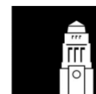

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Reproductive Loss in the Anthropocene: Paul McAuley's *Austral*
Anna McFarlane

Introduction. The figure of the child is evocative of different temporalities. The child gestures towards the past; the baby is a reminder of humanity-as-specie; pre-civilisation, pre-industrialization, a representative of evolutionary time. The human baby is birthed early in comparison with other mammals; otherwise, the mother would be more than likely to die, crushed from the inside by the large skull necessary for the complex brain humans have evolved. The implicit violence of "nature" and evolution, combined with the developing reactions of the baby to the outside world, and the mammalian dyad of breastfeeding all contribute to a sense of the child (particularly the baby) as a reminder of the porous boundary in human/animal relations. At the same time, the child is evocative of the future. The baby takes the baton from its parents and will (in an ideal world) move into a future from which the parents are excluded by virtue of their age and mortality. The child reminds us of generational time and the species-time that might stretch into a future.

The concept of the Anthropocene era, that period of geological time said to be defined by the significance of human impact on the environment, is an attempt to situate humans in deep, ecological time.[1] This is a far more serious intervention than any mentioned so far, deeper than the brief time of the human species which is measured only in hundreds of millennia. At the same time, this intervention into deep time is accompanied by the sense that time is running out. The climate crisis is measured in carbon goals that stretch over the next 50-100 years, while the most serious warnings from the Intergovernmental Panel on Climate Change (IPCC) tell us that time is far shorter than these goals recognize and that immediate action must be taken within one or two years. Or perhaps time has already run out, and we have simply yet to realise it. If the child is evocative of the time of the species, both past and future, then the Anthropocene's warping of temporality must have an impact on the figure of the child and its representations in contemporary culture.

In recent years the figure of the pregnant body and of various kinds of traumatic pregnancies and reproductive losses have appeared and reappeared in literature concerned with the Anthropocene. Barbara Kingsolver's *Flight Behaviour* (2012), credited as one of the first literary novels to deal directly with the climate crisis, includes the miscarriage of its heroine as a means to show the intervention of nature, red in tooth and claw, into human plans and lives. Edan Lepucki's *California* (2014) shows pregnancy as a vulnerable state in a post-apocalyptic America, one that may be exploited as a means to control parents with the promise of a safe haven in which to raise their young. *Gold, Fame, Citrus* (2015) shows the draw of parenthood as a mode of finding meaning in a post-apocalyptic landscape Meanwhile, novels such as Margaret Atwood's *The Handmaid's Tale* (1985), its recent televisual adaptation (Hulu, 2017-), and novels such as PD James's *Children of Men* (1992) or, more recently, Louise Erdrich's *The Future Home of the Living God* (2017), Meg Ellison's *The Book of the Unnamed Midwife* (2014), Megan Hunter's *The End We Start From* (2017), and Naomi Booth's *Sealed* (2017) explore the ways in which environmentally influenced infertility and mutation reveal the life-threatening danger that always lurks in the act of reproduction. In this corpus of texts that bring together feminist reproductive politics with ecological catastrophe the child becomes a figure of both hope and anxiety while the maternal body is the site of confinement and danger. Such texts use the figure of the child to think about the threatening nature of the future in the face of the climate crisis; but equally important is their attempt to center the violence of pregnancy, reproductive loss, and birth as a bodily experience. The science-fictional or dystopian settings allow for the expression of a violence and a danger that is very real today for everyone facing the prospect of pregnancy and birth (particularly for Black women and other marginalized groups).

Paul McAuley's novel *Austral* (2017) is an important contribution to this tradition, which centers the experience of pregnancy and reproductive loss as a means of facing the uncertain future of the earth. The novel shows how pregnancy and reproduction are phenomena inseparable from the social and political milieu that constitute them. *Austral* is set on the continent of Antarctica in a future beset by global warming. Antarctica's peninsula, on the northeast of the continent, has been somewhat cultivated and settled but remains something of a frontier land, with some regions still inclement for human habitation. Much of the cultivation has been carried out by "ecopoets," workers who were originally free to cultivate the land, both through introducing non-native species and by gene-editing existing species to make them more suited to the landscape. Following Antarctica's unilateral declaration of independence, the ecopoets have been outlawed as increasingly conservative governments seize control of the land, though some "free ecopoets" are still to be found in the backlands, working on their projects and living with the land away from government oversight. Despite the significant planetary changes wrought by global warming, the business-oriented politicians of Antarctica (particularly in the right-wing New Unity Party) aim to exploit the land for its minerals and resources, even though the threat of further climate change is clear. The narrative centers around the title character, Austral, a gene-edited "husky," genetically designed to survive in the harsh conditions of the Antarctic. Austral is a prison guard carrying on an affair with one of the inmates, Keever Bishop, a powerful crime boss. When Keever plans an escape from the prison, Austral finds herself charged with creating a distraction by appealing to the visiting governor Alberto Toomy, her estranged uncle. Rather than go along with Keever's plan, which would have seen her arrested, she kidnaps her cousin Kamilah and the two make a long journey through the Antarctic wilderness as Austral tells her side of the family history to her cousin and tries to hide the fact that she is carrying Keever's child.

