

12 Affective Attachments to Carbon within Youth Cultures

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Introduction

The chapter's premise, and primary argument, is that a feasible and just transition to a low-carbon society requires sensitivity to existing attachments to carbon within diversely situated cultures and communities (Hickey-Moody *et al.*, 2021). Built on and of the body of capital, carbon-based materials and surfaces now cover the planet. The athletic shoes that people run in, the motorbikes they ride, the cars they drive, the laptops and phones they carry, are all made from carbon fibre. The ways these surfaces wear on the earth are a material pedagogy that leaves its mark on the planet (Gabrys, 2011), resurfacing the Earth with residues of carbon which are produced by affective desires for lightness, speed, energy, intensity, status, and belonging (Northcott, 2016; Sheller, 2014). The forms that carbon takes within this resurfacing of the earth are extraordinarily diverse, as are the values which become attached to different forms and instantiations of carbon. For instance, unlike plastics, petroleum and coal (which are typically cast as 'bad' carbon), carbon fibre is often prized for generating lighter, faster, more capable and resilient lives and mobilities (Hickey-Moody, 2015, 2019; Sheller, 2020). The desire and value that adheres to particular forms and uses of carbon present a cultural-material expression of key contemporary issues which connect everyday life practices with questions of climate justice and the current transition to low-carbon economies.

Our work pivots on an understanding that existing gender systems and practices, everyday cultures and scientific knowledges rely on, and contribute to, particular experiences and understandings of carbon and energy cultures (Bell *et al.*, 2020). This chapter responds to the need for research which attends to the cultural-material dynamics of everyday carbon cultures, and specifically, how carbon-heavy lifestyles are bound up with processes of subjectification (identity formation) which are often incommensurable with Western environmentalist discourses. While activist groups such as SchoolStrike4Climate and Fridays4Futures have engaged millions of urban, largely white, middle-class young people in action for climate justice internationally, many young people remain deeply invested in carbon-heavy cultures that reflect a plurality of

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affective attachments and cultural values. Material inscriptions of social class, language, ethnicity, religion, gender and sexuality all feature in the diversity of youth carbon cultures, and inform young people's everyday attachments to carbon. In particular, young people's carbon-heavy mobility choices often involve distinctive aesthetic styles and sensibilities (Stefanoff & Frederick, 2011), and are bound up with varying affective investments in belonging, differentiation, self-expression, pleasure, vitality, hope, and overall, a shared sense of ongoingness and what it takes to get by (Berlant, 2011). In many cases, Western environmentalist discourses both threaten and exclude subjectivities which derive a strong sense of cultural meaning and value from carbon-heavy activities, including popular youth investments in custom car and dirt bike cultures both within and beyond the urban centres.

Methodologically, we draw on empirical material from our current pilot studies in the Carbon Cultures Living Lab we have co-developed at RMIT in which we investigate young people's affective attachments to carbon within dirt-biking, car-racing, and mining communities in rural Australia. Adopting a 'living lab' methodology which brings together approaches from cultural studies and creative ethnography (see Hjorth, Harris *et al.*, 2019), our method involves a practice of writing 'scenes' which stage encounters between different carbon cultures across scales of production-consumption and spheres of analysis. We see our 'carbon cultures living lab' as a mobile research event which is looking to understand established and emergent carbon cultures across diverse fields of encounter and engagement. Each scene in this chapter works to dramatise our encounters with carbon cultures in ways that value plural perspectives and attachments, weaving together interview and workshop data with analyses of cultural artefacts, artworks, memories, and immersive accounts of particular social contexts and environments.

Many of the young people and families we speak to in rural communities consider themselves demonised by urban environmentalist ideology, even though they are highly sensitive to changing weather patterns and the value of renewable energy technologies within their local environments. Our scenes draw on interview and photographic data generated in conversation with young people who have been immersed in carbon-heavy cultures from a young age, and derive a strong sense of identity and belonging through these cultural-material practices. By focusing on the investment of affect and desire within diversely situated youth carbon cultures, we hope to open critical discussions about climate change and the Anthropocene to a wider range of life experiences and situated positionalities.

What is a Carbon Culture?

