

Depiction of Scientific Extremity and Human Exploitation in Margaret Atwood's *Oryx and Crake* & the *Handmaid's Tale*

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ABSTRACT

Margaret Atwood's speculative fiction explores both the possibilities and the dangers of scientific advancement. Rather than rejecting science, she questions what happens when scientific knowledge is controlled by political authority and corporate power without ethical responsibility. This article examines the representation of scientific extremity in *The Handmaid's Tale* (1985) and *Oryx and Crake* (2003). It argues that Atwood presents science as a powerful tool that can improve human life but also become a mechanism of domination when it is misused. In *The Handmaid's Tale*, reproductive science is used by the Gilead regime to control women's bodies and deny them reproductive freedom. In *Oryx and Crake*, biotechnology and genetic engineering are driven by corporate interests that treat living organisms as commercial products. Through these two novels, Atwood shows how scientific progress loses its humanitarian purpose when profit, political ideology, and technological ambition replace ethical values. The article demonstrates that the greatest danger does not lie in science itself but in the misuse of scientific knowledge by institutions that seek control rather than human welfare. It concludes that Atwood calls for a balance between scientific innovation and ethical responsibility. Her speculative fiction reminds readers that genuine progress should protect human dignity, social justice, and ecological sustainability rather than sacrifice them in the name of advancement.

Keywords: Scientific Extremity, Biopolitics, Corporate Power, Ethics, Speculative Fiction.

Human life has been transformed in many ways. It has benefited and has been enhanced by healthcare, communication, agriculture, and technology, making everyday life more comfortable and productive. However, it has been a rapid growth in science and technology and it also raised some serious ethical questions. The scientific knowledge is used without ethical and moral responsibility. Later it becomes a potent instrument for domination, exploitation, and destruction. As a consequence, new debates regarding the boundaries of scientific development have emerged regarding topics like genetic engineering, artificial reproduction, biotechnology, surveillance, and environmental degradation. Due to this many contemporary writers explore not only the advancement of science but also its potential dangers.

Margaret Atwood is one of the most important contemporary writers to examine the relationship between science, power, and society. Through her speculative lens she demonstrates that not against to science and technology. Rather, she questions the misuse of science by political institutions and corporate organizations. Atwood envisions future societies where separates scientific knowledge from ethical values and it starts to control the human life.

She challenges readers to think about the social, political, and environmental ramifications of unbridled technological progress through her dystopian fiction. This study aims to examine how Margaret Atwood's *The Handmaid's Tale* and *Oryx and Crake* show the misuse of science by political and corporate institutions. It argues that science becomes destructive when it is separated from ethical responsibility and human welfare.

Among Atwood's speculative works, *The Handmaid's Tale* (1985) and *Oryx and Crake* (2003) presents two distinct but closely connected perspectives on scientific extremity. In *The Handmaid's Tale*, scientific knowledge is controlled by the totalitarian government of Gilead. The state exploits reproductive science to regulate women's bodies and maintain its ideologies. Rather than representing a biological or personal phenomenon, fertility turns become a political commodity. Medical facilities become tools of control and monitoring, and women lose their bodily autonomy. Therefore, instead of advancing the welfare of people, science serves the objectives of state power.

In contrast, *Oryx and Crake* presents a world where scientific research is dominated by multinational corporations. The biotechnology, genetic engineering, and pharmaceutical research are driven by commercial profit rather than a ethical responsibility. Organisms are patented, genetically modified, and marketed as commodities. Human life itself turns into a product that is capable of being created, enhanced, and swapped out. Atwood examines the potential hazards of viewing science as a business rather than a humanitarian endeavours through this corporate-controlled scientific system. This novel illustrates how technological progress might result in social injustice, ecological devastation, and the demise of civilization when it is solely driven by financial gain. Despite the fact that the two novels present distinct social structures, they have one thing in common. They illustrate how science becomes risky when it is detached from moral obligation.

This article brings these concerns together by examining how both state power and corporate capitalism use science to regulate human life. The analysis illustrates that how Atwood portrays scientific extremism as a trait shared by various dominant system. When science is separated from human values and ethical responsibility whether it is controlled by an authoritarian government or by corporate system it becomes harmful. As a result, it clears that Atwood does not disapprove of science or technological advancement. Rather, she advises against exploitation of scientific knowledge by corporate and governmental organizations that put efficiency, profit, and power ahead of human dignity. In *The Handmaid's Tale*, Margaret Atwood presents science as a powerful instrument that is controlled by the state rather than by humanitarian values. Science is not presented in the novel as being intrinsically risky. Rather, it reveals how the scientific knowledge is utilized to defend political ideology and religious authority turns it into an oppressive force.