The narrative of the novel, we discover, is addressed to Austral's unborn child, the product of her liaison with Keever. In aid of this approach, Austral's first person narrative often switches to second person and foregrounds the nature of the text as a narrative being passed from mother to child. For example, Austral says, "So this is my own account of what happened and why, as true as I can tell it. It's your story, too. The story of how you came to be. How I tried to save you" (1-2). This tactic settles the reader into a false sense of security; it could be presumed, from this second person narration, that Austral is telling her story some years after the events depicted, in safety, and with her child at her side. The final pages turn the meaning of the text on its head, however, when it turns out that Austral lost her pregnancy at around the twelve-week mark—before she had started to show, but after suffering from such severe morning sickness that Kamilah recognizes her situation. This unexpected move changes the nature of the narrative retrospectively, in its final pages, as the reader realizes that Austral is not addressing her living child, but is addressing the memory of the child that she had imagined and fought for. In depicting Austral's narrative in this way, McAuley goes some way to recording and respecting the importance that a lost pregnancy can have in a life. Austral's description of the process of miscarriage is understated and clinical:

> I lost you when you were barely three months old. A miscarriage while I was recovering from my injuries in prison hospital. A routine check-up showed that there was no fetal heartbeat. Two days later a small operation removed you from my body. (271)

The language highlights how minor the miscarriage might appear to the outside world, and uses the terms of the medical discourses that discover the miscarriage and inform Austral that the pregnancy has ended. The clipped sentences give the bare facts, showing how the

miscarriage made itself known and the fetus was quickly gone: use of adjectives such as "barely," "routine," and "small" emphasize this point. The doctors reinforce this perspective when Austral asks them how the miscarriage took place, particularly wondering whether it could have been caused by an aggressive punch that Keever made to her belly: "Miscarriages are still quite common is all they said. And, don't think of it as losing a child, it was just an embryo that failed to progress" (271).

Austral immediately follows up the doctor's point of view with her own: "But I know that you were female, that you would have been a girl child. A daughter" (271). The gendering of the fetus is significant here; as in contemporary pregnancies, where ultrasound scanning often allows the sexing of the fetus before birth, the sex of the child is one of the only pieces of information Austral has to guide her understanding of who this child might have been. The fact that the fetus was female evokes Austral's role as daughter to her own mother, giving her a frame of reference for the love she feels for her child. In focusing on the sex, Austral interprets the information in her own way and elevates her own knowledge and understanding of the child above the doctor's advice of training herself to think in a medicalized fashion, prescribed to lessen the impact of the event. The platitudes about the common nature of miscarriage are irrelevant to Austral, for whom her child was a specific individual rather than a common statistic. Instead, Austral contrasts the insignificant nature of the miscarriage to the outside world—a pregnancy that was only known to a handful of people—with the fact that the entire novel is shaped around the identity that Austral invested in this pregnancy; its magnitude in her life cannot be underestimated and the constitution of the child through Austral's own experiences (both the phenomenological experience of the pregnancy itself and her narrative constitution of her child) means that this child is just as real as one carried to term and living with her mother. Austral's life is shaped by the grief of this loss, and this affect is reflected in the landscape of Antarctica itself, shaped by the loss of the pre-climate-change planet.

The entanglement of pregnancy and childbirth in sf with depictions of climate change and catastrophe has most recently, and most extensively, been analysed in Rebekah Sheldon's *The Child to Come* (2016) in which she looks at numerous examples of the figure of the child in both political discourse and in sf narratives, particularly examples from film and television such as Alfonso Cuarón's movie adaptation of PD James' *Children of Men* (2006) and the rebooted version of *Battlestar Galactica* (2004-2009).[2] Sheldon, in many ways, carries on the project begun by Lee Edelman's *No Future* (2004), a work that introduced readers to the term "reproductive futurism." Edelman argues that reproductive futurism, the privileging of an imagined future that seeks to maintain and reproduce the status quo, through the idealization of the child and the heteronormativity it represents, is intrinsic to the political and ideological landscapes in which we live and constitutes the ground for all political decisions and thinkable ideological positions. In taking his critique forward and applying it to sf texts, Sheldon argues that reproductive futurism limits social and cultural responses to climate change by enclosing possible futures, thereby forcing discourse around climate change to imply that the future can be stable and knowable and that action must be taken in order to reproduce the planet as it is for coming generations, a response that delimits the imaginative potential of action to be taken and reduces the possibility of radical, restorative action. Sheldon's and Edelman's books both focus on the figure of the child, rather than actually existing children, and this allows them to consider the role of futurism in cultural and political discourses.

Sheldon deviates from Edelman's polemic in that Edelman focuses on the role of the child in the symbolic order, whereas Sheldon's book "centers on the ways in which the child's figuration of interlocking biological processes stands in the place of the complex systems at work in ecological materiality" (5). Rather than see the child as a purely symbolic

