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## **The Overpopulation Apocalypse and Anthropocentric Bioterrorism in Dan Brown's *Inferno***

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### **Abstract**

In this age of Anthropocene, overpopulation has long been identified as one of the major source of environmental problems. In spite of some necessary measures taken both nationally and globally, it still continues to threaten the environmental equilibrium of the world. Overpopulation not only offers serious challenge to the existence of non-humans and natural world, it also threatens the existence of humans to such an extent that apocalypse motif has often been invoked to discuss this emergent crisis. This issue has been taken up in Dan Brown's ecothriller *Inferno* (2013). In this thriller, through the character of Bertrand Zobrist, a fanatic scientific genius, Brown anticipates a not-so-distant future when the world will collapse due to overpopulation. Zobrist, a transhumanist, releases a preventive vector virus which would enforce random sterility on one-third of the world population. The paper probes into the reason behind Zobrist's bioterrorism and the ethicality, or the lack of it, entailed in his entire approach. It also shows that unlike the advocates of Deep Ecology, Zobrist's concern is ultimately anthropocentric as he cannot think beyond human concern while engaging in the act of bioterrorism.

### **Keywords**

anthropocene, apocalypse, overpopulation, bioterrorism, anthropocentrism

In recent times, the one environmental term which is being referred to in academia with greater degree of immediacy is that of 'Anthropocene'. The term, though originally concerned to those in the environmental studies, has now evolved into a discourse that permeates the fields of humanities and social sciences too. It was Paul Crutzen, a Nobel Prize laureate in chemistry, and his collaborator Eugene F. Stoermer who popularized the term 'Anthropocene' to designate a new geological epoch which is human dominated and in which the world environment is severely violated primarily due to human actions. In this new geological era, which can be dated since late eighteenth century, "humans – thanks to our numbers, the burning of fossil fuel, and other related activities ... act as a main determinant of the environment of the planet" (Chakrabarty "The Climate of History" 209). The human influence on environment and climate has escalated in a rapid scale since the middle of twentieth century to the present which is designated as the period of "The Great Acceleration". It is a time frame "when global figures for population, real GDPs, foreign direct investment, damming of rivers, water use, fertilizer consumption, urban population, paper consumption, transport motor vehicles, telephones, international tourism ... all began to increase dramatically in an exponential fashion" (Chakrabarty "Climate and Capital" 15).

The concern on global warming over the last few decades has been directly linked to that of Anthropocene. Global warming is indeed considered one of the irrefutable examples of human-induced climate change. According to Crutzen (23), fossil fuel burning and agriculture have been among the most instrumental forces in increasing the emission of carbon dioxide by 30%, and of methane by more than 100%. Such increases are responsible for the great acceleration of global warming. The active role played by the humans in the global climate change, signals the replacement of the previous geologic era of Holocene with that of Anthropocene.

There may be debates about the introduction of the term Anthropocene or the specific time register from which this epoch of Anthropocene can be dated but there is no denying that humans being the most dominant species in this planet have gradually evolved into an undisputed, not to forget, detrimental geological force. None can deny the role of this dominant species in the alarming change of climate which has increased significantly over the last three centuries. The present paper doesn't offer scope to discuss the historical aspect of Anthropocene or the details of adverse human interference on nature but what it does is to concentrate on one major aspect of Anthropocene, that of overpopulation. The rapidity with which the human population is accelerating is itself a threat, and the paper deals with that

threat with special reference to a popular thriller of the present times — Dan Brown's *Inferno*.

Besides its obvious religious connotation, apocalypse has emerged as a major concept in environmental rhetoric. Apocalypse, as Lawrence Buell sees it, “is the single most powerful master metaphor that the contemporary environmental imagination has at its disposal” (285). In order to create awareness amongst the largely unconcerned people of the danger that besets our planet particularly due to human actions, the motif of apocalypse has been invoked by the environmentalists every now and then. In most cases, the vision of environmental apocalypse leads to a kind of environmental dystopianism. Buell identifies three major features of this environmental dystopianism. These are:

... (1) the vision of exploitation leading to “overshoot” (excessive demands of the land) or interference producing irreversible degradation, (2) the vision of a tampered-with nature recoiling against humankind in a kind of return of the repressed, and (3) the loss of all escape routes. (308)

