between 10–12 members). But, rather than size or scale, what especially intrigues me are the ways in which Meridian 180 simultaneously accepts and challenges the form and expectations of collaboration. At one level, Meridian 180 is a clearly recognisable community of experts. However, it is also a community that assumes that members will not solely collaborate based on their expertise. Indeed, part of the self-definition of Meridian 180 is that it is a collaboration borne out of a perceived crisis of expertise (Riles 2017: 186). As a result, one of the core principles of the collaboration is that members bring 'their professional backgrounds and expertise but explicitly shed their professional responsibility in order to speak only for themselves' (Riles 2017: 184). Meridian 180 is deliberately nonnormative in other ways. For instance, the collaboration eschews demonstrable outputs, and actively resists the expectation that members are working towards tangible goals (Riles 2017: 187). Furthermore, there is an equivocation about purpose and an embrace of the principle of play.

In Meridian 180 we acted 'as if' we are seriously collaborating towards some other end—some output, such as... legal reform proposals, consultation among policymakers or book publications. And yet, the ultimate purpose remained curiously undefined with explicit and implicit cues communicating 'this is only play' at certain moments… (Riles 2022b: 41)

As the quote above illustrates, within this nonnormative collaboration seriousness is a bracketed concept. Riles tells us that at times project members acted as if they were 'seriously collaborating' towards fixed ends, while at the same time regularly sending out signals to each other that 'this is only play'. In fact, like much recent social scientific literature on collaboration which calls for participants to leave a space for playfulness and humour as well as for non-purposeful experimentation (see Calvert and Schyfter 2017), play is marked as something creative to introduce into the collaborative process, an innovation of sorts. Elsewhere, Riles (2022a: 37) invokes the long-established notion of 'serious play' as one possible way of figuring activities within Meridian 180, alongside the legacy of Gregory Bateson's communicative theory of play. Like most other commentators drawing on those sources, Riles (ibid) makes the point that such play should not be held apart from the concepts of 'work or seriousness'. However, and this is the tension that interests me, play remains either essentially communicative in nature or somewhat whimsically rendered, as well as assumed to be against the grain, especially of conventional instrumentalist forms of collaboration.

By contrast, play as an assumed quality of all games was a rather mundane concept in our ESPRC-funded project. Game designers did not need to be told that play was a form

of work, for they could automatically see the labour involved in making games, whether for education or entertainment, just as they presumed that games (and play) were inevitably the result of design. There was then nothing innovative about the introduction of playfulness. But there was also no presumption that play was noninstrumental in spirit. For instance, their expertise was grounded in the identification of the whole mechanics of game play. As the title 'serious games' might suggest, reward as well as purposefulness were central to their ambitions. The game designers regularly reminded us that while serious games can be fun, that is not their primary rationale; in a joint publication, they stressed that 'games can be *rewarding*, whether or not they are also *enjoyable* [original stress]' (Abbott et al. 2022: 2). As we will see, the seriousness of serious games can include ambitions to problem-solve, but also to provoke and raise awareness; its purpose as an educational tool is often broadly moral in tone. Moreover, the crucial communicative question was also different from Meridian 180, for the design of serious games was all about communicating or sending cues to its players that 'this is serious' (and not just fun or enjoyable). Seen from that perspective, there was a different purchase to the notion of serious play. If all games necessarily involved play, the issue was not whether play was distinguishable from seriousness, but when it was so and how the serious potential of play might be better developed or harnessed.

The game designers in our project saw games everywhere. They certainly would have had no trouble considering Meridian 180 a type of game or assessing its forms of gameplay, although I never invited them to do so. For them, the more important question was always what kind of game it was. Not only how it was made or designed and what playing experience

it delivered, but whether it was a good or bad game (i.e., as a serious game, whether it produced the serious experience desired). Although Riles never identifies Meridian 180 as a game (the most consistent reference is to the collaboration as an 'experiment'), those sort of questions do sometimes crop up. In fact, Riles directly addresses the issue of the collaboration's success or failure, and specifically the success or failure of one of its core principles: the conceit that the collaboration has no outputs (Riles 2017: 187). Although I was a member of Meridian 180, admired its scope and ambition, and participated in a few of its online forums (initiating and curating one of them), my engagement was comparatively marginal. Thus, I do not feel qualified to speak about the practice of Meridian 180 in any first-hand sense. Instead, I want to rely on the descriptions provided by Riles to help throw the terms of collaboration within our serious games project into productive relief, and vice versa. Across this essay, I also occasionally engage with some of Riles' wider work, especially where it helps develop the sense of collaboration as an historical and relational artifact of cultures of expertise.

SERIOUS GAMES, TWICE

'Games are especially good at showing us what they are made of,' Ian Bogost (2016: 19) observes. As such, 'a ball and two goals, no hands' neatly describes the game of football, and 'four squares stuck together, falling over time' succinctly captures the action of the classic video game *Tetris*. 'But it's not only games; everything has borders and contents, edges and materials,' Bogost advises. It's just that the 'artificial, deliberately limited structures [of games] teach us how to appreciate *everything else* that has a specific, limited structure. Which is just to say, *anything whatsoever*' (Bogost

2016: 12). A much-quoted game designer and public intellectual, and a favourite author for at least one of the game designers in our EPSRC collaborative project, Bogost here captures something of the disposition and outlook of his discipline and profession. That is, a tendency to appreciate games through the artificial limited structures and associated mechanics or procedures taken to define them and a willingness to consider game-like structures of interaction everywhere.

Of more immediate relevance, Bogost also provides a helpful account of what serious games are and how they emerged within traditions of game design. 'Interrogating the relationship between seriousness and play is nothing new,' Bogost (2010: 54) states, citing the early influence of arguments made by Johan Huizinga (1955), for instance. However, the category of serious games seems to have emerged somewhat independently of those discussions about serious play and to offer what Bogost (2010: 55) terms a 'new collusion of seriousness and gameplay'. Indeed, Bogost identifies Clark. C. Abt's book, entitled *Serious Games* (1970), as the most obvious origin point for the category. Here, serious games are put forward in the sense now familiar to us—that is, as games with 'an explicit and carefully thought-out educational purpose' (Abt 1970: 9), as opposed to, say, a purpose of entertainment or as Abt would have it, 'amusement' (ibid). These games, which in those pre-digital days were conceived to be either board games or role play games, had defined users too, already conceived as largely institutional in nature, centred not just in education but also in industry, government, and science (Bogost 2010: 55). But it appears that the category of serious games subsequently dipped in profile, to the extent that nearly 30 years after that book was published the name could be reclaimed or recoined, without

reference to the work of Abt, by those initiating the new videogame arm of the Woodrow Wilson International Centre for Scholars (ibid). Bogost (2010) explains that since then the idea and practice of serious game design has primarily arisen through the sponsorship and promotion of that Centre, whose mission statement echoes much of what Abt had to say. This included the assumption that computer-based games could be utilised to address 'key challenges' faced by society and identified by government, as well as the principle that games could be designed in the service of both 'public and private organizations' (Bogost 2010: 56). Although Bogost's narrative is almost entirely centred on the category's development in the USA, much in this account equates to how serious games were understood by the game designers I knew, even if they remained somewhat unclear about the category's origins.

But Bogost offers further observations on the rise of serious games that are worth considering, especially as they come from a place of scepticism about the category's value. First, Bogost makes the point that the defining adjective—that is, 'serious'—remains somewhat unexamined. Those engaged in crafting a serious experience have surprisingly little to say about the exact qualities of seriousness. By way of exemplification, Bogost provides a range of possible resonances. For instance, does 'serious mean *solemn*, implying emotionlessness and sobriety,' or does it 'mean *weighty*, implying consequence and demanding consideration' (Bogost 2010: 56). On the other hand, does it 'mean *grave*, implying severity and foreboding,' or '*highbrow*, implying intellectualism and profundity' (ibid). Whichever meaning or mix of meanings is intended, Bogost argues that serious game designers cannot simply deploy the adjective as an assumed opposite of entertainment. Far from convinced, Bogost

nevertheless suggests some ideas. Perhaps serious might 'imply care and attention to detail, especially as such care leads to reflection,' he proffers (Bogost 2010: 58). Perhaps it might also 'imply substance, a window onto the underlying structure of a thing' or the procedures that define it (ibid).

In fact, Bogost's rationale for discussing the validity of the category serious games is prompted by a desire to promote an alternative, the category of 'persuasive games.' The suggestion for a new name is informed by a wider interest in better exploring the potential of the procedural rhetoric of computer gaming. However, it is also driven by a desire to distinguish the politics behind these two options. For Bogost (2010: 57), the adjective in serious games ultimately always suggests that 'seriousness is… deployed in the service of institutions,' that it is there to foster institutional goals and progress. By contrast, Bogost (ibid) states that 'persuasive games can also make claims that speak past or against the fixed worldviews of institutions like governments or corporations'. Indeed, whether designed for entertainment, education or activism, persuasive games would 'challenge our understanding of the way things in the world do or should work' (Bogost 2010: 59). The distinction is important to keep in mind, even if 'serious games' remains the dominant category. Certainly, for a research council–funded collaboration like ours, the serious experience provided by games is expected to support UK government agendas linked to improving public and professional secure coding practices. But, at least for the game designers with whom I worked, that role does not preclude the possibility of other serious games also challenging institutional goals or speaking against structural powers and assumptions. Indeed, the project's game designers regularly cited examples of such games as an inspiration,

held at least in part responsible for a developing commitment to what they still do term serious game design.

One of the most interesting aspects of the origin story for serious games that Bogost presents is the observation that the category keeps resurfacing in different domains, appearing each time as it were *sui generis*. This is perhaps most starkly exemplified by the fact that the category has also arisen within anthropology; I am talking of course about Sherry Ortner's (1996, 2006) apparently independent coining of the term as part of an attempt by that author to further develop insights drawn from models and theories of practice. In this iteration, the idea of serious games stands for the following characteristics of 'social life':

> … that [it] is culturally organised and constructed, in terms of defining categories of actors, rules and goals of the game…; that social life is precisely social, consisting of webs of relationship and interaction between multiple, shifting interrelated subject positions, none of which can be extracted as autonomous 'agents'; and yet at the same time there is 'agency,' that is, actors play with skill, intention, wit, knowledge, intelligence. The idea that the game is 'serious' is meant to add into the equation the idea that power and inequality pervade the games of life in multiple ways, and that, while there may be playfulness and pleasure in the process, the stakes of these games are often very high.' (Ortner 1996: 12)

Ortner tells us that she modified the category to include the adjective serious 'because the idea of the game in English connotes something relatively light and playful' (ibid). But, in addition, a sense of seriousness comes from the fact that social life or the 'games of life' are inevitably power-ridden and unequal. Although Ortner (2006: 130) is careful to insist that this deployment of serious games had 'nothing to do with formalistic game theory', and indeed it came before the more recent wave of interest in serious games within game design, there are some interesting resonances to the kinds of emphasis drawn out by later figures such as Bogost (2010, 2016). For instance, the idea that the artificial, deliberately limited structure of games can be understood as a template for considering the limited structures of interaction generally available to us, and the accompanying assumption that we need to learn how to best play the rules of those games.

Nevertheless, it is important to recognise that Bogost does not cite Ortner, and that none of the game designers with whom I collaborated had ever heard of Ortner's version of serious games. Indeed, the two definitions are in many ways incommensurate with quite distinctive trajectories. In the case of Ortner, the idea of serious games operates first and foremost as a metaphor for social life; Ortner (1996: 13) does consider several other possible options, such as 'projects,' 'dramas,' 'stories' or 'narratives'. Here, attending to the *games of life* means attending to 'a model of practice that embodies agency but does not begin with, or pivot upon, the agent, actor or individual' (Ortner 1996: 12). For Ortner, this is precisely what makes the 'image' of games useful; it helps draw out that analytical emphasis. However, the serious games that Ortner does go on to describe or use as examples are in essence made up of the same stuff that anthropologists conventionally work with, such as webs of relationship, gender, subject positions, and interaction. That is, the kinds of forms that anthropologists conventionally take seriously. Or, returning to Ortner's own rationale for the idea of these games being serious, the kinds of

things, such as issues of power and inequality, that anthropologists get serious about because they are recognised matters of concern. But, in all these reflections, Ortner proceeds without really understanding how games are made or designed.

By contrast, the serious game designers I knew begin with the vocabulary and processes of game design. This is, after all, what they are most serious about. Then, by extension, they proceed to make comparisons to matters of serious concern elsewhere, such as identified problems in society or organisational culture. But, they do so without really understanding how social life—at least in the anthropological sense described by Ortner—gets instantiated or reproduced. That is, they are, ultimately speaking of or driven by the ambition to design or make serious games.

Despite these obvious differences, and the complete absence of reference to Ortner's categorisation amongst game designers, I am interested in sustaining the conceit of seeing serious games twice. That is, as a category embraced (and occasionally contested) by game designers and as a category historically deployed in anthropology by Ortner. Indeed, across the rest of this paper, I offer that double perspective when considering my two examples (i.e., our EPSRC-funded project and Meridian 180) as games of collaboration. Whilst I cannot claim any previous familiarity or special affinity with the readings of social life offered through Ortner's metaphor of serious games, I can recognise the project and its exhibitions of seriousness as classically anthropological. It can, in that sense, stand as indicative of some of the ways anthropologists might approach such a study; indeed, it would be possible to employ Ortner's model of serious games—that is, to treat and analyse each form of collaboration as exemplifications of certain games of life. I do not

take such a literal approach to my engagement with Ortner, but her model of serious games does provide me with an opportunity to ask anthropological questions of the collaborations, whilst retaining the frame of serious games as well as to reflect upon the seriousness of doing so.

GAMIFICATION?

In the early project meetings of our EPSRC-funded collaboration, much time was spent negotiating expert positions and outlooks, both with a view to clarifying distinctive contributions to project goals and to simply ensuring that we each understood where the others were coming from. The conversations were helpful and led to concrete actions. For instance, one of our artistic partners (i.e., a member of the digital theatre group) proposed that we create a project dictionary with translated disciplinary concepts as part of a process to 'develop a common vocabulary on software security.' The same person recommended that we construct a key series of working metaphors for the challenges of secure coding. But, those meetings also sometimes raised tension point between expert positions. Indeed, here I want to focus on one such tension point most keenly felt by the project's game designers, which centred around perceived misunderstandings of the differences between serious games and gamification. My interest in raising this specific example is twofold. Firstly, I believe that the contrast further develops a sense of what distinguishes serious games, at least from the perspective of these game designers; and, secondly, I believe that the contrast between gamification and serious games provides one productive avenue for exploring our two collaborations as games.

With all this in mind, I begin by offering an illustrative extract from the transcript of

one early project meeting. Please note, I use pseudonyms to help the reader retain a sense of who is speaking throughout the conversation and in the reflections that follow. After each initial name, I also give the speaker's abbreviated role within the collaboration (i.e., Principal Investigator or P-I, Co-Investigator or Co-I, Research Assistants or RAs, & Artistic Partner or AP) as well as their field of expertise.

> *Màiri* [P-I & human–computer interactions]: I want to ask the global question. What is it we are wanting to discover through this pilot forum?
> [Màiri invites the three RAs to respond first]
> *Christos* [RA & human–computer interactions]: I want us to identify how participants prioritise security and its components. How they communicate that knowledge, and how we can use this knowledge in designing games that will feature in the workshops.
> *Eleni* [RA & game design]: And, we want to see how they will combine secure coding issues with the gamification practices that we invite them to participate in.
> *Màiri*: Ok, the pilot forum should also help identify the secure code snippets that we want to use.
> *Xiaoyang* [RA & software engineering/security]: And, it should help us understand the relevant learning process around particular security issues, to assist in the gamification process.
> *Màiri*: So, I would recommend we look at how we used gamification in the health rehabilitation process [a focus in a previous research council–funded project led by Màiri].
> *Alice* [AP & theatre director]: What's going to be useful to me is to understand

the top vision of the project. And how our participants understand security issues and how they communicate those things. I will need to dig into some of the language and then have another discussion.
> *Màiri*: I was hoping that you will help with the first part of the pilot forum. You know, in dramatising the news story [about a security breach] that we want to present to kick discussion off…
> *Claude* [Co-I & game design]: Sorry, can I ask what is the rationale for gamification? I'm confused as to why we are considering it.
> *Christos*: It's about engagement in the learning process around security issues. We want to gamify that process so people will engage more with the chosen issue.
> *Claude*: Ok, but we are concerned with serious games. Can I remind everyone that gamification and serious games are very different things. Gamification has a focus on performance, whereas serious games have a focus on learning and teaching. We need to be careful here. We need to target participants through a serious games approach rather than a gamification approach.

This meeting was called to discuss plans for a pilot forum. Forums were conceived as the first stage of the collaborative project, designed to gather material and initial feedback on the main security concerns of our participating code-citizens or software development professionals. However, because of Claude's intervention, the conversation swerved to, once again, address the question of what distinguished a serious games approach. First prompted by the RAs' slippage into the language of gamification, the issue—from Claude's perspective—became especially concerning after the suggestion made

by Màiri, our P-I, to borrow an approach from a previous human–computer interactions-led project. Focused on assisting older people after major surgery, this collaboration sought to keep its participants better motivated by gamifying the rehabilitation process, specifically through visualising performing rehabilitative physical exercises in the form of simple digital games. As Màiri explained to us, the rationale was to make these otherwise boring and highly repetitive exercises so enjoyable that participants forgot what they were doing, resulting in their adherence to the rehabilitation programme and hence greatly improved recovery rates.

Claude's objection to this approach as a model for our project was partly based on a sense that the suggestion somewhat encroached upon the expertise of the collaboration's game designers. However, the more pressing concern was that it misconstrued the point of serious games. As became clear in a much later conversation I had with Claude, this was a recurring and wider problem, regularly encountered by serious game designers, so much so that Claude felt the need to explain the essential basis of the distinction again. 'Gamification is focused on performance—that is, on enhancing some level of performance,' Claude elaborated. 'In fact, it's really more about carrying out actions outside of the game…', with these actions 'fed through to the game, either via reporting or via tracking, in order to progress your game state.' Claude offered the example of fitness trackers. 'But, again, all this is linked to the activity you do in real life, right? It's about enhancing or motivating those activities.' Claude paused here to let the emphasis sink in. 'The serious game doesn't work that way,' he continued, 'for a serious game is its own entity.' I looked confused, so Claude sought a way to help me understand. 'If tomorrow we designed a beautiful serious game through which [players]

learn how to be great secure coders, well the game is never going to know it, right?' I nod. 'You might be using the game to transmit that knowledge, to communicate and maybe raise awareness, but, then, after the game is finished, it's up to the player to do what they want.' I nod again. 'You know to take away something from the game or not.' Claude relaxes somewhat as he can see my comprehension growing. 'So, to me, there's a big difference there. And it's quite frustrating when people talk about gamification when you're trying to design a serious game.'

Part of the reason that Claude was so resistant to collapsing the boundary between serious games and gamification was due to the knowledge of other well-known uses of a gamified approach, including as a popular incentivising tool in marketing or gambling. But, as a game designer, he was also fully invested in the distinction as a matter of design principle. Whilst serious games clearly had an external context for their targeted learning or educational purpose (such as secure coding), they did not interact with that context during gameplay. Instead, as Claude put it, these serious games are their own entity, the interaction is all internal to the game. By contrast, with gamification, the game serves that external context directly. Indeed, the game only works because it is in interaction with a selected purpose or activity outside the game. If learning takes place, as Claude admits it can, that too occurs during the gamified process of doing the thing at which you want to improve, hence, the emphasis on performance. With serious games, however, the application of learning is not a matter for the game, but for the player after the game has finished.

From a game designer perspective then, there is a way in which gamification is not truly about the quality of the game or the playing experience with its artificial, deliberately

limited structures. There is also a way in which gamification collapses the distinction between the inside and outside of the serious game, and the temporal distinction between play and its rewards. Although it might be possible to reconceive the combination of 'real life' activities (such as rehabilitative exercises or fitness training), tracking features, and certain game mechanics as the game itself, Claude chooses to place the emphasis elsewhere. For him, gamification is crucially about carrying out actions or improving performance *outside* of the game.

With such distinctions in mind, I am interested in returning to our games of normative and nonnormative collaboration and asking how such concerns might be relevant. For instance, is it more productive to consider the experiments of Meridian 180 as a serious game or as an example of an attempt to gamify collaboration between experts? In both kinds of collaboration, what is the relationship between the perceived inside and outside of collaboration? And, how are the principles of play connected to the experience or anticipation of a reward?

'In the common understanding,' Riles (2022b: 31) tells us, 'collaboration is collective activity among differently situated social actors directed towards a well-defined purpose' (see also Thrift 2006). This description is offered to throw the original and experimental nature of Meridian 180 into sharper relief. Riles (2022b: 31) continues, 'Every partner to the [normative] collaboration must understand their own relationship to this purpose, and a focus on this purpose gives the collaboration energy and form'. In this regard, the goals or purpose of collaboration drives interaction between experts and, therefore, also structures the gameplay of collaboration. But, as already discussed, the central principle of Meridian 180 involved an active eschewing of demonstrable outputs.

Indeed, its other minor 'rules of engagement' were also designed as antithetical to the norm. Rule 1 was as follows: 'to encourage risk-taking and discourage public posturing, conversations [between experts] happened in private and were not permitted to be quoted or disseminated' (Riles 2022a: 6). Rule 2: 'to break the aesthetics and politics of academic scholarship, we limited posts [on Meridian's website forums] to a given number of characters equivalent to a few paragraphs; citation of oneself or others, or promotion of one's research, were forbidden.' Rule 3: 'to escape some of the pitfalls of English dominance and to explore ways in which… meaning is transformed and flourishes through translation, we supported the costly and logistically complex translation of all posts into four languages: Chinese, Japanese, Korean, and English' (Riles 2022a: 6–7). In short, as Riles (2017: 187) clearly states, participants in this nonnormative collaboration were invited to deliberately resist the expectation that they were working towards tangible goals.

Thus, from the perspective of Meridian 180, if there was a gamified approach to collaboration, then it belonged to normative collaborations such as our ESPRC project— that is, to collaborations organised around the enhancement or performance of identified project goals. Alongside concrete outputs such as academic publications or policy proposals (or, as in our case, forums or design workshops or serious games), this typically included the active tracking and reporting of those goals as part of the evaluation of collaboration. Here, any interaction between experts appeared entirely subservient to the project's well-defined purpose, which itself appeared beyond that of gameplay. By contrast, the nonnormative collaboration of Meridian 180 was very serious about playing that interaction as if outputs, goals or purpose were absent or did not matter. In fact, its rules

of engagement or artificial, deliberately limited structures defined the experiment very much in the manner expressed by Claude when describing the distinctive approach of serious games. Like a serious game, Meridian 180 was played as though it was its own entity. Scholars, policymakers, and professionals might go on to do many different things because of participating in the collaboration, but knowledge of those activities was not built into the game's rules or terms of engagement.

Of course, one could also interpret this slightly differently. For instance, the principle of eschewing outputs or of collaborating without purpose might be read as a deferral of tangible goals. That is, the principle might be interpreted as an action or set of rules that does not exactly cancel purpose, but rather places it temporarily beyond collaboration. Indeed, as Riles (2017: 187) goes on to relay, the principle of no goals or of no purpose soon encountered semiregular resistance from some of the collaboration's participants. This came from those who needed outputs such as academic publications or policy proposals to justify their participation in the project externally. Additionally, such resistance came from those who found the lack of outputs ultimately uncomfortable or perplexing. In the end, the organisational team at Meridian 180 had to compromise, midgame so to speak, and introduce at least some conventionally recognised outputs.

However, Claude's distinction between serious games and gamification drew other sets of reflections from me. First and foremost, these reflections centred around the status of both collaborations as certain kinds of role-playing games (between experts). Secondly, it inspired me to more closely consider the question of who or what was in collaboration and which relations were reproduced or obscured through

such collaborations. The latter inquiry draws us somewhat back to the kinds of deployment and analysis of serious games described by Ortner.

As well as highlighting the assumption of purpose, Riles (2022b: 32) is keen to stress that normative collaboration typically 'turns on an aesthetic of difference (see also Reddy 2008: 58). 'One does not collaborate with others who are just like oneself,' Riles (2022b: 31–32) advises, 'since by definition the purpose of the collaboration is to enrol different skill sets… and different points of view in the service of the goal'. This understanding emerges quite clearly, I think, from the transcript of our EPSRC project meeting above. Indeed, the tensions revealed in Claude's reaction to the conversation about gamification speak to the expectations that professional differences will form the basis for any interaction focused upon project goals and that the integrity of those differences, therefore, ought to be respected. However, it quickly became apparent to me that our collaboration was not simply a role-playing game between independent experts or that some forms of expertise within the project contained further familiar bases for interaction.

Most obviously, these revolved around the institutionalised conditions for expertise. In the case of the project's six computer scientists, for instance, a relationship as colleagues at the same university in Edinburgh—albeit at varying stages of career development and, thus, occupying different positions within the local hierarchy—was evidently important. To the rest of us, there was an immediate sense of an orienting collegiality that preceded the collaboration, or that these project members already had a history of collaboration. As well as working together as teaching and research colleagues, a few had previously worked together on other funded collaborations (Màiri had previously employed Christos as a RA on

the health rehabilitation project, for instance). But, any sense of that relationship as computer science colleagues straightforwardly prefiguring the terms of interaction or gameplay within our collaboration was itself complicated by other realisations. Most notably, as everyone knew or soon discovered one of the three Glasgow-based game designers (i.e., Claude) had previously worked in the same university and school as the computer scientists. In this respect, Claude had once been their colleague. In fact, as I later learnt, that relationship had strongly informed the development of our collaboration's funding application. This document was put together by Màiri and another colleague, Erik, who had an expertise in the field of software engineering and security, but also had previously collaborated with Claude on a series of smaller funded projects.

In many ways, these collegial, intra- and interinstitutional relationships were entirely normative and recognised features of collaboration. Similar origin stories can be found for a whole raft of other collaborations. Beyond the simple observation that such relationships matter and that being colleagues necessarily impacts the role-playing between experts, there might not be much more to say. But, I am struck by the fact that these relations can also be configured in another way, which does appear to place them beyond the form of normative collaboration. That is, they can also appear as sets of personal relationships.

For example, the history of collegiality and collaboration between Claude and Erik was obviously underpinned by friendship (both French nationals living and working in Scotland, they shared the same first language as well as a love of playing games). But, as I came to realise, there were a whole set of other ties between project members. Erik and two other Co-Is with different kinds of expertise in software engineering and security also knew each other

through a history of playing board games together after work. Likewise, the links to the collaboration's artistic partner arose out of a prior acquaintance between Erik and Alice, the director of the digital theatre company, who had met and become friends because their children were already friends through primary school. Similarly, it turned out that Ruby, one of the other game designers from the school of art in Glasgow, had previously collaborated with Erik's partner on a funded project within the field of education at another university in Edinburgh. In fact, I could not claim to be entirely innocent of these personal relations before joining the project, since my own involvement in the collaboration emerged in an equivalent fashion. Erik and I were friends through our partners, who were colleagues in the same school of education. It was through that connection that the idea of adding an anthropologist to a collaboration between computer scientists and game designers first developed.

The point here is that, unlike institutional relationships of collegiality, these kinds of relations were not regarded as appropriate to highlight. Whilst the funding application for the collaboration required us to list fields of expertise and institutional affiliations, there was no space to list relationships based on friendship, on playing board games socially or on acquaintanceship through marriage or through the schoolyard friendships of our children. Indeed, it was not appropriate to highlight these ties through any rationale or justification for the planned collaboration of experts. This was partly because they could be conceived as a negative instance of connection. In fact, when I shared an early draft of this essay with a colleague in anthropology, they raised the possibility that the revelation of personal relations could be read as a commentary on inequalities of access to participation in normative collaborations between experts. Thus, even though a strong

collaborative logic existed for bringing these fields of expertise and these specific experts together in service to this project goal (for instance, Alice was not just a friend of Erik through their kids, but was also the director of the only digital theatre company in Scotland), it was almost impossible to present these personal relations as a positive contribution. Such relations, it appeared, might emerge as a natural consequence of collaboration, but they should not precede or overtly inform that collaboration. The emphasis is important to observe, I argue, because it laid the groundwork for gameplay within the collaboration. Whilst admittedly rather differently set up and conceived from Meridian 180, the EPSRC collaboration also worked in a certain subjunctive mode. We proceeded as if these personal relations were not there or did not matter; this was an essential part of our serious play.

As previously noted, Meridian 180 took a very different approach to acting seriously, one on the face of it considerably more accommodating to alternative bases for considering interactions between experts. For instance, this is reflected in the already cited invitation for participants to bring 'their professional backgrounds and expertise but explicitly shed their professional responsibility in order to speak only for themselves' (Riles 2017: 184). Indeed, Riles (2017: 184) states that participations in this nonnormative collaboration experienced that invitation as both 'refreshing' and 'hopeful'. Yet, we might ask, what does learning to speak for oneself (as an expert) actually mean? The description provided by Riles seems to imply that the hopeful moment achieved through shedding professional responsibility is wrapped up in a sensation of providing new bases for interaction between individual scholars, policymakers, and professionals from diverse transnational backgrounds. It does not suggest a surfacing or acknowledgement of those personal relations that appear to precede or already coexist alongside relationships of expertise. In this regard, Meridian 180 appears quite normative. Serious play is about establishing new relations as a consequence of acting as if outputs and professional responsibilities do not matter rather than about admitting old friendships or acquaintanceships or ties through kinship or through longstanding social activities such as playing games together.

To be fair, Riles is acutely aware of the ways in which the form of collaboration can exclude or obviate the form of personal relations. Indeed, the description of Meridian 180 as an experiment in nonnormative collaboration rests not just upon a contrast with normative practices of collaboration, but also upon a strong sense of shifts in dominant tropes of transnational organisation between experts as well as other actors. Riles (2022a: 9) suggests that our current era of collaboration was closely preceded by an era of the 'network,' and that any account of Meridian 180 needed to appreciate 'the difference between seeing and creating networks everywhere and seeing and creating collaborations.' As that earlier work on the organisational trope of the network illustrates (see Riles 2001), networks were until quite recently 'held out as engines to solve the most intractable global problems by bypassing traditional forms of organization, such as the nation-state, and allowing ordinary people [including experts] to communicate and organize directly' (Riles 2022a: 9). The crucial difference, however, is that the network did include an acknowledgement of the importance of personal relations. In fact, Riles highlights that the form of the network worked through an internal tension between the 'personal' and the 'professional,' almost as though each was a necessary side of the other and both were an essential quality of networks (Riles 2001: 58–60). This historical contrast helps us

to see, once again, the distinctiveness of games of collaboration.

COLLABORATIVE OR COOPERATIVE GAMES

Of course, the language and design practice of serious games are full of important genre distinctions, most of which closely mirror the distinctions or typologies used in wider game design. Indeed, in our EPSRC-funded project the question of which games might serve as prototypes for our serious games about secure coding cropped up all the time. Project members drew on their diverse gaming knowledge and gameplay experience when discussing these choices, as well as relying on the expertise of our game designers. In this section, I want to explore a little further one kind of highlighted distinction: that between collaborative games and cooperative games. The selection is, in many ways, obvious, since across this essay I have speculated about treating both our EPSRC project and Meridian 180 as games of collaboration. One might, therefore, expect some attention to what game designers say about collaborative games. And, since their definition seems in large part to rely upon a distinction with cooperative games, one might also expect some reflection upon the fluctuating relationship between these two types of game. (As we will see, in game design the two terms can sometimes be conceived as oppositional, while at other times used quite interchangeably.) More broadly, I am interested in how this typological distinction might help us ask new or further questions about the relationship between normative and nonnormative forms of collaboration.