figure, Sheldon sees it as a figure that allows us to think through relationships between that symbolic order and the vibrant animacy of the nonhuman found in the various feminist new materialisms that took inspiration from Donna Haraway's "Manifesto for Cyborgs" (1985) and were influentially taken up by texts like Karen Barad's *Meeting the Universe Halfway* (2007). The child, in its symbolic figuration, represents the continuing self-similarity of reproduction, the concept of progress, associated so closely with the continuing role of the active human taking advantage of the passive environment of the earth. Sheldon points out, however, that this symbolic role exists in tension or torsion with the ways in which the child can remind us of the possibility of mutation and the animacy of matter that is not-quite-human: "this grafting of the culture of life over the *culturing* of life generates a queer child-figure whose humanity is always suspiciously intimate with other-than-human forms-of-life" (6). Finding queer potential in the figure of the child allows for a way out of the heteronormative reproduction of the status quo that has been intertwined with reproductive futurism, and thereby opens options for conceptions of the future that enable more radical responses to climate crisis. A focus on traumatic reproduction brings this materialist aspect of the child figure to the fore and, in *Austral*, specifically foregrounds that materialism through the figure of the miscarried fetus, which resonates with and enriches the materialism of the evolving Antarctic landscape and has implications for the human response to that anthropogenically altered environment. The figure of the child represents the future and calls to the reader to act, in the present, on the child's behalf—as Sheldon puts it, "he makes sensible the proleptic temporalities that then justify the preemptive management of the future" (6).

I contend that miscarriage unties the knot of this temporality in a way that can be traumatic for the individual (who is suddenly thrown from a timeline they had come to expect and inhabit) and is thus useful to us in thinking about the trauma of climate change and ecological loss. Greta Thunberg has, to a great extent, become *the* figure of the child in the climate crisis. In her speech to the UN in 2019 the most powerful statement may have been, "you all come to us young people for hope. How dare you!" Thunberg speaks to all adults (though particularly addressing those in power) and speaks on behalf of all children. The miscarried fetus gives its would-be mother the same rebuke—the fetus is both pure matter and pure hope, and its unviability taunts the would-be mother with the fickle animacy of matter and the powerlessness of her own hope.[3] The trauma is compounded by the possibility of facing a future that cannot be related to as such. The future no longer symbolizes progress, growth, and change but, at best, more of the same, a futile treading of water or waiting for death. The queer temporality of miscarriage demands new strategies for relating to the rest of the world and has echoes in the demands of the climate crisis for the same thing, while the pain of recurrent miscarriage and infertility (whether due to social circumstances or biological reasons) are already modes of being that demand new ways of relating to the future—beyond hope, reproduction, and beyond the figure of the child.

Austral's miscarriage situates her in a queer time, but also in the time of the Anthropocene. In asking how the *time* of queer performativity might be characterized, Elizabeth Freeman argues that Judith Butler's assumptions about time in *Gender Trouble* (1990) might construct time as generally progressive, since development and change in Butler's model are citational. Freeman further temporalizes this temporality, seeing it as reflective of the contemporary political context:

> Just as late-nineteenth-century European and American sexologists proliferated and reified models of sexual nonnormativity in ways that followed the emergent logic of the commodity fetish, so does early Butler privilege futures in ways that are

> symptomatic of late finance capitalism before the crashes of the early twenty-first century. (63)

The miscarriage aligns here with the crash, but one more significant than the regular crashes of the boom-and-bust capitalist system—the existential crash of the Anthropocene and the end of civilization as we know it. The progressive time of pregnancy—the growing bump, followed by the birth, followed by the baby's growing weight plotted on a graph—is arrested abruptly and sometimes violently. Freeman describes the time of queer performativity as a kind of "drag," both in the sense of the art form and with the pejorative connotation that lesbian feminism can be seen as acting as a "drag" on queer studies. The past is dragged into the present to haunt the "now" (Freeman 62). Heather Latimer considers these issues in light of the pregnancy depicted in Denis Villeneuve's *Arrival* (2016), arguing that the film's

> political potential is … found in its speculative potential, as it represents pregnancy in a way that reimagines not only the relationship between biology and kinship, but also the relationship between reproduction and time. In doing so, it exposes the temporal foundations of our own reproductive politics in a way that opens up other models for imaging the reproducibility of future. (439)

For Latimer, conceiving of pregnancy in this framework recognizes the potential of reproduction to be employed in different political contexts and overcomes the issues with work like Edelman's that situates those with the potential to become pregnant as inherently associated with heteronormativity.

Reproductive Loss. To capture a group of valencies intrinsic to different experiences I use the term "reproductive loss", which I take from the collection *Understanding Reproductive Loss* (Earle, Komaromy and Layne 2012). I find this term useful in that it includes a number of associated conditions and experiences: those who have suffered miscarriage, stillbirth, or traumatic abortion, but also those who have struggled with infertility, or from the medicalization of pregnancies resulting in trauma. As its editors argue, the term "reproductive loss" seeks "to address all experiences of non-normative reproduction to include the curtailment of reproductive futures and desires, whether by individual action or social structures" (Earle et al. 1-2), and such an approach allows for the fact that such women may never be pregnant but can still suffer from the loss of an imagined future that they had pictured with their child or children. The resonances with climate change are clear, in that one of the tragedies of climate change is the loss of a future. No more the exciting colonization of space or cyberspace envisaged by Golden Age or cyberpunk sf, but perhaps just a whimper: as cyberpunk author and commentator Bruce Sterling has observed on Twitter, "The '22nd Century.' Google it, go ahead. Scarcely a soul alive has a word to offer about it, and it's a mere 8 decades away." In considering reproductive loss, the figure of the child is available *only* as a figure, just as in considering climate change the future is available as a wistful dream destined never to be fulfilled. Another result of focusing on reproductive loss is that the situation and perceptions of the mother become particularly important. Whereas Edelman and Sheldon focus on the figure of the child and what it stands for to society as a whole, as found in the political and cultural texts of that society, considering texts through reproductive loss means that there is no (or very limited) perception of that child by wider society and the appearance of the figure of the (reproductively) lost child in political and social texts becomes almost taboo and certainly more personal. This taboo and "personal" framing of the child figure make it no less political. Indeed, this child figure is the more relevant in an era of climate change when (reproductive) futures may be lost *en masse*.