A low-carbon economy will be difficult to achieve and maintain if communities remain substantively divided on the existence and impacts of climate change. This disagreement is exacerbated by a lack of mutual understanding, geographic, class and cultural politics. We are inventing the concept of carbon

cultures (Hickey-Moody *et al.*, 2021) through ethnography with diverse low socio-economic status (LSES) youth as an original way to understand and discuss the positive and negative attachments young people have to large-scale carbon emissions. This concept is designed to help young people and their wider communities think about carbon lifecycles, production and consumption, without focusing the conversation on the politically contested idea of climate change. Through ethnography, media analysis, participatory digital animations and co-design, we take an original approach to studies of energy transitions by understanding young people's attachment to carbon in areas which have historically relied on carbon-heavy industries. We adopt the concept of 'attachment' from affect theory to explain relationships that are constitutive of subjectivity and belonging; an attachment is 'part of who you are' (Hickey-Moody, 2013). We bring this multidisciplinary approach to the problem of reducing carbon emissions through rethinking relationships to carbon because the social, cultural and economic values embedded in young people's everyday attachments to carbon are complex. These attachments are geographically distinct while also reflecting differences in class, gender, race, sexuality, and educational attainment (Hickey-Moody *et al.*, 2021).

A just and inclusive transition to a low emissions economy requires multidisciplinary sensitivity to existing youth carbon cultures within diversely situated communities. A multidisciplinary approach to the study of carbon cultures is therefore central to our approach, and builds on Hickey-Moody's (2015) research into the gendered and classed economies of carbon production and consumption through extending the concept of economies of carbon into young people's daily lives. Collin's work has shown that young people's everyday and cultural practices shape their political concerns and identities (Collin, 2015). Extending this, our pilot research has further demonstrated that systems of cultural value are central to how carbon use becomes part of daily life for young people. Thus, in order to begin to change economies of carbon production and consumption we need to understand young people's investments in existing socio-cultural economies. These insights form the basis for our diverse approach to environmental education which acknowledges the multiple perspectives on carbon cultures within diverse communities. This approach avoids the binarisation of 'good' and 'bad' relationships with carbon that are embedded within existing curriculums and typically alienates those who do not position themselves within environmentalist discourses and identities.

Rethinking Environmental Education

The concept of a carbon culture (Hickey-Moody *et al.*, 2021) offers a way to move beyond the political polarisation of 'climate change debates' and associated practices of environmental education. The concept enables us to establish a platform for developing and working with inclusive understandings of young people's diverse attachments to carbon. Our focus on carbon cultures facilitates new ways of imagining and talking about the environment and climate

that do not marginalise young people whose families are employed in the fossil fuels industry or who enjoy carbon-heavy hobbies. Through developing shared understandings of carbon as a precious resource we encourage a broad cross-section of young people to think about the impacts of carbon emissions on the atmosphere.

In this respect, the concept of carbon cultures looks to provide an alternative to approaches to environmental politics, education, and communication which speaks largely to and for white, Western environmentalist discourses. It reflects growing concern that environmental education's historical focus on environmentalist identities is insufficient to prepare diverse young people for the unequally distributed impacts of climate change and the transition to low-carbon energy systems (Jorgenson, Stephens and White, 2019, p. 160). Existing environmental education and communication initiatives have largely overlooked migrant, rural and impoverished communities which do not identify with Western environmentalist discourses on climate change, and yet remain especially vulnerable to the effects of extreme weather, drought, and economic transitions away from fossil fuels (Sarrica *et al.*, 2018). Environmental education's continued focus on Western models of thought has the potential to exacerbate political tensions over climate change, effectively 'privatising' environmental action and neglecting intercultural conversations which could lead to more equitable outcomes for diverse stakeholders (Jorgenson, Stephens and White, 2019, p. 164). These tensions have been exacerbated by Australian media coverage of youth climate strikes, which variously reinforce popular images of primarily white, middle-class young people as being manipulated by adults (Collin and Matthews, 2021), or worse, as 'zealots', 'rebels', and even 'pawns' of radical environmentalist groups (Mayes and Hartup, 2021). Such representations forcibly exclude subjectivities and attachments which are not recognisable as 'environmentalist' from the field of environmental politics, effectively closing down pluralist conversations, understandings, and modes of participation in critical political arenas such as energy system transitions.

As such, knowledge is now needed to bring about more pluralistic approaches to environmental education and communication in order to build new forms of carbon literacy across the wider public sphere. This shift will need to incorporate the perspectives and knowledges of diverse LSES young people, and bring their perspectives into public debates in ways that support diverse LSES youth in participating in civic life and acting as empowered citizens and environmental custodians during a period of energy transition.