Decreasing birth rates, increasing infertility, and contamination of the environment are all strongly associated with Gilead's emergence. The government uses these biological crises as a rationale to enact stringent reproductive regulations. Fertility is now viewed as a national resource that has to be properly dealt with by the government rather than as a personal issue. Women are separated from their families and assigned as Handmaids who are capable of bearing children to elite households. Their identity, education, or personal freedom is not much valued than their reproductive ability. Atwood uses this technique to show how the removal of scientific knowledge from ethical duty could turn information into a political weapon.

The Handmaids are not valued as individuals. They are valued only because of their biological capacity to conceive children. Offred reflects this painful reality when she observes, "We are two-legged wombs, that's all: sacred vessels, ambulatory chalices" (146). This statement captures the central ideology of Gilead. Women are reduced to reproductive bodies whose only purpose is to produce children for the state. Their humanity is gradually erased, and their value is measured only by their fertility. Literary critic Coral Ann Howells argues that "the female body becomes the primary site of political control in Gilead" (167). This observation explains how Atwood connects reproductive oppression with the wider structures of patriarchal power. Offred's body is no longer her own; it becomes an instrument through which the state reproduces its ideology.

This representation closely reflects Michel Foucault's concept of biopolitics. In *The History of Sexuality*, Foucault argues that modern power governs people not only through laws and punishment but also by regulating life itself. He explains that political authority increasingly seeks to "make live and let die" (138). Governments therefore exercise power by managing birth, health, reproduction, and population. In Gilead, reproductive science becomes one of the main instruments through which this form of power operates. Scientific knowledge is integrated into political authority, allowing the state to regulate reproduction and maintain complete control over society. This idea is clearly reflected in Gilead's treatment of women. Every aspect of a Handmaid's body is controlled by the state. Her movements, clothing, relationships, language, and reproductive functions are carefully regulated. Personal freedom disappears because the body itself becomes public property.

Offred's identity is erased from the beginning of the novel. Even her name is replaced by "Offred," meaning "Of Fred," indicating her legal and social ownership by the Commander. This loss of identity symbolizes the complete control that Gilead exercises over women's lives. They are denied the right to read, write, work, own property, or make decisions about their own bodies. Their biological functions become the foundation of their social existence.

Medical examinations also reinforce this system of control. Handmaids undergo regular health checks to determine their fertility. Significantly, Gilead refuses to acknowledge the possibility of male infertility. The state assumes that reproductive failure always belongs to women because admitting male infertility would challenge patriarchal authority. During one examination, the doctor secretly tells Offred, "Most of those old guys can't make it anymore" (61). His statement reveals that the government's scientific claims are shaped more by ideology than by biological reality.

Through these examples, Atwood demonstrates that science is never politically neutral. Scientific knowledge is manipulated to support systems of inequality when it is controlled by institutions that prioritize power over truth. Women's bodies become sites where political authority, religious ideology, and scientific practice intersect.

One of the most disturbing aspects of Gilead is its system of continuous surveillance. Scientific monitoring extends beyond medical treatment and becomes part of everyday life. Handmaids are constantly observed by Aunts, Guardians, Angels, Wives, Commanders, and the secret police known as the Eyes. This permanent observation creates fear and obedience, making physical force almost unnecessary. Women lose the right to make decisions about reproduction because the government assumes complete control over their biological lives.

Offred gradually realizes that even pregnancy would not restore her freedom. A successful birth would only increase her value as a reproductive resource. Motherhood itself becomes another mechanism of political control. Children are immediately transferred to elite families, while the Handmaids remain

anonymous reproductive instruments. Biological motherhood is separated from emotional motherhood, illustrating how the state transforms reproduction into a political institution. Handmaids learn to control their own behaviour because they fear punishment and constant observation. Surveillance therefore becomes internal as well as external. Scientific monitoring contributes to the creation of obedient citizens who rarely question the authority of the regime.

Atwood suggests that the greatest danger lies not in scientific knowledge itself but in its institutional misuse. Medical science, which should protect health and human dignity, becomes a technology of discipline. Hospitals and clinics no longer represent healing. Instead, they become extensions of state power.

The scientific practices depicted in *The Handmaid's Tale* reveal a profound ethical collapse. Scientific knowledge is detached from compassion, justice, and individual rights. Medical institutions no longer exist to improve human welfare. Instead, they function to preserve political authority and maintain social hierarchy.

