

ON Michael Charles Tobias
Jane Gray Morrison

**THE NATURE
OF ECOLOGICAL
PARADOX**

 Springer

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Michael Charles Tobias • Jane Gray Morrison

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To the Future and Wellbeing of Life On Earth

Foreword

On the Nature of Ecological Paradox is unquestionably a masterpiece, in the tradition of two great treatises by Ludwig Wittgenstein and Baruch Spinoza. Nothing like it has ever been written before. It mirrors the dizzying careers of two people deeply in love. Michael Charles Tobias and Jane Gray Morrison have – collectively – conducted field research on every continent in an effort to understand and communicate the fall-out on Earth from human infliction, a mournful epoch geologists call the Anthropocene, which equates with the sixth (possibly seventh) global extinction event in the 4.2 billion years of documented life on this planet. While their field work – articulated in hundreds of published essays, over 75 books and 100 films, lectures, keynote addresses, and several professorships between them – has clinically analyzed one ecological crisis after another, often prophetically, Tobias and Morrison have also focused on solutions, or at least pathways toward amelioration. Their canvas of theoretical, empirical and applied research encompasses the natural sciences, deep demography and family planning, energy strategies, geopolitics, the history of ideas, conservation biology, systematics, taxonomy, ecological anthropology and animal liberation. But, in addition, Tobias and Morrison have for their entire careers been equally focused on ecological aesthetics, art and literary history; philosophical traditions; paleontology; psycholinguistics; comparative ethics, both in practice and in the ideal, as well as the vast array of psychoanalytic theories and tools to better grasp the human condition going back to its far distant hominid origins.

Some of their most notable past films and books include *Antarctica: The Last Continent* (1986); *Ahimsa – Non-Violence* (1987); *Black Tide* (1989); the ten-hour dramatic television series *Voice of the Planet* (1990); *World War III: Population and the Biosphere at the End of the Millennium* (1996); *A Day in the Life of India* (1997); *Nature's Keepers: On the Frontlines of the Fight to Save Wildlife in America* (1997); the sprawling, 1836-page modern-day Don Quixote, *The Adventures of Mr. Marigold* (2005); the massive *Sanctuary: Global Oases of Innocence* (2008); the PBS feature film trilogy *Mad Cowboy* (2005), *No Vacancy* (2006) and “Hotspots” (2008); *God's Country: The New Zealand Factor* (2011), and seven recent books with Springer Nature Publishers (New York/Switzerland), including *Anthrozoology: Embracing*

Co-Existence in the Anthropocene (2017), *The Theoretical Individual: Imagination, Ethics and the Future of Humanity* (2018), *The Hypothetical Species: Variables of Human Evolution* (2019), and, most recently, *Bhutan: Conservation and Environmental Protection in the Himalayas* (2021, with Dr. Ugyen Tshewang). This atlas of endeavors just scratches the surface of their body of work. A short précis of these myriad and deeply provocative intellectual odysseys can be gleaned from a book Michael wrote together with conservation biologist Dr. Paul R. Ehrlich of Stanford University, *Hope On Earth: A Conversation* (2014, University of Chicago Press).

It was on one of these innumerable projects, *No Vacancy* (the feature film and accompanying edited volume) that I worked with Michael and Jane and our film crews throughout the US and Mexico, the Netherlands, France, Italy, Nigeria, Ghana, Iran, India and Indonesia, to try to grasp the extent of the continuing human population as well as to foster voluntary, humane population stabilization. I have devoted my career, and as President of the non-profit Population Communication,¹ to helping couples have children only when wanted and space the births of their children for the health of the mother and child, and to informing governments on growth curves, and have commissioned reports on population stabilization from countries with total fertility rates over 3 with populations over 20 million. I have designed 56 operational research projects in 24 countries.

I have been contemplating ecological paradoxes – in one form or other – for most of my professional career.² Because, as Tobias and Morrison have microscopically delineated in this massive page-turner, everything we think, feel and touch seems to be embedded in a paradox – propositions, beliefs, assumptions, theories which, when thoroughly explored, may often prove to be self-contradictory, or something other than expected or perceived. In other words, our belief systems, born out of centuries, millennia of common practice, community standards, scientific paradigm, observation, endless statistics, fixed ideas and presumptions – even the cumulative phenotypic evidence of individual and population behavioral patterns – when enshrined within eco-system dynamics and feedback loops are constantly revealing new truths, nuances more complex than we ever imagined, and which are critical to the health and robustness of biodiversity. Such paradox is the core ambiguity shading our future as a species, a topic central to Tobias and Morrison’s engrossing study. What a gift we have in this book that brings forth a story so beautifully written that is unlike anything written before.