Carbon Cultures and the Capitalocene

As we introduced above, our project is invested in developing and experimenting with the concept of 'carbon cultures' as a pluralistic theoretical and analytic framework for understanding carbon as a primary element in what makes young people and communities *who they are*. We believe this work is critically important in informing more just and equitable transitions away from fossil

fuel dependency and ecocidal¹ capitalism by acknowledging and understanding the deep affective attachments to carbon within diversely situated lives and communities. Building on feminist new materialist scholars, Elizabeth Wilson (2015) and Samantha Frost (2016) who look to politically reclaim the biochemical relationality that undergirds social and ecological life, our research explores how carbon not only forms the elemental building blocks for physical embodiment but also infuses all forms of social imagining, fabulation, and dreaming. This perspective makes the possibility of a so-called 'post-carbon' future or imaginary untenable, offering instead different ways of thinking and relating with carbon which equally acknowledge its biochemical, speculative, and affective agency (Hickey-Moody *et al.*, 2021). We argue that it is precisely the affective imaginaries that spring from – and become attached to – carbon that have determined our varied pasts and presents, and will inevitably also determine the trajectories of our futures. Importantly, this means acknowledging capitalism as a system of collective fabulation rather than an outcome of biological, social, and technological evolution. In other words, recognising that capitalism is a fiction which both forms and is formed from carbon.

As Jason Moore (2015), Elizabeth Povinelli (2016), and Brian Massumi (2018) have variously argued, the Capitalocene names a time when capitalism has accelerated to earthly proportions, detaching itself from human labour to become a geo-ontological power operating at the scale of a 'world-ecology'. Carbon is the creative fuel and biochemical lifeblood that powers this systemic capture of Earthly life through (and as) the inhuman body of capital (Hickey-Moody *et al.*, 2021). While governments and industries scramble to tax, trade, capture, or otherwise reduce global carbon emissions in a race to slow the catastrophic advance of climate change, such schemes remain entrenched within capitalist fictions of use-value and calculability. At the same time, they ignore the affective force of capital itself as an 'onto-power' (Massumi, 2018) which algorithmically perverts and deploys carbon in ways that are increasingly dissociated from the whims of human decision-makers.

We read the Capitalocene as a system of fabulation which encodes particular (in)human values of carbon into the Earth's ecologies and lifeways, while exploring possibilities for post-capitalist carbon imaginaries and modes of existence. Not only do the values attached to these capitalist fictions ignore the significant amount of environmental value that is destroyed in the emission of carbon, they also reductively imagine carbon as an inert substance with no intensive, processual, or affective properties. Building on Massumi's (2018) revaluation of value for post-capitalist futures, we argue that creativity is crucial for re-imagining carbon beyond economic value and calculability to embrace its affective intensity or 'onto-power' as agentic matter. It is the affective allure and surplus value generated by carbon that must be reappropriated if we are to survive the Capitalocene (Rousell, 2020). This effectively means turning the creative powers of speculative fabulation (or what Deleuze called the 'powers of the false') *against* capitalism in order to revalue the value of carbon *from the inside* of living processes (Goodman and Manning, 2022).

Scenes from Carbon Cultures

In the text that follows we offer a series of vignettes that illustrate scenes from our carbon cultures living labs. These vignettes have been written to ‘bring to life’ experiences, people and places from our ethnography and co-design, offering an experiential lens that brings carbon cultures as embedded desires, attachments and passions to life. As carbon cultures are largely driven by the psychological experience of desire (desire to belong, pleasure, desire to make change, desire for lifestyle) we have chosen to explore them through an affective media (creative ethnography) in an effort to convey this desire. The voices employed to narrate these vignettes change depending on the perspective being offered, so tone and tense are considered part of the method here. The vignettes tell stories of life in a brown coal-mining area, of digital animation workshops we ran with children from the coal mining area that explored the theme of carbon cultures, and a live artwork that explores car cultures as forms of ‘geology in motion’.

Anna Gets to Know Hazelwood Pondage

My first tenured teaching position was in Australia at a regional university campus adjacent to a large power station. This position began my interest in what I now call ‘carbon cultures’ because it moved me into the middle of one of the largest brown coal-mining areas in Australia. The power industry had populated the area for generations. Migrants had moved from England and Wales to permanent jobs in the mines, and had built families there. Later in their lives, the mine paid for the oxygen needed by some of the older workers I got to know, who had left work due to lung health issues. Generations of families lived in the shadow of the mines, both virtually and literally. These families were bound to the working-class region by the only employment opportunities for miles, by poverty and by geography.

