Conclusion

Emerging Thoughts and Forging Forward

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The challenge of having a diverse array of authors, even though they all thought with and through a lens of environmental violence (EV), is making the connecting points between their specific contents and various trajectories to harness the whole of the knowledge that emerges from bringing all of these voices together. The authors in this volume offer a multiperspectival vision of EV and its role in the ongoing drama of human-caused environmental change playing out on the world stage. This collection offers countenance, challenges, diverging paths of choice, and empirical guidance to parse through the variations and diversity of EV. However, the unified call is clear: There must be change in how humans are living and interacting with each other and our environments – and collectively with the global ecosystem. This diversity of voices enables many modes and possibilities by which this change can be experienced, expressed, and enacted.

C.1 What Have We Learned?

A key emerging theme of the chapters is that the whole human and the whole planet are touched by EV with similar emerging trends for both. The over-consumption of the Earth's resources is similarly harmful for human health and flourishing as it is for planetary health – whether it is the individual activities we as humans undertake, as Isham demonstrates in assessing optimal human experience and its material requirements, or the environmental damage caused through extraction of minerals to achieve a "sustainable" future and the polluting of the bodies of the vulnerable and marginalized extractors in a process that is patterned globally, as laid out by Montevecchio, ranging from the Philippines to Brazil to the Democratic Republic of the Congo. As the whole human race suffers the many valences and paths of EV, so too does the planet.

The presence of EV in our lives – in our relatively recent past, present, and future – is ubiquitous. Whether as an outcome of our choices in *what* and, critically,

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how much to consume or in the stories and creative acts that make us distinctively human, from art to poetry, EV implications arise from every pursuit. Expressions and connections of EV can be found in the poetry of Pablo Neruda written more than 70 years ago, as articulated by Astorquiza, in the artwork of contemporary indigenous communities coping with the human-caused environmental changes wrought over and resulting from that same 70 years as documented by Sohns. Similarly, Zenner deconstructs tropes of environmental disaster in contemporary film presenting complicated narratives of real, and grossly unequal, environmental risks but intertwined still with persistent dominance of elite and over-represented people and voices reinforcing inequalities in representation.

Even the inventive tools we design and use to engage environmental change can be employed positively and perversely, for example in the legal framework for "prior consultation" across Bolivia, Colombia, and Peru as portrayed by Jaskoski. Schoeppner shows us how maps, often seen as seemingly benign everyday tools for moving about, are made and employed to track human-environmental land and seascapes, a creative act of science and art, but have a history and present potential to both infringe upon and support the sovereignty of (indigenous) people. Our creativity as a species may have no greater example than our development of high technology, but the appropriateness and true viability of technology as the path to a sustainable future is not a given and thus should, posit Mulrow et al., not be taken for granted. Our creative acts that make us distinctly human both encapsulate what EV is and what we do in resistance to it while also giving rise to it in many instances – our creativity and ingenuity have been both cause of and options for coping with EV, but importantly can also be its antidote.

The extensive pervasion or connection of EV to contemporary human activities yields tough questions about the appropriate trajectory forward, and even how we should assess the frameworks for balancing these choices. Damiano, for example, turns the idea of "sustainable development" on its head given the (un) intended consequences its pursuit has wrought to date, and instead offers the alternative mode of "sustainable life" as a more viable pursuit. Tying into this vein, Isham offers empirical evidence to support a transition to sustainable life-thinking through the analysis of material requirements for varied human activities: Not only would the planet be healthier by the pursuit of low-material activities, but people would be happier. In other words, decreasing the quantity of *stuff* consumed by certain groups of people can increase the quantity and quality of life for all groups of people. It would seem an apparent "no brainer" then for transitioning to Damiano's "sustainable life" model, yet the "struggle for sustainability," an apt characterization and account from Mulrow et al. And, in the view of the authors in this volume as attested to in their chapters, this mode of possibility is only progressing in complexity and pervasion.

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Importantly though, many paths to a "sustainable life" assume choice availability and tend to focus on contributions to EV – for example, most people living within a sustainable greenhouse gas emissions allotment, the bottom 50% of the world's population by wealth, are also those most exposed to the effects of climate change begotten by others' emissions [1]. As Abazeri et al., Damiano, Mulrow et al., and others in this volume make clear though, a more apt approach to sustainable development is have those people and places that have "developed" to rein in their "development" and actually become sustainable and correspondingly produce and impose less EV on others. Often, those experiencing EV most acutely have it forced upon them despite being least responsible for it and have limited options for recourse. For example, in Schoenberger's account, the people of the south Pacific exposed to radiation from French nuclear detonations face the double risk of cell damage from exposure but also the daily stress and corresponding cortisol release in their bodies from the perception and knowledge of their exposure. However, there are few alternatives available – other than abandonment – as literally their entire ecosystem is affected and rendered precarious. How can redress be made for these impacts, the tangible but less tractable loss and damage from just knowing you are exposed and the many ways in which this affects and shapes your choices?

