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What Children Know: Children, Climate Change, and Epistemic Injustice

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Abstract
Scholars of childhood studies, including theologies of childhood, often cite prioritizing the well-being of children as a mark of a just society. At the same time, though, little credibility is given to children's comprehension of their own well-being and the conditions necessary for their flourishing. What children know, especially around solidarity with the nonhuman creation, is seldom deemed legitimate in discussions of children's well-being. Debates over the existence of climate anxiety in children together with responses that trivialize children's climate activism provide clear examples of the disregard for their knowledge. I engage the work of Miranda Fricker on epistemic injustice as a resource for theological critique of the delegitimization of children's embodied knowledge of planetary solidarity as crucial to their well-being.

Keywords Climate anxiety · Epistemic injustice · Child theology · Ecotheology

> One way to remain ignorant of injustice is to disqualify those in a position to call attention to it from doing so.
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> —Gaile Pohlhaus (2017, p. 17)

Introduction

Across multiple disciplines, scholars who study childhood and the lives of children contend that one key measure of a just society is its prioritizing of children's well-being. At the same time, however, little credibility is given to children's comprehension of their own well-being and the conditions necessary for their flourishing. What is the epistemic status of children in relation to climate change, for example? With a few notable exceptions, what children know, especially around solidarity with the other-than-human creation, is seldom deemed legitimate in discussions of children's well-being amid the current climate crisis.[1]

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[1] For important exceptions, see Currie and Deschênes (2016) and Hickman (2019, 2020, 2022, 2024). Hickman (2019) provides a reflexive account of her interview methodology with children that takes especially seriously the value of children's emotions and ways of knowing about climate change. An important early example of positive attention to children's climate knowledge is Strife's (2012) empirical study in which she interviewed children and solicited their drawings about futures.

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Children's high vulnerability to the effects of climate change is well documented (Burke et al., 2018; Eisenman et al., 2015; Garcia & Sheehan, 2016; Kousky, 2016; Lawler & Patel, 2012; Thiery et al., 2021; UNICEF, 2021; van Nieuwenhuizen et al., 2021; Vergunst & Berry, 2022), yet adult debate continues over the very existence of climate anxiety in children. This, together with trivializing responses to children's environmental activism, provide clear examples of the disregard for children's status as either knowledge bearers or knowledge producers. In what follows, I begin by considering children's distinctive positioning in relation to climate change. Then, I inquire into the epistemic status of children. Finally, I engage the work of Miranda Fricker on epistemic injustice. Fricker's work constitutes an untapped resource for theological critique of the delegitimization of children's embodied knowledge of planetary solidarity as crucial to their well-being. I conclude with a brief proposal toward epistemic justice for children on behalf of the planet.

Throughout this paper I speak of children and childhood as *a social identity*, aware that from an intersectional standpoint it is impossible to treat all "children" as if they are one unified collectivity. Important differences between communities of children cannot and should not be subsumed into a single identity, nor should children be essentialized as if contexts lack person-forming power in children's lives. For these reasons, I endeavor not to speak of "the Child." At the same time, however, it is politically and ethically important to be able to speak meaningfully about *children* as a particular constellation of people within humanity and of *childhood* as a phenomenon. It is difficult to advocate for collectivities that cannot be named.

Accordingly, in this paper, as I have done elsewhere (see especially Mercer, 2005, pp. 19–20), I engage in a practice of *strategic essentialism*, a concept I borrow from postcolonial theorist Spivak (1988, p. 205) as a political tactic in writing about children and childhood.[2] This practice does not mean completely ignoring differences among diverse communities of children by boiling childhood down to some imagined set of universal essential characteristics. Instead, strategic essentialism accepts the calculated risk of sometimes underemphasizing important intersecting contextual and community differences for the sake of attending to the broader social identity of child/hood as that facet which (at least temporarily) assumes the most salient focus. For the purposes of this paper, I use the term children in relation to the time of life from birth through adolescence (roughly age 20), as this approximates the ages often included in global frameworks concerning children's health and well-being.

I write from my perspective within ecofeminist practical theology, a location in the academic study of religion focused on inquiry into lived religion and the practices of persons and communities in contexts and in relation to the other-than-human creation, for the sake of transformation toward justice. An ecofeminist practical theological lens broadly extends into other contexts of oppression the feminist interrogation of systemic domination/subordination that circumscribes women's lives. Thus, the extension of critique to matters affecting the lives of children and the nonhuman ecology in which children dwell fits within the reach of ecofeminist concern with injustice.

Children's Relationship to Climate Change

How are children positioned epistemically in relation to climate change? Their lived realities mean that they bear *experiential knowledge* of ecological destruction as people who basically have spent their entire lives under both threat conditions and actual consequences of a climate emergency. Even though they may lack language or categories for propositional knowledge about climate change and the fate of the planet, (nor do they hold what is generally considered to be "expert knowledge"—e.g., knowledge at the level of producing scientific evidence)—what children know about ecological destruction is written onto their bodies, minds, and spirits, an experienced form of knowing produced by living within the ongoing eclipse of planetary health (Hickman, 2019, 2020). Although such experiential knowing has multiple effects, I will underscore two of these by way of illustrating children's embodied, experiential knowledge of ecological harm, namely, the physical and social effects of the climate emergency on children.

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[2] Spivak (1988) describes strategic essentialism as a "strategic use of positivist essentialism in a scrupulously visible political interest... to retrieve the subaltern consciousness" (p. 205).