The large power station nearest to my home was cooled by a large dam called the Pondage. The Pondage had been built to serve a practical function (cooling) in the production of power generated by burning brown coal to make power, but it also sat at the centre of community life. The water was heated to 22 degrees by the power station, so it was warm fresh (if somewhat muddy) water to swim in, and play on, all year round. This warmth attracted locals and tourists to the surface and the shores of the water: floating on large blow-up toys, speeding in boats, on jet skis, drinking alcohol at the side of the Pondage. At various stages of the year the surface of the Pondage was televised: the regional speed boat racing championships were broadcast live by the local television station. I watched in surprise from my living room as men raced each other in their speedboats on the local oversized dam that emitted steam on cooler mornings. The human race is strange. Having discovered the Pondage through urban myth and television broadcast, I took myself down for a swim. The Pondage was a spectacle of performative masculinity upon

which men raced each other in a range of vehicles into which they jumped from swinging tyres, jetties, boats, and next to which they got drunk. I discovered the Pondage was home to a range of tropical fish: people released their tropical pet fish from aquariums into the heated climate of the Pondage and they thrived: continuing to live on, to breed and cross-breed in the temperate water. An entrepreneurial local released Barramundi into the Pondage, where they multiplied rapidly in the warm fresh water. They were enjoyed as a fishing sport and a local delicacy.

In 2017 Hazelwood Power Station began closing down. As a result, the Pondage no longer cooled the power production process and water temperatures dropped radically from 22 degrees to 11 degrees Celsius, even cooler in winter. The Barramundi, along with the other tropical fish, perished. As the smoke stopped rising from the concrete stacks of the power station, bodies of dead fish bobbed to the surface and washed up along the shoreline. What a starkly different scene from the wild motor sports, men racing each other, people getting drunk in blow-up, floating plastic rings. The social and biological life of Hazelwood Pondage had been profoundly shaped by the power station, the people who worked in it, their passions and pleasures. The fish they liked to keep as pets, along with the fish they loved to eat, had filled the waters. Their identity performances of hard, fast masculinity literally ‘racing each other off’ finished as the Pondage was closed. The stories we tell below come from surrounding areas.

Riding with Oscar

I love the smell, the sound, the feeling of the vibration that runs through my body. Moving at that speed. Feeling the wind in my face. The chase. The focus where everything comes into one point, and you have to stay on it or you will come off your bike. I like to win and to always push myself to do better.

We are sitting with 13-year-old Oscar in his family home in regional NSW. It is a very neat and well-kept grey weatherboard home with a large garage. Oscar’s Dad runs a successful Auto Repair business. Oscar and his mum look at the photographs of Oscar on bikes laid out on the table as he tells us about his love for dirt bike racing, how he first got into it, what exhilarates him about it. ‘I guess I just grew up around parents that were always on bikes’, he says. ‘I started racing since I was little and I just loved it from then on ... I do love the motorbike’s sound, like the actual sound of a motorbike. It’s just like a heart-warming thing ... I just love the sound of them’.

Oscar’s mother brings over a photograph from a prized place on the mantle (Figure 12.1). The photo shows Oscar riding a small motorbike over a turf jump, the wheels suspended about five centimetres above the ground. His head and body are completely covered by a reflective helmet and a black motorcycle jumpsuit, gloves, and boots. We ask about the gear, what it’s made of and how it feels to wear it from a very young age. ‘Yeah, now that I think



Figure 12.1 Oscar competing in the Amcross wearing a full suit composed of carbon fibre.

about it, everything I'm wearing in the photo is made of carbon fibre. And I've been wearing it since I was 3 or 4 years old. So I guess carbon is like a big part of who I am.'

'This was Oscar's first time competing in the 85 CC class at the Amcross' his mother tells us. We ask about Amcross and what it means to them. 'So instead of people putting jumps in place and stuff it's just natural terrain' Oscar says.

So like they put markers out on a grass, big grass paddock and you just follow those markers. It's just natural terrain ... It's just one of those things ... like when you're riding through a corner or a jump or something. The whole environment just goes past you and you're just thinking about what's going on *right now*, not the past or the future.

Oscar's story speaks to how children become intimately entangled with carbon cultures from a very young age. While the physical sciences tell us that our bodies are 18 per cent carbon and that we exhale carbon dioxide molecules with every breath, Oscar helps us understand how carbon is also a critical element in the production of subjectivity and the communities of belonging that sustain life.