Figure 1. scare City
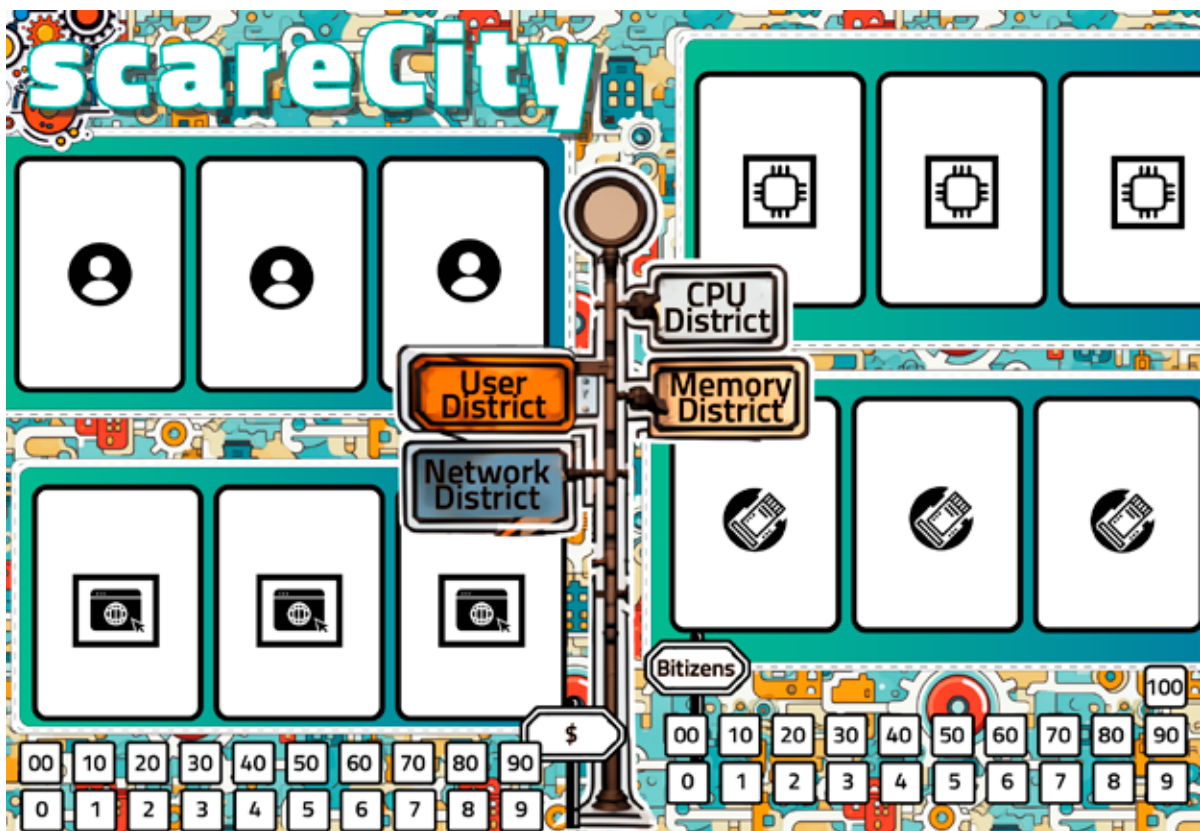
To begin, let me take you to a later stage of the EPSRC project programme, the game design workshops. As I mentioned right at the beginning of the essay, these were planned as exercises that brought participants together into small teams to co-design a serious game. I want to quote from the transcript of one design team as they discussed how to develop their serious game idea. This included a detailed discussion about how the conceived boardgame might speak to the many challenges of coding securely. However, it also included a discussion about examples of games that might inform the design. Although these workshops were intended for our volunteer code-citizens or software professionals, in this instance the design team participants were a selection of project members: that is, Claude; another software engineering and security expert on the project who I call Dave; and Oliver, a technology journalist, but also a core member of our artistic partner (AP), the digital theatre company. The participation of project members was unplanned, a consequence of working through several lockdown periods during the COVID-19 pandemic. Yet, I believe for our purposes, it was fortuitous, since it allowed a continuing sense of the collaboration between experts.

> *Claude* [Co-I & game design]: So, to recap, I think we are talking about a city builder game, in which players manage a development resource budget and they have to balance growth and security.
> *Dave* [Co-I & software engineering/ security]: Yes, but we decided that this is a city that lives in a computer. So, we will have 'bitizens' rather than citizens [everyone chuckles]….
> *Oliver* [AP & technology consultant for theatre company]: Could one of the resources be 'data'? Bitizens have personal

data and corporations in the city also have data. If bitizens lose privacy, their data gets taken away, so they feel bad. Players need to preserve data to prosper…
Dave: Yes, but the key learning outcome would be that coding securely should be a first-class priority or at least go hand-in-hand with writing software. I wouldn't want a learning outcome to encourage the idea of taking a risk with that…. If the point of the game is happy bitizens that also needs to be quantified. [Players] need to know how near the end goal of the game they are.
Claude: And we need to think about the balance of the game. Perhaps it's about putting other strategies in place or generating enough data. Has anyone played *Catan* [a multiplayer boardgame where players take on the role of settlers attempting to develop smallholdings]? There, the end goal is about attaining a certain number of main resources and the balance is between spending resources to generate more resources or spending money to build a base on the board…
Oliver: I think we need a heuristic of bitizen happiness to speed things up.
Claude: We could use randomisation and odds, like roll some dice…. But I am wondering if we should make it a cooperative game. Ideally, in terms of learning, we want players to be able to talk to each other.
Dave: What about that game…? You know, the one where in the end there is only one person left, but you need to build teams along the way?
Claude: Don't know it. But what about *Forbidden Island* [a multiplayer boardgame where players assume the roles of adventurers looking for hidden treasure;

all players win if they find the treasure and escape the island, but everyone loses if they cannot]? We can do that, but it's not necessarily easy to design as it requires a lot of balancing. It will generate a lot of quality discussions between players in the same team. But there are risks there. If the system or the game wins, as it often does, that can leave a bitter taste. And if we design a cooperative game with a collective task there is far more chance of someone sitting back and letting the rest of their team make the decisions. Or you get the risk of having a dominant player.

Dave: There was a game we once played [i.e., Dave and Erik plus the third software engineering and security expert on the project]. It's a card-based game. You play as a team versus the game, but no one can speak. Even if you know [because of the cards held] what your teammates should be doing, you can't tell them. So, you have to rely on the competence of your colleagues, which is just what it's like in software development teams. I am wondering if we made it a two-player game if that could be more cooperative. You know, you have a verification person and a developer, each needs to do their role in silence and takes action without help.

For me, it was exciting to witness a conversation between project members about the design of a serious game. Indeed, participating in and observing this process of codesign was the closest I came to really feeling part of a collaboration in the normative sense. That is, the sensation that our combined forms of expertise (mine far less than the others!) dynamically and effectively worked in tandem to produce a concrete output: specifically, a prototype for an actual boardgame entitled *scare City*. But,

the experience also drew my attention to the category of cooperative games, which in the extract quoted above appears as a type of game with properties relevant to the ambitions of serious game design. As mentioned previously, I also subsequently learnt that these games were usually discussed through comparison with another kind of games, collaborative games.

Whilst my interest was immediately sparked by the thought of putting the form of collaboration in contrast with the form of cooperation, it soon became clear that at least from the perspective of our project's game designers this was not such a straightforward proposition. Ruby, for example, explained to me that both collaborative and cooperative games required players to work together toward a common goal, just with 'variations in the level of competition and decision-making.' In the case of cooperative games, the joint objective of players made them join forces to overcome challenges set by the game and the game's mechanics. As already noted, a win or loss was usually shared. By contrast, with collaborative games, some elements of competition were 'integrated into the cooperative framework,' with players often setting individuals goals or scores alongside the shared objective. As Ruby clarified, here 'collaborative means that everyone is still working together but you can't fully trust *everything* [original emphasis] another player says because they might have a hidden agenda.' Thus, collaborative games leave space for more individual player agency or tactics. However, it is notable that in this distinction both cooperation and collaboration also feature as mechanics of gameplay present in both kinds of game. Ruby told me, for instance, that in cooperative games the 'main focus is upon teamwork and collaboration to gain that collective win,' whereas in collaborative games 'the degree of collaboration and competition can

vary, enabling a much more flexible structure of cooperation.' Ruby further added that other designers and gaming communities might deploy the two terms slightly differently and even sometimes collapse the distinction entirely.

That caveat aside, I was intrigued by Ruby's definitions and how they might be used to recalibrate what I have so far observed about the EPSRC project and Meridian 180. First and foremost, the idea that a collaborative game might be distinguished on the basis of the unreliability of fellow players, their hidden agendas, and, ultimately, by a lack of trust between collaborators throws our settled understanding of collaboration into some relief. While it is true that Meridian 180 does operate on the presumption that expertise is in crisis and that normative collaborations between experts suffer from strategic imperatives as well as individual ambitions or the expectations borne of institutional evaluation of individual performance, those suspicions are not equivalent to the way game designers consider the attributes of collaborative games. Most obviously, this is because collaborative games are not being judged negatively. Those properties of unreliability or a lack of trust and of individual ambition or tactics simply define the nature of gameplay and, hence, the potential for that type of game. Of course, the wider implication is that both collaborative and cooperative games are designed and those designs have a purpose. In this respect, the experience of either is quite different from the quality of serious play to which Meridian 180 aspires. As such, it is largely assumed that the rules of engagement free participating experts from the constraints of predetermined and, thus, normative interactions and experiences of collaboration.

Turning our attention to the EPSRC project, the questions associated with the choice between modelling a serious game upon collaborative or cooperative game principles might be productive in other ways. Whilst one might gain much by reflecting upon whether our normative collaboration was more like a collaborative or cooperative game in practice, I am interested in probing the supplementary questions that, for our game designers, always inform this choice. That is, the assessment of the respective pros and cons related to the quality of serious experience. For instance, as Claude observed, cooperative games require teamwork and, thus, by their very nature can enable or facilitate forms of reflective discussion between players. This was an obvious utility or benefit to a serious game. But, Claude also recognises some of the risks for the serious experience of deploying cooperative game models. For instance, cooperation, which is driven by the necessity of winning or losing together, can result in one player from a team dominating decision-making. This can allow other players to disengage from the serious experience; and, if the system wins, as it often does with cooperative games, the experience can act as a disincentive to learning. Claude also mentions the wider design challenge of balancing such games: 'balance' is a perennial problem in game design (see Becker and Görlich 2020), but cooperative games apparently raise peculiar concerns.

Thinking about normative and nonnormative forms of collaboration as serious games might then result in a productive and timely flattening of value judgements. This could enable redirecting attention towards an exploration of the status of collaborations as games with a potential to help players (including experts) act seriously in different ways. In fact, the very confusion about the distinction between collaborative and cooperative games, which includes the possibility of the interchangeability of the terms, means that such reflections contain their own dynamism. The comparison between

normative or nonnormative collaboration and the kinds of questions such comparative work engenders can, thus, always be slightly reframed.

For instance, during our conversation in the design team, I also quickly googled an explanation for cooperative games and arrived at a set of comments posted to the site BoardGameGeek.com. 'Cooperation is a behaviour that benefits the shared goal,' I read. But, since, in this scenario, 'you are entirely replaceable there is always one decision that is perfect, and it can always be figured out which one that is.' Cooperation, then, is 'deterministic.' By contrast, I read on, 'collaboration is an act of will within a shared context, usually to the effect of getting closer to a shared goal.' But, this time with the proviso that the 'perfect decision' or ultimate solution 'cannot always be figured out.' In this regard, collaboration is properly regarded as 'nondeterministic' (BoardGameGeek.com 2017). The post thread later clarifies that point by returning to the definition of collaboration. 'The core idea is that collaborative games allow you to make decisions ON YOUR OWN… Never can someone else make a better decision than you for yourself.' In both types of games, players strive towards shared goals and to align themselves in some fashion with other players, but wilful decision-making is only a required component in collaborative games.

This explanation in many ways resonates with that provided by Ruby, but there is a subtle shift in emphasis. Here, the issue is about replaceability. As the author of the forum post emphasises, the origin of the word cooperation suggests an 'obligatory act of being part of a process, as a gear is part of a machine.' You as a player may be indifferent or even adverse to that operation, whose goal is 'set from the outside,' but the game nevertheless requires you to follow along (whether you do so or not, the game continues in the direction

determined). In this sense, the post states, 'You are forced to cooperate.' It is important to stress, once again, that there is no value judgement in this observation. The author is absolutely not suggesting that collaborative games are better because they 'allow you to make decisions on your own;' indeed, shortly after making these statements, the forum praises the popular cooperative game *Pandemic* (a shared solitaire multiplayer game in which players work together as a team to manage infections around the world, while preparing resources to find cures). Rather, the point is about quality of playability and the different possibilities for stimulation or entertainment that each type of game offers. Thus, we might ask, do we want a form of collaboration where individual experts are entirely replaceable or one where they are allowed to make decisions on their own? Should cooperation be forced? Should the goals be shared and set from the outset? Or is there some benefit to cultivating a sense that collaboration is an act of individual will within a shared context, and to promoting the idea that there is no ultimate solution to be figured out through the action of collaboration?

CONCLUSIONS: THE RULES

At one point in the team conversation quoted above, Dave suggests that any players of our codesigned serious game will 'need to know how near the end of the game they are.' His observations were principally informed by a concern that gameplay must deliver on its key learning outcome, the important message that coding securely should always be a top priority when writing software. It was clear, however, that Dave was also drawing upon his own gaming experience as well as a growing understanding of how serious game design worked. Indeed, Claude interpreted Dave's

suggestion as a query about the balance of the game, which the game designer proceeded to reflect upon by drawing our attention to how the end goal was recognised in another very popular boardgame. This closely reflected the dynamic of our codesign process.

But, one of the aspects of that process that surprised me most was the fact that a discussion about the rules of the game was often held back. As someone with only a cursory appreciation of gaming, I had expected that we would need to pin these down first (because everyone knows that you must read the rules of the game before your start playing it). This was a rooky mistake. As Claude and the other game designers on our project often highlighted, setting the rules was first and foremost about reflecting upon what still needs to be explained or about the action of identifying and responding to a perception of gaps in a game's design. This did not mean that our game designers had relaxed attitudes towards rules. Far from it. Rules were strongly enforced, and designers were often incensed when discussing examples of games they felt had poor rules. For instance, I remember with a great deal of affection a lively conversation about the rules of Quidditch, the central game of the *Harry Potter* novel series and universe, which seemed to be held up as an exemplar of a bad or improperly balanced game. (The chief problem lay with the rule that the game will end when the golden snitch is caught, which renders the other rules and principles of scoring in the game of Quidditch entirely redundant. Ruby stated that she read somewhere that playing Quidditch was like investing in 'one game, say chequers or backgammon, and, then, after a period, being told to just roll a dice and declare that whoever got the highest number was the winner.') This meant, however, that the game designers thought about the role of rules and the time to consider them quite differently.

Thinking back to Meridian 180, for example, our game designers might have observed that this serious game was also imbalanced. Indeed, they might have pointed to the fact that the organisers of the nonnormative collaboration themselves felt the need to adjust the rules of engagement mid-game as evidence of that imbalance. (If you recall, some members of Meridian 180 expressed dissatisfaction, mounting frustration or concern at the eschewing of outputs, resulting in certain concessions around the production of academic publications and policy proposals [Riles 2017: 187].) Likewise, borrowing Dave's point, our game designers might have asked not just what the end goal of this game exactly was, but further how its participants would know that they were nearing the end of the game. In other words, they might have expressed concerns about game stakes as well. Serious game designers might query the correspondence between the learning ambitions of the collaboration (i.e., the eschewing of outputs as an exercise in reflecting upon the limits of normative collaboration and, hence, imagining alternative terms of interaction between experts) and the protocols and stages of its gameplay. Finally, they might have wondered how that game and the serious experience it aims to cultivate could have played differently if rule-setting had also been held back in the design process. That is, if those rules of engagement were viewed as rather more about plugging gaps than purposefully designing how the game of collaboration would take shape.

Such observations might be regarded as unfair or out of sympathy with the spirit of Meridian 180, which after all was never explicitly figured as a game, but instead as a kind of experiment. Perhaps. There are, however, other ways in which we can recognise that spirit of experimentation within a serious game design framework. At the beginning of this

essay, I briefly alluded to another output of our EPSRC collaboration: a small number of short digital games designed to provoke people to consider issues of software security. These were intended to be played by participants right at the beginning of the game design workshops and conceived as a way of getting them to think about the challenges of coding securely and simultaneously setting the mood for the codesign teamwork to come. Our game designers named these digital games 'Small Provoking Games' or SPGs and made it clear to us that these were quite different in design and purpose. As the name suggests, the games were first and foremost meant as disruptors. Often subversive of player expectations, each SPG operated through 'withholding information about game rules' assuming that this 'forces players to experiment, explore, and actively construct their own meanings and mental models' (Abbott et al. 2022: 9). In this case, the spirit of experimentation was defined not so much by setting alternative or nonnormative rules of engagement, but by making the question of what the rules of the game were part of the challenge of serious play.

Figure 2: Collaboration

In fact, the second of these provoking games was designed around the theme of collaboration itself, which in the digital game was both visualised and disguised through a design metaphor of an ecosystem. *Collaboration* (as project members titled the SPG) was a single-player, turn-based, puzzle game. At each level of the puzzle, the assigned task involved players finding the appropriate actions to sustain seven coloured lanes of a rainbow located in a rainforest. This rainforest featured other automated characters or creatures alongside the player's own and a dynamic environment with a periodic monsoon season. The broader metaphor of an ecosystem was meant to represent a publicly used software application

with specific cybersecurity requirements (in the designers' minds, the digital rainbow was conceived as putting 'rain' or data into the environment, the flow of which could be corrupted if the infrastructure was proven unsecure). However, the chief ambition behind *Collaboration*'s design was to simulate the experience of working in software development teams and, specifically, the challenges of collaborating with others in an office environment. Just as the lack of an overview or the lack of proper communication between team members in a software development company could lead to secure coding failures, players

also had to realise that the rainbow's health depended upon characters or creatures in the digital forest working together through a range of fixed combinations. In post-play discussion of the provoking game, which was also part of its design (Abbott et al. 2022: 9), participants could learn that the faces of the automated characters represented different personality types one might find in a software development team (each creature had a set of behavioural characteristics simulating those types). They could also discover that the different lanes of colour in the rainbow stood for diverse kinds of expertise or skillsets within such teams.

Figure 3. The 'faces' of Collaboration

One of the interesting things about the wider genre of provoking games is that they feature 'expected failure' alongside exploratory gameplay and techniques of distancing and

surprise (Abbott et al. 2022: 3, 9; see, also Khaled 2018). Indeed, it is rare that players complete a provoking game; completion is not necessarily the point. This was obvious from the feedback

from those who played *Collaboration*, since only a minority finished a few of the game's 15 levels. Even fewer managed to successfully interpret the range of software security issues addressed through the ecosystem metaphor, although the post-play discussion did lead to general critical reflections upon some of the challenges of coding securely.

Whilst there are obvious differences between these provoking games and the serious play of Meridian 180, I believe that the analogy holds some value. It can help us look again at what Riles (2022a: 8–9) describes as the unsustainability or 'ultimate failure' of this nonnormative collaboration and reappreciate the experiment. Retrospectively, one cannot help but wonder if expected failure was not also built into the design of Meridian 180. Riles suggests as much when proposing what we should view as the 'feat' or principle learning achievement of this nonnormative collaboration. As Riles (2022a: 9) tells us, the experiment did manage to hold 'the "ends" of collaboration in abeyance,' and it did so 'long enough to allow us to appreciate the "means"—the methods and techniques—of our professions and disciplines,' and, thereby, 'to revisit each of our expert tools by redeploying them against and alongside other's tools'. That sounds like a pretty successful serious game to me.

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Ingjerd Hoëm

TEMPORAL ORIENTATIONS IN LIFE STORIES: A NARRATIVE APPROACH TO THE ETHNOGRAPHY OF HISTORICITY

ABSTRACT

This article draws on ethnographic material from life stories and nonfiction literature and is complemented by fieldwork vignettes. The material is used to discuss how experiences of connections and disconnections between past and present, self and intergenerational relationships, relate to temporal orientations (Bryant and Knight 2019). In the narratives, traces of two salient paradigms framing the temporality of the present, which represent antithetical ways of dealing with connections between the past, present and future, are identified. These traces are found in expressions such as 'timelessness', 'beauty', 'now', and 'silences', but also more negatively, as 'depression', 'hauntings', 'pain', and 'time collapse'. I argue that the two paradigms ('presentism' and 'presence') coexist, and that they are partly in conflict with each other.

Traces of temporality in life stories provide us with keys to understand how temporal orientations, and their related horizons of expectation (Koselleck 1985) may also contribute to shape life trajectories. By explicating how narrators grapple with experiences of temporal disruption and how they try to come to terms with their experiences by seeing them as parts of larger societal events, aspects of the mechanisms whereby dominant modes of thinking become established are made visible to us (Scarry 2022). The merit in this kind of exploration for the ethnography of historicity (Palmié and Stewart 2019), lies in its potential for showing us how future life scenarios are impacted by the ways in which people deal with past events and affect their potential futures.

INTRODUCTION

This article highlights the friction between two salient paradigms framing the temporality of the present. 'Presentism' is the modernist belief in a radical break with the past (Hartog 2015).

'Presence' is the counternarrative, pointing to the continued existence of past events in the present (Runia 2006). Using material from nonfiction authors who narrate experiences that show traces of temporal orientations that can be related to both paradigms, I show

the coexistence and overlap between two historicities, but also point out how they differ.

By referencing silences, absences, and secrets, and concomitant feelings of anxiety and depression felt by three authors—Jan Ketil Arnulf, Daniel Mendelsohn, and Kapka Kassabova—I show how they are drawn to forge new connections between their pasts and their present through the force of the lacunae and hauntings in their present lives.

The texts that emerge from their respective explorations of their families' stories and current strategies of coping with loss and disruption are precisely the parts of pasts deemed inaccessible to the presentism frame of historicity. Yet, as these authors show, these unacknowledged pasts continue as haunting presences.

These works illustrate the coexistence and overlap between the two historicities, but, also, point to their qualitative differences as modes of being in the world.

SELF-PRESENTATION AS ATTEMPTS TO STOP THE FLOW OF TIME

To introduce the experiential dimension of the two historicities, I will take as my starting point an experience I had of 'reverse culture shock' having just arrived in Aotearoa New Zealand's capital, Wellington. I arrived in this city after a long stay in the small atoll community of Tokelau in the Pacific. The meeting between two different temporal orientations, between a present-oriented individualism and a genealogical, kinship-based way of life, created a strong cognitive dissonance, and an unexpected discomfort in me. I was standing on the main street downtown, on Lambton Quay, waiting for a bus. This was in the days before smartphones, so I just stood there and did nothing. I looked around, and because I had been in completely

different surroundings for so long, what I saw struck me with an additional great force.

I looked at the people around me, and unlike the life world of the Tokelau atolls, the place I had just left behind, it struck me that none of the faces around me seemed to have grown up, matured or become old. There were, of course, signs of aging in some, but they looked more like signs of decay—like something that appeared as mistakes, like blemishes that one tries to hide behind a well-polished facade. What I saw made me think of a particular type of fruit, the hard-glossy green Granny Smith apples that never seem to ripen, but which, if left for very long, can develop ominous black spots, a sign that they have rotted from within. I thought that the people I saw around me all seemed like they were working hard to keep looking as though they were somewhere between 20 and 30 years old; I found this sight a little creepy, unfamiliar, and almost obscene given the look I had obviously become habituated to from Tokelau—but which I had not entirely realised until that moment.

The memories with which I was filled and carried with me were of faces clearly marked by lives lived, with wrinkles, injuries, poor eyesight, and greying or white hair, but also with great vitality and an extraordinary light in the eyes of some of the elderly. In Tokelau, different age stages are clearly marked. If anything, they are over- and not under-communicated, as age groups have different status and positions and are met with quite different behavioural expectations in public contexts. Simply put, the older one is, the greater freedom and importance one has in terms of decision-making rights and political power. A person simply has greater leeway and more registers to draw on in general. Disease, decay, danger, and death are obvious and present aspects of everyday life. For example, people still practice the custom of

wakes, meaning that the sight of dead bodies is a regular occurrence.

Until recently, the islands have had such irregular boat routes and are situated so far from the nearest neighbouring islands, Samoa, that family members who leave the islands have customarily been treated as dead people. Upon death, a new family member will be given the deceased's name and take their place in the family group. Such a way of creating continuity between past and present is called genealogical, because it also sees all living beings as well as landscapes, ocean, and sky phenomena as present-day manifestations of previous forms of existence (Hoëm 2000; Salmond 2023). Apparently, for me, being a daily witness to death and decay and births as part of the everyday life I had lived during the previous months had seemed reality-enhancing in a way, while the 'photoshopped' image I saw there at the bus stop seemed unnatural and—yes, a little scary and unfamiliar.

TEMPORAL PARADIGMS WITHIN THE DISCIPLINE OF HISTORY AND THE ETHNOGRAPHY OF HISTORICITY

The first paradigm, 'the dominance of the present', or what is called 'presentism' (Hartog 2015), is commonly identified with the Euro-American tradition of historiography. According to this way of approaching the past, a direct experience of past events is only possible through the meaning horizon of the present. The second paradigm, that of 'presence', is more commonly identified with approaches that entertain the possibility of gaining experiential knowledge of the ethos of past epochs, such as, for example, advocated by Michel Foucault (Sandmo 2012,

2015). This paradigm is referred to as the 'past as presence' or the 'presence' paradigm (Runia 2006; see also Bangstad 2017). The developments that led to the contestation and partial replacement of the linear, evolutionary way of looking at history are well-known and are related to a loss of faith in the modernist project. Here, I present a brief outline of this revision of the overarching narrative of history as it relates to the emergence of an ethnography of historicity and linked to a discussion of how 'presentism' can be seen as part of a larger, late-modernist cultural complex.

The two paradigms from the discipline of history bring us two overarching concepts and interpretative frames of temporality. The two concepts and approaches 'presentism' and 'presence' come with baggage that makes dealing with them difficult. On the one hand, they are emblematically linked through two competing historiographical traditions or paradigms, two strands of thinking with partly incompatible perspectives on temporality. As such, they are examples of what Clifford Geertz has called 'experience-distant concepts' (Geertz 1974). On the other hand, they are also entwined with everyday life experiences, as 'experience-near concepts', such as those reflected in expressions including 'time stopped' or 'urgency' as we shall see. In other words, as temporal orientations that bring a focus to the present—or the past or the future—they can be identified ethnographically and may also be seen as expressions of forces beyond the linguistic, extending into a semiotics that is also economic and ideological. The linguistic expressions of temporal orientations, both of experience-near and more experience-distant concepts and qualities, occur in abundance in life stories.

To identify traces of these two temporal orientations ethnographically, I use the anthropological approach to studies of historicity,

understood as investigations into how people's relationships to the past, present, and future are constituted. I hold, with Palmié and Stewart (2019), that the dominant historians' linear, and ultimately modernist perspective on time, should not be exempt from the comparative approach. If the discursive dominance of this scientific paradigm, and its related 'secular' temporal orientation, is increasingly dominant globally, we should as anthropologists take extra care to document this development.

In their introduction to the new book series *The Anthropology of History*, Palmié and Stewart (2019) describe how various forms of historical experience have come under the shadow of a dominant Euro-American understanding of history. They see the ethnohistory of the '50s as an early attempt to bring other pasts, experiences, and forms of historical understanding to light. From the '80s, and building upon these seminal understandings, they include anthropological texts that can be said to challenge 'the epistemic infrastructure on which Western academic historicism rests' (ibid: xii). Among early challengers to this still-widespread way of thinking, they count the works of Sidney Mintz (1985), Ann Stoler (1985), Nicholas Thomas (1991), and Michael Herzfelt (1991) to name but a few. Palmié and Stewart emphasise Marshall Sahlins' (1985) perspective on 'history as socially relative' as expressed in his aphorism 'other cultures – other historicities'. Perhaps the biggest challenge to the dominant view of history, however, did not come from these early attempts to relativise history, but from what has been called the Subaltern Studies group of Indian history. This group of researchers, including R. Guha, G. C. Spivak, and D. Chakrabarty amongst others, claim that colonial history and Western understanding of history contribute to the silencing of local experiences, arguing that

researchers should turn their attention to local ways of relating to past, present, and potential futures.

To this advocacy for anthropology turning its attention to the study of other historicities, I make a plea for including paradigms of history and temporal orientations of a perhaps more modest sort than that of a subaltern alternative historiography. Stories of past experiences that intrude upon present lives exist in the shadow of the more dominant discourse, and, for that purpose, I also include the 'presence' paradigm in my exploration.

LIFE STORIES AS ETHNOGRAPHY: SOME METHODOLOGICAL ISSUES

The use of life stories, drawn from oral and written sources as ethnographic material, demands attention to genre conventions and reception history—that is, to meta-cultural knowledge and social context. The understanding that there is no one-to-one rendering of factual reality in text should not keep us from these rich resources given the insights they offer into key concepts and orientations (Hemer 2016; Bönisch-Brednich 2018). Elsewhere, I have analysed life stories looking for how discursive links are made between spatial orientations and intergenerational relationships (Hoëm 2004). Here, I identify discursive connections between temporal orientations and intergenerational relationships.

In addition to ethnographic vignettes based on my own fieldwork in the Pacific, I also draw on documentary literature. In the use of these nonfiction texts, I follow principles for interpretation developed in narrative analysis (Hoëm 2004, Ochs and Capps 1996). This approach implies taking the genre and reception

context into account and looking for textual markers (semantic fields and so-called 'deixis')—that is, references that anchor discourse in time and space, in places and relationships. In this way, I identify patterns of orientation, spatial and temporal, that help orient the author relationally in time and space in these nonfiction texts.

The nonfiction texts I have selected all begin with a stillness, a silence, and this silence is expressed as an experience that personal time has stopped. The narrator is trapped in an eternal now. How the narrator goes about redeeming the past haunting the present and shaping the social relations of which they are a part varies. But, in all the cases presented below, we see explicit attempts to forge new connections between past and present. Furthermore, and importantly, this forging has consequences for the future, since it involves creating new understandings of past events and reviving intergenerational relationships in the process of doing so.

To summarise, I treat the authors' craft as a case of narration or storytelling (orators, performers, and writers). I analyse their output, oral as well as written, in reference to the larger sociocultural context of which the storytelling practice is a part (Melhuus 1994; Hemer 2016).

PRESENTISM AND IDEALS OF BEAUTY

Because my impressions of what I called reverse culture shock in the introduction centred around the difference between a society focused on maintaining beauty as youth and one where age is revered, it becomes important to emphasise that both attitudes come with costs. In short, much personal work stands behind different types of practices when it comes to physical appearances, both those that highlight age and those that attempt to downplay the passage of time. In every society, people are concerned with how they appear and how others perceive them. Every one of us will also experience a variety of possible life courses by meeting with others, and over time, be exposed to peaceful or brutal deaths. It is possible for humans to imagine the end of their own lives based on what we learn from observing the end of others. The experience of the cultural importance of maintaining a youthful appearance that I just described is only a momentary impression of a random assemblage of people waiting for a bus. But it can equally be viewed as an expression of a deeper preoccupation with youthful beauty, of a cultural obsession with a perfect appearance. It can be argued that this preoccupation with youth and beauty has been with us since the dawn of time (Hughes 2020), but has taken on a special form symptomatic of modernity, as Christopher Lash (1979), Richard Sennett (1977), and Anthony Giddens (1992) have argued.

