

CATS, COWS, CENTIPEDES AND CHILDREN: EXPLORING ETHICAL ENTANGLEMENTS IN POSTHUMAN DOCTORAL INQUIRIES

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Abstract

This paper illuminates the ethical entanglements that emerged/ are emerging/ might emerge with nonhumans (including multi-species others and the material world) during and throughout doctoral research processes. As education doctoral students with shared concerns about educating in the Anthropocene, we are hope-ful that posthuman, feminist new materialist philosophies can offer new ways to the environmental crises. We share our struggles and joys in enacting lively, relational ontologies, inspired by the work of Barad and Haraway. This paper share stories from our doctoral research to explore ethical entanglements: ‘Centipede and Wonderboy’ tells of a research event that emerged in the urban forest school where Hannah, the children and nonhuman nature are exploring the possibilities of play. Charlotte explores how animal-human stories are constituted through ‘multispecies moments’ in an international school. We consider the agentic nature of doctoral ethical procedures and the anthropocentrism they give force to. We end by reimagining a posthuman ethics where nonhumans are acknowledged and included at every stage of the research process in a generative, dynamic intra-play of situated, entangled engagements.

BECOMING-WITH THE ANTHROPOCENE

As two doctoral students carrying out inquiries in the context of the Anthropocene, and with a shared interest in post-anthropocentric approaches in educational research and practices, we were inspired by the theme of the ECQI Congress 2023. ‘The Anthropocene’, a term proposed by Earth system scientists Paul Crutzen and Ernest Stoermer (1) describe a new geological epoch in which over-consumptive and fossil-fuel dependent human activities have permanently changed the planet (2). Species extinction and biodiversity loss that are a result of these anthropogenic changes compels us to rethink our human and nonhuman relations. Our doctoral inquiries enact relational ontologies and posthuman, feminist materialist philosophies to challenge anthropocentrism (human-centredness). The concept of ‘post-anthropocentrism’ sees flattened hierarchies and the human as enmeshed in the world, rather than at the apex. Responding to the devastating declines in global wildlife populations⁶, we share how our research is entangled with nonhumans. Decentering the human and instead focusing on relations with other species might provide hope for educational research practices to find ways for us to ‘think and act differently for global, social and environmental justice’ (3).

In this paper, we share the theories that we are becoming-with including Haraway’s ‘Making kin’ (4, 5) and Barad’s Agential Realism (6) because these have inspired us to rethink our human/nonhuman relations and give direction to the trouble of educating and researching in the Anthropocene. We share stories of our research journeyings. Charlotte is in her first year focusing on animal(s)-child(ren) relations in an international school and Hannah, in her fourth year, is exploring the possibilities for/of play during child-nature encounters in an urban forest school, UK. This paper was co-authored by ‘Other Kin’ as we attempt to acknowledge the nonhuman life that inspires, challenges and nurtures us in the co-production of research, at all stages of our PhD journey. The paper ends with a series of

⁶ The Living Planet Report 2022 states that there has been a 69% decrease in global wildlife populations since 1970

propositions to rethink current doctoral practices that give force to anthropocentrism and offer ways we might do doctoral ethics differently.

MAKING KIN FOR MULTI-SPECIES FLOURISHING

In our research, we become-with a variety of species, human and nonhuman, to explore how education might offer more hope-ful post-anthropocentric futures. The term *species* is a term that attends to the differences between life forms and through naming, classifying, isolating, and sorting, the separations between humans and nonhumans are exacerbated. For Donna Haraway, this reduces life forms 'to type, all Others to the rational man, and all essential to his bright constitution – is at the heart of racism and flourishes, lethally, in the entrails of humanism' (4 p.18). We are troubled by this human-centric onto-epistemology and to respond-with damaged human-nonhuman relations, we use the term, *multispecies*, to help recognise the entanglement of all life, since no species exists on its own. Even 'we' are multispecies, as our own human cells are outnumbered by the 10-100 trillion microbes that colonise our bodies (7). In our attempts to further reduce human-centeredness in our research and to stay with the trouble of anthropocentrism, we turn to Donna Haraway's notion of 'kin' (5) as an inclusive, generative practice that seeks to recognise the value and worth of all life forms, all matter. Kinships provoke us to break down damaging binaries such as nature/culture, man/woman, human/nonhuman, social/ecological that have thus far, galvanized separation and destruction in the Anthropocene. Responding to The Living Planet Report's (8) alarming statistic, that 69% of global wildlife populations have decreased, we seek an education that embraces notions of kinship, where we make kin with the Others in our world; those who are beyond our humankind. When we consider the kinships that emerge/are emerging within multispecies assemblages, we are faced with the urgent need to practice better care and become-response-able to multispecies flourishing in the Anthropocene.

