

The Progress of a Plague Species, A Theory of History¹

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Done because we are too menny. (Hardy 1895, 420)

Abstract: This article examines overpopulation as a basis for historical interpretation. Drawing on the ideas of T.R. Malthus, Elizabeth Kolbert, John Lovelock, Lynn Margulis, and Edward O. Wilson, I make the case that the only concept of 'progress' that accurately describes the human enterprise is the uncontrolled growth of population. I explain why a Malthusian/Gaia interpretation is not a historicist or eschatological narrative, like Hegelian idealism, Marxism, fundamentalist religion, or 'end of history' neoliberalism. My article also includes a discussion of the ideas and prescriptions of contemporary commentators like physicist, Adam Frank, and the philosophers, John Gray, and Roy Scranton. What makes my article distinctive is bringing together ideas of population theory through a lens of sociobiology and post-humanist philosophy. Through this interpretive synthesis, I form a basis for recasting history as the record of the growing imbalance of our species in light of the unprecedented crises of the environment that are its byproduct. I conclude with the idea that regardless of whether the world is dying or simply going through a fundamental chaotic transformation, the role of the critical-rational historian remains the same: to tell the truth as best as she or he can know it.

Keywords: Gaia, historical narrative, Malthus, population, plague species, progress.

Introduction: The Road Behind and the Road Ahead

The advantage of the study of history in our time is that of a superior vantage point: we see the big picture more clearly and fully than at any previous, more optimistic time in a similar way that an older person has a better idea about the meaning of

¹ I feel that I should explain the term 'plague species' as I intend it. I regard a plague, whether it is of insects, rodents, or pathogens, to be a value-neutral designation of a biological fact signifying an imbalance or visitation. Regarding humans as a plague species, there is no moral judgment intended other than the harm we feel we are doing as thinking manifestations of population imbalance (in the same way that a natural disaster like an earthquake or storm may cause death, pain, and suffering but is not 'evil'). As Bertrand Russell notes, "Good and evil are alike human: the outer world is neither." (1992, 386) In his book, *Light of the Stars*, physicist Adam Frank writes, "We are not a plague upon the planet. Instead, we *are* the planet" and observes "It's time to leave the tired question, 'Did we create climate change?' behind. In its place we must take up our brave new astrobiological truth: 'Of course we changed the climate.' We built a planet-spanning civilization. What else would we expect would happen?" (2018, 9, 225) He is certainly correct that we are just another of Earth's living experiments and that we should get away from an interpretive narrative of 'we suck.' But we are a *thinking* experiment, and to the degree that which we can see the harm we are doing, and act to mitigate this – or not – is a moral issue.

his or her own life than does a young person.² We know the story better at its end. This broader vista is not an attractive one and leads to questions about the role of the historian in a dying world.

The ultimate meaning of the human story will not be the triumph of Enlightenment reason or a traditional liberal belief in social progress.³ It will not be the measured, gradual progress of Burke or Viereck, the universalist humanism of the New Left. Nor will it be the unfolding of Hegelian vitalism, the moral rationalism of Marxist-Leninist dialectical materialism, or the pseudo-scientific monstrosity of National Socialism. In spite of their rise in recent years, it will not be authoritarian state capitalism or right-wing populist nationalism, although they may assert themselves increasingly over the interim. It will not be the neoliberal 'end of history' or globalization beyond its biological manifestation as the uncontrolled spread of our species across the planet. For some people, the significance of life will be found in the self-created meaning of the existentialists or a Jungian inner world of myths. But this is little comfort and even less of a solution.

No, the conservatives, fascist, Hegelians, liberals, Marxists/Marxians, and theistic eschatologists have all missed the larger point. The overarching backdrop to all of history is biological imbalance, and an extrapolation of the ideas of Malthus and their biological implications must figure prominently into our interpretations of Big History. It is humbling to think that while Thucydides, Tacitus, Bede, Gibbon, Smith, Hegel, Marx, von Ranke, and Henry Adams all caught glimpses of the human enterprise, their interpretations all miss the bigger picture and what was really at work; Malthus provides a framework.

Human history has increasingly revealed itself to be a catastrophic prong of natural history, a runaway project of nature and our own nature. With a population now more than eight billion – and with a biomass more than 130 times greater than that of any other large land animal that has ever lived on the planet – we have taken on the character of a natural-historical plague species and are responsible for the unfolding ecological catastrophe, the Earth's sixth mass extinction.⁴ The mild eleven-thousand year summer – the *Holocene* (alternatively, *Ereozoic*) – that permitted and nurtured human civilization and allowed our numbers to grow will likely be done-in by our species in the not-too-distant future

² The idea of comparing history in our time to the end of a story was suggested to me by David Isenberg.

³ By 'meaning' I do not mean an intrinsic, preordained, or intended purpose, but rather the real world impact and significance of human beings on the planet.

⁴ The human biomass surpassed that of any large land animal by about 100 times when it exceeded approximately 6 billion individuals. See Wilson (2002, 29). Another way of saying this is "Humans co-opt over 40 percent of the Earth's living tissue." See Gray (2002 [2003], 149). On human beings as the primary agent for the Earth's most recent mass extinction event, see Elizabeth Kolbert's *The Sixth Extinction* (2016), as well as her *Field Notes From a Catastrophe* (2015 [2006]).

(Wilson 2016, 9, 20).⁵ Human civilization is among the most startling developments in all of natural history, and in terms of years, it is only a small part of the human story. Its demise is well under way.

There is no narrative to history, no deterministic plot or *Zeitgeist*, no eschatological endgame to be understood within the correct ideological framework, no deciphering of the course of a preordained record. There is something like a narrative, only more general and open, a macro current or outline that, left unchecked, is coming to resemble a predetermined plot; history makes no ideological assumptions, but biological currents may assume a course that unaltered will lead to an inevitable conclusion.⁶ Social progress may be temporary or illusory, but the ‘progress’ of uncontrolled population growth is real and observable. The reason why this thesis is not a historicist narrative is because it is not based on ideological assumptions like Hegelianism, Marxism, or the free trade theories of economic globalization, but rather on a real biological trend.

The details of how civilization emerged are largely speculative, but one thing is certain: *Homo sapiens sapiens* is a global plague species and has been since well before recorded history. An adaptive, aggressive African primate, over the past 70,000-100,000 years, we have become the most universal – the ultimate – invasive species.