Author Daniel Mendelsohn describes the far-reaching impact of this obsession with a certain type of beauty as follows:

> In the stories of my mother's family, beauty is necessary, cleansing, justificatory: it generates the best and most vivid narratives, and redeems the worst imaginable suffering. [...] It seemed appropriate that I now belonged to a world that existed in an eternal present, because it had no generations. (Mendelsohn 1999: 150)

He ends this reflection by saying:

> In a picture, it is always Now. In a picture, if you're lucky, you are always beautiful. (Ibid: 151)

These efforts to stop time and create a life without ageing, and without generational differences, were brought to the fore in Scandinavian public debate a few years ago, when author and journalist Åsa Linderborg (2021) stated that she refuses to participate on TV because she is ashamed to see, as she put it, 'that her face sags'. That Linderborg puts into words feelings about the loss of a youthful appearance, but not least that she also expressed so positively her attachment to the power that lies in the possession of such an exterior that fits the model of an eternal now, caused much debate. Wasn't she a good feminist after all?

I take her statement and the debate that followed as an illustration that what I saw at the bus station in Wellington are symptoms of something that is important to many people in specific sociocultural contexts globally. Much work—both emotional and practical—is put into preserving an eternal now, also in terms of appearance. Other temporal orientations, such as those that highlight different age stages and generations, are linked to other life conditions and other challenges. However, the historicity of the modernist paradigm cancels time in a qualitatively new way.

My concern here is to show how, in a micro perspective, in the life course of individuals and families, this temporal orientation which brings a focus on an ongoing present also works in different ways. All overarching ways of thinking (or what we may call discourses) are dual in nature—they are realised in linguistic concepts, but they also reflect types of production forms, work, and life rhythms. As such, they have an affective dimension. The temporal framework of 'presentism', that of the eternal, unchanging now, is expressed, among other things, in the cultivation of youth and health, in the ideal of beauty that portrays the ideal human as free from disease, decay, and ageing.

'PRESENTISM' AS PART OF A LARGER, LATE-MODERNIST CULTURAL COMPLEX

Personal experiences and attempts to stop individual aging can thus be seen as instances of the temporal orientation of 'presentism'. These practices are, however, only a small manifestation of a much larger and complex trend. The late-modernist variant of the former assuredly future-oriented capitalism is described by Thomas Hylland-Eriksen as a state of simultaneous stagnation and frenetic activity—that is, a condition of 'overheating' (Hylland-Eriksen 2016). Historian François Hartog (2015) also analyses the weakening of faith in the future and sees it linked to an experience of the present taking over. Hartmut Rosa (2015) has even described this orientation as tending towards a further narrowing of perspective, bringing about 'a shrinking of the present'. As a sociocultural condition, its paradoxical impulses are characteristically summarised by him (2022) as 'modernity's furious stasis'.

A recent special issue section on temporality in *Social Anthropology* discussed the phenomenon of 'presentism' or the dominance of the never-ending moment. The authors argue that this temporal orientation can be examined through one of its manifestations, namely, the declaration and experience that something is extremely important, creating an atmosphere of 'urgency' (Bandak and Anderson 2022). In other words, they focus on the 'furious' side of Rosa's temporal diagnostic, and on the complex that causes 'overheating' in Hylland-Eriksens' terms. Bandak and Anderson encourage anthropologists to carry out ethnographic investigations into how such a perception of time and the experience of time is constructed. The articles in this special issue devoted to the study of 'urgency' showed how such an

experience of time—that something is urgent, that something is at stake—can come to be established as a general zeitgeist (Scarry 2022).

Importantly, Elaine Scarry argues that such a zeitgeist represents an affective resource available for manipulation. A reservoir of emotions (hysteria, anxiousness, restlessness, and dissatisfaction) once it exists can be used to enable political interventions, and make their implementation easier, especially in situations of crisis (Hoëm 2017). Bandak and Anderson (2022) strongly urge us, as Palmié and Stewart also do, to examine how such discourses about relationships between past, present, and future are shaped and how they are used.

In short, they offer good reasons justifying why anthropology should pay attention to how specific concepts of temporality are established and circulated in discourses that are partly about other things, such as, for example, beauty, youthfulness or economic crises (Knight 2015).

NONFICTION NARRATIVES AS ATTEMPTS TO CONNECT PAST WITH PRESENT EXPERIENCES

'Presence', the alternative temporal orientation, where the past manifests as an actively felt force in the present, is expressed in the many literary publications where the narrator tries to come to terms with a silenced, repressed or suppressed trauma or theme that has afflicted the narrator's family, often over several generations. This productive genre is sceptical of modernity's narrative of a discontinuity, an irrevocable break with the past. The books discussed below bear witness to experiences of being haunted by ghosts of the past and can be read as testimonies of the power of past events in the present. However, the texts frequently begin with what we have seen is a defining criterion of the

modernist paradigm of history, namely, a break with the past. The experiences they describe take the form of a perceived standstill or a persistent collapse of time.

ARNULF: A CULTURE OF SILENCE

Narrators often, but not always, refer to events related to the Second World War. One recent example is Jan Kjetil Arnulf's book *Den norske atomlandsbyen*, with the subtitle *Om tungvannet's tause forsvarsnettverk*[1] (Arnulf 2021). The narrator starts by stating: '[One of the main themes of this book is] the significance of silence in the stories about heavy water.' (2021: 13). The trope of silence, in the sense of deliberate secrecy or avoidances, is presented as a dawning realisation that there are things about which the members of his family do not talk. Furthermore, this silence signals to him that whatever it is that is not talked about has been kept hidden on purpose. As Arnulf reasons, the fact that secrecy makes sense in military intelligence is obvious—however, he reflects that in a family in peacetime, perhaps this silence should be read as an expression of something else.

There is a rich anthropological literature on how violence and trauma are linked to memories and memory. Connerton (1989) is a pioneering reference study, but see also, for example, Tarlo (2003) and Navaro et al. (2021). The extensive historical memory research on the Second World War and the Holocaust further thematises the relationship between trauma and silence and memory work over generations (see, for example, Storeide 2007 and Kverndokk 2011, 2013). In this article, however, my concern is not with trauma or memory work as phenomena per se. Rather, the focus here is on how different temporal orientations are expressed in life stories and how they contribute to shaping life trajectories. In other words, I explore what

consequences temporal orientations may have for the experience and realisation of agency and affect.

As mentioned, the starting point in Arnulf's book is a family in peacetime whose inner life is characterised by the experience of time standing still. His paternal grandfather is the primary figure at the calm centre of this stasis. The family knows that he worked as a military officer at Rjukan, and that he was subsequently hunted by the German SS. This is about all that is told about him. Arnulf's digging in family histories and in archives uncovers past events which allow him to see that the silence that makes every family gathering an onerous task has its roots in military intelligence activities. Added to these are security issues related to the scientific work on the development of nuclear power.

Arnulf's book covers a period from 1905 to the present day, showing how defence needs linked to the development of nuclear power and war matériel were founded on the practice of strict secrecy. Key events in the Norwegian public, such as the opening of the first nuclear reactor at Kjeller and important actors in research, defence, and politics, are described with an eye towards the networks themselves, which together came to constitute what Arnulf calls 'the Norwegian nuclear power village' (2021: 18).

Protected by a culture of secrecy, created by people who knew each other but did not know about or could not openly acknowledge the connections for security reasons, the war was won, and the work carried out by the nuclear village continued after the war. Intelligence activities were organised among networks of people who did not know each other beyond the few with whom one interacted (akin to what Gullestad [2006] has described for the organisation of terrorist networks in dyads in her book *Plausible Prejudice*).

Arnulf describes how, according to the pioneer sociologist in the exploration of the realm of the unexpressed, the late Vilhelm Aubert, this form of organisation produced a generation of people who were unable to talk about what they had been involved in during the war when it was over. This form of muteness was first and foremost enforced for security reasons. Importantly, it also came about because each individual person lacked access to or an overview of the extensive network of which they had been a part. Aubert describes how many were, thus, left to their own devices and were left to improvise, to in a sense 'play their real, normal self', at least to the extent that they could recall what it had been like before the war. In this way, while acting the role of themselves as ordinary citizens, they were 'really' carrying something else, a kind of self that came into being during the war with a burden of experiences that should not be communicated (Arnulf 2021: 19). This experience produced a type of reticent, two-dimensional people. The presence of such a two-dimensional figure in his own family was what eventually prompted Arnulf to search for reasons explaining the silences that he experienced as dominant during family gatherings.

To aid him in this exploration, he uses the gaps in the narratives he finds about the war and post-war events to unravel the roots of the various forms of silence. He traces the lacunae in family stories from those linked to intelligence to those caused by people simply not being aware of national projects and the larger historical events of which that they and their social networks were part.

In Arnulf's story, such past events include scientific entrepreneurship significant for the young Norwegian nation to be the first to develop atomic energy in a setting of international competition. They also involve

business interests heavily invested in keeping this scientific expertise and the knowledge about it on Norwegian hands, represented by the state industrial company Norsk Hydro. These political interests led to the then prime minister, Trygve Lie, being elected to the position of the first General Secretary of the United Nations in 1946. The Norwegian political leaders made public claims of ignorance regarding the military uses of the heavy water and stuck to this official story throughout. Painstakingly, Arnulf opens up this story step by step, thereby releasing its power. His narrative makes it possible for readers to follow how his family's experiences of a temporal collapse, into silence and depression, has its roots in a much larger and previously unacknowledged participation in a large-scale political process.

MENDELSOHN: LOSS AND TEMPORAL DEPRESSION

Internationally, it is perhaps Daniel Mendelsohn's writing that has shed the most light on experiences of loss and silences in representations of the past in later years' documentary publications. He (2020) reflects on the work that he carried out for the book *Lost*, in which he documents his close relatives' war experiences. He describes how time and the experience of what he calls the historical depth of places somehow stopped for him. He came to enter what he describes as a depressive state after a period of intense travel on several continents to interview family members in order to establish what happened to the six missing family members who were the focus of his endeavour. His commentary also provides an explanation of what can be a positive value or at least a strong driving force and motivation for oblivion and silence:

Closeness can lead to emotions other than love. It's the ones who have been too intimate with you, lived in too close quarters, seen too much of your pain or envy or, perhaps more than anything, your shame, who at the crucial moment can be too easy to cut out, to exile, to expel, to kill off. (Mendelsohn 2007: 134)

From these narratives, including my own of 'reverse culture shock' and that of Åsa Linderborg on 'face' and media appearances, it is obvious that the discontinuity between past and present so pronounced in the 'presentism' modernist paradigm can be experienced quite differently.

This particular temporal orientation, a reduction of temporality to the present, is at once a suspension of time, a reduction of flow, and an ongoing, never-ending present (Rudningen 2022). The experience of the present as ongoing can, in other words, be associated with both positive and negative qualities. In the narratives, it is described variously as a sense of timelessness, as time stopping, as stasis, and as a rupture. Furthermore, it is ascribed different kinds of affects. In the first extract from the life story from Mendelsohn, the ability to stop time is related to beauty and its powerful capacity to make pain go away. In Arnulf's intergenerational narrative, the characterisation is of a slowing down of time, of stasis, and the experiences are described as painful silences that cause discomfort and unease.

In terms of affect, the range is, as we have seen, from aesthetic appreciation to depression, according to the specifics of the circumstances of the person(s) experiencing such a state. It is, of course, also important to note that there is a difference in valuation according to whether the experience of a temporal orientation towards the present represents what can be

called a pause or interruption, a break, a crisis or a temporal collapse.

Through this it becomes apparent that competing temporal orientations and interpretative frames for understanding the past can coexist, although often linked to different contexts. In Helge Jordheim's (2014: 502) words, 'the modern regime of historicity [i.e., 'presentism'] was always challenged by other rhythms, other times, and other narratives' (insert in brackets mine). In the stories presented here, we can see how the narrators try to deal with discontinuity, ruptures, and the presence of the past, often in the same text. The two temporal orientations of 'presentism' and 'presence' are apparently active simultaneously. Mendelsohn, for his part, highlights reasons people may have for repressing, for trying to avoid the power of the past. He shows how the desire and need to leave trauma behind has its reasons, and we can, thus, say that gaps and silences in families' stories get their respectful explanation from him.

KASSABOVA: EMIGRATION AND THE COLLAPSE OF TIME

The author Kapka Kassabova is also a nonfiction writer. She is perhaps best known for the book *Border: A Journey to the Edge of Europe (*Kassabova 2017) (for a review, see G. Brochmann 2022). In the book *To the Lake: A Balkan Journey of War and Peace* (Kassabova 2020), she takes as the starting point the fractures in her own family history. She sets herself the task of picking up the threads that have been dropped through repeated exoduses over four generations, which she calls a pattern of serial escape. Migration and diaspora are consistently discussed in relation to a specific place—namely, the two lakes, Prespa and Ohrid, located in the mountainous area in the borderland between North Macedonia,

Albania, and Greece, and which, although separated by political borders, are connected by underground rivers.

She writes:

It just so happens that I am fourth generation in a female line to emigrate. A hundred years ago, my great-grandmother emigrated from the Kingdom of Yugoslavia to the Kingdom of Bulgaria. Her only daughter, my grandmother, emigrated from the Federative People's Republic of Yugoslavia to the People's Republic of Bulgaria. My mother, an only child, emigrated with her family from Bulgaria to New Zealand, and I emigrated from New Zealand to Scotland. My sister moved back to Europe, too. For each of us, emigration has meant separation from our parents. (Kassabova 2020: 17)

She points out that these displacements occurred in response to what she describes as cataclysmic historical forces: the fall of the Ottoman and Austro-Hungarian empires, nation-building in the Balkans, the Balkan Wars of 1912–1913 followed by two World Wars, the Cold War and its end, and contemporary globalisation. She says the pattern she calls serial flight has been with her since childhood. Thus far, this is a story that she can be said to share with many others.

But, then, she ventures into the more locally specific, into the landscape and the concrete losses and traumas that only people who at some point in time have been native to that area share. And, finally, she delves into her individual, personal narrative of being haunted by past traumas. She describes how, every time they met, in various family gatherings, their coming together is painful and they all use a lot of energy to smooth over differences and work to bridge the long absences and distances.

They make efforts to make things work and put much emphasis on making the gatherings function normally on the surface. However, they all repeatedly fall ill, with various strange symptoms, such as neuralgia and painful shingles, conditions which her mother simply calls 'the pain'.

Kassabova explains this syndrome in the following way:

> Repetitive overwhelming states don't always need a current object, it transpires: in transgenerational psychology, this is seen as a result of unprocessed trauma and is known as 'time collapse' which is how it feels. (Kassabova 2020: 27)

COMMONALITIES: ON TEMPORAL DISRUPTION AND FORGING NEW CONNECTIONS

This time collapse resembles the condition that Daniel Mendelsohn experienced, which he, in turn, calls a depressive reaction. It can also be interpreted as a negative manifestation of the never-ending present, which tells us that a moment without a connection to the past does not lead to a possible future either. Rosa points to how the human need for what he calls resonance—that is, attachment to relations and places over time—as being at cross purposes with the drive for continuous change, fueling what we have already identified as a concept akin to Hylland-Eriksens' 'overheating', the 'furious stasis' of modernity (Rosa 2022).

Kassabova decides not to explain this condition with the help of a kind of psychological archaeology. Instead, she chooses to travel to the landscape where she eventually discovers it all began, to the place where the pain originated: to the two lakes separated although connected by underground rivers, divided into different

political zones, and where few people have free and easy access to all sides of the lakes. She comments that 'geography creates history, and that it is something that we like to just accept as a fact' (Kassabova 2020: 6). But, she adds, that 'we don't often explore how families digest big *historiogeographies*. How these sculpt our inner landscapes, and how we as individuals continue to influence the course of history in invisible but significant ways' (ibid: 6).

She travels the landscapes around the lakes searching for an understanding of these forces. She investigates and describes how human destiny plays out across different forms of time, memories, and geography. She sees that their trajectories or life courses are not necessarily linear, but cross back over themselves. Her journey crosses several national and political borders, but the focus is always on the lakes, which are thus separated from each other by national borders despite being physically connected underground. Each of them is also divided across several different nation-states. What people can and will tell, and what challenges they face and have faced over generations in their livelihoods, are carefully documented and significant contrasts in their stories exists which she shows us. These range from nature mythology about the healing powers of water to initiatives from conservationists and ornithologists, as well as to large-scale hotel and tourist infrastructure development projects. Along the way, she also pulls together several threads of her own family's history, incorporating parts of the stories previously unknown to her—she separates the threads and then puts them together in new ways. In the end, we are left with a multifaceted, rich picture of a region that is connected, despite what has often been called 'Balkanisation'. This connection is crucially important for the water supply to the region, but which is also of great importance for

nature and wildlife in Central Europe. Even her strange physical symptoms, which have crippled her mother's body in rheumatic disorders, and which have haunted her daughter throughout her life, find a place and sink to the bottom in the life-giving healing waters of Lake Prespa.

This is a short rendering of a complex and complicated story. My point here is to show how a starting point in an individual's life story opens up an intergenerational time perspective, through her family's descriptions produced over four generations. Furthermore, we are led into a geography and across a landscape that, on the one hand, shows traces that evoke memories of the political history of the Balkans, but which also has an irreplaceable value as one of the few relatively untouched wetland areas of critical importance for bird migration over long distances.

CONCLUSIONS: SOME LESSONS FOR THE ETHNO-GRAPHY OF HISTORICITY

In my presentation of these texts, I have drawn attention to how temporal orientations affect life trajectories and intergenerational relationships. To generalise, one may say that late modernity's temporal orientation towards a present as qualitatively different and separate from the past also serves as a barrier against the exchange of information about past events. The ideal self it produces is singular, unique, and disconnected from intergenerational relationships.

The perpetuation of the trope of the socially independent self, as a driver of biographical narrative, has been criticised (Bourdieu 1987) and more recently discussed as part of a larger context of cultural and ideological (re) production (L. H. Chumley 2019). The narrators of life stories I have presented above captured my interest as they all have in common struggles

with this kind of self and with their experiences of disconnection. Accordingly, I have analysed their narratives as attempts to remedy the disconnect, triggered by an experience of being haunted by unaddressed, unspoken but powerful past events in the present. The practices of narration that they adhere to are interpreted as ethnographic examples of 'presence'. In the struggles faced by these narrators, we can see how the two paradigms for temporality (presentism and presence) coexist, but also that they are partly in conflict with each other. They are also difficult to reconcile in everyday lives, even for authors who have made it their project to create new forms of integration between ways of being with the past in the current moment.

Arnulf, Mendelssohn, and Kassabova's stories all show that the presence of the past can make itself strongly felt, on a personal level and in ways that one is often not aware of, let alone understands. In this way, their stories are both a documentation of the impact of temporal orientations and dominant discourses on past events and a discussion of how they should be perceived.

The stories have in common a represen-tation of the present not only as an expression of rupture and modernity, but as characterised by strong, often unknown or unacknowledged forces influencing the people they describe. These forces, the presence of the past, are not only visible in material traces, in landscapes, and in bodies, but also make themselves felt in family stories, and not least, in the lacunae in these stories (Johansen 2001; Arnulf 2021). Through the emphasis the authors place on the experience of unexpected and difficult-to-explain phenomena, the narrative approach goes beyond the representational (Roitman 2022). The traces of the phenomena, and by implication their roots, can be identified beyond the narrative.

More importantly for the ethnography of historicities, the textual examples I have presented typically foreground the work of mediating between events from unacknowledged pasts. Through this practice, the narrators come up against and must confront the limits of what is possible and imaginable to put into words within the prevailing storytelling paradigm. We can look to their experiences, and as ethnographers ask the fundamental, comparative question of what these taboos are, and what the rationale may be for their existence.

For Hartog, the impetus for what he calls the 'duty' of excavating memories takes its current form a quality of repentance and is fuelled by the modernist denial of experiential knowledge of past events (Hartog 2015: 10). Leaving aside the question of shifting emotional attitudes to memory work, I wish to point to a less acknowledged phenomenon: namely, the belief that the past is only accessible as tradition also creates a grey zone, where all events that are not yet seen as tradition crowd and vie for attention.

For the comparative perspective, we should also bear in mind that taboo is originally a Polynesian term, *tapu,* indicating a cultivation of communicative norms, of how to speak and not to speak of past events, a long-standing tradition in Pacific oral literature. As an alternative form of historicity, past events and their relations to present and future are relational. As Sahlins demonstrated in his 1985 work, ancestral relationships and narratives of past events can, in certain contexts, serve as templates for actions at present.

The impulse to transcend the discontinuity between past and present, as instigated by the experience of a willed, enforced silence, is largely absent in that form in the Pacific. Let us return yet again for a moment to the atolls of Tokelau, from which I had arrived only to find

myself alienated from the people going about their business on Lambton Quay in Wellington. Within narrative practices in Tokelau, the impulse to share with a public versions of past events inspired by haunting memories is not encouraged. To do so is generally seen as an activity that portends bad luck, as something that is likely to bring conflict, disease, and death into the world.

While the nonfiction writers presented in this article are forced to break through personal barriers and taboos, their authorial mandate provides them with a licence that allows them to break silences and bring alternative or hitherto unexpressed stories of past events to public scrutiny. The resurgence of a literature of life stories, as documentaries, biographies or memoires, are, in its recent popular form, intent on drawing lines between personal stories and larger societal events. This can be taken as signalling a need for such connections, and, importantly, it also shows us that such attempts are not entirely discouraged or repressed. In other words, the presentism paradigm is not wholly dominant, neither within nor outside the history profession.

In comparison, in Tokelau, for anyone to break such taboos in earnest is likely to be met with negative sanctions. Knowledge of past events are power, and, as such, its representation in public is a matter for narrative experts and requires careful handling.

The lesson we can learn from this brief comparison is that long-term structural conditions for narrative practices about past events must be considered when analysing narrative, regardless of what form these narratives take. This point is perhaps most clearly brought out in Stewart's (2012) work on historicity in Greece from the island of Naxos, where information about past events of intense local significance for the future of Naxiot

society takes the form of dreams and visions and is communicated to the wider public by children. The visionary practices that reveal past secrets carry an authority in the wider society that perhaps nonfiction writers lack, however. In the documentary literature, we also see how the past can be a powerful presence.

It can be effective in the form of what we have seen described as silences, and, in the presence of strange symptoms. These include, for example, Kassabova's family being haunted by mysterious, strange spirits, or what she calls 'uncanny incomprehensible ghosts'. It is reasonable to think that, this form of haunting, of persistent memories, gains its power precisely from the fact that they are displaced by the dominance of the present. In other words, I draw the conclusion that we see the two historiographic paradigms and ways of conceptualising time as reflections of one and the same reality, that of late modernity. This observation is underscored by the relative absence of this configuration of past–present–future historicity in Pacific narratives.

I have argued that it is possible to create discursive links connecting temporal orientations with experiences of self and intergenerational relationships. Following from this, I have asked questions about what it is like to live with modernity's particular kind of links between self and perspectives on temporality compared with other forms of historicity.

All storytellers, mediators of past and future horizons, work within different contexts of interpretation. All have in common that the concepts and dominant interpretative frames they draw on in their works can simultaneously be the subject of investigation and reflection, but also represent unconscious thought patterns. In the examples I have provided in this article, there is hidden knowledge about the personal self, in the body, in the self-presentation,

and in relationships that are mediated and conveyed.

Sometimes, the relationship between the persistent now and the self is presented as the foreground (as in Mendelsohn's text on beauty and timelessness in photographs). At other times, this relationship is presented as a background (such as in Kassabova's text on the body in a landscape). And, sometimes, the relationship between time perspective and personal relationships is expressed more indirectly without it being the focus itself (as when time itself stands still with Arnulf, Mendelsohn, and Kassabova). We also see the narrator responding to a felt pressure stemming from the power of the past, and they describe an activity (a journey, enquiries, and interviews) that they plan to carry out. In the case of Arnulf, this imperative to action is described explicitly. He wants to discover why there is silence among those close to him.

But, we can also see in the texts of these narrators that the two paradigms for temporality (presentism and presence) coexist, and that they are partly in conflict with each other. There are signs that living with a weak or nonexistent future horizon, the negative aspects of an endless now, can manifest on a personal level as experiences of depression. The effects of a temporal suspension or time collapse, in phenomena such as pandemics, but also associated with climate anxiety and other forms of crises for which mental illness has been thoroughly documented. In the face of this, we can see the efforts of the nonfiction writers to connect the past with the present, through work related to expanding the universe of what it is possible to express in a context that brings out its full significance.

By adding the self and intergenerational relationships to the study of understandings of time and forms of historicity as defined

by Palmié and Stewart (2019), we gain tools to examine how temporal orientations work discursively together with the affective dimension. It is possible to nuance the argument about the growing importance of the 'present' by arguing that the experience of having a future at all can have different qualities. In line with this reasoning, early on Bourdieu (1963) argued that what he called 'the Kabyle's time perspective', dominated as it was by the yearly agricultural cycle of production, did not place emphasis on the future at all. The difference between a growth-oriented mode of production versus a subsistence or agriculturally oriented social formation serves as an obvious example of different horizons of anticipation, to use Bryant and Knights' (2019) terminology.

It is, however, reasonable to hold that there is an existential qualitative difference in living with an infinite or unspecified time horizon versus finding oneself situated in an overheated present. A lifeworld which provides an experience of oneself and one's close relations as part of a continuous unfolding or becoming, imagined as a long genealogy which includes everything in the universe, as I have argued, provides the case for many narrators with connections to the Pacific. This is qualitatively different from a society that works on the premise of some kind of temporal suspension or rupture. This difference between historicities can be described as one where the current moment is experienced as a part of a continuous unfolding, and another where a disconnection from the flow of life is increasingly naturalised as an ongoing present.

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NOTES

1 In English (my translation), *The Norwegian Nuclear Power Village: On the heavy water's silent defence network.*

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Penny Harvey

GEOLOGY AS UNCONFORMING INFRASTRUCTURE FOR THE HOSTING OF NUCLEAR WASTE

As the dramatic consequences of climate change finally begin to motivate governments around the world to explore how to move away from a dependence on fossil fuels, nuclear power is back on the agenda in the UK as a potential energy source. However, this new-found enthusiasm confronts a fundamental challenge—namely, that the radioactive wastes, accumulating since the very first nuclear power stations were built in the 1950s, have yet to be made safe for the long-term future. At the governmental level, there is a clear international commitment to the view that the most secure option for the management of radioactive waste matter is burial deep underground in an engineered geological disposal facility (GDF).[1] Finland leads the international field, and the repository at Onkalo is expected to be fully operational by 2025. The Swedish government approved plans for the construction of an underground repository for spent nuclear fuel in 2022, with Canada, France, Japan, Switzerland, the UK, and the USA all actively engaged in siting and design initiatives. Strategies for generating public acceptance of geological disposal vary, as do the modes of engagement, the investments of time and money afforded, and the decision-making processes. These processes are conceptually and politically challenging. They require not only technical expertise and scientific understanding across an entire range of disciplines, but also the imaginative capacity to think across scales of time and space in what Ele Carpenter (2016: 14) has suggestively referred to as 'reverse mining'.

However, the return of radioactive matter to the deep underground is no simple reversal. It requires the elaboration of an infrastructural system of unique ambition in the history of modern engineering. Some of the high-level radioactive waste that GDFs are designed to accommodate will take hundreds of thousands of years to decay to levels equivalent to natural uranium ore. The safety cases for these facilities assume a far longer time frame, with models built to a million-year time horizon. These capital-intensive, state-led projects are justified as a cross-generational public good with jobs and investments underpinning the promise of social transformation for the most affected communities, and environmental remediation and long-term protection the goal for both contemporary and future generations. Congruent with this framing, the dominant narratives of government departments and delivery bodies focus on the balance of risks, costs, and benefits.

Government policy for siting a GDF in the UK rests on a voluntaristic process in which the delivery body is charged with identifying a site where there is both a 'willing community' and a 'suitable geology'.[2] As I watched and listened to discussions about how to achieve

this initial crucial siting milestone, I was struck by the recurring references to potential 'host communities' and to possible 'host geologies'. Hosting is a key concept that mediates the discussions of high-level nuclear waste disposal I have followed over the past four years through my engagement with policymakers, government delivery bodies, and residents of current search areas.[3] The waste materials themselves are, of course, central to the story, but their movements are contingent upon the possibilities and the limitations of specific hosting relations. It is these relations, and, specifically, the geological hosting relations implied by a GDF, that are the focus of this article.[4]

Anthropology has long had a strong interest in the ambivalent relationships of hospitality and the specific modes of moral reciprocity that they imply.[5] The host/guest relation rests on a sense of alterity, categorical difference, and a potential imbalance of power, such that the transformational possibilities afforded by the presence of outsiders are also acknowledged as threatening or even destructive. In the face of such a possibility, hospitality signals a rather particular ethic of care, a sense of responsibility to the outsider, and even a mode of protection. The UK siting process, and the overarching national project to deliver a geological disposal facility to house all of the UK's most highly radioactive waste, involves a whole range of social actors including not only departments of state, the delivery body, the producers and current holders of waste, the supply chain for the construction process, and the potential host communities, but also the dynamic physical structures of the Earth and the material relations that compose the subsurface world. The agencies of these diverse bodies and forces are all implicated in the movement of waste from the surface to the subsurface. In the rhetoric and the everyday talk surrounding this project, there are

only two entities explicitly depicted as entering into hosting relations: the host community and the host rock. In what follows, I argue that the hosting concept offers a powerful ethnographic analytic through which to approach the categorical impositions and disruptions that comprise this infrastructural form. Engineering projects rely on technical knowledge, probability studies, scenario planning, risk assessments, and the elaboration of generic forms. The hosting concept complicates these abstractions and directs attention to the multiple temporal and spatial scales invoked in the siting process. These include the intrinsic instabilities of the key relational categories of both 'community' and 'rock'; the ambivalent political, moral, and ethical values in play; and the transformations and unconformities of the material relations that the infrastructure ultimately seeks to contain.

THE DIVERSE TEMPORALITIES OF HOSTING

A brief review of the history of the UK siting process sets the scene for my observations of these contemporary hosting relations. The first siting initiative got underway in the 1980s but was abandoned due to public opposition (Blowers 2016), with more than 20 years passing before another attempt was made. This time, government agencies took the advice of the recently established Committee on Radioactive Waste Management and tried to implement a voluntary process.[6] There was significant support for the initiative in West Cumbria, the region where most of the UK's high-level waste was already held in temporary storage at the Sellafield Nuclear Facility. However, there was also committed opposition (Bickerstaff 2012; Gregson 2012). The Sellafield site adjoins the Lake District National Park, and proposals generated a passionate rejection from those

who feared irreversible damage to this protected environmental area. Scientific opinion as to the suitability of the geology of West Cumbria was also divided (Lee 2012). In addition, a widespread sense existed that, as in the past, the opinions and concerns of local people were not really listened to nor taken seriously (Blowers 2016).