BECOMING-WITH KAREN BARAD

As doctoral students we are interested in how Karen Barad's philosophy of 'agential realism' can help us to rethink and redo our research relations. Building on notions of kin and kinship, agential realism offers new ways to think with more-than-human relations, acknowledging that we are mutually entangled and always in the process of becoming-with. According to Karen Barad, 'individuals do not preexist their interactions' but 'emerge through their entangled intra-relating' (6 p.ix), interactions thus become 'intra-actions'. The edges and boundaries of what it means to be human become blurred, we are never the bounded individuals we might believe ourselves to be but are always in relation. This does not reduce our responsibility, but makes us 'response-able' to the other. Through this paradigm shift, 'ethics' becomes intertwined with knowing and being – an 'ethico-onto-epistemology' (6 p.185). What is needed, according to Barad, is a 'posthumanist ethics, an ethics of worlding' (6 p.392). This posthuman reconfiguration, has significant and transformative implications when we consider how we might enact this in our research practices and, as we explore in this paper, brings into question some of the anthropocentric processes and practices of the doctoral journey. What might this 'ethics of worlding' mean for our practices as doctoral students? How might we enact our institutional ethical requirements in ways that acknowledge our responsibilities to/for our more-than-human kin?

BECOMING-WITH DONNA HARAWAY

We use Donna Haraway's (4) concept of becoming-with to help us work alongside Karen Barad's theory of agential realism. This concept helps us acknowledge that we are always becoming through intra-

actions and are not singular but always more-than. When Haraway questions, “Whom and what do I touch when I touch my dog?” (4 p.4), she refers to the entanglement of life and place, the situated knowledges that are formed through our relationality and inter-dependence with everything around us, the living and non-living. Whilst stroking her dog, Haraway intra-acts with a multitude of relations, an assemblage of dog-agility-breeding-colonialism-love-struggle-humans and more. Humans and animals are always already entangled simply by being in the world together; they relate in indeterminate, inconclusive, non-linear processes, constantly influencing each other and ‘are everywhere full partners in worlding, in becoming with’ (4 p.301). This dynamic interplay (or, for Barad, intra-play) takes place in the contact zone ‘where the outcome, where who is in the world, is at stake’ (4 p.244). As such, humans are never just becoming alone; they are becoming with others in a practice of becoming worldly; a practice that invites us to ‘speculate, imagine, feel, build something better’ (4 p.92) to make us response-able for the co-shaping of our worlds. Human exceptionalism suppresses our potential to become-with others and therefore, to become worldly.

Through our research, we are becoming-with Haraway and Barad as we search for post-Anthropocene futures: we hope to illuminate the anthropocentrism that is present in our educational systems by exploring asymmetrical power relations between humans and nonhumans in schools. In doing so, we notice in our respective PhD journeys how academic research processes often do not honour the entanglements of life since there are no ways to formally acknowledge how we, as researchers, are becoming-with multispecies in our doctoral inquiries. To produce data that exclude multispecies means that we separate and privilege the human experience, a practice that is undoubtedly evidenced by the distressing statistics in Living Planet Report (8).

BECOMING-WITH RESEARCH ENCOUNTERS

BECOMING-WITH ANIMAL-CHILD ASSEMBLAGES

As a first year PhD student, my (Charlotte’s) doctoral journey places me in the literature review stage as I research possibilities for multispecies intra-action in various educational contexts. I am interested in exploring power dynamics in relational encounters between animals and children to consider how they become-with and become-response-able in our worlds at large. Here, I consider two stories: firstly, how one traditional university process does not acknowledge the ethical entanglements of a doctoral student; secondly, ‘multispecies moments’ that reveal how anthropocentric mattering is so deeply enmeshed in our educational approaches and school systems. ‘Multispecies moments’ (10) is a posthuman methodology I am coining to explore ways of producing data with animals and children and is inspired by Carol Taylor’s ‘material moments’ (9).