First, the physical effects: climate change's harmful health effects register greater damage to children's physical and mental well-being, and for children of today, the duration of their exposure to these harms spans their entire lifetime. As I have described previously (Mercer, 2022, p. 1 of 16, n.p.), *children's bodies are less adaptive to rising temperatures*, and they experience higher exposure of air and water toxins per pound of body weight in their growing systems (Sheffield & Landrigan, 2011, p. 292), which means that *they carry a greater amount of what the World Health Organization (WHO) calls the "global burden of disease."*

The global burden of disease is a measure of how much overall morbidity and mortality is carried by particular population groups. In the case of children, even as far back as two decades ago, the WHO reported that "88% of the existing burden of disease due to climate change occurs in children < 5 years of age in both developed and developing countries" (Zhang et al., 2007, as quoted in Sheffield & Landrigan, 2011, p. 292). 1.7 million children under the age of 5 died in 2012 from environmentally related causes, and 2021 WHO information shows that 25% of the "disease burden" in children under 5 can be accounted for by what they term *environmental risks*, e.g., unsafe water, heat related illnesses, poor indoor and outdoor air quality, exposure to toxic or hazardous waste and chemicals. Climate change is implicated in these risks because it affects the social and environmental determinants of health such as food and water security, rising temperatures, and stress on the healthcare infrastructure, particularly in areas where it is weakest. The fact that climate change produces such health impacts means that as a group children are extremely vulnerable since they are more subject to ill effects from disease related to climate change than are adults living under the same conditions. Vergunst and Berry (2022) employ a developmental framework to theorize the cumulative impact of climate change across the lifespan. They identify the mental health effects on children as "additive, interactive, and cumulative" (p. 769).

Second, the social effects: environmental degradation amplifies existing inequalities that are especially harmful for children whose social identities and neurobiological capacities for responding to stress are being (mal)formed amid climate destruction's realities. These effects include *eco-anxiety*, the condition of anxiety resulting from deeply felt concern for the welfare of the earth and its other-than-human inhabitants under conditions of environmental catastrophe. *Climate anxiety* is one of the most common forms of eco-anxiety and refers more specifically to "anxiety that is significantly related to anthropogenic climate change" (Pihkala, 2020, p. 3). Children may experience such anxiety from direct encounters with the effects of climate change (i.e., as part of a family displaced by famine or flood). They also may experience climate anxiety in relation to awareness of climate change effects that they do not themselves experience directly (Clayton, 2020, pp. 264–265). Either way, Clayton claims, children are among those who absorb the strongest impact.

Although anxiety names a mental health condition experienced within individuals and disruptive of their physical, emotional, and spiritual well-being, I place climate anxiety under the category of the social effects of the climate emergency so as not to separate individual symptom bearing from the underlying social structuring that produces such harms in persons (Crandon et al., 2022). The psychological language of eco- and climate anxiety risks pathologizing the children who suffer from it, but it is also deemed important to have widely known words for describing conditions that require attention (Hickman, 2020). And, given the reality of the threat posed by climate change, anxiety and a high level of distress appear as appropriate responses (Marks & Hickman, 2023). But children experience climate anxiety as an effect of contemporary life structured to prioritize short term gains, individualism, and the accumulation of economic wealth by a small minority at the expense of planetary health and ecological well-being. The flow of power behind the neoliberal structuring of social relations further ensures that minoritized groups such as children, elderly people, BIPOC (Black, Indigenous, and people of color) communities, and southern hemisphere populations experience more of the direct effects of climate change that can lead to climate anxiety while contributing the least to the causes of climate emergency. This is the macro-aspect of eco-anxiety. It is not separate from mental health concerns yet cannot be reduced to them alone (Wardell, 2020).

Some critics contest the very notion of climate anxiety as a fictional problem created by White privilege that functions to draw attention away from the historical trauma and systemic existential threats always already present for BIPOC people, including children (for a discussion, see Ray, 2021a, b). Others, while not treating climate anxiety as fictional, nevertheless underscore the racial politics of the “movement” to draw attention to climate anxiety as a displacement of White racial unease that treats climate change as novel and exceptional phenomenon (“the most dire threat to existence humans have ever faced”) as a means of extracting it from its political and social moorings (Heglar, 2019).[3] They point out that those identifying with the phenomenon of climate anxiety are not, predominantly, the people most directly affected by climate change. “Poor migrant children don’t talk about climate anxiety” may well be a true statement, one that I rarely encounter in publications (cf. Ray, 2021b) but often hear in academic discussions of climate anxiety. The relative truth of this statement does not, however, mean that poor migrant children or others whose contexts have no mental health-derived language for their experience do not live—and have feelings about living—under conditions of increased vulnerability, harm, and mental health impacts due to anthropogenic environmental degradation (Sanson et al., 2022, pp. 13–17). To put it simply, children may lack the vocabulary or the conceptual categories to identify what their minds and bodies know. Or, adults may simply have failed to ask them, or not asked them in a way that elicited sufficient trust from the children to disclose their vulnerability (Hickman et al., 2021).

What children know too often includes distress, grief, fear, and anxiety as a result of climate change and ecological destruction. Honoring the reality of eco-anxiety even for children who do not articulate their experience as such yet undergo its impacts in the form of greater existential precarity is part of a refusal to separate mental health at its micro-level of an individual’s suffering from social forces at its macro-level that structure pain for whole communities, not to mention for other-than-human species globally (Ray, 2021b; Wardell, 2020).

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[3] Several scholars offer analyses that name structural racism as a *reason* to acknowledge anxiety over climate change. See Gutschow et al. (2021) and Uddin et al. (2021).

A further aspect of environmental degradation's social effects on the lives of many children is best named in relation to trauma. For those children who already suffer the effects of collective and historical traumas such as racism, forced migration, and poverty, climate change and ecological destruction only serve to heighten these vulnerabilities by doubling down on the power such oppressive forces hold over particular children's lives (Mercer, 2022). Consider, for example, a child in an impoverished Filipino community whose role in supporting the family economy involves searching through the "garbage mountain" at Payatas for scrap metals to sell. As more powerful, frequent storms generated by global warming increase dangerous conditions such as garbage landslides (Pelling, 2003, p. 3), the existing oppressive conditions of child poverty are thereby only amplified by locally experienced consequences of climate change. Similarly, children migrating across the U.S. southern border often have endured the traumatic effects of arduous journeys across dry deserts or flood-swollen rivers, these environmental features being magnified consequences of climate change. Such ecological realities in the lives of migrating children only serve to foreground and amplify the political, racial, and material oppressions they encounter after arrival in the United States. These examples underscore the way climate change–induced damages interact with and magnify existing inequalities to increase particular children's suffering.