In focusing on reproductive loss, its discursive production through maternal experience, and its association with climate change, I find it useful to draw on Karen Barad's *Meeting the Universe Halfway*. *Austral* can be seen as an investigation of some of the problems posed by Barad as she develops the philosophical position she describes as "agential realism." Through agential realism, Barad recognizes the constitutive effects of the material and the discursive as processes that cannot be considered separately and describes their entanglement as a kind of "posthumanist account of performativity" (183). Barad uses this terminology to signify her intention to treat material and discursive processes as actions, "not a static relationality but a doing—the enactment of boundaries—that always entails constitutive exclusions and therefore requisite questions of accountability" (135). Using arguments from Bohr's theory of quantum physics, Barad argues that instead of binarily distinct concepts such as subject/object and nature/culture we should instead consider phenomena as the proper appearance of discursive materialities. The use of phenomena as a conceptual tool means that the "cut" that takes place in order to isolate a phenomenon for consideration is recognized as constitutive of the phenomenon itself, a process that Barad compares to the use of different scientific apparatuses in experiments that posed problems for quantum physicists, such as the dual qualities of light, which can appear as a wave or as a particle depending on the apparatus used. Barad argues that the boundaries we draw (or "cut") around a phenomenon in order to view it constitute how we understand that phenomenon and thereby define its ontological possibilities.

Barad's work speaks to the formation of the fetus, and the formation of Austral's child throughout the novel, allowing for a means to think about the fetus in multiple discursive traditions while recognizing its integration with the body of its mother, its lack of identity as a material being that did not survive past the embryonic stage, and its role as the instigator of the narrative we have in front of us. The benefits of this approach are twofold. First, considering the fetus in this way allows the reader to recognize the loss that Austral suffers upon losing her child but without falling into identifying the fetus as a person who has died, a position that would reinforce the idea of the fetus as an individual, and one that is preferred by fundamentalist anti-abortionists. This has been a significant problem in feminist scholarship as the dismissal of fetal personhood in pro-choice discourse must be squared with respect for the reproductive losses suffered by grieving women. These potentially conflicting views tend to be brought into alignment by invoking social construction. Feminist philosopher Amy Mullin sums up this position as follows:

> fetal personhood is constructed socially, and therefore, some fetuses and some embryos (those desired by pregnant women and regarded as their children) are persons. By contrast, other fetuses are not persons on this view because not constructed as such by a pregnant woman. Clearly this approach suggests that respect for a pregnant woman's autonomy should extend not only to her control over her own body but also to others' attitudes toward whether or not the loss of a pregnancy is a loss of a person. (29-30)

Mullin disagrees with this position, pointing out that it is in conflict with other situations in which one person might consider a being to be morally significant whereas others do not: we do not make judgments by adopting another person's evaluation of moral consideration. Rather than aligning the view of the fetus with that of the mother's wholesale, Mullin recommends that the woman's autonomy should be respected regardless of the fetus's personhood or lack thereof in the estimation of others, thus solving the issue of a woman's right to choose without reference to the status of the fetus. Within Barad's framework, the fetus can be recognized as a material discursive phenomenon through the "cut" used to define

it for examination, allowing it to be recognized as more than mere biological matter that the woman can do with as she will. For women suffering pregnancy loss, the fetus may represent a future child and, as such, it is deeply interwoven with the woman's sense of herself and her future. The fetus, and its inseparability from a maternal environment that may be seen as having failed to support it, means that "a woman's right to choose" does not apply in this situation and the agency of matter is instead brought to the fore. Considering the fetus as a phenomenon, in Barad's conceptualization, allows for these discursive properties to be recognized and explored as agential in creating the fetus, along with its materiality, and in navigating the grief of its death.

The Antarctic Interdependence of Nature/Culture. *Austral*'s eponymous main protagonist was subjected to gene editing by her ecopoet parents so that she could survive the harsh landscape of the Antarctic more easily. Austral introduces herself on the first page of the novel describing her birth as "a political act": "Conceived in a laboratory dish by direct injection of a sperm into an egg, I was customised by a suite of targeted genes, grown inside a smart little chamber to a ball of about a hundred cells, and on the fifth day transferred to my mother's uterus" (1). From the beginning of her tale, Austral describes herself in terms of her unusual provenance, and in terms that combine different discourses. There is the scientific explanation of how she came to be, signified by the laboratory and the step-by-step explanation: however, the description does not go into detail about the process of gene editing, explaining the situation with the vague terms "customised by a suite of targeted genes," and the role of her mother and her mother's uterus continue to be visible. In this description, Austral shows herself to be a creation of culture and of nature, of the clinical environment of the gene-editing lab and the organic environment of her mother's uterus. Austral also clearly situates her birth and her identity in the political milieu from which she comes, both from the strong first line "My birth was a political act" and through showing that she understands who she is through listening to her mother and to the other free ecopoets, an ecological and political class. She strongly lays claim to her provenance in this "political act" as an important factor in defining who she is when she says, "first and foremost I'm a husky. An edited person. Something more than human, according to Mama and the other free ecopoets" (1). In these opening pages, Austral gives an account of what it might mean to be a posthuman being, identifying herself as a move beyond the nature/culture binary and laying claim to that identity. She also understands that her identity, is deeply co-existent with Antarctica as a developing continent, as represented by the role of the ecopoets in the novel. The facts of and reasons for her birth and development closely associate Austral as posthuman being with the continent of Antarctica as a product of the Anthropocene. Like Austral herself, Antarctica cannot separate its natural qualities from those that exist as evidence of human intervention.

