

On the Educative Potential of Reservoir Bats: Practices of Response-Ability for the Cthulucene

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ABSTRACT. Arguably, ‘we’ (or at least those who take hearing for granted) are attending to the world more sensitively through sound, becoming more aware of its presence and absence: becoming more bat-like. Perhaps bats have propelled into existence new sonic-relationships for humans and are encouraging us to attend more closely to the becoming sonic-world. Might they be asking us to *finally* listen/see/feel/note more keenly that which is right in front of us?

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Bats

Bats are a species that are particularly susceptible to anthropogenic changes because of their low reproductive rate, longevity and high metabolic rates (Voigt & Kingston, 2016). The International Union for the Conservation of Nature lists 15% of bat species as threatened (i.e. ‘critically endangered,’ ‘endangered’ or ‘vulnerable’), and 18% as ‘data deficient’ (i.e. there is a lack of ecological studies that can provide information on their status). The suggestion that COVID-19 originated in bats (that the *Rhinolophus* species, popularly known as the ‘Horseshoe’ or ‘Chrysanthemum’ bat, were the original ‘reservoir’) has presented further risks to them: Zhao (2020) notes that hibernating bats in or near homes that are not of this particular species have been removed and released into wild areas that are not their natural habitat, posing threats to their survival, and suggestions of indiscriminate mass slaughter have been made, despite there being more than 1400 species of bat in existence. Fake news and videos that have gone viral during the pandemic, showing the supposed removal of a Horseshoe/Chrysanthemum bat infestation from a rooftop in Wuhan, also serve to fuel panic and influence future human/bat relationships (Kaur, 2020). The video was, in fact, nine years old and from Florida.

Though bats sometimes engender fear and repulsion ('I've never been a fan of bats' exclaimed one Facebook user recently in response to a short film from the 1980s, of zoologist and pterodactyl expert Cherie Bramwell, discussing her relationship with her fruit bat companion, Balls [see figure 1]), they are remarkable and educative for us humans.¹ Bats defy 'longevity quotients' – the correlation between body mass and longevity (the smaller the animal, the shorter the life span), living to ages much greater than would be expected. Consequently, they are studied by gerontologists investigating mechanisms of slow ageing (Locke, 2006). Like Balls, the story of a 'Brandt's Myotis' (a small species of bat that roosts in caves of the Siberian region of Russia) provides another opportunity to move from an ethics of the species to that of the individual. In 2005, one such bat was captured and found to be wearing a numbered band that had been attached by researchers in 1964. At the point of re-capture, the bat, which was released after examination, had lived at least 9.8 times longer than would be expected based on its quotient – a remarkable feat despite, or perhaps in spite of, not being reared in a zoo or laboratory. As one gerontologist observed, the bat's physical functions – its ability to hear, echolocate and rapidly manoeuvre to capture prey and escape predators – would have had to remain at very high levels, 'a bit like a human living to be 100 and still being as agile and fast and healthy as when he or she was young' (Podlutsky, in Locke, 2006).

It seems that our relationships with other species can be fickle. Dogs sleeping in chairs in human-like poses are humorous and cute, yet we turn a blind eye to the pain other dogs endure, or we never 'click' to its existence, in the first place.² We fear and go to great lengths to jettison from our surroundings species that may teach us how to age slower, or 'die a good death.' Maybe the ultimate expression of Anthropos supremacy is to exploit that which may teach us to do so. But bats may *also* be educative in the context of the pandemic – just how will be explored next.