Atwood does not argue that reproductive science is inherently harmful. Rather, she questions the values that guide its application. When science operates without ethical responsibility, it easily becomes an instrument of oppression. The reproductive policies of Gilead demonstrate how scientific knowledge may be used to justify discrimination, gender inequality, and the denial of personal freedom.

This concern remains highly relevant in the contemporary world. Advances in reproductive technologies, genetic screening, artificial intelligence, and biomedical research continue to raise important ethical questions about privacy, consent, and bodily autonomy. Atwood's novel reminds readers that scientific progress should always be accompanied by moral accountability and respect for human rights. The novel therefore warns that scientific advancement must remain grounded in human dignity, individual freedom, and social justice. Without these principles, scientific knowledge can become one of the most effective instruments of domination.

While *The Handmaid's Tale* presents science as a mechanism of theocratic control, *Oryx and Crake* shifts the focus to corporate capitalism. In this novel, science is no longer controlled by the state alone. Instead, it is dominated by powerful biotechnology corporations that value profit above human welfare.

The society portrayed in *Oryx and Crake* is divided into privileged corporate Compounds and neglected Pleeblands. Scientists and corporate executives live in secure environments with access to advanced technology, while the rest of the population experiences poverty, violence, and environmental decline. This division illustrates how scientific knowledge is unequally distributed and controlled by those who possess economic power. Scientific innovation no longer benefits society as a whole. Instead, it strengthens the authority of multinational corporations that determine who has access to technology, medicine, and even life itself.

This corporate control reflects Michel Foucault's concept of biopolitics. In *The History of Sexuality*, Foucault argues that modern power increasingly governs human life through the management of bodies, health, and populations rather than through direct physical force (138). This form of power is exercised by biotechnology companies instead of governments. Corporations regulate life through genetic engineering, pharmaceutical production, and biomedical research. They determine how living organisms should be created, modified, and marketed. Science therefore becomes an economic resource that serves corporate interests rather than public welfare. Human and non-human life are no longer respected for their intrinsic value. Instead, they are treated as biological materials that can be manipulated, improved, and commercialized.

One of the most striking examples of scientific extremity in the novel is the creation of genetically engineered animals. Organisms such as the pigeons, wolvogs, rakunks, and ChickieNobs are produced to satisfy commercial demand rather than ecological necessity. These transgenic species blur the distinction between nature and technology, demonstrating how biotechnology transforms life into a marketable commodity.

The pigeons are designed to grow transplantable human organs. Jimmy explains, "The goal of the pigeon project was to grow an assortment of foolproof human-tissue organs in a transgenic knockout pig host" (22). This project appears to represent a remarkable medical achievement because it promises to solve the shortage of transplant organs. However, Atwood reveals the ethical problems hidden beneath this scientific success. The pigs are no longer regarded as living creatures but as biological factories designed for commercial use. Their existence is valued only according to their economic usefulness.

Similarly, the ChickieNobs represent the complete industrialization of biological life. They are described as "a large bulblike object... Out of it came twenty chicken breasts at a time. No eyes, no beak, no brain" (202). This disturbing image demonstrates how scientific innovation removes all natural characteristics from living organisms in order to maximize production. The ChickieNobs are not animals in the traditional sense. They are manufactured products created solely for consumption. Through this grotesque invention, Atwood questions whether scientific efficiency should be allowed to replace ethical responsibility.

Donna Haraway's cyborg theory provides an important framework for understanding these hybrid organisms. In *A Cyborg Manifesto*, Haraway argues that "a cyborg is a cybernetic organism, a hybrid of machine and organism" (149). She suggests that modern biotechnology dissolves the traditional boundaries separating humans, animals, and machines. Atwood develops this idea through genetically engineered creatures that no longer belong entirely to nature or technology. These organisms exist in a space where biological life is redesigned according to commercial needs rather than natural evolution. Decisions about genetic engineering are determined by market demand instead of ethical reflection. As a result, scientific innovation becomes inseparable from corporate capitalism.

The commercialization of life also changes the purpose of scientific research. Scientists no longer work primarily to improve public health or expand human knowledge. Instead, they compete to develop profitable products for biotechnology companies. Pharmaceutical industries invest in designer drugs, cosmetic enhancement, and genetic modification because these innovations generate greater financial returns. Ethical responsibility becomes secondary to commercial success. Atwood repeatedly suggests that this profit-driven model of science creates a dangerous imbalance between technological progress and moral responsibility. Scientific innovation continues to advance rapidly, but ethical reflection fails to keep pace.