In sum, children stand out within the human community as disproportionately bearing the ill effects of environmental degradation (Vergunst & Berry, 2022). They do so both by virtue of what will become their overall, longer lifetime-exposure to environmental hazards as well as by way of their greater vulnerability to such harms. Existing oppressions heighten these negative impacts. Their relationship to climate change is both personal and immediate. Children thus have a large stake in practices and policies aimed at addressing ongoing ecological destruction, and they have existential knowledge about these matters. Unfortunately, due to biases against children's ways of knowing, they are not often participants in discussions of climate policy or even in conversations to determine small local action steps to address the ongoing degradation of the planet and its multiple life forms. Among humans it is often the case that those who experience the greatest risk and harm are the least and last consulted for their knowledge about their situation. That is certainly true when it comes to children and the present ecological emergency.

Children As Knowers

Why is the experiential knowledge of children not a more prominent feature in efforts to address the climate crisis? Why are the narratives of eco-anxious children so easily dismissed? Even though the impact of climate change and ecological destruction on children's well-being is well documented, children's experiential knowledge about their situations can easily be set aside—particularly with children from nondominant groups—because the epistemic status of children qua children is compromised by their stereotyping as inferior, immature, and unreliable knowers. These characteristics operate as a common Western social imaginary of childhood that invalidates children as knowers (Murris, 2013) and treats the kinds of knowledge associated with them as something to be left behind in their development toward greater maturity.

A social imaginary is a widely held notion that is both expressive and productive of a society's sensibilities and practices. The philosopher Taylor (2004) spoke of social imaginaries as "the ways in which [societies] imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations which are normally met, and the deeper normative notions and images which underlie these expectations" (p. 23). He went on to write about a social imaginary as "a common understanding that makes possible common practices, and a widely shared sense of legitimacy" and as "the generally shared background understandings of a society, which make it possible for it to function as it does" (Taylor, 2007, pp. 172, 323). The normative dimension of such social imaginaries means that they can play a constraining role, placing a boundary around what is possible for a group within a society to do or to be, on the basis of how members of that group are positioned within the society and the societal estimation of the group.

A social imaginary of children and childhood, then, refers to a broadly held understanding and set of practices in relation to children that are given legitimacy and normative import in society. Social imaginaries of childhood come to operate in a taken-for-granted manner as descriptors of "how things are" when it comes to children. They hold the social vision for what it means to be a child in a particular society or community. In parts of North America expressive of dominant cultural groups' norms, but perhaps also including some other sectors as well, a common social imaginary of childhood operates in which children are expected to be receivers of knowledge, not its producers or conveyers. In this framework, whatever children know must be something "put into them" by adults. Children's primary positioning as students cements their status as those whose ways of knowing are necessarily subordinate to those of adults.

When it comes to the climate emergency, it follows that the operant social imaginary of children as deficient knowers operates to invalidate their contributions to the wider community's awareness of ecological catastrophe. This functions to protect adults from the emotional discomfort that would be produced by taking in the message communicated by young people experiencing climate anxiety, namely, that survival is at stake and that adults are complicit in bringing about environmental catastrophe in its every element from species extinction to global warming. As scholars have pointed out, "Climate worry correlates to openness to experience and pro-environmental behavior.... Persons who experience climate anxiety can be seen as signalers. They communicate to a society that the situation has reached a critical level and needs urgent action" (Budziszewska & Jonsson, 2021, p. 15). One the one hand, there are signs of hope that children's "signaling" is beginning to be heard. For example, in 2023 in the United States a judge ruled in favor of a group of 16 children and youth plaintiffs (Held v. Montana) who charged that the government's promotion of fossil fuel development violated their constitutional right to a clean and healthful environment. But even as children's climate anxiety signals the need for urgent action, the widespread epistemic delegitimation of children's knowledge continues to block powerful actors from receiving their message.

Epistemological Fissures in the Developmental Paradigm

Ironically, 20th-century (Western) developmental paradigms of childhood play a role in undermining the position of children as knowers. I call this ironic because developmental theories at one time played a liberatory role, inviting adults to see and value children within the particularity of their time of life—to value, honor, and recognize the full personhood of 2-year-old children, for instance, as they live out the ways and capacities of human beings of that age. At their best, developmental frameworks with their age-based stages of human growth provided an interpretive key for making sense of a child's capacities for cognition, emotion, and meaning-making in ways that recognize and legitimate children's realities.[4]

But these theories also constitute strong normative narratives that (implicitly and explicitly) characterize children's growth as the overcoming of deficits belonging to earlier stages of development through the acquisition of better ways of knowing and acting in later stages. This normative logic ultimately turns developmental theories against their own child-affirming potential by devaluing what has gone before, including ways of knowing. That is, human development framed through the paradigm of a process of positive growth toward the telos of adulthood cannot help but register earlier ways of making sense of the world and judging a child's experience as inferior, to be overturned by subsequent, better modes of knowing. The "otherness" of a child thereby gains a fixed status in developmental theories, defining them in binary opposition to adults who represent the pinnacle of development (e.g., Klyve, 2019, p. 2).[5]

As Murris puts it, "The concepts 'adult' and 'child' are in polar conceptual relation: each only has meaning because the other exists. Adult subjectivity is constructed in contrast to what it is not" (Murris, 2013, p. 253). This "adult distancing from child" (p. 252) is perhaps not so far removed from the "human distancing from other-than-human" theological anthropology that participates in the species supremacy at the heart of ecological degradation.

Consider, for example, the value placed on the change from childhood's so-called magical thinking to the "more developmentally sophisticated" ability to distinguish between imagination and reality. Abandonment of the imaginary[6] becomes a significant mark of maturity (Haynes & Murris, 2019, p. 299). Imaginative knowing thereby bears associations with the immature cognition of an earlier stage in Western developmental thought.

