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(Re)wilding creative practices: Lessons from wildlife care

Keywords: More-than-human, Rewilding, Creative Practice, Interactivity, Multispecies

Abstract

What can artists/creative practitioners contribute to interspecies relations informed by notions of care and repair? This article reports on the interconnections between wildlife wilding/rewilding and creative practice in Australia, wherein wildlife rehabilitation contributed to a methodology for the creation of interactive art sculptures. I propose that a creative practitioner's direct engagement in rewilding practices can lead to the design of human artistic expression that can be valuable to the lives and needs of other species. This research takes a mixed methods approach that involves both computational creative practice and enrichment design, where creative practice is diffracted through the lens of being a flying fox rehabilitator performing daily care duties in a care aviary/crèche. I include a discussion of flying fox-human relations in Queensland, Australia, a discussion of rewilding as it relates to flying fox rehabilitation organisations, and discuss the creation of a series of interactive artworks called the *Quantum Enrichment Entanglers* (2021–2022) that can be seen as the original non-traditional outcomes of this research.

Introduction

There are numerous concerns regarding our interactions with other species that warrant our immediate attention. Humans are in no small part responsible for pushing other species towards their extinction – what scientists globally are calling the Sixth Mass Extinction on Earth. Further, we uphold an unwavering commitment to impossibly unlimited economic growth while watching billions of animals die in uncontrollable, inescapable fires. We confront issues such as biodiversity loss and habitat destruction as if they were unavoidable. New threats of multispecies contagions abound, all while we set blame on the species in question, rather than confront our interference with them and their habitats. Jordan and Fremeaux (2021) describe our current situation as a perfect storm of environmental, technological and social issues that they argue can only be addressed through methods and ontologies of care and repair. Åsberg further suggests that what is needed now is interdisciplinarity, and for all disciplines to consider their potential roles as change-makers, stating '[w]e live in troubling times in need of multiple approaches and

versatile research' (2024:1). Including, I argue, approaches from creative practice researchers of all disciplines.

Where does a creative practice like mine – engaged as it is in developing interactive and digital artworks and stories – align with these issues of the Anthropocene? And what could such a practice possibly do to turn towards a sense of positive futures for interspecies interactions? Mine is a practice that largely benefits from the extractivism required to build new technologies, the energy required to use servers, and the human delight in the new, unique and unknown that can be generated by digital and technological connection. To attempt to confront and rectify some of this damage while also acknowledging its continued presence, I look at how digital and interactive creative practices can turn to more-than-human care and rewilding through simultaneous wildlife rehabilitation, as a perspective that follows Åsberg's call for multiple and versatile approaches for troubled times. I attend to this by discussing my ongoing work in creating tactile, edible sound art as flying fox rehabilitation devices, where I work alongside a wildlife rehabilitation institution as at-once a researcher, a practitioner and a long-term volunteer wildlife carer. The point of this discussion is to consider what practice-based lessons acts of living with, caring for and eventually rewilding wildlife can bring to creative practices. In other words, what is brought to light through a diffraction of two seemingly separate acts of care and design? Below, I focus particularly on the concept of 'rewilding' as it relates to interdisciplinary art/care practices. However, it is important to note that rewilding was not the initial research focus or question of this project, instead it has revealed itself in hindsight as an important central theme.

Flying fox–human relations in Queensland, Australia

I begin with a context of flying fox–human relations in Australia to narrate the ways in which human cultural feelings towards flying foxes permeate and drive my creative practice through notions of *interaction*, *multispecies community*, *wilding* and *rewilding*. Though this I intend to impart a sense of the wider cultural scene in which my practice occurs, where wildlife and human communities often appear at odds with one another. Flying fox–human relations exemplify the joys and difficulties of human–wildlife zones of interaction, where conflict over resource-rich habitat has both directly and indirectly lead to the deaths of flying foxes. And yet, interspecies interaction also leads to the possibility of care and response-ability through the work of wildlife care practitioners, including volunteers, nurses and veterinarians who work towards repairing this damage.

I volunteer to rehabilitate and release flying foxes back into the wild, and have mainly worked with black flying-foxes (*Pteropus alecto*) and grey-headed flying-foxes (*Pteropus poliocephalus*) of the order *Chiroptera* and the family *Pteropodidae* (see figure 1). *Chiroptera* means winged hand, as the bones of the human hand and the wings of the bat share similarity in anatomy; kin through our abilities to hold, to enfold, to hug, to wrap our arms around ourselves, each other and our young. Flying foxes are an intelligent, highly social and inquisitive keystone species. They represent some of Australia's best creators of forests and are in no small way responsible for the lives of other Australian natives such as koalas, whose diet of eucalypt trees are almost solely pollinated at night (Sunshine Coast Regional Council 2021). This intrinsic *goodness* of flying foxes (Bird Rose 2022) makes our relations towards them significant and worthy of tending.



