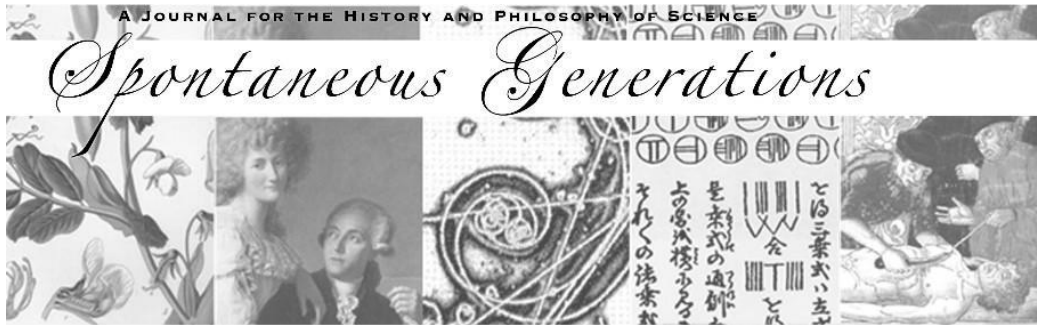




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Do we need faith in expertise to get humanity through the eco-social threats of the Anthropocene? Given the grim prognosis for this proposed period in Earth's history, in which human activity has triggered planetary scale disruption, what can we learn from past and future millennia to live more harmoniously in the present? In *Deep Time Reckoning: How Future Thinking Can Help Earth Now* sociocultural anthropologist Vincent Ialenti tackles these pressing questions and more. Based on 32 months of dissertation fieldwork at a nuclear waste repository in Finland, this book is part of MIT's One Planet Series, which aims at making environmental scholarship accessible to the general reader and useful for enacting positive social change. Ialenti has created a practical guide for anyone interested in addressing our planetary problems; one that draws from the expertise of nuclear safety and anthropology to help develop the reader's ability to think critically about how their actions have impacts across vast time scales. As Ialenti demonstrates, such thinking is desperately needed as Western trends in economics, politics, and the media push for dangerously myopic modes of being in the world.

Ialenti uses his ethnographic account of the working lives of Safety Case experts at the waste management company Posiva as a springboard for thought experiments about Earth's distant pasts and futures. These experts are charged with Finland's nuclear waste containment project on Olkiluoto Island. A Safety Case is an assessment report of the repository's effectiveness across deep time: thousands to millions of years in the future. The experts predict future environmental conditions by studying Earth's past climates. Based on over 100 interviews with Safety Case experts, Ialenti takes the long-term outlooks needed for their work and turns them into thought experiments and lessons, or "reckonings," that publics of both experts and laypeople alike can think with to help develop time-literacy. Time-literacy can be understood as the ability to "extend our intellectual horizons further forward and backward across time" (13). This is a skill Ialenti believes is necessary for living through the Anthropocene because it "can help us take a step back" (102), become more mindful about the ways human actions impact Earth's past and future, and act from that state of mindfulness to accomplish "our shared mission of fending off Anthropocene planetary collapse" (154).

The trouble is that just when our planetary crisis requires collaboration between experts and laypeople across all fields of experience, public trust in expertise is also in crisis. Ialenti refers to the latter as the deflation of expertise, describing it as a historical moment in Western societies characterized by widespread skepticism of knowledge about technology, science, liberal arts education, verifiable facts, truth, and a shared reality. Just when the planet needs experts to help humanity think beyond short-term gains and make more sustainable choices for long-term health, publics spurn experts, further compounding the ecological problem. The solution? Ialenti tells publics to pay attention to the experts and tells experts to become better disseminators of their

knowledge. The goal of his book is “to encourage as many people as possible to pursue long-termist learning” (which requires some faith in expertise) and to support “highly trained, too often ignored, long-termist experts already in our midst” (8). Ialenti argues that cultivating time-literacy can help publics resist the deflation of expertise, imagine alternative, more harmonious worlds, and better align their actions with long-term collective well-being.

Ialenti is right to point out that dealing with the intellectual crisis is necessary for dealing with the ecological one. We need to imagine and create as many alternative ways of living more peacefully on this earth as possible. It will take the expertise of many to do so—and from all walks of life—not just scientists, policymakers, and academics. Deep time-literacy can also draw from the expertise gained from daily living to help people think far forward and back; to sync our experiences of the now in all directions so that our short-sighted gaze becomes long and we can feel our connectedness to life that came before and life yet to come.

Deep Time Reckoning is an accessible guide the combined expertise fashioned from the Safety Case project itself and the ethnography surrounding it. With its lexicon of key terms and engaging prose, this book is user-friendly. It offers practical tips for those who are serious about developing time-literacy. The thought experiments could easily be turned into lesson plans for undergraduates, high schoolers, and even middle schoolers. Reasoning exercises such as following input/output and if/then patterns of thought can teach readers how to think critically about expertise without dismissing it. Ialenti also provides a succinct yet thorough background on the development and transformation of the Anthropocene concept as it has moved across the sciences and humanities over the past few centuries.

However, in an effort to revive public faith in expertise, Ialenti seems to have sided too heavily with the experts. Yes, experts can be well vetted and highly disciplined by the organizations they’ve trained under. Yet unjust social divisions often determine who gets to become an expert, who gets to participate and shape scientific inquiry, and even what aspects of the human experience are deemed worthy of gaining expertise in. Elitism and discrimination are worthy adversaries. Ialenti touches briefly on these challenges but leaves out the complexities and nuances in the crisis of expertise. Perhaps he does this to keep his argument for more trust clear-cut and compelling to a wide audience. His emphasis on making expert knowledge accessible to the layperson, thus inspiring them to address societal problems, is reminiscent of the deficit model in science communication which is based on the assumption that lack of access to knowledge is the main barrier to public engagement in science and social change.¹ Once experts shed the “drab voice of the technocrat” (which “fails to capture hearts, minds, and imaginations”) (p. 7) and learn to communicate their findings more effectively to publics, claims Ialenti, then publics will be more likely to believe what experts have to say and will change their actions accordingly. Yet studies in cognitive science have shown that having the knowledge about an issue alone is insufficient to change attitudes and behaviors.² Knowledge is not quite power, and knowing is less than half the battle.

¹ Molly J. Simis, Haley Madden, Michael A. Cacciato, and Sara K. Yeo, “The Lure of Rationality: Why Does the Deficit Model Persist in Science Communication?” *Public Understanding of Science* 25, no. 4 (May 1, 2016): 400–414. <https://doi.org/10.1177/0963662516629749>.

² Ariella S. Kristal and Laurie R Santos, “G.I. Joe Phenomena: Understanding the Limits of Metacognitive Awareness on Debiasing,” Harvard Business School working paper, No. 21-084, January 2021. <https://www.hbs.edu/faculty/Pages/item.aspx?num=59722>.

Yet knowledge is a good start along the path to reckoning and dealing with our intellectual and ecological crises. Ialenti admits that solving either crisis may be impossible, just as the Safety Case's task of accurately predicting Finland's far off futures is impossible. But as Ialenti concludes, we should accept futility and try anyway. In the face of the absurdly small impact of human action in the grand scheme of millions and billions of years of deep time on a vast universe, rather than give up in the nihilist fashion, we can derive meaning about our collective existence from the journeys we take, together.