Unlike Gilead, where political institutions regulate reproduction, the world of *Oryx and Crake* is governed by multinational corporations that regulate life through economic power. In both societies, science becomes an instrument of control. The difference lies in the institution that exercises this control. Whereas *The Handmaid's Tale* exposes the dangers of state-controlled science, *Oryx and Crake* reveals the equally destructive consequences of corporate-controlled science. Together, the novels demonstrate that scientific extremity emerges whenever scientific knowledge is separated from ethical responsibility and placed in the service of institutional power.

The most powerful representation of scientific extremity in *Oryx and Crake* is the character of Crake. Unlike conventional villains, Crake is neither driven by anger nor by personal revenge. He is a brilliant scientist who believes that science can solve every human problem. In his view, war, violence, jealousy,

religion, and environmental destruction are not social or political issues but biological defects. Instead of reforming society, he decides to redesign humanity itself. Through Crake, Atwood explores the danger of scientific intelligence that is separated from ethical responsibility.

Crake's greatest ambition is the creation of the Crakers, a genetically engineered species designed to replace human beings. He believes that human suffering originates from evolutionary flaws such as aggression, sexual jealousy, and the fear of death. His solution is to eliminate these characteristics through genetic engineering. Explaining his project, Crake tells Jimmy, "Immortality... it's a concept. If you take 'mortality' as being, not death, but the foreknowledge of it and the fear of it... The Crakers don't suffer from such fears" (362–63). This statement reflects his belief that science can create a perfect society by removing the emotional and psychological qualities that define human existence.

Although Crake's vision appears logical, Atwood reveals its ethical emptiness. His scientific achievements are guided entirely by efficiency and calculation. Compassion, empathy, and moral responsibility are absent from his decisions. Scientific knowledge becomes valuable only when it produces measurable results. Human life is treated as a technical problem that requires technological correction rather than ethical understanding.

This perspective closely reflects Hannah Arendt's concept of the banality of evil. In *Eichmann in Jerusalem*, Arendt argues that great crimes are often committed not by monsters but by ordinary individuals who perform their duties without questioning their moral consequences. She observes that evil frequently emerges through "the fear to judge" and the failure to think critically about one's actions (49). Crake embodies this idea. He does not act from hatred or cruelty. Instead, he believes that his scientific project will improve the future of the planet. His calm and rational behaviour makes his actions even more disturbing because genocide is presented as a scientific solution rather than a moral crime.

The BlyssPluss pill represents the most extreme example of scientific knowledge being transformed into a weapon. It is advertised as a revolutionary pharmaceutical product that promises enhanced sexual pleasure, improved health, and protection against disease. Consumers believe they are purchasing a medical innovation that will improve their lives. In reality, the pill secretly carries a deadly virus that rapidly destroys the global population. Atwood exposes how scientific authority can be manipulated through commercial marketing and public trust. Biotechnology, instead of protecting life, becomes the instrument of human extinction.

Atwood extends her critique beyond biotechnology to examine the broader culture of digital media and consumer capitalism. Throughout the novel, Jimmy spends much of his time watching violent websites, online executions, and child pornography. These disturbing images become part of his everyday life. Instead of responding with moral outrage, he gradually becomes emotionally detached. Continuous exposure to violence weakens his ability to distinguish entertainment from human suffering.

Crake's education at the Watson-Crick Institute clearly reflects this technocratic culture. Scientific disciplines receive prestige because they generate economic value, whereas literature, philosophy, and history are treated as unnecessary. Jimmy's study of the humanities is repeatedly dismissed as impractical because it cannot contribute directly to corporate productivity. Atwood implies that when societies neglect the humanities, they also weaken ethical reflection. Scientific knowledge advances rapidly, but moral wisdom fails to develop alongside it.

The novel therefore presents ethical collapse as the inevitable consequence of scientific extremity. Biotechnology, digital media, and corporate capitalism together create a society in which everything—

including genes, animals, information, and human life—can be bought, sold, and manipulated. Scientific achievement is measured by commercial success rather than by its contribution to human well-being.

Margaret Atwood's *The Handmaid's Tale* and *Oryx and Crake* demonstrate that science becomes dangerous not because of scientific advancement itself, but because of its misuse by political and corporate institutions. Through theocratic control in Gilead and corporate biotechnology in *Oryx and Crake*, Atwood reveals how scientific knowledge can be transformed into a mechanism of domination, exploitation, and ethical decline.

Ultimately, Atwood's speculative fiction is not a rejection of science but a call for its responsible use. Her novels remind readers that genuine scientific progress must be guided by ethical values, social justice, and respect for human life. As biotechnology and artificial intelligence continue to reshape the modern world, Atwood's vision remains a timely warning about the importance of balancing innovation with moral responsibility.

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