As Haynes and Murris explain, a child who imagines becoming invisible like the wind, or sharing the climbing capabilities of clawed animals who race up tall trees, will eventually be encouraged to put such ideas into fictive stories and poetry—in short, to recognize that such imagery is not "real" and move on from it (see also Curry, 2014). At risk in what is considered development are the very imaginative forms of knowing that can help to foster a sense of connection and cross-species belonging integral to the survival of the planet, those allowing for a subject-to-subject relationship between a human and a plant, for example, or a human and another species of animal. Imaginative blurring of the boundaries between animate and inanimate, human and other than human, when seen through a developmental theory lens become examples of childishness and immature thinking best left behind for more proper knowledge. Haynes and Murris (2019) put the matter forcefully:

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[4] Developmental theories underlie a number of influential 20th-century educational and social reform movements intended to aid children and contribute to their well-being. These include movements such as child-centered learning (Montessori, 1964) and the child study and child welfare movements (Gesell, 1925; Hall, 1893; see also Takanishi, 1978). There also are multiple influential critiques of developmental theory, for which Burman (2016), Walkerdine (1993), and Woodhead (2009) provide helpful overviews.

[5] Piaget (1929/1973) applied the label of "primitive thought" to animism, tying it to young children and others he treated as less than fully competent. See Merewether's (2023, pp. 25–26) critical description of Piagetian developmental psychology on the basis of its rendering of animism as an "underdeveloped" state.

[6] Here, I use the term *imaginary* not in the sense cited above in the discussion of Charles Taylor's *social imaginary* but rather as a reference to a human's creative capacities for meaning making through the form of knowing called imagination. Imagination makes use of both cognitive and affective capacities and, as Tateo (2020) argues, is therefore a form of higher knowledge.

> Developmentalism works as a theoretical justification to treat children as intellectual and emotional primitives. A good example of this, is adults' dismissiveness of young children's animistic thinking . . . that is, children's apparent inability and immaturity to distinguish between what is alive and what is dead matter. (p. 293)

They go on to argue that when these developmental frameworks posit childhood as something to be left behind, children's knowledge such as the "animistic idea that objects are alive... is dismissed as 'cute,' 'magical,' and expressive of a limited and distorted understanding of the world. It doesn't count as real knowledge" (Haynes & Murris, 2019, p. 296). Merewether (2023) concurs, arguing that "Piagetian views of children's animism work to perpetuate colonialist visions of Euro-western supremacy and a view of the world that positions non humans as inferior, separate and there for the taking" (p. 21). In the face of such dismissals, Merewether calls for a re-valuing of children's animism that "reflects a speculative way of seeing the world which can create room for responsiveness, attentiveness and caring-with relations in the world" (p. 22). She employs the term *enchanted animism* to children's playful way of imbuing material objects with life.

Amid the growing stirring of such calls to value children's imaginative knowing, the currently dominant epistemic regime with its privileging of certain kinds of rational and expert forms of knowledge continues to devalue children when it discounts their imaginative abilities as nonsense. In a similar vein, cultures that view the entire created world as populated by life-forces and infused by the unseen presence of wise ancestors similarly are devalued as "primitive" for their "unscientific" ways of making sense of the world. Imagination, intuition, and fantasy are ways of apprehending and organizing meaning apart from direct contact with objects accessible by the senses or through spoken communication. Binary thinking modes locate these modes of apprehension and cognition as opposite to—perhaps even against—what is termed "evidence-based scientific rationality." Under the dominant episteme, imagination, intuition, mystery, affect, and fantasy become the Not Real and/or the Untrustworthy and are thus disenfranchised, instead of being understood as alternative modes of knowledge.[7]

As a result of this kind of discriminatory stereotyping of children and their ways of knowing, too often adult hearers do not believe the witness of children even to the children's own lived experience. As Norwegian writer Klyve (2019) notes, "Children have important information about their own well-being, [yet] one can easily disregard what children actually tell us" (p. 5).

In relation to the climate emergency, for instance, when children express their anxiety about the extinction of animal species or the intensification of weather disasters caused by global warming, too often they are treated as a group of humans who cannot possibly know about their own mental-emotional states or who are responding to a situation (the widespread devastation of ecosystems) with inappropriate affect and unfounded or spurious claims of meaning due to deficits in knowledge that cause them to misread the environmental situation/context. Their empathy with animals orphaned by habitat destruction or their grief for a near-extinct species may be discounted as "merely manufactured" through media exposure and therefore neither real nor authentic, in effect rendering it what Doka (2020), Kelley (2010), and Pihkala (2024) all term "disenfranchised grief," or grief resulting from a loss that is not publicly recognized, acknowledged, or legitimated.[8] Burroughs and Tollefsen (2016) note that children's lack of social power amplifies their disenfranchisement as reliable knowers: "Given the child's lack of social power and standing she is rarely in a position to challenge these conceptions and the deficit model of childhood that provides them with support. Thus, it is possible for prejudicial stereotypes of children as overly emotive, irrational, and incompetent to color the credibility judgments that adults make when assessing their testimony" (p. 364).

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[7] Robin Kimmerer (2013) speaks to this point in her story about the wisdom of pecan groves:

> In the old times, our elders say, the trees talked to each other. They'd stand in their own council and craft a plan. But scientists decided long ago that plants were deaf and mute, locked in isolation without communication. The possibility of conversation was summarily dismissed. Science pretends to be purely rational, completely neutral, a system of knowledge-making in which the observation is independent of the observer. And yet the conclusion was drawn that plants cannot communicate because they lack the mechanisms that *animals* use to speak.... There is now compelling evidence that our elders were right—the trees *are* talking to one another. (pp. 19–20).