Austral's posthumanism sits uncomfortably with her gendering as a woman through her pregnancy. At the outset of the novel her history as a husky denies her the full rights of a citizen, a human being and, by extension, a woman. Rather than personhood or womanhood, she is defined in terms of what Sheldon refers to as "somatic capitalism" (118). Her body is a series of capabilities that allow her to fulfil her economic function as a jailer and to survive the inhospitable conditions of the Antarctic. Her strong, rough, masculine body designed for working rather than the genteel performance of femininity combined with her exclusion from citizenship is reminiscent of Sojourner Truth's 1851 speech "Ain't I a Woman?" and the exclusion that racialized and/or enslaved people have faced from the category of "woman." When Keever begins his seduction, it is his treatment of her as a woman, coupled with the promise he represents of allowing her the full rights of a citizen to leave Antarctica, that draw Austral to him. This seduction leads to her impregnation and the concomitant womanhood

associated with pregnancy, only for her to be thrust back into a queer space by miscarriage. Sexual difference is rarely foregrounded in discussions of the Anthropocene, a situation in which humanity is discussed in an undifferentiated way; however, this overlooks the difference in kind of the level of impact some individuals have had over others. For example, consider the contrast between public efforts to stop using plastic straws as compared to results of a 2017 report which found that 100 corporations produced 71% of carbon emissions (Carbon Majors Report): it is worth differentiating the concept of "the human" in the context of the Anthropocene. Claire Colebrook argues that gendered sexual difference is implicated in many of the systems that produced the Anthropocene (the nuclear family, industrialization, the liberation of women to take part in the public sphere), and so feminism has to reckon with the implications of these entanglements (2017). Over the course of the novel Austral moves from being a product of the Anthropocene, to someone who is invested in the future as a would-be mother, to occupying a queer space between the two.

The impossibility of separating nature from culture is fought, in the novel, by conservative political forces as Antarctica's politics become more nationalistic; this move is accompanied by an urge towards purity that excludes the ecopoets, preferring to discursively construct the land of Antarctica as "natural" rather than shaped by the efforts of the ecopoets and by climate change itself. The ideological apparatus relies on the exclusion of huskies and ecopoets in order to construct a purist ideal of the country based on a nostalgia for a past that did not exist and on constructing a nation rather than engaging with the geological legacy of the land as a historical phenomenon. As Kathryn Yusoff writes, "No geology is neutral" (111), and political efforts to naturalize the land also result in the racialization of the huskies. Austral finds herself bearing the brunt of racist, or perhaps speciesist language throughout, from those who see her as a "remorseless monster" (1) and from Keever who describes her as "one of the genetically polluted" and "an affront to God" (21) as far as the ruling National Unity Party is concerned. The huskies birthed by the ecopoets are associated with the impurity of their "unnatural" parents and represent the intervention of human culture into a God-given nature, so Austral is not considered to be a full citizen of the continent. This ideological separation of nature from culture has real consequences for Austral who cannot leave the continent and can only travel within it on a permit. Many of her decisions, including her decision to get involved with Keever initially through running contraband, are taken in order to earn the extra money she will need to pay a smuggler to help her escape Antarctica and start a new life in a place where she might be treated without discrimination. The entanglement of Austral's identity, her actions, and the political-ecological landscape that constitutes her are woven through the narrative, consistently highlighting the intradependence of the "natural" and the "cultural".

Both the racialization of the huskies and their status as illegal people who cannot travel beyond Antarctica make them coterminous with the land itself. The geology of the Anthropocene is a political tool in shaping the racialization of its people; Kathryn Yusoff describes the "Anthropocene-in-the-making" as a moment to recognize "geology as a racial formation from the onset and, in its praxis, as an extractive and theoretical discipline" (12). The bodies of the huskies are aligned with the earth, in that they are confined to the geological formation of Antarctica, but they are also aligned in that their bodies have been singled out for the extraction of labour. They are aligned with the local environment at the level of their (engineered) genetics, and in that their labour is extracted to maintain a status quo that does not recognize them as people. Yusoff, writing about the history of Blackness and its constitution, shows that, "this contact point of geographical proximity with the earth was constructed specifically as a node of extraction of properties and personhood. At the same time, this forced intimacy with the inhuman was repurposed for survival and formed into a praxis for remaking other selves that were built in the harshest of conditions" (11).

Yusoff identifies a tension here between the dehumanization that can be enforced by associating a people with the earth, and the liberation that can be accessed through knowledge of the land, the power intrinsic to survival in a hostile environment. As Austral travels Antarctica, dreams of leaving, and carries her unborn child, these tensions are activated. Her dehumanization, her construction as a creature suited to the land, is her main source of power. And, in the miscarriage she suffers, the same tensions are at play. The inhuman materiality of the miscarriage, the cruelty of matter, is put in tension here with the power of imaginatively creating a life for her child.