Figure 1: The practitioner works in the aviary. Image copyright: Alinta Krauth.

But as an interactive artist, the contentiousness of the term *interaction* in zones of human–wildlife conflict is not lost on me. The current reality of flying fox–human relations in Australia is often plastered across news headlines as a fight between the clean, quiet human species and the dirty, loud flying fox. Public surveys have suggested that only a small number of people are directly affected by close living arrangements with flying foxes, yet 20% believe that they pose more health risk than is reality (Kung et al. 2015). Other research indicates that the public perceives native flying foxes as pests (Lunney et al. 2002). In many instances, members of the public have felt it is morally just to '[take] matters into their own hands' (Chomicki 2019), protesting in the streets and marching against flying foxes with government representatives describing their cities as 'under siege' (Chomicki 2019). One resident explains her own shocking interference with a nationally protected species of flying fox:

“I get the pressure cleaner gun and we can get most of the lower bats dispersed from the lower branches with that,” Ms Kruger said. “What makes the biggest difference is the pot and the pan” (Chomicki 2019).

Tait et al. (2014) have suggested that flying foxes are becoming urbanised, and that managing our interactions is now a highly contentious issue. Beyond an understanding that climate change is driving flying foxes southwards, more research is required to understand why flying foxes sometimes appear to want to roost near humans. Perhaps it is because we both like to be near fresh water sources. Perhaps it is because fruit in farms and flowers in backyards are now more prevalent than their other resources. But whatever the reason, there are geographical areas where our lives are unavoidably entangled.

The prevalence of Australian Bat Lyssavirus (ABLV) further shapes Australians’ perceptions of flying fox species, particularly in the current era of heightened attention to hygiene and species-jumping pandemics. ABLV affects humans in much the same way as rabies (Gould et al. 2002) and the prevalence of ABLV in healthy Australian flying foxes is said to be around 1%. This jumps to around 7% in sick, injured or stressed bats (Wilkinson and Hayman 2017). Unwittingly, by stressing bats through violence and removal of food sources, we only heighten our own risk of exposure. I believe this virus, and the division it contributes to, teaches us more about our similarities than our differences: ABLV shows us where the borders of the human body and the bat body overlap through the microscopic world of bacterial and viral third parties. It is not just backyards and public parks where our lives entangle, but in our blood, bones and nervous systems. Our cultural relations towards flying foxes, and bats more generally, are enmeshed in visceral, body-led interactions and reactions.

The research and public opinions outlined above do not necessarily give us clear ways forward for rectifying flying fox–human relations. Reactionary relations hardly ever flourish. Research that does offer steps towards positive futures include projects such as *Re-imagining Utopias: The Bat/Human Project* (2010–2012) by the Remnant Emergency Artlab. *The Bat/Human Project* resulted in the ‘Botanical Gardens X-Tension’: an imagined network of distributed gardens throughout Sydney, New South Wales, that give grey-headed flying foxes and humans more equal use of public space. The artists reimagined a botanical garden from one largely landscaped for human aesthetic purposes, to a green space rewilded for cohesion between bat and

human users (Armstrong 2014:282). Such projects suggest ways to embrace, or at the very least, tolerate, other species with whom we share public space.

Rewilding as creative practice

Previous research into rewilding situates it most often as a restorative land-care practice for attempting to turn humanised land back to its original state (Pettorelli et al. 2019; Sweeney et al. 2019). As such, the term is used largely in discussions of human–flora relations and urbanised or pasteurised spaces, such as that seen in the ‘Botanical Gardens X-Tension’ (also see Root-Bernstein et al. 2018). First referenced as a specific scientific term in 1991 (Jørgensen 2015), it can include practices such as regenerative farming (Vogt 2021) and indigenous land restoration (Wright 2018). As Jørgensen (2015: 482) reminds us, the term has been used to describe many different practices and has no one clear meaning or method of execution.

Rewilding as part of a methodology, process or thinking-tool for creative practitioners is emergent and naturally interdisciplinary. Creative writing practitioners (Marland 2020; Martin 2015) have discussed notions of wilding and rewilding as practices of decolonisation, and attuning a creative practice to the creator’s engagements with floral surroundings. It is ideally situated as a creative practice method or outcome for artists who interpret urban rewilding movements (Sage 2019). Exemplar artists include Jenny Kendler, who designs ‘eco art reform tactics’ (Albertsen 2020), Donna Davis, who collaborates with scientific teams to document and restore endangered flora and fauna in tropical Queensland (Chandler et al. 2018), and Keith Armstrong, who headed the Remnant Emergency Artlab mentioned above.