String Figures

What is it to surrender the capacity to think? These times called the Anthropocene are times of multispecies, including human, urgency: of great mass death and extinction; of onrushing disasters, whose unpredictable specificities are foolishly taken as unknowability itself; of refusing to know and to cultivate the capacity of response-ability; of refusing to be present in and to onrushing catastrophe in time; of unprecedented looking away. Surely, to say 'unprecedented' in view of the realities of the last centuries is to say something almost unimaginable. How can we think in times of urgencies *without* the self-indulgent and self-fulfilling myths of apocalypse, when every fibre of our being is interlaced, even complicit, in the webs of processes that must somehow be engaged and repatterned? Recursively, whether we asked for it or not,

the pattern is in our hands. The answer to the trust of the held-out hand: think we must. (Haraway, 2016, p. 35)

Bats are mammals of the order *Chiroptera* (from the Ancient Greek *chiro*, ‘hand,’ and *pteron*, ‘wing’), a name that has come about because of their hand-like wings, which are formed by four elongated ‘fingers’ covered by a cutaneous membrane. Hence, we might think of *Rhinolophus* bats as chrysanthemum/wing/horseshoe/hand hybrids. Thinking bats as hands in motion that emit sounds that travel through the darkness until those sounds arrive at the boundaries of something as minute as a human-hair, which in turn emits a signal, brings to mind the imagery of string figure (SF) games – a game that ‘can be played by many, on all sorts of limbs’ (Haraway, 2016, p. 10). Such imagery is produced if we imagine tracing a line from a bat’s calling-point to a given recipient, and back again, over and over.

Haraway describes SF as a process of ‘passing on and receiving, [of] making and unmaking, [of] picking up threads and dropping them. SF is practice and process; it is becoming-with each other in surprising relays; it is a figure for ongoingness in the Chthulucene’ (2016, p. 3).³ SF is, therefore, a model for worlding, the consequential question of which is ‘how to be response-able?’ (2011, p. 12). As a figure of ongoingness, in addition to speculative fabulation, speculative feminism, science fiction, science fact and science fantasy, the material-semiotic ‘SF’ sign ‘must also mean ‘so far [sf]’ opening up what is yet-to-come in protean entangled times’ pasts, presents, and futures’ (2011, p. 12). Haraway also thinks of SF as a mode of tracing to be deployed for the cultivation of multispecies justice:

[By] promiscuously plucking out fibres in clotted and dense events and practices, I try to follow the threads where they lead in order to track them and find their tangles and patterns crucial for staying with the trouble in real and particular places and times. In that sense, SF is a method of tracing, of following a thread in the dark, in a dangerous true tale of adventure, where who lives and who dies and how might become clearer for the cultivating of multispecies justice. (2016, p. 3)

What temporalities are at play in string figuring? We might imagine an unfolding in un-interrupted ‘real’ time. However, SF involves ‘relays ... passing patterns back and forth, giving and receiving, patterning, holding the unasked-for pattern in one’s hands, response-ability’ (2016, p. 12), thus the possibility for delay; for waiting, is also present as an ‘un-asked for pattern’ might solicit a slower response. That moments and periods of delay and waiting could occur within a practice of SF, permits the possibility that string figuring can include that which operates outside repeatable, patternable actions (like the unknown movements of bats).

What praxes of care and response, of response-ability, are bats and the pandemic, or the ‘intrusion of Gaia,’ asking of us, at this moment in the Chthulucene (Haraway, 2016; Stengers, 2015)? The answer to the trust of the closed-hand snoozing: that to address the trauma experienced by other species, and thus cultivate a therio-justice, we must engage certain practices of response-

ability.⁴ These include ‘turning towards’ therio trauma through practices of ‘noticing’ and ‘tracing,’ or as Haraway would say, by ‘following threads in the dark.’ Understood such, being response-able literally becomes a practice of ‘clicking’ – as in the popular lexicon of being ‘more aware’ – to everyday injustices, and in the context of the pandemic, to how events of therioicide, such as throwing a dog from an apartment (Majeed, 2020), and the practices that support them, such as eating a fast-food burger (Kirkness, 2020), are symptoms of a general way of thinking about other species that also created the virus and pandemic.⁵ But ‘clicking’ is also a material practice that allows bats to keenly ‘hear’ the feedback from the ‘calls’ (or ‘clicks’) they emit – likewise, we need to listen to the feedback we receive, to the semiotic-material expressions of Anthropos supremacy that we ‘emit,’ that comes back to us in the form of Gaia’s intrusion. This feedback leads to another practice of response-ability, one that involves listening more keenly and with greater care and intensity; being other sensorial, being bat-like. In the context of the pandemic, perhaps bats are teaching us how to ‘tune our ears in.’

