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“The Four Horsemen of the Greenhouse Apocalypse”:
Apocalypse in the Science Fiction Novels of George Turner

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… the realities of overpopulation, ineradicable pollution, rampant nationalism, and plain entrepreneurial greed – the four horsemen of the greenhouse apocalypse – closed around the planet.

- George Turner, *Down There in Darkness* 13

In *Postmodern Apocalypse*, Richard Dellamora writes of a “pervasive sense of unease in contemporary existence”, arguing that the “lack of confidence in the possibility of shaping history in accord with human desire(s) provides the bass line of culture – political, economic, and aesthetic” (xi). More than a decade after Dellamora’s remarks, a collective dread evident in literature and film has not abated; rather, it has perhaps intensified. The real and immediate threat of nuclear war was perhaps most prevalent in the years following 1945, and has since decreased, yet terrorist attacks throughout the world, as well as growing fears about global warming, have continued to provide impetus to the apocalyptic tradition. Particularly in the wake of the terrorist attacks on New York City in 2001 and London in 2005, it is perhaps no surprise that literature and film have featured a steady stream of apocalyptic scenarios. For instance, in a five year period after 2001 just some of the disaster films released include *The Core*, *The Day After Tomorrow*, the remake *Poseidon*, adaptations of novels such as *I, Robot* and *War of the Worlds*, and telemovies including *Category 6: Day of Destruction*, *Category 7: The End of the World*, *Locusts: Day of Destruction*, *Oil Storm*, *Supervolcano*, *10.5*, and *10.5: Apocalypse*. [1]

This paper will argue that George Turner utilises apocalyptic imagery and themes in his science fiction novels to interrogate political systems and warn of future disaster if preventative action is not taken now. He reveals that crises will arise if ordinary people delay making the necessary changes until “tomorrow” because they refuse to believe that threats are serious or will affect them. His work offers a useful example of how writers can use apocalypse as a protest genre to critique scientific, social and environmental policies.

**Apocalyptic Writing**

Apocalypse literally means revelation, discovery, disclosure. The term is derived from the Greek *apokálypsis* (uncovering) and *apokalyptein* (to uncover). Apocalyptic writing is that
which aims to reveal, to disclose something hidden. The strongest association of the word is with the Book of Revelation – Apocalypse – in the Christian Bible, which uncovers a vision of future chaos at the end of times. Secular apocalypse is permeated with the images and themes from biblical writings, although a major departure from religious apocalypse is the emphasis on disaster as the primary interest in secular writing. Hence the most popular use of the term apocalypse, which is used to mean not revelation but widespread destruction.

Critics have identified the decades following World War Two as a time when dystopic and apocalyptic visions of the world became dominant in speculative work. Veronica Hollinger has suggested that much earlier “‘classic’ science fiction ... is optimistic about the future of human beings” (216), while Paul Brians notes that science fiction gradually became bleaker over time:

In the 1940s science fiction had promoted itself as prophetic and inspirational. In the 1950s it had been diagnostic and critical, but typically provided some sort of happy ending. But in the 1960s the dominant mood of much of the best writing could only be described as nihilistic. At last science fiction found a fictional voice appropriate to the nightmare of nuclear war. (22-23)

Apocalyptic literature worldwide increased in volume and urgency in the decades following the various catastrophes that characterised World War Two. After the war, the American-Russian Cold War maintained a sense of crisis with its underlying threat of total annihilation, while terrorist strikes, ecological disasters, and scientific experimentation continue to contribute to significant cultural anxieties. W. Warren Wagar claims that real-life world wars and the Cold War had a “profound effect ... on the apocalyptic imagination” (110), while Tom Moylan argues that the growth of dystopic fictions competed with and eventually overshadowed a revival of utopia in the 1960s and 1970s (xii).

Some critics have suggested that the dystopic downturn in speculative fiction began specifically with the nuclear bomb. I.F. Clarke writes: “After Hiroshima and Nagasaki that proposition [of nuclear war] became the key text for the greatest outpouring of warning stories in the history of this apocalyptic fiction” (22). Susan Sontag suggests that the first use of the nuclear bomb, which she describes as a “trauma”, heightened the fears underpinning many science fiction films: “it became clear that, from now on to the end of human history, every person would spend his individual life under the threat not only of individual death, which is certain, but of something almost insupportable psychologically – collective incineration and extinction which could come at any time, virtually without warning” (“Imagination” 224). David Seed notes that the bombing of Hiroshima was both the “end of one period or the beginning of another” (“Dawn” 88); the atomic age, essentially creating an overlap of the old and new. The conflation of ending and beginning in the event of nuclear
warfare is, of course, apocalyptic. There was also the creation of the Doomsday Clock in 1947 by the *Bulletin of Atomic Scientists*, with the clock approaching midnight in times of crisis, as in the 1950s when Cold War nuclear testing saw the clock move to two minutes to midnight. In January 2007 the Doomsday Clock was moved from seven to five minutes closer to midnight, because of environmental fears and nuclear development throughout the world ("Doomsday Clock").