The view that I outline below is allied to a number of perspectives and how they apply to our historical understanding. It accepts the thesis of Malthus in modified form and his projection of the numbers of population growth toward catastrophe. It accepts the idea that unchecked Darwinian success thus leads to Malthusian disaster (and that a human Apocalypse might mean salvation for the biosphere) (Malthus, 1798).⁷ It acknowledges the Gaia hypothesis of James Lovelock and Lynn Margulis and embraces the sociobiology of Edward O. Wilson (Lovelock 2000 [1979], Margulis 1998, 113-128, Wilson 1978). It also has an affinity with the powerful critique of un-self-critical humanism by John Gray in *Straw Dogs*, although I reject his prescriptions there and in his later book, *The Silence of Animals* (Gray 2002/2003 and 2013).⁸ My epistemological and methodological outlook is founded on the critical rationalism of Karl Popper (1934/1959 and 1963). My conclusions and errors are my own.

⁵ For *Eremocene* or ‘Age of Loneliness,’ see Wilson (2016, 20). Regarding the term *Anthropocene*, or ‘Epoch of Man,’ see Wilson (2016, 9).

⁶ It is an open question about whether or not a rational animal might rise above its biology, but I suspect that this query is more closely tied to issues of biological and physical determinism than to ideological models of historical determinism. On the other hand, if the universe is deterministic, then the particulars of its closed nature may be irrelevant (i.e. that determinism is determinism).

⁷ Commentators who believe that the planet might be saved by human extinction and that the biosphere would quickly rebound without us include Frank Fenner and Alan Weisman.

⁸ I discuss my disagreements with Gray in the final section.

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As a historian of ideas and a human being, it is hard to concede that the larger 'meaning' of our species is a byproduct of unreasoning biology, the inexorable numbers of population growth, and an inability or unwillingness to rise above our animal nature. And yet here we are, like the popular conception of lemmings at the edge.

Aggravating all of this is the fact that many of us are operating under three mistaken assumptions that distort our understanding of history, things that we have backward or inverted in our understanding. The first is that because we see ourselves as good, overpopulation is therefore either not a problem or just another issue among the many that we can live with, work around, or manage. We see a world vastly overpopulated with humans as normal.

The second is the optimistic Enlightenment article of faith that history is a 'rising road' of social progress, that because science is progressive, then so must be other areas of human endeavor and social life. Adherents to more extreme outlooks along these lines may even believe that human beings and their society are perfectible.

The third, closely related to the second, is the belief that because technology makes our lives easier, longer, and more enjoyable, and because it rids us of natural enemies, it must therefore be categorically good, even if it is a population accelerant, the enabler of a plague species.

In the first part of this paper, I proffer a simple experiment to corroborate the claim that humans are a plague species. In the second part, I address inaccurate views of history and of human nature and provide the basis for a realistic one founded on sociobiology. In the third part, I briefly describe the three concepts of progress relevant to this discussion: the progress of formal truth (logic, math, science, and technology), social progress, and the 'progress' (i.e. growth in numbers) of our species, a process aided by technology. In the fourth part, I address the question of whether a model of history premised on a population theory is a narrative or historicist model.

Having thus presented a realistic understanding of the human condition as illustrative of a global plague species with little chance of reversing or remitting the problem, I look at the prescriptions of two of the more well-known writers on topics related to the unfolding Anthropocene and conclude with some observations on the role and obligations of the historian in a dying world.

I. An Experiment: On Human Goodness and Overpopulation

Man is the measure of all things. – Protagoras (Plato (1926), 481-577)

We are feeling, thinking beings and we think of ourselves as good or mostly good, a creature set apart (Nietzsche 1874 [1983], 127-194). Indeed, we are set apart in our superior cognitive abilities (a difference of degree rather than of kind), and possibly a unique capacity for syntactical language (Chomsky 2003, 59-61).

Some of us are realists or Manachiests and are quick to note the dominant non-rational and irrational side of human nature, but even these commentators have historically regarded the moderate mean of human civilization to be a good thing (Weiner 1949, 27; James, 1892 [1992]; Wilson 1978, 112, 186-7; Wilson 2014, 23-4, 29-30; Popper 1994, 181).⁹

In biological terms, humans are neither good nor bad. Nature does not make moral distinctions (although it shaped our notions of good and bad as the adaptive characteristics of a social animal). As a species we are amoral and can be judged in empirical terms of balance and imbalance. Objectively speaking, human overpopulation is an imbalance that nature will either correct or destroy one way or another, or else will be transformed by it. Overpopulation has damaged and continues to damage the Earth's biosphere. We are both the asteroid and its victims.

An informal experiment: over the course of your day, keep a record of all the evidence of human life and activity you see. You will quickly be overwhelmed. Just looking out the window of a commuter train heading toward Washington D.C. for a minute or two, I see roads including an Interstate beltway with hundreds of cars and trucks, aircraft in the sky, microwave towers, power lines, transformers, endless rows of houses, low, mid, and high-rise buildings, and a superabundance of discarded plastic.

Now imagine this built environment and its diverse residue to be the product of another single species whether it be cockroaches, flies, rats, starlings (an invasive species in North America), or worms. Extrapolate this evidence so that it covers much of the world. Consider the evidence not for its aesthetic or practical attributes and ingenuity, but for its magnitude and scale and ubiquity – its predominance over that of all other large animals (especially our closest living relatives, the great simians). Based on what you see, how would you describe the species that created it? Also take notice of every animal and bird killed by the

⁹ Although they are useful concepts, *irrational* and *rational* are ideas that deserve revisiting in terms of modern evolutionary psychology, as opposed to a continued reliance on their traditional definitions in rationalist and empirical philosophy. Philip P. Weiner gives an early evolutionary characterization of reason embraced by the Metaphysical Club of the 1870s: "Reason was not Hume's slave of the passions nor Hegel's absolute lord of creation; it was an instrument which had evolved from animal cunning to become the sole means of attaining the free use of one's natural powers. In social matters it was the only workable means of achieving a cooperative model of living with others who has competing desires." See Weiner (1949, 27). See also chapter XXII, 'Reasoning,' in James (1992 [1892]). If human morality and self-sacrificing altruism are in part the products of group selection, then perhaps so are elements of reason. On group selection, see Edward O. Wilson (1978, 112, 186-187) and (2014, 23-24, 29-30). One of the more useful definitions of 'soft' rationality is given by Karl Popper: "Rationality as a personal attitude is the attitude to correct one's beliefs. In its intellectually most highly developed form it is the readiness to discuss to discuss one's beliefs critically, and to correct them in light of critical discussions with other people." (1994, 181)

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activities and byproducts of this creature over the period of a few months, as well as habitat destroyed by the creature for its own homogenized use.

Imagine also that you can actually see the creatures of this profuse monoculture in the same proportion to the people you see over the course of a day, including yourself in the mirror. Imagine them to be the size of people (and put aside the reflexive revulsion you might feel at seeing a world populated by giant Kafkaesque insects, for instance). Does your assessment of the human global preponderance – and even of individual people as manifestations of that surfeit – shift? How would you describe this creature relative to its environment and other species? Try to put aside your moral prejudices and bromides about people being the children of God, ‘a god in ruins,’ ‘the paragon of animals,’ or as otherwise exceptional, and take a cold, hard look at what we are, what we have done, and what we continue to do (Emerson 1844 [1940] 39, Shakespeare 1623 [1974], 1156).