Buell finds all these fears being projected in Rachel Carson's seminal book *Silent Spring* (1962), one of the earliest to invoke the metaphor of apocalypse in environmental literature. In that book, Carson imagines a near future in which the world will be blighted by the curse engendered by human sin of excessive use of organic pesticides like DDT, aldrin and dieldrin. *Silent Spring* begins with the description of a fabled town of America “where all life seemed to live in harmony with its surroundings” (Carson 21). But this reference of the pastoral idyll is immediately supplanted to a description of a waste land blighted by an environmental curse:

Then a strange blight crept over the area and everything began to change. Some evil spell had settled on the community: mysterious maladies swept the flocks of chicken; the cattle and sheep sickened and died. Everywhere was a shadow of death. (Carson 21)

There was a strange illness that led to sudden death of the humans. There were no birds, no chicken hatched, no fish in the stream, the vegetation had withered. But the reason behind this destruction is not unknown. As Carson states, “No witchcraft, no enemy action had silenced the rebirth of new life in this stricken world. The people had done it themselves” (22). Carson's declaration obviously anticipates Crutzen's concept of Anthropocene where she directly blames human actions for the imminent environmental apocalypse.

However, long before Carson, the environmental apocalypse motif was anticipated in Thomas Malthus's *Essay on the Principle of Population* (1798). In this epochal text, Malthus

forewarns of the ecological crises which is imminent due to the hiatus between exponential progression involved in population growth and arithmetic progression of agricultural growth. As he categorically states that “the power of population is indefinitely greater than the power in the earth to produce subsistence for man” (qtd in Garrard 94). Malthus, however, also believed that population increase will not go beyond a certain point as human vice and depravity will check it. He also held that population increase will be regulated by war of extermination, sickly seasons, pestilence, famine etc, an image directly echoing the biblical reference to apocalypse. It is this last idea which was used by Paul Ehrlich with greater degree of urgency in his neo-Malthusian classic *The Population Bomb* (1972).

Unlike Malthus, who was writing two centuries earlier, Ehrlich makes use of the apocalypse motif to warn us of the immediate dangers of overpopulation. There is no denying that the problem of overpopulation has increased rapidly over the last three centuries. The world population in 1999 was estimated to be around six billion which was six times of the world population back in 1850. Within 2011, the world population increased to seven billion; i.e an increase of one billion within just 12 years. As Al Gore succinctly sums up the situation:

... from the beginning of humanity’s appearance on earth to 1945, it took more than ten thousand generations to reach a world population of 2 billion people. Now, in the course of one human lifetime — mine — the world population will increase from 2 to more than 9 billion, and it is more than halfway there. (qtd. in Garrard 98)

It is to this alarming rate of population increase which leads Ehrlich to invoke the apocalypse metaphor in *The Population Bomb*. Reinstating the Malthusian logic in the present scenario, Ehrlich imagines overpopulation as a ticking (nuclear) bomb which will lead to unprecedented destruction through famine, pestilence and nuclear war and consequent increase of human mortality rate. In a world sharply divided by inequalities, overpopulation can only lead to blind alley of helplessness. As Mike Davis states:

Sheer demographic momentum will increase the world’s urban population by 3 billion people over the next 40 years (90% of them in poor cities), and no one — absolutely no one ... has a clue how a planet of slums, with growing food and energy crises, will accommodate their biological survival, much less their inevitable aspirations to basic happiness and dignity. (qtd in Chakrabarty “The Climate of History” 211).

The same possibilities are considered by Ehrlich and he radically blames the humans declaring them as the “teeming, burgeoning, eco-pathological threat” (qtd in Garrard 96). He advocates radical surgery to cure this cancerous increase of human population by taking emergent measures like compulsory sterilization (though later he has changed his stance to offer a reluctant nod to non-coercive birth control measures). Forty years after his predictions, it may be argued, nothing serious has taken place in the world. The famines and wars which have taken place in this time frame are primarily due to economic, ethnic and religious grounds; not really for any direct effect of overpopulation. Ehrlich himself has stated that “these are just possibilities, not predictions” (qtd. in Garrard 99). But, that doesn’t mean that we can take the concerns of Ehrlich lightly. The possibilities may well be realized in the not-so-distant future if no pre-emptive measures are taken immediately. These measures can be harsh, unpopular and even unethical if judged by the “normal” standard. But, the question is when confronted with the possibility of certain danger, isn’t extreme measure justifiable? The paper tries to find answer to this question as it goes on to discuss how Dan Brown’s popular ecothriller *Inferno* (2013) presents an apocalyptic vision of human future and suggests an extreme but well-intentioned pre-emptive measure.