While nuclear war fuelled many apocalyptic fantasies, such as Nevil Shute’s *On the Beach*, other anxieties have replaced the threat of nuclear weapons. Brian Stableford writes:

> the advent of atomic weapons did more than confirm a growing suspicion that the modern world possessed the means to bring about a man-made catastrophe of awesome dimensions. It helped bring about a consciousness of the future as a kind of *continuing* catastrophe – a mess which we had already made and would have to take special measures to escape. The lesson of Hiroshima was that *it was already too late* to avoid the dark and hostile future which had earlier been feared; the world was locked on course. (126-27)

The “continuing catastrophe” is evidenced in the fact that other issues have taken the place of nuclear war in the anxieties of the cultural imagination. Sontag writes that disasters such as AIDS, Third World poverty, overpopulation and environmental problems constitute a “long-running serial: not ‘Apocalypse Now’ but ‘Apocalypse From Now On’ … catastrophe in slow motion” (*AIDS* 88). Global warming, for instance, has become a popular trope in apocalyptic fictions, particularly in recent times when high-profile politician- and celebrity-endorsed documentaries receive as much attention as Hollywood blockbusters. The success of *An Inconvenient Truth* is one example of how climate issues have become key election factors. Scientific concern coincides with popular interest in the subject, as seen in environmental or geological catastrophe films such as *The Day After Tomorrow* and *The Core*, to the point where the prospect of widespread ecological disaster appears to have replaced nuclear war as a dominant fear in society.

For I.F. Clarke, the new apocalyptic fictions were not only nihilistic but also didactic because the discovery of the “new-found human capacity for creating the most genocidal instruments conceivable ... transformed the tale of the Last Days into a most admonitory form of fiction that centres on the dangerous pursuit of super-weapons” (21). Apocalypse can therefore be an appropriate mode for writers keen to protest against complacent political systems, harmful environmental policies, and reckless technological and scientific experimentation; the form allows authors to extrapolate from current events and imagine a terrible future should certain actions be taken. Even if social criticism is not the intention of the author, a disaster scenario that is the result of human action (or, frequently, inaction) functions as a warning to readers. In this way, politics, technologies, ecological issues and
science may be construed as significant causative factors in either the end of the world or a world very much worse than it is now.

There is the potential for apocalypse to transform readers’ perspectives, although, as Wagar points out, “long experience suggests that no country will be deterred from waging total war in the future by literary doomsdays” (128). Brians argues that the writers of apocalyptic tales themselves are often not actually against war. It might seem that novelists depicting the end of the world are utilising the genre in order to make a stand against war or nuclear weapons, but Brians insists this is not the case and that the opposite may indeed be true; most writers of nuclear fiction are not pacifists but instead use nuclear war in their writing as a justification for retaliation, violence, and resistance (44). Whether consciously didactic, critical, or neither, however, what such novels do give their readers is “a permanent question mark over the shape of tomorrow’s world” (Clarke 23), perhaps in line with Frank Kermode’s declaration that the “shadow [of the End] still lies on the crises of our fictions” (6).

**George Turner's science fiction novels**

George Turner’s science fiction novels, published from 1978 to 1999, are explicitly visionary in their concerns, which range from scientific and genetic manipulation, and class problems, to catastrophic ecological issues. Turner had published mainstream fiction including *The Cupboard Under the Stairs*, *The Lame Dog Man* and *Transit of Cassidy*, but his science fiction career began with *Beloved Son* in 1978 and increased his fame. Several of his works are interconnected, such as the trilogy *Beloved Son*, *Vaneglory*, and *Yesterday’s Men*, as well as *The Destiny Makers* and *Down There In Darkness*; while others are independent works, such as *Drowning Towers*. Despite the different locations, timelines and characters, there is coherence in these future novels, making the novels not so much competing as collaborating visions of the future.