On the Nature of Ecological Paradox, divided into three major sections totaling 100 essays – Part I, *Tractatus Ecologia Paradoxi*, Part II, *Ecological Memories and Fractions*, and Part III, *A Natural History of Existentialism* – each lavishly illustrated with over 325 images from every artistic and intellectual domain (1943 citations), traces every dominant divining rod in the history of ecology, but does so in a continually unexpected context. This book structures within many dimensions the paradox of the Green Revolution pioneered by Norman Borlaug. My burgeoning

¹ www.populationcommunication.org

² <https://www.smith.edu/libraries/libs/ssc/prh/transcripts/gillespie-trans.pdf>

career as a soil scientist was disillusioned as Borlaug saw populations exploding from 2.2 billion when I was born to over 7 billion today. In 1986, he wrote to me, "Many put great emphasis on ecological problems and to me one of the great unrecognized parts of the equation that bears on ecological systems is human population pressure and yet, one seldom hears the ecologists speak out about the population monster." Norman Borlaug's successful battle to give birth to the Green Revolution ultimately served as but one more desperate stop-gap measure that could not prevent inequitable distribution of staples, or the sheer expansion of populations forever undermining gains in high-yielding varieties, an equation for unstoppable chronic malnutrition in large population pockets across the globe. There were 2 billion people on the planet in 1930. Today there are 7.7 billion. Since the publication of the authors' book, *World War III*, 2.2 billion more people have been added to the planet. At the turn of the century there will be over 10 billion. Indeed, if current total fertility rates continue, our species might even exceed 11.5 billion.

And yet, as Tobias and Morrison point out in so many ways, while most species' well-being is measured, in part, by the degree of their reproductive success, in the case of *Homo sapiens*, we have clearly outsmarted ourselves. What are key drivers, stressors, psychological components and ethical inflection points that might yet enable our species to grow up, to make peace with the world, to learn from our all but 330,000 year+ history? We are newborns who have, as Nikos Kazantzakis warns in one of the chapters, discovered fire and are ready to burn up the world. Is this destiny socio-biological? Are there compassion fatigue/regeneration bifurcation points where we can, as individuals, and as a collective, transcend moral bankruptcy? Total self-destruction? Or is our destiny implacable, against the unflexing, albeit resilient combination of biomes, over 40% of which our species has already appropriated for its own fast increasing wants and desires?

The stranglehold of the self-interested political and economic structures is illuminated by the scientists, politicians, writers, artists and world leaders exquisitely detailed in Michael and Jane's prose. As is the senseless destruction of habitat that supports the myths of exponential growth, revealing the sheer cruelty to most other species and the billions of other humans caught in a path of evolution we ourselves have commandeered.

On the Nature of Ecological Paradox represents an intellectual and ethical breakthrough, by the very courage of its principles and sturdiness of its arguments. And by these two leading thinkers bringing such wide experience, data and wisdom to the most profound ecological and moral crises of our time. They have faced the abyss head-on, though not without flinching. There is a personal through-story in this great book that lends an emotional underpinning to all that they describe, explore and theorize. They passionately and persuasively bring to the open tables of science, mathematics and the many histories of consciousness a dramatic, sometimes terrifying focus upon the deeply frustrating reality that, despite sound reasoning and a plethora of information widely promulgated regarding the many human-imposed plights to the planet, it is more often the fact that what is good for the earth and all that dwell therein is not what humans want. By that predisposition, our future – and that of all others – is indeed imperiled. Few intellects in the world

today have so comprehensively explored this baffling paradox. Tobias and Morrison's psychoanalytic approach is critical to an emerging perspective from the humanities and sciences that will not shy away from the absolute troubling truth of ourselves. And while there are countless conceptual frameworks for addressing these etiologies we face as a society, no one book has ever collated so much of the historic and contemporary fabric of these difficult deliberations. It is an ecological corollary, in a sense, to Will and Ariel Durant's *Story of Civilization* (though, obviously, in 1 volume, not 11.)

The ultimate paradox is that we are tiny, insignificant, probably irrelevant, dust motes in an obscure galaxy. And yet, we are so full of ourselves, so full of passion, longing and hope. All of these predicates and presumptions would assume, as a fundamental premise of human existence, that we would cherish every day and every life form. But we don't. Most people are so troubled and haunted by circumstances not of their making that it's just enough to get through the day, get some sleep at night and have a good meal, if possible. We've lost the connection to what we truly need to cherish with every breath. We either take it for granted or destroy it.

