

**Progression of Science and Regression of Human Species in Huxley's
Brave New World**

Ruchita Bhatt¹,(Assistant Professor), Government Post Graduate College, Champawat
(Uttarakhand)

&

Dr.Shivangi Chanyal²,(Assistant professor),D.S.B. Campus Nainital (Uttarakhand)
Ruchita Bhatt 2/127 Saaswati Vihar Colony GIC Road, Pithoragarh 262502 (Uttarakhand)

Article Received: 18/12/2022,

Article Accepted: 20/01/2023,

Published Online: 24/01/2023,

DOI:10.47311/IJOES.2023.5.01.54

Abstract

Scientific knowledge gathered over millions of years and its application to general human life has brought drastic changes. Its charisma can be seen in all spheres, from medical miracles that prolonged human life to travel that made it possible to go around the world in shorter duration. Artificial intelligence has helped to improve the capability of human mind. Communication and Wireless technology allows us to connect to any part of the universe with the blink of an eye and weather forecasting provides humans quite an edge against the calamities of nature. This advancement has not come for free and it had its own cost. On one hand science made us reach the stars and on the other indiscriminate use of it has botched our natural inclinations. Our extravagant dependence on technology has lulled our senses. The human race has certainly gained much through the progression of science but we have to stop once to consider all that has been lost in this blind race. History stands as a proof that progression of science has not always been human-friendly, hence its advancement can-not always be considered the advancement of human race. The concept that advancing science and human welfare don't always go hand in hand has been nakedly depicted in Aldous Huxley's Utopian- Dystopian novel "Brave New World". "Brave New World" is a science-fiction novel published in 1932. It is penned by British writer Aldous Huxley. Huxley in his magnum opus does not shy away from portraying ugliest picture of unchecked use of technology. This is one of the most popular books describing the exploits of genetic engineering, cloning and misuse of behavioural science.

Keywords: Genetic Engineering, Cloning, Behavioural Science, Psychology, Science Fiction, Totalitarianism, Mass Production.

Introduction

“Brave New World” is called a dystopian novel for its gruesome representation of a very distorted vision of future. The novel takes us on tour of a totalitarian regime, where an all-powerful government, to maintain its authority, flourish its economic viability and aiming social stability has resorted to unchecked use of science and technology. The fictitious society of the novel known as “World- State” can be taken as a warning against an obnoxious future lest the infernal scientific methods shown to be used in the novel are steered clear away from.

The focus of the paper is to bring to the forefront that science can-not be allowed to have the driving seat. It is rather to be domesticated by humans. Its inventions are to be applied to ease our burden, help us explore the wonders of the universe, quench our thirst for knowledge and satisfy our curiosity. Its birth took place to help humans climb the ladder of modernity. The paper, here will argue against the boisterous use of science and genetic engineering to reverse human race to achieve so called social and economic stability by a super ambitious government.

Every page of the novel is written to satirise totalitarian government of “World-state” and its manipulative use of scientific technology to primitivize its citizens to achieve illusionary harmony and a state of no revolution. In the “World- State” the concept of individualism, society, human relations such as marriage, child birth, parenting, love affairs and happiness along with its political structure differs hugely from what is conceived as usual. Here everything, each single citizen, every aspect of her/his life is supervised by breakthrough scientific ways in the name of progression. Where, in reality science is engaged to bring into play the successful survival of worst version of a political system by eliminating any desire for change from its citizens. The constant state of happiness maintained under this government is not by the means of spiritual upliftment, but by regular use of a drug called Soma. The use of science to suffocate natural human inclination to attain an unnatural human existence, some of the concepts depicted in the novel need a scrutiny.