Transitions to a low-carbon economy have particular implications for young people living in regional communities with a history of dependence on carbon-heavy industries like mining and agriculture. We are interested in how

children develop affective attachments to different forms of carbon, and how these attachments become part of who they are and how they relate to the world. Oscar has grown up wearing carbon fibre motorcycle gear from a very young age, and has formed complex systems of attachments between the feeling of lightness, speed, power, and protection that this carbon fibre affords. Oscar and his family are not just avid motorbike riders, they are competitively successful bike racers and this gives them a sense of belonging as a family within the wider community. It is part of their social and cultural identity. They are sensitive to the impacts of their love for motorbikes and value race-courses that have minimal impact on the terrain, flora, and fauna of their local environments. Oscar's mum makes the point that actually having more race-courses for bikes can help limit environmental damage. And yet both Oscar and his mum describe feeling excluded, even demonised, by environmentalist climate change discourses coming primarily from middle-class, urbanised cultures in densely populated areas with much higher detrimental impacts on lands, waters, and biodiversity. On a global scale, blockchain makes more carbon emissions than bike racing, even though there is a blockchain regenerative finance movement, designed to trade carbon, and much less visible 'green' bike racing movements. There are some environmental biker organisations, but they are not prolific. Perhaps bike racing is green enough already? Certainly, in comparison to blockchain, it is. Oscar's attachments to carbon are bound up with diverse investments in individual and group expression, identity-formation, belonging, pleasure, vitality, hope, imagining, and perhaps most significantly, what it simply takes to get by in the world in which his family lives: a world filled with cars, racing and social events at bike meets. Cars are the economic mode of survival for the family and bikes are the fun, fame and identity of the family unit.

Carbon Dreaming

In the Australian Broadcasting Corporation's recent documentary *Carbon: An unauthorised biography*, passionate scientists extoll carbon's extraordinary ability to compose life out of the ancient remnants of dead stars, while carbon 'herself' is anthropomorphised and voiced as a playful and promiscuous element who parties and bonds with just about anything it encounters (see Hickey-Moody, 2019). But about halfway through the film, carbon's party girl persona transitions into an agent of genocide.

'I was the enabler of life until you chose to make me a weapon of death' carbon's raspy voice mourns over images of industrialised military annihilation. 'I fuel your histories and your shames ... your horrors ... I also feed your dreams'.

A few weeks after *Carbon: An unauthorised biography* premiered on the ABC, we find ourselves driving from Melbourne to the town of Sale in East Gippsland to run a workshop on carbon cultures at the regional gallery. As we approach Sale the road passes into the La Trobe Valley, an area which contains



Figure 12.2 Encountering the Loy Yang power station in the La Trobe Valley.

one of the largest coal reserves in the world and supplies around 70 per cent of Victoria's power. The open cut mine yawns on the horizon like a black scar that runs for miles. The coal deposit here is estimated to be between 15 and 50 million years old, which is still relatively 'young' in geologic terms. The road drops steeply into the valley, curves, and then rises slightly to reveal the hulking mass of the Loy Yang Power station. It looks otherworldly, an image closer to science fiction than any logistical feat of engineering. This power station alone generates more than 14 million tons of greenhouse gases every year to provide power to homes and business across the State of Victoria. Just a few months ago, the power company announced that it would close the power station in the following year in an effort to pursue decarbonised energy strategies. If the Capitalocene fabulated this power station into existence according to the logic of a particular carbon dreaming, new fabulations are now rerouting those affective investments in order to secure a livable future.

The children attending our workshop in Sale all come from communities that have historically relied on carbon-heavy industries as the basis for economic security, recreational enjoyment, and social cohesion. The closure of another of the local power stations will put many of their families and community members out of work, and radically transform the affective and material infrastructures that shape and sustain their lives. For the workshop, we asked young people to bring along an object or image of something made from

carbon that really matters to them. The old family piano; a set of pokemon cards; the backyard trampoline; a karate outfit; a wooden desk; a very cute dog. One child shows us a photo of her wooden bed; it has her name carved into the wood and she says it's her favourite thing in the world. As the children begin to use digital drawing tools to animate the carbon stories of their favourite things, her iPad screen fills with drawings of elves with long, drooping ears. 'This is the carbon dreaming I see when I'm sleeping in my bed, she whispers to us.