In order to live with the findings of our experiment, we must rationalize our cognitive dissonance or else dismiss it. We live in the world of human beings, after all, and there is no realistic way to live outside of the hive. Even if we accept the better examples of our kind and their products in the arts, sciences, and service as superlative (to say nothing of our loved ones) and continue to assert our intrinsic goodness, we must admit that there is such a thing as imbalance and too much of a good thing and that we are a perfect illustration of it. This is not to say that human accomplishments and what makes us distinctive and interesting are not real or impressive. Rather, it is an attempt to place these things in a broader biological context without our prejudices about them.

From this casual experiment, it is clear – at least it is to me – that human beings are a global plague species, and therefore, the record of its development and activities is history writ large.

II. The Basis for Understanding: A Disillusioned View of History and Human Nature

Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them. (Hume 1740 [1888], 415)

If we learned nothing else from the 20th century, we should have learned that the more perfect the answer, the more terrifying the consequences. (Judt 2010, 224)

I hope that nobody reading this will mistake my view for one of fatalism, or worse, misanthropy. To the contrary, all of my favorite people are human beings, and our best examples – the greatest minds, whether they be artists, humanitarians, musicians, philosophers, scientists, or writers – are what I admire most in the world. My purpose is not to inspire hatred or self-hatred, but to make the point that, special or not, there are far too many of us and that we must interpret history as the record of the trend of human population growth, domination, and collapse.

In order to have a more accurate understanding of what we are, we must approach the topic with detachment. As a historian of ideas, I am well aware of the godlike attributes of our kind. But having some grounding in sociobiology, evolutionary psychology, and military history, I have no illusions about human nature. We are animals and are subject to our animal nature. As Edward O. Wilson observes, "History makes no sense without prehistory and prehistory makes no sense without biology." (2012, 287)

Progressives are constantly disappointed by the course of events past and present because they labor under illusions about what people are and because they hope for the best based on the highest examples of human thought and behavior. Thinking, feeling Americans, for example, come to powerful disillusionment when they realize that much of the mythological national history we are taught or absorb via cultural osmosis is just that. The truth is always more complex and a lot messier.

These optimists view people as being essentially good and rational or at least capable of having these qualities predominate in our nature which we can then generalize into an interpretation of history as a rising road. They see the unfulfilled promise of the Enlightenment in terms of reachable goals and a foundation for even greater freedom, equality, and rights.¹⁰ And yet how are we to bring forth and sustain these positive human characteristics that are often so much at odds with so much of our nature for so much of the time? Proffering a historical model based on an assumption of the dominance of the better qualities of our nature is like trying to build a school of clinical psychology based on the assumption that people are predominantly happy.¹¹ It also means ignoring much of the historical record or else providing tortured ideological explanations to account for it. It requires one to ignore significant aspects of our nature.

Modern conservatives, by contrast, tend to cling to national myths and rationalize or shrug off the facts of past atrocities as justifiable or at least understandable operating costs, the rounding errors of 'freedom' and the foibles of an essentially good system. Rationalization and denial are the twin pillars of human psychology, and we should never underestimate another person's capacity for self-delusion, and never underestimate our own.

These liberal and conservative misunderstandings of national history find seamless analog in their misinterpretations of human beings and world history.

¹⁰ See Purdy (2019). Even though Purdy has a firm grasp of history and its darkness, his concept of a *commonwealth* reflects an overly optimistic view of human potential, in my opinion.

¹¹ People are not predominantly happy creatures and questions about how to be always happy are misconceived. In *The Silence of Animals*, John Gray observes that "For Freud... it is the hope of a life without conflict that ails us. Along with every serious philosophy and religion, Freud accepts that humans are sickly animals. Where he is original was in also accepting that the human sickness has no cure." (2013, 108-109) As animals torn by evolutionary pressures driving considerations of self-orientation and group interests, non-diseased human beings are by their nature off-balanced creatures.

Much of the conservative and progressive outlooks grow out of these respective mistaken assumptions (and both are based on an assumption of the eventual triumph of the good, even though they might disagree on what the good is). Ironically, both outlooks draw from the ideals of the Enlightenment.¹² One of the limitations of liberalism and conservatism is that they emerged from a kind of moral rationalism that predates a modern sociobiological understanding of humans. Thus the way these people see history, relative to a modern realist understanding, is analogous to an optimistic Enlightenment biological or a Romantic pantheist view of nature relative to that of a modern biologist.

By contrast I regard people to be a mixed bag. Rifting off of William James, I see history as a bloody mess (underscore *bloody*, underscore *mess*), a dark record brightened haphazardly by noble people, their efforts, ideas, and periods of relative enlightenment.¹³ If we assume that humans are aggressive creatures capable of genocide, torture, total warfare, the conventional and nuclear bombing of civilians, chattel slavery, and the destruction of the world environment, but who are also capable of altruism, generosity, kindness, love, moral and physical courage and self-sacrifice, classical music, hot and cool jazz, impressionistic painting, the works of Shakespeare, the Sistine Chapel, the New Deal, the Marshall Plan, the Peace Corps, and the Voting Rights Act, history and the world around us make a lot more sense.

Such an outlook on our divided nature is also more accurate – *truer* – than the ones we create in our minds based on binary categories of good/evil and rational/irrational and a fatuous assumption of the ultimate triumph of the former in both dichotomies. In spite of our revulsion at these things, genocide, slavery, and war, have been ubiquitous parts of the human condition, and admitting this and incorporating such understanding into a disillusioned view of history is an important first step in coming to terms of what we are and to realistically address

¹² There is a widely-embraced misconception that the great thinkers of the Enlightenment were all liberals –optimists – about human nature and reason. But there were also tough-minded realists who believed that human nature was multifaceted, passionate, and problematic. In addition to Enlightenment optimists like Bentham, Condorcet, Jefferson, Locke, Madison, Moisioudax, and Rousseau, are realists and skeptics like Burke, Franklin, Hamilton, Hume, Montesquieu, and Malthus himself. Even on the optimistic side there were ideas that are now considered to be illiberal. On modern misperceptions of the Enlightenment, see John Gray, “Steven Pinker is Wrong about Violence and War.” *The Guardian*. March 13, 2015.