In the first chapter readers are introduced to a “thirty-four storey gray building”. This building is named “Central London Hatchery and Conditioning Centre” with World-State’s motto “Community, Identity and stability” written in bold letters on it. This is the place where human children are meticulously designed to suit the particular needs of the state. The director of this centre is shown giving his students a guided tour of the building. In the fertilizing room are kept the huge incubators with insulated doors inside which numbered test tubes are kept on shelves. In the test- tubes are kept naturally conceived fetuses now taken out of their mothers’ ovaries and waiting to be cultured by scientists. A very learned and proud demonstration of modern fertilizing process is given in the novel by “Director of Hatcheries and Conditioning.” The director explains to his students the right technique, temperature, salinity, viscosity required to keep the detached egg safely and ripen it into a fully grown human. This process shows the complete disregard for every-aspect of natural way of child bearing. Fetuses are not allowed to grow inside mother’s womb but

cultured and manipulated by scientist in a laboratory. This detachment of embryo from mother is necessary for two reasons: in a natural environment an embryo spends about nine months inside its mother's womb during this span all of the requirements of the unborn are provided by mother who also plays the role of a caretaker. This phase develops a very strong attachment between the mother and the child which is not only unwanted but also detested in "World- State". Another reason for aforementioned is, when a fetus grows inside its mother's uterus, the child's physical-mental characteristics are unknown and depend upon the natural selection of genes. "World-State" on the contrary believes in categorizing their subjects even before they are born by contriving and maneuvering the DNA. Blatantly disregarding natural selection and progression of human genes. In this laboratory the future course of action of these fetuses is pre-determined. The fetuses are divided into various categories: Alpha, Beta, Gamma, Delta and Epsilon. Alpha and Beta fetuses belong to upper caste and are pre-destined to be beings of higher intellect and reason. They are supposed hold high positions in "World-State" and are destined to be the future world controllers. Epsilons', belong to the lowest category of embryos and are to be the future sewage workers. The ways and means, by which these different embryos are brought up, depends on the requirements of the state. First two categories of embryos are kept in a very safe environment and remain bottled for full gestation period of nine months, until they are fully grown. Whereas other categories of embryos go through "Bokanovsky's process". Under "Bokanovsky process", an embryo will proliferate and divide to grow into ninety- six humans. So, where one baby would have grown out of one embryo, now there will be ninety-six. This process of cloning human babies gives "World-State", sets of identical twins to work on their machines and fulfilling their motto of "community, Stability and identity." The scientists of "World- State achieved a high mark in the field of technology as they successfully applied the principle of mass production to biology by producing ninety-six humans out of one embryo. But this mass-production of humans will eventually result into loss of individuality and lack of variety. Individualism is the essence of being human and the society thrives on this individuality. It is an important part of expressing one's identity. Promoting individual identity is vital for the establishment of a diverse society. According to concept of individualism each person is essential and conforming to societal standards hinders a person's expression of self. Diversity is indispensable for the inception of a healthy society. In the "World-State" where humans are used just as tools to fulfil certain other goals, nothing of the above mentioned notions matter. Bokanovesky method, that is developed to produce identical set of twins (ninety-six human babies out of one embryo), though successful for science, will push human development behind by a great magnitude and will eventually lead to loss of individuality and lack of diversification in the society. Every human will be forced to forfeit her/his importance and no one will be exclusive anymore. Everyone will be able to replace everyone else. This inter-changeability would prove to be very beneficial in running the society smoothly but uniqueness that humans have always strived for, will be under assault and uniformity will overshadow. The "World- Controllers" relish the idea of identical humans working tirelessly on the machines,