Response-Ability and Sonic-Frequencies (SF)

It is ironic, given popular misunderstandings of bats as blind, that ‘voir’ – the French verb ‘to see’ can be found inside the word ‘reservoir.’ The banal phrase ‘as blind as a bat’ can be used to describe someone who refuses to notice what is right in front of them (such as climate-change denialists). But bats perceive/attend/respond acutely through echolocation, a finely-tuned sense used when navigating, avoiding predation, foraging and hunting. Echolocation involves emitting ‘clicks’ through the nostrils, and listening to the echoes of those calls that return from various objects and surfaces (bats can discriminate differences of less than one millimetre in surface textures).

That bats are ‘blind’ is possibly as much a misnomer as the words ‘wild’ or ‘wildlife’ are when used to describe the animals sold at the wet market where the virus developed (the animals concerned were likely born and reared on intensive farms). The word also potentially shifts attention away from the ethics of eating other species, and the intensive farming of cows, pigs and chickens, where viruses have also developed. It may also suggest that the virus originated in a free-roaming animal; that its emergence was just ‘bad luck’ – that it was nothing to do with the systematic ways that we exploit animals that we turn a blind eye to, or fail to notice in the first place. For example, when we dutifully ‘perform’ the lockdown, home-baking and binging on Netflix, perhaps watching *Reservoir Dogs*, but more likely *Tiger King* (also to do with the exploitation of wild animals), and as we walk around the neighbourhood, our eyes gazing at toy animals stuck behind glass.⁶ We might see, but the favoured sense of Anthropos renders us not always thoughtful and searching, not always caring/careful.⁷

It is curious that bats should so foreground the sensory as relational, and specifically the sonic. It seems we are un-responsive to Gaia's intrusion – we do not adequately hear/see, nor intuit via any other sense, the feedback from the violence we have unleashed, and that has brought us to this moment in the Anthropocene – consider the environmental crisis *generally*, but also the contiguity of the pandemic with the 2019–2020 Australian bushfires – a radically visual event.⁸ Both are anthropogenic crises entangled within the ongoing environmental crisis that we are unable to grasp the consequences of, because our cognitive and sensory apparatus has evolved such that we are 'only able to perceive a small region of space and a short length of time' (Hanski, 2008, p. 34).

Two jolts in quick succession, then. Therefore, it seems appropriate that when negotiating an un-responsive human-made object, bats shorten the time between calls to collect more information, to solicit a response (Greif, Zsebök, Schmieder, & Siemers, 2017). So found a study that sought to learn more about why bats fly into metal or glass plates on buildings, such as McCormick Place.⁹ The study involved placing a vertical metal-plate in the corner of a rectangular tunnel to see how bats negotiated it when travelling around the corner. When close to the metal-surface, some of the bat's calls ended up hitting the plate at a 90-degree angle and bounced right back at them, prompting them to change their echolocation patterns by shortening the time between calls. The pandemic and the Australian bushfires are events whose 'calls' have come in quick succession.¹⁰ If the first 'call' came pre-dominantly visually, at least for those observing from a safe distance, the second came sonically, but unlike the first, in ways we might interpret as sometimes affirmative.

