

Ted Toadvine. *The Memory of the World: Deep Time, Animality, and Eschatology.* University of Minnesota Press 2024. 344 pp. \$120.00 USD (Hardcover 9781517915995); \$30.00 USD (Paperback 9781517916008).

Our world is a living world of embodied experience. To be alive is to experience the world, not in isolation. How can we apply this to deep scales of time? And how can we think forward to a world (perhaps one without us) and speak meaningfully of the future, especially when confronting a potential climate crisis?

Ted Toadvine has brought forward an interdisciplinary work, combining philosophy of time, philosophy of science, anthropology, epistemology, as well as more modern conceptions of critical theory to build an argument that he argues is missing from discussions of the deep past and future. When addressing the natural world as a whole, much has been lost in translation over how we can relate to these longer periods of history.

Toadvine has drawn inspiration from the work of Merleau-Ponty particularly in distinguishing narrative time from anonymous, cyclical time, but sees a vacancy in dealing with deep time. Another important voice for him is Meillassoux, reflecting on the long periods of seemingly empty time without human reference. For Toadvine, it cannot be that this vast empty world can only find mathematical reference. Mathematical references to nature alone do not make much of a ‘world’ at all. When we speak of the world, we are speaking firstly of experience. For the phenomenologist, even a mathematical world is one of embodied experience.

In summarizing the case of our flawed discussion of nature, this work cautions that:

our obsession with the world’s precarity relies on a flawed understanding of time that neglects the past and present with the goal of managing the future, arguing that it not only misleads sustainability efforts but also diminishes our encounters with the world and with human and nonhuman others... Toadvine suggests that reconciling our embodied lives with the memory of the earth transforms our relationship with materiality, other forms of life, and the unprecedented future. Integrating insights from phenomenology, deconstruction, critical animal studies, and new materialism... argues for a philosophy of time that takes seriously the multiple, pleated and entangled temporal events spanning cosmic, geological, evolutionary, and human durations. (back cover)

Perhaps our modern conversations have been missing the point all along in trying to best define the universal feeling of connection with nature into the deep evolutionary past? Throughout this work, Toadvine asks a great deal of us through mixing in many voices and perspectives from a wealth of different disciplines. It can be a lot to follow, yet the sense of wonder one feels from any awesome connection with nature carries in it a ring of truth that Toadvine is trying to reconcile with his argument.

The first voice in Toadvine’s case comes from phenomenology. Phenomenology takes as its starting point the description of experience and its essential structures. He has chosen here as his chief vantage point, taking for granted that it is a useful tool for reconciling scientific conceptions of the natural world, and the philosopher’s mission to understand it. The challenge is the sheer



scale of time, and here one must ask a first question of anthropomorphism: Does maths exist independently of us? Is it discovered or invented? For if maths is discovered, then it exists independently of our conceptions, but if it is invented, then it is a tool we can wield freely. The reader must decide, in agreement or disagreement, early on how much of this world exists independently of us and whether these questions of conception are valid or not.

Philosophy of time has not been adequately addressed over large scales. Thinkers such as Kant and Heidegger that have spoken about time focus on its inherent subjectivity, but not much has been said about deep time at all. Toadvine ventures headlong into deep, unexplored waters to push previous thinking to a conclusion on matters of the deep past and far future. He takes aim at correlationism: ‘For the correlationist, statements about “ancestral” time – a time prior to all manifestation – are strictly meaningless.’ (14) Seeing as meaning feels strongly embedded in our encounters with ancient life, this cannot be true for Toadvine, who opens the book with a lengthy description of exploring fossils on the Dorset coast.

In many ways, this is an ancient argument brought to a practical present: If a tree falls in a forest and no one is around to hear it, does it still make a sound? To Toadvine, not only does it make a sound, but we *can* hear it, even though we were not there.

Toadvine has divided his work into three parts, the first of which deals with ‘deep time.’ Can deep time be experienced? To Chakrabarty the answer is no, and Toadvine lays out his disagreement. ‘I argue that deep time is an essential structure of human temporal experience and its depths can only be understood in experiential terms.’ (6) We get several distinct shifts away from science, (although Toadvine dialogues frequently with the historical sciences) by referencing ‘the evolutionary memory that we share with other living beings’ (6). The reader may find themselves challenged on this throughout the book. Is this the philosophical equivalent of those that claim to experience their past lives through meditation?

Lived experience carries serious weight in critical theory, but can we apply it to both critical animal studies (venturing into anthropomorphism) and evolutionary time?

The second part deals with animality, and Toadvine’s attempt to take us ‘beyond biologism’ (87) into what he calls memory. Can we conceive of animal memories? Fossils seem to be essentially memories, so why not engage with them as such? What about *extinction* and memory? Here we find what Toadvine refers to early on as ‘incarnate memory’ (7). The tool of choice is an invention of Toadvine’s called *Biodiacratitics*. Toadvine articulates this as ‘modelled on the parallel between life and language as historically evolving webs of differential relations. Biodiacratitical configurations embrace the ontological memory of all evolving life.’ (7) By dealing with animal relation as one would in philosophy of language or philosophy of history, Toadvine draws upon an arsenal never utilized, and the reader must decide whether this is rule breaking.

Another issue the reader must discern for themselves is on this issue of anthropomorphism. Anthropomorphism is a cardinal sin in science. Scientists are not to think of animals like themselves or read human behavior and instinct into other creatures. This is seen as muddy thinking, but Toadvine’s work is an approach that argues for a different approach if the older approaches have failed to find the answer.

The third and final part deals with eschatology and the end of the world. Toadvine could have made an entirely separate book on climate change and yet for him it is the logical endpoint of our failure to correctly conceive of deep time, to blunder on the issues of the future. Are we future fossils? To Toadvine this appears to be a mistake. We are not creating our own geological age in the same way as one may describe the Devonian or Jurassic.

A serious question raised early is whether we are really living in an ‘Anthropocene’? Toadvine argues that:

the horizons of the far future are first opened for us with the discovery of the deep past but that current sustainability efforts risk foreclosing the very future they claim to safeguard. Clarifying our relationship with deep time, both past and future, is therefore essential for critically evaluating the eco-eschatological narrative underlying much of contemporary environmental theory and practice. (8)

When utilizing the tools of the critical theorist, Anthropocene (apparently) legitimates human nature, it should instead be referred to as the ‘Capitalocene’ or ‘Plantationocene’. Anthropocene rationalizes and naturalizes ‘colonial and capitalist violence.’ (8)

However, the Anthropocene is an accurate way of describing our present era for many different reasons, and though not perfect, neither was the Devonian, Permian, Jurassic or Ordovician. It is simply a convenient and useful way of characterizing eras. It need not be as specific as capitalist might be, especially given many nations contributing most to climate change are not capitalist or Western. Much of one’s engagement with this book may come down to whether one believes that Toadvine is using the current tools.

Another interesting question to critically perceive the book is whether there is too much going on here? Are there too many voices, and has this exploration of our relation to deep time included too many disciplines? Those from philosophy of science may find themselves in strong disagreement with the epistemologists, and those with first loyalties to phenomenology may find the explanations of our human experience of deep time at odds with those in critical animal studies.

What can be agreed upon by most is that Toadvine has made a serious, concerted effort in answering a question that has not previously been raised. How do we relate to deep time, and has our disparate, scientific approach been adequate?

Samuel McKee, Manchester Metropolitan University