By 2013, the delivery body accepted that the siting framework continued to elicit more resistance than enthusiasm. Nevertheless, the need for a permanent subterranean facility remained a priority. Government bodies revisited the policy and made changes that included a solid commitment to exclude the possibilities of siting within the boundaries of a National Park. At the end of 2018, a new initiative was launched with the release of the current 'Working with Communities' policy.[7] Under the terms of this policy, any interested party, such as an individual landholder or community stakeholder, can approach the delivery body to discuss the possibilities of siting in their area. These conversations are confidential and only made public once the delivery body has made an initial assessment of the prospects for the site in terms of the geology, transport links, and the possibility of sustained interest and support from local government. If these criteria are met, then a Working Group is formed to identify the specific electoral ward that could provide the surface site, or point of entry, for a GDF. Working Groups are formalised as community partnerships with a contractual relationship to the delivery body if at least one local council commits to participate in the process, alongside other community leaders and employers. The delivery body is also represented on the Community Partnership whose primary task is to work with the local community to define a future vision, to assess the potential contribution of a GDF to that

vision, and to build information on the geology, transport links, and any other economic, political or social factors deemed relevant. At this stage, funds of up to £1 million per year become available for community projects within the siting area (always a political ward or wards). This funding can be increased to £2.5 million per year if the delivery body assesses that there are sufficient possibilities for meeting the criteria of a 'willing community' and a 'suitable geology' to justify investment in more intrusive investigations, including borehole drillings, as part of the geological characterisation process.[8] Both the Partnerships and the delivery body have the right to withdraw from the process at any time. Ultimately, however, after a period of several years, the Partnership has to conduct a meaningful test of public support to definitively demonstrate 'willingness'.[9] Only then can the delivery body finalise the design and apply for the formal Development Consent Order that allows construction and investment to proceed in accordance with national planning regulations.[10]

However, while there appears to be general agreement between the delivery body and the Community Partnerships that 'the community' needs to learn what the siting process involves—just as the delivery body needs to learn about their understandings, expectations, and fears—there is far less clarity regarding how a community might ultimately emerge as a stable and singular collective with the capacity to act as 'host' over the 150-year period needed to build and run a facility until the point of ultimate closure. Thus far, there is very little exploration of what hosting might involve beyond a commitment to compliant ongoing cohabitation with the waste. The possibility that a GDF could be considered for their area provokes deep anger in some people, allied to a sense of invasion and destruction.

Many assume, and fear, that decisions are effectively made elsewhere, that the process is out of their hands, and that to actively seek to learn about it is already a show of willingness and must, therefore, be resisted.[11] The delivery body obviously wants to identify a site for a facility and people to trust that it will be safe. However, while the personnel of the delivery body might hold the conviction that a GDF will deliver an invaluable 'public good', both for local people and for the wider public (including the taxpayers supporting the growing costs of maintaining the waste securely in temporary storage), they must also confront people's direct experiences of a nuclear industry with a history of not being open and honest with local people or addressing local concerns in a sustained and serious way. In West Cumbria, many have felt ignored or discounted by industry experts over the years. Whether or not people are conversant with nuclear technologies (and many are), many more have a deep knowledge of how particular projects undertaken in the name of the 'public good' landed in their communities in the past, with little or no appreciation of local politics or local needs.[12] These represent social knowledge, which some within the development company know they must learn about if they want to engage people, but others more readily dismiss as the outcome of ignorance, ideology or 'politics'.

As yet, there is no identified site and, in many ways, a GDF remains an abstract, conceptual possibility. However, in other ways, a GDF has already materialised as a major state infrastructure project. There is a government policy and a parliamentary endorsement of the commitment to geological disposal and to a consent-based siting process; there is a long-term public financial commitment of approximately £45 billion from the Treasury; there is an organisational hierarchy of government bodies including the Nuclear Decommissioning Agency (a non-departmental public body), and its subsidiary, Nuclear Waste Services;[13] and there is considerable activity and investment in technical research and design and in programmes of community engagement.[14] In other words, the institutional, financial, epistemic, and engagement infrastructures underpinning the possibility of a GDF already exist and have already begun to shape what it is that a GDF can be, regardless of *where* and *how* a GDF is ultimately built. For now, the infrastructure thus exists both in formation (as a generic form) and in suspension (until the siting decision is made).

The commitment of the volunteer community at the heart of a national infrastructure of this scale is unusual and produces a paradoxical effect. Despite the centralisation of government control over financing, regulation, design, and delivery, the *specific* design, budget, and timeline cannot be decided upon until a 'volunteer community' has committed to hosting a facility. It is proving rather difficult to know how long it might take for a 'community' to emerge as a stable, positively committed social entity, or indeed how such a 'community' might take a decision on behalf of others in both the near and the very distant future. The delivery body finds itself under pressure to deliver a site. It is their job to limit costs and get the project properly underway, but they appreciate that 'willingness' is both elusive and fragile. They are anxious not to provoke a contagious refusal. They want to listen to local concerns, but they also have their own concerns to manage, including their anxieties that uninformed opinions and misinformation might easily foreclose potential avenues of acceptance. In this context, the identification of a 'suitable geology' becomes critical for the reassurance and consolidation of emergent publics (Chilvers and Kearnes 2015).

Here again, things become complicated as the voluntary siting process does not begin with the notion of an optimal geology but is committed to work instead with the possibilities afforded by the *specific* geological environment of a yet-to-volunteer host community. Both a 'willing community' and 'suitable geology', thus, exist as co-dependent, open categories that have yet to be brought into being.

Beyond the complications of the voluntaristic siting process, the radically divergent scales of time, space, and material power that a GDF has to encompass also pose major challenges. The functionality of a GDF is ultimately framed in relation to geological time. The engineering of the design and safety rest upon the assumption that the infrastructure will gradually move towards a point of closure from whence no further human input or engagement will take place. Once completed and closed, the infrastructure will become a fully passive system. This ideal of total detachment could be seen as the classic utopian vision of civil engineering, whereby technical automation channels and limits human action in the name of rationalisation. However, a GDF has a far more radical ambition, to definitively isolate the radioactive materials from the surface and close off the way back. This radical shift from managed facility to passive system is to be achieved through the alignment of geological forces with those of a highly technical engineered infrastructure. Industry professionals refer to this as a multibarrier system comprised of nested layers of containment designed to impede the movement of radioactive matter, but also to ensure that there is no single point of failure.[15]

These precautions demonstrate that GDF design is not conceived in ignorance of the ongoing material processes underground. On the contrary, engineers work with geologists who take it as axiomatic that below ground a GDF will become integral to an alternative environmental system than that experienced on the surface. That system, nevertheless, will remain open-ended and will continue to transform. The movement of rock and of radioactive matter is assumed and responded to in every aspect of the design. In addition, much of the current experimental work that the delivery body undertakes focuses on the many material interfaces that the infrastructure needs to anticipate and accommodate. The open-endedness of this time horizon unfolds beyond the realm of human engagement and poses the challenge of how to think beyond the human scale into spaces that, while not currently unknowable, *are* ultimately designed to become inaccessible to future human intervention. The engineering out of human agency, nevertheless, requires a whole range of human artefacts both material and conceptual. Amongst these, one of the most significant is the conceptual separation of categories of time and space, the 'deep time' of the subsurface, and the 'human time' of the surface world (Ialenti 2020).

Deep time is a geological and ultimately cosmological concept that scholars of nuclear technologies routinely deploy to draw attention to the exceptionally enduring vitality of radioactive matter (Hecht 2012, 2018; Ialenti 2020, 2022; Irvine 2014, 2020; Morton 2013). Geologists, astrophysicists, and cosmologists immerse themselves in the study of deep time as they explore both the origins and the demise of planets, stars, and universes. Their understandings of deep time are central to the conceptualisation of a geological disposal facility as an infrastructure of permanent disposal. Yet, the siting and construction of a GDF begins at the surface or near-surface of the Earth. The human host community must, first, receive the waste and facilitate its route to the deep

underground, to the world of geological time, where the rocks will be supported to take over as hosts in a time–space that no longer relies on the continuity of human existence to oversee the containment of radioactivity.

The ongoing vitality of this anthropogenic and highly radioactive matter is of huge concern to many people. The materials are deeply political in the sense that their very existence indexes the power struggles, entrenched inequalities, and divergent values of a highly securitised industrial economy. In this context, and with the awareness that there can never be absolute certainty with respect to the impact of a GDF on future generations, there are those who question the ethics of geological disposal. Gregson (2012), for example, criticises the disposal of highly radioactive waste in a GDF as an act of abandonment. A GDF is, indeed, a proposal to deliberately remove these materials from the surface and to leave them deep underground, effectively forever. However, it is not an act of abandonment that ignores the ongoing vitality of these nuclear waste materials (as Gregson suggests), but rather rests on a calculation of the relative risks, costs, and benefits of deep geological disposal compared with surface storage options. Such calculations should, of course, be closely scrutinised. Debates about nuclear waste are also congruent with contemporary fears about the future habitability of the planet, provoked by a new-found awareness of limited resources, fragile environments, and the extreme vulnerability of many human and other-than-human lives (Chakrabarty 2021; Latour 2018; Latour and Weibel 2020). Much effort in the broad field of environmental humanities is now directed at fostering conversations about collaboration with the natural sciences, and about how to live well on and with the Earth.

Nigel Clark (2013: 2825) suggests that a growing awareness of the limits to human agency and the consequent sense of vulnerability might induce the industrialised world to think more deeply about what he refers to as a new 'geologic politics (...) a turn from issues hinging on territorial divisions of the earth's surface toward the strata that compose the deep temporal earth'. In this respect, he suggests that the discourses and imaginaries of geoengineering do not *necessarily* imply a retreat from politics (that is, from the human struggles over how best to configure our relationships to the earth at the surface). These could perhaps invite an extension to the scope of politics to include the other-than-human agencies of deep subterranean rock.[16] A GDF offers one example of how a future geological politics might be framed.

Anthropologists and social historians of nuclear matters have long been attentive to the beyond-human timescales of radioactive materials, many of which have half-lives that far outreach the horizons of human being.[17] Hecht (2018) recognises the need to think beyond the human scale, but not at its expense. Her determination is to find a way to 'hold the planet and a place on the planet on the same analytic plane' (Hecht 2018: 112). She pays attention to what is revealed and hidden by specific scaling practices, and she analyses the political and ethical work that scalar choices and claims accomplish. Using examples of what she refers to as 'interscalar vehicles' as diverse as the map, uranium, the atom bomb, and the international benchmarks used to calibrate and compare the bodily harm caused by exposure to radiation, Hecht looks not only at what each of these devices makes knowable or significant and what they hide or erase, but also at what they bring into dialogue and on what terms. To disappear

the waste through the invocation of a geological scale might well deflect attention from the ongoing 'slow violence' (Nixon 2011) of nuclear waste in the here and now. At the same time, geological disposal could offer protection to both human beings and the wider environment from the lethal hazards of many legacy wastes. It is in recognition of this ambivalent possibility that I return to the multi-scalar relations of a GDF as an infrastructural system, and to the ways in which the hosting relation operates as an interscalar vehicle promising to enable the transfer of highly radioactive waste from the surface to the subsurface.

As noted previously, the transfer is not a simple return or reversal. Both mining and engineered disposal involve potentially damaging human intrusion, and too often hubris and the violence of neglect. Nevertheless, the stakes of geological disposal are not identical to those discussed by critics of industrial extraction. Indeed, while disposal is undoubtedly a corporate and state-led enterprise, with interests that connect to future investments and related extractive activities, it also carries the ethical dimension of the hosting relation as a moral gesture of care and protection in the face of an unknowable future.

GEOLOGY AND THE ANTHROPOCENE

The promoters of a GDF face a somewhat paradoxical situation as they argue for the responsible removal of radioactive waste from the surface of the planet at a time when previous human irresponsibility, with respect to both discards and extraction, might challenge the wisdom of a proposal to further penetrate the subsurface with the deliberate intrusion of radioactive wastes. Other disposal alternatives were considered in some detail (CoRWM

2006), including the possibility that the wastes could be launched into outer space. This solution was discounted not only in relation to cost, but also because it had never been attempted before and was, thus, unproven. In conversation with geologists, I also learned that the underground offered a huge advantage over outer space with respect to the rates of dispersal of highly radioactive matter. In space, the movement of particles accelerates. Deep burial produces an opposite effect. Underground, the process of dispersal will slow down, engaging a dimension of time external to the fluctuations of the surface and of the biosphere. The ultimate aim of the multibarrier approach to geological disposal is, thus, to embed the engineered structure in a specific geological environment. Here, human time and the time of radioactivity are collapsed into a single geological moment and, thus, rendered inconsequential: 100 000 years barely registers on the geological time scale.

At a geology conference organised by the delivery body, the chief geologist introduced a general audience to the three basic or generic rock types that could meet the requirement for the isolation and containment of waste, each chosen for their ability to slow down the movement of radioactive particles. The three categories of rock are hard rock, clays and mudstones, and evaporites, each with its own particular advantages and disadvantages. Hard rock is an obvious candidate for a GDF. In Sweden, as in Finland, the construction of a GDF is about to begin in granite rock that is more than a billion years old. The challenge with hard rock is that it is brittle and can sustain open fissures and networks that groundwater and gas can flow through. In these environments, geologists look for evidence of blocks of rock without fractures and, thus, with limited hydraulic connectivity.

Clays and mudstones have a certain advantage over granite, because the movement of this rock affords a self-sealing capacity. The rock also has a low permeability, and a permeability that further decreases over time. Its long-term behaviour is deemed highly reliable. At the same time, clay rocks are not as strong as hard rocks such as granite and would not as easily withstand the pressure of expansion caused by the heat of high-level radioactive waste. A GDF in clay rock would need more space across which to distribute waste containers. Evaporites such as salt rock are practically impermeable and, like clay, they 'creep' and, thus, operate their own self-healing mechanism. But they also throw up their own challenges, not least the exceptional difficulty of accurate mapping. Salt structures often remain transparent, and three-dimensional seismic data do not easily reveal the evidence of absence that geologists need to find. Boreholes, core sampling, and underground geophysical investigations are then needed, which risk compromising the integrity of the rock formation.

The work of geologists in search of evidence for stability connects to the eighteenth-century roots of the discipline, when the theory of uniformitarianism and consistent gradual change displaced previous biblical theories of catastrophe and abrupt change (which were pretty much erased from the agenda until relatively recent times). The work of James Hutton, Charles Lyell, and others established that the earth's history was one of slow geological transformation via processes unfolding over time at even, predictable rates. Their work led to a reappraisal of the age of the planet, and completely changed the time horizons of humanity. Furthermore, their approach was fundamental to Enlightenment as a way of thinking about human beings and human capacities and ushered in what we now look back on as the age of 'modernity' with its focus on planning and improvement (Gould 1988; Ghosh 2016). Then, as now, rocks were approached as semiotic repositories and sign systems, which held the secrets of the origins and evolution of life on Earth. What changed from previous eras, and what has continued to change since, are the methods of observation and interpretation. Only much more recently have the meanings of the geological traces of 'deep time' begun to be more systematically inferred through the deployment of ideas about probability and improbability grounded in statistical thinking, and projections both forward and back in time enabled by contemporary simulation and modelling techniques.

These techniques have, in turn, made visible the complexities of the geological record. The most spectacular are perhaps the missing years of rock from the Earth's geological record, referred to as unconformities. Geologists have calculated that the Great Unconformity of the Grand Canyon in the USA registers a missing 725 million years between what are now two adjacent strata. Questions regarding whether the causes of the discontinuity or gaps in the geological record are due to a series of gradual erosions or more sudden events are debated. Either way, geologists refer to these gaps as 'lost time'. Contemporary fascination with abrupt changes and with lost time continue to inflect human understanding of the history of the planet, as well as opening new sites of possibility for resource prospecting. These sites of intrinsic uncertainty and of possibility are what excite geologists. A Swiss geologist presenting at the conference explained the choice of a claystone site for a Swiss GDF in these terms: 'We have to make sure that the geology makes a good contribution. We need to maximise the contribution of the geology to the multibarrier system. We excluded the Alps

for their rapid uplift rates, and other areas for tectonic complexity. We looked for host rock at the right depth and thickness. We discounted strongly faulted zones and came up with the three most boring sites of Swiss geology.' These are not sites with the best stories; they are sites where nothing had happened for millions of years. A GDF incites a search for rock that is otherwise unremarkable. Suitable geology implies stability and conformity, and geologists look for evidence of an absence of activity, a complex task given that the evidence gathering itself involves intrusion into the layers laid down in the deep past.

Geological research is also fundamental to assessments of how the rock will behave in the deep future. The deep past is accessed via a range of sampling and scanning techniques. The deep future, by contrast, is evidenced by analogy, a mode of reasoning that rests on the theory of uniformitarianism, whereby changes in the materiality of the Earth's subsurface are slow and gradual. Ialenti's (2000) ethnographic work with the Finnish GDF at Onkalo looks in detail at how experts connect the deep past and the deep future through analogical reasoning. He gives the example of Lake Lappajärvi, a crater lake in Finland that formed when a meteor crashed into Earth some 73 million years ago (Ialenti 2020). A detailed study of this rock formation allowed geologists to demonstrate the changes that have (and crucially have not) occurred over this time frame. On this basis, they can project forward with confidence on the likelihood of significant activity over the next 100 000 years, a very short period on the geological timescale.

Geologists do not ignore the possibility of a future dramatic change; they simply search for sites where there is a high probability that change will occur on an entirely different time horizon from life on the surface of the planet.

Their models anticipate extreme climate change, continental glaciation, seismic activity, and human intervention. In public presentations, and in response to concerns frequently voiced over the effects of climate change, geologists reiterate that the temporal scales of change are quite different on the surface than they are underground. While the rise in sea levels will have devastating consequences in some places, in others changes will be negligible over the 100- to 150-year period of operation when the facility would be most vulnerable to water intrusion. Continental glaciation is a near certainty over the next 100 000 years, but the geological record provides an assurance (by analogy) of an absolute cut-off for glacial erosion at 200 metres, the minimum depth at which a facility would be constructed. The frequency of seismic activity must be assessed for any site, but the UK is not close to tectonic plate boundaries and, thus, major earthquakes are not assumed to pose significant risk.

Calculations of optimum depth for a GDF are, thus, drawn by analogy with previous events of ice-age erosion and changes in sea levels. Central to all these calculations by analogy is the recalibration of time. As stated above, one million years in geological time is but the blink of an eye, while 100 000 years barely registers on the scale of planetary time. Thus, despite the clear understanding of the perpetual fluidity of rock, the relative speed of change in the geological environment is such that waste is stabilised by time itself. Above ground, nuclear waste is out-of-time with life on the surface of the planet, where its enduring vitality poses a continual lethal threat to the biosphere. Below ground, its vitality is neither exceptional nor long-lasting. This arrangement leaves open the possibility of human intrusion and the unwelcome, and unpredictable, possibility of a future intersection of human and geological times. There are

interesting experiments at all geological disposal sites, which consider how to communicate the existence of this underground hazard to future populations with the knowledge that we have no idea whatsoever what kinds of language or communicative processes might be significant or intelligible in future. These thought experiments in nuclear semiotics can only ever be speculative and rest upon an imaginary interpretation with no stable signifiers or points of reference. The exercise, nevertheless, offers a significant reminder of the fragility of the barrier between surface and depth. At the surface, all geologists can do is attempt to clarify whether or not the chosen geologies might become of interest for those looking to exploit natural resources. What cannot be avoided is the possibility that a GDF itself might become one such resource.

We, thus, reach the point where we return to the surface and to human time. However powerful the arguments about the ultimate stability of geology, this infrastructure of detachment must still be brought into being and its integrity maintained in human time. Here, the uncertainties and possible unconformities begin to multiply, even if we remain within the field of geology itself. Contemporary geology is primarily oriented towards resource prospecting, whether for minerals or in relation to the tracing of pollution plumes and the effect of mining and industry on water courses. From an anthropological perspective, there is important work emerging from these fields of practice as ethnographers follow the ways in which multiple data sources are brought together to produce 'reliable data' in specific times and places, following in detail how the criteria for reliability are assessed and by whom.

Gisa Weszkalnys (2015) described the speculative reasoning that prevails in the fields of oil and gas prospecting, drawing attention to how the search for a potentially valuable resource involves a continual balancing of the cost of the search in relation to the speculative value of what might be discovered. Geology becomes entangled with investment decisions, the different kinds of risks that must be managed, and the affective force of the resource potential. Thus, while such searches are data driven, they also involve many other kinds of embodied understandings including hunches, expectations, desires, aspirations, and negotiated possibilities. So, too, with a GDF.

Andrea Ballestero (2019, 2020) also draws attention to the subterranean interfaces where geology, the economy, and social concerns intersect. She analysed the geological detection techniques used to trace how a major oil spill affected a local water source in Costa Rica, and described how the geologists were working not simply on the rocks, but on the subterranean interfaces where nature, the economy, and social concerns intersected. She used the example of 'plumes' of hydrocarbon pollutants, learning from geologists how these were traced and described. Their focus was on the movements of the contaminating hydrocarbons within the movement of water courses. They worked to detect and trace the form, size, and speed of plumes, *and* the type of containment in which they were moving—that is, the solubility, density, and velocity of the groundwater movement. She observed that a plume 'is movement within movement and is scientifically studied under the rubric of fluid dynamics. In technical language, plumes of contamination in aquifers are described as migrant or stable (…) How expansive or contained a plume's contours are is also a matter of textural relations between the intruding substance and the substances in which it tries to move' (Ballestero 2020: 5). These tensions between conceptualisations of discrete (bordered) entities and the more fluid, situational textural relations are commensurate

with what comes to the fore when we turn our attention to the hosting relations of a GDF. Ballestero's argument focuses on the way in which modes of description create a sense of reality, in this case a disputed reality. The legal case that she followed hinged on two very different hosting relations. In one, the aquifer was a discrete entity, the container of a plume; in the other, a more elastic or topological figure of oscillating concentration and movement, one that resisted 'being infrastructuralised' (Ballestero 2019: 22). This tension between the bordered and fluid figuration also pertains to a GDF, where hosting always involves encounters across difference and ambiguous shape-shifting processes in which distinctions between hosts and guests become difficult to maintain.

HOSTS AND GUESTS

If narratives of geological time remove the alarm from the subterranean post-closure life of radioactive waste, I want to pursue the idea that the 'hosting' relation might offer another layer of reassurance via the analogy between rocks and communities, which posits the hosting of waste as an ethical act. The Swiss geologist speaking at the conference referred to above wants to ensure that rock makes a good contribution to the process; he wants the rock to be effective. At times, it can seem as if the appropriate *community* contribution might simply involve not making a fuss, to comply and let engineering works proceed. But the community is called to go further, forming partnerships and acting as hosts. Although largely unacknowledged, the community is thus called into being through the invocation of an ethical and moral relationship. But, to whom or to what exactly? What are the desirable hosting capacities and how might these be cultivated and sustained over what is a very lengthy period in human time?

On the surface, the hosting relationships of a GDF are particularly ambiguous, given that the 'host community' itself is only drawn into being through the hosting process. Even if we suspend that complication, it is unclear at what point the community moves from hosting the state (in the guise of the developer who comes with incentives, criteria, science, policy, and financial resources) to hosting the construction process (where a whole swathe of private companies will arrive with machinery, materials, job contracts, supply chains, and the control of all kinds of movement and the circulation of materials, money, jobs, and information). At a much later stage, different organisations will arrive to begin the operational phase, when increased securitisation will accompany the radioactive waste materials on their journey underground. There is a possibility of protests and occupation at any stage. All these relationships suggest that the identity of a host might easily transform into that of the occupied or besieged. Many who were once guests are likely to stay and become residents, as well as hosts to the ongoing processes both above and below ground. Once the facility is closed, and the rock takes over the task of hosting the waste, future generations will no longer serve as hosts in an active sense.

What will the waste itself have become in the meantime? Ethnographers of hospitality have also pointed to the tension between transformation and domestication that hosting implies.[18] Antinuclear activists who oppose a GDF clearly fear its capacity to domesticate nuclear power by providing a solution to the waste. This concern echoes concerns about how waste in general is made to disappear using techniques of spatial and temporal distancing and/or by rhetoric and other calculative and distancing practices designed to reassure and remove blocks to consumption (a topic

explored by Alexander and O'Hare 2020). These are clearly important issues, and the decision by the UK government to include the waste from new nuclear facilities challenges the previous narrative of the 'public good' that argued for a GDF in relation to the urgent need for environmental remediation of legacy wastes. There is a well-founded concern that a GDF will, in practice, enable future nuclear technologies and the generation of new, and as-yet-unspecified wastes.

Hosting relations above and below the surface are also not commensurate in ways that are themselves revealing of the unconformities of geological infrastructures and the central role that temporal discontinuity plays in the shaping of their imaginaries. For a start, a host community must assume the role of host voluntarily, but a willingness to host does not imply that a community exercises any kind of sovereign rights in the extension of an invitation to another. Hosting does not imply control over the process but is achieved through a dance of consensus and coercion. It emerges from an offer and from imposed conditions of subsequent compliant cohabitation, such that a GDF can appear as an ethical act and not a sacrificial act on the part of the community in question. In the projected timeframe for the construction of a GDF, the developer anticipates that full agreement to build a facility might take many years. During this time, the host/guest relation holds a specific kind of ambiguity. It remains unclear whether 'the guest' will decide to stay. The 'volunteer community' puts themselves forward as a candidate who may or may not be chosen. The 'volunteer community' can also decide to end the relationship right up until the test of public support. There is, thus, a lengthy period of exploration and negotiation around the terms of a potential co-habitation, while 'the community' lives with the construction

phase and the ongoing negotiation of an 'offer' is concluded.

Once the radioactive waste materials begin to arrive for disposal below ground, a new phase begins. For a period of approximately 100 years, the hosting relationship will be shared between those above ground and the rock below. The community at the surface is not directly involved in the negotiations between rock, radioactivity, and nuclear expertise below the surface. Gradually, the rock will take over the hosting role, until ultimately it is presumed that the regulatory agencies of the future will end the phase of human hosting. Over time and below ground, the radioactive wastes will become incorporated and themselves become the guest that never leaves. From the perspective at the surface, incorporation is viewed as a highly undesirable possibility that sits alongside a fear that the transfer below ground will reduce their capacity to shape the relationship with the wastes going forward. In short, this imagined coming into being of a GDF reveals an ever-shifting sense of moral, political, and economic claims across social spaces and across generations, where insiders and outsiders can never be definitively defined and where both 'geos' and 'bios' are also constantly transforming internally and in relation to each other.

CONCLUSIONS

This article has focused on the relationship between two key hosting relations that sit at the heart of the UK government initiative to provide a geological disposal facility for the long-term management of highly radioactive nuclear wastes. This infrastructure of disposal requires the active participation of a willing host community and a suitable host rock. It also requires the navigation of radically different scales of space and time, and the management

of intrinsically ambivalent hosting relations. This ambivalence appears not only in the shifting perceptions of ethics and morality that a GDF poses with respect to intergenerational, intragenerational, and future generational needs, or to the multiple needs and fragilities of the biosphere and the wider environmental ecologies, but also with respect to the granular specificity of the hosting relation itself. Hosts and guests are not always clearly bordered or discrete entities, but emerge as relational and dynamic forms, moving at different speeds above and below ground.

The level of empirical detail that Ann Kelly (2012) could draw on in her analysis of the hosting relations involved in the study of malarial transmission in Tanzania has yet to unfold for the case of a GDF. However, even at this very early stage in the process, the intrinsic instabilities of the fundamental host/guest relations at the heart of a GDF programme are visible and significant. It may still take many years to identify a 'willing community' and a suitable host rock. If the search fails, the policy might have to be revised. Nevertheless, the hosting idiom remains important because it makes the moral and ethical dimensions of the siting relation explicit, without negating the ambivalence and the powerful disconnections that are also in play. In this way, a focus on the cross-scalar temporalities of hosting, around which the UK's GDF programme is currently conceived, might open possibilities for a new awareness of 'geological politics'. The policy framing of a GDF could, perhaps surprisingly, encourage a new awareness of the interdependence of human life and rocks deep below the surface of the earth.

The anthropologist Jerry Zee has argued that anthropology and geology are compatible thought spaces in that they are both disciplines that are highly attuned to

transformative potential (Zee 2020: 3).[19] The GDF project provoked me to think about such transformations at a time when environmental change appears almost unstoppable and potentially catastrophic. Nuclear power and its waste products are highly controversial figures in this space, deeply implicated in environmental pollution in the recent past, from weapons testing to the irresponsible dumping of waste. Furthermore, there is an ongoing tendency for governments to be more enchanted by the next technological possibility than by the need to ensure that the previous overflows have been securely contained. Nuclear waste management is a space of disputed sovereignty, at times unaccountable public investment, and an inward-looking securitised environment where there is little room for meaningful public engagement. However, the growing international consensus on the need for secure long-term isolation of the most hazardous waste opens a different arena in which it is acknowledged that *in practice* the technology cannot be abstracted from the site in which it will be built.

It is not currently possible to deliver a GDF until enduring alliances are forged with a specific human 'community' (above ground) and a specific rock formation (below ground). Even if a UK 'community' declared itself willing to host waste today, the delivery body still has to maintain that willingness for well over a century, until final consent is granted for the facility to close. It is perhaps in the spaces of such negotiations that a future Earth politics will take shape and demonstrate that the ambivalent sociality of hosting is more prevalent and more significant than a dichotomy of acceptance or refusal allows. For now, the hosting relation provides a conceptual language with which to think about engagement with the subsurface beyond the practices of violent extraction or

the hubris of technical control. This brings the diverse temporalities, connections, and associations between the surface and subsurface into view in the context of a gesture of care and protection that is not simply imposed, but which also must accept the uncertainties and unconformities of material worlds beyond the horizons of the human imagination.

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NOTES

1 The advice to UK policymakers from the independent Committee on Radioactive Waste Management outlines the key arguments in support of this position (CoRWM 2006 and 2018).

2 In 2018, the delivery body was Radioactive Waste Management. In 2022, the organisation was restructured and renamed as Nuclear Waste Services.

3 I am deeply indebted to my anthropological colleagues in the Beam research group at the University of Manchester. Their in-depth ethnographic research on spaces of nuclear decommissioning in West Cumbria (Petra Tjitske Kalshoven, Ian Tellam), and in the USA (Basak Saraç-Lesavre) has been a constant source of inspiration and learning. See thebeam@manchester.ac.uk for details of projects and publications.

4 Since 2017 my research on nuclear decommissioning has been supported by the British Nuclear Fuels Endowment Fund. The fund has charitable status and is administered by the University of Manchester to support independent academic research on nuclear. In 2019 I was appointed to the Committee on Nuclear Waste Management (CORWM). CoRWM is sponsored by the UK governments (of England, Scotland, Wales, and Northern Ireland) to provide independent scrutiny and advice on the long-term management of radioactive wastes. Through my work on CoRWM I have had the opportunity to closely follow the UK siting process, and to learn both from my fellow committee members, and from the many different organisations, government and non-government agencies, communities and individuals involved in the process. I am grateful to all those who have spent time explaining things to me. All errors in interpretation are mine alone.

5 See the collection by Candea and da Col (2012) for a review of this field and for a recent set of essays.

6 In 2003, the Committee on Radioactive Waste Management (CoRWM) was asked to make recommendations for the long-term management of the UK's higher activity waste. Their 2006 report recommended geological disposal as the best available long-term solution, the need for safe and interim storage in the meantime, and the

need for ongoing research and development. They also recommended the importance of a consent-based process.

7   Department for Business, Energy & Industrial Strategy, 2018.

8   In spring 2024, the equivalent in euros—€1.13 million—was earmarked for the early stages of participation, increasing to €2.83 million if boreholes are drilled.

9   Community Partnerships are charged with devising this test of public support. Current discussions suggest that a referendum with a very low turnout or with a small majority voting in favour would not be taken as indicative of public acceptance. From the delivery body perspective, the ideal would be a situation in which local areas are actively competing to house a facility.

10 The first Community Partnerships were formed in West Cumbria in late 2021. By August 2023, there were four active partnerships. Three of these were in the region of West Cumbria, where most of the UK's high-level radioactive waste is held in temporary storage at the Sellafield Nuclear Facility, the fourth formed on the East coast of England in Lincolnshire, where people have little if any experience of the nuclear industry. In late 2023, one of these partnerships was terminated due to limited suitable geology.

11 A position discussed by Li (2015) in relation to consultations by mining companies in Peru, where local people refused to be drawn into the consultation process for fear that engagement would be used as evidence of a willingness to collaborate. See also Cooke and Kothari (2001).