incapable of any individual human thought, thus providing stability to their society. Alpha and Beta category of embryos do not undergo the Bokanovsky process, because this process of multiplying numbers of humans produced by one fetus apparently weakens the fertilised egg and multiplying their category of embryos involves much risk. The exaggerated and unnatural process that are induced in conditioning these unborn babies, aim at them happily accepting their inescapable social identity. Inside the bottle where fetus remain, the environment is kept such that to manipulate them in becoming desired humans. In case of Epsilon, availability of oxygen for the embryo is reduced. The prime organ of the body is mind - the thinking tool. The first organ that is affected by lack of oxygen is also the brain. The Epsilons are to be future sewage workers and the active functioning of brain is not much craved in this category of humans. The scientists of “World- State” were laboring on experimenting the methods to reduce gestation period for embryos belonging to lower strata. The fruit of long maturation period for babies in human beings is intelligence, an unwanted characteristic in Delta or Epsilon. What use a sewage worker has for a brain anyway? The experiment also involved developing a suitable technique of genetic mutation which would revert Epsilon embryos to the normality of dogs and cows, rendering them having intelligence of a range of a tea spoon. The director of “World-State”, using reverse genetic engineering, wanted to create a population that has just enough amount of physical strength and intellect for the employment for which those humans are generated. Being able to fully exercise their mental and physical capacity, these citizens are always satisfied and do not wish for any change in the prevailing circumstances.

Huxley’s futuristic dystopian world in the novel not only warns about the exploits of the technologies in the field of science, but also misapplications of medical science and psychological innovations. Manoeuvring the advancement in the field of behavioural science, authorities of the state owned the power to condition the behaviour of their citizens from an early age. Such conditioning could successfully turn them into conformist and submissive beings. Weaponisation of behavioural psychology by totalitarian government of the “World- State” gives stunningly nefarious results. To ensure docility and stupidity among its population, the despotic government went to a great extreme of combined abusing genetic engineering and conditioning of thoughts and behaviour. The modus operandi employed to reach the intended outcomes are “Hypnopaedia (sleep-teaching), mob-psychology and Neo-Pavlovian conditioning techniques”.

“Neo-Pavlovian conditioning” is a term used in “Brave New World” for training of infants. The term is used to describe classical conditioning system and is named after Russian Psychologist Ivan Petrovich Pavlov. It is a type of unconscious or automatic learning in which learning is done through association and connection that is formed between a stimulus and response or between two stimuli. This is also known as a stimulus substitution method, in which a new stimulus (a neutral one) is substituted for the stimulus which originally elicits the response. In Pavlov’s research, the dog salivated by the sound of the bell, earlier a neutral stimulus but linked with unconditioned stimuli that were food to unconditioned response of the dog that was to salivate looking at food. By repeatedly

linking natural stimuli to neutral stimuli, it was observed that dog started to salivate hearing the sound of the bell. In “Brave New World” the controllers of the fictitious “World- State” want to achieve the state of sheer stability, hence early conditioning of infants is practiced. The rooms designed for this conditioning are called ‘infant nurseries’. The ‘Director of Hatchery and Conditioning ’with much pride demonstrates to the students the inhuman treatment of eight months old babies of Bokanovsky group. The Delta children, all dressed in *khakis*, are exposed to colorful books and flowers. The vibrant colour of these objects works as a natural stimuli for the little crawlers and they run towards them, actively touching, crumpling and transfiguring them. Once the infants are gleefully entangled in playing with these lovely looking objects, a sudden reversal of situation comes. With violent explosion of shrill voices and maddeningly ringing alarm bell, all the children start to scream. These shrieks suddenly turn into insane yelps as soon as the head nurse turns on the switches for electrified floor on the orders from Director. Repeated use of this practice instills an instinctive hatred for books and flowers in the infants. The D.H.C. explains the reason behind the use of this tactful method of infusing the life-long hatred towards nature and books in these infants. The lower caste delta children are fated to be become factory workers and if they develop any inclination towards books or nature it will be a waste of community’s time. The Delta children as such do not have the capacity to understand books as their brains were not allowed to develop to the fullest during the gestation period. Another reason for spreading dislikes towards the books is ‘reading books always run the risk of glancing through things undesirable and unfiltered’. This might further have the potential to unfasten the conditioning done throughout the incubation time. Developing affinity towards nature is also in no way effectuating, as it does not contribute to state’s motto to maximize the consumption and makes no contribution to proliferate economy. Therefore, the ‘World-State ’subjects are conditioned to hate country but love country sport, because to watch country sport, the citizens will have to travel and use transportation. Due to this, other related commodities will also be consumed and the economy will thrive.

