

## Population, Ecology, and the Malthusian Imagination: An Introduction

Hannes Bergthaller

National Chung-Hsing University, Taiwan

[hannes.bergthaller@gmail.com](mailto:hannes.bergthaller@gmail.com)

Margarita Carretero González,

Universidad de Granada, Spain

[carreter@ugr.es](mailto:carreter@ugr.es)



Human population growth is a strange beast. To express concern over it may be one of the few things which, even in today's polarized political climate, will evoke roughly equal amounts of scorn and ridicule from both the left and the right.<sup>1</sup> The issue has become the 'third rail' of environmentalism: no major organization dares to touch it. And yet, this is the very topic which, only half a century ago, first galvanized the environmental movement into a global political force. The problem of "overpopulation" served as the catalyst for a new understanding of ecological crisis as a phenomenon that had to be tackled on a planetary scope, in contrast to the more local issues of nature conservation or urban sanitation which had preoccupied the movement's precursors. When environmental consciousness in the U.S. reached an early culmination point in the celebrations around the first "Earth Day" in 1970, the question how to rein in human population growth was generally understood as the master key to the panoply of ecological problems that had begun to draw public attention over the preceding decade. If humanity failed to defuse *The Population Bomb*, Paul Ehrlich warned, it would face a dire future marked by famine, war, and civil strife. Kenneth Boulding's powerful metaphor of "Spaceship Earth" encapsulated this new sense of the Earth as a finite place which demanded that humanity accommodate itself to the *The Limits to Growth*, to quote the title of yet another key text in this debate (Meadows et al.). Population growth also figured centrally at the 1972 UN Conference on the Human Environment, which for the first time put the ecological health of the planet on the global political agenda.

The idea that the growth of the human population was about to outstrip the Earth's ability to feed it was a variation, in an apocalyptic key, on an old and familiar theme—a theme most famously and consequentially articulated by the English economist and country parson Thomas Malthus in his 1798 *Essay on the Principle of*

---

<sup>1</sup> As evidenced, for example, by the hysterical reaction to Al Gore's remarks at the 2014 World Economic Forum in Davos. Gore argued that the lowering of birth rates should be part of the effort to combat global warming, and was immediately branded as a closet racist—by the representatives of a conservative think tank! The episode is recounted in Hoff and Robertson, 267-68.

*Population.* In the *Essay*, Malthus stipulated that population has the tendency to grow exponentially, whereas food production will at best increase arithmetically. If population growth is not curbed through self-restraint (“preventive checks,” in Malthus’ diction), external forces (or “positive checks”), such as famine, disease, and war will bring it back in line with what animal ecologists in the 20th century would come to term “carrying capacity.”<sup>2</sup> Malthus’ aim was to provide axiomatic proof (rather than empirical evidence) why the utopian hopes for progress embraced by his contemporaries (in particular William Godwin and the Marquis de Condorcet) were bound to fail, and to demonstrate that economic inequality, with all of its attendant ills, was an ineradicable feature of any possible social order. Malthus therefore opposed attempts to alleviate poverty through government policy, such as the English Poor Laws. In the extensively revised and enlarged second edition of the *Essay*, Malthus summarized the ethical and political implications of his views in a disturbing little allegory:

A man who is born into a world already possessed, if he cannot get subsistence from his parents on whom he has a just demand, and if the society do not want his labour, has no claim of right to the smallest portion of food, and, in fact, has no business to be where he is. At nature’s mighty feast there is no vacant cover for him. She tells him to be gone, and will quickly execute her own orders, if he do not work on the compassion of some of her guests. If these guests get up and make room for him other intruders immediately appear demanding the same favour. [...] The order and harmony of the feast is disturbed, the plenty that before reigned is changed into scarcity. [...] The guests learn too late their error, in counteracting those strict orders to all intruders, issued by the great mistress of the feast, who, wishing that all her guests should have plenty, and knowing that she could not provide for unlimited numbers, humanely refused to admit fresh comers when her table was already full. (531-532)