¹³ “History is a bath of blood.” See William James, “The Moral Equivalent of War,” 1906. Some of James’s contemporaries express similar points of view. Mark Twain writes “Human history in all ages is red with blood, and biter with hate, and stained with cruelties.” See Twain (1938/1991, 53, letter number XI). Henry Adams writes “The war alone did not greatly distress him; already in his short life he was used to seeing people wade in blood, and he could plainly discern in history, that man from the beginning had found his chief amusement in bloodshed.” (1918, 128) A century before, Edward Gibbons characterized history as “the register of the crimes, follies, and misfortunes of mankind.” (MacMillan 2009, 141) As Karl Popper observes, “For the *history of power politics is nothing but the history of international crime and mass murder*” (Popper’s italics). See Popper (1945/2013, 475).

these behaviors (Gray 2002/2003, 91-96).¹⁴ Such an understanding gives us a fighting chance by knowing what we are up against and how to teach against such things. We must realize that they arise from the aggression that is a significant part of our nature. The best way to know people in these terms is a combination of a broad and deep understanding of history and sociobiology as parts of a general liberal arts education (Viereck 1949 [1962], 34-35).

Humans are intrinsically conflicted, off-balance creatures divided between primary impulses of self-orientation driven by pressures of individual selection, and less dominant motivations of altruism driven by group selection and the resulting eusociality (Wilson 2012 109-130, 133-157, 162-65, 170-88, Wilson 2014, 21-24). Our inborn repertoire of behavior therefore includes aggression and competition between individual groups as well as the qualities of cooperation, empathy, symbiosis, and loving-kindness. The tension between individuals, the individual and the group, and between groups is the No Man's Land of ever-evolving, never-ending discussions, of ethics. When they become broadly accepted, the details surrounding these often conflicting impulses become framed – codified – into moral systems.

A realistic view of humans is a necessary base for historical interpretation and for understanding events, and both the conservative and liberal interpretations require greater nuance and subtlety. With such an understanding, we arrive at the conclusion that, although we may and should take moral lessons from the past, no nation or people are an unswerving paragon of virtue; they are aggregates of human beings and are subject to our complex nature as shaped by particularities of individual circumstances and local culture as well as broader principles. And while we should never abandon efforts to make the world a better place, we cannot ignore what people are capable of doing, what we have done and will continue to do. Insofar as possible, we must approach the study and record of ourselves without illusion. As Mark Twain reminds us, "When we remember we are all mad, the mysteries disappear and life stands explained." (Twain 1987, 159)

III. Kinds of Progress

History may be a succession of absurdities, tragedies and crimes; but – everyone insists – the future can still be better than anything in the past. (Gray 2013, 4)

Does progress exist and can it be inferred from the historical record? The answer to this question depends on the kind of progress implied in our inquiry. There are at least three kinds of human progress relevant to this discussion: progress in areas of formal truth, social progress, and the progress in the growth of our species.

¹⁴ Realistically speaking, we might effectively minimize these things overall or prevent them on a piecemeal basis, but they will always exist as possibilities of the human behavioral menu.

1. *Progress in Areas of Formal Truth* (logic, mathematics, theoretical science, and technology/applied science): Knowledge may be forgotten, ignored, and lost, but progress in areas of formal truth is real, objective, and demonstrable. The growth and advancement of knowledge has been so overwhelming over the past 600 years that it has given rise to an assumption of parallel progress in other areas of human endeavor. Whether or not other forms of knowledge and activities are progressive – historical knowledge, for example – is an open question.
2. *Social Progress*. Progress in society and politics may be an illusion, or, if real, temporary. Enlightenment and post-Enlightenment ideas of moral rationalism (feminism, modern humanism, social and economic liberalism, Marxism, etc.) and their real world applications are too new and tenuous for us to determine if they are permanent and progressive. Over historical time, the underlying bases for human behavior do not appear to have progressed significantly. John Gray believes that the idea of moral or social progress grows out of early Christianity. He also observes that “Things are learned in ethics and politics, but they don’t stay learned.” (John Gray lecture “On Progress,” April 4, 2013, <https://www.youtube.com/watch?v=jmRBHCclzZk&t=426s>) As Tony Judt observes, the Victorian confidence that underlies the modern idea of progress “was hard-pressed to survive the 20th century.” (2010, 140)¹⁵ If anything, at this writing, it appears that in many republics, illiberal demagogues have gamed democratic procedures and institutions and are poised to turn the forces of extremism against these systems. This would be the opposite of progress, but it may also be temporary. It also suggests that if the potential for progress exists, it is vulnerable to changing historical currents.
3. *The Growth or ‘Progress’ of the Population of an Unchecked Plague Species*. I discussed this idea in Section 2 and stand by my conclusions there: it is real, observable, and if left unchecked, catastrophic. A corollary of this idea is that progress in science and technology enables and drives uncontrolled population growth, although social innovations, improvements in standards of living, and women’s rights, may slow or lower the growth of population (Wilson 2002, 30, and Wilson 2016, 190-191). Even if true, it would be too little, too late.

More broadly speaking, through a combination of aggressiveness, endurance, abstract and social intelligence, and an unmatched ability to adapt, we have fatally rigged the game in our own favor. Those things that help our fellow

¹⁵ Tony Judt writes, “By the 1950s, [the belief in progress] was already shaken by the crimes committed on History’s behalf by Lenin and his successors: according to Ralf Dahrendorf, Richard Tawney (the British social historian who died in 1962) was ‘...the last person whom I heard speak about progress without an apparent sense of embarrassment.’” (Judt 2010, 140) Although such serious men as Franklin Roosevelt and Martin Luther King, Jr. both reference history as a rising road, an ‘upward trend,’ they were popular leaders, and both of these endorsements were made in public utterances. King also notes in his *Letter from Birmingham Jail*, that “time is neutral. It can be used either constructively or destructively.” Thus, social progress requires positive effort and will not occur merely with the passing of time. King would appear to be right: to the extent that social progress exists, it is the result of constant endeavor.

humans enable us as a plague. In this sense, even things that we regard to be good or socially progressive contribute to imbalance.

A. The Technology-Population Dynamic

When a viable species is unchecked, and in favorable circumstances, its population will explode. Why would anyone suppose that human beings – a naturally-evolved species – would be exempt from this fact? If a species can kill off its natural enemies and competitors and is able to drastically lower deaths rates from disease – decreasing premature deaths from illness and increasing longevity – it is inevitable that it will come to grief with nature. History is in part the record of humans killing off our natural enemies and reaping the benefits and increasing our numbers.

The progress of formal truth therefore enables population growth, a phenomenon that might be called the Technology-Population Dynamic. It goes like this: science and technology help us eliminate, neutralize, or minimize our natural enemies (predatory and competitor species, pathogens, harsh climates), while bolstering our capacity to produce food, thus driving population growth. The progress that helps the species adapt and thrive increasingly drives the progress of imbalance.