“Hypnopaedia or sleep-teaching” is another psychological process that the children of ‘World-State ’go through. This is the method to reaffirm their standards to the regime’s requirements. Under this process, repeated messages are telecasted while the children are asleep. The notion of class-consciousness is ingrained in their memory and idea of morality is altered for them. These messages promote conformity to established order of ‘World-State’. The sleep-teaching classes are called “Elementary Class Consciousness classes”. In reality, Hypnopaedia, as a method of learning was discarded through experiments by psychologists. In “Brave New World” this method is indicated to be a useful tool to manipulate core beliefs of humans. It is provocatively applied in the novel as a mean to avoid class-conflict. The lessons taught here mandatorily reinforce satisfaction about their societal rank. Infants of each class are exposed to endless suggestions night after night during the hours of drowsiness. The lessons practised in this process are class-specific: the message designed for Beta children in this class is, "All wear green and Delta children khaki, oh, no, I don’t want to play with Delta children. And epsilon are still worse, they are

too stupid.... I am glad I am a Beta.” These infant brains infused with such sort of discriminatory tutorials, turn into adults whose decisions, desires and judgments are the climax of it all, brimming with prejudice towards other classes. Another hypnopædic suggestion whispered in the dreams of these young children is that “everyone belongs to everyone else”. This insinuation focuses at blurring exclusivity in friendship and in love. This instills the sense that everyone is everyone’s, promoting promiscuity. Combinedly, wielding the power of technological and psychological inventions, the “World- state” perfectly denies their native the independence of making free choices, thus depriving them the essence of being humans.

In “Brave New World” the deindividuation of citizens leads to expansion of ‘group mentality’ or ‘mob psychology’. People always and everywhere, have a common desire to fit in. They consistently seek validation from others or society for their actions. People modulate their behavior to what others consider as acceptable, readily doing things that are done in the society, that they otherwise would not do as an individual. The knowledge of being in a group, tends to make actions that generally seem unacceptable to appear as admissible. Evolution of group mentality in “World- State” is done through certain psychological apparatus. Lenina, the central female character of the novel does not relish the idea of being in multiple relations. In the beginning of the novel she develops a soft spot for Bernard. When Lenina discusses her emotions towards Bernard with her friend, the friend discourages this attitude and advises her to be more promiscuous to live upto the standards of society. The state very well understands the need to undercut individual emotions to maintain stability, hence arranges for organized release of sexual urges to avoid developing deeply felt individual attachments. The dubbed messages in soft, pleading but impressive voice are played to control any chaotic situation in public arenas. These messages are perfectly able to appeal to already conditioned brains. These messages have immediate and equal effect in all the citizens of “World-State”, because everybody thought the same way.

The despotic government of Huxley’s utopian- dystopian society in “Brave New World” is not ready to risk the stability of their state at any cost. Even before the child is born, he/she is conditioned to happily accept their prescribed role in society. But there is always a risk that sometime, the conditioning might prove to be unsuccessful. Many of the complicated human emotions are developed in the adult phase of life. So, there is a possibility, that these emotions might find an escape from early years of conditioning. To soothe these emotions and to achieve the state of bliss, citizens are given the treat of miraculous drug named Soma. These tiny colorful pills are used as mood altering pills and are meant to block those emotions that result from stressful situations such as love, frustration, anger or hatred. A very high dose of this drug is capable of creating hallucinations. None of the subjects of the state are allowed to feel any natural or free emotion. These people are constantly living in a drugged state, a state of coma. At the end of the day everyone is distributed free doses of soma and are encouraged to be addicted to it. Independent human soulful emotions of grief, pain, happiness, loss, stress, etc. if ever creep under the human skin of these puppet citizens, they are subdued by drugging these people.