Jordan and Bernard's Digital Carbon Assemblages

Figure 12.3 is a still from an animation made by Jordan, which shows the earth as a carbon molecule, alight and burning because of climate change. The centre of the carbon molecule also resembles a red and white Pokemon ball which is featured on a prized set of Pokemon cards which Jordan brought to the workshop. Orbiting the earth are children creating animations on iPads in colourful plastic cases. This is a creative interpretation of the situation that Jordan was in – a digital animation workshop in a regional gallery. Jordan's digital media assemblage brought together different forms of gendered and culturally specific knowledge that were effectively connected in how he understands carbon. While his imagery centres the cultural play practices associated with Pokemon card games, the main kind of knowledge that Jordan values in his narrative about carbon cultures is scientific knowledge.

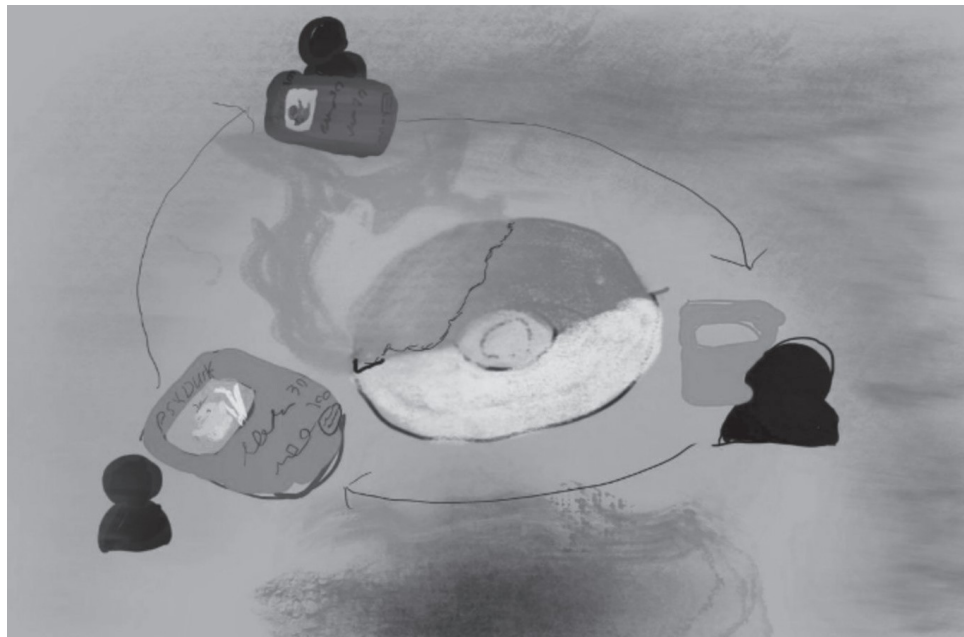


Figure 12.3 Jordan's digital rendering of the Pokemon carbon culture assemblage.

Jordan draws on as much science as he can in explaining what carbon is and how carbon pollution works. Science is a ‘legitimate’ knowledge of expertise, gendered masculine in many popular cultural formations and, broadly speaking, it is taken seriously. Scientific discourses are imbued with authority. They are also the main context in which carbon is discussed. Jordan was surely not alone in being asked for the first time to make artwork about carbon. Jordan’s Pokemon imagery and science-y narrative are accompanied by a ‘heavy metal’ soundtrack he made himself on the application ‘Garage Band’. This choice of sound media was important because it was performatively masculine: it situated Jordan as a young man and heralded the issue of climate change as both melancholy and overwhelming. Jordan’s narrative emphasises the role that multinational corporations play in creating climate change. Jordan was adamant that plastic production and waste were the result of multinational corporations and that this was a major driver in climate change.

Bernard made a much shorter animation about his ‘very messy’ desk that was made from trees. He drew the process of the trees being cut down and carbon (which he drew as grey and gaseous) being released from the tree. This wood, Bernard explains, is then used to make things like his desk. Bernard is about five years younger than Jordan, and this comes through in the difference in the depth of their voices, the focus of their work (global multinationals vs personal desks), the length of the animations (five mins versus less than one minute) and the background music. Bernard chose not to make background music. However, both animations show intersections of young masculinity with discourses of carbon and offer initial investigations into their own enmeshment in carbon cultures. These are two of many examples in which young participants examined their feelings, associations and knowledges about carbon through digital animation and created soundtracks that explained the story of their animation. Real and imaginary worlds, scientific and emotional worlds were combined through digital animation practices, descriptive voiceover and music.



Figure 12.4 A drawing of Bernard’s messy desk.

