Modern Intellectual History (2025), 1–12
doi:10.1017/S147924432510022X

CAMBRIDGE UNIVERSITY PRESS

REVIEW ESSAY

Governing the Miracle

Julia Nordblad

Department of History of Science and Ideas, Uppsala University, Uppsala, Sweden
E-mail: julia.nordblad@idehist.uu.se

Jonathan S. Blake and Nils Gilman, *Children of a Modest Star: Planetary Thinking for an Age of Crises* (Stanford: Stanford University Press, 2024)

Alyssa Battistoni, *Free Gifts: Capitalism and the Politics of Nature* (Princeton: Princeton University Press, 2025)

Between 1991 and 1993, four women and four men spent two years voluntarily locked into a sealed glass and steel structure in the Arizona desert. Biosphere 2, as the facility was so modestly called, was designed to function as a miniature self-sustaining replica of the Earth. It encompassed small-scale versions of a fog desert, a rainforest, a mangrove, savanna grasslands, an ocean with a coral reef, and an agricultural zone—all within an area the size of two soccer fields. The project was an exceptional experiment in ecological engineering, seeking not only to re-create but also to concentrate and enhance the essence of the original biosphere's vital functions. The question that the project sought to answer (pertinent in an age of space colonization dreams) was whether an ecological replica could sustain the eight humans and all their biological needs for a prolonged period of time. The answer to this question turned out to be no.[1]

Failures in the Biosphere 2 anthropogenic life-support system were legion and unforeseen. Trees inside became frail and threatened to fall and cause damage to the structure, temperatures and CO_2 levels soared, the atmosphere in the facility degraded as oxygen levels sank from 21 to 14 percent (a level usually experienced by mountaineers at some 5,300 meters of elevation), and eventually oxygen had to be injected into the structure to keep the "biospherians," as the crew were called, well. Food production slumped, and the participants had to eat directly from the seed stock meant for sowing – one of the participants was reported to have lost twenty-five kilograms during his time in the experiment. Nineteen out of the twenty-five vertebrate species brought inside became extinct, as did the majority of insect species, including all pollinators (which, in an *in situ* space scenario, would have added the task of manually pollinating plants to the crew's workload). Not all species fared ill, however: morning glory

[1]Joel E. Cohen and David Tilman, "Biosphere 2 and Biodiversity: The Lessons So Far," *Science* 274 (Nov. 1996), 1150–51, at 1150.

© The Author(s), 2025. Published by Cambridge University Press. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/4.0), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

prospered inside the facility (forcing the biospherians to spend much of their time culling it), and cockroaches and "crazy ants" (*Paratrechina longicornus*) thrived too.

A summary of the experiment's results published in *Science* in 1996 described how the biospherians "had to make enormous, often heroic, personal efforts to maintain ecosystem services that most people take for granted in natural ecosystems. Even these efforts did not suffice to keep the closed system safe for humans or viable for many nonhuman species." Inside Biosphere 2, the task of maintaining the life-support systems normally provided by the original biosphere proved incredibly laborious: the Promethean quest for engineered planetary habitability made the everyday life of the crew Sisyphean. The whole experiment suggests that the workings of the biosphere and other systems of planetary habitability are still largely unknown to science (and perhaps unknowable). As the article in *Science* summarized it, "the major retrospective conclusion that can be drawn is simple. At present there is no demonstrated alternative to maintaining the viability of Earth. No one yet knows how to engineer systems that provide humans with the life-supporting services that natural ecosystems produce for free."[2] Or in the words of the biologist Enric Sala, "in essence, what it did show is that our planet is a miracle."[3]

The Biosphere 2 experiment has been discussed in detail in the history of environmental-science literature as it powerfully captures nature's unique, complex, and ultimately unreplicable role in sustaining conditions for human life on Earth.[4] It thereby also exemplifies a key concept that has emerged in environmental history and humanities in the last decade. Prompted by the writings of Dipesh Chakrabarty, a growing number of historians now explore planetary habitability as both a historical category and a theoretical framework for understanding the environment—a perspective that encompasses not only climate change but also other threats such as biodiversity loss.[5] Two new books examine the consequences of the planetary perspective for political thought and politics more broadly: Jonathan S. Blake and Nils Gilman's *Children of a Modest Star: Planetary Thinking for an Age of Crises* (2024) and Alyssa Battistoni's *Free Gifts: Capitalism and the Politics of Nature* (2025). The books share the ambition to diagnose our current inability to protect the planetary systems that sustain habitability, to imagine what a political order accounting for these systems might look like, and to mobilize intellectual historical analysis in doing so. But the similarities end there, since the books propose very different understandings of what kind of problem the planetary environment is, and thus how it should be tackled. They also suggest diverging interpretations of how planetary habitability as an environmental concept should be interpreted. Alyssa Battistoni takes a political-theoretical approach,

[2]Ibid.