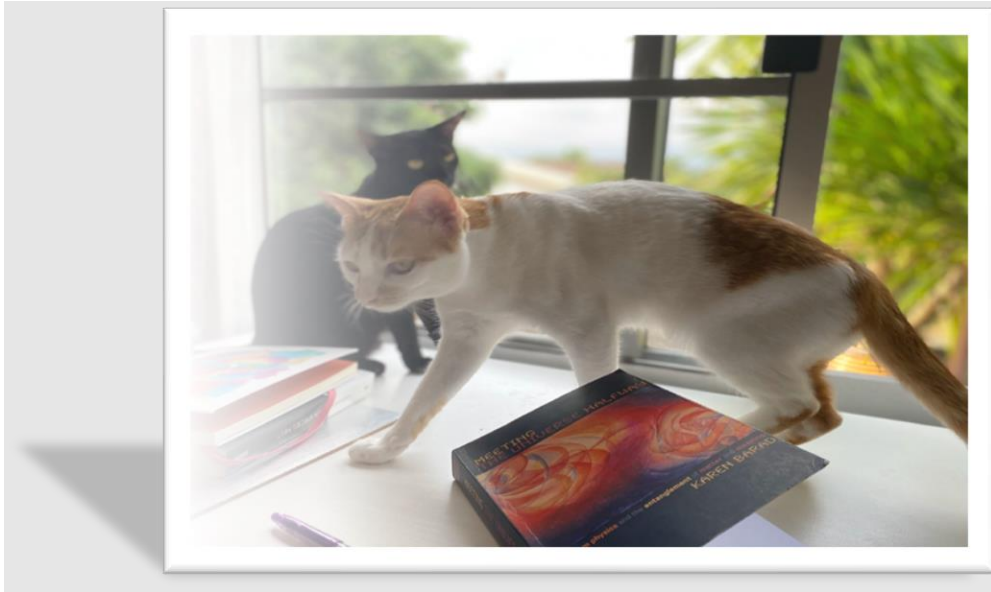


Figure 1: A cat-human-research assemblage

My favourite space to become-with my literature review is at a table in my kitchen looking out at Thailand's exotic trees, flowers, plants and mountains in the distance and beyond. A typical and mundane reading encounter could be described like this:

I hear the whirring of the fan trying to cool a warm room. Outside, birds are chirping and as I cast my eyes out of the window above the computer screen, I see a frangipani tree with bright pink flowering buds drooping elegantly over the grass below. Around me, my kittens cause havoc, darting across the room, chasing tails and tossing small toys around in their paws. The relations in this territory are temporary between table-chair-computer-birds-fan-heat-kittens-frangipani-cat toys-and me. They are enmeshed, dynamic, immanent, and emergent, circulating across and within one another. The literature review process emerges within human-nonhuman assemblages of affect; together, all 'entities' are entangled as co-producers of knowledge.

Whilst researching, my eyes are drawn to my cat's behaviours as they sense something in the room or outside. With intrigue, I notice their noses twitching, eyes squinting, ears rotating to sensory stimulus that I cannot detect. Their sensory responses consistently remind me that nonhumans process the world so differently to humans and I can only attempt to understand if I dedicate time, energy and effort to notice and follow their behavioural cues. I consider how much of what Karen Barad describes as the 'radical aliveness of life' is unnoticed, unappreciated and reduced by humans on a day-to-day basis because they do not sufficiently attend to nonhumans' needs, appreciations, interests. Exploring animal-child assemblages in schools means giving more time, energy and effort to attend to the multitude of relations in an educational encounter.

This 'literature review' process so often individualises the bounded researcher, situated outside or above the research as an almost all-knowing, worldly spectator who gathers pieces like a jigsaw, then identifies missing pieces as research 'gaps.' The researcher could be seen as capturing the voices of other similarly individualised and bounded humans and not necessarily as a process of becoming-with multispecies. Agential realism helps us to remember that since we are always intra-acting with the world around us, we are constantly in relation with multispecies, even when reading the words of other humans. This leads me to trouble-with how I attend to the contributions of multispecies when

they influence and shape my reading, thinking, and reviewing processes when consulting literature. Unknowingly, I might be amplifying and prioritising human-centric experiences and knowledge of our worlds, even at early stages of my PhD journey. Becoming-with Barad's 'ethico-onto-epistemology' helps me to consistently challenge how I am choosing what to include/exclude, why, and for whom. This process of becoming-worldly with multispecies reduces the force for anthropocentrism; I consider how this could be included in the research process for all doctoral inquires in attempts to more become-response-able in post-Anthropocene futures.