By comparison, the terms wilding and rewilding in my work relate to flying fox rehabilitation and release through a wildlife organisation. More specifically, I use the terms ‘wilding’ and ‘rewilding’ to suggest a particular stage of the flying fox rehabilitation process which occurs in approximately the final 5 weeks before animals are released back into wild habitat. Wild flying foxes who may have become accustomed to human interaction as a side product of the early stages of rehabilitation are dehumanised (‘rewilded’) within an outdoor aviary before release.¹

¹ This process may not be the same across institutions. Bat rescue, rehabilitation and release organisations in Australia are bound by wildlife-related laws, government guidelines and animal husbandry best practices. They are also often the instigators of, or consultants on, the

In this rewilding aviary, flying foxes are generally no longer sick or injured, but are instead regaining full strength, meeting each other in a larger group, and learning survival skills with limited human interference. The process can also encompass *wilding*, as orphaned pups are also frequently brought into care. Once grown and ready for release, these young flying foxes may have no knowledge or recollection of an outside world. As such, the aviary may be their first steps in learning what it takes to live as a bat, how to fly, how to seek food and shelter, and how to interact positively in a larger social group.

In my experience, rewilding can benefit from interaction mediated by objects and artefacts, rather than direct handling, due to the need to avoid human interference. This can include hand-made and selected enrichment and exercise courses, toys and puzzles. A bat rehabilitator understands that any object taken into the rewilding aviary should aim at enrichment or exposure to situations and challenges that educate bats on potential future encounters. This assemblage of species and objects makes wildlife care an always-already new materialist practice: the use of craft and homemade design can be what makes rewilding possible, and indeed what makes it inherently creative. Indeed, aviary spaces and objects requiring largely amateur design or craft is often essential when there is little funding to go around. In my time as a bat rehabilitator, my artworks have become examples of these objects of rewilding and indirect interaction.

Objects of (re)wilding: The *Quantum Enrichment Entanglers* (2022) artwork series

Considering how one's practice can contribute positively to the rehabilitation of another species first suggests seeing one's work as having a function beyond aesthetic purposes. To attend to this, I adopt an artistic practice-based research (PBR) approach, inspired by a functional enrichment design framework from the field of animal behavioural studies. This approach offers opportunities to contemplate nonhuman experiential interactions by observing flying foxes engaging with objects. Further, PBR facilitates the potential incorporation of methods from diverse fields – in this case, animal behavioural enrichment design – since PBR methods continue to evolve (Skains 2018; Bartleet 2013). Within this approach, I incorporate Marty MacPhee and Jill Mellen's 'SPIDER framework', a framework for enrichment design

creation of such practices. However, these are often non-profit organisations that rely on contributions and grant funding, and as such, their facilities may not be standardised.

including: *Setting goals, Planning, Implementation, Documentation, Evaluation and Re-adjustment* (2020). To reframe this for my purposes, I iteratively make and then observe interactions, beginning by observing bats interacting with a series of initial stimuli options informed by existing enrichment literature, then introducing prototype artistic objects to the aviary that incorporate commonly engaged stimuli options, and ultimately, presenting final creative outcomes to the bats as fully realised works. From this, quantitative metrics are gathered regarding how, when and for how long bats interact with each artwork, what vocalisations or body signals are used, what sensory engagements they appeared to use, and whether they show signs of territoriality when interacting with the artworks. These data alone do not evaluate whether rewilding occurs more effectively or at a faster rate when artwork is present, however, they help me to introduce a greater richness of learning options to the current rewilding process, and to suggest a path for other creative practitioners to also engage in similar crafting for wildlife rehabilitation.²

One series of sculptures coming from this approach is my interactive ‘toys’ for bats: the *Quantum Enrichment Entanglers (QEEs)* (see figure 2). These works derive their name from their ability to detect and respond to movements during bat interaction. Constructed as lightweight sculptures suitable for hanging in aviaries, the *QEEs* feature a sturdy biodegradable shell designed to accommodate technology. Their irregular shapes draw inspiration from natural forms, and are coated in a non-toxic, chew-friendly texture. Every *QEE* features ‘puzzle hollows’ with hidden food treats to stimulate foraging and problem-solving abilities. Further, *QEEs* use internal speakers and sensors such that when a sculpture is interacted with, it will trigger sounds (including across nearby sculptures), such as colony noises, bell sounds and white noise. These immaterial elements attempt to drown out human-specific noise environments and create imagined wild environments (Livingstone 1997). These elements are, separately, recognised as essential techniques in the rehabilitation and enrichment of flying foxes in captive spaces (see: Stevens et al. 1996; LeBlanc 1996; Bukojemsky and Markowitz 1997; Laule and Desmond 1997; Guy et al. 2013).

² Further research would be required to evaluate whether these artworks caused a rewilding process to occur significantly differently to a control group.



Figure 2: A selection of QEE sculptures in-studio and in-aviary. Image copyright: Alinta Krauth.