12 Key examples from West Cumbria include Bickerstaff (2012), Bickerstaff et al. (2010), Wynne et. al. (1993) and Wynne (1998).

13 The Nuclear Decommissioning Agency (NDA) was formed by the Energy Act of 2004 to deliver the decommissioning and clean-up of the UK's civil nuclear legacy. NDA owns the UK's nuclear legacy sites and acts primarily as a strategic and governing body. The delivery bodies, subsidiaries of NDA, have changed several times since 2004. In 2022, Nuclear Waste Services replaced the previous organisation, Radioactive Waste Management. The delivery body in 2013 was NIREX. Given the frequency with which these organisations appear and transform, I refer to them simply as 'the delivery body' in this article. Furthermore, much of the work of the delivery body is subcontracted to large and small companies in an extensive and growing supply chain.

14 Department for Business, Energy & Industrial Strategy, 2019.

15 To this end, nuclear waste is first vitrified or otherwise solidified by processes of cementation. The solid waste forms are placed in stainless steel canisters, which are, in turn, further enclosed in a thick overpack of corrosion-resistant materials before being buried in a layer of low permeability clay, and then surrounded by 200–1000 metres of 'host rock'.

16 The anthropological record features numerous detailed accounts of the many ways in which diverse human societies have long paid close attention to their relationships to Earth, to rocks, and to the wider cosmos. For a specific focus on rock, see, for example, Cruickshank (2005), Harvey (2019), Povinelli (1995), and Raffles (2020).

17 See, for example, Gusterson (1998), Hecht (1998, 2012, 2018), Ialenti (2020, 2022), Irvine (2014, 2020), Masco (2006), McBrien (2016), and Saraç-Lesavre (2020).

18 Kelly (2012) offers a vivid example of the ambivalence of the hosting relation, which arose during her research on scientific experimentation on malaria in rural Tanzania. The scientists built an experimental hut that was designed to simulate the site of malaria transmission on a domestic scale. However, on the ground, she found that the relatively straightforward scenario that scientists had conceived was constantly destabilised by the changing dynamics of the relationships involved. The experimental hut produced multiple configurations of the host/guest relation that emerged from the cross-scalar juxtaposition of divergent knowledges and positionings of the scientists and villagers, domestic and experimental spaces, mosquitos and human beings, and mosquitos and pathogens.

19 For more detail see Zee (2022).

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FORUM: INFRASTRUCTURE

Anu Lounela & Mari Korpela

INTRODUCTION

It was Europe's wake up call: the news reported that a huge gas pipeline running across the Baltic Sea from Russia to Germany had exploded (Oltermann 2022). The explosion caused a release of gas and ruptured the pipeline, abruptly stopping the flow of gas. In the aftermath of the Russian attack and war on Ukraine, we have seen time and again how infrastructure becomes the main stage for power struggles and politics (infrastructure destroyed for various reasons) on the one hand, and how today's infrastructures scale up to a global level and then back down to local arenas, affecting the lives of millions of people, on the other. While the pipeline explosion is only one recent example of the impact and mobilisation of infrastructures in today's fragile global context, it well illustrates the ways in which infrastructures create and dismantle relationships, politics, connections, and disconnections, sometimes on a massive scale.

Thus, in the 2020s, the study of infrastructures as material, ecological, informational, and political forms seems even more relevant. Infrastructures have become part of global politics in the financialisation of the world economy, violent conflicts, and ecological change, and, at the same time, the politics of infrastructures and their materialisation constitute everyday life and experiences.

Infrastructures can refer to both material and institutional structures that enable and/or constrain people's actions. They are manifested with power, affect social relations and relations with the environment, and have both intended and unintended material, social, and cultural consequences. On the one hand, people may not pay much attention to infrastructures unless certain infrastructures are not functioning properly, causing hardship in everyday life or failing to fulfil people's desires and hopes (Star 1999: 382). On the other hand, sometimes people are strikingly aware of infrastructures, such as if concrete infrastructural constructions are built near their homes.

In recent years, infrastructure has emerged as an important orientation in anthropology (Anand et al. 2018). Prior to the 1990s, as Harvey and colleagues (2017: 3) note, infrastructure was not discussed as much as it is today because infrastructure was often seen as the invisible background of social action or structure; by remaining in the background, infrastructure did not explain human activity or institutions. The turning point occurred when anthropologists in the mid-1990s proposed that the materiality of infrastructures actually 'reshapes bodies, societies, and also knowledge and discourses', which 'inverted' infrastructure to the foreground, giving rise to the emerging

study of infrastructure (Harvey et al. 2017: 3; cf. Bowker 1994).

Susan Leigh Star is one of the pioneers of the anthropological study of infrastructures that had been considered 'boring', but which she viewed as important sites of value creation and political hierarchies, using the example of computer information systems, which were often presented as invisible backdrops (Star 1999: 380). In the years that followed, several texts were published exploring the ways in which infrastructures connect the material and social spheres through political, economic, statecraft, urban development, and environmental issues, inverting infrastructure into the foreground (Venkatesan et al. 2018).

The growing interest in infrastructure in anthropology was also linked to the emergence of other approaches and subfields in anthropology being interested in the study of 'universal' structures such as the state, globalisation, colonialism, nations, and nationalism. Instead of primarily studying the particularities of specific cultures, anthropologists became more interested in studying the interactions and articulations of local cultures with global structures and movements as with when Wolf (1972) suggested studying how capitalist structures were transforming peasant lives, agricultural practices, and land tenure systems. These theoretical discussions on, for instance, globalisation had an impact on the reconfiguration of approaches in anthropology and ethnographic methodologies (Marcus and Fisher 1986). However, anthropologists continued to 'maintain a legacy of attention to social relations, meaning, identity, and cultural differentiation' when discussing change and larger structures and when entering new field sites (such as technological, digital infrastructures) (Harvey and Knox 2015: 2).

We suggest that recent anthropological research interest in infrastructure relates not only to the emergence of large-scale infrastructure construction, which has become a huge site of investment worldwide, but also to a (renewed) interest in materiality in relation to climate change and environmental, food, energy, and water crises (Harvey 2018: 4), as well as to new forms of relationality in anthropology. Virtual technologies, for example, connect and mobilise relationships and information in radically new ways. These new forms shape people's everyday lives, creating unexpected sociomaterial connections, dependencies, and entanglements. New infrastructural forms, thus, raise important material, temporal, and social questions.

Take, for example, green energy infrastructures such as windmills and their rapid acceleration and expansion globally to stop greenhouse gas emissions and mitigate climate change, and the contradictory effects it may have on local landscapes (Zanotelli and Tallé 2019). New energy infrastructures are material infrastructures, systems that affect landscapes and social life in those landscapes, changing the ways humans see and sense landscapes and the ways in which people relate to them. In addition, energy infrastructures have economic effects, not to mention the dependency on electricity infrastructures, which are listed on stock markets but are subject to disruptions (as we saw in Finland in 2023 when the price of electricity skyrocketed).

In addition to material infrastructures, anthropologists have also paid attention to institutional or organisational infrastructures. They can be defined as 'institutions that are required to maintain the functioning of societies and organisations', and they often play crucial roles in enabling or preventing people to do or not to do certain things (Korpela 2016: 115).

For example, the use of passports forms an institutional infrastructure that, on the one hand, enables states to control and facilitate people's cross-border mobilities. On the other hand, this passport infrastructure prevents certain people from crossing borders when they do not possess appropriate passports (Korpela 2016: 120–123).

Infrastructures mediate power relations and politics, creating connections and disconnections, but also distributing injustices and 'abjects' (Anand 2012). Anthropologists are interested in how people participate in the making of material and institutional infrastructures and how they perceive, understand, experience, and make sense of them. Anthropologists are also interested in how infrastructures affect people's everyday lives, and which new challenges people encounter with infrastructures due to urbanisation and climate change among other issues.

This forum explores some of the key insights and orientations of recent infrastructure discussions in anthropology. The papers in this forum were originally prepared as oral presentations for the workshop titled 'Anthropology and Infrastructures', organised at Tampere University in May 2022.[1]

THE POLITICS OF INFRASTRUCTURE

Today, many anthropologists discuss infrastructures as manifestations of power, asking how they affect relations and the formation of authority. It is generally agreed that an infrastructure does not just 'exist', but that it creates effects and perceptions and is embedded in power relations.

Brian Larkin (2013), for example, discusses how infrastructures such as roads and railways are more than technical objects because they mobilise affects that can be political: frustration, desire, and pride, among others. Infrastructures may represent 'the possibility of being modern' or foreclosing the possibility from development, which gives rise to the affects of abjection (Larkin 2013: 333), as Nikhil Anand (2012) has also shown. The politics of infrastructure (through the effects it creates) go back to the Enlightenment idea of a 'world in movement and open to change where the free circulation of goods, ideas, and people created the possibility of progress (Mattelart 1996, 2000)' (Larkin 2013: 332).

In other words, it is about social progress and politics. In Marxist terms, infrastructural technologies 'enacted the course of history itself' (Larkin 2013: 332). Infrastructures in terms of modernity and development are presented as linear and progressive, a kind of rational way in which governments build the nation-state, provide services, and facilitate the flow of goods. However, as many infrastructure anthropologists have noted, infrastructures create connections and disconnections as well as relationships, and distribute resources and justices, raising questions such as who is responsible and what outcomes are achieved, as well as who benefits and who becomes vulnerable or marginalised (Anand 2012).

The Foucauldian approach to infrastructure provides a different angle by looking at the biopolitics or governance and its implications. In this regard, anthropologists ask how certain forms of governance organise populations and territories through technological spheres as if they were distant from political institutions (Mitchell 2011). They might also ask how specific knowledge forms produce new forms of governance (Karhunmaa and Käkönen, this volume). Along this line of thinking, infrastructures reveal 'forms of political rationality that underlie technological projects and which give rise to an "apparatus

of governability" (Foucault 2010: 70)' (cited in Larkin 2013: 328).

In this sense, infrastructures assemble states into certain forms of governance that include calculative rationality and administrative techniques (Collier 2011). Stephen Collier presents an interesting case related to the constitution of the biopolitics of power through infrastructure. He shows how budgets, for instance, are as important as technical systems: they reflect and illuminate modes of reasoning and the changing rationalities of biopolitical governance. In other words, both material and institutional infrastructures can be crucial.

Many of the contributors to this forum have approached infrastructure through the definition proposed by Brian Larkin in his seminal 2013 article, 'The politics and poetics of infrastructure'. Larkin (2013: 328) proposes that 'infrastructures are built networks that facilitate the flow of goods, people or ideas and allow for their exchange over space'. Larkin goes on to state that 'infrastructures are matter that enable the movement of other matter. Their peculiar ontology lies in the fact that they are things and also the relation between things' (Larkin 2013: 329). In this sense, infrastructures are unruly, he says, suggesting that infrastructures could be studied as built things, knowledge things, and human things, and their relations as networks.

Penny Harvey, Casper Bruun Jensen and Atsuro Morita (2017: 10) have suggested that infrastructural politics can be analysed in terms of complications rather than in terms of the biopolitics and governance: 'From the point of view of *complication*, infrastructures are shaped by multiple agents with competing interests and capacities, engaged in an indefinite set of distributed interactions over extended periods of time. The characteristics of infrastructure emerge out of these interactions, making it exceedingly unlikely that they will function

according to the plans of *anyone* in particular (cf. Latour 1996)'.

In other words, even when infrastructural projects have ideological aims or may be used as tools of governance, their outcomes are always much more complicated and diverse. Even when states and those in power make explicit plans, the outcomes are often somewhat different, creating an interesting area of studies into the 'complications' of infrastructure. Thus, in studying the politics of infrastructure, anthropologists look behind the technology and materialities of infrastructure, focusing on the interests and capacities of agents across space and time. Technical or technological managers may emphasise plans and their implementation, and the functions of these plans and built infrastructures. By contrast, anthropologists explore the processes of infrastructure-making and the relations, power positions, and connections that emerge through these processes, the interests and actors behind these plans, the intended and unintended effects they have, and how people perceive and experience them. For example, plans arouse dreams and desires for a better life, and when they materialise in infrastructures, they create new dependencies, and when closed off they can create affects of humiliation or despair. These complications are deeply political.

The politics of infrastructure are well-illustrated in this forum by Lalli Metsola, who writes about urban infrastructures in Namibia. He shows that, while the immediate purpose of particular vital infrastructures is to solve practical problems, the social, transactional, and political patterns that they entail lead to profoundly relational, co-constructed infrastructures and everyday governance. These vital infrastructures create new dependencies, but also interactions and mutual relationships. The making of vital infrastructures emphasises

the human agency and the ways in which infrastructures create differentiated positions.

ENVIRONMENTAL INFRASTRUCTURES

In an introduction to the debate on the anthropology of infrastructure, 'Attention to Infrastructure Offers a Welcome Reconfiguration of Anthropological Approaches to the Political', Penny Harvey (2018: 4) points out that some anthropologists have criticised infrastructure studies as 'too specific and coherent an entity (unwelcome for the way it erases and side-lines other concerns) and as far too vague and open-ended (infrastructure can refer to so many different things that it holds neither conceptual worth nor analytical purchase)'. The core tension in infrastructure politics, she argues, is between the material form and the connective capacity of those forms (or things) (ibid.).

As noted above, the infrastructure approach has increasingly been used to study environmental issues and ecological formation—that is, infrastructures are not just built materialities, but they are 'material conditions of possibility for life', thus opening up the possibility of including the nonhuman and moving beyond distinctions between human, natural, and cultural (Harvey 2018: 5). In this way, anthropologists overcome the Western dichotomy between nature and culture or materiality and sociality, a long-debated question in anthropology (Descola and Pálsson 1996).

In early anthropology, environment, like infrastructure, served as the background to the study of people. However, there has been a move to bring both infrastructure and landscape to the fore, always leaving open the question of how to do this. There is also the problem of how to distinguish infrastructure from environment when both are relational backgrounds, along with how to separate the conceptual from the empirical when studying environmental infrastructure (Harvey et al. 2017: 211). As such, infrastructures and environments are intertwined in many different ways.

Environmental infrastructures are strongly linked to knowledge production, such as expert knowledge and scientific concepts, plans, and designs that draw on specific forms of knowledge. In this forum, Kamilla Karhunmaa and Mira Käkönen explore how negotiations and agreements on climate change mitigation form a knowledge infrastructure that is hugely important in enabling particular forms of climate governance (see also knowledge and water infrastructures in Morita 2017). By focusing on the carbon-offsetting trajectories, they discuss the ongoing effects of such knowledge infrastructures long after they have officially ceased to exist or take effect.

Water infrastructures provide an interesting example regarding how infrastructuring the environment creates connections and disconnections, as the example of shifting and multiscalar channel making by Lounela exemplifies (Lounela this volume; see Lounela 2021). In this forum, Anu Lounela explores how the human-made wetland infrastructure structures social relations, while, at the same time, the environment in turn shapes infrastructure, producing inclusions and exclusions as overlapping social orders that are constantly negotiated and contested among people. Environmental infrastructures, thus, reflect and produce different knowledge and political regimes that become entangled in wetland landscapes, making it difficult to separate environment and infrastructure from each other.

Ashley Carse (2014: 6), who studies canal building in relation to forests, notes that infrastructures produce environments and

environments produce infrastructures. This means that infrastructures seek to organise landscapes to reflect the plans, designs, and politics of technical systems, but that ecologies and populations do not necessarily bend to these designs and plans. This, according to Carse (2014: 6), gives rise to a political ecology of infrastructures 'with winners and losers'. In her view, almost all environments are modified by human labour, suggesting that labour dissolves the boundary between nature and infrastructure (i.e., technology). Political ecology helps to understand how nature becomes infrastructure and a system that has 'significant potential to produce ecological distribution conflicts around social and spatially asymmetrical access' (Carse 2012: 544).

Tuomas Tammisto, in this forum, explores the oil palm plantation as an infrastructural system with different components, where the plan (protocol) serves a specific extractive logic supporting the potential agency of this system, but what the systems do and enable may be very different from what the planners imagine. Infrastructure is like a grid (see Scott 1998) of roads, pipelines, mills, and tree plantations that together form a highly infrastructural space, and further components of this system. Rather than simply facilitating flows, plantation infrastructures also have bottlenecks that disrupt flows. Furthermore, the smooth functioning of the oil palm infrastructure hinges on the activity of the people, especially, the plantation workers, Tammisto argues. This is where people's agency and potential become important.

In general, environmental infrastructures or infrastructuring environments form systems that have special potentials and capacities and involve active forms. They produce knowledge and are shaped by specific forms of knowledge, which give rise to specific forms of governance.

INSTITUTIONAL/ ORGANISATIONAL INFRA-STRUCTURES AS COLLAGES OF MULTIPLE ACTORS AND CONTESTED AIMS

People's agency becomes crucial also when investigating infrastructures, which are combinations of technological and institutional structures or networks materialised in the landscapes or social worlds. Such institutional infrastructures not only 'facilitate the flow of goods, people or ideas and allow for their exchange over space' (Larkin 2013: 328), they also affect how people deal—and are able to deal—with certain events, situations, and processes in their lives. In other words, institutional infrastructures shape people's lives and actions. They have often been formulated without a master plan through the course of time. They may be institutions with very long historical roots or ad hoc developments with various (state-driven, private, and commercial) actors involved. These infrastructures often consist of a fragmented field of actors resulting in a complex and somewhat confusing network, where the parts form an entity that was never planned as such, and individuals then need to navigate these structures—that are in a constant process of change (Gupta 2018: 62)—the best they can. National and political interests often play significant roles in these infrastructural processes, yet the nation-state is far from the sole actor in these institutional fields and the entanglement of the local and global may be complex and even controversial (Harvey et al. 2017: 5). Consequently, the infrastructural domains may become contested and confusing for the individuals who need them or are requested to use them. Examples of such crucial institutional infrastructures include, amongst

others, the already mentioned international system of international passports, social security systems in welfare states, education systems as well as various other systems with which states, organisations or corporations organise, support, and control people's lives and actions.

In this forum, both Laura Huttunen and Anna Matyska discuss infrastructures related to the search for missing persons. Their analyses show the complex and confusing realities of these technological and organisational infrastructures involving various actors with somewhat differing aims and agendas. Yet, their existence and actions have significant consequences in the lives of people who search for their disappeared family members or friends. Huttunen discusses infrastructures related to the search and identification of disappeared or missing people in the context of the Bosnian War and the present-day Mediterranean. She argues that global politics, trust, and material affordances play a key role in these processes, where, in some cases, there are significant financial and institutional resources invested in the search, while, in other cases, such investments—and even interest— are strikingly missing. Matyska discusses the expansion of tracing infrastructure related to the rising sociopolitical recognition of people's disappearances in Poland. She argues that there are multiple actors with somewhat competing interests in the field, which results in the tracing infrastructure always being an imperfect work-in-progress.

The processual nature of institutional infrastructures also becomes visible in Mari Korpela's text, where she investigates the institutional infrastructure of schools in the lives of internationally mobile children. She argues that the incompatibility of school systems in different countries can pose

a tangible challenge to children who move between countries because of their parents' work. The institutional infrastructure of children's education often functions on the premise of a rigid nation-bound timeframe, determining how an individual progresses in the system, but internationally mobile children's educational paths are characterised by disruptions rather than a smooth progress (cf. Devine and Boudreault-Fournier 2021: 5).

To conclude, in all of these institutional infrastructures, resources and knowledge circulate, organise, and guide people's actions and lives, but the directions and distribution are not straightforward and various actors involved may have different interests and goals, and some of the outcomes may also be unintended. A significant element is also the political will— or the lack of it—to solve challenges in the smooth functioning of these infrastructures. Yet, competing interests or disruptions in their functions may have severe consequences in individual's lives.

Infrastructures matter, perhaps more than ever. Infrastructure projects today are often large-scale projects that shape the environment, transform and change power relations, and create social relationships that are materialised in landscapes or social worlds. Infrastructures also create new dependencies (electricity and energy, water, internet, and social security) that make human life vulnerable to forces it cannot control or influence. Moreover, infrastructures can have rather tangible (and sometimes unexpected) effects on individuals' lives and actions. We, therefore, propose that it is of the utmost importance to conduct studies on infrastructures, making them and their effects visible through anthropological research.

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Lalli Metsola

VITAL INFRASTRUCTURES: PRECARIOUS PRESENCE AND THE CO-CONSTITUTION OF URBAN SPACES, LIVES, AND GOVERNANCE

Sustaining lives in urban environments depends on infrastructures—buildings, water pipes, sewers, energy distribution, and roads among others. Their availability is particularly acute in Africa due to rapid urbanisation, entrenched inequalities, and persistent resource constraints. At the site of my ongoing research, Namibia's capital Windhoek, the legacy of colonial segregation coupled with low incomes and a lack of affordable housing have led 'informal' settlements with insufficient formal infrastructures to mushroom. Under these conditions, the necessity of satisfying one's basic needs, as well as aspirations of improvement, lead residents to rely on improvisational skills, co-presence, and social relationships to innovate do-it-yourself (DIY) solutions as well as to appropriate, bypass, and complement formal infrastructures. These arrangements serve as 'vital infrastructures' in two senses: both by facilitating and regenerating lives in the city and by relying on the energies of residents for their operation (blurring the categories of provider and user). I argue that such vital infrastructures represent a major force in the making of cities and urban lives, in Africa and beyond. While their immediate purpose is to solve practical problems, the social, transactional, and political patterns they entail lead to profoundly relational, co-constructed infrastructures and everyday governance.

Historically, the concept of infrastructure has referred to physico-technological networks and organisations essential to the functioning of societies (Graham and McFarlane 2015). They are relational assemblages of concrete objects, energies, technologies, people, and ideas (Larkin 2013; Appel et al. 2018). Along these lines, recent ethnographies have highlighted the real workings of planned, formal infrastructures, such as water and electricity networks or roads. Such studies have examined how the selected infrastructural assemblages reflect power relations; prompt user adaptations, modifications, and claims; influence living conditions and social organisation; and serve as a nexus between state power and citizenship (for a few examples, see Harvey and Knox 2015; Von Schnitzler 2016; Anand 2017; Fredericks 2018; Degani 2022).

The relational approach evident in the ethnographies of infrastructure is fruitful, but the predominant focus on networked, formal infrastructures remains limited. Fundamentally, infrastructure can be defined as any relatively durable, shared, systemic arrangement that supports societies. What is identified as 'infrastructure' then depends upon what is selected as the primary object (or figure) and its underlying condition (or ground). For example, social relationships might serve as infrastructure in contexts with deficient formal

networks (Simone 2004; Elyachar 2010; De Boeck 2015). From this perspective, the concept of 'infrastructure' does not necessarily refer to the formal infrastructures commonly associated with modern states, such as municipal water (Anand 2017; Von Schnitzler 2016) or electricity (Degani 2022) networks. Instead, infrastructure can refer to any socio-material assemblage—of materials, energy, technology, social relations, norms or routines—catering to the needs and aspirations related to urban dwelling, irrespective of whether these are formal or informal, networked or off the-grid, state or non-state, and conventionally recognised as infrastructures or not.

This is important because vital infra-structures in African cities cross such boundaries on a regular basis (Monstadt and Schramm 2017; Amankwaa and Gough 2021). Relevant actors may differ from city to city, between different neighbourhoods, as well as according to social stratification, but they commonly include family, kin, neighbour and friend networks, savings groups, religious communities, traditional authorities, entrepreneurs, municipal officials, nongovernmental organisations (NGOs), and political party branches (Lund 2006; Blundo and Le Meur 2008). Actors under the 'state' rubric also tend to be diverse. Accordingly, the analysis of political agency and urban citizenship should relate inclusion and access not only to the state, but to any significant institutions in the observed politico-material space.

When migrants—mostly young people in search of better opportunities—first arrive in Windhoek from rural areas, they often settle with relatives, friends or people with a common origin. Informal rental markets represent another option. The unauthorised occupation of municipal land tends to occur when such people later wish to establish their own household.

Such occupation is illegal in principle, but in practice the municipal authorities largely tolerate it. Simultaneously, the uncertainty of tenure directs building practices (for example, a reliance on cooperation in land occupation and construction or the use of relatively cheap, removable materials, such as corrugated iron). Occupants gradually extend their homes over the years as resources allow. Obtaining a house in the city is an important objective as a part of intergenerational, translocal survival and advancement strategies among extended families in which people, money, food, goods, and information flow between rural and urban areas (author's field data; see also Frayne 2007; Greiner 2012; Nord 2022).

Simultaneously, residents seek tenure security, basic services, and better chances of daily survival by cultivating relations in the neighbourhood as well as with municipal authorities. Some participate in savings groups to obtain and subdivide plots together (Delgado et al. 2020; Chitekwe-Biti 2018). Over time, partial, provisional, and evolving recognitions from the municipality, such as enumerations, waiting lists, leaseholds, or certificates of occupation, provide gradual increases in tenure security and condition access to water, electricity, and sanitation (Metsola 2018, 2021, 2022; see also Goodfellow and Owen 2020). Advances in the latter, such as gaining water tokens or toilet keys, in turn, come to signify increasing degrees of recognition and, hence, solidify claims for tenure (Metsola 2018, 2021, 2022; see also Holston 2008; Bayat 2010).

The dense co-presence of residents facili-tates their everyday off-the-grid arrangements as well as ways of appropriating formal infrastructures. This co-presence also generates the space for informal markets for a wide array of goods and services. Apart from commercial transactions, exchanges often

involve expectations of mutual obligations and reciprocity, and are described as sharing, assistance or support (author's field data; see also Tvedten and Nangulah 1999; Spiegel 2018). For instance, many settlements have pre-paid communal water taps, which residents who are recognised by the municipality can use with rechargeable water tokens. However, unrecognised residents who do not possess their own tokens might use their neighbours' and contribute towards recharging them. For energy, residents use gas and paraffin, install solar panels, and fetch firewood on the outskirts of the city. In principle, electricity connections are only available to those on formal plots. In practice, it is quite common for those residents who are sufficiently close to the grid to tap into it illegally, mostly from houses with official connections. In these (and other) cases of shared access, I have learned about both making a profit by reselling and about terms and prices being determined not solely by demand and supply, but also by other considerations such as need, decency, and fairness.

Apart from solving practical problems and constituting a socioeconomic field, vital infrastructuring carries political significance. First, it reflects the interests of participating social actors and the distribution of power between them. The literature on urban politics tends to focus either on domination and resistance (e.g., Harvey 2008) or on the ways in which these poor residents' mundane efforts towards practical improvement carve out space for autonomy and rights (Holston 2008; Bayat 2010). Such antagonisms are certainly important. From a critical perspective, the urban fringes serve as an environment for reproducing the labour necessary for the running of a formal city, while outsourcing the burden of its reproduction to the residents themselves (Metsola 2022). However, the

shared experiences of precarity do not always appear to solidify into an organised 'resistance', but rather incubate a broad spectrum of political energies, orientations, and relations, most of which rely on the aforementioned co-presence. In Windhoek, these include moments of collective protest and land occupation, but also mediatised pressure, pleading with political representatives, mutual co-optation through 'participation', the exchange of improvements for political allegiance, the appropriation of formal infrastructures, and generalised expectations of a responsive and caring public authority (Metsola 2022:46–50). Thus, apart from resistance and autonomy, infrastructuring also constructs various co-dependent relations. In particular, expectations of mutual obligation play a role in how people establish themselves as residents through institutions of kinship, shared origins, and co-habitation as well as through the local state, which is expected to tolerate and improve neighbourhoods (Metsola 2021; see also Ferguson 2013).

Second, infrastructuring can be viewed as a dispersed relational field with constitutive effects on the entities that participate in it. Infrastructural practices contribute to the very formation of urban residents as political subjects, along with their conceivable modes of action and coexistence, from dispositions of exercising authority to the making of urban space (von Schnitzler 2016; Fredericks 2018; Degani 2022). Such processes can only be understood diachronically over time. This means scrutinising how the interaction between various participating entities produces vital infrastructures, while simultaneously taking into account the historical emergence and transformation of these participating entities in relational entanglements over time (Strathern 2020: 17–18; Harvey et al. 2017: 12). For example, in Windhoek, people have learned

to operate in a multi-logic environment—improvising but also resorting to expected patterns of obligation; utilising 'traditional' ties as well as new opportunities of engagement; and seeking both personal advancement and mutual support. The vital infrastructures and claims of residents have prompted governmental responses in the form of informal settlement upgrading policies, extending services, local leadership structures for administering the urban fringes, and legislative changes that provide for intermediate forms of tenure (Metsola 2022; Delgado et al. 2020). At the same time, resident claims often reflect the promises of policies and officials (Metsola 2022). These interactions produce specific ways of being an urban citizen. They have resulted in co-produced urban fringes and a practical regime for their everyday governance which is partially formalised and partially informalised. It consists of tolerating unauthorised land occupation, autoconstruction (Holston 2008) and DIY solutions, combined with formal provision of services, mechanisms of 'participation' as a governmental device, and partial increases in tenure security. These cannot be understood as solely bottom–up or simply top–down, but only as evolving incrementally and relationally.

To summarise, I have argued that vital infrastructures arise out of a need to survive and aspire in precarious conditions. They are constellations of social relationships, transactional logics, political relations, materials, and technologies, and cut across the divides of formal/informal, networked/off-the-grid, and state/non-state. Such diverse, plural regimes of vital infrastructuring have major effects on the making of cities, urban lives, and everyday governance, and, therefore, deserve systematic analytical attention.

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Kamilla Karhunmaa & Mira Käkönen

TURNING ATTENTION TO THE AFTERLIVES OF KNOWLEDGE INFRASTRUCTURES

Once a large-scale infrastructure such as a railroad, sewage system or power plant is put into place, it not only tends to enjoy a long life, but often also a forceful afterlife. Abandoned railroads may find new uses, while ruined sewage systems or power plants tend to have toxic legacies that continue to make people sick. When infrastructures cease or fail to provide the functions for which they were originally intended, they do not cease to interact with and alter their environments. Rather, they remain as lively remnants that continue to order relations and exert influence (Appel et al. 2018; Barry 2020; Sizek 2021).

In this short piece, we take our cue from recent infrastructure studies that have focused on the processuality and temporality of infrastructures (e.g., Anand et al. 2018; Carse 2019; Gordillo 2014). We extend this approach to knowledge infrastructures—or the support systems and networks that lay the conditions for particular modes of governing—and ask what kinds of afterlives they may have. To assess these, we examine the continuities present as international climate policy transitioned from one regime—the Kyoto Protocol —to another— the Paris Agreement. Our main argument is conceptual: we, first, argue that knowledge infrastructure is critical for enabling particular modes of climate governance. Second, we point out that knowledge infrastructures also need to be critically examined through a temporal lens, asking what their continued influences and lingering power effects are. We close with

remarks on the possibilities for research opening up from examining the afterlives of knowledge infrastructures.

Infrastructure has been the subject of much attention in the social sciences, ranging from science and technology studies (STS) to anthropology. The focus of a large part of such studies has been placed on physical infrastructures and the dis/connections they generate and/or mediate (Anand et al. 2018; Harvey et al. 2017; Larkin 2013) as well as on the processes of 'infrastactur*ing*', which rearrange human and nonhuman relations, while rendering environments infrastructural (Blok et al. 2016; Barua 2021). At the same time, the role of less material infrastructures has received a smaller amount of attention. To address this gap, we draw on earlier literature on infrastructure in STS to specifically consider knowledge infrastructures.