Pointing out a similar disenfranchisement of Indigenous people's knowledge, anthropologist Eduardo Batalha Viveiros de Castro (2019) writes about the "perspectival multinaturalism" of Amerindian myths in which humans and other animals are indistinct: "For Amazonian peoples, the original common condition of both humans and animals is not animality but, rather, humanity.... Animals are ex-humans (rather than humans, ex-animals)" (p. 465).

Disrespecting Young Climate Activists

A key example of the failure to take seriously what children know about the urgency of addressing environmental harm can be seen in negative press coverage of youth climate activist Greta Thunberg. Climate change–denying websites and social media posts accuse Thunberg of promoting fear by disseminating false information or acting as a puppet for larger leftist organizations, or they attack her credibility by associations with mental illness (Dave et al., 2020). Mainstream news media sources publish pejorative portrayals of youth climate activism that align these youth protests with illegal actions, for example blaming Thunberg for promoting school truancy with the school strike for climate action / Fridays for Future (FFF) movement, calling her and other young activists naïve and deriding their motives as the mere attention-seeking behavior of children. In the case of Thunberg, who identifies as female and neurodiverse, these critiques also involve intersectional elements of sexism and ableism.

Diverting attention from the reason for the protest to negative characterizations of the protester, these accounts delegitimate protesters' climate concerns as nothing more than the unlearned ignorance of "mere children." As a result, "Children's interests are disregarded" (Bergmann & Ossewaarde, 2020, p. 273).[9] What children know about the state of the planet is invalidated, while adults around them pretend not to know what is going on. Holmberg and Alvinius (2020) mince no words in naming what such behavior means: "Children's resistance in relation to the climate emergency can be understood as declared, organized public resistance against a disguised discourse of climate ignorance" (p. 80).[10]

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[8] For a more complete treatment of the dismissing of children's ecological grief, see, e.g., Shierry Weber Nicholsen's 2002 book *The Love of Nature and the End of the World: The Unspoken Dimensions of Environmental Concern*. See also Russell (2017) for a fascinating account of interview research with children on their experiences with the death of nonhuman animals. Russell argues for a developmental framework that includes children's relationships with animals, with "an ecological view of children's experiences with animals and the role that death plays in these shared communities." He continues, "In this way, I believe my work seeks to fulfill the goals of giving children a voice in larger discourses about human–animal and human–nature relationships and what they ought to be or how they might evolve while simultaneously emphasizing the goal of taking animal perspectives seriously in our very multi-species communities" (p. 88).

[9] In the 2019 school strike for climate change action led by Thunberg, the former Australian prime minister Tony Abbott reportedly told a group of students that "the earth has survived many things" and that he disbelieved scientists' predictions of "environmental catastrophe." A woman in the crowd reportedly shouted that the protesters should "go back to school!" (Chung & Noyes, 2019; see also Bergmann & Ossewaarde, 2020).

Privileging Expert Knowledge, Whether or Not It Works

The failure to recognize children as a group who both "possess" and produce knowledge goes hand in hand with the experience of other marginalized groups whose knowledge about the other-than-human world is dismissed. In their critique of formal "expert knowledge's" limitations in addressing the climate crisis, for example, Karvonen and Brand (2013) consider the distinction between positivist world views that rely heavily on *techne* or "impersonal, often quantitative precision and a concern with explanation and verification," in contrast to *metis*, or "indigenous knowledge, meaning, experience, and practical results" (p. 218). They do not dispute the value of technical and scientific forms of knowledge for addressing the climate crisis, nor is it my intent to do so. This is instead an argument that the current climate emergency requires responses drawing upon multiple epistemologies, including what children know.

A contemporary example comes from the Anishinabekwe author and scientist Robin Kimmerer, who holds together her scientific knowledge of ecosystems with Indigenous wisdom and her own narrative as one who listens to plants, allowing the plants to teach her. It is "an intertwining of science, spirit, and story" (Kimmerer, 2013, p. x). Kimmerer asserts that all three strands of knowledge are necessary to restore the broken relationship between the earth and its human inhabitants.

It is no small matter for each of these diverse forms of knowledge to find the opportunity to make their contributions, however, given the reality of unequal power relations between different groups of knowers: "When discussing scientific and technical problems, holders of experiential, local, or tacit knowledge are generally not granted a seat at the decision-making table due to an institutional bias toward formal knowledge" (Karvonen & Brand, 2013, p. 218). Children are among those most often excluded from the table, resulting in the subtraction of what children know from the wealth of knowledge available for communities to address the climate emergency. This not a haphazard exclusion but rather a demonstration of larger pattern in the form of a "credibility deficit... related to age, in that being a particular age has a significant impact on how much credibility a hearer affords a speaker, and when and how s/he is silenced systematically" (Murris, 2013, p. 248).

Critics of the idea that children have knowledge that could contribute to addressing environmental destruction might refute the notion of discrimination against children and their knowledge, arguing that the problem is not bias against children per se but an appropriate estimation of the limits of children's understanding. The preference for expert knowledge merely reflects the reality, they would say, that children are still learners and lack experience to bring a sufficiently complex understanding to climate action decision making. To be sure, children *are* learners: their knowledge about many areas is incomplete or in process, and they do lack certain kinds of knowledge altogether. In this status, they are simply more obvious versions of the epistemological status of all humans. This does not make them inferior knowers per se.

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[10] For young people's own voices related to this, see Diffey et al. (2022).

Of course children lack competency concerning matters with which they have only partial learning or experience, but at the same time, children may also have access to knowledge in various domains—especially concerning their own lives—that adults lack: "The fact that we do not rely on children to tell us about the stock market, for example, does not mean that we do not rely on them for a variety of other information, or that we shouldn't rely on them for a variety of other knowledge" (Burroughs & Tollefsen, 2016, p. 366). That there exists a widespread bias against children as knowers in situations in which they have a stake in decisions and actions points to what Miranda Fricker terms *epistemic injustice*.