MASS: A Requiem for the Capitalocene

Over the past year we have extended our digital media Living Lab that produced the two animations discussed above, as well as many more, through collaborations with contemporary artists who engage with the affective dynamics of carbon in a variety of critical and regenerative ways. Staged at dusk, performance artist Zoe Scoglio's 2015 project MASS begins with the arrival of approximately one hundred people who park their cars in a circle and silently ascend the mountainous terrain of Calder Park raceway. Led by silent facilitators carrying LED light sticks and wearing wireless headphones, the humans form a solemn, ritualised procession simultaneously resembling a funeral train or spiritual pilgrimage. A series of cars then enter the arena. They are driven by professional car racers, their faces entirely obscured by reflective carbon fibre helmets. Each car articulates an elegant series of choreographic curves, stops, and starts, raising up clouds of black dust into the darkening sky. As night sets in, the humans return to the tight circle of cars before pulling off and driving away one by one. Scoglio describes MASS as 'a ceremonial gathering tracking the revolutionary potential of people, planets and automobiles ... A car gazing trip charting deep time, deep space and deep ecology under the full moon. An invitation to consider ourselves as geology in motion – from the metal in our cars to the minerals in our bodies and the iron at our earth's core'.

MASS mobilises the aesthetic allure of carbon-heavy car cultures, connecting the deep pleasures of muscle cars, V8 engines, and smoke-drenching burn-outs with much deeper flows and formations of carbon across geological and



Figure 12.5 Still video image from MASS by Zoe Scoglio.
(used with permission).

cosmological time-scales. It provides an intimate choreography of human cultures and technologies as elemental formations of the Earth in motion, inseparable from the planetary forces, multi-layered histories, and playful material agencies of carbon that give life to matter. And yet MASS can also be read as a ritualised funeral which marks the end of petro-capitalism as the dominant system and culture of the current planetary age.

MASS effectively dramatises the Capitalocene as an epoch powered by the geologic affects of carbon in motion, but in doing so, it exposes the Capitalocene as a fiction which masquerades as a naturalised and inevitable reality. In other words, it demonstrates how capitalism generates ecologies of fabulation that bind us to particular stories about who we are and what matters to us. In this sense, MASS offers a kind of requiem for the Capitalocene which acknowledges the vertiginous pleasures and dependencies that bind us to carbon, while gesturing toward counter-practices of fabulation that can and might arise from within the dominant powers of capitalist fictions.

Conclusion

We connect Braidotti's (2022) call for diverse posthuman knowledges and feminisms which 'speak' to both everyday and global concerns about carbon/energy futures (Gabrys, 2011). If our thoughts, and even our dreams, are made of carbon, then what really comes to matter is *how* we think, feel, live, and dream with carbon in ways that are life-affirming and pluralistic rather than ecocidal and exclusionary. Our Living Lab looks to collectively assemble stories and scenes of encounter which take the fabulatory capacities of carbon into account, while also acknowledging the quotidian (but no less constitutive) attachments to carbon which sustain everyday experiences, dependencies, and sites of belonging. In the various scenes and surfaces that we have explored in this chapter, we try to offer windows into various carbon assemblages: both how carbon is experienced and understood by humans but also the cultural-material formations that are brought to bear through carbon cultures. Bodies connected by carbon surfaces and carbon cultures have radically different understandings of how carbon works and why it matters, and the diversity of these perspectives needs to be more broadly understood. Digital media, ethnography and art practice all offer perspectives that are different from the mainstream discourses of carbon. If we are to change the way that carbon is made and distributed, perhaps we first need to change how we understand, what and how we think about carbon. Broadening the forms of knowledge to include experiential, creative and ethnographic narratives is a starting place for such a change.

Note

- 1 The term 'ecocidal' is derived from the word 'ecocide', which combines 'eco' (referring to ecology or the natural environment) and 'cide' (meaning to kill or destroy). 'Ecocidal' is an adjective used to describe actions, practices, or behaviors that cause severe harm or destruction to the natural environment, ecosystems, or the overall

ecological balance of a particular area or the planet as a whole. In essence, when something is labeled as ‘ecocidal’, it means that it is causing such extensive and irreversible damage to the environment that it is comparable to an act of ecological destruction or devastation. This term is often employed in discussions related to pollution, deforestation, habitat destruction, over-exploitation of resources.