Temporality and Environmental Ethics. Rather than considering the fetus as a phenomenon most deeply associated with Austral's body, we can make the "cut" elsewhere and consider the fetus as entangled with the environment of Antarctica and the ecological and political situation we find there. Barad suggests the term "intra-action" to describe such entanglement: whereas "interaction" implies individuated subjects and objects that have effects on one another, "intra-action" does away with such subject/object distinctions and considers phenomena as holistic events that are constituted discursively *and* through materialism. In the case of the fetus and the environment, considering the intra-action within such a phenomenon shows that the fetus is produced by the environment: Austral's very genes are man-made, and the death of the fetus may have been caused by its father's violence. Austral's personal history crucially develops the themes of interdependence with the land and the disruption of progressive time as the past haunts the present. The importance of these histories is emphasized in chapters set apart from the main narrative. The main chapters are marked by numbers, but these chapters are given titles, such as "The Ballad of Isabelle and Eddie." Three such chapters tell the story of her grandmother, Isabelle, and her grandfather, Eddie, and Austral shares these histories with her kidnapped cousin, Kamilah, an appeal to generational time that may create a bond between the two, which shows how the past continues to haunt the present—whether that past consists of the actions of ancestors, the accumulation of capital, the shaping of the land, or the failed imagined futures that have not come to pass. A fourth chapter is entitled "The Happiest Days of My Life," and it features a description of the time Austral spent travelling through the wilderness with her mother and living off of the land. While the chapters on Isabelle and Eddie are framed as being told by Austral to Kamilah (in an attempt to show her that Austral's side of the family were wronged by Eddie and the subsequent generations who refused to make up for his negligence and abandonment but instead excused his actions through euphemism and myth-making), this chapter is inserted at a point in the text when Kamilah is unconscious after a fight with Keever's men, so the second person narration is particularly intimate and reads as being addressed to Austral's child. She describes the volcanic activity in the Antarctic region where she grew up before saying, "Now I want to tell you how another eruption helped Mama and me escape. I want to tell you about the happiest days of my life" (202). Austral describes the land as an animate and mobile being that lives with and shapes the lives of the humans inhabiting it; her Antarctica is not an inert land mass or an empty, white space on the map to be passively colonized and cultivated, but a participant in her story. The volcano on Deception Island is "active," "where fingers of molten rock ooze up" (202). The imagery of the fingers stretching up through the earth's crust personifies the activity and assigns intentionality to the actions of the earth and of the volcano. New islands appear as lava is pushed up from under the water, she sees tremors which lead to landslides as the land destroys and recreates itself. The agency of the land, and the ways it creates and constitutes itself through intra-acting with the flora and fauna that make their home with it, is compared to the relationship between Austral and her mother. These are the happiest days of her life because Austral remembers them as a time when she and her mother lived with the land and

without the intervention of those who would try to construct ideological barriers between the land and the people, or between humans and huskies. The journey that Austral makes with her child inside of her is narratively analogous with the journey Austral made with her own mother in "The Happiest Days of My Life." The fact that her embryo was barely developed and unborn does not diminish the impact that it has on her life and the sense of intra-action that she experiences with her child.

Focusing on the importance of Austral's unborn child draws attention to the significance of miscarriage as a site for thinking through agential materialism and for exploring the material-discursive production of phenomena. Barad uses the example of the ultrasound scanner and its production of the fetus to show the making of a phenomenon from materialist and discursive practices including technoscience, biology, physics, and medicine, among others. Miscarriage, as a phenomenon, is constructed through all of these discourses while also bringing to the fore the contingent nature of life and its dependence on the mother's creation of the child through her own discursive and embodied practices. Miscarriage often involves the pain of a mother who has begun to materialize her own child through the discursive practice of infusing the potential child (whose existence may only be known to her, and perhaps her closest friends and family) with individuality before it has been formed into anything nearing a recognizable human, or an independently viable life, just as Austral does by addressing her story to her lost child. The loss of such potentiality can be mourned with the same grief as a flesh-and-blood person. Through McAuley's intertwining of the lost pregnancy with lost potential futures in the face of climate change, miscarriage acts as a gateway concept for exploring our affective affinities with the world we are at risk of losing. Through analysing the entanglement of miscarriage and climate change, reproductive loss becomes just as important a tool as reproductive futurism. The locus of reproductive loss is one that demands attention to the relationship among humans, gender, and the vibrancy of the material. Reproductive loss is a means of recognizing the grief of giving up a future and being forced to search for a new temporality and a new political way of being.