Epistemic Injustice and Children

Epistemic injustice involves "a wrong done to someone specifically in their capacity as a knower" (Fricker, 2007, p. 1). People engage in various epistemic practices in ordinary life, including "conveying knowledge to others by telling them" and "making sense of our own social experiences" (Fricker, 2007, p. 1). In its testimonial form, epistemic injustice relates to the erasure of a knower's credibility and legitimacy. It happens when bias against them allows others to disregard their testimony such that they cannot participate in a community's knowledge economy. Preemptive testimonial injustice occurs when someone's views are not even sought out because of existing biases. In the case of children's knowledge about the environment, preemptive testimonial injustice happens when what they know is discredited in advance—they are never even asked—simply because it is knowledge that comes from children. The harm rendered against children experiencing testimonial epistemic injustice is that it deprives them of contributing their knowledge and meaning making, acts that many would argue are constitutive of personhood. As Fricker (2007) puts it, "The capacity to give knowledge to others is one side of the many-sided capacities so significant in human beings: namely, the capacity for reason.... When someone suffers a testimonial injustice they are degraded qua knower, and they are symbolically degraded qua human" (pp. 44–45). When children are excluded from meaning making about environmental catastrophe, when they do not even "count" as legitimated authorities on how the present climate emergency impacts them simply by virtue of their being children, then this "credibility deficit" is discriminatory epistemic injustice.

Fricker's account also includes a second type of epistemic injustice she terms "hermeneutical," which results from the inability to understand one's own experience because a structural injustice such as exclusion/marginality leads to a gap in the kinds of knowledge/epistemological resources available in the community (p. 6). Hermeneutical injustice references "the injustice of having some significant area of one's social experiences obscured from collective understanding owing to a structural identity prejudice in the collective hermeneutical resource" (p. 155). But, as Mason (2011) suggests in her important critique of Fricker, marginalized groups might have their own, nondominant interpretive resources from which they can draw to understand and describe their experiences despite gaps in their collective hermeneutical resources. Hence, "[Fricker's] account underplays the epistemic agency non-dominant subjects possess despite their marginalization from dominant interpretative discourses" (p. 295). So, for example, as I noted earlier, children experiencing anxiety over the ecological violence of species extinction may not have access to psychological terminology like climate anxiety to depict their experience, but they do have experiential knowing, namely, the epistemic resource of affect attunement around loss.

To Fricker's two types of epistemic injustice Pohlhaus Jr. (2017) adds an additional dimension, *willful hermeneutical ignorance*: "One way to remain ignorant of injustice is to disqualify those in a position to call attention to it from doing so" (p. 17). Pohlhaus focuses attention on dominant groups' refusal to engage the epistemic tools or knowledge available from the experienced world of subaltern groups such as children. Unlike testimonial epistemic injustice where the bias against children prevents hearers from believing the children's testimony, or hermeneutical injustice wherein the community's epistemic resources do not include forms of knowledge that would help marginalized knowers make sense of their worlds, willful hermeneutical ignorance "describes instances where marginally situated knowers actively resist epistemic domination through interaction with other resistant knowers, while dominantly situated knowers nonetheless continue to misunderstand and misinterpret the world" (p. 716).

The "dominant knowers" maintain their ignorance "by refusing to recognize and by actively undermining any newly generated epistemic resource that attends to those parts of the world that they are vested in ignoring" (Pohlhaus, 2012, p. 728).

What does this mean in relation to children as producers of knowledge and the climate emergency? When climate change–denying adults as the "dominant knowers" encounter marginalized knowers, i.e., youth climate activists pushing for an alternative perspective about planetary welfare, the adults' willful refusal to recognize knowledge resources about climate change and ecological destruction from these young people, along with adults' ongoing misinterpretation of the world based on this lack of knowledge, constitutes willful hermeneutical ignorance, a form of epistemic injustice against children.[11] Byskov and Hyams (2022) similarly analyze as epistemic injustice the lack of inclusion of Indigenous peoples' knowledges and voices in developing strategies of climate adaptation, which suggests that children from BIPOC communities face even greater epistemic exclusion concerning climate change than children from nonmarginalized cultural communities.

Toward Epistemic Justice for Children On Behalf of the Planet

What would epistemic *justice* toward eco-anxious children entail? I offer here a modest proposal, grounded in a feminist Christian theological understanding that the work of justice is central because theology is a *praxis*. Faith as "the praxis of God's love and justice in the context of particular communities of struggle and hope" (Mercer, 2005, 1996, pp. 96–97) is therefore not a place for the mere "application" of theology brought from the abstract into real life. It is itself a context for the construction of theological meanings through thought and action. The lives and contextual realities of children experiencing eco-anxiety and epistemic injustice constitute a location for theological meaning making and transformation. My proposal involves constituting churches as communities of epistemic resistance open to what children know; constructing theological anthropologies (and sustaining those already in existence) that attend to the lives of children as part of humanity and to humans as part of the larger ecology of the whole creation; and developing modes of pastoral care attentive to climate-anxious children at the micro-, mezzo-, and macro-levels of care.

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[11] Sally Weintrobe explores this phenomenon through a psychoanalytic lens, naming it as a form of "disavowal" (Weintrobe, 2018, 2019, 2020, 2021, 2024). She locates the effects of such disavowed knowledge in moral injury, asserting that "neoliberal culture recruits people to participate in an immoral project, which is to live daily life in a way that collectively causes huge environmental and social damage and is unsustainable. It is a culture that actively 'uncares' people, by encouraging them to damp down their awareness that even ordinary shopping now faces people with moral dilemmas" (2020, p. 352).