Malthus’ “full table” is the ancestor of all the spaceships, lifeboats, emergency rooms, and overcrowded tenement buildings that shaped the way in which issues of population growth and resource distribution were imagined during the Neo-Malthusian revival of the 1960s and 70s. Malthus’ allegory, like its tropological progeny, served to render concrete an abstract set of social and ecological relationships. As Ursula Heise has pointed out, “overpopulation” is a “far more elusive phenomenon” than such images would suggest (74). Whether a given population exceeds ecological carrying capacity is not primarily a matter of sheer aggregate numbers, but more importantly of the exact manner in which people make their living; while it necessarily engenders scarcity (not just of food and water, but also of medical and other social resources), it need not entail physical crowding. Much like global climate change, overpopulation is a condition which “cannot be seen as such in any one place” (Clark, *Ecocriticism on the Edge* 87), and becomes

---

<sup>2</sup> It is important to note that in Malthus’ original formulation of the problem, “overpopulation” was not a real concern: the human population would always return to a stable equilibrium. The important question was what this insight entailed for the organization of society.

comprehensible first of all by way of statistical calculations and mathematical models, such as those pioneered by the authors of *The Limits to Growth*.

Such abstractions, however, tell us very little about the vexed question what it would mean to live in a world with “too many people.” This gap is closed by the images, metaphors, and narratives which, taken together, constitute what we designate as the “Malthusian imagination.” By making overpopulation tangible, they also lend plausibility to particular accounts of our ethical responsibilities—or, as in the story of Nature’s full table, the lack of such responsibilities. Indeed, the sheer cold-heartedness of Malthus’ logic made him one of the most universally reviled figures in the annals of intellectual history. Marx’ characterization of him as a “shameless sycophant of the ruling classes” must count among the milder attacks (Marx 526). The radical Percy Bysshe Shelley referred to him as a “eunuch and a tyrant” (qtd. in Mayhew 12), the conservative William Cobbett, simply as a “monster” (ibid. 11). That Charles Dickens’ Ebenezer Scrooge justifies his lack of Christian charity with reference to a convenient reduction of “the surplus population” (39) is exemplary for how people across the political spectrum of Victorian England had come to view Malthus’ doctrines.

Malthus’ environmentalist disciples have suffered a rather similar fate. By the time the United Nations Development Program instituted “World Population Day” to raise awareness of population issues in 1989, the tide had already begun to shift against them. The UN’s 1994 Conference on Population and Development in Cairo deemphasized “family planning” in favor of “reproductive health,” and acquiesced to the growing sense that government-sponsored programs to reduce birth rates were *eo ipso* authoritarian and hence illegitimate (Campbell and Bedford 3104). Conservatives began to view 1960s and 70s Neo-Malthusianism as the consummate expression of everything that is wrong with environmentalism: the failure to see every human life as a gift from God, a disturbing willingness to subordinate individual liberty to the collective good as defined by unaccountable elites, a disdain for ordinary folks cloaked in progressive pieties, a penchant for the use of alarmist rhetoric to scare people into acquiescence. Leftist critics, meanwhile, convinced themselves that the concern over rapid population growth in the “Third World” was little more than a nefarious neocolonialist plot to reduce the number of dark-skinned people and pave the way for global agribusiness, a new bottle for the sour old wine of eugenics, or an attempt to deflect attention from the real culprits of ecological crisis, namely the people at the top of capitalism’s global food chain (one of the most eloquent expressions of this view is Matthew Connelly’s 2008 book *Fatal Misconception*). In popular culture, Neo-Malthusian ideas became the favorite obsession of supervillains and mad scientists, invariably illustrating the perversity of a scientific mind untempered by human sympathy.

It must be pointed out that such fiercely negative views, even where they contain a kernel of truth, are deeply unfair to many of the scientists, medical professionals, and government officials who, in the years following WWII, arrived at

the conclusion that the high rates of population growth in the developing world represented a real crisis which demanded an urgent response. They were quite conscious of the fact that rising affluence had already (contrary to Malthus' assumptions) led to a steep decline of birth rates in the wealthy nations of Europe and North America, a phenomenon referred to as demographic transition. But they also feared that the unprecedented rapidity of the increase in the human population would overwhelm the capacity of developing countries to feed, educate, and provide healthcare for their people, and consequently undermine their ability to modernize (Hodgson 568). They were also perfectly aware that the overconsumption of resources in the developed world formed an essential piece of the global puzzle. Paul Ehrlich's famous "I=PAT" formula (ecological impact equals population times affluence times technology) may have been misleadingly simple, but it had the indisputable advantage of making it clear that a viable approach to the ecological crisis could not afford to treat any of these factors in isolation. Calls for reining in population growth in the "Third World" were generally accompanied by the acknowledgement that "First World" nations needed to transition to a more frugal way of life, as advocated, for example, by E. F. Schumacher in his 1973 best-seller *Small Is Beautiful*. And while at the height of the population scare, Neo-Malthusians did sometimes speak in favor of coercive and inhumane policies, these remained rare exceptions and were never supported by the various international organizations who were advocating voluntary contraception and smaller family sizes.