The pandemic has brought new sonic relationships into existence. These relationships make felt afresh the spatial parameters we operate within, disrupting thinking (and feeling) as usual. People report being able to hear into greater distances (Green, 2020), and reports of birds singing more abound. In virus epicentres, emergency sirens pierce through abandoned streets, while apartment-dwellers emit sound from their hands by clapping and banging pots and pans in praise of health workers (the public sphere has become the domestic). The sonic has also gained prominence due to its absence – an absence that amplifies the presence of existing sounds that might otherwise have gone unnoticed. Those that rely on sound cues to navigate, report the at times intolerable increase in volume accompanying certain sounds, and a changing of aural clues. An absence of sound is present in film-footage of burials of yet to be claimed bodies, produced by another kind of hybrid: a 'machine-with-wings' (a drone operated by human-hands, hovering over Hart Island). On first viewing, the silence amplified the tragedy of the footage, but by the time I stumbled across it again, text had been overlaid to explain what was happening. Perhaps the footage was too dis-quieting, hence media-outlets over-coded it with language.

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and absence: becoming more bat-like. Perhaps bats have propelled into existence new sonic-relationships for humans and are encouraging us to attend more closely to the becoming sonic-world. Might they be asking us to *finally* listen/see/feel/note more keenly that which is right in front of us?

NOTES

1. See <https://www.bbc.co.uk/archive/balls-the-fruit-bat/zbt2kmm>

2. See <https://www.independent.co.uk/news/world/asia/yulin-dog-meat-festival-video-china-blow-torch-animal-cruelty-a8969361.html>

3. The Chthulucene (a compound of two Greek roots: khthôn and kainos) marks a ‘timeplace for learning to stay with the trouble of living and dying in response-ability on a damaged earth’ (Haraway, 2016, p. 2). Kainos means ‘now, a time of beginnings, a time for on-going, for freshness’ (Haraway, 2016, p. 2). Kainos does not privilege conventional pasts, presents, or futures, but does not insist on wiping out what has come before, or what may come after. Rather, it ‘can be full of inheritances, of remembering[s], of comings, of nurturing what might still be’ (Haraway, 2016, p. 2). Chthonic ones are ‘both ancient and up-to-the-minute’ earth-beings, ‘replete with tentacles, feelers, digits, cords, whiptails, spider legs, and very unruly hair.... They romp in multicritter humus but have no truck with sky-gazing Homo’ (Haraway, 2016, p. 2).

4. Bats hanging upside down, while hibernating, might appear to us as ‘closed-hands snoozing.’

5. The term ‘theriocide’ is borrowed from Piers Beirne (2014). Beirne notes that, unlike ‘homicide,’ there is no unitary term to name those diverse sites and human actions that cause the death of animals and proposes the term ‘theriocide,’ after rejecting ‘zoocide’ and ‘animalicide’ as possibilities. Zoocide, he argues, carries too much cultural baggage because of its association with zoos – one particular site of exploitation. And though ‘zoon’ means a ‘living being, including an animal – as opposed to a plant, phyton – the verb with which it is cognate (*zao*) is also used for human life’ (Beirne, 2014, p. 56). The term theriocide ‘combines the ancient Greek *θηριον* (an animal other than a human) and the Latin *caedere* [to cut or fell]. *θηριον* ... is a prosaic version of *θηρ*, which may originally have meant beast of prey. Later, *θηρ* was extended to other animals, probably including wild and domesticated animals and metaphorical monsters’ (Beirne, 2014, p. 55).

6. In a similar vein, Joanna Zylińska (2018) cautions that the visual, in the form of representational images of environmental destruction, can desensitise us, either through aestheticisation or anesthetisation.

7. Out walking during lockdown, I saw a model of car called a ‘Dodge’ that had a toy shark in the window, but I still managed to stumble over it (literally ignoring the car’s instruction), as I held my phone out to take a photograph.

8. The bushfires have thus far claimed one billion animal lives, but bats, frogs and invertebrates have not been factored into this toll (Sanda, 2020).

9. A giant convention centre in Chicago and the site of many avian (including bat) collisions. It is now a makeshift hospital for the treatment of COVID-19 patients, coincidentally.

10. These events are but two that unfolded in the world at this time. There may be other events, as equally as damaging as the Australian bushfires that also took place, in other parts of the world.

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