Resisting the Dominant Episteme, Recovering Imagination

Epistemic justice for children on behalf of the whole of creation starts with *resistance to the epistemological dominance* of what is termed rational knowledge, with its delegitimation and exclusion of other forms of knowing, through *the recovery of imagination as a privileged epistemology*. Is such resistance possible? Earlier, I mentioned cultural contexts in which the lines distinguishing animate and nonanimate creation are quite permeable. Such strands find embrace in the ecopsychology movement, particularly among those thinkers who consider animism a source of human empathy with the other-than-human creation. A similar embrace of the imaginal collapse of boundaries children often construe between animate and nonanimate also appears within Christian theology. Wallace's (2020) "Christian animism," for example, seeks to recover the earthiness of Christianity's depictions of God's Spirit as a bird and thus the sense of "the continuity of biblical religion with the beliefs of Indigenous and non- Western communities that God or Spirit enfleshes itself within every thing that grows, walks, flies, and swims in and over the great gift of creation" (p. 3). Wallace maintains that deep in the DNA of Christian tradition "is the belief in the Spirit as the animal face of God, even as Jesus is the human face of God" (p. 3).

Such constructive theological retrievals exemplify approaches to a reality that aligns closely with children's imaginative construals of a world with trees that can whisper and give hugs, rivers that sing, and fish that tell secrets about their water lives in their own languages.[12] Epistemic justice toward children resists their delegitimation as knowers by incorporating the epistemic value of fantasy, affective knowledge, intuition, story, and imagination as crucial forms of knowing for life in the Anthropocene. With Taylor (2011, p. 423) and Miller-McLemore (2019), I resist romanticized equations of children with nature that posit children as occupying a location of innocence that is "closer" to nature, which construes both as pure. Affirming the epistemic validity of children's imaginations is about valuing the meaning-making contributions and affective knowledge that children express more freely than many adults in Western cultural communities.

What if communities of *epistemic resistance* committed themselves to exploring what children know through children's connections with the other-than-human creatures and planet that their imaginations may make possible? Philosopher of education Bruner (1986) considered imagination as the storying of "possible worlds." Bruner suggests storying as a means to "explore alternative versions of the human condition, 'possible worlds' as it were. It is the vehicle par excellence for exploring troubles and the possible ways of coping with them" (p. 58). Imagination gives children (and others) the ability to envision what could be, to conjure new possibilities not already self-evident—a critical capacity in the face of the complexity and urgency of climate change. Bruner (2005) spoke of the importance of imagination as "the reality of fiction."

Tateo (2020) amplifies Bruner's idea and the sense in which imaginative knowing constitutes a resistance to the toxic power of the dominant episteme. He writes about fantasy as having "epistemic value" and calls for a "pedagogy of imagination" in which we recognize imagination as a "higher mental function... a meaning making semiotic process." Tateo asserts, "The epistemic value of imaginative activity is exactly the potentiality for exploring new portions of the universe of discourse that have not yet been empirically reached. This is also the reason for imagination to be the first target of tyrants, markets, and orthodoxy" (p. 54). That is, imaginative forms of knowing pose dangers to the status quo as sources for envisioning new alternatives to the present order.

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[12] An interesting example of researchers giving themselves over to alternative ways of relating to the nonhuman world may be found in Willis Jenkins's (2021) report on the Coastal Futures Conservatory project, a multidisciplinary project in which scholars of environmental humanities and sciences worked together using contemplative attention through *listening* to learn about the Virginia coastal ecology amid rapid environmental change. The researchers introduced contemplative listening practices into the research design with the assumption that something new could be known about the coastal ecology by listening rather than via the dominant research approaches alone.

Communities of epistemic resistance committed to the well-being of the planet and of eco-anxious children must risk pushing back against the dominant episteme to re-prioritize other ways of knowing—*metis*, *phronesis*,[13] and affective knowing—sometimes as alternatives and other times as companions to the currently overvalued forms of knowledge that disregard what children know. Christian religious communities ideally should be well poised for such resistance as they have more than 2,000 years of experience with mystical, symbolic, metaphorical, and imaginative modes of apprehension. I picture communities of epistemic resistance operating within faith communities but also occurring in educational and political movement spaces that work to disrupt the ecological devastation of the Anthropocene.

A Humble Theological Anthropology

Epistemic injustice against children entails their nonrecognition as contributors to the knowledge economy of their communities, an erasure of their belonging and participation in the activity of meaning making that is a basic aspect of humanity. Epistemic justice for children therefore must include their recognition as members of the human community. Theological anthropology—the area of theology providing accounts of the nature of human personhood—historically supplies theological warrants for recognition by working out what it means to be a human who lives in relation to God. Recognizing children in their full humanity has long been a problem for Christian theology; recognizing humanity as a part of the wider ecology of the creation remains a problem for (some) Christian theological anthropology. The second aspect of my proposal for epistemic justice therefore involves constructive work toward a Christian theological anthropology addressing children as part of a humanity situated in deep relation to the rest of the creation that is "not God," a task that calls for a humbler approach to the matter than has been the case in some theologies.

Among the most generative resources for theological reflection on children and childhood is the mid-20th-century Catholic theologian Rahner's (1971) essay "Ideas Toward a Theology of Childhood." Rahner provides a theological intervention to the epistemic injustice against children in which their status as knowers and as fully human is undermined by developmentalism that views them as merely "subordinate and preparatory" (p. 34) beings in relation to adulthood. Rahner writes that, in contrast to such viewpoints, for God all time is gathered up in God's eternity and is not subject to "the laws of physical time" (p. 34). In this theological understanding of a life expanse, time is not linear from the perspective of God. Instead of seeing childhood as merely provisional, a temporary stage of life to be left behind for the "more human" state of adulthood, Rahner contends that in God's being as Trinity, it is not only the adult Jesus who is coeternal with God but also the infant and child Jesus. Rahner thereby critiques frameworks marking the significance of a human by means of linear time and developmental status. "We do not move away from childhood in any definitive sense, but rather move toward the eternity of this childhood, to its definitive and enduring validity in God's sight" (pp. 35–36).

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[13] Phronesis, from Aristotle, is often translated as "prudence," or practical wisdom tied to wise action.