'Multispecies moments' (10) is a posthuman methodology that reminds us to recognise the human researcher in the research-production process and in doing so, attempts to decenter the human, opening new ways of observing and becoming-with others. As a methodology, this enables researchers to remain open to possibilities so that more unexpected moments might emerge from an encounter. In my research, I give attention to moments in and around school that involve animals and children as 'which are often mundane, every day and seemingly trivial' (11 p10). Traditionally, these moments might be considered trivial by some because they are not rooted in academic study, nor involving solely human subjects. Multispecies moments will attend to the tiny moments of encounters to explore potential for human exceptionalism. As exemplified in Figure 2, the following experiences might be explored: school displays that depict and celebrate animals; animal content in curricular textbooks; the depiction of animals in children's literature; the use of dead or live animals as educational resources. These encounters offer provocative questions about how power between animals and children might be generated through various intra-actions.

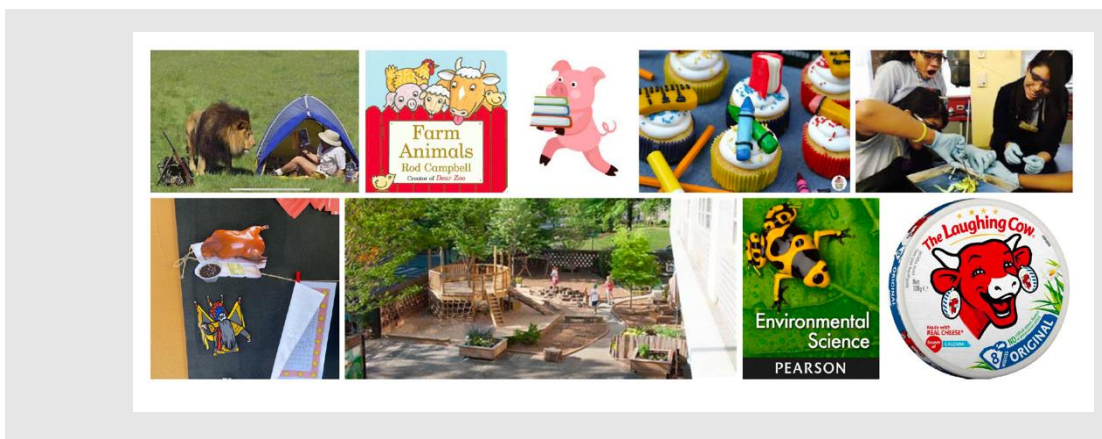


Figure 2: Multi-species moments in international schools

To momentarily hone in on the cow product, an item observed in a school cafeteria, we gain insight into the stories that children are told about human-nonhuman relations. The cow's unnatural, morphed appearance, with its red skin and toothy smile, results in a cartoon-styled image that purposes the cow as entertainment to attract young human consumers. The cow is feminised, humiliated and plasticised through its human facial features and jewellery, forcibly wearing its bodily extraction on its ears to seduce another species to consume the product. The cow's smiling countenance proposes a joyful and benevolent animal, willingly offering its body as commodity, an accomplice in full partnership with the dairy-production process. Most disturbingly, the cow still has its horns, obfuscating the violence that many dairy farmers carry out when they dehorn cows at a young age, for human safety and economic interests. This re-virginalises the cow, a reversal of the forced insemination that is carried out to ensure the cow unnaturally produces milk and blinds us to the un-cowly ways in which milk is farmed from her body. This image of the cow creates a

multispecies fantasy; a mythical cow-creature and a delusional human story of dairy processing, both generated as a result of human dominance.

In schools, reducing children's intra-actions with such examples of human dominance and cultivating mindsets that actively question and challenge untrue stories and unfair power relations in our worlds, might create better conditions for multispecies flourishing, together, in the post-Anthropocene. As such, multispecies moments enact a hope-ful move away from anthropocentrism and towards biocentrism, reconfiguring the child in a world that is more than a human experience.