By contrast, the means by which to address imbalance involves politics and policy based on the social sciences and at best offers progress that is local, haphazard, and short term (humans tend not to address crises until they are perceived as immediate threats). Such means are weak and ineffective relative to the combined momentum of technology and population growth. Even if social progress is real or potentially real, it will eventually be undermined by overpopulation. All of these observations suggest provocative questions about whether intelligence, reason, and planning are ultimately bad in that they push negative trends. At the very least, these things have given humans an exponential advantage over much of the living the world, thus leading to our present imbalance.

Technology continues to drive population growth, even when it does not improve living standards. The transition of human society from foraging to agricultural life, for example, was a mixed blessing, and perhaps the opposite of progress in terms of the quality of life. As John Gray observes, “In fact the move from hunter-gathering to farming brought no overall gain in human well-being or freedom. It enabled larger numbers to live poorer lives. Almost certainly, Paleolithic humanity was better off.” (2002, 156) More recently, longer lives and falling infant mortality rates in parts of the developing world have increased population without raising the standard of living for most people. In a world of scarcity, living well comes at a cost – acquiring the things that make life enjoyable and rich necessarily degrade the lives of others. To live and live well, means that other people and organisms will live impoverished lives or not at all. There is no way around this.

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Of course biology – ‘nature’ – is on both ‘sides’ of the human-Gaia conflict in the same way that it is represented by both pathogens and immune systems, the disease and its host. Biology drives human population – we are as ‘natural’ as any other organism – but, past a certain point, it is likely to work to limit that population growth like an immune system killing cancer cells. Perhaps the history of human epidemiology is the record of reason versus the immune response of the biosphere.

The COVID-19 virus might serve as an illustration of this. We know that subsequent forms of the virus such as the Delta and Omicron variants are the products of mutations, vectors, and numbers. But it *seems* as if the virus is trying to outwit or outmaneuver the vaccines. This leads to a rather obvious observation that we might call the COVID-19-Gaia Inversion, a dark thought: what if we have it all backward? What if the biosphere is the fevered patient struggling to breathe, that we are the pathogen, and COVID-19 is the immune response? This view does not sit well with our humanitarian impulses and progress-based assumptions about history, but that does not mean that it is not true.

IV. Is the Characterization of History as Unchecked Population Growth a Historical Narrative?

The short answer to this question is ‘no,’ neo-Malthusian theories of overpopulation do not constitute a historicist narrative; they are a theory-laden description of a biological trend that, left unaltered, will reach certain, seemingly-inevitable results, the specifics of which cannot be foretold. History may not be the result of an eschatological narrative, but it might as well be. The question of whether or not the Malthus-Lovelock-Margulis paradigm is or will become a *de facto* biologically-deterministic narrative depends on the answers to two other questions:

1. Can humans rise above our biology, and through moderation, reason, and cooperation, successfully address the problem of overpopulation and problems incumbent on it (the excess of carbon in the atmosphere and therefore global climate change, deforestation and loss of habitat, the plastics crises, etc.)? After all, humans are problem solvers as well as problem makers.
2. Will we?

As regards the first question, I venture a cautious ‘yes.’ The answer to the second question will likely render the answer to the first an academic point. I would like to believe that humans can rise above their biology via our better qualities, but I doubt that we will in time.

Open-ended social progress might not be real, but standalone economic and social projects like the New Deal, the Marshall Plan, the New Frontier, and the Great Society, are. And such programs may produce impressive results, endure, and may be improved upon for a while. The idea of an inevitable general advance everywhere at all times however is too much to expect.

If solutions to the world environmental crises are forthcoming, they will have to be large examples of what Karl Popper calls *piecemeal social engineering* based on trial and error rather than on rigid utopian schemes based on holistic ideology. If there are workable solutions, they will be products of a shotgun marriage of global cooperation forced by increasingly harsh realities. History has a will of its own – a course with inert heft – that cannot be managed or put into a rational order by holistic programs, and if there are solutions, I doubt they will come in time. If they do come, they will have to be based in large measure on historical understanding of what is possible. Regardless of what comes, we are audacious monkeys and must at least try (and if successful, then the question will be our responsibility in sustaining the Holocene indefinitely) (Frank 2018, 12).

The other reason why I do not believe the Malthus-Lovelock-Margulis interpretation of history is a historicist narrative is because we cannot know the future. I subscribe to a view of history as disorderly. Whether the world is characterized by chaos (deterministic disorder) or randomness (objective disorder), is irrelevant in practical terms (Popper 1934 [1959], 359-362). Either way, the future is unknowable. History is what cull from the cacophony of human interaction. Individual people in a nation are like the Brownian motion of atoms aggregated into a somewhat knowable macro order. But nations acting with other nations may become like multiple bodies acting upon each other. As such what appears to be a simple Newtonian interaction of bodies is actually an unpredictable, chaotic process (Newton 1687, 138-151; Penrose 2002, 688-689).

V. Prescriptions: The Role of the Historian in a Dying World

Well, when the fall is all that is left, it matters a great deal.
James Goldman, *The Lion in Winter*

The prospect of a world on the precipice pulls in different directions given how little we know about the future. Are we to assume that something of civilization will survive the crises of the environment and that our role is to preserve what is known for an aftertime? Let us assume the worst, that the world – the world as we have known it – is dying. What is the role of the historian under this assumption? More generally, what is the role of the thinking person, and why does it matter? We must address these questions because, no matter what the future brings, we cannot avoid or escape ethics. As my friend, David Isenbergh observes, claims that there are no ethics or meaning, or that ethics have no future, are still ethical statements.

Before providing my own prescription, let us examine those of two of today's more thoughtful commentators, John Gray and Roy Scranton.

A. John Gray

A post-humanist realist, Gray believes that we should give up the quest for meaning altogether. Nietzsche-like in tone and format but Schopenhauer-like in

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his pessimism, he ends his 2002 book, *Straw Dogs*, with the observation, "Contemplation is not the willed stillness of the mystics, but a willing surrender to never-returning moments... Other animals do not need a purpose in life. A contradiction in terms, the human animal cannot do without one. Can we not think of the aim of life as beginning simply to see?" (Gray 2002 [2003], 199) Seeing in silence, in forgetfulness, and without purpose? Hmm.

In *The Silence of Animals*, Gray concludes by continuing his argument to abandon quests for meaning, salvation, and myth: "If the human mind can ever be released from myth, it is not through science, still less through philosophy, but in moments of contemplation." (2013, 206)

Leaving aside the fact that a call to abandon philosophy is itself a philosophical plea, Gray diagnoses the human condition well. He appears to be saying that life provides its own meanings once we stop searching for them (and happiness) and just get on with living. But his solutions fail; for a human being it is impossible to live fully in forgetfulness, and it is undesirable to try (and Gray always remembers enough to put into his next book or lecture). He offers a lot of words about silence.