Rahner's essay has been a generative resource for many contemporary theologians seeking to disrupt the relative absence of children from Christian theological concern and claim their full humanity (Bunge, 2006; Hinsdale, 2001; Jensen, 2005; Mercer, 2005). Martin Marty (2007), for example, finds in Rahner a resource for seeing children as "mystery" rather than as "problem." As a product of the mid-20th-century time in which Rahner wrote, however, this essay says nothing about the rest of the creation of which all humanity and children-as-fully-human are also a part. On the one hand, Rahner (1971) makes a space for reflecting on children in relation to God, organizing his ideas for a theology of childhood around the question, "In the intention of the Creator and Redeemer of children what meaning does childhood have, and what task does it lay upon us for the perfecting and saving of humanity?" (p. 33). But on the other hand, as can be seen in this question, Rahner's reference point for thinking theologically about children ultimately concerns humanity in a stand-alone existence and not as an embedded part of the wider creation.

Theological anthropologies play a problematic role in relation to environmental concerns when they situate humanity as separate from the rest of the ecosphere. Classical formulations of the God-human relationship tend to focus on human distinctiveness among creatures, first as sole bearers of the *imago Dei,* and then as creatures uniquely able to give glory reflectively and self-consciously to God. Such an emphasis has made these formulations ripe for exploitation as justifications for human species-supremacy. Kelsey's (2009) more expansive language to define theological anthropology—"how God relates to all that is not God" (p. 114)—bears promise as a resource for constructing an ecologically and child-conscious account of the God-human relationship by centering God rather than humanity and by emphasizing creatureliness in common with other created entities as the relevant theological category, locating humankind as one creature among "all that is not God."

Pastoral Care As Personal and Political

The third and final aspect of my proposal concerns the development of strategies for pastoral care with eco-anxious children that simultaneously attends to their mental and spiritual health as a personal phenomenon and also to the structural and societal factors creating the conditions of the climate emergency that leads to children's eco-anxiety. Feminist, womanist, and other liberation theologians long have attended to the structural dimensions of suffering in our work. The recent scholarship of pastoral theologians including Rogers-Vaughn (2016), Johnson (2016), and LaMothe (2022) hones in on the cultural project of neoliberal capitalism as the taproot of much contemporary suffering. Among these, LaMothe in particular makes connections between neoliberalism's ascendency and suffering born out of ecological destruction in the current era.

LaMothe (2019) recognizes caregivers' difficulty connecting the personal level of suffering with the suffering engendered by living in a capitalist society structured by neoliberalism. He therefore suggests a way of engaging in pastoral listening as "two interrelated moments," which he refers to as (1) the immediate encounter in which one engages pastoral listening skills to be responsive to the person before them and (2) the time afterwards, when the pastoral caregiver uses awareness generated by that person's suffering to lead the ecclesial community in actions that identify and act to alleviate sources of suffering at the macro-level of social and structural intervention (p. 431).

LaMothe does not address pastoral care with children per se. But other researchers attentive to climate-anxious children affirm his direction.[14] Australian climate educator Verlie (2022), though writing for a secular educational context, perhaps comes closest to LaMothe's framework as a mode of pastoral care for children with climate anxiety. Verlie calls for three practices of living with and responding to the distress of climate change, which she names as "encountering climate anxiety, witnessing multiple climate realities, and storying climate collectives.... Collectively and reiteratively engaging in these practices can move us from anxiety toward affective transformation" (p. 111). Unlike the focus on developing children's emotional resilience that is often advocated with climate-anxious children, Verlie argues for affective transformation through engagement with the disturbance of climate change, through which there is "a changing of the sense of self from an insulated individual human being to a distributed atmospheric, more than human 'becoming... porously enmeshed with climate change and dynamically changing because of this" (p. 112). While entailing grief over the loss of former selves, this affective transformation "has 'we-creating' potential."... Responding to the impacts of climate change should compel the reorganization of the social systems that created the problem; we need to bounce elsewhere, not bounce back" (p. 113). This is a process she terms "bearing worlds":

> Bearing worlds involves *enduring* the pain that current and potential climate change engenders, while *labouring* to generate desirable and possible, though always uncertain and indeterminate, futures. This is what makes affective transformation more hopeful than emotional resilience: affective transformation requires that climate-complicit peoples change themselves and the socio-economic structures they are entangled with, for it is only through such processes that we might create more promising worlds. (p. 113)

Verlie names three practices through which young people and others can take action: encountering, witnessing, and storying climate change. As decolonial ways of knowing and of giving voice to one's truth, such practices fit easily with efforts to restore epistemic justice among children affected by climate anxiety. Furthermore, Verlie's description of these practices embraces the kind of work LaMothe advocates for pastoral practice, in which care emphasizing change for the suffering person is bound up with interventions focused on the social structures that normalize exploitative relations between humans and the ecology of which they are a part.[15]

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[14] For example, Nairn (2019) echoes LaMothe's model of care with its twin attention to individual suffering and to mobilizing communities to work for change at the meta-level of the causes of suffering. Youth in her study identified participation in collective action as key for generating hope. Trott (2021, p. 300) considers the "transformative potential of everyday activism, especially by children and youth," as a means of caring for young people affected by climate anxiety. Ojala's (2012a, 2012b, 2016) research highlights "meaning making" strategies for coping with climate change that include promoting hope through environmental activism. These researchers along with many others affirm the insufficiency of simply attending to an individual child's climate anxiety as a mental health concern without also empowering agency and hope through activism aimed at structures and systems.

[15] Resources from the environmental education movement may be helpful companions for pastoral practice here. See, e.g., Bryan (2022), Verlie (2019), and Nxumalo and Villanueva (2019).

Conclusion

Epistemic injustice against children is not confined to children whose direct or indirect encounters with climate change cause anxiety. The disenfranchisement of children as knowers is widespread. However, privileging what climate-anxious children know constitutes a critically important theological praxis of justice in line with the present moment's requirement of urgent climate action. Epistemic justice for children matters not simply for these children themselves but for the sake of the whole creation. In the context of the climate emergency, it is vital to bring what children know into the collective knowledge about planetary survival and the well-being of all creatures.

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