Considering rewilding as a goal of a creative practice suggests that a practitioner's choices and actions should aim towards the eventual release of healthy animals into their habitat. Artists wishing to work at this particular art–science nexus should therefore consider the kinds of behavioural enrichment already deemed effective for the species in question that may lead to typical wild behaviours. Furthermore, practitioners must acknowledge that a consideration of behavioural enrichment may influence the physical and aesthetic qualities of their work, potentially conflicting with their personal artistic sensibilities. It is imperative for practitioners to recognise that the wellbeing of animals supersedes any aesthetic attributes their work may possess. For example, colour and texture choices on the *QEEs* were made exclusively to ensure they were non-toxic if licked – I had initially hoped to make them green, a colour that may be more clearly visible to bats. As another example, I watched these sculptures eventually obtain superficial damage through interaction, and came to understand this damage as a healthy aesthetic quality that may suggest bats wanted to spend sustained time exploring them (see figure 3). As a third example, my largely digital and sensor-based art practice was heavily influenced by a perceived need for bats to have choice in how they might engage. For instance, while sound is often used as a form of behavioural enrichment for flying foxes, I questioned how they might consent to its playing if not given the agency to activate or deactivate it. This caused me to decide that digital sound should only be initiated by some form of physical exploration, leading to the sculptures' ability to produce sound only when swung. This saw a shift in my practice towards largely tactile-led interaction that specifically aimed at allowing bats degrees of agency over how, when and how much they might engage with a sculpture, or if preferred, not engage at all.



Figure 3: Flying foxes interact with *QEEs* in the aviary. Image copyright: Alinta Krauth.

All flying foxes who took part were deemed successfully dehumanised by the rehabilitation organisation. They are now all flying free, though their individual status is unknown. What flying foxes have taught me through their interactions with *QEEs* is that rewilding can be conceptually engrained into a work's aesthetic, as their function as nonhuman teaching aids is integral to their physical appearance and the highly sensory ways in which they invite exploration. These objects can gain more than just aesthetic value (see Krauth 2024), in that they aim to help bats remember how to engage in outdoor life, encouraging knowledge such as food sourcing and gathering methods, practicing social interactions, and learning about novel materials, textures and foods. However, the process of rewilding is unavoidably tied to the formulation of a type of pedagogy for nonhumans, the outcomes of which can be difficult to evaluate. The *QEEs* evoke the implementation of teaching materials for learners, and yet, these are learners with whom I cannot share subjective viewpoints or gain in-depth feedback through most qualitative methods (see Nagel 1974). Here, I am confronted by my own human exceptionalism, where I must ask myself not only what makes me think this nonhuman pedagogy could be effective in delivering nonhuman knowledge, but further, what makes me think a human could be in any way equipped to provide it.

Towards creative practices for positive multispecies futures

Flying fox–human relations in Australia are clearly strained, requiring care and repair. We are species that need each other for our ongoing co-survival in a time of ecological and climate crisis. Creating interactive artworks with/alongside species that simultaneously hold ecological significance and face cultural stigma can be a powerful act of resistance to human exceptionalism through which practitioners can contribute to physically and metaphorically mending strained relationships. To return my practice to the wild, in the case of the *QEEs*, has also meant to attempt to embrace the creation of artefacts that hold value beyond my own species. It is thus not just a practice but a metaphor for how artists can engage in more-than-human aesthetics, moving beyond humanist ideals of aesthetics towards ideals engaged in interspecies giving, repairing and returning. *Rewild, we must!*

As this discussion reports on on-going research, there are many related and tangential aspects of this topic that are not covered here. One being the question of why I term my practice interactive art, when it could arguably also be termed experimental enrichment design. One indeed could see the *QEEs* as experimental enrichment designs, and this question of aesthetics for humans versus enrichment for other species begins to be addressed in Krauth (2024). Perhaps the most important aspect that is not detailed here is the ethics of any methods that offer animals human-made stimuli, and ways of considering animal consent by, for example, avoiding coercive interactions with provided stimuli, offering a range of other stimuli options, and considering important questions of when and where stimuli is offered in order to allow animals to approach stimuli on their own terms and without humans present. I have begun to address this and other details regarding animal participation consent in Krauth (2022).

Acknowledgements

I would like to acknowledge the help of BatsQLD staff in assisting me to create ethical methods for housing and observing sculptures in the rehabilitation aviary, and for their continued support of the country's flying fox population through rescue, rehabilitation, and release. I would also like to acknowledge Queensland University of Technology for their rigorous animal ethics, biosecurity ethics, and environmental ethics codes of practice under which this project operated.

This paper reports on research undertaken during my PhD at Queensland University of Technology, and as such, portions of this paper and its wording may appear in, or be similar to, my dissertation.

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