References

- Bell, S. E., Daggett, C. and Labuski, C. (2020) ‘Toward feminist energy systems: Why adding women and solar panels is not enough’. *Energy research & social science*, 68, 101557.
- Berlant, L. (2011) *Cruel optimism*. Duke University Press.
- Braidotti, R. (2022) *Posthuman feminism*. Cambridge: Polity press.
- Collin, P. (2015) *Young citizens and political participation in a digital society: Addressing the democratic disconnect*. London: Palgrave Macmillan.
- Collin, P. and Matthews, I. (2021) ‘School Strike for Climate: Australian students renegotiating citizenship’. In J. Bessant, A. M. Mesinas and S. Pickard (Eds.) *When students protest. Secondary and high schools* (pp. 125–144). Lanham: Rowman and Littlefield.
- Frost, S. (2016) *Biocultural creatures: Toward a new theory of the human*. Durham: Duke University Press.
- Gabrys, J. (2011). *Digital rubbish: A natural history of electronics*. Michigan: University of Michigan Press.
- Gabrys, J., Hawkins, G. and Michael, M. (Eds.) (2013) *Accumulation: The material politics of plastic*. Abingdon: Routledge.
- Goodman, A. and Manning, E. (2022) ‘Social dreaming: Fabulating ecologies’. *Qualitative Inquiry*, 28(5), 578–585 doi:10778004211065799
- Hickey-Moody, A. (2013) ‘Affect as method: Feelings, aesthetics and affective pedagogy’. In R. Coleman and J. Ringrose (Eds.) *Deleuze and research methodologies* (pp. 79–95). Edinburgh: Edinburgh University Press.
- Hickey-Moody, A. (2015) ‘Carbon fibre masculinity: Disability and surfaces of homosociality’. *Angelaki*, 20(1), pp. 139–153.
- Hickey-Moody, A. (2019). *Deleuze and masculinity* Basingsoke: Palgrave Macmillan.
- Hickey-Moody, A., Cutter-Mackenzie-Knowles, A., Rousell, D. and Hartley, S. (2021) ‘Children’s carbon cultures’. *Cultural Studies ↔ Critical Methodologies*, 21(3), pp. 214–224.
- Hjorth, L. Harris, A. Jungickel, K and Coombs, G. (2019) *Creative practice ethnographies*. London: Rowman and Littlefield.
- Jorgenson, S. N., Stephens, J. C. and White, B. (2019) ‘Environmental education in transition: A critical review of recent research on climate change and energy education’. *The Journal of Environmental Education*, 50(3), pp. 160–171.
- Massumi, B. (2018) *99 theses on the revaluation of value: A postcapitalist manifesto*. Minneapolis: University of Minnesota Press.
- Mayes, E. and Hartup, M. E. (2021) ‘News coverage of the School Strike for Climate movement in Australia: The politics of representing young strikers’ emotions’. *Journal of Youth Studies*, 25(7), pp. 994–1016.
- Moore, J. W. (2015) ‘Putting nature to work. Anthropocene, capitalocene, and the challenge of world-ecology’. In C. Wee, J. Schönenbach and O. Arndt (Eds.) *Supramarkt: A micro-toolkit for disobedient consumers, or how to frack the fatal forces of the capitalocene* (pp. 69–117). Gothenburg: Irene Books.

- Northcott, M. (2016) 'The desire for speed and the rhythm of the Earth'. In S. Bergmann and T. Sager (Eds.) *The ethics of mobilities*. Abingdon: Routledge.
- Povinelli, E. (2016) *Geontologies: A requiem to late liberalism*. Durham, NC: Duke University Press.
- Rousell, D. (2020) 'Doing little justices: Speculative propositions for an immanent environmental ethics.' *Environmental Education Research*, 26(9–10), pp. 1391–1405.
- Sarrica, M., Richter, M., Thomas, S., Graham, I. and Mazzara, B. M. (2018) 'Social approaches to energy transition cases in rural Italy, Indonesia and Australia: Iterative methodologies and participatory epistemologies.' *Energy Research & Social Science*, 45(1), pp. 287–296.
- Sheller, M. (2014) *Aluminum dreams: The making of light modernity*. Cambridge, MA: MIT Press.
- Sheller, M. (2020) 'Mobility justice in urban studies.' In O. Jensen, C. Lassen, V. Kaufmann, M. Freudendal-Pedersen and I. Gotzsche Lange (Eds.). *Handbook of urban mobilities*. Abingdon: Routledge.
- Stefanoff, L. and Frederick, U. (2011) 'Emerging perspectives on automobilities in non-urban Australia: A context for cruising country.' *Humanities Research*, 17(2), pp. 1–16.
- Wilson, E. A. (2015). *Gut feminism*. Durham: Duke University Press.