[3]Enric Sala, *The Nature of Nature: Why We Need the Wild* (Washington, DC, 2020), 14.

[4]See, for example, Drew Pendergrass and Troy Vettese, *Half-Earth Socialism: A Plan to Save the Future from Extinction, Climate Change and Pandemics* (London, 2022), 22–6; Sala, *The Nature of Nature*, 11–17; Leah Aronowsky, "The Planet as Self-Regulating System: Configuring the Biosphere as an Object of Knowledge, 1940–1990" (unpublished Ph.D. thesis, Harvard University, 2018), 130–48; Battistoni, *Free Gifts*, 179–80; and Alyssa Battistoni, "A Repair Manual for Spaceship Earth," *Logic(s)* 9 (7 Dec. 2019), at https://logicmag.io/nature/a-repair-manual-for-spaceship-earth (accessed 12 Sept. 2025).

[5]Dipesh Chakrabarty, *The Climate of History in a Planetary Age* (Chicago, 2021). See also Geoff Mann, "Planetary Politics and the Climates of History," *Modern Intellectual History* 21/4 (2025), 1–11.

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

and systematically discusses some well-rehearsed but still unresolved issues in environmental thought and practice in the dominating climate paradigm, with a particular focus on economic theory. Blake and Gilman address the problem from a technocratic perspective, where science-based institutional design is the principal object of discussion and the proposed solution. These differences are not merely a matter of diverging disciplinary and political perspectives; they reflect different conceptions of the planetary. The books' respective qualifications of the planetary, and the differing political consequences these entail, are instructive for the purpose of articulating the stakes of the planetary turn—and for moving the discussion forward.

* * *

In *Children of a Modest Star* the planetary differs from other environmental concepts by virtue of its scale. The degradation of planetary habitability is an issue of the vastest of dimensions, and Blake and Gilman argue that protecting it requires a matching level of governance, which means that the book reopens the old question of world government. The authors do not shy away from grand gestures; they call for intellectual boldness to leave behind what they claim to be false political ideas grounded in an old worldview with humans separate from nature, and move on to "new political concepts and institutions that are founded instead on the real human condition, that understand us as fragile nodes in a mind-bogglingly complex network, inextricably embedded and enmeshed in planet Earth" (101, 195).

More concretely, they suggest a supranational level of government consisting of a set of agencies, each responsible for one planetary-scale issue. These agencies should be strictly limited to dealing with one particular issue each. They "should be capable of providing an adequate solution to planetary problems" but remain as minimal as possible, and be tasked only with setting frameworks and targets. All choices regarding their implementation should be pushed down the decision-making ladder to the national or local level. Blake and Gilman introduce the term "planetary subsidiarity" for the principle that any issue should be governed on the lowest level possible, which is to guard against mission creep and the resulting loss of legitimacy. Planetary problems are, in this reasoning, by definition only effectively resolvable on a supranational level, and that is then the lowest level possible. The agencies themselves would in this way be granted "just enough authority to govern a particular planetary problem effectively" (164–5). In other words, the design of the planetary agencies should perfectly match the issue they are set to govern, and accord them the precise amount of power to address these issues. This approach to habitability preservation therefore depends upon the possibility of science to adequately break down into discrete political issues what the authors call humanity's "*condition of planetarity*, the inescapability of our embeddedness in an Earth-spanning biogeochemical system," and the assumed power of institutional design to create political agency (8, original emphasis).