Thrillers have rarely been given critical attention by serious literary critics. Without being judgmental about this critical stance, it must be admitted that thrillers (both in literature and films) have dealt with environmental problems with greater frequency than “serious” novels. The reason is not difficult to surmise. As environmental issues are “much more the stuff of potentiality than of actuality” (Kerridge 244), the realistic novels often used to steer clear of these elusive problems. Until the late twentieth century, these novels were slow to respond to the growing environmental crises.<sup>1</sup> The thrillers, on the other hand, thrive in their ability to imagine catastrophes and disasters with their dramatic suddenness. Environmental apocalypse is thus a favourite motif for the writers of thrillers. As Kerridge sums up:

Environmentalists frequently feel that time is running out. They feel panic in the face of the world’s indifference. Sometimes this fear finds expression in fantasies of apocalypse — or rather of apocalypse excitingly and heroically averted, the escape narrow and frightening enough to stop industrial capitalism in its tracks. (244)

It is certainly no co-incidence that thrillers like Peter Hoeg’s *Miss Smilla’s Feeling for Snow* (1992), Sarah Dunant’s *Fatlands* (1993), Paul Watkins’s *Archangel* (1995) or more recent Leo Child’s *Terminal Freeze* (2009), Si Rosser’s *Tipping Point* (2011) & *Impact Point*

(2012) and others are all concerned with the imminent ecological crises and most often than not they invoke the rhetoric of the apocalypse.<sup>2</sup>

This apocalypse motif has been taken up in Dan Brown's thriller *Inferno* (2013). In this ecothriller, Brown anticipates an apocalyptic vision of the not-so-distant future when the world will collapse due to overpopulation. Being a thriller of Robert Langdon series, it has all the usual (but here mostly unconvincing) tropes of puzzles scattered through famous Renaissance artifacts and conspiracy theories associated with legendary Renaissance personalities. But, we can give the unconvincing diachronic mystery a miss here as it is beyond the scope of this present paper. It is rather the ecological aspect of this thriller which is our object of deliberation.

In *Inferno*, the environmental apocalypse metaphor has been invoked by the fanatic transhumanist scientist, Bertrand Zobrist who considers on the lines of Ehrlich that the future of humanity is at peril due to the inordinate rate of population increase. Zobrist reiterates the rhetoric of bomb used by Ehrlich. He warns the director of World Health Organization (WHO) by saying that the "time bomb is no longer ticking. It has already gone off, and without drastic measures" (Brown 104), apocalyptic disaster is inevitable. Zobrist advocates that for the better future of the world forceful depopulation is the only alternative. Being the scientific genius he is, he prepares a preventive vector virus and makes arrangements to release the virus after his suicidal death so that the virus will make random genetic alteration to enforce sterility on the infected humans. At the end of the thriller, the vector virus is released despite the combined efforts of WHO, a secret society called Consortium, Robert Langdon and his mysterious accomplice Sienna Brooks. The virus infects all the humans of the world and it is estimated that one-third of the random human population will become infertile due to this infection.

Though well-intentioned, this release of vector virus which forces changes in the human genes must be seen as an act of bioterrorism. Langdon was appalled by this act of genetic terrorism which attempts to change the basic nature of human species itself without the consent of the concerned individuals. This act is a gross violation of human rights. Yet, at the end, Langdon becomes partly convinced of the necessity of this drastic measure taken by Zobrist. Both he and Elizabeth Sinskey, the director of WHO, agree that it was necessary to take this drastic measure for the betterment of human future. The question of ethicality was sidetracked for the hallowed notion of "greater good".

Zobrist's vision, at the surface level at least, reminds us of the suggestions of Deep Ecology<sup>3</sup> which advocates the measures of depopulation. The fourth of the eight planks of

Deep Ecology states that “the flourishing of human life and culture is compatible with a substantial decrease in human populations; indeed, the flourishing of nonhuman life requires such a decrease” (Devall and Sessions 70). Taking cue from this principle, eco-fascists like David Foreman and Christopher Manes have made inhumane and misanthropic statements about population control. Warwick Fox, a prominent deep ecology theorist reminds us of the distinction of being misanthropic and anti-anthropocentric. There’s a difference between saying we want to get rid of all human beings, and saying that humans aren’t the most important species on the planet.