Austral explicitly relates the significance of her child back to the intra-action of the land with those who live therein such a way as to demonstrate the importance of considering the discursive as a means of working with the material to create reality. Throughout the novel there have been examples of "elf stones" scattered around the Antarctic landscape, associated with a belief in hidden people, known among the Antarcticans to have originated in the Icelandic tales of the Huldufólk. Despite the fact that these traditions are a relatively recent transplant from older cultures, Austral explains that they "help to humanise our bleak land, help us believe that it's possible to make our lives here" (272), and so the elf stones, the sacred sites of the hidden people, are respected, even in the face of industrialization and the progress of modernity through the frontier landscape. During her time doing hard labour after the loss of her child, Austral is put to work building a railway with a curve to avoid an elf stone named "*The Place Where The Wind Sings Itself To Sleep*" (272; italics in original) and has a revelation about her lost pregnancy and her grief:

> in that moment it struck me that the way the railway bent around that damn stone was exactly like the way you had shaped my life. And it was then that I knew that you always would be a part of what I was, a hard fact I couldn't shift or erase, and I felt, I don't know what to call it, it wasn't exactly relief or comfort, but maybe it was a kind of acceptance. And maybe that moment was the seed from which this account grew. (272)

Those elf stones that make living possible are known to be fictions, they are known to have no basis in the reality of this strange landscape, borrowed as they are from another culture and invested with a primitive belief that deviates from logic. Despite this, however, the fiction of the elf stones makes the landscape liveable and materially shapes it through causing alterations in its infrastructure, like the bend in the railway line, marking itself into the landscape in a way that has a reality just as true as the other features of the Antarctic world. Similarly, Austral recognises the identity with which she invested her fetus as a fiction, but one which has shaped her life irrevocably, therefore giving her daughter an identity as real as that of a child who had reached full gestation and one deserving of the narrative that Austral gives; "The memorial I wasn't able to give you when you passed. A confession made without hope or expectation of forgiveness" (273). After being arrested for the kidnapping, Austral spends many years doing hard labour and it is not clear whether she will still be of child-bearing age when she returns to society. The novel ends as it began, with Austral in a jail, although now as a prisoner rather than a jailer, giving the narrative a circular structure. To the outside eye it might appear that Austral is back where she started and the failure of her pregnancy to progress is reflected in the stasis of her life. Austral knows through her comparison with the elf stones, however, that nothing has changed and everything has changed. The absence of the child does not represent a horizon of possibility, but its thwarted potentiality remains an object of great gravity that changes and warps Austral's life and narrative around it. The text we have been reading is Austral's record of her experience as a mother..

Conclusion. Sheldon writes about the impossibility of reproductive futurism offering the urgency and radical action that we need. There is no "maintaining the status quo" for a stable notion of the child. At a time like this, the figure of miscarriage may be more resonant than the figure of the child. The miscarriage highlights the contingency of matter; there are no guarantees and the much anticipated ensouled child can be reduced to cells and material—retained products of conception that, when left in the womb, can become a source of infection, raising the specter of the miscarried cells as bacteria-infested meat becoming a danger to the body that until recently housed and nourished them. Sheldon writes that reproductive futurism represses the child's exposure to the animacy of the nonhuman, and in the animacy of pregnancy tissue spawning bacterial cultures within the mother's womb the activity of nature lays itself bare. The animal state of motherhood has a dark twin in the animal state of miscarriage as the body grieves hormonally and physically, the mother's mental grief an adjunct to be dealt with when the physical recovery has begun. The miscarriage removes the mother from the heteronormative time of pregnancy, successful childbirth, and motherhood, a narrative of predictable progress that is suddenly barred to her; instead, she enters a queer space. Miscarriage, like the Anthropocene itself, forces us, to use Claire Colebrook's terms, "to think about what has definite and forceful existence regardless of our sense of world" (7). The miscarriage evokes that truncated time of the climate crisis where time may have already run out and the lack of the imagined future must be negotiated. In these times, the scale of the personal and of grief may be aligned with the deep time we have left to play with.

The novel's epigraph is taken from *Antigone*, another text named for its heroine, and one in which a character seeks to honour a dead family member in a way that is prohibited in the society in which she lives. For Antigone, it is verboten to bury her brother's body because he had fought against Creon, the ruling king of the city. Antigone risks, and loses, her own life in order to honour the rites of burial, a sacrifice that is represented throughout the play by the handful of sand that Antigone casts onto his body, to signify the body being reunited with the earth. In *Austral* we also find a story of remembrance, one which is prohibited in

Austral's society as her narrative, the product of a convict and a second-class citizen, will not be listened to and, even if it were, it honours a person that never was, as far as her society is concerned. A death that should be dismissed as "common," a life that should be considered "just an embryo" (271). The lines from the play that McAuley chooses to introduce the novel are:

> How many miseries our father caused!
> And is there one of them that does not fall
> On us as yet we live? (quoted on vii)

These lines bring together the themes of generational responsibility as both the responsibility of a parent to a child and, by extension, the responsibility of inhabitants of the earth to protect the world for their children in a way that could be seen as concomitant with reproductive futurism. The horizons of political expectation are defined by how one should react with the best interests of future generations in mind. In the case of Antigone, however, as in the case of Austral, these responsibilities are shown again and again to be hypocritical ideological constructions designed to maintain the status quo, in the very way that Edelman highlights in *No Future* and that Sheldon connects to the politics of climate change in *The Child to Come*. For both, the powers of conservatism are vested in father figures, figures like Austral's uncle, Alberto Toomy, who uses the preservation of Antarctica as a nation state in order to maintain political and economic power. Or like Antigone's uncle, Creon, who denies the bonds of family in order to consolidate his power over the state. Other father figures in *Austral* disown and endanger their children, like Keever, or create schisms in their families that will echo down the generations, like Austral and Kamilah's grandfather Eddy. The resistance to such sins comes through Antigone's handful of earth and through Austral's recognition of a land and a people that intra-act and co-constitute their collective meaning. In the theme of reproductive loss, the denial of reproductive futurism through unclear means, Austral finds a new way to relate to her story and to the land around her, through recognizing the performativity that makes her experience real and relevant.