From the perspective of planetary habitability, this approach introduces two problems. First, the amount of power deemed "just enough" to solve an issue presupposes that the question is known in its precise workings and can be neatly circumscribed. But where is the beginning and end of an issue like the planetary-habitability generation of the biodiverse biosphere? What metrics could enable the setting of general targets and norms that can then be implemented at lower levels, in analogy with the temperature targets in climate governance? Biologists and other scholars have, for

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

example, endlessly and unsuccessfully struggled to find a unified and quantifiable metric for biodiversity. Planetary subsidiarity rests on the knowability, predictability, and transparency of planetary habitability—all seriously questioned by the Biosphere 2 experiment that demonstrated science's incapability to manage even simplified, small, discrete biospheres, and leaves in doubt our ability to successfully divide up the miraculous biological weave that envelops the Earth. This could be why the Biosphere 2 episode, despite being well known in the environmental literature (it is discussed in Battistoni's book) and ostensibly relevant to their definition of planetarity, is not even mentioned in Blake and Gilman's otherwise fairly extensive inventory of the "interdisciplinary archive of Western science and philosophy to track the emergence of the concept of the Planetary" (74).

More generally, in their summoning of a planetary tradition—encompassing such historical material as the noosphere concept, the science of ecology, and the Gaia concept—there is no recognition of the radical uncertainty of human knowledge of the biosphere, although it has been a persistent theme in much ecological thought. Blake and Gilman acknowledge the idea that the Earth's systems aren't completely known, and that there is complexity and unknowability, but take this as a call for continuing the scientific quest to enhance what they call planetary sapience rather than understanding ignorance as an inherent part of the planetary condition (177–8). What would it yield to instead start from a position of epistemic humility and imagine a system of governance that took the unknown and perhaps unknowable character of planetary nature into account? After all, what is the meaning of assuring that the planetary institutions will not be given an inch more than "just enough power" to effectively contain the threats to the habitability systems, if those systems, and their extent and interconnections, are essentially or in important parts unknown to science? In contrast, we can consider the philosopher Dale Jamieson's argument that, faced with the radical insecurity about the working of a planetary system (climate change, in his discussion), governance cannot be guided by a quest for the optimal, but should rather be envisioned as operating according to principles such as margins of safety, robustness, precaution, and redundancy.[6]

Blake and Gilman attempt to escape these difficulties by simply avoiding the proposal of a planetary agency responsible for the biosphere. For all their underlining of "human embeddedness in the kaleidoscopically interwoven ecosystems that make up the biosphere" (100), the planetary agencies they outline are for other issues, like climate change and pandemics. More such institutions would be needed, the authors admit, and gesture towards agencies for very specific aspects of biospheric functions, such as the nitrogen cycle (164). Important as this issue is for safeguarding marine, lacustrine, and fluvial life, such an agency is unlikely to offer protection enough to halt the accelerating degradation of nature, comprehensively documented and synthesized by the IPBES, the UN intergovernmental body for biodiversity protection, often referred to as the IPCC for nature.[7]

[6]Dale Jamieson, *Reason in a Dark Time: Why the Struggle against Climate Change Failed and Why Our Choices Still Matter* (Oxford, 2014), 137.

[7]IPBES, *Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (Bonn, 2019).

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

The lack of clarity concerning institutional design is not easily resolved as long as planetary habitability is conceived as a problem of scale. Blake and Gilman take this as a given, asserting that "without planetary institutions that meet the scale of the problems, planetary challenges will remain ungoverned" (163). However, this argument rests on a particular understanding of the planetary, and the book offers no real argument for it or discussion of alternatives. Nevertheless, historians have recently suggested that the idea of planetarity as a matter of scale is not self-evident but the product of historically contingent techno-scientific arrangements tied to political power.[8] After all, the specific kind of knowledge about planetary degradation that Blake and Gilman evoke is mediated through a historically situated scientific program, Earth system science, which not only reflects the geopolitics of its time through its reliance on technology only affordable by the militarily and economically hegemonic powers, but in its focus on global modelling also fosters precisely the idea that environmental issues are only governable on a global level.[9] There is thus a considerable risk that Blake and Gilman's political arrangement is not science-based, as they assert, but rather power-based. As such, its claim to special effectiveness in halting habitability degradation is dubious.