Discussing the sociotechnical support systems enabling the generation and circulation of scientific knowledge, Paul Edwards (2010: 7) defines knowledge infrastructures as 'robust networks of people, artefacts, and institutions that generate, share, and maintain specific knowledge about the human and natural worlds.' However, our interest extends beyond Edwards' focus on scientific knowledge to being interested in acts of governing—or how knowledge infrastructures enable and are co-constitutive of certain forms of climate governing while foreclosing on others. We define knowledge infrastructures as a durable assemblage of

interacting governing rationalities, calculative devices, accounting methodologies, standards, and experts that form the basis for and enable particular modes of governing. To elaborate on this, we next turn to discussing international climate policy and carbon offsetting.

Adopted in 1997, the Kyoto Protocol marked the first comprehensive international treaty to address climate change. It also established several market-based policy mechanisms for dealing with climate change, including the creation of carbon offsetting through the Clean Development Mechanism (CDM). Carbon offsetting refers to the practice of paying another entity to reduce, avoid or sequester emissions somewhere else, in order to compensate for or offset emissions. In the case of the CDM, industrialised countries in the global North could meet part of their emission reduction obligations by purchasing supposedly more 'cost-efficient' carbon credits produced in the global South.

In this context, we take knowledge infrastructures to refer to the assemblages enabling offsets to exist as tradable commodities and entities of climate policy. For example, carbon offset units need to be legally and technically defined in order to exist in a commodity form and to be able to travel from one place to another (Mackenzie 2009; Dalsgaard 2013). A series of obligatory passage points (Callon 1984), such as technical calculations and processes of monitoring and reporting, exist which offset projects must pass through before being accepted as tradable carbon credits. Without such knowledge infrastructure and the expert work it supports and enables, carbon offsets would not exist. A tree planted in India would simply be a tree planted in India. A carbon offset becomes real only 'through all those processes of validation, verification, issuance' (Lobbyist, quoted in Blum

2020: 232). Thinking about carbon offsetting as dependent upon and contributing to knowledge infrastructures opens up new avenues for examining climate policy and its governance.

Knowledge infrastructures, just as any other infrastructure, are subject to modification, maintenance, refinement, and change. The extent to which knowledge infrastructures are malleable or result in obduracy and lock-ins needs to be addressed empirically. As the Kyoto Protocol was ending, the Paris Climate Agreement was negotiated in 2015. The Paris Agreement provided a moment to think anew about the role of policy mechanisms in climate governance. It brought to the fore the substratum of climate policy, or the distinct calculative devices, methodologies, and expert networks enabling climate policy mechanisms such as carbon offsetting to function.

The main difference between the Paris Agreement and the Kyoto Protocol is the shift from imposing quantified emissions reduction obligations on a group of industrialised countries (Kyoto Protocol) to committing all signatories of the Agreement to propose climate mitigation activities of their own (Paris Agreement). As all signatories aim for mitigation activities, there no longer exists a so-called surplus of 'cheap and efficient' emissions reductions in the global South which industrialised countries from the global North could finance and claim. This opened up the possibility of moving away from an offsetting logic in international climate governance to renew commitments to emissions reductions. However, what countries agreed to in signing the Paris Agreement was not at all clear. In particular, Article 6, which outlines the role of voluntary cooperation between signatories, entailed vague language and remained a source of heated debate. In fact, Article 6 prevailed as the last unresolved piece of the Paris 'rulebook' with continuous failures upon which parties

could reach agreement prior to the COP26 in Glasgow in 2021.

In relation to international carbon markets, the Paris Agreement posed a threat to several actors since it potentially signalled an end to offset-based carbon markets. Given this reality, carbon market actors rapidly mobilised around the methodologies, processes, and capacities—or the knowledge infrastructure—created during the Kyoto Protocol. As a speaker at a COP24 side event organised by the CDM Executive Board commented, 'Not finding a place for the CDM will mean lost infrastructure' (UNFCCC News 2018).

The negotiations at COP26 in Glasgow resulted in a compromise deal that extended Kyoto-era carbon market mechanisms to the Paris Agreement. When examined as a knowledge infrastructure, we see significant parallels between the two, with largely the same networks of experts, data, and methodologies established during the Kyoto Protocol re-purposed to fit the Article 6 requirements in the Paris Agreement. Years of work using the Kyoto mechanisms helped create the knowledge infrastructure that enabled the first global carbon market. Following COP26, governance bodies established during the Kyoto Protocol offered alongside the novel policy instruments the 'hard and soft infrastructure that has been built up over many years in support of the CDM' (UNFCCC 2022). This demonstrates how the assembled networks of experts and methodologies have inertial powers that have kept the mechanisms alive. It also reflects how infrastructure is oftentimes developed or built upon existing structures (Appel et al. 2018; Barry 2020).

The continuity of offset-based climate governance represents a combination of infrastructural persistence and powerful political interests pushing for the endurance of carbon offsetting. At COP26 in Glasgow, industrial lobbyists approached Article 6 as the key mechanism for enabling corporate net zero pledges and accelerating the establishment of global carbon markets. The will to make climate ambitions 'easy', undisruptive, and business-friendly through sustaining carbon offsetting has, thus, been coupled with the lingering power effects of knowledge infrastructures that already exist and can easily be mobilised.

Following COP26, new questions emerge on who will have access to cheap credits or the so-called low hanging fruits that the previous offset mechanisms targeted: the governments of the global South that now have their own emission reduction commitments or the corporate and government buyers in the North? Furthermore, the problems of carbon commensurations remain and intensify with the new Paris rules put into place through Article 6. Creating commensurability will require hard infrastructural work as significant modifications of calculative devices are required to make them fit for the post-Paris realities of climate governance and accounting. Moreover, this work is largely expected to be done by the same experts trained in carbon offsetting during the Kyoto Protocol. In the worst-case scenario, new forms of infrastructural violence may become engendered, perpetuating the kinds of harms caused by previous offsetting mechanisms (Cavanagh and Benjaminsen 2014; Carton and Edstedt 2021; Käkönen and Thuon 2019; Milne and Mahanty, 2019; Rodgers and O'Neill 2012).

If abandoned mines or power plants continue to pollute and affect their surroundings, what happens to seemingly obsolete policy mechanisms? Or, rather, what happens to the knowledge infrastructures that form the foundation and substratum of such policy mechanisms? Like unused railroads, such knowledge infrastructures do

not merely disappear. Instead, they continue to exert influence as networks of experts, data, and methodologies that can be brought up and retrofitted. Using our example on carbon offsetting trajectories, we hope to have highlighted the relevance of attending to such afterlives. By revealing infrastructural inertias, such an analysis also has the potential to contribute to the infrastructural repurposing and reimagining required to leverage more liveable and just futures.

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Anu Lounela

MAKING WETLANDS AGRICULTURAL LANDSCAPES: THE POLITICS OF INFRASTRUCTURE

In Central Kalimantan, Indonesia, wetlands have been converted and drained through massive infrastructure canalisation since the Dutch colonial period. In the 1950s, the newly independent Indonesian state developed an irrigation system with canals and channels to increase rice cultivation and settle migrants as rice farmers in the area. In the 1990s, the Mega Rice Project (MRP), launched by President Suharto's government in order to make Indonesia self-sufficient in rice production, produced a massive canal infrastructure consisting of more than 4000 km of canals and channels, draining about one million hectares of peatland within several years (McCarthy 2013). These infrastructure projects produced massive fire hazards and other environmental damage due to the drainage of fragile peatland soils (Horton et al. 2021; Lounela 2021b). To address these environmental problems, recent public–private partnerships have produced new infrastructure initiatives to restore drained peatlands to wetlands by rewetting and revegetating them, which involve local populations. In this essay, I examine the 'politics of infrastructure' by looking at the sociomaterial connections and disconnections, and the implications of wetland infrastructure promises and failures in Central Kalimantan (Anand et al. 2018; Harvey et al. 2017; Venkatesan et al. 2018).

Today, infrastructure can be considered a key concept for analysing material systems that reflect modernity and development, and, thus, power relations. Initially, infrastructure reflected the Enlightenment's idea of 'a world in movement and open to change where the free circulation of goods, ideas, and people created the possibility for progress' (Larkin 2013: 332). Today, we live in a world where modernity, development, and 'economic growth' interconnected with infrastructure schemes seemingly failed us, resulting in environmental damage and catastrophic climate change. This all suggest that the idea of infrastructure as a system providing a better human future demands reconsideration. In addition, infrastructure is taking on a new role as a vehicle for 'green development', 'restoration', and 'climate change mitigation' in response to the problems produced by capitalism and large-scale infrastructure development. For example, in Indonesia, President Jokowi is called the 'father of infrastructure' given his enthusiasm for massive energy and industrial infrastructure projects, as well as restoration and green energy, in addition to rebuilding a spectacular green capital on the island of Borneo and abandoning the old capital in Java (Lounela and Wilenius 2023).

Anthropological studies on infrastructure continue to increase, as we can see in this forum. Harvey, Jensen and Morita (2017: 5) have argued that infrastructure anthropology importantly shows that infrastructures 'as material assemblages produce effects and structure social relations through either planned (i.e., designed and purposefully shaped) or unplanned (i.e., unplanned and emergent) activities'. In this paper, I show that infrastructures are an 'ongoing

process of relationship building', which involve material or ecological and social aspects (Carse 2014: 5). Thus, the politics of infrastructure produce planned as well as unplanned effects in the sociomaterial landscapes (Lounela et al. 2019). This approach suggests that the division between nature and technology is somewhat illusory (Carse 2012: 540). Infrastructure-making is a two-way relationship and process given that human labour transforms nature, while nature, in turn, also modifies the result of work alongside human sociality. Here, I explore how the human-made wetland infrastructure structures social relationships embedded within the material landscape, while simultaneously the environment, in turn, shapes infrastructure, which structure social relationships and activities, producing inclusions and exclusions, often with unforeseen effects.

THE INDIGENOUS INFRASTRUCTURE, ECOLOGY, AND SOCIAL RELATIONSHIPS IN THE WETLANDS OF CENTRAL KALIMANTAN

The Ngaju Dayak are horticulturalists living in the south-central part of Indonesian Borneo. Ngaju means 'upstream' and is an exonym for various local groups who identify themselves as river people (Schiller 1997: 16). The Ngaju inhabitants in the Sei Tobun village (pseudonym) live in a swampy landscape (N. *rawa*) characterised by the fluctuating composition of land and water. In earlier times, settlements remained small and scattered along the small rivers connected to the great Kahayan River; today, the village is home to about 2800 residents. The Ngaju used to gather forest products, make small fish ponds (N. *beje*) in the

swampforests, practice swidden rice cultivation, hunt, and share some of their harvest with people living nearby (Lounela 2017).

In *rawa,* 'you had to walk barefoot', my host told me one day. In addition, people used small wooden boats and pushed them with wooden sticks while standing to travel deeper into the swampforest. Previously, the water level was high, although seasonally the water level dropped (Lounela 2021a). In addition, peat water is acidic and black, and only certain species of fish and plants have adjusted to living in this type of wetland ecology. Wetlands and the flow of water in the rivers are difficult to 'control', I was often told, and people carefully noted the movements of water in order to access their gardens or inland forests and fishing sites via waterways they made when they channelled rivers making them longer.

Small rivers—locally, *sei* or *saka*—crossing the peatland were opened further by digging channels to mark rights to land. Rivers were also associated with forming socialities which emerged simultaneously with working on wetland drainage and rivers and making it into an agricultural infrastructure. Family groups, sometimes said to be clans, distributed inheritance rights along the lengthened rivers in the wetland landscape, and responsibilities and rights were defined through kinship and genealogy (Lounela 2021a.) Thus, the Ngaju people built the channel infrastructure for drainage, marking property rights in order to further expand and reach swampforests and territorialise the land. At the same time, the rivers transformed into small channels, accompanying the formation of kin groups securing tenure rights to land, demonstrating that working nature as infrastructure also creates relationships (Carse 2012).

INFRASTRUCTURE POLITICS: EXCLUSIONS AND INCLUSIONS IN THE MAKING OF AN EXTRACTIVE INFRASTRUCTURE

The concept of 'infrastructure politics' refers to how power relations embedded in the infrastructures produce inclusions and exclusions in a variety of ways, in addition to being a question of 'life worlds' that infrastructure sustains or destroys (Venkatesan et al. 2018: 5). In this section, I explore how a state and corporations—which are interlinked in Indonesia—produce exclusions and inclusions through resource extraction and related infrastructure built on the wetlands.

There is a long history of colonial and sovereign states harnessing wetlands to create property rights, to territorialise 'remote' and 'waste' swamplands and their populations, and to convert them into agricultural sites in Southeast Asia and around the globe (Scott 1998, 2009; Lounela 2021a; Nygren and Lounela 2023). In Central Kalimantan, the Dutch colonial rule, for example, pushed mobile indigenous people to settle down in the nineteenth century to create more ordered settlements and property rights. Simultaneously, Dutch colonial rule formally regulated land that had no formal ownership as state land (Kelly and Peluso 2015: 484). These policies drove people to seek ways to mark their land rights by terrestrialising the wetlands through drainage and by planting crops and trees on land; at the same time, Dutch colonial rule created canal waterways for transportation and rice cultivation in the area (Nygren and Lounela 2023).

In the 1960s, timber companies began expanding into the swamp landscape by logging timber for the timber industry on a massive scale, increasing again in the 1970s and 1980s

(McCarthy 2007). The expansion of large companies into forest areas through large-scale logging led people to participate in the logging operations by forming small logging groups in the hope of making money. The logging groups (normally consisting of about five people) would sell the timber to the sawmills. These small groups transported timber along hand-dug channels (*tatas*) and rails along the banks of the Kahayan River. Such infrastructures were part of producing new property relations as some men claimed rights to these waterways, and in some cases claimed that these waterways also marked their land rights.

In 1996, the Mega Rice Project (MRP)—a state scheme aimed at making Indonesia self-sufficient in rice production—started to build a huge canal infrastructure (of more than 4000 km) across the villages, swamps, and peat bogs in an area of more than one million hectares in Central Kalimantan (McCarthy 2013). According to the government discourse, the MRP would become a productive rice-growing and agricultural landscape. Subsequently, many Ngaju Dayak imagined the project would bring prosperity and new livelihoods. Yet, civil society groups and some local actors considered the project damaging to the environment and negatively affecting local livelihoods. However, opposing the state scheme was considered dangerous under authoritarian rule (Lounela 2015). This demonstrates how highly political infrastructures are in Central Kalimantan and in general (Venkatesan et al. 2018), promising development and hope (Li 1999), while also often failing and becoming the sites of struggle (Harvey et al. 2017; see also Anand et al. 2018).

The MRP left behind a severely disturbed landscape. However, environmental damage opened up the landscape to nature conservation projects, and industrial plantations, especially oil palm, spread rapidly in the province. Just

recently, President Jokowi promoted a new food estate project falling under the responsibility of the armed forces (The Jakarta Post 2020).

As multiple actors, each with their own development or resource interests, sought to take over the management and development of wetlands, local people also sought to secure access to the land by expanding infrastructure drainage. In 2005, the provincial governor, a Ngaju Dayak himself, encouraged the Ngaju people to widen and deepen their rivers with excavators and cultivate rubber along the channels to stop the expansion of oil palm plantations on their customary lands and to secure land for future generations with support from the regional government. Increasingly, the rivers were infrastructured into channels called *handel*. The former river social organisations primarily based on kin relations were now formalised as channel or *handel* groups with clear membership rules and rotating leadership. At the same time, new people were integrated into the groups as the residents sold land to external actors and people outside the groups (Lounela 2021a).

Drainage lowered the water level. Subsequently, after 1998, fires regularly occurred, but intensified after the new channelisation in 2006. The environmental damage and fire hazards pushed governments to try to *fix* the drained wetlands (Castree 2008), involving new infrastructural schemes. After 2010, different climate change schemes worked to fix the wetland drainage in the area (Lounela 2015, 2019). President Jokowi launched the Peat Restoration Agency (BRG) by presidential decree (PP 1/2016) in 2016. The BRG began operating in the Central Kalimantan province and Pulang Pisau district in 2017, aiming to restore 2.49 million hectares of peatland between 2017 and 2020. New infrastructures were initiated: rewetting by blocking; restoration

of vegetation with plants; revitalisation through livelihoods (Badan Restorasi Gambut 2019). The local people were expected to build wooden dams in the channels, which they previously kept open by cleaning and digging them. Damming the channels, in turn, would affect gardening, planting, fishing, and transportation in the riverine peat landscape. Thus, while some residents remained reluctant to build dams for this reason, other residents argued that restoration is necessary for preventing further fire disasters. There have been relatively large fire incidents in the village since the BRG restoration began.

The state-initiated wetland canal infrastructures, such as the MRP, were designed by specialists in collaboration with governmental actors. But, these infrastructures have carried unplanned consequences, both ecologically and socially, producing multiple socionatural effects and environmental hazards such as fires. The large-scale infrastructures connect with new, partly locally and initiated channel infrastructures, forming multilayered and hybrid wetland landscapes where different social forms seem to create multiple overlapping social organisations and social orders (Gershon 2019). Infrastructures are embedded with power relations, the 'politics of infrastructure', which manifest in competing infrastructure forms from the state, corporations, and local populations, and which continually remake the wetland infrastructures and, thus, socionatural relations.

CONCLUSIONS

In this paper, I have discussed the Indonesian 'politics of infrastructure' by looking at the making of the wetland infrastructure and its effects, promises, and failures in Central Kalimantan (Anand et al. 2018; Harvey et

al. 2017; Venkatesan et al. 2018). In doing so, I discussed how the Ngaju people have worked the wetland ecology to establish an agricultural infrastructure through drainage and plant cultivation in the context of state formation and resource politics. I have also shown how making nature into infrastructure (canals, channels, and dikes) also affects the environment, in this case by drying the wetland and making peatland susceptible to large-scale fires, thereby causing environmental disasters that harm the inhabitants of the area.

Thus, it matters what kind of nature is made into infrastructure. Infrastructure-making takes place on a specific peat ecology, consisting of trunks, leaves, plants, and acidic water that have accumulated over a very long period of time. This peat, then, becomes highly flammable when the water level falls and the peatland logged of trees.

Large-scale agricultural infrastructure such as the MRP differs from the small-scale channelisation by the Ngaju. Lengthening rivers created connections among local populations to distant gardens, enabling them to carry out agricultural or agroforestry practices in distant locations. The channel infrastructure formed a strategy to territorialise and claim rights to land, while also creating and maintaining social relationship.

After 2016, the state sought to repair and restore damaged swamps through new dams and well infrastructures to mitigate fires. The dams impeded peoples' access to the remote areas they had come to understand as their customary lands. This reterritorialisation by the state through new restoration infrastructure demonstrates how infrastructure making and politics links to changing governance systems with different resource policies. But they all have the same effect of rendering people as objects of infrastructure development.

As I have argued elsewhere (Lounela 2021a; Nygren and Lounela 2023), the processes of making nature into infrastructure reveal the changing politics and shifting values inscribed in wetland landscapes. Infrastructures are not neutral; state-initiated infrastructures, such as the Mega Rice Project, seek to create legible landscapes, which allow for extracting natural resources, but also create governance mechanisms (Scott 1998). Furthermore, local populations also create state-like infrastructures in an attempt to territorialise spaces. Multiple interests and actors produce overlapping infrastructures and social organisations. Infrastructure, thus, creates connections and disconnections as nature is worked into infrastructural forms. As an anthropological lens, infrastructure provides a view of the continuities and discontinuities of wetland-making and unmaking, and the inclusions and exclusions that occur within these processes.

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Tuomas Tammisto

THE DISPOSITION OF THE OIL PALM INFRASTRUCTURE

The Tzen oil palm plantation in the northwestern corner of Wide Bay in Pomio District, East New Britain Province, Papua New Guinea, is a highly infrastructured space. Roads surround and order the oil palm plantings into a grid-like space and connect the main estate to the plantation's extensions in the surrounding area. A sawmill, workshops, and a mill, with a pipeline running from the mill to the seashore all stand on the main estate. Not only is the plantation an area characterised by these 'hard infrastructures', but the plantation was established in 2008 as a part of a large combined logging and agriculture project aimed at bringing income, employment, and road infrastructure to the rural and remote Pomio District (Tammisto 2018: 1–2, 123). In fact, until 2015, Pomio District on the southeastern side of New Britain Island, was not connected by roads to the broader roadway network nor to the island's two provincial capitals.

The combined logging and oil palm project was initiated by the then MP of Pomio with the intention that, in exchange for logging concessions and land leased from customary owners for oil palm plantations, the logging and plantation companies would connect the existing logging roads of Pomio to the provincial roadway network. According to the plan, a sustained company presence would ensure road maintenance and serve as the economic motor for a nearby township or for a growth centre (Tammisto 2018: 123). The Tzen plantation then is not only a highly infrastructured space, but the provision of infrastructure was embedded into the larger plan according to which the plantation was established.

In this essay, I examine these two infrastructural features of the Tzen oil palm plantation. I begin by examining the specific components of the wider infrastructural system of the plantation, such as the road network, the palm oil mill, and the palm oil pipeline connected to the mill. Following Brian Larkin's definition (2013: 328) of infrastructure, I examine them as built networks that 'facilitate the flow of goods, people or ideas', allowing their exchange over space. Human agency, such as that of the plantation workers, is a crucial part of this network, since things, people or ideas would not 'flow' without it.

In addition, the systemic quality of the infrastructure built is important in directing, constraining, and modulating the flows, as architects and scholars of infrastructure Keller Easterling (2014) and Eyal Weizman (2007: 18, 142) noted. By examining roads, the mill, the pipeline, and its pumping station, I focus specifically on the chokepoints of the system and the unintended effects of the infrastructural system. I then turn to the logging and agriculture projects as a part of the plan established by the plantation.

The roads, the pumping station, and the plan represent active forms of the infrastructural system (Easterling 2014: 73). The roads and the pipeline serve as 'wiring', along with activity is channelled and directed across space. The mill and the pumping station are 'switches', which regulate activity on the wiring. Finally, the
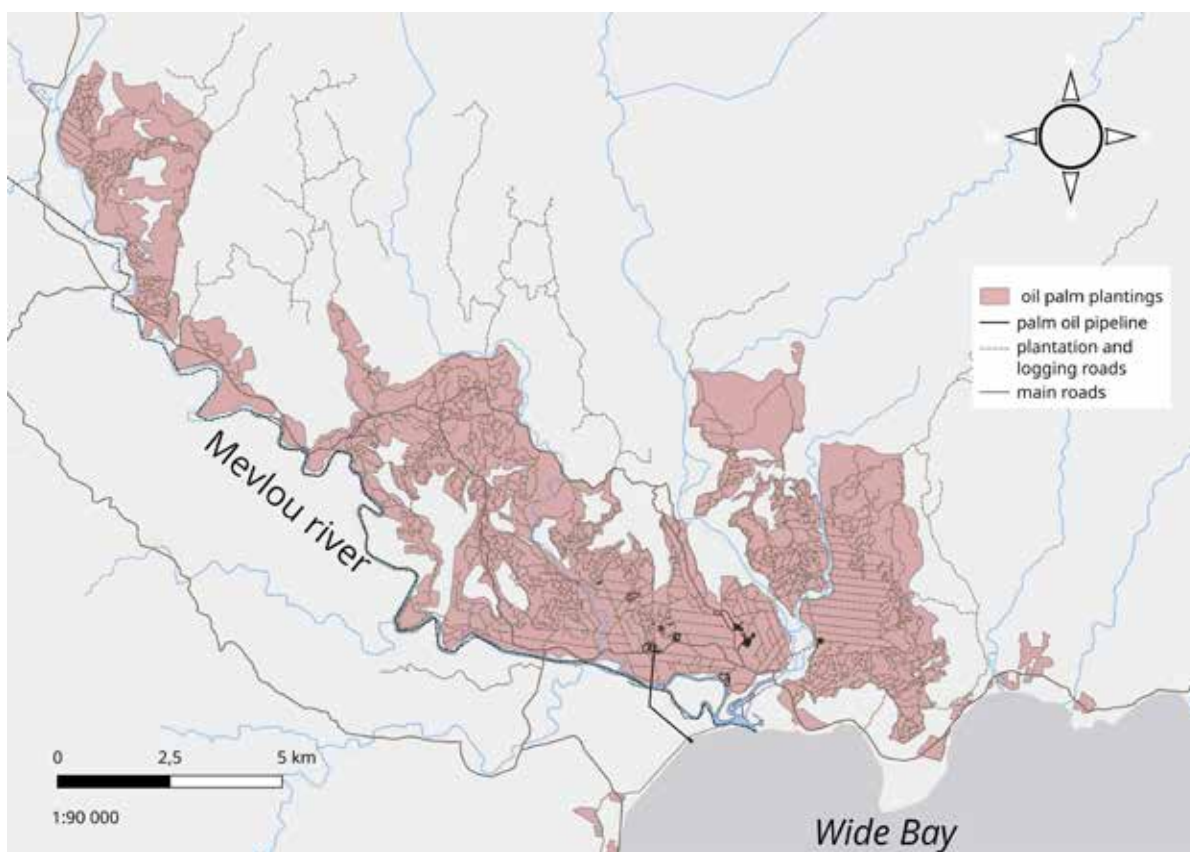
MAP: The infrastructure space of the plantation ca. 2020 (Map by Tuomas Tammisto).

logging and agriculture project is the 'protocol', or the plan according to which the system is expanded (Easterling 2014: 75, 76, 78). The properties of these components and their interrelations constitute what Keller Easterling (2014: 21, 72, 83) calls the disposition of an infrastructural system. 'Disposition' here refers to the 'immanent tendencies' or 'potential agency' within an infrastructural system. This tendency, or disposition, of the system accounts—for the most part, at least—for what systems actually do and enable, which, in turn, might greatly differ from the stated intentions of the planners and controllers of the system (Easterling 2014: 21, 72, 83).

ROAD CONNECTIONS AND DISCONNECTIONS

The Tzen plantation, like other oil palm plantations, is characterised by uniform plantings of oil palm and by roads. Following the harvest and within 48 hours, the fruit of the oil palms must be transported to the mill (Li and Semedi 2021: 95). For this reason, each individual oil palm needs to be planted within a set distance from a road, so that workers can carry the harvested fruit by wheelbarrow to the roadside. Workers carry the fruit to the sides of these infield roads surrounding and criss-crossing the oil palm plantings. Then, other workers load them onto trucks, whose drivers next transport the fruit to the mill. Like arteries, the roads are all connected to the mill—the

heart of the plantation—where the fruit is pressed into crude palm oil. This crude palm oil is then—literally—pumped out of the mill onto tanker ships and onto the world market.

The material properties of the oil palm fruit and labour, thus, place particular demands on the plantation infrastructure. Roads must be sufficiently close to the palms so that workers can carry the fruit to them and the plantings must be sufficiently close to the mill (Bissonnette and De Koninck 2017: 928). Conversely, the production infrastructure and changing economies of scale place shifting demands on the oil palm environments: in 1934, a mill needed 2000 hectares of surrounding oil palms to be economically viable (Byerlee 2014: 583–584). Today, mills require 10 000–20 000 hectares of oil palms (Cramb and McCarthy 2016: 34; Li and Semedi 2021: 20–21). This change in the economic rationale means that the number of oil palms needed for the mill has increased five to ten times over a period of about 80 years.

Most of the roads of the Tzen plantation are arterial infield roads running from the plantings to the mill, although the main plantation is connected by a secondary road to the main roadway, which then connects rural village communities along the coast with one another. Extension plantings of oil palms lie near some of these communities. Trucks regularly run from the main estate on the main roadway, such that truck drivers sometimes give rides to locals traveling between villages. Because the plantation is an infrastructural hub, it is sometimes used as a base by the police, who come by boat from the provincial capital and use local cars to travel to rural villages.

Roads represent one of the 'active forms' constituting the infrastructural system of the plantation (Easterling 2014: 72–73). Roads are the 'wiring' channelling activities, built to enable the transport of palm oil fruit to the mill for processing. But, because the 'wiring' is connected to the existing logging roads of Pomio, and, as of 2015 to the provincial capitals, they also direct various impulses, such as the projection of the police force, merchants travelling by car to the plantation to sell commodities on the market, and other merchants who buy betel nut in rural villages to sell in the cities. Similarly, enterprising local people from Pomio repair cars and transport village produce to sell in infrastructural hubs like the Open Bay timber plantation, one such hub located on the New Britain Highway, which connects the provincial capitals.

On the main estate, the infield roads form a grid as well as a network allowing cars to reach the mill via several possible routes. However, the routes northward to the New Britain Highway and south to the remainder of the Pomio District rely on single road connections. This makes the road connections beyond the plantation frail, becoming potential chokepoints. Indeed, several of the bridges built by the plantation company have been swept away by rains, and, when I conducted research in Pomio in 2019, villages on the south side of Wide Bay were inaccessible by car.

Roads as the 'wiring' of the infrastructural system allow and direct activities across space. Some of these activities, such as the easier movement of violently behaving police units to villages, are unintended uses of the infrastructural system. But those activities become part of the 'disposition' or underlying tendencies of the system. Similarly, as the road connections beyond the main estate are potential chokepoints, the system is also 'disposed' to major hiccups and a severing of connections. Another potential chokepoint is the palm oil pipeline, to which I now turn.

PHOTO: The interface: palm oil from Wide Bay pumped onto a tanker ship and onto the world market (Photo credit: Tuomas Tammisto, 2019).

THE PIPELINE AND PUMPING STATION

Because New Britain is an island, sooner or later on their way to global markets commodities must be transported by sea or by air. The provincial capital of Kokopo with its port in Rabaul is, however, relatively far away from the plantation and can be reached by land only via the new and frail road connection described above.

Instead of transporting palm oil by land to the faraway port, tanker ships sail to Wide Bay to load the palm oil and export it to buyers and refineries (Global Witness 2021). The Tzen plantation mill is situated some kilometres inland; the company, therefore, built a pipeline so that palm oil could be pumped from the mill

to the tankers. On the coast, the pipeline ends at a pumping station with a few valves and levers. When the tanker ship arrives, workers attach a large hose with floaters to the pipeline, pulling it to the ship using tugboats.

The end of the pipeline, located on a sandy beach at the northwestern corner of Wide Bay, is what Keller Easterling (2014: 75] calls a 'remote' or a 'switch'. Remotes or switches are nodes in an infrastructural system used to generate effects at a distance or down the line, activating a distant site to impact a local condition or vice versa. Remotes or switches serve to modulate the flow of activities (Weizman 2007: 143; Easterling 2014: 75)—channelled by 'wiring', such as the pipeline or the roads described above. The end of the pipeline in Wide Bay is quite literally a switch: when the ship arrives, workers use the

levers to open the valve allowing the palm oil to flow onto the ship. Much like the mill (Li and Semedi 2021: 166), the pumping station is a potential chokepoint.

To me, one of the most impressive things about the end of the pipeline is its unimpressiveness. The pipeline ends on an empty beach, the hose lies on the ground next to the pipeline, and a shipping crate nearby sits within which tools are stored. Apart from the pipeline itself, there is no other infrastructure. The tanker ships anchor in the bay, but there is no port infrastructure such as a pier. Yet, this end of the pipeline is—quite literally—the point of contact between the plantation in Pomio and global markets. By operating the levers, the workers—again quite literally—regulate the flow of palm oil for export.

The pipeline then does not simply connect the plantation and its mill to ships and to the world market. As the pipeline crosses the Mevlou River, it crosses several boundaries—both administrative and local. The plantation on the northern side of Mevlou is located on land leased for 99 years from the Simbali, the customary owners who forfeited their rights to the land for the duration of the lease. As the pipeline crosses over to the south side to another local-level government area, it crosses onto the customary lands of a neighbouring community. The Sulka- and Mengen-speaking inhabitants of that community have not, however, leased their lands, but granted permission for the establishment of the pumping station on their land, for which the company pays them rent.