Reading *Austral* through the lens of reproductive loss and the figure of the lost child gains us a number of advantages. It advances the critique of reproductive futurism found in Edelman's and Sheldon's work. By removing the child as a physically existing presence, McAuley brings the focus to the mother—or the woman, to define her outside of the relationship to her potential child. It brings the focus to her moral agency, and her experience of loss as a lens through which to understand her place in the world. Rather than generic North American feminist dystopias, which tend to dramatize the fear of the female body being treated as a vessel, a text focused on reproductive loss prioritizes the woman as a moral agent and a meaning-maker. The impact this has in *Austral* is to disrupt the assumptions made in the name of reproductive futurism. Reproductive futurism is the source of a narrative that makes reproductive loss more difficult for women to face; it is an ideology that pits the states of pregnancy and non-pregnancy, mothers and non-mothers, against each other with no room left for the grey areas in between, areas that the recognition of reproductive loss as an important part of many lives and an inevitable part of reproduction bring to light. The recognition of the importance of reproductive loss in *Austral* serves to show the power that the narrative or reproductive futurism has, and how its disruption by the unexpected blow of a miscarriage deepens the pain and poignancy of Austral's suffering. The abrupt exit from the heteronormative pathway of pregnancy and birth constitutes an entry into queer time; a person who had begun to think of herself as a mother is excluded from the role. She may feel like a contaminant, an outsider to the (ostensibly) happy, heteronormative families she sees around her. She must find her own way to survive it. For the politics of reproduction,

challenging the heteronormative conveyor-belt view of life and its milestones is important for those who find themselves in queer time, whether through a rejection of heteronormativity or through the contingency of material reality.

In using the narrative of the miscarriage in a text that comments on the Anthropocene and the posthuman entanglement of human and nonhuman life-forms and the changing land on which they live, McAuley disrupts and critiques the use of reproductive futurism in climate change narratives. Sheldon identifies the impact that such narratives have in enclosing the possibilities of the discourse of climate change activism and here McAuley shows that disrupting that narrative of reproductive futurism has a profound impact on the resistance available to us in the face of this crisis. Rather than a mindset that assumes there will be a future to preserve, and assuming that the future is in some sense knowable, McAuley shows how "nature" or the chaotic entropy of the universe in which we live means that a knowable future is not possible and that unthinkable tragedy can happen, and does happen on a regular basis. There are often no clear reasons for these tragedies, either medical, spiritual, or physical, however a society might like to think of itself as having the power of prediction in such cases. The departure of this child figure, around which the narrative is structured, signifies the intervention of a force that lies outside of the logic of reproductive futurism and reminds the reader that our understanding of cause and effect in the past, as Austral tells her story, explaining how she came to be where she is, has little bearing on a future that is completely open, indeed, one which is susceptible to the negative effects of anthropogenic climate change and for which there does not have to be a technological or narratological silver bullet to extricate humanity from our destruction. The power of Austral's grief produces a narrative that acts as a commemoration of her daughter, and aligns with the grief of the climate crisis—described by Glenn Albrecht (2007) using the neologism "solastalgia"—and the loss of the fish and fauna in this great extinction. The haunting of the present by the past, in this case through the power of a deep and profound grief, acts as a means of looking backwards, a challenge to progressive time and reproductive futurism. McAuley's novel invests the miscarriage as a powerful motif in the era of the Anthropocene, one that recognizes the public power of a grief that has traditionally been largely confined to privacy and secrecy.

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[1] Paul Crutzen did much to publicise this term, and he dates the Anthropocene from the design of the steam engine by James Watts in 1784, though other candidates for the beginning of the Anthropocene have varied from the development of agricultural societies circa 10,000 years ago to the development of atomic weapons during the Second World War.

[2] Sheldon deals with US culture from the 1960s to the present but argues for the use of some UK texts on the basis that the concerns with "bare life" chime closely with the United States' Iraq War-era policies. There is a great deal of cross-pollination between British and American culture. On the subject of reproduction, however, there is a distinctive difference between speculative fictions from the UK and those from North America. The culture wars in America mean that abortion (and reproduction more broadly) tend to be framed in terms of oppression and theology. British feminist dystopias also represent reproduction as a major site of women's oppression, but this tends to be at a remove from religious concerns, e.g., Sarah Hall's *Carhullan Army* (2007, also known as *Daughters of the North*), Anne Charnock's *Dreams Before the Start of Time* (2017), Helen Sedgwick's *The Growing Season* (2017), and Rebecca Ann Smith's *Baby X* (2016). Religious objection does threaten abortion provision in the UK, but the trend is tending towards greater liberalization of abortion, which was recently made legal in Northern Ireland following the Republic of Ireland's recent removal of its constitutional barrier to free and available abortion, and there have been some calls to remove the current rule that two doctors must approve an abortion on the UK mainland. For this reason, I read *Austral* as part of a British tradition.

[3] I am here speaking of the experience of the miscarriage of a wanted pregnancy; of course, those miscarrying or terminating an unwanted pregnancy will have a range of different emotional reactions to the process some of which will be very positive.