The second problem with the approach encompassing a structure of supranational agencies and planetary subsidiarity based on Earth system science is that the planetary condition is not only that we are wholly dependent on an intricate web of life that is degrading. It also encompasses all the historical, social, and political tensions within that "we." We share dependence on the biosphere with all other humans on the planet, but the extent to which different societies' and communities' resource use impedes life-supporting functions is radically unequal and the product of historical relations of domination. It is an absurdly commonplace fact that the basic needs of billions of people on this Earth are not met. Around 28 percent of the world's population is currently food-insecure, and 8 percent face outright hunger.[10] Simultaneously, others live with unfathomable levels of affluence that threaten the habitability systems of all. Oxfam has calculated that, in the last three decades, the crops lost due to climate change linked to consumer emissions caused by the world's richest 1 percent could have been used to feed roughly 14.5 million people over the same period.[11] As we know from the struggles to limit climate change, it is politically unworkable—if nothing else—to ask those in need to limit their use of the biosphere. Historical injustice further complicates the protection of planetary nature, particularly where certain ecosystems, such as

[8]Deborah R. Coen and Fredrik Albritton Jonsson, "Between History and Earth System Science," *Isis* 113/2 (2022), 407–16.

[9]William Rankin, *After the Map: Cartography, Navigation, and the Transformation of Territory in the Twentieth Century* (Chicago, 2016), 2; Sheila Jasanoff, "Image and Imagination: The Formation of Global Environmental Consciousness," in Jasanoff, *Science and Public Reason* (Abingdon, 2012), 78–102.

[10]FAO, IFAD, UNICEF, WFP, and WHO, *The State of Food Security and Nutrition in the World 2025: Addressing High Food Price Inflation for Food Security and Nutrition Financing to End Hunger, Food Insecurity and Malnutrition in All Its Forms* (Rome, 2025), xii, at https://doi.org/10.4060/cd6008en.

[11]Oxfam International, *Carbon Inequality Kills: Why Curbing the Excessive Emissions of an Elite Few Can Create a Sustainable Future for All* (Oxford, 2024), 20.

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

the Amazon, play a significant role for the planet as a whole. Climate justice could—at least theoretically—be operationalized by granting a larger share of the remaining carbon budget to countries that have contributed less to the total accumulated emissions of greenhouse gases. But since ecosystems cannot be moved or substituted, there is no "currency," like carbon dioxide equivalents in the case of climate change, that can be used to equitably divide up the use of the biosphere.

The planetary condition is, in other words, not just a shared embeddedness in planetary life-support systems; it is also a historical, economic, and political situation of radical inequality and unmet needs for billions. Starting from this situation, a useful program for science aimed at guiding planetary government would look very different from Blake and Gilman's focus on detecting global-scale environmental change. A political planetary sapience could include endeavors such as finding out how much biophysical resources would be required to achieve universal human well-being by some definition; what material quality of life could be achieved by all without serious degradation of the habitability systems; or how far and under what conditions qualitative social goals like democratic participation, social support, and life satisfaction can be decoupled from biospheric pressure.[12] A political planetary sapience could also involve finding models of international economic cooperation that would allow low-income countries to protect ecosystems of planetary importance. If Blake and Gilman's unspecified claim that "there are real and powerful antiplanetary forces in governments and corporations around the world" (13) was taken seriously, planetary sapience might also address the issue of how such models of provision can be achieved politically and socially. Or what kinds of political community and future horizons of aspiration can be cultivated beyond private material consumption. In other words, planetary sapience could include collected prudence, practical political experience on how to build political alliances, and programs that make reduced material and energy consumption both politically possible and electorally viable.

Yet there is no trace of such research in this book. Instead, the authors hint at the future prospect of solar geoengineering, a technology that promises control over global temperatures through artificial manipulation of the solar radiation reaching the Earth (168). Such schemes, of course, again rely on the questionable assumption that the Earth system is sufficiently known to allow accurate enough predictions of the effects on the biosphere, and thus on the habitability systems. Needless to say, such interventions are also highly controversial due to the enormous scale and temporal reach of their ultimately unforeseeable consequences.

If it is structurally unclear how much authority is needed to protect a specific aspect of the biosphere, the same is true for the social systems surrounding it. Consider, for example, the long-standing struggle around industrial agriculture and its unintended, yet harmful, effects on biodiversity—including the foreclosed possibilities to retrieve and develop earlier practices that are more labor-intensive but less destructive of the quality of the soil, the surrounding biodiversity, and the diversity in agricultural

[12]For research along these lines see, for example, the work done by Julia Steinberger's research group at the University of Lausanne, such as Daniel W. O'Neill, Andrew L. Fanning, William F. Lamb, and Julia K. Steinberger, "A Good Life for All within Planetary Boundaries," *Nature Sustainability* 1/2 (2018), 88–95, at 88.