The plantation company wanted to place the pumping station at this site, because that is the shortest and most convenient route from the mill to the coast. However, in doing so, it placed a key component—that is, the switch— of the entire production system into the hands of the neighbouring community. Until now, the Sulka–Mengen have not interfered with this switch or with the flow of palm oil. But, the placement of the switch grants important control over the plantation's operations to the community situated beyond the actual plantation and the land. The potential for the neighbouring community to interfere with the flow of palm oil is—again quite literally—built into the disposition of the system.

PROTOCOL

As noted, the Tzen plantation was established in 2008 as a part of a larger combined logging and agriculture project initiated by local politicians to bring road infrastructure to Pomio. As a part of that plan, another large oil palm plantation was established by another company further south in Pomio, where it has met much resistance by the former customary owners and inhabitants (Lattas 2012). The general plan was that the logging and plantation companies would connect the existing logging roads of Pomio with the provincial road network. This would necessitate building an as-yet missing roadway link on the east coast of New Britain.

Instead, the Tzen plantation was connected by an inland route to the New Britain Highway running along the northwestern coast of the island. As noted above, the road connections beyond the Tzen plantation remain frail. When the Tzen plantation company logged south of the main plantation in East Pomio, it built bridges so that its trucks could transport the logs onto ships. The bridges were built of raw logs and lasted only long enough to enable the logging operation. But, flooding rivers during the subsequent rainy seasons swept them away. The road connection to these areas is now again broken and the company has no

need to maintain the bridges since the logging operation has ended.

Similarly, the concrete bridges crossing the large rivers on the plantation have been swept away by rain, sometimes several times. This is a nuisance for the plantation company, but because company vehicles such as large trucks and tractors can fjord the rivers, the lack of bridges does not stop its operations. Thus, the maintenance of the bridges is not an urgent issue for the company.

Besides 'wiring' and 'switches', one of the 'active forms' affecting the disposition of an infrastructural system is the 'protocol' (Easterling 2014: 78), namely the underlying plan for infrastructural expansion. In the case of the Tzen plantation, the 'protocol' is the plan, according to which it and other plantations were established aimed at creating and maintaining the larger road infrastructure of Pomio. The creation of infrastructure was then built into the plan—that is, the protocol—of the combined logging and agriculture project. Conversely, the extractive logic of logging and oil palm development was built into the protocol of infrastructure development.

Bettina Beer and Willem Church (2019: 6) note that infrastructure is the primary vehicle conflating the interests of the state and multinational enterprises in Papua New Guinea, where companies can, for example, offset taxes by using their own equipment and engineering capacity to finance public infrastructure (Bainton and Macintyre 2021: 133). Through this 'protocol', the extractive logic becomes a part of the disposition of the infrastructural system. This tendency manifests itself, for example, when companies do not maintain the roads or bridges they no longer need—and, here, public and private interests may differ greatly.

CONCLUSIONS

In this essay, I have examined the oil palm plantation infrastructure in Wide Bay by focusing on roads and pipelines built to enable the flow of palm oil produced on the plantation to buyers, refiners, and consumers across the globe. This flow, like the production of palm oil, hinges upon human labour, of course, since it is the plantation workers who plant the oil palm, harvest its fruit, press it into palm oil, and transport it.

However, as I have shown in this essay, thinking about the infrastructural components in relation to each other and as parts of a system helps us to see not only what the system is designed to do and how it does it, but also what other activities the system affords, encourages, and enables. Or, as Keller Easterling (2014: 21, 72) puts it, this allows us to see how the system is disposed. Disposition refers not only to the intended and unintended effects of infrastructures, but also to latent tendencies and potentials built into the system.

In this brief essay, I have discussed how the creation of infrastructure was built into the plan of the large-scale logging and plantation project in Wide Bay. But, this goes both ways. Thus, the extractive logic was built into the plan to develop Wide Bay's infrastructure. And, because of this, the disposition to seek a private gain through extraction may very well trump public expectations related to the provision and maintenance of infrastructure.

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Laura Huttunen

MISSING PERSONS AND THE INFRASTRUCTURES OF SEARCH AND IDENTIFICATION

People go missing all over the world, but the reasons for disappearances are enormously diverse. Some people are intentionally disappeared by the state: totalitarian and military governments as well as various paramilitary and criminal organisations have used enforced disappearances as a tactic to control a population and create submissive citizens or subjects through fear and insecurity. Both civilians and soldiers disappear invariably in the chaotic circumstances of war and armed conflicts. Some people disappear during natural catastrophes or fatal accidents; some disappear of their own free will. 'Enforced disappearance' as a term is used to refer to the tactic of intentionally making people disappear by the state or by those connected with the state, while simultaneously withholding knowledge of the whereabouts and destiny of the disappeared individual from their family. 'Missing person', on the other hand, refers to anyone whose protracted absence is unaccounted for, in situations that raise concerns among those left behind. This unease among those left behind is the crucial point for my understanding of a missing or disappeared person in this paper: it is the search, in whatever form, that creates the missing as a category (cf. Parr et al. 2016) Whatever the reason for a disappearance, it disturbs the everyday flow of life in families and communities, and, in many places, it creates anomalies for modern state bureaucracies. Socially and culturally, disappearances that become presumed deaths create a liminal space between life and death (Huttunen 2016), and

that situation pushes others towards a search action aimed at closing the liminal space (Parr et al. 2016). In other words, unaccounted-for absences give rise to search practices, but the circumstances of search radically differ in various places and varied contexts of a disappearance. One way to approach these differences is to analyse the infrastructures of search in each site.

In this paper, I understand infrastructures as both technological and institutional structures enabling certain functions (Korpela 2016), and as 'technologically mediated, dynamic forms that continuously produce and transform socio-technical relations' (Harvey et al. 2017: 5). Moreover, '[…] infrastructures are extended material assemblages that generate effects and structure social relations' (ibid.).

Using the phrase 'infrastructures of search', I refer to the institutional structures and practices that allow families to report their family member missing with an assumption that the missing will be searched for, as well as referring to the structures and practices that aim to find missing persons. When a person goes missing in democracies in the Global North, the police are usually the institution with whom to report a missing person, thereby initiating search processes (Parr et al. 2016; Shalev Greene and Alys 2017). In armed conflicts, the functioning of such institutions often breaks down and other actors, such as established international organisations with other institutional and infrastructural arrangements, enter the scene. Similarly, when people move across state

borders along so called irregular routes, nation state–based infrastructural practices become problematic. Moreover, because a significant number of missing and disappeared persons are dead, infrastructures for identifying dead bodies are also crucially important.

In this paper, I juxtapose the missing from the Bosnian War (1992–1995) with migrants disappearing in the Mediterranean in the present. Moreover, I juxtapose the strikingly differing success rates in identifying the disappeared-turned-out-to-be-dead Bosnian victims and unidentified dead migrants encountered on Mediterranean shores.

Specifically, I am interested in the entanglement of the local with the global, and the spatial reach of search infrastructures (e.g., Harvey et al. 2017: 5). Moreover, I consider the significance of the material affordances (Ingold 2000, 2018) of some infrastructural forms— especially DNA—as key tools for identification. Herein, I offer some observations regarding how the entanglements of local and transnational investments and the material affordances of techniques allow some of the disappeared to be found and identified, while others remain more 'disappearable' (Laakkonen 2022).

BOSNIA–HERZEGOVINA

The armed conflict in Bosnia–Herzegovina between 1992 and 1995, following the dissolution of Yugoslavia, was characterised by projects of ethnic engineering and concomitant genocidal violence against civilians. Over 30 000 persons were reported missing by their families, with most of the Bosnian missing eventually identified as dead, brutally executed, and buried in mass graves. Now, 28 years after reaching the peace agreement, almost 80% of those reported missing have been found, identified, and returned to their families for burial. This

represents an unprecedented identification rate—such numbers are exceedingly rare among those forcibly disappeared or anywhere.

There are several factors that explain the high success rate of identifications in Bosnia, many of them connected to infrastructures. First, the infrastructures for reporting somebody missing existed from the beginning of the conflict, despite the breakdown of Yugoslavian state institutions: large international organisations, such as the International Committee of the Red Cross (ICRC), operated in the area throughout the conflict (e.g., Jugo and Škulj 2015). These organisations have well-established procedures and a readily available infrastructures for reporting a family member missing during armed conflicts. The ICRC, in particular, has a long history of recreating connections between family members who have lost contact during the chaotic circumstances of war. Consequently, the disappeared were effectively registered, and this information was available when search operations began.

Moreover, the blatant failure of the West to prevent the genocidal attack on Srebrenica in July 1995 gave rise to a significant investment in building a search and identification capacity— in other words, infrastructures—to find the more than 8000 men and boys who went missing from the Srebrenica enclave under the gaze of United Nations (UN) peacekeepers. The International Commission for Missing Persons (ICMP) was founded to search for the missing and conduct the identification work. In addition, a significant amount of donor money enabled the ICMP to build an infrastructural capacity, including hiring personnel, building laboratories for DNA identifications, and organising outreach programmes to find the family members of the missing, now living in the global diaspora created by the war. The mandate of the organisation was soon enlarged to work

with the missing across the ex-Yugoslavian territories.

Identifying the large number of dead bodies in mass graves became a huge infrastructural challenge: the mass graves had to be located, and hiring experts was necessary to excavate the graves, work on identification, and work with the families to get the necessary information. In the early period after the peace agreement was reached in 1995, so-called traditional methods were applied focusing on the visual identification of bodies, but in those circumstances, they were not successful: the material affordances—such as the condition of the bodies in mass graves, and similar clothing worn by many bodies because of years of humanitarian delivery programmes—made visual identification virtually impossible. The heavy investment in developing new ways of applying DNA-based identification at a mass scale since 2001 brought about results, and the number of identifications began to dramatically increase (Wagner 2008).

As an infrastructural tool, DNA has specific affordances. DNA works as an identifier only if there is a reference sample, either DNA from the person herself taken while she was alive or blood samples from several close relatives. Moreover, significant resourcing of the ICMP enabled a well-organised outreach programme to collect reference blood samples from the relatives of the missing, both in Bosnia and amongst the diaspora created by the war.

Since the 1990s, DNA has become the key methodology for trustworthy identifications globally. However, to be reliable, DNA-based identification needs an entire set of infrastructures around it, including reliable laboratories with trained personnel, trustworthy chains of custody to transfer DNA samples, and knowledge and resources for archiving and providing access to the archives. This has proved challenging in the context of migrant disappearances.

MIGRANT DISAPPEARANCES IN THE MEDITERRANEAN

While people inevitably disappear during armed conflicts, the number of disappearing migrants has grown dramatically over the last 20 years (Schindel 2020). According to the International Organisation for Migration (IOM)'s Missing Migrant Project, more than 50 000 migrants have gone missing since 2014 globally, approximately half of these in the Mediterranean. Those who disappear are mostly undocumented migrants, pushed to travel increasingly more dangerous routes because of tightening border regimes. Currently, migrants originate from Northern and Sub-Saharan Africa, as well as from the Middle East, including from Syria and Afghanistan. They move in a geographically wide and politically diverse transnational space, and the reasons for their disappearances are diverse, ranging from drowning and dehydration to violence from border guards or smugglers.

There are still no unified or universally trusted infrastructures to report a disappeared transnational undocumented migrant as missing. Often, families are reluctant to report them in their countries of origin because of mistrust in authorities. Likewise, they are hesitant to report them missing in putative countries of destination because of their undocumented status (IOM 2021). While several initiatives exist to establish universal procedures for searching for missing migrants and for identifying dead migrants, mainly through international organisations such as the ICRC and the ICMP, the political will to build such infrastructures does not (Huttunen and Perl 2023).

Attempts have been made to introduce DNA as the infrastructural tool to help identify dead migrants in the Mediterranean region. At present, DNA samples are often taken from unidentified dead migrants in Europe and the samples are archived in nationally run coroners' archives in each country for eventual future identification. However, because there are no outreach programmes aimed at finding families, no infrastructures to run such programmes or investments to build such infrastructures, the DNA remains 'mute' in the archives and does not do its intended identification work. In rare cases, some investments have allowed for identifying dead migrant bodies. One example includes the infamous shipwreck in Lampedusa in October 2013, resulting in the death of several hundreds of migrants on the Italian coast, in which the Italian government invested in retrieving the ship from the sea and identifying the bodies found. However, even in this case, only around 8% of the bodies were identified, and a significant number of bodies that sunk with the boat remain unretrieved (Olivieri et al. 2018).

The systems for monitoring migrant mobility on European borders has become a highly developed, institutionally and technically sophisticated infrastructure. Against this back-drop, it is quite striking that the infrastructures to search for and identify disappeared migrants remain fragmentary and ineffective at best, virtually non-existent at worst.

The two contexts of disappearance discussed here differ significantly from each other, and several reasons explain the dramatically different rates of identification. Infrastructures are always connected to political structures and to the control of resources. The volume of investment in Bosnia is rare, even in post-conflict situations, and is connected to the specific geopolitical moment. By contrast, the lack of investment in migrant disappearances reflects contested political processes in Europe and the reluctance of any state to take responsibility for the dead and missing who are not European citizens. Moreover, the ways in which infrastructures do or do not work in these contexts also reflect questions of trust, on the one hand, and the material affordances of some infrastructural tools, on the other hand.

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Mari Korpela

INTERNATIONAL CHILDREN AND THE INSTITUTIONAL INFRASTRUCTURES OF SCHOOLS IN FINLAND

Growing numbers of children are moving between countries because of their parents' careers. The temporary labour migration of highly educated professionals—sometimes called career expatriates or transnational corporate elites (Amit 2002; Fechter 2007)—is increasing in various parts of the world. Finland, one among many countries, welcomes such professionals, both because those individuals offer skills needed in global competitive markets and because the country's domestic population is ageing. Often, these professionals do not intend to stay permanently, but rather plan to return to their native countries or move on to other locations after a few years.

International professionals are often accompanied by their spouses and children. In this paper, I focus on a central institutional infrastructure in these children's lives—namely, education and schools. Specifically, I examine international schools in Finland and children's positions within this infrastructure. My research presented here is based on extensive ethnographic research in an international school in a Finnish town.

IT engineers and developers often differentiate between hard and soft infrastructures. By hard infrastructures, they mean large physical networks, whereas soft infrastructure refers to the institutions necessary to maintain the functioning of societies and organisations (see Korpela 2016: 115). Rather than considering the technological characteristics or structural significance of infrastructures, anthropologists tend to focus on their impact on people's everyday lives.

Infrastructure projects are often launched as indications of a better, more effective future. Therefore, time is a significant concept in relation to infrastructures, and progress and future aspirations are integral to how people and states understand such projects. In fact, Akhil Gupta (2018: 62) understands infrastructures as never-ending processes rather than as things. Discussions regarding time and infrastructures usually focus on material infrastructures, especially their maintenance and ruination. Time is, however, also important in institutional infrastructures, which often function within rigid timeframes, with one institutional function related to the execution of specific institutional processes in a certain order and within a particular timeframe.

Here, I understand children's education as an institutional infrastructure. Such infrastructures aim to guarantee the smooth progression of learning, whereby children follow rigid temporal paths; at a certain age, they are taught specific things alongside their peers. A child's progress is based on what they have learnt in the past. In other words, the functioning of an educational infrastructure is closely entangled with time; as time passes, children progress within the institutional infrastructure. Typically, educational infrastructures for children are constructed based on strong national interests, with the aim of transferring specific knowledge, skills, and values to future

adult citizens of that country. Thus, the local infrastructure of schools is tightly connected to the national infrastructure of education. The different nationally—as well as geographically—bound educational infrastructures do not, however, form a smooth global infrastructure (cf. Harvey at al. 2017). Instead, a mismatch emerges between them. Therefore, educational infrastructures reveal the limits of Brian Larkin's (2013: 328) definition, whereby 'infrastructures are built networks that facilitate the flow of goods, people, or ideas and allow for their exchange over space'. Within educational infrastructures, the flow and exchange of ideas is normally limited to the space within national borders. Here, I demonstrate that, because school systems, curricula, and educational paths vary between countries, internationally mobile children may face certain challenges.

On a global level, the educational needs of international professionals' children are often catered to by private international schools (with relatively high tuition fees), which follow their own curricula (often related to UK or US standards) (see Hayden and Thompson 2013). To some extent, such schools themselves form a global educational infrastructure or, more precisely, several separate infrastructures. Such an infrastructure is not, however, available everywhere nor to everyone. In Finland, for example, profit-making private schools which charge compulsory tuition fees are not normally permitted; consequently, this global educational infrastructure is unavailable. International schools exist in the country, but most are free municipal schools. While the language of instruction is English, such schools follow the Finnish curriculum. The curriculum does not, however, necessarily neatly fit with curricula and educational infrastructures from elsewhere.

Internationally mobile children's educational pasts—that is, their previous studies—often differ from those expected by the Finnish educational infrastructure: the timing of various actions differ across educational infrastructures, and the content of the education differs as well as the skills and outcomes expected of children. Consequently, children's international mobility can be seen as pathbreaking (Devine and Boudreault-Fournier 2021: 5) vis-à-vis educational infrastructures—specifically in relation to their temporalities (see Korpela 2023a).

When a child moves from one country to another, they must move from one education infrastructure to another, which necessarily entails some disruption. A child ends up on a new institutional path—a rigid temporal path—and they may not have taken the steps (in the correct order) expected by that institution or they may have taken more steps than expected for their age. In other words, in the new place, a child may be behind or more advanced in their studies compared with their peers. In both cases, individual children become personally aware of the different institutional paths, whether repeating content or attempting to catch up. Moreover, everyday practices within schools may differ, potentially requiring children to adjust to their new circumstances. During this process, children often reflect upon their past, and possibly their future, school experiences. They may, for example, talk about the different amounts of homework required and tests in different schools with which they are familiar. Asian children, in particular, consider Finnish schools easier and more relaxed (Korpela 2023a).

Finnish education is internationally praised, with Finland ranking highly in OECD's Programme for International Student Assessment (PISA) testing, which measures 15year-olds' abilities and skills worldwide. The Finnish education infrastructure also employs effective practices including extensive language

training aimed at integrating immigrant children into both schools and Finnish society. The highly skilled international experts who come to Finland for work, however, do not necessarily intend to remain in the country permanently—their contracts typically last between one to three years. Consequently, learning the language and becoming integrated into Finnish society often does not seem feasible for their children (see Korpela 2023b). Instead of attending regular Finnish schools, many opt to attend international schools. Nevertheless, since these municipal schools follow the Finnish curriculum, children integrate into the Finnish education infrastructure all the same.

Families who intend to sojourn in Finland temporarily are sometimes concerned about the differing educational arrangements and curricula. While they know Finnish education is generally of a high quality, they also know that if their children later return or move on to a different educational system elsewhere, they may encounter problems because those curricula may emphasise different skills and knowledge from those in Finland. Consequently, some families attempt to keep up with the curricula from their home countries, which can result in a lot of extra work for such children. Others attempt to plan their families' mobility trajectories in a way that avoids specific countries and their schools, sometimes including their own native countries. For example, India and China have highly competitive education systems and some Indian and Chinese families are not keen to return to these systems. Still other families intentionally return while their children are still very young in order to secure their standing within a competitive education infrastructure.

While attending Finnish international schools can work well for young children, such children may encounter challenges at the age of 16 when they should move to upper secondary schools. In larger Finnish towns, it is possible to study all nine years of basic education in English. At the upper secondary level, however, options remain rather limited. Youth need relatively good grades to gain entry into International Baccalaureate schools operating in English, while very few programmes in English exist in vocational schools. Finnish upper secondary schools, as well as the majority of vocational schools, function in Finnish. Therefore, international youth whose Finnish skills are limited (or non-existent) are anomalies on the rigid path of the Finnish education infrastructure; consequently, their educational options in the country remain limited (see Korpela 2023b).

When international professionals are recruited, emphasis is placed on their skills and on the labour needs of the recipient societies. We should not, however, forget the institutional infrastructures of schools. Accompanying children cannot escape these infrastructures, and they play a key role in determining families' wellbeing and their children's future options. Internationally mobile skilled professionals are often viewed as free agents, maximising their individual career options. But, as the example of schools illustrates, in practice they may end up in the midst of institutional infrastructures designed for those who remain. These infrastructures have a binding nature: one cannot escape them, but they must operate within them or, alternatively, opt for homeschooling, which creates its own challenges.

Educational infrastructures are complicated with rigid temporal paths and close connections to geographical locations. Although there are attempts to standardise education and degrees, such as through the International Baccalaureate, the great majority of education systems operate on national levels. Schools and education provide an example

of an institutional infrastructure that is not only geographically bound, but also closely entangled with time: it is not simply that children are situated within the infrastructure at a particular moment in time, but that they are expected to progress within a certain timeframe. Disruptions to this progressive path—including children's transnational mobilities—can present challenges. Future aspirations are central to education infrastructures, but, simultaneously, the infrastructures form the framework and temporal path to which individual children must adjust in the here and now. There is not necessarily much individual agency available when navigating education infrastructures in specific locations.

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Anna Matyska

TRACING INFRASTRUCTURE AND ITS EVOLUTION IN THE SEARCH FOR THE MISSING IN POLAND

Every day around the globe, people go missing for any number of reasons. Some disappearances are intentional, others are enforced by oppressive political regimes or the result of natural disasters. Whatever the reason, these disappearances produce family ruptures and anxieties, and require a search to establish, at the very least, whether the missing person is dead or alive. In Poland, the number of reported disappearances gradually rose to 20 000 by 2018. (For comparison, other countries' figures vary widely due to the diverse contexts and calculations used—for instance, Finland records 700–800 missing incidents annually, while in the UK there are over 300 000.) The increase in Poland's figures results from the sheer growth in disappearances given the ease of movement and rising socioeconomic pressures, bringing with them health issues, debt, and family conflicts. The increase in disappearance figures also results from an increased willingness among families to report missing persons and a willingness among the police to accept such reports. I associate the rising sociopolitical recognition of disappearances in Poland with the expansion of tracing infrastructure, which I define as the interlocking assembly of state and nonstate agents, institutions, and technologies engaged in the search for missing persons.

Appel et al. (2018) emphasise that infrastructures develop incrementally as they grow or are built based on older forms. However, this rarely reflects a linear development. Instead of progressing smoothly, evolving infrastructures tend to create 'new gaps and zones of opacity, uncertainty, and incomprehensibility' (Harvey et al. 2016: 14). Similar incremental and nonlinear development characterises the tracing infrastructure in Poland. The Polish tracing infrastructure evolved ad hoc, from both 'below' and 'above', with no clear masterplan or unified oversight, against a backdrop of changing political and technological possibilities for action. While new actors, regulations, and technological tools made certain things possible, they also introduced new complications. In this article, I address the ambiguities and challenges this evolution produced. Here, I draw upon ethnographic fieldwork I conducted online and face-to-face with both members of Polish search groups and Polish officials in 2020–2022.

Larkin (2013: 327), in his overview of the anthropology of infrastructure, defines infrastructures as 'material forms that allow for the possibility of exchange over space. They are the physical networks through which goods, ideas, waste, power, people, and finance are trafficked.' Other scholars emphasise that infrastructures not only enable but also impede movement (Korpela 2016, Xiang and Lindquist 2014), where internal disruptions rather than smooth flows characterise their functioning (Harvey et al. 2016: 13). Nevertheless, traffic, circulation, and flow appear to represent conceptual keywords of infrastructure: infrastructure is a framework for movement. Tracing infrastructure partially inverts this logic. On the one hand, tracing infrastructure is built

upon circulation: information (about both the missing person and search regulations), people (search groups, the police, and the families of the missing) and objects (technological equipment, search dogs, and financial resources) need to circulate and interlock in order to find the missing person. On the other hand, the primary purpose of the tracing infrastructure is not so much to channel or impede but to trace—retrospectively and in the present—the movement and whereabouts of specific people—people who have gone missing. Tracing aims to ascertain that missing persons are safe or, if they are dead, to identify their bodies; and, in both cases, to provide families with that knowledge. The circulation of agents, information, and objects within the tracing infrastructure is auxiliary to this purpose.

The above approach echoes the notion of the 'traceability system' developed in governance studies. Muirhead and Porter (2019: 425) define this system as one that aims to detect and record the journey of objects through time and space. The traceability system is mediated by the 'traceability infrastructure', attuned to the 'material properties of the object that is being traced and the infrastructure that carries it' (Muirhead and Porter 2019: 424). Although Muirhead and Porter focus on the traceability of objects in transnational industries (e.g., banking or pharmaceutical), their insights can be feasibly expanded to analyse the movement of people. Accordingly, I consider tracing infrastructure as built upon and alert to other types of infrastructures (such as transportation) underpinning and framing the movement of those being traced.

Initially, tracing infrastructure in Poland primarily included governmental actors, reflecting the constraints on civic activism in the communist era. In the 1980s and early

1990s, the primary tracing agent was the police. However, regulations were imprecise, and the police often dismissed families' needs to know what had happened to their loved ones. A seminal step emerged with the television programme 'Has anybody seen, does anybody know (*Ktokolwiek widział, ktokolwiek wie*)', which began broadcasting in 1996, seven years after Poland's transition to a liberal democracy. It has remained on air since then. The programme aims to help families search for their missing loved ones. But, as its co-creator explained to me, the show also attempts to demonstrate that disappearances can happen to anybody and that the families are entitled to institutional support (for a more detailed account of the programme, see Matyska 2024). In 1999, journalists and a police consultant for the programme established the Itaka Foundation, the first and to-date largest Polish nongovernment organisation (NGO) providing emotional and practical support to the families of the missing. Itaka (Polish for Ithaca, Odysseus' island home in Greek mythology) became the leading family advocate for the need to improve police regulations.

Under societal pressure, Polish police regulations gradually expanded, obliging them to search for everyone reported missing and to accept a family's report of a disappearance without delay (Matyska 2023). In parallel, the police's institutional resources grew. In 2013, the Missing Persons Centre was established at the police headquarters in Warsaw, tasked with providing technical support and know-how to local police units and at coordinating search and rescue actions across the country. These moves demonstrated that the Polish state was taking disappearances seriously. On the ground, the police's search and rescue efforts were supported by search and rescue (SAR) teams acting mostly

under the auspices of the state emergency system's voluntary fire brigades.

Notwithstanding the above developments, the most prolific and visible infrastructural expansion has taken place in the last few years, particularly in the nonprofit and commercial sectors. I link this expansion to the development of social media and technological innovations that have facilitated new ways for civilians to participate in searches and new ways of tracing the missing. Firstly, there has been an explosion of search groups on social media. These group primarily aim to disseminate information about a missing person across the various platforms, while they also support families emotionally and practically. The groups do what previously was the domain of Itaka and the television programme, whereby the activities of all these actors overlap extensively since they are usually searching for the same people. Secondly, the number of SAR groups has increased exponentially. While initially such groups were mostly affiliated with voluntary fire brigades, now many civilian groups also utilise social media to recruit members and remain visible. Finally, the commercial dimension of the infrastructure, comprising private detectives (and occasionally for-profit clairvoyants), has increased as social media has granted them a new platform for advertising their services directly to specific families.

From the perspective of the needs of the families of the missing, for whom disappearance is both an affective and a practical challenge, such expansion of the tracing infrastructure can be considered a positive development in many ways. There are more sources of support, which to some degree complement each other. Indeed, according to police statistics from recent years, over 90% of Polish missing persons are found in the first weeks following their disappearance, with the proportion of cold cases remaining low. According to the police (Puzio-Broda 2021), those who remain unfound are primarily individuals who intentionally disappeared and do not want to be found (for instance, individuals fleeing debt or domestic violence). It is not easy to determine who contributes the most to these results. It is, however, safe to assume that the cumulative input of different infrastructural actors carries an effect.

Yet, the multitude of actors, technologies, and information circulating across the tracing infrastructure creates new opacities and ambivalences, which can detrimentally affect the families of the missing and the missing themselves. To begin with, the quality and ethics of the search can at times become questionable. In principle, all of the search groups with whom I talked and whom I observed have their own internal standards and codes of conduct, although there is little systemic oversight or transparency. For instance, while an SAR group claiming to have conducted a search in a specific quadrant without finding anyone can have life-or-death consequences for the missing person, it is not always easy to say whether the search was in fact thorough. Search groups on social media struggle with maintaining a balance between the need to make the missing person visible to the public and attract followers, and the need to control and shape information in a way that enables the person's potential return, especially if they are alive. I was often told that families are desperate to provide much sensitive information to the public via search groups, but this can have negative consequences when the person returns. In addition, multiple problems relate to the reliability of a private detective and clairvoyant services. Commercial agents often take advantage of families wanting to exhaust every possible means of finding their loved ones, regardless of the cost.

The individual quality of the search notwithstanding, a problematic issue emerges related to the tacit competition between different nongovernmental actors—for visibility, funding, volunteers, and contact with the families and the police. The police, lacking a solid overview of which civilian actors are reliable (or even available), tend to rely more on SAR groups from the voluntary fire brigades than on civilian groups, and on Itaka rather than social media groups, ultimately inhibiting overall cooperation. Finally, the multitude of nongovernmental actors engaged in a search, whether commercial or nonprofit, leaves citizens (both the missing and their families) with no clear place for making claims and complaints if something goes wrong. Thus, overall, there is a need for greater transparency and collaboration for the sake of a more ethical, and more effective, search.

To conclude, the utilisation of the infra-structural approach sheds light on the characteristics and evolution of the search for missing persons in Poland. Such an approach reveals the interconnection between different actors, institutions, and technologies, and their growing complexity as the infrastructure emerges and expands upon old forms, whilst also allowing us to see that the increased complexity of a search does not necessarily imply a straightforward improvement in outcomes. Rather, this suggests a nonlinear evolution. While the expansion of the tracing infrastructure increases the social and political recognisability of disappearance and provides families with further resources, it also complicates the search process, diffuses responsibility for its outcome, and creates a less-than-collaborative spirit. This is the result not of deliberate top–down politics but of the unplanned spontaneous development of the infrastructure at the grassroots level. This

also stems from the expansion of Poland's civic society and capitalist market and the *reactive* (rather than proactive) development of state policies and institutions, resulting from public pressure on the state to take greater ownership of searching for the missing.

Infrastructures emerge because they are supposed to 'make things happen' (Devine and Boudreault-Fournier 2021: 4). As I mentioned at the outset, while the tracing infrastructure is meant to locate the missing (rather than to enable or inhibit their movement), the movement of material and nonmaterial elements across infrastructure is necessary for it to be effective and efficient. If such circulation is not coordinated, and the actors are more concerned with the expansion of their own roles within the tracing infrastructure rather than with its expansion as a whole, the potential offered by such infrastructures remains underutilised. Yet, again, various studies underscore that infrastructures rarely, if ever, generate 'smooth flows' (Harvey et al. 2016: 3). While the future will likely offer solutions to some of the existing problems in the search for the missing in Poland, new opacities and challenges will also emerge (likely in relation to the development of other infrastructural systems), rendering the tracing infrastructure an always imperfect work-in-progress.

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Suvi Rautio

REFLECTIONS ON ETHNOGRAPHIC RE-ENACTMENT:
FROM THE CUBBY FILM SCREENING IN HELSINKI, AUTUMN 2023

*This is the first essay of the The Anthropologist's Toolkit series. This essay series peers into the anthropologist's toolkit to reflect on what ethnographic methodology constitutes in all its multimodal forms.

From the Cubby is a film written in memory of the protagonist of the film, Martin, who passed away during its production. Based in Southeast England in Canterbury, the name of the film derives from a temporary encampment set up and frequented by members of the city's rough-sleeping population, members including Martin. In the film, the audience learns a little bit about Martin's Romani heritage and his upbringing, leading up to his adult years when he struggled with illicit drug consumption whilst drifting across Canterbury's homeless encampments. Directed by Joe Spence as part of his anthropology doctoral project and co-directed by Nick Chamberlain, the film is based on six years of ethnographic fieldwork and is divided into three episodes, two of which were screened in Helsinki, respectively, in spring and autumn 2023.