Pickett and O'Lear, coincidentally also through the investigation of a case of radiation-centered EV, show that these challenges in valuation and harm assessment exist not only in transnational contexts, where victim and perpetrator are halfway around the world which makes complete externalization of an issue easy, but even within the same state where it can be arduous to render EV valued and visible. Here Peña's epistemic exploration of EV, questioning and refining its core assumptions and how it might pervade the entire lifeway and cosmology of a community, are central to how we "know it," that is the ontology of EV. And Sohns' demonstration of art as witness to EV illuminates how there are many ways of experiencing and consequently expressing engagement with EV, and through these varied outlets arises a more holistic view of the true impact wrought by EV. The EV framework thus draws out the many pathways of harm from the suite of vectors of violence, but the valuations of these impacts are not innately determinate but rather they are dependent upon the ethics, values, and even the epistemological commitments of the diverse collective of stakeholders.

Similarly, the "solutions" that have been proposed for various forms of EV are not seamless and without complication. They too require a balance of values in application if they are to achieve their aim of a sustainable and just future. Montevecchio demonstrates this in the tradeoffs between mining for the minerals necessary for a "green renewable future" and the toxic pollution impacts experienced by the communities in the periphery where extraction occurs. Mulrow et al. think through this question of appropriate technology and its use, and its connection to affluence and

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corresponding consumption, demonstrating that technology alone is not the answer but has to be in concert with intentional restraint and a human choice of "less." Stock's discussion of technology in agricultural production warns how such a salvationist commitment to technology for the production of food – a basic human need – and the absolute pursuit of efficiency and scale, can become self-affirming and an end itself such that the aim of meeting human needs as the primary goal, especially a net assessment of needs-meeting vs. the potential harm arising, is obscured and lost. Again, this draws on a distinctly human characteristic of value-based judgments and intentional collective action, which have to date led us to the predicament that we are in with EV in the first place but, if better calibrated along lines of justice and equity, can provide an appropriate path out of this complex quandary.

The most often used tool to employ and follow such a path is formal policy that binds groups to a particular direction, to positive and negative effect. As discussed in the introduction to this volume, most pollution – and thus most EV – is either legally permitted or unregulated. For example, in the United States, the largest historic greenhouse gas emitter, there is no national environmental regulation for carbon dioxide. This highlights again the point that "sustainable development" may better serve all nations if they can guide those nations that have "developed" to be more ecologically sustainable. But even where there are policy tools explicitly designed to protect communities from the potential negative effects of development, such as the "prior consultation" documented by Jaskoski, they have to be applied consistent with their intent. Otherwise, such tools potentially simply become a mechanism for furthering and legitimizing EV, again such as prior consultation or the financial subsidies for agriculture meant to support food security but that rather end up feeding polluting industrial agribusiness as Stock highlights. And even the rampant and unnecessary consumption with corresponding pollution that is regulated and legally permitted, since what is *needed* to maximize human flourishing and sustainability is not calculated when determining pollution permits.

Emerging as transnational policy considerations, Montevecchio's case of mining to service the "renewable transition," Chesler's case of human displacement caused by EV, and the question of economic degrowth and redistribution discussed by Abazeri et al. all highlight the need for comprehensive and synchronized policies from local-to-global contexts. This trans-scalar cohesion and coordination is necessary to prevent ecologically unequal exchange [2], to prevent perpetuating one form of EV for the pursuit of reducing another, and to recognize the transboundary sovereignty challenges of EV. The EV framework draws out these policy challenges, as demonstrated through its application in each chapter, offering critical calibration power to the formulation of any new environmental policy.

Many other emergent themes arise from the assemblage of perspectives and modes of inquiry brought together in this collection. One undergirding sentiment

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to all of the contributions is a profound concern for the current direction of humanity. There is no hiding the recurring concern for the direction our planet is going as a result of human actions: our actions. There is a plethora of publications – from news media to science fiction to peer reviewed social and environmental science literature – founding and affirming this concern and sounding the alarm. It is easy to quickly become disheartened and riskily apathetic, or even experience the increasingly recognized phenomenon of "climate anxiety" [3]. It is important to acknowledge the realities these fears are founded in and are indicative of the fingerprint of EV that can be found on every aspect of the modern human condition and is the single largest challenge to human and planetary flourishing. But it is also important to embrace and gather the energy that these concerns and fears beget and direct them toward action. Care must be taken so as to not sell false narratives, empty alternatives or unrealistic hopes, of which there are many as our authors point out, but hope should not be, and is not, lost.