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

crops and animals. How much authority is "just enough" to establish a planetary perspective on a complex and politically inflammable issue like food production, with its far-reaching political and ecological consequences? It seems implausible that a successful political process aimed at easing the pressure on the biosphere would begin by positing the absolute limits of the issue.

A convenient effect of conceptualizing the planetary as a question of scale is that it allows it to be decoupled from economic issues that tend to be politically tricky. For Blake and Gilman, the economy is a realm defined by scale, in analogy to the planetary. The economy is that which pertains to the national level, and it exists seemingly without links to the international or supranational governance level they propose (9). But their reluctance to discuss the planetary in economic terms effectively strips the habitability framework of much of its potential for new understanding and political analysis. As we will see, Alyssa Battistoni's book, in contrast, suggests that the planetary-habitability framework poses challenges to environmental politics that are profound, even transformative, if taken seriously. Yet for all its promises of "new political concepts and institutions" founded on "the real human condition" (101), *Children of a Modest Star* consistently avoids engaging honestly with those challenges.

In light of that avoidance, and the principled cutting off of economic questions, it is pertinent to note that the authors are both employed by the Berggruen Institute—a "think and action tank" set up to "reconsider the foundational ideas that our contemporary institutions embody, including what it means to be human."[13] With this objective, it has established centers in lavish locations in Los Angeles, Beijing, and Venice, from where it awards academic prizes, organizes lush events, and pumps out publications that promote a particular understanding of the planetary.[14] The institute is funded and run by Nicolas Berggruen, a finance billionaire and inheritor of a vast art collection, described in glossy magazines as "soft-spoken" and "a modern-day Medici." For a while, he practiced the 0.1 percent version of an alternative lifestyle by selling all his real estate and limiting his material belongings to a small bag of clothes and a private jet with which he travelled the world as the "homeless billionaire."[15]

Private funding—even of the eccentric kind—does not, of course, disqualify an intellectual project per se. But the particular agenda of the Berggruen Institute, and the active role seemingly taken by its founder in the think tank's intellectual activities, raises the question of what kinds of interest it is possible to challenge in a plan for world governance funded by a billionaire, however serene. Blake and Gilman's book is notably polite on global capital and its institutions, and the new class of politically ambitious charisma-cultivating billionaires—including their role in degrading the

[13]Berggruen Institute, "An Institute Exploring the Ideas We Need for Our Changing World," at https://berggruen.org/about (accessed 7 July 2025).

[14]Berggruen Institute, "The Planetary," at https://berggruen.org/themes/the-planetary (Accessed 7 July 2025).

[15]Cari Beauchamp, "One of Hollywood's Most Storied Estates Gets a Second Act," *Town & Country*, 20 Aug. 2022, at www.townandcountrymag.com/leisure/sporting/a40784827/beverly-estate-nicolas-berggruen-marion-davies-hearst-photos (accessed 11 Sept. 2025); James Reginato, "Nicolas Berggruen, the Modern-Day Medici," *Financial Times*, 29 May 2024, at www.ft.com/content/44e6da0c-2a51-4198-add5-7aafbc415555 (accessed 11 Sept. 2025).

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

planet's habitability systems. Ultimately, it is difficult to shake off the sense that *Children of a Modest Star* says one thing while doing another. And what it effectively does is reconcile the planetary perspective with the interests of the global billionaire class, and help prop up a new type of global political power—itself unlimited by supranational regulatory institutions—that seeks to contain the environmental question through Promethean beliefs in transgressive technofixes, such as synthesizing programmable life forms (also on the Berggruen agenda) and geoengineering, where the effectiveness against planetary-habitability degradation is ultimately questionable.

* * *

Instead of seeking to contain planetarity by defining it as an issue of a particular scale, Alyssa Battistoni's *Free Gifts: Capitalism and the Politics of Nature* uses the failures to deal with nature's habitability function as a starting point for a critical examination of nature in economic life and theory under capitalism. This is a plausible perspective for understanding the ongoing failure to protect the habitability systems because "one of the densest sites of interaction between 'nature' and 'society' is in the material realm we call the economy" (7). *Free Gifts* immediately places itself in the literature scrutinizing capitalism's relation to nature, but the author, a political theorist at Barnard College, draws on a number of very different traditions of thought to diagnose the problem of environmental destruction.[16] In a nutshell, Battistoni argues that the problem of planetary degradation stems from a structural issue in market societies whereby nature is inevitably devalued and mismanaged, with the result that the planetary systems of habitability will helplessly erode. Capitalism as a societal system is structured around the pursuit of value, but is simply unable to capture certain aspects of the world as value. The habitability-supplying aspect of nature is one of them; reproductive labor—a long-standing problem for feminist economists and philosophers—is another. Instead, nature appears as a "free gift" in capitalist societies, as "something that can be taken without payment or replenishing; something that is materially useful but that tends not to appear in exchange" (3).