Soma holiday (extended dose of Soma) is capable of blurring most intense human feelings, such as love. Use of this drug is popularised using slogans like, "a gram is better than a damn". To the citizens of "World- State", the use of this drug is rather a blessing, as they have not developed the strength to handle human emotions which ordinarily a person learns from his surroundings. The "World-State" citizens live in hoaxed surroundings, shielded away from real life experiences. The character of John, an outsider in "World-State" perceives the use of Soma as an odious experiment on state's subjects and as a means of social control. Use of Soma renders the citizens incapable of experiencing the happiness or the pain, depriving them of realizing the true essence of being a human, living their lives much like zombies. The problem of reliance on drugs to suppress emotional fluctuation has taken a frightening shape at present.

Conclusion

The scientifically managed society of "World-State" allows its leaders to keep their subjects at their disposal by commanding mass-obedience. This mass-compliance is not achieved through force or terror, but by peaceful means of advance scientific techniques, psychological manipulation, use of drugs and exploiting behavioural science. Through science and technology, "World- State" controllers have maintained such a society, where people have their liberties taken from them and are enjoying their state of servitude, never questioning it.

The world class science- fiction novel of Huxley records the scientific developments taking place in contemporary period. He uses the writer's imagination to predict the wildest ways these uncontrollable developments in the field of science can be put to use by unchecked governments. He depicts a world where advance science, biological manipulation and behavioural conditioning are hand in hand to manufacture citizens as replaceable and mindless producers and consumers. Today, we might not be living in the world as gruesome and frightening as presented by Huxley and the use of science and technology is certainly not put to use to such extreme as envisioned in this novel, but subtle use of certain technologies to manipulate humans is already in action and that cannot be denied. One of the most prime examples to ascertain the former statement would be, to mention the extravagant use of advertisements. Linking any product to positive emotions, like showing happy families sitting in a car, posing in front of a house and its repeated telecast is likely to influence a human mind.

"The Brave New World" gives a peak into a horrifying, disastrous and devastating future human society. Human babies being bred in bottles, severing all the ties from their parents. This separation robs them off all the chances of ever-developing any real human connection. It denies them the attainment of emotional intelligence and developing a love for humanity, which is otherwise instilled from having spent a secured and loving childhood at home, under the care of parents. The time spent with the family in early years is necessary to decipher the importance of human proximity and human relations. The bottle babies having lost all chances of natural way of growing up, turn into mechanical adults, being forced to rely on drugs to sooth down troubling thoughts. Many a times, social life of

separation, free indulgence in sexual encounters and use of drugs proved to be a failure to control even these conditioned humans. Humans are born to be multi-dimension species and this is ingrained in our DNA itself. The curbing of all round development of humans would therefore require use of reverse engineering, manipulating the DNA and undoing thousands of years of evolution.

Controllers of “World-State” were not only trying to hamper the natural growth of humans but also with equal force, they tried to dismantle the social and traditional structure of society, which is typical of a totalitarian government. Isolation was forced between/among human relations, marriages were not allowed, long term affairs were banned and promiscuity was upheld. All the enactments were directed to reduce mental exercise of the citizens, ultimately turning them into caricatures at the hands of the state.

The aim of development of science, all the discoveries and successive inventions in medical field were directed to provide convenience, comfort and providing an edge to humans by improving the quality of life at many levels. The purpose was to usher an era of peace and prosperity, unraveling the mysteries of universe. Improper and aggressive use of science has led to catastrophes, both in the animated life of “Brave New World” and in real. On many occasions, it led to greater sorrows. Humans have paid a colossal price for making science an integral part of their lives. Weapons of mass destruction, environmental damage, moral and religious deconstruction are few of many reasons that have added to the human sufferings. “Brave New World” stands as a warning that the price for the progress of scientific development and social and economic stability should not be at the cost of sacrifice for the potential for human growth. In blind pursuit for excellence men should not ignore the very nuclei of everything, “the man”.

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