C.2 What Gives Us Hope?

It is not always easy to find hope when thinking about the environmental challenges that humanity faces today. As we did in the introduction, it is important to note that many humans are living longer lives than ever before [4]. Infant mortality is at its lowest levels in our evolutionary history [5]. And much of humanity has the greatest technological and material access and use (and abuse through excess use) of any humans to walk the Earth. We could point to these facts, full stop, and label them as sources of hope. But as we made clear before, it seems we may have hit an inflection point in the human story that threatens this progress on both quantity and quality of life. So those facts, taken at face value, are unstable and potentially untenable.

So where to look? One often cited source of hope is the platitude that "we created the problem, so we can fix it." While true, it is not very descriptive. It is not actionable, demonstrable, nor self-evident. It sounds and maybe even feels good at first, but in the end leaves you guessing and empty. From this volume we draw on three sources of hope. There are many more in the volume and that can be found elsewhere. But these three we find most compelling.

First, the idea that the humans most responsible for EV through excessive consumption would, on average, be both healthier and happier using less and thus contributing less to EV is a critical source of hope [6–9]. While the path to getting people to buy into Isham's pitch of self-actualization through low-material flow experiences and live out Damiano's proposed "sustainable life" is unclear, the empirical evidence is compelling. It is particularly important that those most responsible, and who thus have the most power and available choices to affect their EV contributions, would also be better off. Using less and thus contributing less is not a sacrifice

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or a reduction in quality or quantity of life – it would enhance it. This results in the choice of using less to be the most "correct" answer whether applying a normative framework oriented toward the collective good or a self-interested framework focused on maximizing individual utility. In other words, what is good for the self is good for the whole – and in this case for the planet too.

The second source of hope is the possibility of regenerative production. Whether through the application of holistic management practice [10] for regenerative agriculture that promotes food production and ecosystem vitality toward an agriculture of flourishing, as Stock points to in the Catholic Worker model, or through myriad other regenerative production schemes that have been evaluated to date [11], regeneration offers the possibility of concurrently caring for human and planetary flourishing. Producing toward meeting human needs and flourishing is thus not inherently antithetical to ecosystem flourishing, and is also not antithetical to technological innovation as some of the most productive regenerative systems thoroughly integrate artificial intelligence, machine learning, and unmanned automated vehicles in their production process [12]. This does not mean that lifeways will not have to be adjusted and calibrated to new products, activities, and ecologies [11]. Much change is needed to harness the power and value of regenerative praxis. And pursuing regenerative production does not inherently result in equality and equity, and therefore is not a standalone solution. But it does offer alternative means by which human flourishing and planetary functioning can be repaired and sustained despite the broad reach and impact of EV [13].

The third is that cooperation, coordination, and collaboration are the predominant mode of humanity's action. For more than two million years, the genus *Homo* (human ancestors) have been navigating the ecological, social, and structural challenges of living on and with the Earth and its other inhabitants by working, thinking, and acting together, constructing niches and shaping worlds and we are in turn shaped by them [14–18]. As noted earlier, this distinctive dynamic has led to both the best and the worst of outcomes. But yet it remains as humans' first and best capacity for reshaping our economies, ecologies, and societies. Harnessing it, as suggested by many in this volume and as we are suggesting here, is not a pipe dream, but it is also not easy. Recognizing humanity's deep bodily and cognitive commitment to working together is a first step and thinking, together, on how to harness and deploy it is the true challenge.

C.3 What Is the Way?

The way forward for shedding EV from its current tier in structuring the human condition and regenerating the damage done to date cannot be simply prescribed. There is no static solution that can be pre-constructed to address all of the

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complexity and ever evolving production and distribution of EV. And this volume does not feign to proffer such an antidote. This volume does offer tangible, real steps toward a sustainable and less environmentally violent future. But they do not constitute a structured prescription.

The fundamental principles that arise from this volume which act as guideposts for us toward achieving this vision are: equality, equity, inclusion, polycentricity, and holism. In any choice with EV implications tied to it, the equality of the distribution and likely realized impacts arising from the different options must be considered, as well as the equality of total contributions. In other words, the different alternatives and their EV footprint must be assessed as well as the cumulative contribution of EV from the person or group taking the action to ensure equality in both contribution and distribution of EV, while actively working to drawdown all EV. This is requisite for distributive justice. Contemporaneously, equity in historical EV emissions that have and continue to cause damage must be considered to reconcile a long history of inequality in EV contributions and resulting distributions of harm. This is requisite for restorative justice. Ensuring inclusion such that all impacted stakeholders have a fair and equitable say in EV-related decision-making is essential to maintain individual and collective freedom and sovereignty. This is requisite for procedural justice. Approaches to safeguarding these principles and achieving their aims require holistic, comprehensive but attentive and adaptive schemes that can be actively shaped and reshaped to meet the needs of individuals and communities as they work against EV and pursue a future of flourishing.