The gift of habitability cannot be commodified, but when treated as free its shadow emerges in the form of pollution (understood broadly here as climate destruction, biodiversity loss, and so on) and as a consequence habitability erodes. This particular type of exploitation, Battistoni argues, is systematic and essential, and in effect "foundational to how capitalism works" (4). The free gift therefore differs from the familiar form of the commons in that it does not appear outside capitalist relations but as an integral part of them. Capitalism depends on the material world offered by reproductive labor and planetary nature, yet in a capitalist society these appear as free gifts determined to be degraded and exploited (193–6). Battistoni draws the term "the free gift" from a phrase Marx used in passing in Volume Three of *Capital* to describe nature's contribution to the productiveness of labor (32). In her account, the term not only is apt for the phenomenon at the center of her argument; it also exemplifies her overall intellectual modus operandi—taking something seemingly marginal, said in passing, and using it to illuminate a universally operating mechanism.

[16]See, for example, Jason W. Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital* (London, 2015).

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

Battistoni's book mobilizes several different intellectual traditions, mostly heterodox and critical economic thought and political philosophy, and engages with them at an impressive level of precision in order to systematically chisel out multiple aspects of her political theory of the free gift. The centerpiece of this engagement is a critical historical account of the idea of the externality in economic thought, via a discussion of three of its major theorists (Chapter 4): the neoclassical welfare economist Arthur Pigou (1877–1959), the neoliberal economist Ronald Coase (1910–2013), both Brits, and the German Frankfurt school-inspired economist William Kapp (1910–76). The externality—basically the idea that specific aspects of the economy such as pollution fail to appear in the market through prices, something that is to the detriment of society as a whole—is presented as a long-underestimated but pivotal problem in political and economic thought. Battistoni argues convincingly that the externality represents the dominant framework in the current economic and political paradigm for understanding climate change as a societal problem, and thus underpins mainstream political responses to it. As such, it is "plausibly the most significant economic concept of the twentieth century: first conceptualized in the 1920s to describe minor flaws in the market like the unpriced 'external effects' of smoky chimneys on laundry, by the early twenty-first century it would be described as the cause of a phenomenon that threatens to end human civilization as we know it" (120).

As far as I, a nonspecialist in economic thought, can tell, Battistoni gives a nuanced and generous account of the three economists' attempts to make sense of the problem of the environment in economic theory, and draws on their respective theories to arrive at her own argument about the externality as no less than a profound misunderstanding of the nature of the world. Battistoni agrees with William Kapp's argument that in capitalism not only externalities, but all market prices, in effect push damages onto others, and the market failure so often referred to in environmental discussions is therefore more of a feature than a bug. But departing from Kapp, she adds that economics as a knowledge form cannot even in theory capture the costs of those damages. The habitability-producing aspect of nature doesn't have a "true cost," as Kapp argued it did, because it resists economic valuation altogether (135–136). No price can ever account for the planetary role of nature. The reason for this, Battistoni argues, is because its marginal value—what an extra unit of it is worth to a particular person—is infinite (just ask yourself what you would be willing to pay for another day in the oxygenated atmosphere). Its material character also resists commodification: it is notoriously difficult to exclude those who do not pay from enjoying it, which makes it impossible to create a market demand for it (194). After all, who would pay for the hydrological circulation offered by a forest left standing if you can always get the rain for free? And once destroyed, it is gone forever and for everyone.