Finally, there is a case to be made that many of the poorest countries in the world were ill-served by the decisive shift away from internationally coordinated efforts at population control. Birth-rates in most of Latin America and Asia had already begun to stabilize by that point – often much earlier than demographic transition theory would have predicted (i.e., declining fertility was not necessarily linked to better education or rising affluence), and arguably as a result of precisely those education campaigns which were now falling out of favor (Campbell and Bedford 3108). Since then, however, contraceptives and family planning measures have become less available in many African and Middle Eastern countries, even while disparities in access to such methods between the rich and the poor within these countries have increased. In Benin, Kenya, Mozambique, and Tanzania, for example, birth rates for women in the richest quintile of the population have dropped slightly during the first decade of the 21st century, even while they increased for those in the poorest quintile (sometimes significantly: in Mozambique, from 5 to roughly 6.5; Campbell and Bedford 3105). Current demographic projections suggest that absent a fundamental change in the patterns of reproduction, the combined population of Niger, Mali, and Burkina Faso (all located in the Sahel zone, which is also expected to be hit particularly hard by the consequences of climate change) will grow more than six-fold by the end of this century, to about 300 million people. To quote the authors of a study on the subject,

“it is hard to see how the countries in the region can avoid major social and political disturbances or even collapses if this explosive population growth is not curbed” (Zinkina and Korotayev 122). In the face of such prospects, the tacit consensus that the subject of human population growth ought to be placed beyond the bounds of polite conversation appears less than an expression of respect for cultural difference and reproductive autonomy, and more like a case of criminal neglect.

Among historians, of course, Malthusian ideas never fell entirely out of favor. In his seminal *Poverty and Progress: An Ecological Model of Economic Development* (1973), the economic historian R. Wilkinson argued that Malthus’ understanding of the relationship between human populations and their means of subsistence had indeed been valid for much of the history of our species, as long as natural photosynthesis remained people’s principal source of energy – he just had the singular misfortune of articulating his insights at the very moment when the advent of fossil fuels was about to render the constraints of an organic economy obsolete. The idea that the transition to coal and oil as primary energy carriers allowed modern society to innovate its way out of the “Malthusian trap” which had stymied the development of all earlier social formations (also discussed by Hannes Bergthaller in his contribution to this issue) has since become a mainstay of environmental and economic history. Even if one agrees with Andreas Malm that such accounts unduly naturalize the ascendancy of coal in the early 19th century (35-36), there can be no doubt that it was fossil energy which allowed humanity to forestall the great famines which the Neo-Malthusians had predicted. The so-called “Green Revolution” which allowed food production to stay abreast of a rapidly expanding human population in the second half of the 20th century was made possible by nitrogen fertilizers, pesticides, and petroleum-powered agricultural machinery, all of which in turn depended on cheap and plentiful energy from fossil fuels, and effectively transformed agriculture into a form of industrial production. What has become increasingly clear is that the Malthusian limits for this process lie not so much in the availability of resources, but rather in the finite capacity of the Earth system to absorb our waste.

In this very basic sense, then, the problems of human population growth and global warming—two “intractable and truly global issues” that, Timothy Clark laments, ecocriticism has largely evaded (“Nature” 80)—are indeed inseparable. Our field has taken its own sweet time before it finally turned to the issue of climate change over the past decade. We believe that it is about time that we also take up again the old question of human population growth—not because the critiques which placed a taboo on the topic were entirely misguided, but because the underlying problem has refused to go away. Indeed, the Malthusian imagination has seen something of a comeback of late. Arguably, it is central to the recent efflorescence of post-apocalyptic scenarios in popular culture, and particularly in feature films such as *World War Z* (2013) or television series such as *The Walking Dead* (since 2010) which dramatize the uncontrolled proliferation of bodies with no