We have seen this before from philosophers. Wittgenstein writes that "What we cannot speak about we must pass over in silence," but then kept arguing for another three decades (1922, [1961], 74). Camus believed the world to be absurd, yet showed up in person to receive his Nobel Prize, dressed appropriately for the occasion, and gave a perfectly coherent speech. Postmodernists deny rationality and even the possibility of meaning in language, yet continue to write articles and books that present their positions in the form of reasoned, grammatical arguments. Only Hume (eventually) quit philosophy when he could go no farther. In 1739 he wrote "The *intense* view of these manifold contradictions and imperfections in human reason has so wrought upon me, and heated my brain, that I am ready to reject all belief and reasoning, and can look upon no opinion even as ore probable or likely than another." (Hume 1739-40 (1888), 268-269) In the early 1750s, he retired from philosophical writing to work in several governmental posts, write history, dine, play backgammon, converse and make merry with his friends until he died in 1776. In Hume's time and in our own, irrationalist skeptics and cognitive nihilists who keep talking or writing are frauds, even in their own terms (Hume 1739-40 (1888), 180-185, Hume 1745 (1993), 115-124). I do not put Gray into this category, but it is odd that he keeps writing after embracing silent contemplation.

Fish gotta swim, birds gotta fly, and people gotta think. We think on all manner of topics toward all ends. We cannot be silent observers shorn of intellectual quests any more than we can turn off our inner voice short of falling into dreamless sleep, suicide, or the allegedly 'pure experience' of Buddhist self-negation (although if identity is an illusion, then how did it ever occur to us and why do we experience it; and – given that an illusion must have an observer – does the idea of an illusion being an illusion to itself make any sense?). We cannot be

silent and therefore cannot live in Gray's (or Nietzsche's) animal-like forgetfulness (Nietzsche, 1874 [1980], 62). For as Nietzsche also writes "Man... would will *nothingness* rather than *not* will at all." (1887 [1996], 77) It would be pointless and, given our circumstances, immoral to try; we are blessed or condemned to be curious, thoughtful, remembering, story-telling animals and we must embrace our true nature.

We may not avoid assertions of meaning and myth even if we would. We cannot live without purpose and not choosing is not a possibility for us; to be human is to choose our meanings, or rather, to let them choose us. We are fundamentally ethical and linguistic mythmakers, and we could not avoid these things if we would. As Edward O. Wilson observes, human beings are natural-born – 'hardwired' – mythmakers: "...the mental processes of religious belief – consecration of personal and group identity, attention to charismatic leaders, mythopoeism, and others – represent programmed dispositions whose self-sufficient components were incorporated into the neural apparatus of the brain by thousands of generations of genetic evolution. As such they are the powerful, ineradicable, and at the center of human social existence." (1978, 206)

Humans are therefore perhaps the only animal that lies to itself in order to access a kind of non-literal truth about itself and to explain the world in the absence of more accurate structural explanations. Although Wilson acknowledges the centrality of myths and mythmaking, he holds that science is "the more powerful mythology" and that "man's destiny is to know." Science "is the only mythology that can manufacture greater goals from the sustained pursuit of pure knowledge."¹⁶ (Wilson 1978, 207)

Gray's ultimate prescription in *The Silence of Animals*, of 'Godless contemplation,' is fine as far as it goes, but what else does it exclude from our thought? I suspect it is hardly a solution that a majority of people are likely to take up (Gray 2013, 194-209). As much as I like Gray as a thinker and a writer, his advocacy of silence and meditation leave me a little cold, beyond a temporary personal prescription.

B. Roy Scranton

Another of the more eloquent voices on the dark side of the Anthropocene perspective is Roy Scranton. A literal warrior scholar who has glimpsed the ruined

¹⁶ To the degree that scientific hypotheses are myths, they are distinct from other myths. Scientific conjectures are progressive myths in that they may be improved upon or replaced by more accurate – more truthful – ones. As Karl Popper observes, "In both [science and non-science] we start from myths – from traditional prejudices, beset with error – and from these we proceed by criticism: by the critical elimination of errors." (1994, 14) Edward O. Wilson, like physicist Adam Frank, believes that we will need new myths, a new 'Big Story' if humans are to save themselves (Frank 2018, 8-10).

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future of humankind in the rubble and misery of Iraq, Scranton believes that it is simply too late to save the environment. The time for redemption has passed. Full stop.

His response therefore, is one of acceptance and adaptation, that as members of a myth-making species, people should acknowledge that the world that we knew is finished and we should let it die with courage and dignity in the unfolding Anthropocene. In this prescription he combines Nietzsche's premise of living on one's own terms with a Jungian preoccupation with myths. In some respects, he is the opposite of Gray in that he embraces humanism and mythmaking and places much of the blame of the global environmental crises on capitalism rather than our animal nature (Scranton 2015, 23-24, Gray 2013, 112-118). I found that his two most revealing pieces on this topic are his hard-hitting article "We're Doomed. Now What?" and his book *Learning to Die in the Anthropocene*, both from 2015.

In some respects, Scranton goes beyond Gray by asserting that things are already too far gone as a matter of fact, and that all that remains is to learn to let civilization die. Scranton is a noble, disillusioned *bon vivant* of the mind forced by circumstances and his own clear and unflinching perception into fatalistic stoicism.

In *Learning to Die in the Anthropocene*, a grimly elegant little book in which he builds his case, Scranton acknowledges the existence of the neoliberal Anthropocene and recognizes its necessarily terminal nature. But he is speaking about the death of the human world as we know it with a general idea about how to adapt, learn, survive, and pass on wisdom in the world after.

Scranton is not as elemental as Gray and his claim is not necessarily deterministic in character (i.e. that the looming end is the result of cosmic or genetic destiny or the natural balancing of the biosphere). He simply observes that things are too far gone to be reversed. Where Gray places blame squarely on the animal nature of *homo rapinus* – "an exceptionally rapacious primate" – and not on capitalism or Western civilization – Scranton puts much of the blame, both practical and moral, at the feet of carbon-fueled capitalism, "a zombie system, voracious and sterile" an "aggressive human monoculture [that has] proven astoundingly virulent but also toxic, cannibalistic and self-destructive." (Gray 2002 (2003), 7, 151, 184; Scranton 2015, 23). As with Edward O. Wilson before him, he calls for a "New Enlightenment." (Scranton, 2015, 89-109; Wilson 2012, 287-297)

For all of his insight, Scranton does not advance grandiose theories about human nature (most of his condemnation is of economics/consumerism and the realities of power although he does believe that "The long record of human brutality seems to offer conclusive evidence that both individually and socially organized violence as biologically a part of human life as are sex, language, and eating.") (2015, 75) He just looks at the world around him – peers Nietzsche-like into the unfolding abyss – and does not blink. Honest, sensitive, and intelligent he

simply tells the truth as he sees it. He accepts the inevitable and without delusion. The time for redemption has passed, and we must learn to let our world die with whatever gives us meaning.