The externality, it turns out, is not external to the market at all, but integral to and necessary for its functioning. All production ultimately relies on material conditions and processes provided by nature. This is the reason, as Battistoni argues in Chapter 6, why the problem that has long been known as the externality cannot be resolved through the creation of some new class of assets or methods of accounting "to give the invisible hand of free-market economics a green thumb," an expression she borrows from the famous biologist Edward O. Wilson (181). For some four decades now,

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

monetary valuation and various forms of payment for nature's services or realization of nature's capital have repeatedly been advanced as a perpetually new approach promising to fix environmental problems in economics as well as in the world. But since these approaches operate within the externality framework, Battistoni argues, they miss that nature's world-making character makes it untranslatable into monetary terms and thus impossible to create demand for in a market. Again, externalities aren't exceptions to the rule of a well-functioning market; they "illuminate the rule of the market itself," which inevitably exploits and degrades planetary nature (121). The "market failure" is not an accounting error, but lies in the widespread idea that the market, with or without a little help from the state, would eventually correct environmental damages. According to *Free Gifts*, the true meaning of the externality is thus to cast into doubt the whole idea of markets as benign in their ordering of society. In the end, the invisible hand cannot help but kill off the pollinators, turn down the oxygen, and leave us and the cockroaches to uphold habitability as best we can.

Battistoni's pointed theoretical argument about nature in capitalism provides a vantage point from which she can engage in new ways with well-known literatures on environmental problems. One example is her striking critique of the influential philosophical treatment of climate change, spearheaded by analytical philosophers like Stephen Gardiner and Derek Parfit, who have famously diagnosed societies' passivity in this context as a problem of agency and collective action. Battistoni argues that the reason why individual conscious and rational action in relation to climate change seems so impossible is not because climate change is an aggregate effect of innumerable individual actions, but because the market is such an effect. We cannot foresee the consequences of our actions in a market-centered society, because "market coordination is *premised* on our ignorance" (130, original emphasis). The very point of the market, Battistoni argues, is individual nonresponsibility: the classical tradition of economic thought (interpreted in a certain way) promised that the market would absolve us of individual responsibility and transubstantiate private vice into public virtue. From the point of view of *Free Gifts*, the philosophical literature fails in its attempts to illuminate the character of climate change as a political problem, because it misattributes the cause of the collective-action problem to climate change itself, rather than to the market—and thus to market-centered societies as such (128–31).

To my mind, Battistoni's book is one of the most worthwhile to have been published in the planetary turn, and it carries great relevance for readers across many academic fields. Despite its deep theoretical engagements with highly specialized literatures, *Free Gifts* is also written in impressively clear prose. Battistoni's combination of political theory with a historicization of the intellectual underpinnings of the dominating climate framework is also highly engaging as intellectual history. In some cases—such as the discussion about natural capital and the economic valuation of nature—she offers syntheses with a genuinely sublating effect, allowing decades-long discussions to be seen afresh. I also find her multifaceted theoretical contribution largely convincing. While most of the book is devoted to meticulously diagnosing the problem of nature in capitalism, the final chapter summons multiple strands of thought for an alternative approach to the planetary as a political problem. For Battistoni, the ultimate challenge posed to political thought by the free gift is what freedom might mean from a planetary perspective. What if the political emancipations achieved in industrial modernity are

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

inextricably linked to the abuses of the habitability systems? What if an environmentally sustainable society is necessarily an unfree one? These are questions that other environmental intellectual historians have raised before, but Battistoni engages with them in a substantial and original fashion, drawing together a surprising synthesis of existentialist, feminist, and republican ideas of freedom.[17]

The political consequences of the argument presented in *Free Gifts* are both straightforward and daunting. In Battistoni's book, markets are not just unhelpful but counterproductive in environmental politics—not because it is morally wrong to price the environment, but because the very nature of nature makes it impossible to govern its planetary-habitability aspect through markets. What remains is a recognition of the planetary condition as inescapably political: a realm where limits must be acknowledged, and where political judgment and responsibility must replace the nonresponsibility of the market. Battistoni advocates a "socialization of nature" (202, 204), but the specifics of such a model in terms of policies or institutions fall beyond the scope of this book. This delimitation is understandable in an already rich and ambitious study. Still, her account leaves me wondering how to think about the status of capitalism in this framework. As in other literature that attributes climate change and planetary degradation to the unfixable mechanisms of capitalism, the scope of the concept of capitalism remains unclear. Is the "socialization of nature" that she envisions compatible with some version of a mixed economy? Is there a place for the market at all in a sustainable system, or is the slightest presence of market forces in a society enough to spoil its relation to the living material world? This question can be brought to bear on a slightly different reading of the tradition of economic thought on the economization of nature that Battistoni studies.