Turner engages the apocalyptic theme of disaster to critique political systems, environmental, race and social policies. The causes of chaos in his imagined worlds are usually linked to the environment, particularly the overexploitation of resources. Turner’s emphasis on ecological rather than nuclear causes reflects a shift in the genre. Andrew Milner has suggested that “global environmental catastrophe comes increasingly to substitute for large-scale nuclear warfare” (37), and this is certainly evident in Turner’s work which shows little interest in nuclear war as a worldwide catastrophe. Turner dismisses the nuclear threat because he considers it unfeasible and unrealistic. In his Postscript to *Drowning Towers* he
writes that the nuclear threat is “unlikely”, if only because nobody would remain to “loot the losers” (318).

Turner outlines his beliefs about the purpose of science fiction in an essay, “Some Unreceived Wisdom”. He dismisses most of the genre as “junk” and condemns an “abyssmal standard of genre criticism” (15). Turner contrasts science fiction with fantasy, and defines the former as: “a logically derived presentation of activities and their consequences taking place under conditions which, while scientifically admissible, represent life and the universe not as we know them but as under changed circumstances they could be” (16, emphasis in original). Turner insists that science fiction must function as an extrapolation of reality and be credible and possible. The futures depicted should be the projected outcomes of contemporary political and social conditions, and in this way the genre can operate as a literature of prophecy, acting as commentary or even warning on issues facing current society. This is an apocalyptic function, the idea of the prophetic author having special knowledge about the future and telling others.

Turner uses science fiction to warn his readers about the catastrophic problems facing society and the dire consequences of inaction. For instance, in Beloved Son, set in 2032, the crew of the space shuttle Columbus returns to Earth from a forty-two year journey to discover that the world has suffered a cataclysm. The travellers, including Commander Raft and Lindley, learn that during their absence an event called the “Five Days” occurred, “a short week of vast airstrikes, and whole cities dissolved in dust and fire” (101). The wars are a consequence of the problems of overpopulation, environmental issues of pollution and exploitation of resources. In a deliberate attempt to curtail the population, biochemists engineer a “final solution” (99) where mutating crops and diseases have “genocidal” results (100) and much of the world starves and dies. Westerners suffer in particular because they prove unfit for the new “Stone Age” lifestyle (101); Asian populations die because of disease (102); while people with experience or knowledge of Indigenous “tribal methods of survival” fare better, including in Australia, “one of the world’s harshest lands” (104). England and “a dozen such areas around the planet” become “uninhabitable” for a century or more (56). The changes lead to the creation of a communist America, the New York Soviet, while Russia is taken over by religious fanatics.

At first the society that Raft and Lindley find in Australia appears to be utopic: people live peacefully, crime is rare, and the world is run by adherence to the ethics of non-interference and the “freedom to seek and perfect their own systems” (47). With its skyscrapers and business district, Melbourne proves impracticable for this new world, so
along with other “monster cities” (77) it is destroyed in favour of a newer, more economical environment. The people have “destroyed it, smashed it down, taken what they wanted and left the rest in rubble, forty city blocks of shapeless and heartless trash heaps of brick and concrete, plaster and tile and splintered glass” (214). Most of the city’s population of three million succumb to plague, leaving less than a million inhabitants.

Turner makes it clear that the pursuit of the utopic ideals of this ethical society does not work. Adherence to the ethics amounts to a world controlled by Security, where youth suicide is unusually high, news is suppressed, dissenting citizens are brainwashed and people have become “robots” (224): “Security was only another stop-gap preservation of a status quo eternally unbalanced by the same powers as were marshalled for its equilibrium; it would go the way of all attempts at regulation – Marxism, Victorian morality, religious persecution, dictatorship – as inner change rendered it obsolete” (Vaneglory 192). The reader of Beloved Son views this new world through the eyes of Raft and Lindley, and their impressions are highly unfavourable. Lindley claims that it is a world developing into “totalitarianism” (361) that Hitler would have admired (142), while Raft denounces it as: “Drugs, hypnotism, spy gadgets, computer records and Security ready to spring on any individuality that doesn’t toe the ethical line!” (251). Raft himself has been targeted as part of an experimental cloning program to create a race of “supermen” (296) with improved life span, skills and physical regeneration; ultimately, a “virtually immortal” body (307). Genetic experimentation, however, results in grotesque, monstrous beings, who haunt scientific progress with the reality of their disturbing presence. Cloning has dire consequences because the potential exists for it to “ruin a civilisation and rule the ruins” (62). Turner’s novels display a distrust of science, where biologists and geneticists are constructed as irresponsible and dangerous:

The bomb we’ve learned to live with and pollution we will handle. But biologists! What they have achieved since the sixties is enough to put the fear of hellfire into Jehovah himself. Artificial inovation, the gerontological drugs, brain regrowth and the mechanics of gene manipulation – these are already with us, imperfect and unready but with us. They are only the beginning. Consider the implications, and retch. (25)

Turner repeatedly emphasises the problems of overpopulation compounded by the misuse and abuse of science. Judith Buckrich has written of the difficulty of distinguishing Turner’s authorial voice from that of his characters (147), and this problem is complicated by his use of character diaries or reports as narrative devices. Yet the various biases against science, religion and utopic ideals recur so often and consistently that these attitudes remain the dominant voice of his work, rarely disputed by other major characters. Raft and Lindley’s opposition to and criticism of the new world results in Raft’s brainwashing to become one of the cloned “zombies” (345), and as the novel ends Lindley has been captured to be
brainwashed as well; he escapes this threat only to be killed at the conclusion of the sequel to *Beloved Son, Vaneglorry*, when a group of super-humans with naturally occurring mutations, giving them longer than average lifespans, are gathered together in Glasgow and killed with radioactive dusting.

Turner continues his critique of damaging environmental and social policies in *Drowning Towers*, published outside the US as *The Sea and Summer*, which remains one of Turner’s more well-known works. The narrative concerns a future, utopic Australia where a character is writing a history of an earlier time before a disaster changed the country. This earlier period is the major focus of the book, and the story takes place from 2041-2061 in the Old City, Melbourne, before global warming when rising sea levels flooded all coastal cities. The world is divided into two main classes representing the extremes of wealth and poverty: Sweet (the rich) and Swill (the poor), the latter of whom makes up ninety percent of the Australian population. There are also Fringers, former Sweet who have lost their position. The State encourages class divisions and attitudes in order to “preserve an economically manageable status quo” (157), and experiments on a virus to decrease the population. Indeed, the Swill do not oppose the situation in the belief that resistance would worsen their lot (237), and their indifference and complacency in the status quo stymie any chance of revolution.

In the works discussed here, Turner utilises apocalypse to highlight and critique social inequities and racist policies. He suggests that human reactions to catastrophes prove to be opportunities for radical programs of depopulation that demonstrate the hidden racist or fascist desires of the ordinary person. Edward James has noted that in apocalypse fiction generally:

A post-holocaust novel has the advantage of allowing the author to recreate the world as he or she wishes ... Holocaust wipes out the problems of the present, to create a new, possibly simpler and, from the point of view of both author and characters, more manageable world ... The author can work out his or her social and political ideas on a clean slate. (52)

A new and simpler world that eliminates the “problems of the present” can result in racism. Norman Cohn writes that in apocalyptic thought the desire is to “purify the world by destroying the agents of corruption”, allowing the chosen people to reign (285), while Robert Plank suggests that “ill will”, or sometimes even “rage”, is evident in apocalyptic texts (36).

In Turner’s novels, the apocalyptic scenario results in scientists and politicians envisioning a new world for a chosen people. The crisis of overpopulation leads to the desire – couched as necessity – for “culling”, usually of particular populations. The dominant groups use science or simple neglect to annihilate populations based on age or colour or gender. The aged are left to die in *Beloved Son* to make way for the youth, an idea actually promoted by
older peers, for the older citizens were “wrecked by hunger and disease and they carried the old ideas with them like poison; they were a dead weight on an emerging world” (110-11). In *Drowning Towers*, a sterilising infection is engineered and tested on the poor, and then ultimately women appear to be the chosen victims of a suspected experimental disease that slowly kills them.

Nonwhite populations are the targets in *The Destiny Makers*, set in 2068, which follows the story of a detective, Harry Ostrov, assigned to protect the Victorian Premier. In addressing the problem of overpopulation, the sinister possibilities of targeting particular races are highlighted:

> It became necessary to decide who should be preserved and who wiped out ... Of course each alliance had different ideas about that. Blacks would dispose of whites with some sense of justice done, and who would blame them? Islam would have little mercy for the non-Mohammedan, while Hindus and a few others would cheerfully see Islam to the devil. Religion and race are only part of the problem; political persuasions enter, too. (260)

A consortium of mostly white, English-speaking countries – Australia, the UK, USA, Canada, New Zealand and Israel – votes on whether or not to produce a genetically engineered sterilising virus that will target and annihilate nonwhite populations, and they also consider the idea of “preserving carefully monitored numbers of nonwhites for the sake of the gene pool ... [or] that reasonable numbers be preserved to form a serving and laboring caste” (269). Australia is the last country to vote; and Victoria has the deciding vote of the states. Some of the characters denounce this plan as racist and evil and attribute its existence to a political system that is riddled with corruption.