BECOMING-WITH POSTHUMAN PLAY IN AN URBAN FOREST SCHOOL

My (Hannah's) doctoral inquiry explores the possibilities for/of play in an urban forest school during human/nonhuman encounters. Over the course of a school year, Hannah co-researched with young children from an inner-city primary school and nonhuman nature (including weather, plants, animals, fungi) in a local urban park. The research focused on play as it emerged from these 'assemblages' during forest school sessions run by a local outdoor education charity. The Deleuzo-Guattarian concept 'assemblage' (12) refers to the relations between entangled entities and the ways in which these entities intra-act. The data was generated through playing together, building on the practice of 'shared play' (13) where children and adult researcher play together as a form of knowledge creation. Stories of play were co-created by the children, nonhuman nature, practitioners and the researcher (Hannah) and have been named 'Play Tales' (14) because these stories work in-between the boundaries of real-fantasy, space-time, human-non-human. These 'play tales' hone in on intensities within these playful encounters and tell different stories from different perspectives and in multi-modal ways. In this paper, we share extracts from the play tale entitled 'Centipede and Wonderboy', a story co-created by a Centipede, a plastic pot and Wonderboy one summer morning during a 'bug hunt'. The tale was shared by the children via a collage (see Figure 3) for an end of year research exhibition and re-told again for this conference paper. This play tale illuminates some of the ethical tensions that emerge during these intra-actions, and the dynamic and messy relations that are part of the research apparatuses.

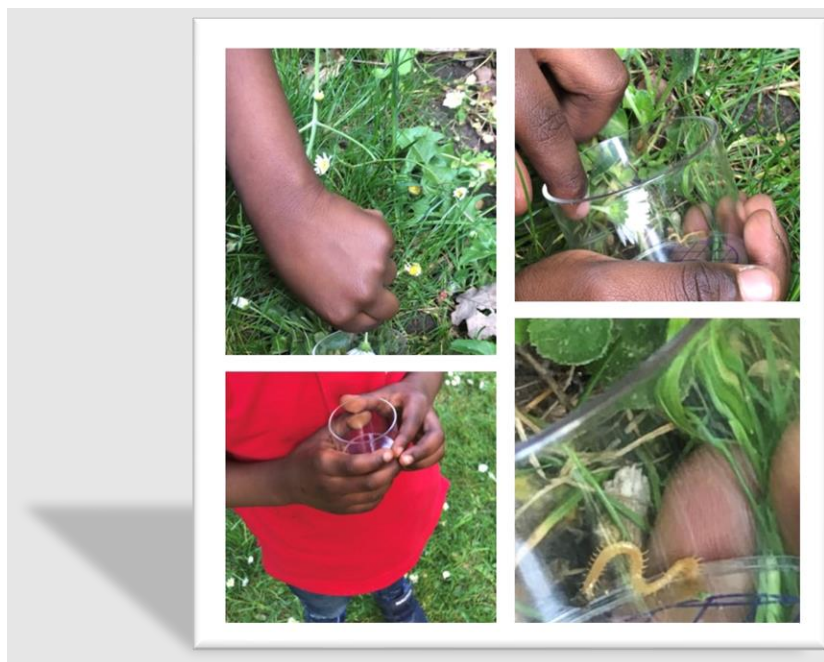


Figure 3: Centipede and Wonderboy Collage

Centipede is moving through the wavy grass. Sunlight flickers between each blade as Centipede's legs move one after another. Centipede's antennae feel the grass in front of them and their back legs do the same, checking that they are not being chased by a predator.

Centipede suddenly finds itself trapped in a pot with walls. They see the grass, the sun, the soil, but they cannot reach them. Their back legs become stuck in a corner of the pot. They try to move but the surface is too slippery. They find themselves suddenly spinning away from the ground, moving quickly towards the sky. Centipede feels dizzy. Centipede feels sick.

"'I'm stuck, I'm stuck" That's what he's saying!"

Wonderboy notices Centipedes stuck legs. He notices his writhing body. He gestures to Hannah that he needs to return him to his family in the grass. He opens the pot and places it on the floor, using a Daisy to gently free Centipede from the sticky edge. Centipede's legs carry him quickly into the blades of grass and he disappears into the hedge surrounding the park.

"He will come back tomorrow and say: 'Thanks for saving me! I'm back with my family now'" Wonderboy says.