Battistoni's rendering of earlier critiques of the economization of nature as purely moralistic and oblivious of the character of planetary nature is, in my view, not the whole story. Within that strand of critique were figures such as the energy historian Vaclav Smil and the economist Richard Norgaard, who did articulate planetary nature as incompatible with economics for structural rather than moral reasons.[18] This does not diminish Battistoni's contribution, but it is relevant that this tradition offered a notion of nature's dual role for humanity: both as the material maker of our only habitable world and as a set of resources—sometimes finite, or exploited in ways that make them finite—that we use for consumption. This double nature of the biosphere was recognized already in the 1980s. For example, the *World Conservation Strategy* issued in 1980 by the IUCN (International Union for Conservation of Nature), often considered the most authoritative institution on biodiversity conservation, framed conservation as a twofold aim: to "maintain essential ecological processes and life-support systems," which is a clear formulation of the habitability provision idea, and to "ensure

[17]Chakrabarty, *The Climate of History*; Pierre Charbonnier, *Affluence and Freedom: An Environmental History of Political Ideas* (Cambridge, 2021), 8.

[18]Vaclav Smil, "Nature's Services, Human Follies: A Review Essay," *Population and Development Review* 24 (Sept. 1998), 613–23, at 615–16; Richard B. Norgaard, Collin Bode, and Values Reading Group, "Next, the Value of God, and Other Reactions," *Ecological Economics* 25 (April 1998), 37–9. For a historical discussion of this critique see Julia Nordblad, "The Nature of Planetary Habitability: A Conceptual History of Biodiversity and Ecosystem Services," *Environmental History* 30/2 (2025), 256–80.

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press

the sustainable utilization of species and ecosystems," which conceptualizes nature as resource.[19] The planetary condition, if we want to keep that phrase, could be understood in line with this tradition as a dependence on two aspects of the rapidly degrading biosphere: we live in a world made of nature, and we live off that nature.

Proponents of economic-valuation approaches have always held that the promise of economics is to provide an unmatched tool for efficiently governing humanity's inescapable use of nature, and the tradition of the externality has sought to bring the habitability aspect of nature into the realm of the resource—an approach that Battistoni has contributed to demonstrating is profoundly problematic. The crux of the matter seems to be that the two roles of nature—as habitability maker and as resource—are aspects of the same biosphere, and the political question is how nature can be governed in this double capacity. If this interpretation is correct, it suggests that Battistoni's theoretical conceptualization of the planetary, while truly clarifying and compelling, may have had intellectual precedents among some of the theorists she criticizes for misunderstanding it. It also suggests that the question of the place of economics and markets in relation to nature might not be a matter of all or nothing.

* * *

Taken together, *Children of a Modest Star* and *Free Gifts* in very different ways complicate the question of what the planetary-habitability perspective means for political thought as well as for intellectual history. Both books demonstrate that how the planetary is conceptualized will have consequences for the politics that is constructed around it. Yet *Children of a Modest Star* seems to participate in an undeclared political project related to the very issue it is discussing, making the reader suspicious of what motivates its omissions, especially its unexplained silence on economic issues. *Free Gifts,* by contrast, offers a theory of the planetary with profound intellectual and political consequences. Although certain environmental problems such as climate change are detectable on the global scale, the planetary environment is not a matter of size. Planetarity is a qualitative understanding of the environmental situation, with the biosphere as an essentially unknowable but vital infrastructure for all societal life (*Free Gifts*, 183). Adding perspectives from earlier traditions of planetary thought, this natural infrastructure also shifts shape, and appears in society as both world maker and resource. Based on this understanding of nature, Blake and Gilman's initial question of what political institutions could effectively protect that miracle is still valid—but would have to be posed anew.

Acknowledgments. I have benefited from helpful comments on this article by Thomas Turnbull, Hjalmar Falk, Niklas Olsen, and Chris Haffenden.

Competing interests. The author declares none.

[19]IUCN, *World Conservation Strategy: Living Resource Conservation for Sustainable Development* (Gland, 1980), vi; see also Jessica Dempsey, *Enterprising Nature: Economics, Markets, and Finance in Global Biodiversity Politics* (Chichester, 2016), 53.

Cite this article: Julia Nordblad, "Governing the Miracle," *Modern Intellectual History* (2025), 1–12. https://doi.org/10.1017/S147924432510022X

https://doi.org/10.1017/S147924432510022X Published online by Cambridge University Press