Obviously, Zobrist differs from the deep ecologists at the core. Far from being a misanthropic, he rather advocates disturbing anthropocentrism. His entire act of genetic alteration is blatantly anthropocentric in nature. Being a transhumanist, Zobrist believed in the immense potentialities of the humans. As Sienna Brooks, one of Zobrist’s prime admirers, clarifies:

He [Zobrist] was a Transhumanist who believed we are living on the threshold of a glittering ‘posthuman’ age — an era of true transformation. ... He understood the astonishing powers of technology and believed that in the span of several generations, our species would become a different animal entirely — genetically enhanced to be healthier, smarter, stronger, even more compassionate. (Brown 436)

Evolution must then cease to be a natural process. Humans through genetic engineering will strive to become, and indeed will become, better species. One of the fundamental aspects of Zobrist’s transhumanist philosophy is that “we as humans have a moral obligation to *participate* in our evolutionary process ... to use our technologies to advance the species, to create better humans — healthier, stronger, with higher-functioning brains” (Brown 453). Thus, neither he nor Brooks, can see any violation of ethics in these radical experiments in genetic engineering. Brooks even tries to convince Langdon that “genetic engineering is not an acceleration of the evolutionary process. It is the natural course of events” (Brown 453). This ultra-optimism on genetic engineering must surely be questioned as it might lead to disturbing implications.<sup>4</sup>

One of the basic problems of Zobrist’s view is that it is totally bereft of concerns for other species. He is silent on how the non-humans have to suffer due to human actions or how the rapid increase of human population has an adverse effect on non-human species. This anthropocentric “otherizing” is no less problematic than his unethical modification of human genes. Zobrist must though not be singled out as the only advocate of

anthropocentrism. *Inferno*, the text, as a whole doesn't give any impression that population increase is a holistic environmental problem. The way all the characters including Robert Langdon readily fall into the necessity of genetic terrorism shows that solutions to major environmental problems are rarely thought in holistic terms. Besides the unconvincing merger of Renaissance history and science in this thriller, Dan Brown also needs to be criticized for his explicit promotion of anthropocentrism which dilutes the seriousness of a problem as grave as overpopulation. We certainly cannot take a work seriously if the writer criticizes Anthropocene and overpopulation while remaining anthropocentric at the same breath. In that case, his ecological stand appears to be a mere pose or at our sympathetic best, inadequate and incomplete. Both as a thriller and a thought-provoking work on overpopulation, *Inferno* disappoints us big time.



## Notes

1. Obviously, since the last decades of the twentieth century, realistic novels have started to take up the environmental issues with more readiness. These novels include — Graham Swift's *Waterland* (1983), Don DeLillo's *White Noise* (1985), Jenny Diski's *Rainforest* (1987), Ian McEwan's *A Child in Time* (1987), John Updike's *Rabbit at Rest* (1990), Barbara Gowdy's *The White Bone* (1998), Yann Martel's *Life of Pi* (2001), Marian Engel's *Bear* (2002), Amitav Ghosh's *The Hungry Tide* (2004), Zakes Mda's *The Whale Caller* (2005) etc.
2. Hollywood has also started to produce greater number of films having the motif of environmental apocalypse almost at the same time frame. Thus, we have films like *Armageddon* (1998), *Deep Impact* (1998), *The Day after Tomorrow* (2004), *The Happening* (2008), *2012* (2009), *San Andreas* (2015) and others including the cinematic adaptation of *Inferno* in 2016.
3. Deep Ecology refers to an environmental movement initiated by a Norwegian philosopher, Arne Naess in 1972. It is founded on two basic principles: one is a scientific insight into the interrelatedness of all systems of life on Earth; together with the idea that anthropocentrism is a misguided way of seeing things. Deep ecology though has recently developed misanthropic associations.
4. Margaret Atwood's *Oryx and Crake* (2003) presents a dystopian future where genetic engineering conducted by a young genius scientist, Crake, leads to catastrophic results.

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