claim whatsoever to a seat at Nature's table. They fantasize about a world in which human life would once again be rare and precious (set in profile as it is against the teeming masses of the undead), and where the withholding of charity may be an imperative of survival. These fictions find a real-world echo in the forecasts of military planners and political journalists when they predict that the climate-changed world of the 21st century will be marked by resource wars, mass-migration, and the collapse of the social order (Welzer). The historian Timothy Snyder has recently argued that Malthusian fears, engendered by the resource shortages of WWI, were an important ideological driver of Germany's campaign of genocide and territorial expansion in WWII, and he warns that they might be invoked once again to abrogate the rights of people who are defined as "the source of an ecological problem" (325). The challenge, then, may be to find ways of articulating how the surfeit of humanity is indeed the source of ecological problems—without falling into a dehumanizing logic of emergency.

In its analysis of literary and cultural artifacts, ecocriticism needs to stress the threat overpopulation poses not only to the human species, but also to the entirety of the ecosystem and all its inhabitants. The Cornucopian faith that the development of new technologies will make life on the planet possible for the estimated 10 billion people by 2050 is not only outlandishly short-sighted, but anthropocentrically so; it fails to take into account the cost that such advances have and will keep on having on the lives of other species, "our neighbors in the community of life" (Butler n.p.) who have as much right to live on this planet as humans do. Every year, 16 million hectares of forest disappear, which entails the destruction of the natural habitats for many species that have to move to inhospitable territories where native animals will also eventually become extinct (Avalos 41). Against the naysayers, Musimbi Kanyoro insists: "our numbers and behavior profoundly affect nonhuman species, all of the creatures with which we share this beautiful but finite planet. The web of life that these species create is what makes the Earth habitable and lovely" (Kanyoro, n.p.).

This special focus section of *Ecozon@* opens with a contribution by Manuel Peinado Lorca, "Población, cambio climático y huella ambiental," in which he focuses the debate on overpopulation not so much on resource limitations, but on anthropic influence on climate change and its effects on both human and other-than-human populations. Overpopulation, Peinado Lorca admits, is still the problem. However, since the Green Revolution demonstrated that it is possible to provide food for an ever-growing population, the issue is no longer whether resources are limited or not, but rather our environmental footprint assessed in terms of greenhouse gases' contribution to climate change. The so-called "boomsters" who celebrated the Green Revolution as evidence that the Malthusian "doomsters" were wrong should not lose sight of the environmental side-effects of the effort to feed a population that has doubled in the last fifty years: soil degradation and erosion, water scarcity, new pathogens affecting the crops, destruction of arable land due to the extreme weather

conditions linked to climate change, together with a progressive loss of biodiversity, health and food safety, pollution and energy consumption. Measures taken so far to reduce our carbon footprint are only having a moderate impact, therefore more effective steps need to be taken, which, according to Peinado Lorca are these four: shifting to a vegetarian diet (which reduces an individual's CO<sub>2</sub> footprint by about 820 kg), giving up transport by car (for an average reduction of 2.400kg CO<sub>2</sub>) and air plane (1.600kg per transatlantic flight) and, most importantly, having one child less per couple: on average, each child in a typically developed country will produce 55.600 tons of CO<sub>2</sub> over the course of its life, about the same amount that 700 teenagers would be able to avoid by recycling as much as possible until their deaths. Nothing else will have a significant effect. The call is for politicians to accept that an economy based on infinite growth goes against the elemental principles of physics and the limits of our planet.