Alongside a memoir and commemorative piece devoted to a close friend, there is no question that *From the Cubby* is an anthropological enquiry into the margins of Britain's urban poor. Halfway through the film, another overlapping theme is introduced through the story of the co-director, Nick. Nick's story is one of the bonds and dependencies that can materialise in the unanticipated friendships which arise when doing research. The audience learns about Nick's struggles, dealing with years of heroin addiction and living in the cubby with Martin, who was his closest friend.

Near the end of the film, we see Nick infected with tuberculosis, as the disease takes hold of Canterbury's homeless community. We see the first-hand hardships Nick faces, navigating the housing system and the endless loopholes in accessing Britain's National Health Services. We also see how Joe has no option but to step up and offer Nick accommodation in his own home, even though it means putting his own and his partner's health at risk through exposure to tuberculosis. This is the brutal outcome of Britain's conservative-led austerity programmes, which have brutally stripped away the housing and healthcare rights of its citizens.

If the rich audio and visual encapsulations of the film fill in the textual details of social life, they also inform its ethnographic tone, triggering an emotional engagement in the spectator with the lives of those experiencing homelessness. By invoking these emotions, the film debunks stereotypes and opens a dialogue towards a deeper understanding of the rough-sleeping community.

The film also evokes a web of finer-tuned stories linked to Canterbury. These fine-tuned

narratives carry a tone of mystique and wander, encapsulated in the visual documentation of the city and its monastic cathedral. Rich with minute attention to detail, it is this complex interweaving of storytelling I found most striking and contemplative about the film.

After the screening in Helsinki, I had the pleasure of talking with Joe and Nick about their collaboration in more detail. They explained to me that, from the film's conception, it has carried a collaborative ethos. This began after the death of Martin, when together Joe and Nick started recalling past events and re-enacted scripted scenes together in a way that felt authentic to and mindful of Martin. The recalling, reminiscing, and re-enacting of events from the past opened up an avenue for Joe and Nick to grieve and heal from the loss of Martin. They reminded me that taking accountability is crucial for both Joe and Nick when they represent Martin and as they portray Martin's life on screen. In remaining close to his experiences, Nick and Joe have together scripted, edited out, and concealed portions of the movie which they decided Martin and his family would not have wanted screened.

Drawing from Nick and Joe's retrieval of memories, many nuances in the film are re-enacted scenes to enrich the story. For example, the scenes of the cubby itself are carefully reassembled re-enactments of the former encampment, which has since been demolished. Rather than inventions or fabrications, these scenes become re-enactments to tell a multilayered story inspired by lived experiences.

Re-enacting staged scenes has been a common tool since the inception of documentary film-making, or docufictions, such as the 1926 film *Maona* filmed in Samoa. Samoans are displayed dressed in tapa-cloth costumes, which, during filming, were no longer worn by locals during coming-into-manhood rituals and painful tattoo practices. At the time, re-enacting scenes and capturing them through visual technologies were also commonly employed by anthropologists as active fieldwork strategies in the face of a presumed cultural decline (Grimshaw 2001; Cubero 2021).

The anthropologist's commitment to the salvage paradigm, which prioritised moving imagery as a tool for capturing and communicating data, has since been critiqued and replaced with new practices in visual anthropology. Extending authorship to the people represented in front of the camera serves as one way of overcoming the salvage paradigm. More recently, anthropologists who capture more-than-textual ethnography continuously work towards renegotiating the relationship between the researcher and the ethnographic subject (Dattatreyan and Marrero-Guillamon 2019). The objective here is to share authorship with the anthropologist's research subjects in efforts to defuse traditional power relations around epistemic authority. This was also Joe's motivation when he extended his film-making project into a collaborative endeavour.

In conversation with Joe, he informed me that, because re-enactment is so central to how he films ethnographic documentaries, he sees it as almost inevitable that he—the director—and the people he films become collaborators. Over time, as Joe explained to me, the very act of re-enacting scenes to capture the perfect shot inevitably generated an interpersonal relationship and co-authorship. It built a level of trust and consent that might not have been there or would possibly take another form if *From the Cubby* was not a visual, but a written ethnography.

Re-enacting events is not unique to filmmaking, but remains a central part of narrative building in its written form as

well. Whilst remaining diligently attentive to fieldnotes and interview transcripts, ethnographers whose primary ethnographic output is text can take creative liberty in carefully selecting, distorting, and concealing elements of their interlocutors' lives. Where vulnerability is a condition of the research subject, maintaining anonymity and writing ethnography which carefully weighs on the particularities and generalisations goes a long way in selecting what remains concealed to the reader (Abu-Lughod 1991; Narayan 2008). This too can be considered re-enactment through writing.

Re-enacting scenes that convincingly weigh the particularities and generalisations is one of the most challenging tricks of the trade for the anthropologist. I left the *From the Cubby* screening yearning for more generalisations, wondering if the directors could have zoomed out of the story more, paid less attention to the narrative of the particularities and re-enactment of past events, and focused more on the larger macro-workings of Britain's Tory-led government. In particular, I wanted to know more about homelessness in Canterbury and about the welfare crisis more broadly in the UK. These issues come through powerfully in Nick's story, but perhaps less so in Martin's. Perhaps this resulted in more sensitivity to the genre of memoir.

These limitations aside, the film is a fine example of the wider practices in multimodal anthropology of orienting towards advancing and expanding new pathways of documenting the human experience. Joe and Nick take liberty, playing with the concept of re-enactment by continuously returning to the genre of seeing and vision in storytelling, whilst simultaneously and continuously alluding back to the questions around researcher positionality with which it began. Unquestionably, in this project the ethnographer's eye is partial, which is

encapsulated in the way that the unscripted and scripted scenes were pieced together. This is further exemplified in a quote that the film concludes with: 'The subject is not in the work but in the person who's looking.' Left with this final quote, the tables are turned, and the audience are no longer the spectators, but become part of the re-enactment and collaborative remembrance of Martin and his life.

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Annastiina Kallius

LECTIO PRAECURSORIA

10 June 2023

Honoured Custos, Honoured Opponent, dear audience members,

I was in Hungary a month ago, and met with many of those people whose lives you can read about on the pages of my dissertation. A very close friend to many of us fell seriously ill, and, yet again, we gathered in a green garden for a get-together with some food and wine. The mood was subdued, but also filled with a sense of normalcy. Unlike in 2018, the rhythm of life now no longer dominated by cycles of aggressive propaganda. Instead, people discussed visits to maternal health clinics, cancer treatment, and the complex organisation of securing hiking boots for children's class trips.

But, the awareness of living in a non-democratic regime lingered in every conversation. Hardly a single discussion went by without referencing someone who had emigrated or was planning to do so; many among the liberal intelligentsia gathered in that springtime garden worked remotely for organisations in other countries. People often casually remarked that their grassroots democracy work was targeting the long term, and would not, of course, currently challenge the Fidesz regime.

At some point, I sat down with Marcell, who in my dissertation appears as a lecturer at a Budapest-based university. By the early 2020s, Marcell had left academia to work for the Budapest town hall, which since 2019 had become a centre of opposition against Fidesz.

Tonight, he was devastated by the illness of his best friend. The two of them could put up quite the entertaining show in public, he told me—but, in private, their friendship was solemn, serious, and driven by an impossible quest to understand two problems: the problem of violence and the problem of Hungary.

Hungary, Marcell continued, was like living in an ever-evolving puzzle. It was endless in its complexity, and yet somehow so compelling; filled with painful paradoxes and passion that they sought to understand through endless discussions. While they knew that they would never reach a conclusion, they had to try.

In my doctoral dissertation, I approach the puzzle of Hungary through the perspective of knowledge. This perspective reverberates far beyond Hungary, to contexts such as the Nordic countries and the United States where liberalism is in crisis. It is a puzzle that is politically urgent, analytically challenging, and familiar to all of us in this room:

How do we come to know the world around us? What happens when a common ground of truth begins to shake?

These broad questions guided my dissertation. Ethnographically, I follow the liberal milieu in Budapest in 2017 and 2018 through one intellectual family, a high school final-year class, and millennial democracy activists. The chronological chapters culminate with the parliamentary elections in April 2018, when Viktor Orbán secured a third consecutive supermajority. This politically turbulent year

was also the culmination of the retreat of the liberal community into a minority—not just in political terms, but also epistemically.

By epistemic, I mean knowledge, and more specifically, the way reality is represented. These representations are all around us: in the books that we read, in the discussions that we have, and in the pictures that we see. Often, we take for granted that such representations align with our parameters of knowing what is true: in other words, most of us are used to seeing our own truth around us.

I documented an 'epistemic collapse'—when this assumed alignment between truth and its representation is broken; when you see books of fiction in the non-fiction section; when the evening news tells you of a reality you know to be false. Such instances may be hard to take seriously or may even seem comical—but they might also result in the loss of your job or being publicly denigrated.

An epistemic collapse thus refers to a moment when knowledge is no longer stable. It is a productive term that brings into view different, competing systems of knowledge. Thus, it is through the collapse of liberal epistemology that the tentative outline of illiberal epistemology comes into view.

I want to emphasise that there is no post-truth or pre-truth. This is not a question of one system of knowledge replacing another. Rather, coexisting knowledge systems function like a Venn diagram: they might agree on issues of physics and gravity, but disagree on specific questions in politics. This is because they draw on different notions of objectivity.

Ultimately, I argue that, in late 2010s Hungary, competing systems of knowing reality coexisted and competed in what I term in the title the 'politics of knowledge'.

My fieldwork took place in 2017 and 2018, when a shared epistemic anxiety gripped

the Euro-American context. As I am sure many of you can personally testify, liberal elites, researchers, and politicians were filled with anxiety and uncertainty following the Brexit vote and the Trump election and presidency. The topic of the 'rule of law' became a buzzword in European Union institutions.

In Hungary, it was becoming clear that the regime established by the ruling party Fidesz in 2010 was not just a government that could be voted out of power. The liberal elites, who in the 1990s and 2000s had occupied a powerful position, finally came to accept what Viktor Orbán had told them: that the illiberal regime marked a new political era, or in the words of Fidesz, a revolution in the voting booths.

The late 2010s witnessed a further centralisation of economic and administrative power in the hands of Fidesz and a more-entrenched economic integration within the EU single market. In the words of Tamás Gerőcs and Csaba Jelinek (2018), Fidesz established its regime as part of, and not against, the European Union.

Fidesz itself, of course, premises much of its foreign policy on provocation and aggressive rhetoric, emphasising disconnections rather than connections.

The consequences of illiberal ideology are not, however, merely rhetorical. In Hungary, the politics of knowledge meant concrete developments that materially decreased the influence of liberal knowledge institutions and maximised the volume of their state-funded illiberal counterparts.

To name just a few examples, in spring 2017, Fidesz had effectively expelled the Central European University, my liberal-cosmopolitan *alma mater* which trained me in anthropology. Non-governmental organisations (NGOs) that received funding from abroad were required to register as foreign agents. At the same time,

Fidesz-sponsored research centres and book publishers enjoyed massive funding and visibility.

As I document in my dissertation, state propaganda had become so aggressive that it was impossible to escape. Newspapers, television (TV) shows, gigantic billboards, dramatic TV and radio advertisements, and leaflets and questionnaires distributed to each household created an echo chamber that all told the same story.

According to this story, the Fidesz government finally marked an era of democracy after the rule of corrupt post-communist liberal elites. This new era was labelled the 'System of National Cooperation', *Nemzeti Együttműködés Rendszere*.

The bright future was, the story continues, in danger: the Hungarian-born financier and philanthropist, George Soros, planned to destroy European nation-states by bringing millions of migrants to the continent. Supporting Soros were his liberal mercenaries who worked in undemocratic media outlets and NGOs, and their friends in Brussels who refused to see that the Fidesz regime was what the Hungarian people wanted and represented the dawn of democracy.

I had originally planned a research project on how liberal youth in Budapest imagine Hungary's location in Europe. In autumn 2017, I joined a final-year class in what I call the István Örkény High School, and sat in all of their English, history, and Hungarian literature classes.

My relationship with the students slowly evolved from suspicious looks to small talk, then a fun prom after-party, and, finally, the crucial milestone of chatting on Facebook Messenger. From December onwards, students like Johanna, István, Fanni, Lola, Artúr, and Julian welcomed me in their midst, and we began hanging out.

Through them, I was able to document what

it had been like to grow up under illiberalism: they had been 10 years old when Viktor Orbán came to power, and, in April 2018, they would vote for the first time in their lives.

I followed how these youth negotiated complex questions regarding their future choices, the context of the Fidesz regime, and debates with their parents, with whom they shared contradicting ideas of liberalism.

When I told the students of the activism for migrants' rights that I had been involved with since 2011, they shrugged it off as an uninteresting extracurricular activity and instead discussed the latest romantic gossip in the school.

Later, in 2018, when this activism led into an episode where I was listed as a member of George Soros' network on national television, the students found it quite cool. István, for instance, laughed aloud, gave me a high five, and joked that finally he knew why I had money to just hang out with them for a year.

Typical in anthropological research, my focus evolved during the process of participant observation. In winter 2018, I expanded my focus to the liberal milieu at large. This was possible only because, through activism, I had drifted into the edges of the tight web of the Budapest liberal intelligentsia.

In January 2018, the Fidesz regime introduced a plan for a legislative bill called 'Stop Soros', which would criminalise things like 'producing information about migration'. I found myself in the eye of a storm: able to document how a community identified as a target by a new political regime responded to threats against it.

For instance, I ethnographically documented meetings with lawyers discussing whether a prison sentence over a blog post on migration was a realistic fear or pondering if one could be fired from work for participating

in a demonstration. In perhaps the most striking example, Fidesz hired an Israeli private intelligence agency called Black Cube to spy on Marcell's best friend, Nóra.

In this context of authoritarianism, assessing ethics remained a constant challenge. My interlocutors, such as Marcell, did not always make this job any easier: when I asked him whether I could include him in my daily fieldnotes, he shrugged in annoyance and told me to 'do whatever I wanted with that research of mine', and continued to discuss the burning political questions of the day.

I knew that my positionality made it extremely difficult for me to conduct ethical fieldwork among Fidesz supporters. Nevertheless, I was worried about establishing a voyeuristic, one-sided perspective, and began attending public events in Fidesz-community centres.

What I documented brought a certain balance to my material. As I discuss in Chapter 5, much was similar to that in the liberal milieu. During the community events, I found an interconnected fabric of a people gripped with anxiety for the future, democracy, and truth.

Regarding the Fidesz elite in power, however, I witnessed something else: the building of a colossal epistemic infrastructure for producing propaganda that masked economic and administrative power.

To summarise, collecting this material was only possible because of nearly a decade of overlapping work that had led to trusting relationships. As anthropologists have known for a long time, in order to collect in-depth ethnographic data, an anthropologist can never truly be an 'outside' observer.

In autumn 2018, I returned to Helsinki with 275 pages of ethnographic field notes, 40 interview transcripts, and a gigantic collection of newspaper articles, pictures, and screenshots.

These data documented a world of endless relations. I struggled to organise my material into a coherent order until I identified the question that brought it all together: how reality was or was not represented.

In Chapter 2, I identified schismogenesis as a modality of knowledge that cuts across late socialism, liberal democracy, and illiberalism. Famously coined by Gregory Bateson (1935), schismogenesis stands for the creation of difference between social groups that closely interact. When I assessed my material on propaganda in light of the work done by Hungarian scholars such as Balázs Trencsényi (2014), Tamás Hofer (1991), and Éva Kovács (1994), I understood how Fidesz skilfully reproduced a centuries-old antagonism in Hungarian public life.

In Chapter 3, I turned my attention to conspiracy. Max Gluckman's (1963) and Paul Silverstein's (2002) work on gossip and conspiratorial knowledge production helped me to comprehend how my liberal interlocutors also relied on conspiracies—but to make sense of the authoritarian entrenchment. The resulting landscape of omnipresent conspiratorial knowledge shows that any moral charge laid on conspiracies as a 'better' or 'worse' type of knowledge is necessarily political.

In Chapter 4, I was interested in the multiple comparisons people made between illiberalism and previous political eras. I expanded upon the work of Michael Scott (2002) to demonstrate how people rely on comparisons as an epistemic strategy to navigate the changing political context. Furthermore, Marilyn Strathern's (2005) work prompted me to look at the background of the connections and disconnections these comparisons imply.

In Chapter 5, I was interested in truth, and returned to F. G. Bailey's (1991) classical work on coexisting logics: first, truth as

correspondence, which means that the truth-value of a claim is measured in relation to how it represents an external reality, which gradually comes to be known.

In truth as a coherence, on the other hand, truth is already known in its entirety. Whether something counts as a fact is measured hermetically, inwards. These logics of truth do not cancel each other out: instead, they coexist and compete, between communities as well as within them.

Building on this literature, which is now perhaps even timelier, I demonstrate how the illiberal regime's propaganda follows truth as coherence, where the factuality of things depends upon whether they fit the already known narrative of the propaganda. The liberal community, on the other hand, by and large, still expected to see truth as correspondence in the public sphere.

In Chapter 6, I followed how these different truth constellations collapse into a single shared reality. Ethnographically, this chapter follows Fidesz' election victory in April 2018 and events such as the public blacklisting of individuals as agents of George Soros. Why did some respond with fear and others with indignation? I argue that this moment made visible hitherto eclipsed relations when people's various personal relationships to power became relevant.

Finally, in Chapter 7, Make-Believe, I place Hungary in the context of the political economy of the European Union and discuss the future-oriented, revolutionary nature of the Fidesz regime. Combined with strong nationalism, I argue that the regime fulfils what historian Roger Griffin (1993) defined as the 'fascist minimum'—that is, 'palingenetic ultranationalism' or the rebirth of a nation.

In this political project, knowledge is an essential component, as I argue based of

the work of Yael Navaro (2012) and Begoña Aretxaga (2003). The regime places a heavy emphasis on imagination and fantasy in the construction of the political. Following the logic of truth as coherence, whether something fits the political imagination of Fidesz comes to define the very parameters of objectivity.

Thus, my dissertation documents a rare moment, focusing on how people experience the beginning of an era. Together, the analysis of different modalities of knowledge provides the main finding of this dissertation, which seems striking in its obviousness, and yet analytically profound: that the new political regime is also a regime of knowledge.

With this finding, I join scholars such as Alexei Yurchak (2005) and Andreas Glaeser (2010) who examined the change of political eras in East Germany and the Soviet Union in epistemic terms. I further develop this anthropological work by showing how the epistemic collapse brings into view different, coexisting modalities of coming to know the truth.

Ultimately, I provide a tentative outline of illiberal epistemology. It is not against science, but defines objectivity through a prefigured political narrative. In other words, objectivity is sought from internal coherence rather than external correspondence. This finding helps advance anthropological discussions on knowledge and the crisis of liberalism.

So, what happens when a shared ground of truth begins to shake? My dissertation shows that there were different grounds to begin with, because different ways of coming to know the truth coexisted in the first place.

As I stated at the beginning, this puzzle of knowledge is shared across the Euro-American context. What sets Hungary apart, however, is the centralisation of administrative and economic power in the hands of one party in a

way that would not, for the moment, be possible, for instance, in Finland, the United Kingdom or the United States.

But, what is shared is that different ways of coming to know the truth coexist, that political regimes are also epistemic, and, consequently, that the crisis of liberalism in the Euro-American sphere must be understood in epistemic terms.

I now call upon you, Assistant Professor Paolo Heywood, as the Opponent appointed by the Faculty of Social Sciences, to present your critical comments on my dissertation.

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BOOK REVIEWS

Geographer Reece Jones has explored state borders, border enforcement, and the political alternatives to both in several of his works. In *White Borders: The History of Race and Immigration in the United States from Chinese Exclusion to the Border Wall*, Jones charts the history of US migration legislation, as well as its political and intellectual foundations. If the question is 'How did we get here?', the answer Jones provides is 'Not by chance.' His argument is simple enough: that 'immigration laws are about racial exclusion' (p. 5), although the journey to that conclusion is anything but simple. Starting from the Gold Rush and ending with Donald Trump's presidency, the book feels far larger than its 239 pages and 16 chapters. Jones brings to the fore an astonishing array of characters, politicians, journalists, academics, economic and cultural elites, and grassroots organisers, all who have, over time, shaped the exclusionary and violent border and immigration regime of the country. The voyage Jones takes readers on is enlightening and sometimes breathtaking. By meticulously cataloguing life histories, correspondence, archives, speeches, and court documents, amongst others, he carefully crafts a story of interconnections and interdependencies, intellectual genealogies, and political continuities. Moreover, Jones is an expert storyteller. Written in a lively, accessible, and jargon-free style, the book not only makes a convincing case for dismantling the current US border regime, but does so in a way that makes crystal clear why this dismantling is required:

'[B]ecause immigration restrictions are a tool of white supremacy, then free movement must be the position of anyone opposed to it' (p. 198).

Jones is essentially arguing that border and immigration policies in the US have, in one way or another, always rested on the notion and fear of a 'great replacement'. That is, migrants threaten not just the lifestyle—however one defines it—or the financial security of white Americans, but their very existence. White supremacists chanting 'You. Will not. Replace us' as they marched through the University of Virginia grounds in 2017 is only the latest expression of that fear. Rooted in colonial imagination and eugenic ideas justifying the notion of superiority of white Northern European 'stock', the position remains conflicted. On the one hand, a belief in unquestionable superiority also justifies hierarchy and domination; yet, this superiority is, on the other hand, so fragile that it is constantly endangered by the mere presence of those deemed inferior. Curtailing, and ultimately stopping, migration has become one of the major ways to protect that superiority and the purity of the 'white race'. One of the key merits of *White Borders* is demonstrating how prevalent this thinking has persisted over the past two centuries, how it has shaped discussions and debates, and how it has found its way into various fora, from the obvious like the House of Representatives and the Senate to less obvious fora such as environmental movements. We are also witnesses to how white supremacist thinking

has travelled from the salons of intellectual and cultural elites in Boston and New York to the average resident in Michigan or Wisconsin.

This book is structured so that each chapter begins with a scene or the introduction to a new person before moving on to the broader context. For example, we learn about Chy Lung, who boarded the SS Japan in Hong Kong in 1874; Albert Johnson, the journalist turned politician who became the chair of the House Committee on Immigration and Naturalisation in 1919; and Cordelia Scaife May (1928–2005), an ultra-wealthy heiress who became a crucial funder of various white supremacist endeavours, especially those centred around the network set up by white nationalist, environmentalist, and anti-immigration activist John Tanton. Through these individuals, a broader picture emerges, pieces fall into place, and the laws, memos, policy documents, and correspondence come alive. This structural choice is one of the clear strengths of *White Borders*. It allows for a natural back-and-forth movement between the particular and the general, weaving together a narrative, which is both instructive and terrifying. At the same time, however, the sheer number of individuals and the speed at which they are introduced to the reader makes one sometimes stop to catch their breath. The breadth of knowledge and the depth of the material presented, whilst transmitted in a compelling and accessible form, require focus, at least from a non-American reader for whom the vast majority of individuals were previously unknown.

As a European reader, one who himself has worked on borders, bordering, and their racist roots, it is obvious that *White Borders* is the product of a quite specific moment in history in a rather specific political context. Without the ascension of highly specific forms of white supremacy, now branded the 'alt-right', culminating in the inauguration of Donald

Trump as the 45th President of the United States, this book would have looked rather different. The specific historical moment, and the need for the critical scholarship it engenders, are also rather obvious from the details and time periods granted primary importance. The two World Wars, as well as the Jim Crow laws and the Civil Rights movement all receive sufficient attention, but nowhere near as much as the early twentieth century or the growth of contemporary white supremacist movements from the 1970s onwards. This by no means suggests that this book is limited in its scope, but it is worth noting that the book presents a specific narrative—during another historical moment, that narrative could have prioritised other people and other stories. Another thing which a European reader notes is the absence of any discussion of fascism. Despite the interconnections and the shared colonial history, this represents a clear difference between Europe and the United States in terms of how white supremacy and, indeed, resistance to it, are constructed—through antifascism or through antiracism. *White Borders* does examine European thoughts at the time, from Francis Galton to Adolf Hitler, and how such thinking made its way across the Atlantic (and back). However, as the book moves further towards the present moment, the specifically American version of 'great replacement' theories and racism stand on their own. In fact, between the lines, one can appreciate a reversal of sorts: how American racist and anti-immigration thought came to not just influence, but define the political context elsewhere, especially in Europe. What happened next could be the theme for another work.

White Borders represents an important contribution not just to critical scholarship on migration, borders, race, and racism, but also to the political struggles around the same issues. It offers a chance to recognise and historicise

developments at a particular moment—some might argue a watershed moment—when far-right talking points have not only made their way into everyday politics, but, instead, have come to define it. It is simultaneously an interrogation of and a call to think differently. Jones does not delve too deeply into historical resistance to the policies and debates it catalogues, but simultaneously urges us to look for alternatives. Despite its North American focus, this book also offers a partial answer to the question of 'How we got here?' in other contexts as well, especially in Europe.

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Krause, Franz. *Thinking Like a River: An Anthropology of Water and Its Uses Along the Kemi River, Northern Finland.* Bielefeld: transcript Verlag. 2023. 294 pp. ISBN: 9783837667370 (paperback); 9783839467374 (E-book).

At a time when 'anthroposcene' and 'infrastructure' are buzzwords in the academy, Franz Krause's book provides a rich ethnographic account of the Kemi River and its dwellers in scarcely populated Lapland, enabling the reader to understand how the river and people inhabiting its surroundings mutually constitute and continuously transform each other. The relations between the river and the people always contain wider economic and political agendas. These relations are subject to global rather than national interests, whereby it is difficult to identify the real decision-makers behind the scenes. In recent years, especially with the EU's attempt to eliminate its dependency on China's mineral resources, Lapland has garnered attention as a promised land of valuable minerals. Public discussions often depict Lapland as a 'resource periphery', producing a mere burden to the Finnish national economy. This is due to the high costs of maintaining Lapland's infrastructure and basic public services in relation to its sparce population, forgetting that northern Finland has been a 'resource pool' for the entirety of Finland and beyond throughout the twentieth century (Ranta-Tyrkkö 2018). These issues are more often discussed in the context of the global South, whereby Krause's book, by applying both a sharp ethnographic lens and detailed historical description, offers a fascinating perspective on how the periphery of the European North is equally a subject of global financialisation.

This book presents Krause's ethnographic research on the environmental engagement and mutual constitution of Kemi River dwellers and the river based on his fieldwork in Finnish Lapland during 2007–2008. The content is distributed across ten chapters. The introductory section presents the main avenues of his research, the relevancy of the topic, its theoretical groundings in phenomenological anthropology and environmental studies, and a brief overview of the fieldwork and methods. The subsequent nine chapters can all be considered empirical accounts stressing different aspects of what constitutes life in the catchment. Chapters 2 through 4 disentangle the geographical and historical aspects of the places, people, and activities involved.

Chapter 2 argues that river dwellers, notwithstanding their age, gender, profession or specific location in the catchment, perceive their lives on the shores of Kemi River as living along 'the stream of life' in which movement and friction play an equal role. Furthermore, it paints a picture of dwellers not as a historically grounded population, but as one that has been constituted by movement and contact over time. The newcomers have been accommodated by the more settled population and above all the river itself and its seasonally endowed practices. At the same time, the dwellers are subject to industrial modernisation and economic change exposed by the state and large companies, all of whom take hold of the river's streams, limiting habitual livelihoods, and introducing specialised employment and salaried jobs. When livelihoods became diversified, some of those become increasingly understood and treated as leisure,

diminishing their importance in the eyes of the authorities, companies, and, eventually, the dwellers themselves.

Chapter 3, which focuses on the flow of the Kemi River, conceptualises the river as a space-maker. The direction of the flow of water in the river defines the direction and intensity of human relations. Krause demonstrates how placenames along the Kemi River, for instance, illustrate which places have occupied a larger importance and how in some cases that importance has diminished as the flows have changed, even if the names continue preserving the memories of this spatial change.

Chapter 4 interrogates the past and present hegemonies on the river. It captures the evolution of how different actors view the flow of water as a resource, which can be applied for different economic means: initially, salmon weir fishing, then timber floating, hydroelectricity production, and, most recently, leisure tourism. When priority is granted to one activity, others need to gradually withdraw and power strugglers result. Krause argues (p. 111) that the changing interests of different actors and their ability to technologically re-invent the river water as a new profitable resource renders the river a subject of continuous transformation with no hope for permanency.

Each of the next chapters (5–9) focuses on one dominant activity practiced in the Kemi River. Chapter 5 disentangles the deeper meanings of fishing. Krause goes far beyond fishing as a form of subsistence or recreational practice in open air to explain it as a deeply phenomenological process: '[river] dwellers engage with water, the rhythms of discharge, temperature and biological processes' (p. 136) in which habitat, observation, sociality, sharing, and accumulating skills simultaneously emerge. Similarly, boating on the river, discussed in Chapter 6 in close conversation with Ingold's

work (2000 and elsewhere), emerges as a deeply embodied practice. Krause explains the river dwellers' profoundly skilled long durée relationship with the river as one that allows them to 'claim the stream'. Timber floating down the river, the topic of Chapter 7, is another skilled embodied practice of river dwellers, which should be understood through the concomitant processes of movement and friction (Tsing 2005).

This and the subsequent chapters (8–9), the former depicting the impact of the broadening road network in the catchment and the latter focusing on hydroelectricity production on the Kemi River, describe how traditional livelihoods have gradually withdrawn to be replaced by a small number of industrial jobs. The local livelihoods are no longer controlled by the river dwellers, but the managing enterprises and the water flow have shifted initially into a national and, later, global commodity. Furthermore, the industrial production criteria and infrastructure built, drawing from efficiency and productivity demands, impact local life in multiple ways. As the tempo of life speeds up and dwellers become increasingly dependent on centralised consumption and services, the river slowly transforms into an obstacle rather than a facilitator in dwellers' everyday lives. The reader gains insights into how, for example, hydraulic infrastructures act to transform relations between place, people, and materiality (see Hommes et al. 2022). From my personal point of view, this is the most fascinating chapter for someone like me, interested in the interplay of the financialisation, global connections, power, future aspirations, and often colliding interests between the state, corporate actors, engineers, and dwellers, all whom might hold different conflicting subjectivities simultaneously.

In the final chapter, Krause dwells on the rhythms and seasonality emerging from

the bounded lives of the river and its dwellers. Seasonality implies that dwellers are in a continual process of preparing for the future 'in order to act appropriately at the moment that social and environmental conditions are right' (p. 240). This realisation, in fact, captures the idea of 'thinking like a river', reflecting the book's title: successfully dwelling with and through the river requires incorporating its flow, rhythms, and ongoing changes into oneself as a dweller.

Krause covers a wide range of vital issues defining lives in northern Finland. What he does not do is provide some answers regarding the impact of nature tourism on local livelihoods and outlining the competing interests there from locals' perspectives—considering the lengthiness of the book, this is likely an informed choice from the author. Perhaps, more importantly, readers whose prior interests lay with the political and economic situations of the various parties—and the competing globalising interests involved in industrial resource extraction and similar activities—only feel as if they received an appetizer after reading the hydropower chapter of Krause's book. After gaining insights from engineer dwellers, readers may also want to know more regarding other possible competing interests among the river dwellers themselves.

I recommend this book as an enjoyable read for anybody interested in nature–human relations, their historical evolution, and prospective futures, in peripheral areas globally and in Northern Europe specifically. It is exceptionally rich in describing the various river practices and their embeddedness in dwellers' lifeworlds, and Krause is highly convincing in analysing those within his chosen conceptual framework.

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