As with Gray, Scranton may prove to be right as a practical matter and believes the end to be a matter of empirical fact rather than the unfolding of biological, historical, or metaphysical necessity. He speaks about learning to die, but his book is only palliative in tone as regards capitalistic civilization. He states that:

The argument of this book is not that we have failed to prevent unmanageable global warming and that the global capitalist civilization as we know it is already over, but that humanity can survive and adapt to the new world of the Anthropocene if we accept human limits and transience as fundamental truths, and work to nurture the variety and richness of our collective cultural heritage. Learning to die as individuals means letting go of our predispositions and fear. Learning to die as a civilization means letting go of this particular way of life and its ideas of identity, freedom, success, and progress. These two ways of learning to die come together in the role of the humanist thinker: the one who is willing to stop and ask troublesome questions, the one who is willing to interrupt, the one who resonates on other channels and with slower, deeper rhythms. (Scranton 2015, 24)

He is speaking of the death of the world as we knew it and the individual lives we knew. But he is also speaking of adapting and emerging in a time after with a universal humanism shorn of the assumptions of a failed world. In this sense, he is telling us what to pack for after the storm, both for its own sake, and perhaps to learn from it and do better next time. He writes:

If being human is to mean anything at all in the Anthropocene, if we are going to refuse to let ourselves sink into the futility of life without memory, then we must not lose our few thousand years of hard-won knowledge accumulated at great cost and against great odds. We must not abandon the memory of the dead. (Scranton 2015, 109)

In this sense Scranton is advocating a role not unlike that of a fifth century Irish monk carefully preserving civilization at the edge of the world, on the precipice of what might be the end of civilization, as well as an Old Testament prophet speaking of an eventual dawn after the dark of night, the calm or chaotic altered world after the tempest. As with the early Irish monks and similar clerical scribes writing at the height of the Black Death of the 14th century, we do not know whether or not we face the end of the world (Tuchman 1978, 92-125).

Although I do not agree with the Anthropocene perspective of surrender and adaptation as long as there is a chance to avoid or mitigate a global disaster, there is much to like about Scranton's perspective here.

In *We're Doomed. Now What?* he goes even farther than the idea of the heroic humanist thinker and becomes something like Emerson's all-perceiving eyeball, or a kind of pure empathetic consciousness. Relying heavily on the perspectivism of Nietzsche, Scranton says that human meaning is a construct. But

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meaning must be tied to – exist in – proximity to perceived reality, and beyond meaning is truth (Tarski 1956 (1983), 155). Perspectivism is a kind of relativistic but intersubjective triangulation for a more complete understanding. From the accessing of truth from multiple perspectives, we may devise a fuller, more informed, and less delusional kind of meaning.

He writes that rather than die with our provincial illusions intact,

We need to learn to see with not just our Western eyes but with Islamic eyes and Inuit eyes, not just human eyes but with golden-cheeked warbler eyes, Coho salmon eyes, and polar bear eyes and not even with just eyes but with the wild, barely articulate being of clouds and seas and rocks and trees and stars. (Scranton 2018, 8)

In other words, this is a kind of reverse-phenomenology: rather than attempting to approach the world without assumptions, we should begin with many, perhaps *all* perspectives. As sympathetic as I am with all of the living things he mentions, beyond a general sense of empathy and stewardship, to see things through their eyes is impossible. We should realize and fight for the interests of the creatures of the living world, but beyond the generalities of conscious awareness, we cannot experience it the same way they do. I too feel a kind of pan-empathy, only without the illusion – a Western illusion – that I can truly *see* things as they do. And besides, Scranton does not mention what good it would do even if it were possible. This idea is reminiscent of Edward O. Wilson's notion of biophilia, only more all-encompassing (Wilson 1984).

It seems odd that Scranton believes that technology cannot save us from the climate crisis, and yet empathy and philosophy will save us in a time after, in a sense. They may work for individuals – and certainly for thinking people, like historians – but this is not a realistic prescription for an overpopulated world in crisis. Perhaps he would benefit from a measure of Gray's realism about human nature.

C. My View

Rather than try to detach from myth as Gray would have us do, or to embrace myths that either arise in us or to which we have been acculturated, we must continue to grow without illusion; if we are not growing – learning – we are dying, and dying will come soon enough. Certainly we will have illusions, but these must be minimized in pursuit of truth. Who we are is given, to include our archetypal myths.

Human psychology is founded on rationalization and denial, but we must rid ourselves of mistaken ideas and understanding or else improve upon them to make them truer and relevant. And we must do so with the understanding that all knowledge is fallible and that there are limits to what we can know – that all learning is flawed, incomplete/limited, and selective.

The capacity for mythmaking is innate, and some of our myths emerge from the mists of time. Whether archetypal stories or new variations of old themes, they

are a key part of what makes us human. They are the bases for art and entertainment. We may still tell and adapt age-old stories, but we must also unburden ourselves from delusion and grow, because learning and seeking truer understanding are not only useful, but are noble and worthwhile ends in themselves. We may be destroying the planet, but truth-seeking is still something to which we may aspire.

From a body of disillusioned knowledge, we may come to better know our world and the human story; such understanding is both inherently good and a practical basis for how to act. As regards history, there is great merit just in knowing the story better, even (and especially) if the end is near. Knowing is an end in itself and a realistic basis for policy, and to die wiser and with fuller and more accurate knowledge is an element of the good life; all else being equal, a person who dies knowing that $1 + 1 = 2$ is superior to someone without that knowledge, simply because it is *true*. This prescription is not a means toward salvation in any greater sense. If a new and more accurate narrative is to be defined broadly as a 'myth' by some, then so be it. Its correspondence to reality will also make it a truer empirical statement.

I would therefore expand Wilson's prescription to embrace science to include all of epistemology, which, when it is done well, would include the practice of history as a part of the greater rational-empirical enterprise. It too is a part of the 'sustained pursuit of knowledge' of which Wilson writes (1978, 207).