In "Malthusian Biopolitics, Ecological Immunity, and the Anthropocene," Hannes Bergthaller discusses Michel Foucault's concept of biopolitics and the ecological implications of a mechanism designed to secure populations against famine and disease, thus allowing for continuous growth, which has succeeded to an extent where is actually endangering the basic conditions of life. Bergthaller proposes that in its original formulation, biopolitics can be seen as a response to Emmanuel LeRoy Ladurie's notion of a "Malthusian curse," and points out the paradox at the heart of this concept: biopolitical governance is premised on a naturalization of the human species, a life form susceptible to disease and famine like any other, but results in its denaturalization insofar as society assumes the roles previously played by biological mechanisms to regulate population. The ecological aspects of biopolitics may not be evident at first sight, given its focus on enhancing the vitality of humans; in practice, however, "they are predicated on the general commutability of life forms and weave together all sorts of bodies." Roberto Esposito's concept of "immunization" helps to elucidate the biological dimension of biopolitics, in viewing society as a living organism which can survive only by virtue of its entanglement with other life forms; after all, biopolitics implies the management of both human and nonhuman population. The fact that human health, longevity and fertility, the primary objects of biopolitical regulations, have now turned into a source of risks poses, indeed, a dilemma: dismantling immunitary defenses will cause significant harm to human life, but not dismantling them will increase the risk of incurring even greater harm in the future, which leads Bergthaller to argue that many of the most important questions about population in the Anthropocene will revolve around the recalibration of society's immunitary mechanisms.

In "The Promise of Disaster, Specters of Malthus in Marxist Dreams," Alex McCauley traces the presence of Malthus's ghost in twentieth-century thought – particularly in the context of Marxist criticism and ecology – arguing that many of Malthus's detractors actually misread him and, in so doing, repeat his errors. Even

though Malthus was empirically and historically wrong insofar as he failed to anticipate the techno-scientific advances that brought about birth control, the Green Revolution, or food transportation around the world, McCauley contends that he was correct in observing that the destitute will always be the first to suffer whenever disaster strikes, and that famine, contrary to what his Marxist readers claim, is not only an issue of distribution, but also of quantity. Malthus saw that any political regime would have to deal with the same material limits, with regard to the soil and to demographics. If civil liberty cannot produce fresh land, the wealth of a nation does not reside in its political structure, but in the fertility of its land. Drawing on Malthus' anecdotal mention of the toothache that plagued him as he was writing the *Essay*, McCauley stresses that the relationship the clergyman established between body and the mind is analogous to the one he saw between the resources of a nation and its politics: The mind may distract itself from the pain but cannot overcome it; similarly, the state cannot overcome scarcity, exhaustion or natural decline, even if it chooses not to pay attention to them.

Malthusian ideas have found ample room for exploration in the science fiction genre, particularly in its dystopian forms. In "Numbers for an Alternative Anthropocene: Population Counting and Humanity's Place Among other Species in Daniel Keys Moran's *Tales of the Continuing Time*," Keri R. Stevenson looks at Moran's science fiction series as developing the scenario of a future Earth which may succeed in putting an end to overpopulation not by enforcing bans on fertility, but rather by respecting other intelligent life forms, such as AIs, genetically engineered beings, and alien species. The series stresses the idea that humankind is just one more species that must find its own place in an overpopulated world; a species that, just like any other, is subjected to natural laws, even though humans are the only ones supposedly capable of self-restraint. The government in Moran's secondary world—the Unification—considers humanity as a virus and tries to reduce its numbers. However, its coercive policies fail. Only when humans realize that they don't have the right to appropriate the entire ecosphere, causing destruction in their wake, and voluntarily choose self-restraint, can the planet heal.

Stevenson concedes that Moran's proposed solution to the problem of overpopulation, appealing though it may seem, smacks of naïveté, and that is especially true when it is contrasted with the topic explored in the last essay of our section. In "*Inferno Unleashed: Dan Brown's Uncomfortable Solution to Overpopulation*," Irene Sanz Alonso turns to the connection between overpopulation and ecology as represented in Dan Brown's best-selling novel *Inferno* (2013) and its 2016 film adaptation, focusing especially on the way in which the film version changes the ending of the story. This change, she argues, evidences the reluctance of the film industry to deal with the issue of overpopulation and its consequences for the environment. In the film version, the principal antagonist, Bertrand Zobrist, is reduced to a murderous villain, a terrorist who wants to put a stop to the problem of overpopulation by releasing a lethal virus. In the original

novel, however, Zobrist and his partner Sienna Brooks are accorded greater complexity, and their “solution” is far more morally ambiguous: their virus does not kill, but randomly sterilizes a third of those infected. These shades of grey are completely eradicated in the film, preventing the audience from asking the very questions which stand at the center of the novel.