The great tragedy enshrined within the mesmerizing pages of *On the Nature of Ecological Paradox* is that most of us more or less have a general idea of what's going on, whether in the guise of sheer human chaos, millions of acres across the planet horribly on fire, the number of natural calamities, human violence, civil wars, extinctions, climate change, and the scope of medical fall-out of pandemics, all on the rise. Here, this syndrome of anthropocenic causes and consequences is conveyed through what can only be characterized as a culminating journey of a half century of deep reflection and field research. With its collective eye looking directly before it, as well as the near future, Tobias and Morrison unstintingly encourage us to think clearly and feel deeply, as to how we arrived at this moment, and what our remaining options may provide for. They offer us uncluttered avenues that reject an otherwise mathematically certain species demise – which by all accounts we currently, selfishly favor – and, instead, project cognitive and ethical scenarios that this and future generations can cultivate, and thereby usher in the time when a more sane, compassionate co-existence is within our grasp.

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Prologue

For a generation Michael Tobias and Jane Morrison have been among the leading voices helping us understand the intricacies of the interconnectiveness of the web of life. Their perspective stands out because it goes beyond science and includes our religious beliefs and philosophical foundations. They earned their credibility by traveling to the very places they speak of, seeing droughts, famines and population dislocations on the one hand, and on the other experiencing the sublime through the beauty of the earth's remotest places and the people who live there.

I met Michael and Jane when I was serving as the secretary of the Smithsonian Institution because of their interest in the work of the Smithsonian Environmental Research Center. They were intrigued by the findings of the Smithsonian's Global Earth Observatory (GEO), a project that brings together multiple entities around the world observing changes in forests over time, and sharing the information using a common format. It was apparent that the GEO concept resonated with their interest in understanding how the earth's systems are responding to the overarching effects of humankind on the natural world.

During the course of their lives they have written, together and individually, over 70 books, and produced a similar number of film documentaries. This new book distills their insights as examined through the lenses of art, human sensibility, philosophy, religion, animal rights, statistics and conservation, among others. No stone is left unturned in the search for examples that can help us save ourselves, both physically and spiritually.

They probe the question as to why our species, with a brain large enough to appreciate the beauty and complexity of the natural world, seems unable to contain the damage done by its own choices and actions. Whether in the end we can find the will to save our fragile planet and the life on it, or if we will be the agent of our own destruction. Hence, the ecological paradox, the focus of this book.

As the authors note, in a 1993 essay, the scientist/sociologist E.O. Wilson was asked if humanity is suicidal. His answer, "no, we aren't suicidal, but we are death for much of the rest of life and, hence, in ultimate prospect, unwittingly dangerous to ourselves." Their new book points out in the interim between 1993 and today, while we have made some efforts to save species, protect wilderness, and develop

new technologies to combat climate change, by and large we have lost ground. Sadly, we are reaping what we have sowed in the form of apocalyptic forest fires in the Western US, Siberia and Alaska, “300 hundred-year” rainstorms occurring annually, protracted droughts, massive garbage patches and dead zones in the oceans, huge glacial melting events in Greenland and Antarctica, increasing frequencies of hurricanes and typhoons, and a pandemic. Ironically, each of these events was predicted beforehand, including the pandemic, where Michael and Jane were among the first to note the linkage of disease spread from animals to humans to the “wet markets” of China.

Because it has proven difficult to mobilize the collective will of humanity and its governments to take the actions needed, the authors conclude that our hopes lie with the individual and free will. Individuals who not only deeply understand the need for transformation but that it must be done at speed. As the book concludes, “Otherwise, and all too clearly, our worst emergent nightmare, collectively, will be shown to have been the very paradox of our presence on earth.”

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Correction to: On the Nature of Ecological Paradox C1

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Part I
Tractatus Ecologia Paradoxi

Chapter 1

Introduction



1.1 Ecological Interpolations

We call this treatise, or *Tractatus*—in homage to both Baruch (Benedict de) Spinoza (1632–1677) and Ludwig Wittgenstein (1889–1951)—*On The Nature of Ecological Paradox*, knowing full well that its “causes and consequences” are the real clue to an Anthropocene that has, to date, been analyzed for its inflictions on the natural world, which are unprecedented in their *cruelty*.

SARS-CoV-2 (or Covid-19), climate change, extinctions, global pollution, human progress for some but not for most, vast inequities between species: These are only some of the most recent ecological pandemics that are, at heart, a prime lesson in paradox and pain. Ultimately, a healthy, well-balanced individual should, theoretically, make for a healthy planet. However, even in health, as in sickness, humanity has shown so many hostile predilections with respect to other life forms, that today we have no baseline for assuring reasonable correlations between human behavior and the options for successful furtherance and interactive vitality among other species.

Such escalating facets of the human experience question the very substance and verity of our notions of evolution and natural selection against a pressing context of ethics. Ethics that are phronetic (born of practical wisdom), dispositional as the vicissitudes of life dictate, silent, pragmatic, consequential, teleological, eudaimonist, self-effacing and rationalizing, absolutist, situationist, overtly volitional, and the like. These are just some of the philosophical traditions key to any thorough examination of the history of the natural sciences within a contemplative and unstinting context of analysis. And its many tentacles of speculation are fraught with paradox.