EV does not have to be a part of any person's daily life and there are many pathways to achieving such a future. Environmental violence is not a deterministic state that must accompany contemporary humanity and the many ways in which our varied communities live and seek to thrive. The distribution of EV can be flattened even while development proliferates in the many impoverished and marginalized communities whose human right to a "clean, healthy, and sustainable environment" is not currently respected [19] and who are unequally oppressed by EV. There is no single path to such outcomes prescribed in this volume. But what is made clear is that EV is not an inherent, immutable part of the human story and that holistic, equitable, and polycentric approaches can play substantive roles in ameliorating the damage and harm of EV globally and locally.

References

[1] UNEP. The emissions gap report 2020 [Internet]. Nairobi, Kenya: United Nations Environmental Program; 2020 [cited Dec 17, 2020] p. 128. Available from: www.unep.org/emissions-gap-report-2020

[2] Givens JE, Huang X, Jorgenson AK. Ecologically unequal exchange: A theory of global environmental injustice. *Sociology Compass.* 2019;13(5):e12693.

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[3] Wu J, Snell G, Samji H. Climate anxiety in young people: A call to action. *The Lancet Planetary Health.* Oct 1, 2020;4(10):e435–6.
[4] World Bank. Life expectancy at birth, total (years) | Data [Internet]. Washington, DC: The World Bank; 2020 [cited Oct 14, 2021] p. 3. Available from: https://data.worldbank.org/indicator/SP.DYN.LE00.IN
[5] Vollset SE, Goren E, Yuan CW, Cao J, Smith AE, Hsiao T, et al. Fertility, mortality, migration, and population scenarios for 195 countries and territories from 2017 to 2100: A forecasting analysis for the Global Burden of Disease Study. *The Lancet.* Oct 17, 2020;396(10258):1285–306.
[6] Isham A, Jackson T. Finding flow: Exploring the potential for sustainable fulfilment. *The Lancet Planetary Health.* Jan 1, 2022;6(1):e66–74.
[7] Isham A, Gatersleben B, Jackson T. Materialism and the experience of flow. *J Happiness Stud.* Apr 1, 2021;22(4):1745–68.
[8] Isham A, Gatersleben B, Jackson T. Flow activities as a route to living well with less. *Environment and Behavior.* May 1, 2019;51(4):431–61.
[9] Isham A, Gatersleben B, Jackson T. Why do materialistic values undermine flow experiences? The role of self-regulatory resources. *European Journal of Applied Positive Psychology.* 2021;5(10):12.
[10] Butterfield J, Bingham S, Savory A. *Holistic management handbook*, Third Edition: Regenerating Your Land and Growing Your Profits. Island Press; 2019. 266 p.
[11] Hawken P. *Regeneration: Ending the climate crisis in one generation*. Penguin; 2021. 700 p.
[12] McLennon E, Dari B, Jha G, Sihi D, Kankarla V. Regenerative agriculture and integrative permaculture for sustainable and technology driven global food production and security. *Agronomy Journal.* 2021;113(6):4541–59.
[13] Schulte LA, Dale BE, Bozzetto S, Liebman M, Souza GM, Haddad N, et al. Meeting global challenges with regenerative agriculture producing food and energy. *Nature Sustainable.* May 2022;5(5):384–8.
[14] Fuentes A. *The creative spark: How imagination made humans exceptional*. Penguin; 2017. 354 p.
[15] Gamble C, Gowlett J, Dunbar R. The social brain and the shape of the Palaeolithic. *Cambridge Archaeological Journal.* Feb 2011;21(1):115–36.
[16] Spikins P, French JC, John-Wood S, Dytham C. Theoretical and methodological approaches to ecological changes, social behaviour and human intergroup tolerance 300,000 to 30,000 BP. *J Archaeol Method Theory.* Mar 1, 2021;28(1):53–75.
[17] Sterelny K. *The Pleistocene social contract: Culture and cooperation in human Evolution*. Oxford University Press; 2021. 203 p.
[18] Galway-Witham J, Cole J, Stringer C. Aspects of human physical and behavioural evolution during the last 1 million years. *Journal of Quaternary Science.* 2019;34(6):355–78.
[19] UN GA. *The human right to a clean, healthy and sustainable environment* [Internet]. New York, NY: United Nations General Assembly; Jul 2022 [cited Aug 20, 2022] p. 4. Available from: https://digitallibrary.un.org/record/3982508

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