As with science, in history we start with myths. And like science, we might improve on this, thus making history a progressive enterprise. As Popper writes,

In both [science and non-science] we start from myths – from traditional prejudices, beset with error – and from these we proceed by criticism: by the critical elimination of errors. In both the role of evidence is, in the main, to correct our mistakes, our prejudices, our tentative theories – that is, to play a part in the critical discussion in the elimination of error. By correcting our mistakes, we raise new problems, we invent conjectures, that is, tentative theories, which we submit to critical discussion directed to the elimination of error. (1994, 140; see also note 16)

Traditional myths are archetypal, and although they may take on the trappings of the times as cinema, literature and painting, their general outlines, if merely restated, are non-progressive, although, in a new time, we may find new insights in them. Epistemological interpretations of the world around us in science and history, when done well, are progressive. Thus, as a critical thinker, Anaximander, is superior to Thales because he criticized myths in order to improve them. (Popper 1998, 9-10) As a historian, Thucydides is preferable to Herodotus, because he relies less on myths. Therein lies our duty as historians regardless of what comes. Just as $1 + 1 = 2$ is true in every possible universe, truth is truth, even in a dying world.

If we are not growing, we are dying. But what does it mean to grow? What does growing mean in a dying world? Ostensibly, writers, to include historians,

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write to get published, to get the ideas out as gifts to humankind. But more fundamentally, writers write *because they are writers*. They write because they have to write. Historians study history to know the story better. If honest they seek the truth no matter where it leads and no matter how dark that truth may be. To live is to grow, and regardless of our fate, we must continue to grow until we die. It is what we do.

To illustrate this point, I will close with what I call The Parable of the Dying Beetle, a personal myth of sort based on a real event. When I was a child, I came across a beetle on the sidewalk that had been partially crushed when someone stepped on it. It was still alive but dying. I found a berry on a nearby bush and put it in front of the beetle's mandibles and it began to eat the fruit. There may have been no decision – eating something sweet and at hand was presumably something the beetle would do as a matter of course. It made no difference that there was no point in a dying beetle nourishing itself any more than did my offering the berry to it (perhaps like the last meal of a condemned person). It was simply something that I did and which the beetle did. Maybe it is the same with humans and myth-making: it *is* what we do, living or dying. Writers write because they are writers; artists (to include writers), historians, and journalists tell the truth. At least they are supposed to.

The dying beetle likely ate unthinkingly out of instinct whereas humans should act out of reflection. But we may look more broadly at the beetle as acting out of its nature, its will as given. Let us act out of our nature as thinking beings, interpreters of the past, and truth-tellers, come what may. We should write for a purpose beyond our own gratification, to get to truer answers and more accurate interpretations, if only for the sake of knowing.

Conclusion

Where does all of this leave us? What is the role of the historian in a dying world? More broadly, what are ambition and hope and love in a dying world and what is the morality of a thinking agent that is a part of the cause of the world's end? I have stated my opinion. In discussions related to this topic, I have sometimes been told that we should take a more neutral view of the situation and treat human overpopulation with a detached attitude as just another natural phenomenon.

Should we adopt an amoral 'big picture' stance of fatalism and recognize that the evolution, propagation, and the technologies of human beings are all parts of natural processes – that the human-caused destruction of much of the natural world is itself a 'natural' process, an experiment doomed by its own success – and leave it at that?¹⁷ By the same logic, we could decide not to treat cancer because it

¹⁷ Lynn Margulis writes, "To me, the human move to take responsibility for the living Earth is laughable – the rhetoric of the powerless. The planet takes care of us, not we of it. Our self-inflated moral imperative to guide a wayward Earth or heal our sick planet is evidence of our immense capacity for self-delusion. Rather, we need to protect us from ourselves." (1998, 115)

is a 'natural process,' or shrug off the extermination of the Armenians, the Cambodian killing fields, the Holocaust, and World War II in general as unfortunate but inevitable manifestations of human nature? Perhaps the human-altered world is just the next phase of life on the planet just like "the microbes that reworked the world by creating the oxygen-rich atmosphere." (Frank 2018, 10, see also Popper 1972, 285) I acknowledge that human overpopulation is the result of the Earth's biology. But we are also so fundamentally and intimately a part of it, that we cannot escape judgment about it as well. Again, we could not escape morality if we tried.

Of course, all of the prescriptions presented here are based mostly on the assumption that the world (or *our* world) is actually dying. If there is hope for the survival of some kind of a world in which humans are a part, then the role of the historian is to interpret the past in order to apply its lessons to the present and future. If this is the case, then getting the facts and the interpretations right will be more important than ever before.¹⁸ If the world is not dying, getting the story right will be of great practical benefit. It will allow those who follow to learn from the mistakes of the past and to anticipate what might be coming.¹⁹

If not – if the world is dying – then the role of the historian will still be to get things as right as possible for its own sake. Like the beetle, we must act based on our nature regardless of what comes. If global ecological disaster is our fate – if it is predetermined or if the world is merely too far gone to save – then we must be conscientious locusts or cancer cells and bear faithful witness and admit openly what our kind has wrought as a matter of fact.

Regardless of whether or not the world is dying, the historian must inform the reader what we have done and continue to do, and to confront the powers that be with this truth and urge them to do better.

One of the most constructive uses of history is to learn from the past in order to apply lessons about how to act in the present. And yet what is a person of

For the purpose of comparison, it would be interesting to see side-by-side structural diagrams of the various systems and functions of an individual organism relative to those of the world biosphere. Like an organism, the biosphere is self-regulating and 'alive,' but as Margulis observes, there are some important differences that make the analogy an imperfect one.

¹⁸ Ideas matter and history, when gotten wrong, is worse than useless, it is harmful and potentially catastrophic. Getting history as right as possible therefore matters. Some interpretations are truer, more accurate, complete, and insightful than others. In order to have meaningful discussion and policy toward a goal of effective problem solving, we must first have a realist understanding of what is happening today by knowing how we got to where we are. The less people know about history, the less they know of the world and their place in it, they less they know who they are. Such people have an impoverished understanding of themselves. Historians who deny the practical importance of the study of history – like A.P.J. Taylor –err badly (MacMillan 2009, 141). For a discussion of the importance of getting history as right as possible, see my article "Looking for Black Swans: Critical Elimination and History" (2021, note 6).

¹⁹ In the words of Lord Byron, "The best of prophets of the future is the past." (1982, 248)

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our time to take from a realistic understanding of the human past? A sensitive person today *is* like a thinking, feeling cancer cell. We know that we are a part of an aggregate that is killing a much larger living thing of which we are a small subset, and yet it is almost impossible for us to do anything about it or even shun our kind and its intrinsic nature. The truth will allow us to see what we have done.

If there are interpretations of the human project beyond biological imbalance, they must include creativity, reason, and the understanding of what we are and our place in the world. They must be a part of an accurate account of the story of our species. The role of history as a critical-rational enterprise today is what it has always been: to tell the truth insofar as the historian can know it. If we are not able to reconcile morality and reason with history, then perhaps we may at least learn from it. The truth may not save us, but the search for it will keep us honest, regardless of what comes. And that is something.

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