Paradoxical in that a hominid that for so long has prided itself on species success has done so only at an extreme cost to the rest of the biological planet. One most recent example involves the so-called “wet markets” throughout much of the world, where shoppers demand that their food be animals, and that those sentient beings be

Fig. 1.1 A Troubadour: “Nature instructing the Poet,” from a M.S. in the King’s Library in Paris. (Reproduced from Costello and Pickering,³ Private Collection, Frontispiece, Photo © M.C.Tobias)



slaughtered right there before them (in the most violent, inhumane, and unsanitary of circumstances). Cruel because that *is* cruel—emblematic of our species’ insensate grip upon the majority of life forms; and, ironically, the cruelty, at the stage of gene commingling into mutant virus bats, pangolins, mink, possibly other species; a resulting global pandemic that infects humans, thus totally backfiring, at least for our kind. But it is not the first time—nor will it be the last (the ultimate backfire is yet to occur)—that a paradox of the most heinous and vile dimensions has suddenly (seemingly) dominated the biosphere (Fig. 1.1).

1.2 Troubadours

It is by that amalgamation into a mere word, *cruelty*, Old French, “indifference to, or pleasure taken in, the distress or suffering of any sentient being”,¹ stemming etymologically from the twelfth and thirteenth centuries, that we perform from the

¹<https://www.etymonline.com/word/cruelty>

very beginning grapple with its psychological implications, collapse of virtue, this singular indictment of the human species. A word, cruelty, that most prominently corresponded to take one salient, if seldom discussed, example to the Spanish Inquisitional flames that claimed so many lives of a culture of southwestern France, the Vaudois, which had given birth to the ascetic, pure, and sensuous musical traditions of the nomadic lyrical gypsies of Provençal. We single them out, that time and place in Western history, because it was a fashion of music subtly delivered in order to please, to quiet the heart, and it was nearly obliterated by forces who refused to be pacified by poets. Dante was greatly influenced by their fancies, the Utopian songs and lyricism that are their legacy, and the Inferno to which many were subjected.

This far-off and elusive aesthetic, two centuries of Arcadia-enraptured Occitan-singing musicians who had sought a safe haven in Spain, across the Pyrenees, only to be viciously turned upon (again) and many burned at the stake over their musical and poetic faith, represents one of the most emphatic dialectics in Western tradition; an iconic example of our species-wide psychoses of which much will be written; not unlike the many martyred saints throughout Christian tradition. In this case, the tragic victims of an ill-turning human nature in the Late Middle Ages were Troubadours.

Their melancholic soliloquies, sonnets, and cansos (love songs to one's beloved) would centuries later inform Monteverdi, Vivaldi, Bach, Mozart, and Handel, and even Goethe's first and most despairing of creations, *The Sorrows of Young Werther* (1774). We feel the fragile presence of the Troubadours in equal measure across the span of literature and natural history reflections, from Petrarch to Cervantes, from Shakespeare to Voltaire, Jean-Jacques Rousseau, and ultimately Buffon, Beethoven, and Darwin; so star-crossed were the heavens and hells to which their melodies and dreams fell prey.

Theirs is an unwritten history emblematic of The Birth of Innocence; the Fall of Man. Within its diverging paths are two distinct philosophical and moral poles: sagas writ painfully in so many leys d'amors, the pastorela, descort, and alba, this latter a shepherd's song of woeful countenance, as dawn broke ranks with darkness; and a natural history of Europe and, by sharp implication, all of human time, human contradiction, and ensuing turmoil.²

And at this very moment, a concatenation of global crises is not only bringing out the best in our species but also epitomizing how unprepared the collective really is to effectively deal with individual and community suffering, from Washington, D.C. to Siberia, from Sweden to the Antarctic. The breakdowns are not restricted to, though possibly made more intractable by, democracies. But in every nation, institutional vulnerabilities are now glaringly seen to track with our apparent inability to effectively change large numbers of minds and hearts; to engage in civil and transformational dialogue that can surmount the hurdles inherent to theory; let alone

² See *Protestant Endurance Under Popish Cruelty: A Narrative Of The Reformation In Spain*, by J. C. M'Coan, Esq., of the Middle Temple, Binns And Goodwin, London, 1859; See also, *The Troubadours -A History Of Provençal Life And Literature In The Middle Ages*, by Francis Hueffer, Chatto & Windus, London, 1878, particularly Chapter XIX, "Siege Of Autafort -Bertran's Death;" and Chapter XXI, "The Vaudois And Albigeois," –"The Reformation Of The Thirteenth Century."