Eventually, any text, fictional or otherwise, tackling the topic of overpopulation, must tackle the crucial question: how many people can the Earth sustain while allowing the diversity of life to flourish? William Ryerson admits to not having the answer, but he does offer a conclusion: “We cannot go on the way we are going. We are already doing severe and irreparable harm to the planet. Something has to give” (Ryerson n.p.).

## Works Cited

- Avalos, Carlos. “La sobrepoblación mundial y sus males. Reflexiones *ad portas* del Día Mundial de la Población,”  
[www.generacion.com/secciones/biodiversidad/pdfs/Generacion-Edicion-115-biodiversidad-677.pdf](http://www.generacion.com/secciones/biodiversidad/pdfs/Generacion-Edicion-115-biodiversidad-677.pdf). Accessed May 5th 2017.
- Boulding, Kenneth. “The Economics of the Coming Spaceship Earth.” *Environmental Quality in a Growing Economy*, edited by Henry E. Jarrett, Johns Hopkins UP, 1966, pp. 3-14.
- Butler, Tom, editor. *Overdevelopment, Overpopulation, Overshoot*. Foundation for Deep Ecology, 2015.
- . “Lord Man. A Parable,” *Overdevelopment, Overpopulation, Overshoot*, edited by Tom Butler, Foundation for Deep Ecology, 2015. n.p.
- Campbell, Martha, and Kathleen Bedford. “The Theoretical and Political Framing of the Population Factor in Development.” *Philosophical Transactions of the Royal Society B* vol. 9, no. 364, 2009, pp. 3101-3113.
- Clark, Timothy. “Nature, Post Nature.” *The Cambridge Companion to Literature and the Environment*. Cambridge University Press, 2014, pp. 75-80.
- . *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept*. Bloomsbury, 2015.
- Connelly, Matthew. *Fatal Misconception: The Struggle to Control World Population*. Harvard UP, 2008.
- Dickens, Charles. *A Christmas Carol, and Other Christmas Writings*. Penguin, 2003.
- Ehrlich, Paul R. *The Population Bomb*. Ballantine, 1968.
- Foster, John Bellamy. “Malthus’ Essay on Population at Age 200: A Marxian View.” *The Monthly Review*, vol. 50, no. 7, 1998.
- Heise, Ursula. *Sense of Place and Sense of Planet: The Environmental Imagination of the Global*. Oxford UP, 2008.

- Hodgson, Dennis. Review of Matthew Connelly's *Fatal Misconception: The Struggle to Control World Population*. *Population and Development Review*, vol. 34, no. 3, 2008, pp. 566-569.
- Hoff, Derek S. and Thomas Robertson. "Malthus Today." *New Perspectives on Malthus*, edited by Robert J. Mayhew. Cambridge UP, 2016, pp.267-292.
- Kanyoro, Musimbi, "Foreword," *Overdevelopment, Overpopulation, Overshoot*, edited by Tom Butler. Foundation for Deep Ecology, 2015, n.p.
- Malm, Andreas. *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*. Verso, 2016.
- Malthus, Thomas Robert. *An Essay on the Principle of Population; or, a View of Its Past and Present Effects on Human Happiness*. J. Johnson, 1803.
- Marx, Karl. *Theories of Surplus Value*. Prometheus Books, 2000.
- Mayhew, Robert J. "Introduction. 'Alps on Alps arise': Revisiting Malthus." *New Perspectives on Malthus*, edited by Robert J. Mayhew, Cambridge UP, 2016, pp. 1-21.
- Meadows, Donella H. and Dennis L., Jørgen Randers, and William W. Behrens III. *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. Universe Books, 1972.
- Ryerson, William. "Introduction," *Overdevelopment, Overpopulation, Overshoot*, edited by Tom Butler, Foundation for Deep Ecology, 2015, n.p.
- Snyder, Timothy. *Black Earth: The Holocaust as History and Warning*. Tim Duggan, 2015.
- Welzer, Harald. *Climate Wars: What People Will Be Killed for in the 21st Century*. Translated by Patrick Camiller, Polity, 2012.
- Wilkinson, Richard B. *Poverty and Progress: An Ecological Model of Economic Development*. Methuen, 1973.
- Zinika, Julia, and Andrey Korotayev. "Explosive Population Growth in Tropical Africa: Crucial Omission in Development Forecasts – Emerging Risks and Way Out." *World Futures*, vol. 70, 2014, pp. 120-139.