Centipede wriggles into the grass weaving in through the blades. They explore what is in front of them with their antennae and then rushes forwards. His body behind him moves in waves so that he is a wiggle in the grass. He pauses, feels, rushes. Pauses, feels, rushes. Then they move so quickly, weaving between the grass, that they disappear beyond our humansight.

'Centipede and Wonderboy' has a happy ending. But there were other endings we explored. An ending where Centipede loses a leg as he is scraped from the pot. He tries to crawl through the grass, but he can tell that one is missing and it does not feel right. He wonders where his children are. He searches through the grass, but he can't find them. He walks through the grass alone.

We don't like this ending. We decide to go for the first one. But we know the second is plausible. More likely, perhaps. The possibilities that this 'play' - this intra-action between child, plastic pot, centipede, grass – gives force to are considerations of animal (specifically invertebrate) sentience, response-ability (6) and activism. As our 'play' turned towards a darker side, we were able to explore further possibilities. Thinking-with the Centipede, as Wonderboy does in this event, can illuminate the ways in which these violent, anthropocentric practices in education have desensitized us to the ethico-onto-epistemologies that are always in play. 'Everywhere, life is making itself known, heard, and understood in a wide variety of media and modalities; some of these registers are available to our human senses, while some are not' (15). Wonderboy and Centipede's kinship challenges the anthropocentric educational practice of bug hunting, bringing to the fore the notion of capturing invertebrates in plastic pots so that human children can look at them and learn about other species. Centipede's writhing in the pot communicated his discomfort. Recently scientists have argued against the rendering of invertebrates as insentient and therefore ineligible for moral consideration and yet this is not a common view. Wonderboy emerges with Centipede and assumes invertebrate sentience, and the need to be response-able, taking action for his nonhuman kin. The anthropocentric, anachronistic view that invertebrates are lower in the *scala naturae* 'continue to influence public policy and common morality' and yet there is now evidence that these views are unwarranted (16).

APPARATUSES OF ETHICAL PROCEDURES FOR DOCTORAL RESEARCH

Whilst in different stages of our research, we are moved by some of the formal processes in the PhD journey so far. At each stage, the PhD 'milestones' enact 'agential cuts' that come to matter. For one,

the ethical approval process considers obligations towards humans. The supplementary ethical approval form that considers nonhuman animals is only necessary if the research directly intervenes with animals. The ethics procedures become an apparatus in the research process, enacting 'what matters and what is excluded from mattering' (6 p.148). These 'apparatuses are boundary-making practices...where "phenomena" are the ontological inseparability of agentially interacting components' (6 p.148). The approval form becomes entangled in anthropocentrism, reinforcing the notion that nonhumans are an afterthought; a secondary consideration, beyond the wellbeing of human research participants. This raises questions about why other forms of life and natural material are not considered in research ethics, such as insects, vegetation, trees, geology and more. The speciesism is hard to ignore.

POSSIBILITIES FOR POSTHUMAN ETHICS FOR EDUCATIONAL RESEARCH IN THE ANTHROPOCENE

As we move through our respective PhD journeys and grapple with the institutionalised processes that reinforce anthropocentrism, our ethical entanglements shift to 'what next?'. We argue that what is needed is what Karen Barad describes as 'a posthumanist ethics: an ethics of worlding' (6 p.392). Here we offer possibilities for becoming-with ethics; our invitation to researchers to consider ways that reduce anthropocentrism in academic research for better futures and multispecies flourishing. We advocate for diffractive apparatuses (6) that would assist researchers in the exploration of a greater range of interdisciplinary concerns, reduce anthropocentrism and speciesism, and support, nurture and challenge a kinship between Others in doctoral inquiries. This would illuminate 'how different differences get made, what gets excluded, and how these exclusions matter' (6 p.30). The use of a diffractive methodology would create spaces for de-territorialisation (12) whereby the boundaries of the ethical approval process might become questioned more frequently, encouraging researchers to re-consider the relations they hold between objects and bodies to create new thinking, ideas, perspectives, processes. As we bring this paper to its close, we re-open our ethical entanglement quandaries by quietly sitting-with this provocative reprise from Bruno Latour (17):

'To limit the discussion to humans, their interests, their subjectivities, and their rights, will appear as strange a few years from now as having denied the right to vote to slaves, poor people or women.'

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