Eventually the culling scheme is carried out in the sequel *Down There in Darkness*, although the dominant groups choose their targets based on adaptability to the new world rather than their ethnicity. *Darkness* begins in 2070 and continues a hundred years later after the release of a virus that sterilised all but the desirable populations. In the decision about who would populate the new world: “Race and color were ignored. The true demographic distribution was not by nation but by environmental suitability; physical types could be divided into geographically based groups characterized roughly as coastal-dwellers, plainsmen, mountainmen, tropical foresters, and so on” (196). Yet the ordinary citizen is shown to be inherently racist. When Ostrov and his friend Kostakis are given the opportunity to represent the ordinary working class vote, both protest the racist plan, yet when subjected to a drug-induced interrogation whereby a person’s real thoughts and beliefs are revealed, Kostakis recommends everybody should be killed, while Ostrov says: “We should make a white man’s world. No slaves, no servants; just us. We can talk to each other; we understand
the same things” (*Destiny* 283-284). Turner shows that the veneer of civilisation worn by ordinary people hides a core of racism and rage against others.

**Conclusion**

Turner appears to believe that change is possible, albeit unlikely, in that his novels function as apocalyptic prophecies meant to provoke an active response. He writes that it is possible to avoid the dire predictions in his novels, but he apparently has little belief that governments will actually act to prevent future nightmare scenarios: “No country in the present world is likely to do this because no government can, by the nature of its provenance, plan beyond its own tenure. All governments busy themselves with preserving and continuing their own power. They do little else. There are no votes in projects twenty years in the future, let alone a hundred” (*Drowning* 317-18). Turner repeatedly argues that if problems are faced rather than ignored, societies can prevent or at least mitigate the effects of future catastrophes, however unlikely this might be.

Yet Turner’s writing, while critical of government and political systems, lays the blame for the ultimate catastrophe on human beings in general. His emphasis on the responsibility of human action reflects one of the shifts in secular apocalyptic writing. The events of World War Two and the nuclear age demonstrated the very real possibility that the end of the world could be the work of humans rather than an act of divine intervention. David Ketterer suggests that apocalypse is particularly relevant after the advent of nuclear weapons, for atomic power enables humanity to “be the instigator of a do-it-yourself apocalypse” (4). Sontag argues that this shift of responsibility is one of major developments in the genre: “Recent science fiction films have a decided grimness, bolstered by their much greater degree of visual credibility, which contrasts strongly with the older films. Modern historical reality has greatly enlarged the imagination of disaster, and the protagonists – perhaps by the very nature of what is visited upon them – no longer seem wholly innocent” (“Imagination” 215).

If there were any doubt as to Turner’s intention with his novels, the Postscript to *Drowning Towers* confirms his self-appointed position as apocalyptic prophet. The Postscript outlines potential problems facing society and the costs of ignoring them. Turner denies any didactic intention, calling his work neither “prophetic” nor “a dire warning” (317), yet goes on to outline six key areas of concern that if ignored will have grave consequences. He lists overpopulation as a serious threat, while other issues of concern include the potential lack of food in the future, unemployment due to increasing technologies that eliminate the need for human involvement, monetary system collapses, nuclear war and the Greenhouse effect.
Turner says of the latter that it may be “mild” or “a global disaster, striking with great suddenness” (318). The consequences of complacency, of doing nothing, are dire and he leaves no doubt that there will be consequences.

Turner’s conclusion to *Drowning Towers* reinforces the fact that there is indeed an underlying dread of the future in society, perhaps exemplifying what Dellamora terms a “pervasive sense of unease” in the cultural imagination. Turner warns that while the future is uncertain, the potential for cataclysmic change is not:

We can be sure only that enormous changes will take place in the next two or three generations, all of them caused by ourselves, and that we will not be ready for them. How can we be? We talk of leaving a better world to our children but in fact do little more than rub along with day-to-day problems and hope that the longer-range catastrophes will never happen.

Sooner or later some of them will.

*Sleep well.* (318)

**Endnotes**

[1] These films are all set in the USA or predominantly feature American characters. All narrate the occurrence or threat of widespread ecological catastrophe, except for *I, Robot* (malevolent artificial intelligence), *War of the Worlds* (alien invasion), and *Poseidon*, which features small-scale disaster when a cruise ship capsizes. The resilience of the catastrophe film suggests that there is an ongoing appeal of apocalypse.

**Bibliography**


